

# Clean Energy Fund Quarterly Performance Report through March 31, 2018

Final Report | May 2018



## **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.

# **NYSERDA Record of Revision**

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<b>Document Title</b>
Clean Energy Fund Quarterly Performance Report through March 31, 2018

<b>Revision Date</b>	<b>Description of Changes</b>	<b>Revision on Page(s)</b>
May 14, 2018	Original Issue	

**Clean Energy Fund  
Quarterly Performance Report  
through March 31, 2018**

*Final Report*

Prepared by:

**New York State Energy Research and Development Authority**

Albany, NY

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# 1 Overview

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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 Reforming the Energy Vision (REV) strategy to make New York's energy system cleaner, more affordable and more resilient, and advances the State's clean energy goals as stated in the 2015 State Energy Plan. These goals include the reduction of greenhouse gas emissions 40% from 1990 levels, and actions to date have already resulted in the implementation of the Clean Energy Standard that requires 50% of the State's electricity to come from renewable energy sources by 2030.

The CEF offers solutions to:

- Reduce greenhouse gas emissions through increased efficiency and use of renewable energy
- Deliver \$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.<sup>1</sup> This order required quarterly reporting for the Market Development and Innovation and Research Portfolios to explain the following:

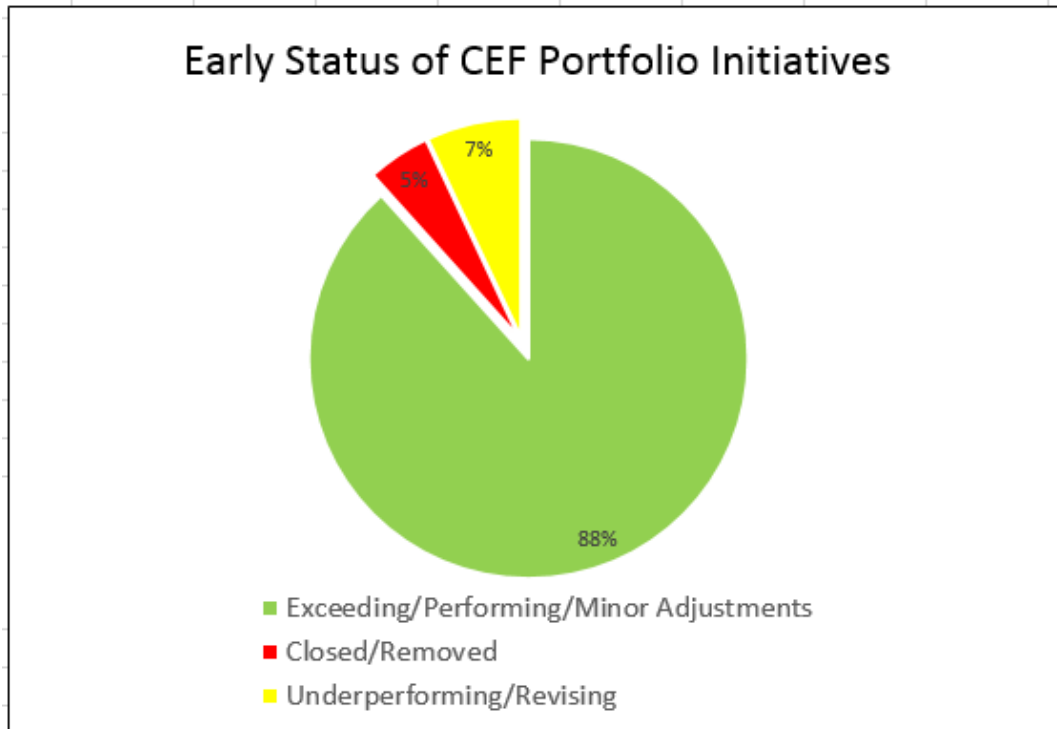
- Progress against the initiative-specific milestone
- CEF goal metric schedules outlined in the Investment Plan Chapters
- Tracking of expenditures and commitments against their prospective budgets

This report represents quarterly and cumulative activity through March 31, 2018 and achievements of all programs approved prior to and during the reporting period. This includes the transition programs included in the Resource Acquisition Transition Chapter as well as new initiatives in the Market Development and Innovation and Research Chapters. See Appendix A for the Department of Public Service (DPS) case number/reference and effective date of these initiatives.

Through March 2018, 56 Market Development (MD) and Innovation and Research (I&R) initiatives were developed by NYSERDA and filed with the Public Service Commission, and 43 of these initiatives have launched. In this portfolio, NYSERDA included the introduction of 31 new initiatives, pivoting the organization’s focus toward a market transformation model. In the early years of the CEF, these new initiatives will operate alongside 12 resource acquisition transition initiatives—a purposeful portfolio mix intended to introduce a greater proportion of market-enabling activities without disrupting existing market momentum that may be based on more traditional NYSERDA and utility approaches.

Figure 1 shows the majority (88%) of launched initiatives are progressing well and either exceeded expectations, maintained their original plans, or moved forward with minor changes. As information is gained, NYSERDA modified several of these largely successful initiatives to optimally align them with market needs. A smaller percentage of initiatives are undergoing more substantial adjustment (7%) or have been closed/removed due to lack of performance (5%). Closed initiatives generally experienced lower customer demand than expected, and NYSERDA is redirecting funds to better meet market needs.

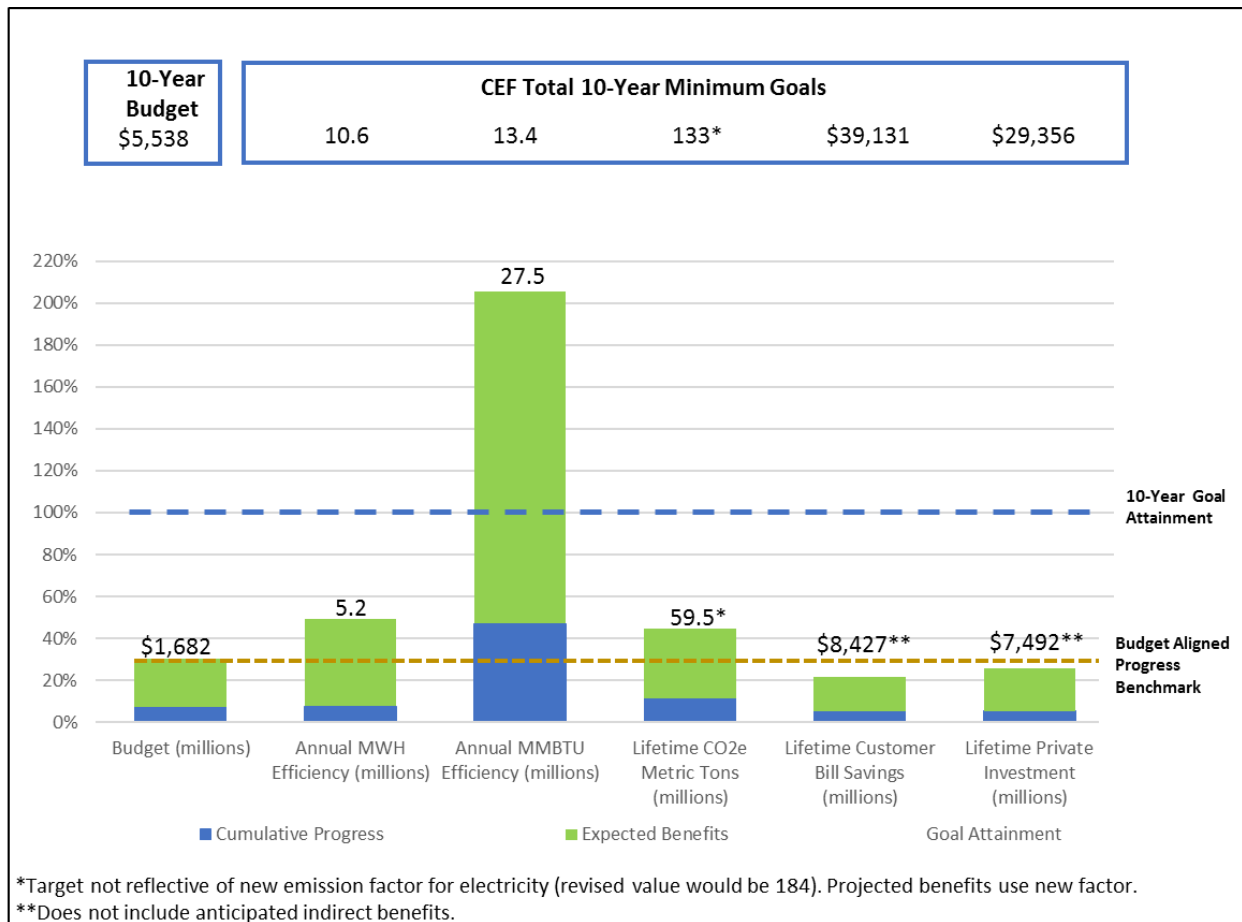
**Figure 1. Early Status of CEF Portfolio Initiatives**



The MD and I&R portfolios are contributing toward realization of the total CEF 10-year minimum goals, which will also be supported by achievement in the NY-Sun and NY Green Bank portfolios.<sup>2</sup> The deployment of MD and I&R funds is well-aligned with progress at this time, as depicted in Figure 2,<sup>3</sup> where cumulative progress represents committed dollars and associated impact and expected benefits equals remaining “programmed” dollars and associated benefits.

- Achievement of the energy efficiency MWh and MMBtu goals that are core to the MD portfolio and represent “no backsliding from EEPS” is on track. MMBtu expected benefits are already significantly greater than the minimum projected benefits.
- Carbon dioxide equivalent (CO<sub>2</sub>e) emission reduction progress is currently excellent, and NYSERDA is well-positioned to meet the overall goal for the CEF. The CEF’s fuel-neutral approach is a large driver of success on the CO<sub>2</sub>e metric.<sup>4</sup>
- Performance of the customer (participant) bill savings<sup>5</sup> metric is somewhat low at this time, but is not yet inclusive of estimated indirect bill savings projected to result from the new MD initiatives, which will occur later in the 10-year time frame. NYSERDA’s current expectation is that this metric will be attained over the life of the fund.
- Lifetime private investment benefits are generally on track at this time, but like the bill savings metric, does not yet account for additional indirect benefits expected to occur later in the 10-year time frame.

**Figure 2. CEF Market Development and Innovation & Research Projection Expected Investment and Benefits Contribution Toward 10-Year Minimum Goals as of March 31, 2018 (millions)**



A high-level summary of the progress of each initiative and offerings within the initiatives as applicable is shown in Tables 1-3. These tables display key dates, assessment of benefits metrics progress against current targets and, as warranted, an explanation of progress towards benefit metrics and/or program implementation milestones. The 10-year Budget and 10-year Minimum Goals reflect all four CEF portfolios: Market Development, Innovation and Research, NY-Sun, and NY Green Bank. The 88 million MWh renewable energy goal is not depicted here as it is mainly supported by NY-Sun. Progress shown is only for Market Development and Innovation and Research.

**Table 1. Summary of Initiative/Offering Status – Resource Acquisition Transition**

Initiative: Offering (Tables)	Key Dates	Status Notes
Commercial Resource Acquisition Transition and FlexTech Initiative (Table 9)	Approval Date: February 29, 2016 Launch Date: March 1, 2016 Refiling Approval Date: July 17, 2017	The Commercial Implementation Program closed at the end of April 2017. There were eight approved projects and the targets set for this program component will not be met. A revision to the FlexTech Program is expected in Q2 2018. It is expected that this revision will generate additional interest in the program leading to more projects and savings towards FlexTech targets.
Industrial Resource Acquisition Transition Initiative (Table 10)	Approval Date: February 29, 2016 Launch Date: March 1, 2016 Refiling Approval Date: July 17, 2017	The initiative is proceeding as planned.
Agriculture Resource Acquisition Transition Initiative (Table 11)	Approval Date: February 29, 2016 Launch Date: March 1, 2016 Refiling Approval Date: July 17, 2017	The initiative is proceeding as planned.
Multifamily Market-Rate Resource Acquisition Transition Initiative (Table 12)	Approval Date: February 29, 2016 Launch Date: May 19, 2016 Refiling Approval Date: July 17, 2017	This program is no longer accepting applications. The program received less applications, but with more units than anticipated, which explains why progress is greatly exceeding the participant target. However, the energy conservation measures implemented were low-cost and yielded less savings than initially projected at the program design; therefore, relative progress against other benefit metrics is lagging.
Single-Family Market-Rate Resource Acquisition Transition Initiative (Table 13)	Approval Date: February 29, 2016 Launch Date: March 1, 2016 Refiling Approval Date: July 17, 2017	After withdrawal of consumer incentives and the increase in Green Jobs - Green New York financing interest rates in September 2016, fewer market rate projects are being submitted through the program. Program evaluation will determine to what extent projects are being completed outside the program.
Commercial New Construction Resource Acquisition Transition Initiative (Table 14)	Approval Date: February 29, 2016 Launch Date: March 1, 2016 Refiling Approval Date: July 17, 2017	A substantial update to the program was issued on 3/21/2018, which offers technical support to applicants of all project sizes, and which further targets financial support to drive the design and construction of net zero energy, deep energy savings, and smart buildings.
Low-Rise New Construction Resource Acquisition Transition Initiative: Market-Rate (Table 15)	Approval Date: February 29, 2016 Launch Date: March 1, 2016 Refiling Approval Date: July 17, 2017	Current participant metrics reflect significant participation of single-family homes. Higher potential savings are associated with single-family homes vs. multifamily projects, on a per dwelling unit (or participant) basis, affecting the savings metrics vs. the lower levels of participation.
Low-Rise New Construction Resource Acquisition Transition Initiative: Low- to Moderate-Income (Table 16)	Approval Date: February 29, 2016 Launch Date: March 1, 2016 Refiling Approval Date: July 17, 2017	Seasonal variations in LMI project awards by New York State Home and Community Renewal typically result in early season lag in application submissions to NYSERDA. Additionally, NYSERDA is transitioning to an online solutions model, which has altered the timing of when project funding has been committed. It is expected that participation rates and approvals should more accurately reflect program activity levels by end of Q2 2018, and better align with targets.

**Table 1 continued**

<b>Initiative: Offering (Tables)</b>	<b>Key Dates</b>	<b>Status Notes</b>
Multifamily New Construction Resource Acquisition Transition Initiative: Market-Rate (Table 17)	Approval Date: February 29, 2016 Launch Date: August 8, 2016 Refiling Approval Date: July 17, 2017	Performance against metrics targets is lagging currently, but program participation is expected to increase based on the reauthorization of the New York City Property Tax abatement. Market engagement indicates the modifications to program, which were approved in July 2017 and led to reissuance of the solicitation in November 2017, should also lead to increased participation and closer alignment with targets by Q3 2018. Release of additional modifications to the program incentive structure are anticipated to be published by end of Q2 2018, with expected benefits in Q3 and Q4.
Multifamily New Construction Resource Acquisition Transition Initiative: Low- to Moderate-Income (Table 18)	Approval Date: February 29, 2016 Launch Date: August 8, 2016 Refiling Approval Date: July 17, 2017	Performance against metrics targets is lagging currently, but program participation is expected to increase based on the reauthorization of the New York City Property Tax abatement. Market engagement indicates the modifications to program, which were approved in July 2017 and led to reissuance of the solicitation in November 2017, should also lead to increased participation and closer alignment with targets by Q3 2018. Release of additional modifications to the program incentive structure are anticipated to be published by end of Q2 2018, with expected benefits in Q3 and Q4.
Anaerobic Digesters Resource Acquisition Transition Initiative (Table 19)	Approval Date: February 29, 2016 Launch Date: July 8, 2016	A delay in launching 2017 activities caused the lag in performance. Progress is expected to better align with expectations after proposals are accepted in early Q2 2018.
Small Wind Resource Acquisition Transition Initiative (Table 20)	Approval Date: February 29, 2016 Launch Date: March 1, 2016	The program has not achieved some targets due to smaller-sized projects and fewer developers than anticipated.
Solar Thermal Resource Acquisition Transition Initiative (Table 21)	Approval Date: February 29, 2016 Launch Date: March 1, 2016 Refiling Approval Date: July 17, 2017	The initiative is proceeding as planned.
Combined Heat and Power (CHP) Resource Acquisition Transition Initiative (Table 22)	Approval Date: February 29, 2016 Launch Date: March 1, 2016	The initiative is proceeding as planned.

**Table 2. Summary of Initiative/Offering Progress – Market Development**

Initiative: Offering (Tables)	Key Dates	Metrics Progress vs. Targets <sup>a</sup>	Explanation of Progress
Real Estate Tenant Initiative (Tables 24-25)	Approval Date: May 23, 2016 Launch Date: July 19, 2016 Refiling Approval Date: July 17, 2017	Lagging	The Real Estate Tenant initiative made significant progress since program changes in Q3 2017. A total of 112 sites are in program as of end of Q1 2018. 90% of participants have joined since program changes were enacted and NYSERDA anticipates continued growth in program participation moving forward. The initiative is making progress toward its multi-year implementation milestones.
Energy Management Initiative (Table 26-27)	Approval Date: May 23, 2016 Launch Date: June 20, 2016 Refiling Approval Date: July 17, 2017	Mixed	Energy Management initiative continues to see significant market uptake through RTEM program. RTEM program is lagging performance targets on private investment, CO2 and MWh because project sizes are smaller than anticipated. REM program is lagging participation targets, but contracting with selected providers is set to be complete in Q2, and we anticipate seeing program uptake in Q2 and Q3 2018.
Reforming the Energy Vision (REV) Campus Challenge Initiative (Tables 28-29)	Approval Date: May 23, 2016 Launch Date: December 21, 2016 Refiling Approval Date: July 17, 2017	Lagging	The REV Campus Challenge initiative is exceeding its targeted membership goal (98 out of projected 88), but it is lagging its energy savings targets (65%). NYSERDA is reviewing available data on REV Campus Challenge member activity to more accurately and completely account for energy savings. The initiative is making progress toward its multi-year implementation milestones.
K-12 Schools Initiative (Tables 30-31)	Approval Date: December 1, 2017 Anticipated Launch Date: Q2 2018	n/a	
Continuous Energy Improvement Initiative: On-Site Energy Manager Initiative (Tables 32-33)	Approval Date: May 23, 2016 Launch Date: September 12, 2016 Refiling Approval Date: July 17, 2017	Exceeding	The initiative is making progress toward its multi-year implementation milestones. Initial energy savings projections at pilot facilities are exceeding expectations.
Continuous Energy Improvement Initiative: Strategic Energy Management Initiative (Tables 34-35)	Approval Date: May 23, 2016 Launch Date: November 22, 2016 Refiling Approval Date: July 17, 2017	Delayed	Lag in completion of the milestone due to delayed launch of the program as well as longer than anticipated period to secure participant commitment. The lag in metrics is due to the timing of contracting for development of strategic energy management wastewater cohorts.
Continuous Energy Improvement Initiative: Energy Management Information Systems Initiative (Tables 36-37)	Approval Date: June 23, 2017 Launch Date: November 14, 2017	n/a	Newly launched initiative. The initiative has made good progress against its current implementation milestones. NYSERDA anticipates the first applications will occur in Q3 and Q4 2018 as vendors develop projects; at this point, currently lagging metrics are expected to show progress.

**Table 2 continued**

Initiative: Offering (Tables)	Key Dates	Metrics Progress vs. Targets <sup>a</sup>	Explanation of Progress
Clean Energy Communities Initiative (Tables 38-39)	Approval Date: May 23, 2016 Launch Date: August 3, 2016 Refiling Approval Date: July 17, 2017	Mixed	The initiative has made good progress against its current implementation milestones. The lag in metrics progress vs. targets is primarily due to timing of contracting with designated communities.
Community Energy Engagement Initiative (Tables 40-41)	Approval Date: March 27, 2017 Launch Date: October 10, 2017	n/a	Newly launched initiative. The initiative has made good progress against its current implementation milestones.
Offshore Wind Master Plan Initiative (Tables 42-43)	Approval Date: May 23, 2016 Launch Date: September 15, 2016	n/a	The initiative has made good progress against its current implementation milestones.
Offshore Wind Pre-Development Initiative (Tables 44-45)	Approval Date: May 23, 2016 Launch Date: December 12, 2016	n/a	The initiative has made good progress against its current implementation milestones.
REV Connect Initiative (Tables 46-47)	Approval Date: May 23, 2016 Launch Date: August 9, 2016 Refiling Approval Date: July 17, 2017	Lagging	The initiative has made good progress against its current implementation milestones, but metrics progress is behind target for the program's singular metric of private investment. Private investment is defined as financial support from utilities and private sector companies for REV Connect functions. As users of the REV Connect platform identify which functions create greatest value for their organization, this may prompt additional private investment to support high-value functions.
Reducing Barriers to Energy Storage Deployment Initiative (Tables 48-49)	Approval Date: August 17, 2016 Launch Date: November 7, 2016 Refiling Approval Date: July 17, 2017	Delayed	The initiative is making good progress against its implementation milestones; however, technical assistance contractors and value stacking pilot applications did not begin in earnest until mid-2017, so some full year results will lag milestones in the near term, but will be made up over time.
Electric Vehicles Initiative: EV Rebate (Tables 50-51)	Approval Date: August 17, 2016 Launch Date: March 21, 2017 Refiling Approval Date: July 17, 2017	Lagging	All current milestones have been met. Lag in metrics progress is due to greater than anticipated EV purchases occurring in the market without leveraging the available rebate. NYSERDA estimates that only 60% of EV sales have applied for the rebate since it was put in place.
Greenhouse Lighting and Systems Engineering (GLASE) Initiative (Tables 52-53)	Approval Date: September 15, 2016 Launch Date: January 1, 2017	On Track	The initiative has made good progress against its current implementation milestones.
Advancing Agricultural Energy Technologies (Tables 54-55)	Approval Date: December 1, 2017 Anticipated Launch Date: Q2 2018	n/a	New Initiative. Anticipated to launch ahead of schedule in Q2 2018.



**Table 2 continued**

Initiative: Offering (Tables)	Key Dates	Metrics Progress vs. Targets <sup>a</sup>	Explanation of Progress
RetrofitNY Initiative (Tables 56-57)	Approval Date: August 31, 2016 Launch Date: April 4, 2017	Delayed	The initiative has made good progress against its current implementation milestones. The first solicitation initially anticipated to release in 2017 was delayed until the first quarter of 2018. Response to the solicitation has been quantitatively and qualitatively very strong.
REVitalize Initiative (Tables 58-59)	Approval Date: August 31, 2016 Launch Date: June 27, 2017	Exceeding	The initiative has made good progress against its current performance metrics targets. A delay in the launch of the solicitation caused a lag in performance against current milestones.
Low-Income Forum on Energy Initiative (Tables 60-61)	Approval Date: August 31, 2016 Launch Date: August 31, 2017	Exceeding	The initiative has made good progress against its current implementation milestones.
Healthy Homes Feasibility Study Initiative (Table 62)	Approval Date: August 31, 2016 Launch Date: January 20, 2017	n/a	Progress against milestones is lagging due to difficulty obtaining the data required for completion of the study. In addition, this data will be required for completion of the pilot design.
Low- to Moderate-Income Single-Family Initiative: Low-Income (Tables 63,65)	Approval Date: February 29, 2016 Launch Date: March 1, 2016 Refiling Approval Date: July 17, 2017	On Track	The initiative has made good progress against its current implementation milestones.
Low- to Moderate-Income Single-Family Initiative: Moderate-Income (Tables -64-65)	Approval Date: February 29, 2016 Launch Date: March 1, 2016 Refiling Approval Date: July 17, 2017	On Track	The initiative has made good progress against its current implementation milestones.
Low- to Moderate-Income Multifamily Initiative (Tables 66-67)	Approval Date: February 29, 2016 Launch Date: May 19, 2016 Refiling Approval Date: July 17, 2017	Lagging	The initiative has made good progress against its current implementation targets. Several new projects entered the pipeline. However, because many of these new projects were smaller buildings than expected, the number of participants (number of dwelling units) and the savings are lagging as compared to the projected intake and savings at this time. The program team is launching new communication and outreach efforts to continue to improve program intake.
Low-Income Community Solar Initiative (Table 68-69)	Approval Date: December 1, 2017 Anticipated Launch Date: Q2 2018	n/a	The initiative has made good progress against its current implementation milestones. The initiative is scheduled to launch in Q2 2018 and begin participant enrollment in Q3 2018.

**Table 2 continued**

Initiative: Offering (Tables)	Key Dates	Metrics Progress vs. Targets <sup>a</sup>	Explanation of Progress
Industry Partnerships Initiative (Tables 70-71)	Approval Date: September 15, 2016 Launch Date: January 13, 2017 Refiling Approval Date: July 17, 2017	Delayed	The initiative has made good progress against its multi-year implementation milestones. A delay in the launch of the solicitation caused a lag in metric performance against current targets.
Heat Pumps and Solar Thermal Initiative (Tables 72-73)	Approval Date: May 16, 2017 Launch Date: May 30, 2017	Exceeding	The initiative has made good progress against its current performance metrics targets. Stakeholder feedback indicated alternative pilots should be considered prior to program rollout, causing a delay achieving certain current implementation milestones.
Renewable Heat NY Initiative (Tables 74-75)	Approval Date: May 16, 2017 Launch Date: May 9, 2017	Mixed	The initiative has made good progress against its current implementation milestones; however, there was a delay in integration of stakeholder feedback in the RHNY program modifications process. Contracts with Alliance for Green Heat and the launch of the Coop Marketing Campaign will be completed in Q2 2018. The program is mostly on track with metrics performance, but it is lagging performance for private investment and participants as non-CEF funding being exhausted prior to using CEF funds.
Underutilized Products Support Initiative (Tables 76-77)	Approval Date: May 16, 2017 Launch Date: August 17, 2017	Exceeding	The initiative has made good progress against its current implementation milestones however the ARTU program has been put on hold. Technology performance levels are not readily available in the supply chain at this point. Alternative structures and technologies to address commercial HVAC are being investigated. Trainings and case studies will be available for ASHP contractors in Q3-Q4 2018.
EE Soft Cost Challenge Initiative (Tables 78-79)	Approval Date: July 19, 2017 Anticipated Launch Date: TBA	n/a	The initiative is in the process of being integrated into the single-family, multifamily, and commercial programs. The launch date is uncertain currently.
Technical Services Initiative (Tables 80-81)	Approval Date: October 3, 2017 Launch Date: November 9, 2017	n/a	Newly launched initiative. The initiative has made good progress against its current implementation milestones. One application has been received to the On-Site Energy Manager Program. NYSERDA had conversations with several interested potential applicants. The second effort under technical services, the Aggregation Program, is expected to launch Q2 or Q3 2018.
Clean Energy Advanced Market Performance (AMP) Challenge Initiative (Tables 82-83)	Approval Date: December 1, 2017 Anticipated Launch Date: Q2 2018	n/a	Scheduled to launch Q2 2018.

**Table 2 continued**

Initiative: Offering (Tables)	Key Dates	Metrics Progress vs. Targets <sup>a</sup>	Explanation of Progress
Clean Energy Siting and Soft Cost Reduction Initiative (Tables 84-85)	Approval Date: December 1, 2017 Launch Date: March 9, 2018	n/a	Newly launched initiative. The initiative has made good progress against its current implementation milestones.
Code to Zero Initiative (Tables 86-87)	Approval Date: December 1, 2017 Anticipated Launch Date: Q4 2018	n/a	On schedule to launch Q4 2018.
Fuel Cells Initiative (Tables 88-89)	Approval Date: December 1, 2017 Anticipated Launch Date: Q2 2018	n/a	On schedule to launch Q2 2018.
New Construction Market Rate Initiative (Tables 90-92)	Approval Date: December 1, 2017 Anticipated Launch Date: Q2 2018	n/a	On schedule to launch Q2 2018.
Low Income New Construction Initiative (Tables 91-92)	Approval Date: December 1, 2017 Anticipated Launch Date: Q2 2018	n/a	On schedule to launch Q2 2018.
Engaging New Markets Initiative (Tables 93-94)	Approval Date: December 1, 2017 Anticipated Launch Date: Q3 2018	n/a	On schedule to launch Q3 2018.

<sup>a</sup> Initiative progress indicator takes into account current cumulative progress of all relevant metrics vs. targets. Exceeding means all metrics (with the allowed exception of two) are >100% of progress vs. target. On Track means all metrics (with the allowed exception of two) are >80% of progress vs. target. Lagging means all metrics (with the allowed exception of two) are <80% of progress vs. target. Mixed means more than two metrics are < 50% and > 100% of progress vs. target. Where the same metric has both an annual and lifetime value, it is counted as one. Delayed means metrics performance is lagging vs. target due to a delayed launch of initiative and/or solicitation. N/a means initiative has not yet launched or has been launched too recently (within two quarters) to measure metrics progress..

**Table 3. Summary of Initiative/Offering Progress – Innovation and Research**

Initiative: Offering (Tables)	Key Dates	Metrics Progress vs. Targets <sup>a</sup>	Explanation of Progress
Distributed Energy Resource (DER) Interconnection Initiative (Tables 96-97)	Approval Date: May 23, 2016 Launch Date: October 20, 2016	Mixed	The initiative has made good progress against its current implementation milestones and is exceeding its metrics targets for participants, but is lagging the private investment target.
High-Performing Grid Modernization Initiative (Tables 98-99)	Approval Date: May 23, 2016 Launch Date: September 16, 2016 Refiling Approval Date: July 17, 2017	On Track	The initiative has made good progress against its current implementation milestones.
Power Electronics Manufacturing Initiative (Tables 100-101)	Approval Date: July 19, 2017 Launch Date: October 13, 2017	n/a	Newly launched initiative. The initiative has made good progress against its current performance metrics targets. A delay in contracting has caused a lag in the progress of achieving current implementation milestones.
Cleantech Startup Growth Initiative (Tables 102-109)	Approval Date: May 23, 2016 Launch Date: October 12, 2016 Revised Approval Date: December 1, 2017	Mixed	The initiative has made good progress against its current implementation milestones. The solicitation for Ignition Grants that was originally planned to launch in 2017 is now expected to be released in Q2 2018. For the Geographic Coverage activity, there are no entrepreneurship training programs planned at this time due to feedback from market participants stating it is not currently needed. Metrics for active initiatives are only collected every six months. The first full set of metrics for incubators were received and finalized in February 2018. The number of participants is expected to meet or exceed forecasted levels in coming reporting periods. The time required to stand up new programs and raise awareness for them in the market impacted early participation.
Manufacturing Corps Initiative (Tables 110-111)	Approval Date: February 13, 2017 Launch Date: June 29, 2017 Revised Approval Date: December 1, 2017	n/a	The initiative has made good progress against its current implementation milestones. Program expected to formally launch Q2 2018 with early results expected in Q3 2018
Novel Business Models and Offerings Initiative (Tables 112-113)	Approval Date: December 1, 2017 Anticipated Launch Date: Q2 2018	n/a	Scheduled to launch Q2 2018.
NextGen HVAC Initiative (Tables 114-115)	Approval Date: August 17, 2016 Launch Date: June 28, 2017	Mixed	A delay in the launch of the solicitation caused a lag in metric performance against current targets and milestones.

**Table 3 continued**

Initiative: Offering (Tables)	Key Dates	Metrics Progress vs. Targets <sup>a</sup>	Explanation of Progress
Electric Vehicles Initiative: EV Innovation (Tables 116-117)	Approval Date: August 17, 2016 Launch Date: September 15, 2017	Delayed	The initiative has made good progress against its current implementation milestones. A delay in the launch of the program caused a lag in metric performance against current targets.
Public Transportation and Electrified Rail Initiative (Tables 118-119)	Approval Date: October 3, 2017 Launch Date: February 22, 2018	n/a	Newly launched initiative. A delay in the launch of the solicitation caused a lag in metric performance against current targets.
Energy Related Environmental Research Initiative (Tables 120-121)	Approval Date: February 13, 2017 Launch Date: February 15, 2017	Exceeding	The initiative has made good progress against its current implementation milestones and is exceeding expectations regarding the delivery of benefits metrics.
Energy Storage Technology and Product Development Initiative (Tables 122-123)	Approval Date: March 27, 2017 Launch Date: June 21, 2017	Mixed	The initiative has made good progress against its current implementation milestones. A delay in contracting caused a lag in metric performance against current targets.

<sup>a</sup> Initiative progress indicator takes into account current cumulative progress of all relevant metrics vs. targets. Exceeding means all metrics (with the allowed exception of two) are >100% of progress vs. target. On Track means all metrics (with the allowed exception of two) are >80% of progress vs. target. Lagging means all metrics (with the allowed exception of two) are <80% of progress vs. target. Mixed means more than two metrics are < 50% and > 100% of progress vs. target. Where the same metric has both an annual and lifetime value, it is counted as one. Delayed means metrics performance is lagging vs. target due to a delayed launch of initiative and/or solicitation. N/a means initiative has not yet launched or has been launched too recently (within two quarters) to measure metrics progress.

Table 4 shows the CEF cumulative progress (committed benefits) to date against the 10-year minimum projected goals of the entire CEF, inclusive of all four portfolios. The CEF MD and I&R portfolios will contribute significantly to these minimum projected goals, as will the NY-Sun and NY Green Bank portfolios, for which progress is presented in separate filings.

This report reflects direct benefits from participation in NYSERDA’s programs, as shown in the tables that follow. Many CEF initiatives also anticipate accruing indirect, longer-term market effects from follow-on market activity. These indirect impacts are grounded in a theory of change

developed for each initiative, and NYSERDA will use market evaluation approaches to quantify the indirect impacts expected to accrue over time. Indirect benefits are not yet reflected because it will take time for these benefits to be realized. Targets and benefits include initiatives filed and approved through March 31, 2018. The column labeled Cumulative Current Target through Q1 2018 represents 100% of the 2016 and 2017 annual targets plus 25% of the 2018 annual target. Actual progress may not be equal each quarter of a calendar year.

**Table 4. CEF Minimum Projected Goals 2016–2025 and Progress to Date, Commitment Basis**

See Endnotes section for more information<sup>6</sup>

		Cumulative Annual Benefits		Lifetime Benefits	
		Cumulative Progress through March 31, 2018	Minimum Projected Goals 2016-2025	Cumulative Progress through March, 2018	Minimum Projected Goals 2016-2025
Energy Efficiency	MWh	808,136	10,600,000	11,515,755	*
	MMBtu	6,321,316	13,400,000	99,198,283	*
	MW	62	*	62	*
Renewable Energy	MWh	35,485	*	513,480	88,000,000
	MW	23	*	23	*
CO2 Emission Reductions <sup>a</sup> (metric tons)		1,022,849	*	15,242,831	133,000,000
Customer Bill Savings <sup>a,b</sup> (\$ million)		\$141.57	*	\$2,092.44	\$39,131
Private Investment <sup>a</sup> (\$ million)		\$1,602.60	*	\$1,602.60	\$29,356

<sup>a</sup> The Private Investment, Customer Bill Savings and CO<sub>2</sub> Emission Reduction targets includes estimated benefits from NY-Sun and NY Green Bank. This information will be reported on an annual basis.

<sup>b</sup> Bill savings represent savings for participants of NYSERDA programs.

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

**Table 5. Market Development and Innovation and Research Portfolio Level Budgets and Spending**

See Endnotes section for more information<sup>7</sup>

Initiative	Total Budget <sup>a</sup>	Budget Approved as of September 30, 2017 <sup>b</sup>	% of Ordered Budget Funds Approved <sup>c</sup>	Expended Funds <sup>d</sup>	Open Encumbrances <sup>e</sup>	Contract Pre-Encumbrances <sup>f</sup>	Committed Funds <sup>g</sup>	% of Approved Budget Committed <sup>h</sup>	Budget Approved Remaining Balance <sup>i</sup>
<b>Market Development</b>									
Program Funds									
NYS Cost Recovery Fee	\$2,346,051,964	\$1,171,739,563	50%	\$127,954,503	\$90,905,565	\$86,990,653	\$305,850,721	26%	\$865,888,842
<b>Innovation &amp; Research</b>									
Program Funds									
NYS Cost Recovery Fee	\$619,090,948	\$327,502,032	53%	\$10,296,679	\$30,463,845	\$23,413,330	\$64,173,854	20%	\$263,328,178
<b>Administration</b>	\$268,934,758	\$134,583,080	50%	\$39,855,237	\$509,313	\$31,223	\$40,395,773	30%	\$94,187,307
<b>Evaluation</b>	\$127,606,798	\$48,463,825	38%	\$1,309,130	\$2,516,232	\$7,000	\$3,832,361	8%	\$44,631,464
<b>Total</b>	<b>\$3,361,684,468</b>	<b>\$1,682,288,500</b>	<b>50%</b>	<b>\$179,415,548</b>	<b>\$124,394,955</b>	<b>\$110,442,205</b>	<b>\$414,252,708</b>	<b>25%</b>	<b>\$1,268,035,791</b>

<sup>a</sup> Reflects reduction of CEF Ordered total funding authorization by about \$68.3 million (2%) for reduction in RGGI funding proposed for April 1, 2018 to March 31, 2021 proposed in RGGI Operating Plan approved January 2018.

<sup>b</sup> Funds approved by DPS as of March 31, 2018.

<sup>c</sup> Percentage of the approved budget.

<sup>d</sup> Invoices processed for payment by NYSERDA.

<sup>e</sup> Remaining funding obligated under a contract, purchase order, or incentive award.

<sup>f</sup> Planned funding for contracts awarded and under negotiation.

<sup>g</sup> Sum of Expended Funds, Open Encumbrances, and Contract Pre-Encumbrances.

<sup>h</sup> Percentage of the committed budget.

<sup>i</sup> Difference between Budget Approved Funds and Committed Funds.

**Table 6. Market Development, Innovation, & Research Portfolio Committed Benefits Progress to Date – Annual**

See Endnotes section for more information<sup>8</sup>

Initiative	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/18	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Annual Target Through Q1 2018	% of Cumulative Annual Target Through Q1 2018	Total Cumulative Annual Target through 2025	% of Total Cumulative Annual Target through 2025
<b>Market Development</b>									
Energy Efficiency (MWh)	83,127	22,817	105,944	702,192	808,136	1,021,850	79%	3,041,000	27%
Energy Efficiency (MMBtu)	973,796	423,654	1,397,451	4,923,866	6,321,316	6,441,500	98%	19,820,000	32%
Energy Efficiency (MW)	1.3	0	2	61	62	*	-	*	-
Renewable Energy (MWh)	23,448	1,075	24,523	10,962	35,485	*	-	*	-
Renewable Energy (MW)	19	1	20	4	23	*	-	*	-
CO2e Reductions (metric tons)	106,652	33,880	140,532	882,317	1,022,849	*	-	*	-
Customer Bill Savings (\$ million)	\$28.11	\$6.93	\$35.04	\$106.53	\$141.57	*	-	*	-
Private Investment (\$ million)	\$231.00	\$88.06	\$319.06	\$975.23	\$1,294.30	*	-	*	-
<b>Innovation and Research</b>									
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)	-	-	-	\$308.31	\$308.31	*	-	*	-
<b>Total Energy Efficiency (MWh)</b>	<b>83,127</b>	<b>22,817</b>	<b>105,944</b>	<b>702,192</b>	<b>808,136</b>				
<b>Total Energy Efficiency (MMBtu)</b>	<b>973,796</b>	<b>423,654</b>	<b>1,397,451</b>	<b>4,923,866</b>	<b>6,321,316</b>				
<b>Total Energy Efficiency (MW)</b>	<b>1.3</b>	<b>0.3</b>	<b>2</b>	<b>61</b>	<b>62</b>				
<b>Total Renewable Energy (MWh)</b>	<b>23,448</b>	<b>1,075</b>	<b>24,523</b>	<b>10,962</b>	<b>35,485</b>				
<b>Total Renewable Energy (MW)</b>	<b>19</b>	<b>1</b>	<b>20</b>	<b>4</b>	<b>23</b>				
<b>Total CO2e Reductions (metric tons)</b>	<b>106,652</b>	<b>33,880</b>	<b>140,532</b>	<b>882,317</b>	<b>1,022,849</b>				
<b>Total Customer Bill Savings (\$ million)</b>	<b>\$28.11</b>	<b>\$6.93</b>	<b>\$35.04</b>	<b>\$106.53</b>	<b>\$141.57</b>				
<b>Total Private Investment (\$ million)</b>	<b>\$231.00</b>	<b>\$88.06</b>	<b>\$319.06</b>	<b>\$1,283.54</b>	<b>\$1,602.60</b>				

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



**Table 7. Market Development and Innovation & Research Portfolio Committed Benefits Progress to Date – Lifetime**

See Endnotes section for more information<sup>9</sup>

Initiative	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/18-3/31/18	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Lifetime Target Through Q1 2018	% of Cumulative Lifetime Target Through Q1 2018	Total Cumulative Lifetime Target through 2025	% of Total Cumulative Lifetime Target through 2025
<b>Market Development</b>									
Energy Efficiency (MWh)	1,265,488	347,344	1,612,833	9,902,923	11,515,755	*	-	*	-
Energy Efficiency (MMBtu)	17,963,527	6,766,295	24,729,822	74,468,461	99,198,283	*	-	*	-
Renewable Energy (MWh)	356,128	16,125	372,253	141,227	513,480	977,675	53%	2,648,000	19%
CO2e Reductions (metric tons)	1,815,290	535,559	2,350,849	12,891,982	15,242,831	12,513,000	122%	41,920,000	36%
Customer Bill Savings (\$ million)	\$457.61	\$106.76	\$564.37	\$1,528.07	\$2,092.44	\$2,292.50	91%	\$8,427.00	25%
Private Investment (\$ million)	\$231.00	\$88.06	\$319.06	\$975.23	\$1,294.30	\$1,145.73	113%	\$6,105.00	21%
<b>Innovation and Research</b>									
Energy Efficiency (MWh)	-	-	-	-	-	*	-	*	-
Energy Efficiency (MMBtu)	-	-	-	-	-	*	-	*	-
Renewable Energy (MWh)	-	-	-	-	-	*	-	*	-
CO2e Reductions (metric tons)	-	-	-	-	-	*	-	*	-
Customer Bill Savings (\$ million)	-	-	-	-	-	*	-	*	-
Private Investment (\$ million)	-	-	-	\$308.31	\$308.31	\$335.80	92%	\$1,387.00	22%
<b>Total Energy Efficiency (MWh)</b>	<b>1,265,488</b>	<b>347,344</b>	<b>1,612,833</b>	<b>9,902,923</b>	<b>11,515,755</b>	-	-	-	-
<b>Total Energy Efficiency (MMBtu)</b>	<b>17,963,527</b>	<b>6,766,295</b>	<b>24,729,822</b>	<b>74,468,461</b>	<b>99,198,283</b>	-	-	-	-
<b>Total Renewable Energy (MWh)</b>	<b>356,128</b>	<b>16,125</b>	<b>372,253</b>	<b>141,227</b>	<b>513,480</b>	-	-	-	-
<b>Total CO2e Reductions (metric tons)</b>	<b>1,815,290</b>	<b>535,559</b>	<b>2,350,849</b>	<b>12,891,982</b>	<b>15,242,831</b>	-	-	-	-
<b>Total Customer Bill Savings (\$ million)</b>	<b>\$457.61</b>	<b>\$106.76</b>	<b>\$564.37</b>	<b>\$1,528.07</b>	<b>\$2,092.44</b>	-	-	-	-
<b>Total Private Investment (\$ million)</b>	<b>\$231.00</b>	<b>\$88.06</b>	<b>\$319.06</b>	<b>\$1,283.54</b>	<b>\$1,602.60</b>	-	-	-	-

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

## 2 Resource Acquisition Transition Initiative Specific Results

**Table 8. Resource Acquisition Transition Initiative Level Budgets and Spending**

See Endnotes section for more information <sup>10</sup>

Initiative	Budget Approved as of December 31, 2017 <sup>a</sup>	Expended Funds <sup>b</sup>	Open Encumbrances <sup>c</sup>	Contract Pre-Encumbrances <sup>d</sup>	Committed Funds <sup>e</sup>	% of Approved Budget Committed <sup>f</sup>	Budget Approved Remaining Balance <sup>g</sup>
<b>Resource Acquisition Transition Chapter</b>							
Commercial	\$26,392,500	\$2,195,279	\$2,939,062	\$528,979	\$5,663,320	21%	\$20,729,180
Industrial	\$69,562,932	\$5,260,467	\$14,061,192	\$13,574,986	\$32,896,645	47%	\$36,666,287
Agriculture	\$3,600,000	\$2,530,599	\$895,818	-	\$3,426,417	95%	\$173,583
Multifamily Market Rate	\$156,628	\$138,374	\$18,199	\$55	\$156,628	100%	-
Single Family Market Rate	\$22,024,680	\$12,047,931	\$1,638,252	\$1,204,551	\$14,890,735	68%	\$7,133,945
Commercial New Construction	\$30,683,999	\$1,770,092	\$2,300,828	\$15,336,988	\$19,407,908	63%	\$11,276,091
Low Rise New Construction	\$13,324,000	\$1,776,885	\$3,924,982	\$373,675	\$6,075,542	46%	\$7,248,458
Multifamily New Construction	\$13,613,000	\$1,150,182	\$5,204,284	\$1,100,525	\$7,454,991	55%	\$6,158,009
Anaerobic Digesters	\$12,150,000	\$283,263	\$1,842,898	\$2,000,000	\$4,126,160	34%	\$8,023,840
Small Wind	\$6,090,000	\$1,686,149	\$841,566	-	\$2,527,715	42%	\$3,562,285
Solar Thermal	\$399,000	\$134,987	\$177,116	\$61,794	\$373,897	94%	\$25,103
Combined Heat & Power	\$48,550,000	\$4,161,694	\$13,548,836	\$9,597,758	\$27,308,287	56%	\$21,241,713
<b>TOTAL</b>	<b>\$246,546,739</b>	<b>\$33,135,901</b>	<b>\$47,393,033</b>	<b>\$43,779,311</b>	<b>\$124,308,245</b>	<b>50%</b>	<b>\$122,238,494</b>

<sup>a</sup> Funds approved by the DPS as of March 31, 2018.

<sup>b</sup> Invoices processed for payment by NYSERDA.

<sup>c</sup> Remaining funding obligated under a contract, purchase order or incentive award.

<sup>d</sup> Planned funding for contracts awarded and under negotiation.

<sup>e</sup> Sum of Expended Funds, Open Encumbrances, and Contract Pre-Encumbrances.

<sup>f</sup> Percentage of the committed budget.

<sup>g</sup> Difference between Budget Approved Funds and Committed Funds.

**Table 9. Commercial Resource Acquisition Transition and FlexTech Initiative Results**

**Approval Date:** February 29, 2016

**Launch Date:** March 1, 2016

Resource Acquisition Transition Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2019)	% of Total Target through Initiative Completion (2019)
Energy Efficiency	MWh Annual	159	-	159	14,652	14,811	52,850	28%	109,600	14%
	MWh Lifetime	2,627	-	2,627	241,750	244,377	872,250	28%	1,809,000	14%
	MMBtu Annual	-	-	-	108,323	108,323	472,500	23%	980,000	11%
	MMBtu Lifetime	-	-	-	1,787,330	1,787,330	7,787,500	23%	16,170,000	11%
	MW	0	-	0.4	0.2	0.6	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	Annual Tons	84	-	84	13,468	13,551	54,960	25%	114,200	12%
	Lifetime Tons	1,382	-	1,382	222,218	223,600	911,250	25%	1,891,000	12%
Customer Bill Savings (millions)	Annual Dollars	\$0.02	-	\$0.02	\$2.55	\$2.57	\$11.87	22%	\$24.63	10%
	Lifetime Dollars	\$0.38	-	\$0.38	\$41.99	\$42.38	\$196.30	22%	\$406.80	10%
Private Investment (millions)	Dollars	\$0.17	-	\$0.17	\$3.67	\$3.85	\$49.70	8%	\$92.00	4%
Implementation Assistance	Participants	3	-	3	5	8	20	40%	20	40%
Technical Assistance		-	-	-	125	125	178	70%	320	39%

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

**Table 10. Industrial Resource Acquisition Transition Initiative Results**

**Approval Date:** February 29, 2016

**Launch Date:** March 1, 2016

See Endnotes section for more information<sup>11</sup>

Resource Acquisition Transition Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2019)	% of Total Target through Initiative Completion (2019)
Energy Efficiency	MWh Annual	11,423	11,811	23,235	199,546	222,780	267,400	83%	421,700	53%
	MWh Lifetime	171,346	177,171	348,518	2,993,187	3,341,705	4,020,000	83%	6,325,000	53%
	MMBtu Annual	58,708	222,876	281,584	2,973,616	3,255,201	2,750,000	118%	3,586,000	91%
	MMBtu Lifetime	880,621	3,343,140	4,223,761	44,604,247	48,828,008	41,200,000	119%	53,790,000	91%
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	9,060	17,807	26,866	582,297	609,163	395,950	154%	521,400	117%
Customer Bill Savings (millions)	Lifetime Tons	135,893	267,104	402,997	8,734,452	9,137,449	5,940,000	154%	7,821,000	117%
	Annual Dollars	\$1.81	\$2.45	\$4.26	\$33.25	\$37.51	\$43.73	86%	\$64.12	58%
Private Investment (millions)	Lifetime Dollars	\$27.16	\$36.72	\$63.89	\$498.75	\$562.64	\$654.75	86%	\$961.80	58%
	Dollars	\$9.19	\$40.25	\$49.44	\$576.60	\$626.04	\$386.25	162%	\$761.10	82%
IPE	Participants	24	20	44	115	159	127	125%	218	73%
Technical Assistance		-	-	-	44	44	45	98%	80	55%

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

**Table 11. Agriculture Resource Acquisition Transition Initiative Results**

**Approval Date:** February 29, 2016

**Launch Date:** March 1, 2016

See Endnotes section for more information<sup>12</sup>

Resource Acquisition Transition Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2018)	% of Total Target through Initiative Completion (2018)
Energy Efficiency	MWh Annual	8,709	900	9,609	2,982	12,591	10,250	123%	14,000	90%
	MWh Lifetime	130,636	13,496	144,132	44,731	188,863	153,750	123%	210,000	90%
	MMBtu Annual	21,871	3,111	24,983	430	25,412	4,750	535%	7,000	363%
	MMBtu Lifetime	328,069	46,672	374,741	6,446	381,186	71,250	535%	105,000	363%
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	862	98	959	-	959	*	-	*	-
	MWh Lifetime	12,927	1,465	14,392	-	14,392	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	Annual Tons	6,136	749	6,885	1,592	8,477	5,750	147%	8,000	106%
	Lifetime Tons	92,036	11,237	103,274	23,879	127,153	86,250	147%	120,000	106%
Customer Bill Savings (millions)	Annual Dollars	\$1.64	\$0.20	\$1.84	\$0.44	\$2.27	\$1.53	149%	\$2.09	109%
	Lifetime Dollars	\$24.54	\$3.01	\$27.55	\$6.56	\$34.11	\$22.98	148%	\$31.35	109%
Private Investment (millions)	Dollars	\$10.94	\$1.15	\$12.09	-	\$12.09	\$9.10	133%	\$12.24	99%
Participants	Participants	507	80	587	160	747	569	131%	765	98%

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

**Table 12. Multifamily Market-Rate Resource Acquisition Transition Initiative Results**

**Approval Date:** February 29, 2016

**Launch Date:** May 19, 2016

Resource Acquisition Transition Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2018)	% of Total Target through Initiative Completion (2018)
Energy Efficiency	MWh Annual	-	-	-	29	29	41	70%	41	70%
	MWh Lifetime	-	-	-	428	428	617	69%	617	69%
	MMBtu Annual	36	-	36	4,188	4,224	9,871	43%	9,871	43%
	MMBtu Lifetime	546	-	546	62,820	63,366	148,100	43%	148,100	43%
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	2	-	2	238	240	598	40%	598	40%
Customer Bill Savings (millions)	Lifetime Tons	29	-	29	3,565	3,594	8,967	40%	8,967	40%
	Annual Dollars	\$0.0002	-	\$0.0002	\$0.02	\$0.02	\$0.11	22%	\$0.11	22%
Private Investment (millions)	Lifetime Dollars	\$0.002	-	\$0.002	\$0.36	\$0.36	\$1.63	22%	\$1.63	22%
	Dollars	\$0.07	-	\$0.07	-	\$0.07	\$0.42	17%	\$0.42	17%
Participants	Participants	18	-	18	459	477	186	256%	186	256%

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

**Table 13. Single-Family Market-Rate Resource Acquisition Transition Initiative Results**

**Approval Date:** February 29, 2016

**Launch Date:** March 1, 2016

See Endnotes section for more information<sup>13</sup>

Resource Acquisition Transition Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2018)	% of Total Target through Initiative Completion (2018)
Energy Efficiency	MWh Annual	2,098	136	2,234	95	2,329	2,678	87%	3,504	66%
	MWh Lifetime	31,468	2,043	33,511	1,428	34,940	40,050	87%	52,550	66%
	MMBtu Annual	109,755	9,340	119,095	7,032	126,127	169,350	74%	230,700	55%
	MMBtu Lifetime	2,743,875	233,501	2,977,376	175,800	3,153,176	4,230,000	75%	5,766,000	55%
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	7,852	627	8,479	480	8,959	11,665	77%	15,820	57%
Customer Bill Savings (millions)	Lifetime Tons	185,256	14,967	200,224	11,501	211,725	273,500	77%	371,900	57%
	Annual Dollars	\$2.00	\$0.15	\$2.16	\$0.13	\$2.28	\$3.00	76%	\$4.07	56%
Private Investment (millions)	Lifetime Dollars	\$47.24	\$3.64	\$50.88	\$2.99	\$53.87	\$70.40	77%	\$95.71	56%
	Dollars	\$35.84	\$3.74	\$39.58	\$2.12	\$41.71	\$55.55	75%	\$77.23	54%
Participants	Participants	4,904	556	5,460	293	5,753	6,744	85%	9,300	62%

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

**Table 14. Commercial New Construction Resource Acquisition Transition Initiative Results**

**Approval Date:** February 29, 2016

**Launch Date:** March 1, 2016

See Endnotes section for more information<sup>14,15</sup>

Resource Acquisition Transition Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2018)	% of Total Target through Initiative Completion (2018)
Energy Efficiency	MWh Annual	1,097	1,723	2,820	46,766	49,586	45,050	110%	66,200	75%
	MWh Lifetime	21,940	34,460	56,400	935,329	991,729	901,000	110%	1,324,000	75%
	MMBtu Annual	846	(5,404)	(4,558)	176,031	171,473	63,925	268%	105,100	163%
	MMBtu Lifetime	16,920	(108,080)	(91,160)	3,520,622	3,429,462	1,280,000	268%	2,105,000	163%
	MW	0.3	0.3	0.6	13	13	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	Annual Tons	622	619	1,241	33,965	35,206	27,025	130%	40,300	87%
	Lifetime Tons	12,444	12,386	24,830	679,300	704,130	541,750	130%	808,000	87%
Customer Bill Savings (millions)	Annual Dollars	\$0.16	\$0.23	\$0.40	\$8.26	\$8.66	\$6.37	136%	\$9.41	92%
	Lifetime Dollars	\$3.25	\$4.67	\$7.92	\$165.24	\$173.16	\$127.55	136%	\$188.30	92%
Private Investment (millions)	Dollars	\$0.41	\$0.12	\$0.53	\$6.34	\$6.87	\$38.64	18%	\$42.07	16%
Participants	Participants	3	1	4	93	97	112	87%	147	66%

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



**Table 15. Low-Rise New Construction Resource Acquisition Transition Initiative: Market-Rate Results**

**Approval Date:** February 29, 2016

**Launch Date:** March 1, 2016

Resource Acquisition Transition Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2018)	% of Total Target through Initiative Completion (2018)
Energy Efficiency	MWh Annual	2,544	87	2,630	2,370	5,001	4,933	101%	7,010	71%
	MWh Lifetime	50,876	1,732	52,608	47,409	100,017	98,825	101%	140,300	71%
	MMBtu Annual	57,554	303	57,857	12,755	70,612	56,025	126%	78,900	89%
	MMBtu Lifetime	1,151,077	6,060	1,157,137	255,096	1,412,233	1,119,500	126%	1,577,000	90%
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	Annual Tons	4,421	62	4,483	1,925	6,408	5,568	115%	7,870	81%
	Lifetime Tons	88,421	1,233	89,655	38,506	128,161	111,350	115%	157,400	81%
Customer Bill Savings (millions)	Annual Dollars	\$0.80	\$0.01	\$0.82	\$0.49	\$1.31	\$1.30	101%	\$1.86	70%
	Lifetime Dollars	\$16.08	\$0.25	\$16.33	\$9.85	\$26.18	\$26.25	100%	\$37.20	70%
Private Investment (millions)	Dollars	\$3.95	\$0.13	\$4.09	\$2.14	\$6.23	\$12.20	51%	\$17.73	35%
Participants	Participants	801	21	822	498	1,320	2,019	65%	2,926	45%

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

**Table 16. Low-Rise New Construction Resource Acquisition Transition Initiative: Low- to Moderate-Income Results**

**Approval Date:** February 29, 2016

**Launch Date:** March 1, 2016

Resource Acquisition Transition Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2018)	% of Total Target through Initiative Completion (2018)
Energy Efficiency	MWh Annual	160	52	211	3,638	3,849	4,995	77%	7,770	50%
	MWh Lifetime	3,195	1,034	4,229	72,754	76,982	99,700	77%	155,200	50%
	MMBtu Annual	2,302	423	2,725	36,023	38,747	44,550	87%	66,900	58%
	MMBtu Lifetime	46,030	8,460	54,490	720,453	774,943	889,000	87%	1,336,000	58%
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	Annual Tons	206	50	256	3,837	4,093	4,983	82%	7,630	54%
	Lifetime Tons	4,128	994	5,122	76,735	81,856	99,650	82%	152,600	54%
Customer Bill Savings (millions)	Annual Dollars	\$0.03	\$0.01	\$0.05	\$0.94	\$0.99	\$1.21	82%	\$1.86	53%
	Lifetime Dollars	\$0.69	\$0.27	\$0.95	\$18.79	\$19.75	\$24.20	82%	\$37.25	53%
Private Investment (millions)	Dollars	\$0.47	\$0.22	\$0.69	\$9.98	\$10.67	\$17.26	62%	\$25.73	41%
Participants	Participants	104	50	154	2,361	2,515	3,659	69%	5,329	47%

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

**Table 17. Multifamily New Construction Resource Acquisition Transition Initiative: Market-Rate Results**

**Approval Date:** February 29, 2016

**Launch Date:** August 8, 2016

Resource Acquisition Transition Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2018)	% of Total Target through Initiative Completion (2018)
Energy Efficiency	MWh Annual	-	-	-	1,535	1,535	3,216	48%	5,271	29%
	MWh Lifetime	-	-	-	30,698	30,698	64,425	48%	105,600	29%
	MMBtu Annual	-	-	-	9,603	9,603	16,640	58%	28,490	34%
	MMBtu Lifetime	-	-	-	192,056	192,056	332,500	58%	569,500	34%
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	-	-	-	1,318	1,318	2,581	51%	4,291	31%
Customer Bill Savings (millions)	Lifetime Tons	-	-	-	26,362	26,362	51,500	51%	85,700	31%
	Annual Dollars	-	-	-	\$0.30	\$0.30	\$0.52	57%	\$0.86	34%
Private Investment (millions)	Lifetime Dollars	-	-	-	\$5.93	\$5.93	\$10.41	57%	\$17.19	34%
	Dollars	-	-	-	\$4.00	\$4.00	\$12.87	31%	\$20.82	19%
Participants	Participants	-	-	-	834	834	1,639	51%	2,689	31%

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

**Table 18. Multifamily New Construction Resource Acquisition Transition Initiative: Low- to Moderate-Income Results**

**Approval Date:** February 29, 2016

**Launch Date:** August 8, 2016

Resource Acquisition Transition Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2018)	% of Total Target through Initiative Completion (2018)
Energy Efficiency	MWh Annual	-	-	-	8,630	8,630	11,403	76%	15,520	56%
	MWh Lifetime	-	-	-	172,602	172,602	227,700	76%	310,200	56%
	MMBtu Annual	-	-	-	42,586	42,586	57,400	74%	81,100	53%
	MMBtu Lifetime	-	-	-	851,720	851,720	1,148,000	74%	1,622,000	53%
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	-	-	-	6,805	6,805	9,030	75%	12,450	55%
Customer Bill Savings (millions)	Lifetime Tons	-	-	-	136,096	136,096	180,825	75%	249,300	55%
	Annual Dollars	-	-	-	\$1.64	\$1.64	\$1.83	89%	\$2.51	65%
Private Investment (millions)	Lifetime Dollars	-	-	-	\$32.76	\$32.76	\$36.63	89%	\$50.20	65%
	Dollars	-	-	-	\$29.55	\$29.55	\$46.58	63%	\$62.40	47%
Participants	Participants	-	-	-	4,407	4,407	5,757	77%	7,857	56%

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

**Table 19. Anaerobic Digesters Resource Acquisition Transition Initiative Results**

**Approval Date:** February 29, 2016

**Launch Date:** July 8, 2016

See Endnotes section for more information<sup>16</sup>

Resource Acquisition Transition Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	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	-	-	-	7,444	7,444	26,190	28%	37,440	20%
	MWh Lifetime	-	-	-	74,440	74,440	261,900	28%	374,400	20%
	MW	-	-	-	1	1	1	113%	1	113%
CO2e Emission Reduction (metric tons)	Annual Tons	-	-	-	3,917	3,917	13,920	28%	19,920	20%
	Lifetime Tons	-	-	-	39,168	39,168	139,200	28%	199,200	20%
Customer Bill Savings (millions)	Annual Dollars	-	-	-	\$1.08	\$1.08	\$3.49	31%	\$4.99	22%
	Lifetime Dollars	-	-	-	\$10.83	\$10.83	\$34.99	31%	\$49.99	22%
Private Investment (millions)	Dollars	-	-	-	\$8.00	\$8.00	\$69.00	12%	\$99.00	8%
Participants	Participants	-	-	-	2	2	7	29%	10	20%

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

**Table 20. Small Wind Resource Acquisition Transition Initiative Results**

**Approval Date:** February 29, 2016

**Launch Date:** March 1, 2016

See Endnotes section for more information<sup>17</sup>

Resource Acquisition Transition Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	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	880	-	880	453	1,333	3,500	38%	5,000	27%
	MWh Lifetime	17,609	-	17,609	9,053	26,663	58,000	46%	82,000	33%
	MW	0.4	-	0.4	0.3	1	1	57%	2	40%
CO2e Emission Reduction (metric tons)	Annual Tons	463	-	463	238	701	2,250	31%	3,000	23%
	Lifetime Tons	9,265	-	9,265	4,764	14,029	31,250	45%	44,000	32%
Customer Bill Savings (millions)	Annual Dollars	\$0.11	-	\$0.11	\$0.06	\$0.17	\$0.51	33%	\$0.72	23%
	Lifetime Dollars	\$2.17	-	\$2.17	\$1.16	\$3.33	\$10.20	33%	\$14.40	23%
Private Investment (millions)	Dollars	\$1.79	-	\$1.79	\$1.90	\$3.69	\$5.10	72%	\$7.20	51%
Participants	Participants	23	-	23	32	55	92	60%	129	43%

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

**Table 21. Solar Thermal Resource Acquisition Transition Initiative Results**

**Approval Date:** February 29, 2016

**Launch Date:** March 1, 2016

Resource Acquisition Transition Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2016)	% of Total Target through Initiative Completion (2016)
Energy Efficiency	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MMBtu Annual	-	-	-	-	-	*	-	*	-
	MMBtu Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	123	-	123	707	830	830	100%	830	100%
	MWh Lifetime	1,849	-	1,849	10,604	12,453	12,500	100%	12,500	100%
	MW	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	Annual Tons	65	-	65	372	437	437	100%	437	100%
	Lifetime Tons	973	-	973	5,580	6,552	6,550	100%	6,550	100%
Customer Bill Savings (millions)	Annual Dollars	\$0.02	-	\$0.02	\$0.09	\$0.11	\$0.11	96%	\$0.11	96%
	Lifetime Dollars	\$0.23	-	\$0.23	\$1.35	\$1.58	\$1.66	95%	\$1.66	95%
Private Investment (millions)	Dollars	\$0.08	-	\$0.08	\$0.74	\$0.82	\$0.82	100%	\$0.82	100%
Participants	Participants	8	-	8	34	42	42	100%	42	100%
Eligible Installers		-	-	-	-	-	20	-	20	-

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

**Table 22. Combined Heat and Power Resource Acquisition Transition Initiative Results**

**Approval Date:** February 29, 2016

**Launch Date:** March 1, 2016

See Endnotes section for more information<sup>18,19,20,21</sup>

Resource Acquisition Transition Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2018)	% of Total Target through Initiative Completion (2018)
Energy Efficiency	MWh Annual	1,740	-	1,740	220,810	222,550	242,000	92%	287,000	78%
	MWh Lifetime	26,096	-	26,096	3,312,157	3,338,253	3,577,500	93%	4,230,000	79%
	MMBtu Annual	-	-	-	-	-	*	-	*	-
	MMBtu Lifetime	-	-	-	-	-	*	-	*	-
Renewable Energy	MW	0.3	-	0.3	41	42	43	97%	51	82%
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	355	-	355	46,176	46,532	54,450	85%	64,800	72%
Customer Bill Savings (millions)	Lifetime Tons	5,330	-	5,330	692,645	697,975	817,750	85%	973,000	72%
	Annual Dollars	\$0.17	-	\$0.17	\$22.21	\$22.38	\$24.59	91%	\$29.19	77%
Private Investment (millions)	Lifetime Dollars	\$2.61	-	\$2.61	\$333.08	\$335.68	\$368.70	91%	\$437.70	77%
	Dollars	\$11.60	-	\$11.60	\$184.74	\$196.34	\$209.00	94%	\$230.00	85%
Participants	Participants	26	-	26	74	100	74	135%	86	116%
MT Marketplace		-	-	-	12	12	14	89%	24	89%
Technical Assistance		-	-	-	20	20	*	-	*	-

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



### 3 Market Development Initiative Specific Results

**Table 23. Market Development Initiative Budgets and Spending**

See Endnotes section for more information<sup>22,23</sup>

Initiative	Budget Approved as of December 31, 2017 <sup>a</sup>	Expended Funds <sup>b</sup>	Open Encumbrances <sup>c</sup>	Contract Pre-Encumbrances <sup>d</sup>	Committed Funds <sup>e</sup>	% of Approved Budget Committed <sup>f</sup>	Budget Approved Remaining Balance <sup>g</sup>
<b>Market Characterization &amp; Design Chapter</b>	<b>\$21,150,000</b>	<b>\$2,147,226</b>	<b>\$1,881,078</b>	<b>\$160,500</b>	<b>\$4,188,803</b>	<b>20%</b>	<b>\$16,961,197</b>
<b>Commercial Chapter</b>							
Energy Management	\$59,805,000	\$962,953	\$5,148,146	\$4,507,784	\$10,618,883	18%	\$49,186,117
Real Estate Tenant	\$25,500,000	\$898,269	\$1,807,611	\$301,472	\$3,007,353	12%	\$22,492,647
REV Campus Challenge	\$21,650,000	\$310,102	\$1,872,524	\$1,403,273	\$3,585,899	17%	\$18,064,101
K-12	\$21,600,000	-	-	\$1,800,000	\$1,800,000	8%	\$19,800,000
<b>Commercial Chapter Total</b>	<b>\$128,555,000</b>	<b>\$2,171,325</b>	<b>\$8,828,281</b>	<b>\$8,012,529</b>	<b>\$19,012,135</b>	<b>15%</b>	<b>\$109,542,865</b>
<b>Industrial Chapter</b>							
Continuous Energy Improvement	\$17,539,000	\$1,623,167	\$1,491,722	\$1,316,247	\$4,431,135	25%	\$13,107,865
<b>Industrial Chapter Total</b>	<b>\$17,539,000</b>	<b>\$1,623,167</b>	<b>\$1,491,722</b>	<b>\$1,316,247</b>	<b>\$4,431,135</b>	<b>25%</b>	<b>\$13,107,865</b>
<b>Communities Chapter</b>							
Clean Energy Communities	\$14,218,527	\$417,080	\$1,759,467	\$4,738,348	\$6,914,895	49%	\$7,303,632
Community Energy Engagement	\$4,409,882	\$60,061	\$3,484,358	\$865,463	\$4,409,882	100%	-
<b>Communities Chapter Total</b>	<b>\$18,628,409</b>	<b>\$477,141</b>	<b>\$5,243,825</b>	<b>\$5,603,811</b>	<b>\$11,324,777</b>	<b>61%</b>	<b>\$7,303,632</b>
<b>Large-Scale Renewables Chapter</b>							
Offshore Wind Master Plan	\$5,000,000	\$1,313,753	\$213,004	-	\$1,526,758	31%	\$3,473,242
Offshore Wind Pre-Development Activities	\$10,000,000	\$4,915,665	\$405,252	\$85,000	\$5,405,918	54%	\$4,594,082
<b>Large-Scale Renewables Chapter Total</b>	<b>\$15,000,000</b>	<b>\$6,229,419</b>	<b>\$618,257</b>	<b>\$85,000</b>	<b>\$6,932,675</b>	<b>46%</b>	<b>\$8,067,325</b>
<b>REV Technical Assistance Chapter</b>							
REV Connect	\$2,500,000	\$1,532,971	\$933,234	-	\$2,466,205	99%	\$33,795
<b>REV Technical Assistance Chapter Total</b>	<b>\$2,500,000</b>	<b>\$1,532,971</b>	<b>\$933,234</b>	<b>-</b>	<b>\$2,466,205</b>	<b>99%</b>	<b>\$33,795</b>
<b>Energy Storage Chapter</b>							
Reducing Barriers to Distributed Deployment	\$24,450,000	\$808,404	\$1,785,506	\$3,779,198	\$6,373,108	26%	\$18,076,892
<b>Energy Storage Chapter Total</b>	<b>\$24,450,000</b>	<b>\$808,404</b>	<b>\$1,785,506</b>	<b>\$3,779,198</b>	<b>\$6,373,108</b>	<b>26%</b>	<b>\$18,076,892</b>
<b>Clean Transportation Chapter</b>							
Electric Vehicles	\$39,500,000	\$5,612,661	-	\$402,007	\$6,014,668	15%	\$33,485,332
<b>Clean Transportation Chapter Total</b>	<b>\$39,500,000</b>	<b>\$5,612,661</b>	<b>-</b>	<b>\$402,007</b>	<b>\$6,014,668</b>	<b>15%</b>	<b>\$33,485,332</b>
<b>Agriculture Chapter</b>							
2030 GLASE	\$5,000,000	\$275,648	\$4,724,352	-	\$5,000,000	100%	-
Advancing Agricultural Energy Technologies	\$3,760,000	-	-	-	-	-	\$3,760,000
<b>Agriculture Chapter Total</b>	<b>\$8,760,000</b>	<b>\$275,648</b>	<b>\$4,724,352</b>	<b>-</b>	<b>\$5,000,000</b>	<b>57%</b>	<b>\$3,760,000</b>

**Table 23 continued**

<b>Low- to Moderate-Income Chapter</b>							
Healthy Homes Feasibility Study	\$215,000	\$92,374	\$119,773	-	\$212,147	99%	\$2,853
LMI Multifamily	\$50,189,418	\$1,054,783	\$3,861,627	\$3,271,925	\$8,188,335	16%	\$42,001,083
LMI Single Family	\$229,261,852	\$64,794,682	\$3,696,168	\$16,386,764	\$84,877,614	37%	\$144,384,238
Low-Income Forum on Energy	\$1,300,000	\$79,557	\$169,341	\$30,000	\$278,898	21%	\$1,021,102
Retrofit NY	\$30,503,500	\$269,410	\$226,634	-	\$496,044	2%	\$30,007,457
REVitalize	\$725,000	\$31,527	\$83,133	\$195,000	\$309,660	43%	\$415,340
Low Income Community Solar	\$21,245,000	\$3,999	\$50,000	-	\$53,999	0.3%	\$21,191,001
<b>Low- to Moderate-Income Chapter Total</b>	<b>\$333,439,770</b>	<b>\$66,326,332</b>	<b>\$8,206,675</b>	<b>\$19,883,689</b>	<b>\$94,416,696</b>	<b>28%</b>	<b>\$239,023,074</b>
<b>Workforce Development and Training Chapter</b>							
Industry Partnerships	\$11,345,000	\$360,646	\$2,778,934	\$1,545,411	\$4,684,991	41%	\$6,660,009
<b>Workforce Development and Training Chapter Total</b>	<b>\$11,345,000</b>	<b>\$360,646</b>	<b>\$2,778,934</b>	<b>\$1,545,411</b>	<b>\$4,684,991</b>	<b>41%</b>	<b>\$6,660,009</b>
<b>Renewable Heating and Cooling</b>							
Heat Pumps and Solar Thermal	\$33,211,843	\$1,550,096	\$5,327,624	\$1,796,286	\$8,674,006	26%	\$24,537,837
Renewable Heat NY	\$13,487,000	\$1,194,623	\$514,288	\$155,543	\$1,864,455	14%	\$11,622,545
<b>Renewable Heating and Cooling Total</b>	<b>\$46,698,843</b>	<b>\$2,744,720</b>	<b>\$5,841,912</b>	<b>\$1,951,829</b>	<b>\$10,538,461</b>	<b>23%</b>	<b>\$36,160,382</b>
<b>Clean Energy Products Chapter</b>							
Underutilized Product Support	\$28,896,000	\$2,108,750	\$588,921	\$172,501	\$2,870,172	10%	\$26,025,828
<b>Clean Energy Products Chapter Total</b>	<b>\$28,896,000</b>	<b>\$2,108,750</b>	<b>\$588,921</b>	<b>\$172,501</b>	<b>\$2,870,172</b>	<b>10%</b>	<b>\$26,025,828</b>
<b>Multi-Sector Solutions Chapter</b>							
Soft Cost Challenge	\$10,000,000	\$62,598	-	-	\$62,598	1%	\$9,937,402
Technical Services	\$21,898,040	\$807	-	\$214,000	\$214,807	1%	\$21,683,233
Clean Energy AMP Challenge	\$10,500,000	-	-	-	-	-	\$10,500,000
Clean Energy Siting & Soft Cost Reduction	\$8,795,000	-	-	-	-	-	\$8,795,000
<b>Multi-Sector Solutions Chapter Total</b>	<b>\$51,193,040</b>	<b>\$63,405</b>	<b>-</b>	<b>\$214,000</b>	<b>\$277,405</b>	<b>1%</b>	<b>\$50,915,635</b>
<b>Codes Chapter</b>							
Code to Zero	\$21,000,000	\$22,733	\$294,500	\$17,500	\$334,733	1.6%	\$20,665,267
<b>Codes Chapter Total</b>	<b>\$21,000,000</b>	<b>\$22,733</b>	<b>\$294,500</b>	<b>\$17,500</b>	<b>\$334,733</b>	<b>1.6%</b>	<b>\$20,665,267</b>
<b>On-Site Power Chapter</b>							
Fuel Cells	\$15,000,000	-	-	-	-	-	\$15,000,000
<b>On-Site Power Chapter Total</b>	<b>\$15,000,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>\$15,000,000</b>
<b>New Construction Chapter</b>							
New Construction	\$96,641,432	\$13,420	\$251,650	\$22,500	\$287,570	0.3%	\$96,353,862
<b>New Construction Chapter Total</b>	<b>\$96,641,432</b>	<b>\$13,420</b>	<b>\$251,650</b>	<b>\$22,500</b>	<b>\$287,570</b>	<b>0.3%</b>	<b>\$96,353,862</b>
<b>Residential Chapter</b>							
Engaging New Markets	\$15,988,015	\$6,314	\$43,686	\$44,620	\$94,620	1%	\$15,893,395
<b>Residential Chapter Total</b>	<b>\$15,988,015</b>	<b>\$6,314</b>	<b>\$43,686</b>	<b>\$44,620</b>	<b>\$94,620</b>	<b>1%</b>	<b>\$15,893,395</b>
<b>NYS Cost Recovery Fee</b>	<b>\$28,908,315</b>	<b>\$2,294,320</b>	<b>-</b>	<b>-</b>	<b>\$2,294,320</b>	<b>8%</b>	<b>\$26,613,995</b>
<b>Total Market Development</b>	<b>\$925,192,824</b>	<b>\$94,818,601</b>	<b>\$43,512,532</b>	<b>\$43,211,342</b>	<b>\$181,542,475</b>	<b>20%</b>	<b>\$743,650,348</b>

Table notes are on the next page.

- a Funds approved by the DPS as of March 31, 2018.
- 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 Sum of Expended Funds, Open Encumbrances, and Contract Pre-Encumbrances.
- f Percentage of the budget that has been committed.
- g Difference between Budget Approved Funds and Committed Funds.

**Table 24. Real Estate Tenant Initiative Results**

**Approval Date:** May 23, 2016

**Launch Date:** July 19, 2016

Market Development Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2024)	% of Total Target through Initiative Completion (2024)
Energy Efficiency	MWh Annual	203	927	1,131	7,557	8,688	19,246	45%	124,900	7%
	MWh Lifetime	1,626	7,419	9,045	60,457	69,502	154,218	45%	999,200	7%
	MMBtu Annual	215	981	1,196	7,997	9,193	20,303	45%	131,800	7%
	MMBtu Lifetime	1,720	7,851	9,571	63,972	73,543	162,020	45%	1,054,000	7%
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	118	542	660	4,400	5,061	11,190	45%	72,700	7%
	Lifetime Tons	943	4,338	5,282	35,202	40,484	89,564	45%	581,600	7%
Customer Bill Savings (millions)	Annual Dollars	\$0.04	\$0.16	\$0.20	\$1.24	\$1.44	\$2.67	54%	\$17.34	8%
	Lifetime Dollars	\$0.28	\$1.30	\$1.58	\$9.92	\$11.50	\$21.31	54%	\$138.70	8%
Private Investment (millions)	Dollars	\$0.01	\$0.02	\$0.04	\$0.37	\$0.41	\$1.87	22%	\$12.15	3%
Participants	Participants	2	13	15	97	112	189	59%	1,349	8%

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

**Table 25. 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 the 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).	NYSERDA launched the program in July 2016. Initial market uptake was lower than anticipated. Through stakeholder engagement and voice of customer research, the program was revised in July 2017. Program revisions (issued in fall 2017) resulted in greater market uptake. A total of 112 sites are currently enrolled in the program, 58 of which were received in Q1 2018. Initial projects resulted in greater energy efficiency in tenant spaces and "primed" the sector for more energy efficiency projects.
	2018–2024	Building specific packages demonstrate replicability of tenant-specific model to the whole building for development of building-specific packages.	Some energy consultants and building owners have begun to see the value of these generic packages and started to make use of them. Different use cases are emerging, and this development will be used to inform future program direction.
	2018–2024	Engagement with stakeholders involves all identified market actors.	Our continued engagement with key stakeholders, through outreach and market research efforts, allows NYSERDA to continually identify areas of opportunity to engage tenants in energy efficiency and be responsive to the market. Brokers are a hard-to-reach audience and NYSERDA is strategizing on how to best engage them in the process.
	2018–2024	Secure commitments from building owners and managers and brokers to provide building-specific packages to new tenants with leasing materials.	Currently, about one-third of the projects in the program are for building owners commissioning generic packages. Different use cases of these generic packages are emerging and providing interesting insight into the motivations and intentions of building owners when it comes to engaging tenants. Building owners still need to better understand the value of the generic packages before they will include them in their leasing packages.
	2018–2024	New tenants use building-specific energy efficiency packages (actual participation identified from results reported by building owner).	As building owners understand the value of the generic package, more will want to include it in their tenant engagement activities and leasing process. These activities are still in their infancy as the program gathers momentum in the marketplace and building owners explore different ways to leverage the program to get tenants to implement energy efficiency.
	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.	As more building owners commission generic packages for their tenants, NYSERDA will be able to assess how successful these packages are as engagement tools for tenants.

Table 25 continued

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2018–2024	NYSERDA validates energy models, energy savings, incremental cost, and return on investment for tenant projects.	When a tenant chooses to implement a measure from the energy efficiency package, NYSERDA will determine whether M&V is warranted, based on the scope of the installed measures. M&V will be most valuable for more complex, interactive measures, as opposed to a lighting only project, for example.
	2018–2024	NYSERDA confirms economic savings/value while presenting soft cost (i.e., productivity) opportunities as additional benefits to the market.	This analysis will go hand in hand with the validation activities outlined in the previous milestone.
	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.	To date, project completion dates and the types of projects completed have not been conducive to this type of data collection and analysis.
	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.	Building owners are just beginning to understand the value of the generic package and are exploring different use cases within their organizations. Service providers are also beginning to see the value of this service and as more building owners sign up, the impact on tenants' behaviors will become more apparent.
	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 26. Energy Management Initiative Results**

**Approval Date:** May 23, 2016

**Launch Date:** June 20, 2016

Market Development Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2024)	% of Total Target through Initiative Completion (2024)
Energy Efficiency	MWh Annual	-	-	-	54,647	54,647	85,050	64%	444,300	12%
	MWh Lifetime	-	-	-	437,176	437,176	682,600	64%	3,554,000	12%
	MMBtu Annual	-	-	-	40,484	40,484	38,050	106%	184,200	22%
	MMBtu Lifetime	-	-	-	323,868	323,868	304,050	107%	1,474,000	22%
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	-	-	-	31,011	31,011	46,900	66%	243,400	13%
Customer Bill Savings (millions)	Lifetime Tons	-	-	-	248,088	248,088	373,950	66%	1,948,000	13%
	Annual Dollars	-	-	-	\$8.80	\$8.80	\$11.54	76%	\$60.11	15%
Private Investment (millions)	Lifetime Dollars	-	-	-	\$70.43	\$70.43	\$92.25	76%	\$480.90	15%
	Dollars	-	-	-	\$8.66	\$8.66	\$31.12	28%	\$357.80	2%
Participants (Number of RTEM Buildings)		-	-	-	111	111	110	101%	822	14%
Participants (Number of REM Buildings)	Participants	-	-	-	-	-	37	-	640	-

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

**Table 27. Key Milestones for Energy Management**

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2016	Secure RTEM Advisor and begin development of market standards.	RTEM Advisor is secure 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 received 113 applications to date and 53 vendors are currently approved. This is marked complete, but the RFQ is open until April 2021, so the number of vendors will continue to grow.
✓	2016	Stimulate interest and market activity with an open enrollment incentive offering.	The RTEM Program Opportunity Notice 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. A substantial number of vendors are now qualified, 59 project applications over 93 sites are approved, and more are expected. PON is open through June 30, 2021.
✓	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 led to interactive conversations that allow firms to clearly identify areas of opportunity to expand their services and abilities. The program's criteria are causing these opportunities to be adopted sooner than would have occurred without the program.
	2017–2020	Incentives, Qualified Vendor Listing, and Independent RTEM advisor services help convert prospective customers into committed and installed RTEM projects.	There are 79 approved RTEM projects with installation/services underway and a project pipeline of 40 additional projects. Projects can take a year to install and then proceed for 1-5 years during which time the program collects data on recommended and installed energy efficiency measures. Initial reporting of findings is expected to begin in 2020.
	2017–2020	NYSERDA market support and approach attract new RTEM vendors to the New York State market and increase business development investment of all RTEM vendors.	Due to the RTEM program, vendors are looking to initiate new business in NYS. Furthermore, due to the program structure of the program, vendors looking to enter the NYS market can partner with vendors who already have business in NYS and can leverage existing relationships, thus expediting business development opportunities.

Table 27 continued

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2017–2020	Secure REM Advisor and begin development of market standards.	Contractors selected through REM RFP 3681 are set to begin market activity in Q2 2018. This effort will inform the development of market standards
	2017–2020	Create and grow a list of qualified REM vendors.	Through RFP 3681, NYSERDA selected a group of REM vendors to start the REM program. Contracting with vendors is still ongoing and it is anticipated that work will begin in Q2 2018.
	2017–2020	Stimulate interest and market activity with an open enrollment incentive offering for REM.	Contracting with the REM vendors selected through RFP 3681 is in process and work is expected to begin in Q2 2018.
	2017–2020	EM Advisors support gaps in market confidence and identify market approaches to eliminating gaps.	Work on this will begin once RTEM projects begin to be installed and reporting savings.
	2017–2020	Peer-to-peer exchanges and EM Advisors transfer learnings across the projects supported by NYSERDA and enhance success.	During the early RTEM project installations, discussions of best practices, client communications, and lessons learned have been reported to the RTEM Advisor.
	2017–2020	RTEM 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 customer needs are better defined through project level understanding. Therefore, NYSERDA will reconsider the timing of this milestone.
	2017–2020	RTEM Technical Guidance Document is published.	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 will reconsider the timing of this milestone.
	2017–2020	NYSERDA in coordination with industry partners standardizes methodologies for calculating/analyzing costs and savings data.	Working with CUNY BPL (Building Performance Lab) to help RTEM vendors participate in focus groups to develop a MSoC (minimum standards of care). The MSoC will serve as a customer buying guide that will highlight the fundamental RTEM System/Service capabilities and benefits.



Table 27 continued

Complete ✓	Time Frame	Milestone	Explanation of Progress
	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.	NYSERDA does not plan on ratcheting down direct supports in the near term but will continue to monitor program and market adoption.
	2018–2021	Methods for capturing the potential benefits of RTEM for operations and maintenance of buildings are standardized and widely available.	NYSERDA is collecting data on all projects participating in RTEM program and working with qualified vendors on the process of standardizing RTEM data.
	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.	NYSERDA has begun to collect RTEM project data sets but does not yet currently have sufficient data to publish anonymized data sets.
	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.	NYSERDA has begun to collect RTEM project data but does not yet have sufficient data to inform peak-load shaping efforts.
	2018–2021	Training platform for facility owners/operators is designed. Training platform is available and used by facility owners/operators.	NYSERDA is working with industry stakeholders and qualified vendors to make progress on building owner and operator training.
	2018–2021	Market penetration of REM insights increases as commercial customers gain awareness of and confidence in remote audit technology for energy efficiency projects and the usage becomes more widespread. Regularly engage with REM vendors to understand changing technology and market landscape.	NYSERDA is regularly engaging with REM vendors to understand changing technology and market insight.
	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 NYSEERDA'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 28. Reforming the Energy Vision (REV) Campus Challenge Initiative Results**

**Approval Date:** May 23, 2016

**Launch Date:** December 21, 2016

Market Development Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2025)	% of Total Target through Initiative Completion (2025)
Energy Efficiency	MWh Annual	-	-	-	16,138	16,138	29,000	56%	108,100	15%
	MWh Lifetime	-	-	-	242,063	242,063	433,750	56%	1,621,000	15%
	MMBtu Annual	-	-	-	99,407	99,407	180,000	55%	670,000	15%
	MMBtu Lifetime	-	-	-	1,491,108	1,491,108	2,687,500	55%	10,050,000	15%
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	1,838	-	8,804	-
	MWh Lifetime	-	-	-	-	-	27,500	-	132,100	-
CO2e Emission Reduction (metric tons)	MW	-	-	-	-	-	2	-	8	-
	Annual Tons	-	-	-	13,776	13,776	25,750	53%	97,030	14%
Customer Bill Savings (millions)	Lifetime Tons	-	-	-	206,635	206,635	386,250	53%	1,455,000	14%
	Annual Dollars	-	-	-	\$2.78	\$2.78	\$4.84	57%	\$18.07	15%
Private Investment (millions)	Lifetime Dollars	-	-	-	\$41.68	\$41.68	\$72.63	57%	\$271.10	15%
	Dollars	-	-	-	\$1.04	\$1.04	\$16.70	6%	\$71.20	1%
Participants	Participants	94	4	98	-	98	88	111%	150	65%

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

**Table 29. Key Milestones for REV Campus Challenge**

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2016–2019	A total of 120 out of 250 institutions sign up to be REV Campus Challenge Members.	The REV Campus Challenge has 98 institutions signed up as of the end of March 2018.
	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.	In April 2016, NYSERDA recognized 46 REV Campus Challenge members as part of a "First Movers" announcement during Earth Week to highlight those institutions that took the initiative to join early and demonstrate their commitment to integrating clean energy into their campus, classroom, and community activities.
	2020–2022	A total of 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/semiannual 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 30. K-12 Schools Initiative Results**

**Approval Date:** December 1, 2017

**Anticipated Launch Date:** Q2 2018

Market Development Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2025)	% of Total Target through Initiative Completion (2025)
Energy Efficiency	MWh Annual	-	-	-	-	-	1,450	-	90,480	-
	MWh Lifetime	-	-	-	-	-	21,750	-	1,357,000	-
	MMBtu Annual	-	-	-	-	-	8,075	-	500,000	-
	MMBtu Lifetime	-	-	-	-	-	121,000	-	7,500,000	-
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	-	-	-	-	-	1,223	-	76,170	-
Customer Bill Savings (millions)	Lifetime Tons	-	-	-	-	-	18,350	-	1,143,000	-
	Annual Dollars	-	-	-	-	-	\$0.27	-	\$16.69	-
Private Investment (millions)	Lifetime Dollars	-	-	-	-	-	\$4.03	-	\$250.40	-
	Dollars	-	-	-	-	-	\$1.80	-	\$86.40	-
Participants	Participants	-	-	-	-	-	50	-	2,800	-

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

**Table 31. Key Milestones for K-12 Schools**

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2017	Develop a list of K-12 clean energy resources and update the K-12 website. Use the website to disseminate resources across schools in NYS.	NYSERDA updated its K-12 landing page to include all currently relevant resources for schools. NYSERDA will continuously update and improve this as the initiative moves forward.
✓	2017	Promote the utilization of FlexTech and fund energy master planning and performance contracting assistance oversight for schools.	K-12 schools have received notice that FlexTech is available for assistance through the NYSERDA website update and emails from school associations.
	2018	Develop and launch a competitive solicitation to select an existing benchmarking tool for the benchmarking program.	Solicitation is under development and is expected to launch by Q2 2018.
	2018	Launch a clean energy benchmarking open enrollment program.	Open enrollment program will launch after selection of benchmarking tool (goal of Q3 2018).
	2018	Begin examining efforts to minimize hard and soft costs associated with delivering technical analysis for schools such as energy master plan development.	This effort is expected to begin in Q4 2018.
	2018	Launch a competitive solicitation to provide gap assistance.	The competitive solicitation is expected to launch in Q4 2018.
	2020	Assess participation and seek feedback on gap assistance funding program; identify any needed changes.	
	2020	Distribute first annual survey for schools to provide feedback on clean energy progress specific to energy use intensity and greenhouse gas emissions data, projects and recognition.	
	2021	Assess school progress in the launched initiatives and assist them in receiving recognition as demonstrated by new and revised clean energy planning and implementation projects	
	2021	Deploy clean energy case studies and guidance documents based on successful efforts.	
	2022	Launch second gap assistance funding program.	

**Table 32. Continuous Energy Improvement Initiative: On-Site Energy Manager Results**

**Approval Date:** May 23, 2016

**Launch Date:** September 12, 2016

See Endnotes section for more information<sup>24</sup>

Market Development Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2019)	% of Total Target through Initiative Completion (2019)
Energy Efficiency	MWh Annual	-	4,110	4,110	21,435	25,545	18,750	136%	42,000	61%
	MWh Lifetime	-	61,650	61,650	321,525	383,175	281,250	136%	630,000	61%
	MMBtu Annual	-	24,670	24,670	405,965	430,635	218,750	197%	500,000	86%
	MMBtu Lifetime	-	370,050	370,050	6,089,475	6,459,525	3,287,500	196%	7,500,000	86%
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	-	3,444	3,444	32,363	35,807	17,800	201%	50,400	71%
Customer Bill Savings (millions)	Lifetime Tons	-	51,657	51,657	485,441	537,099	267,000	201%	755,000	71%
	Annual Dollars	-	\$0.46	\$0.46	\$4.16	\$4.62	\$2.76	167%	\$7.80	59%
Private Investment (millions)	Lifetime Dollars	-	\$6.84	\$6.84	\$62.44	\$69.27	\$41.30	168%	\$117.00	59%
	Dollars	-	\$0.33	\$0.33	\$7.82	\$8.15	\$25.25	32%	\$55.80	15%
Participants	Participants	-	-	-	6	6	19	32%	40	15%

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

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

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2016 and 2017	List of qualified energy-focused process consultants from which On-site Energy Management expertise can be sought and/or matched with industrial facilities.	Of the approximate 50 FlexTech Consultants (FTCs), about half indicate aptitude in energy management. Since the first solicitation was released in September 2016, seven applications were received and approved that include four different FTCs. The second pilot was released with Commercial in November 2017 with changes to the offering based upon marketplace feedback intended to spur participation and get to the intended 30 total participants. A webinar was held in December with ~150 attendees, including consultants and customers. NYSERDA is in the process of contracting the first application to the second pilot and is aware of 15 potential new applications that will be followed up on. A list of the consultants who are part of both pilots will be shared with the marketplace.
	2016 and 2017	C-suite executive buy-in and engagement that provides momentum for energy planning and management activities at industrial sites.	C-suite executive buy-in and engagement is required to be confirmed as part of the application process. Eight total applications have been received with the requisite executive buy-in and engagement. Executive buy-in and engagement is continued via Energy Management Plan review and meetings.
	2016 and 2017	Industrial end-user commitment to energy goal creation and realization is key to successful On-site Energy Manager engagements.	Energy goals are created as part of the application process and are confirmed in the Energy Management Plans submitted in the first quarter of the engagements. Eight total applications have been received with energy goals stated and six Energy Management Plans have been submitted and approved with confirmed annual energy goals averaging 7% of site annual energy usage.
	2016 and 2017	Robust tracking and reporting of energy and nonenergy benefits of the On-site Energy Manager role.	Robust tracking and reporting of energy and nonenergy benefits occurs on a quarterly basis at the six active industrial projects. Results through March 31, 2018 are shown in Table 32.

Table 33 continued

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2017 and 2018	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.	Business cases that prove the benefits of on-site energy management will be shown in the final deliverables (final reports, case studies, and road maps). Six engagements are underway having different start/ end dates and will begin to show completion of final deliverables that prove the business case in Q2 2018.
	2017 and 2018	Business case content for consultant marketing plans, which address this need in the industrial market.	As business cases are completed (starting Q2 2018), results will be summarized into a format conducive for use in marketing plans by consultants.
	2018	Long-term energy resource(s) dedicated to energy management, without NYSERDA support (e.g., manufacturer hires energy manager in-house; continues with On-Site Energy Manager consultant; or with a new consultant).	First pilot projects do not begin completing until Q2 2018.
	2018	Transition of knowledge and tools from pilot On-site Energy Managers to long-term energy resource.	The first of the pilot project completions will begin in Q2 2018. Final case studies and tools are not yet developed. Three of the six first pilot participants have begun peer-to-peer sharing through presentations, webinars, websites, and companywide best practice sharing.
	2018	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.	First pilot projects do not begin completing until Q2 2018. Final case studies and tools are not yet developed. Three of the six first pilot participants have begun peer-to-peer sharing through presentations, webinars, websites, and companywide best practice sharing.



**Table 34. Continuous Ennergy Improvement Initiative: Strategic Energy Management Results**

**Approval Date:** May 23, 2016

**Launch Date:** November 22, 2016

See Endnotes section for more information<sup>25</sup>

Market Development Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2019)	% of Total Target through Initiative Completion (2019)
Energy Efficiency	MWh Annual	-	-	-	34,500	34,500	52,500	66%	52,500	66%
	MWh Lifetime	-	-	-	345,000	345,000	525,000	66%	525,000	66%
	MMBtu Annual	-	-	-	267,000	267,000	406,000	66%	406,000	66%
	MMBtu Lifetime	-	-	-	2,670,000	2,670,000	4,060,000	66%	4,060,000	66%
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	-	-	-	32,020	32,020	50,600	63%	50,600	63%
Customer Bill Savings (millions)	Lifetime Tons	-	-	-	320,198	320,198	506,000	63%	506,000	63%
	Annual Dollars	-	-	-	\$4.37	\$4.37	\$7.88	55%	\$7.88	55%
Private Investment (millions)	Lifetime Dollars	-	-	-	\$43.69	\$43.69	\$78.80	55%	\$78.80	55%
	Dollars	-	-	-	\$54.62	\$54.62	\$84.00	65%	\$84.00	65%
Participants	Participants	-	-	-	8	8	25	32%	40	20%

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

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

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2016 and 2017	<p>Facilities understand how energy intensity is embedded in their process and have integrated energy management into their organizational culture.</p> <p>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.</p>	<p>The Strategic Energy Management solicitation (Program Opportunity Notice 3411) was released in November 2016 and closed May 2017. Eight participants were selected to participate in the first cohort. The kick-off workshop for the cohort was on September 12, 2017 and attended by all participating facilities. As of November 2017, all participants have an Energy Map, have identified savings opportunities, and are working on developing project registers and plans for project implementation. The solicitation (Program Opportunity notice 3411) for the second cohort was released in December of 2017. NYSERDA is actively recruiting to fill this second cohort.</p>
	2017 and beyond	<p>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. 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).</p> <p>Executive support to implement energy-related projects.</p>	<p>The first cohort concludes in September 2018, after which progress will be reported.</p>
	2018 and beyond	<p>Industrial facilities seek out developed information and standardized tools as well as contractor support to implement and adopt SEM.</p> <p>Tracked inquiries and dissemination of case studies, training, SEM resources, and vetted consultant list.</p>	<p>These materials are still in development and information from the first cohort's successes is still being collected. Progress on this milestone will be updated Q4 2018.</p>
	2018 and beyond	<p>SEM replaces the ad hoc energy project approach resulting in deeper and continuous energy savings and energy decision-making at industrial facilities.</p> <p>Critical staff can express how the energy measures they've implemented have affected their bottom line.</p> <p>Facilities realize 1-2% reductions in their energy consumption annually.</p> <p>For large industrial facilities, this equates to approximately 150–300 MWh, 1,100–2,500 MMBtu Natural Gas, 75–160 MMBtu Oil, and \$100,000 in energy savings per participant in the first year.</p>	<p>Progress on this milestone will be updated in Q4 2018 and into 2019 as the cohorts are completed.</p>

**Table 36. Continuous Energy Improvement Initiative: Energy Management Information System Results**

**Approval Date:** June 23, 2017

**Launch Date:** November 14, 2017

Market Development Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2019)	% of Total Target through Initiative Completion (2019)
Energy Efficiency	MWh Annual	-	-	-	-	-	1,253	-	67,050	-
	MWh Lifetime	-	-	-	-	-	12,525	-	9,925,000	-
	MMBtu Annual	-	-	-	-	-	9,675	-	992,500	-
	MMBtu Lifetime	-	-	-	-	-	96,750	-	670,500	-
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	-	-	-	-	-	1,205	-	91,380	-
Customer Bill Savings (millions)	Lifetime Tons	-	-	-	-	-	12,050	-	913,800	-
	Annual Dollars	-	-	-	-	-	\$0.19	-	\$14.12	-
Private Investment (millions)	Lifetime Dollars	-	-	-	-	-	\$1.88	-	\$141.21	-
	Dollars	-	-	-	-	-	\$0.05	-	\$3.19	-
Participants	Participants	-	-	-	-	-	2	-	79	-

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

**Table 37. Key Milestones for Continuous Energy Improvement Initiative: Energy Management Information Systems**

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2017	Develop and release RFP for qualified EMIS vendors.	RPQ 3691 was launched on November 14, 2017.
✓	2017	Solicit and contract with EMIS assessment provider(s).	Technical reviewer contractors available for technical assessment of EMIS systems.
✓	2017	Develop solicitation for participants.	PON 3689 was launched on November 14, 2017.
✓	2017	Develop and disseminate a matrix or list of qualified EMIS vendors.	List of approved vendors to be supplied upon receipt and review of qualification applications
	2019	Distribute list of qualified EMIS vendors.	
	2019	Initiate development and dissemination of EMIS case studies, webinars, and knowledge transfer sessions in a variety of media/forums.	
	2021	Refine and continue the dissemination of EMIS case studies, webinars, and knowledge transfer sessions in a variety of media/forums.	Results of continuous reporting and shifts in the market will be reviewed for key lessons applicable to the EMIS customers and NYSERDA programs.

**Table 38. Clean Energy Communities Initiative Results**

**Approval Date:** May 23, 2016

**Launch Date:** August 3, 2016

See Endnotes section for more information<sup>26,27</sup>

Market Development Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2018)	% of Total Target through Initiative Completion (2018)
Energy Efficiency	MWh Annual	45,669	1,362	47,031	5,861	52,892	35,075	151%	118,600	45%
	MWh Lifetime	685,038	20,429	705,467	87,909	793,376	525,250	151%	1,780,000	45%
	MMBtu Annual	156,070	6,443	162,513	10,456	172,968	197,000	88%	667,500	26%
	MMBtu Lifetime	2,341,044	96,646	2,437,690	156,835	2,594,525	2,952,500	88%	9,990,000	26%
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	21,583	977	22,560	6	22,566	37,225	61%	126,000	18%
	MWh Lifetime	323,743	14,661	338,403	89	338,492	558,000	61%	1,889,000	18%
	MW	18	0.8	19	0	19	32	61%	107	18%
CO2e Emission Reduction (metric tons)	Annual Tons	44,302	1,603	45,905	3,694	49,599	49,225	101%	166,700	30%
	Lifetime Tons	664,526	24,051	688,576	55,407	743,984	739,000	101%	2,502,000	30%
Customer Bill Savings (millions)	Annual Dollars	\$10.38	\$0.38	\$10.76	\$0.89	\$11.64	\$11.44	102%	\$38.74	30%
	Lifetime Dollars	\$155.73	\$5.64	\$161.37	\$13.28	\$174.65	\$171.25	102%	\$580.30	30%
Private Investment (millions)	Dollars	\$17.69	\$0.31	\$18.00	-	\$18.00	\$23.83	76%	\$80.73	22%
Participants	Participants	62	65	127	-	127	60	212%	171	74%

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

**Table 39. Key Milestones for Clean Energy Communities**

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2016–2019	Eighty communities complete and demonstrate replicability of four out of 10 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. As of 3/31/18, 149 communities completed at least four actions and are officially designated Clean Energy Communities. In total, 360 Communities completed 929 high-impact actions, 758 of which were completed after program launch ('new').</p> <p>Anticipated savings from the 758 'new' completed High-Impact Actions and the 93 grant projects that are either awarded or underway (when combined with savings reported in Regional Greenhouse Gas Initiative (RGGI) reporting), include:</p> <ul style="list-style-type: none"> <li>• 150,008 MWh Efficiency Savings</li> <li>• 64,053 MWh Renewable Generation</li> <li>• 54.57 MW Renewable Generation</li> <li>• 394,316 MMBtu Natural Gas Savings</li> <li>• 5,561 MMBtu Gasoline Savings</li> <li>• 90,866 MMBtu Distillate Fuel Savings</li> </ul>
✓	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 six currently certified to 12 certified.	There are now 16 Certified Climate Smart Communities, nine of which achieved Certification after CEC program launch.
	2016–2019	NYSERDA 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 recently released minor revisions to the Clean Energy Communities program to better accommodate the needs of communities and to clarify program requirements.

**Table 40. Community Energy Engagement Initiative Results**

**Approval Date:** March 27, 2017

**Launch Date:** October 10, 2017

Market Development Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	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	-	-	-	\$1.73	\$1.73	\$1.73	100%	\$1.73	100%
Participants	Participants	-	-	-	3,355	3,355	3,355	100%	3,355	100%

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

**Table 41. Key Milestones Community Energy Engagement**

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2017	NYSERDA issues competitive “base-activities” solicitation.	Solicitation was released May 2, 2017.
	2017	Awards from base-activity solicitation are contracted.	Solicitation was release May 2, 2017 with proposals due June 20, 2017.  Eight contracts were awarded through the first release of the solicitation and are fully executed, while the remaining two regions were awarded in November 2017. NYSERDA anticipates full execution of these contracts Q2 2018.
✓	2017	Commencement of local outreach and support to households and communities (with the focus on LMI).	Eight of 10 organizations are now under contract. Proposals for the second release of the solicitation were awarded and NYSERDA anticipates full launch of program in Q2 2018 for all 10 regions.
	2018	NYSERDA initiates awards proposals for regional-specific pilot projects.	None at this time as only eight of the 10 contracts are executed. Anticipate this activity to be developed in Q2 2018 and executed in late 2018.
	2018–2020	NYSERDA develops one or more case studies on regional-specific pilot projects and other support provided through the base activities.	None at this time as the initiative has not fully launched yet.
	2019	Conduct surveys of customers assisted by Local Based Organizations (LBO) to assess performance.	



**Table 42. Offshore Wind Master Plan Initiative Results**

**Approval Date:** May 23, 2016

**Launch Date:** September 15, 2016

Market Development Initiative Specific Results	Market Development Initiative	Completed Projects through September 30, 2017 with Adjustments	Completed Projects through December 31, 2017 with Adjustments	Total Completed Projects through December 31, 2017	Current Pipeline Through December 31, 2017 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q4 2017	% of Cumulative Current Target Through Q4 2017	Total Target through Initiative Completion (2019)	% of Total Target through Initiative Completion (2019)
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	-	-	-	-	-	*	-	*	-
Participants	Participants	-	-	-	-	-	*	-	*	-

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

**Table 43. 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.	Six public meetings were held in July-August in Melville, Long Beach, Southampton, Rockaway Beach, Staten Island, and Brooklyn. Additionally, meetings were held with the fishing, maritime, environmental, labor, and offshore wind communities as well as elected officials and State and federal agencies.
✓	2016–2017	Publish the final Offshore Wind Master Plan, after completion of studies and no later than end of 2017.	The Offshore Wind Master Plan and all underlying studies were completed on schedule by 12/31/2017. The Master Plan and all studies were published on January 29, 2018.

**Table 44. Offshore Wind Pre-Development Activities Initiative Results**

**Approval Date:** May 23, 2016

**Launch Date:** December 12, 2016

Market Development Initiative Specific Results	Market Development Initiative	Completed Projects through September 30, 2017 with Adjustments	Completed Projects through December 31, 2017 with Adjustments	Total Completed Projects through December 31, 2017	Current Pipeline Through December 31, 2017 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q4 2017	% of Cumulative Current Target Through Q4 2017	Total Target through Initiative Completion (2019)	% of Total Target through Initiative Completion (2019)
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	-	-	-	-	-	*	-	*	-
Participants	Participants	-	-	-	-	-	*	-	*	-

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

**Table 45. Key Milestones for Offshore Wind Pre-Development Activities**

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓		Reports resulting from predevelopment work validating New York State Offshore Wind resource and proposing potential additional wind energy areas for development.	<p>Planning has been completed for environmental and other studies and surveys.</p> <p>Solicitation issued for offshore wind technical assistance in December 2016.</p> <p>There were 20 environmental, social, regulatory, economic and infrastructural reports, including a report of New York State's Offshore Wind resources, completed by December 31, 2017 and published January 29, 2018. Drafts of all 20 reports were sent to external reviewers and input from reviewers informed final reports.</p> <p>New York State Area for Consideration for the Potential Locating of Offshore Wind Energy Areas completed with report given to the Bureau of Ocean Energy Management and public in October 2017.</p>
		Reports providing site-specific data needed to support detailed siting, design, and permitting of Offshore Wind project(s).	<p>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. Draft Metocean Plan published November 2016.</p> <p>Additional planning started in Q1 2017 for site-specific environmental, sea floor, and other studies and surveys. Multi-beam sonar and sediment profile imaging survey of sea floor undertaken in June-August 2017 with final report completed by December 31, 2017 and published January 29, 2018.</p> <p>Working on plan for deploying one or more buoys for measuring wind, wave, and other data in 2018.</p> <p>Solicitations have been issued to begin work on a supply chain database and a cost assessment of New York port infrastructure. Both studies will be completed in Q3 2018.</p>

**Table 46. REV Connect Initiative Results**

**Approval Date:** May 23, 2016

**Launch Date:** August 9, 2016

Market Development Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2018)	% of Total Target through Initiative Completion (2018)
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	\$0.07	-	\$0.07	-	\$0.07	\$0.31	21%	\$0.50	13%
Participants	Participants	-	-	-	-	-	*	-	*	-

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

**Table 47. Key Milestones for REV Connect**

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	Q3 2016	Execute contract with partner to operate REV Connect.	NYSERDA competitively selected and executed a contract with a contractor to operate REV Connect.
✓	Q2 2017	Create information resources and summarize best practices.	Information resources completed and posted to the nyrevconnect.com website include focal innovation opportunities that NYS utilities are interested in, a profile of each investor-owned utility in the State, summaries of key REV orders, and listings of active solicitations and non-wires alternative opportunities statewide. Resources are updated on an ongoing basis.
✓	Q2 2017	Develop project evaluation criteria and process.	The project evaluation criteria and process were tested with market participants in May 2017, completed in June 2017, and posted to the REV Connect website.
✓	Q3 2017	Launch initial REV Connect platform to allow submission of project ideas.	The REV Connect website launched on August 19, 2017.
	Q4 2017	Draft Innovation Plan completed.	In July 2017, NYSERDA removed this task from the contractor's scope of work to shift resources into other project tasks. NYSERDA is undertaking the related planning.

**Table 48. Reducing Barriers to Deploying Distributed Energy Storage Initiative Results**

**Approval Date:** August 17, 2016

**Launch Date:** November 7, 2016 issued Request for Proposals (RFP) seeking technical assistance contractors.  
April 19, 2017 issued value-stacking pilot competitive solicitation.

Market Development Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2019)	% of Total Target through Initiative Completion (2019)
Energy Efficiency	MWh Annual	143	-	143	1,200	1,342	3,775	36%	13,800	10%
	MWh Lifetime	1,428	-	1,428	11,995	13,423	37,750	36%	138,000	10%
	MMBtu Annual	-	-	-	-	-	*	-	*	-
	MMBtu Lifetime	-	-	-	-	-	*	-	*	-
	MW	0.3	-	0.3	2	2	7	36%	25	10%
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	Annual Tons	75	-	75	631	706	1,988	36%	7,260	10%
	Lifetime Tons	751	-	751	6,311	7,063	19,875	36%	72,600	10%
Customer Bill Savings (millions)	Annual Dollars	\$0.02	-	\$0.02	\$0.16	\$0.18	\$0.50	37%	\$1.84	10%
	Lifetime Dollars	\$0.24	-	\$0.24	\$1.60	\$1.83	\$5.02	37%	\$18.35	10%
Private Investment (millions)	Dollars	-	-	-	-	-	\$11.40	-	\$30.00	-
Number of customers engaged (sites for developments)	Participants	-	-	-	63	63	41	153%	120	53%
Number of vendors engaged	Participants	1	-	1	160	161	19	859%	45	358%

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

**Table 49. 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.	Completed; contracts executed for four technical assistance contractors competitively selected from 42 proposals received.
✓	2017	Lead acid, lithium-ion, and flow batteries are independently tested with results aggregated into first responder training materials for authorities having jurisdiction.	Independent burn testing report issued for chemistries seeking FDNY permit; first responder training materials being completed; refer to milestone six for incorporation of these results into permitting requirements.
✓	2017	Technical consultants or organizations to assist with soft cost reduction strategies, quality assurance, and feasibility studies are selected.	Technical assistance contractors selected and contracted.
✓	2017	Launch a competitive program funding value-stacking pilots.	Solicitation developed with input from developers, customers, utilities, and NYISO. Launched in April 2017, NYSERDA is conducting outreach with prospective vendors and customers, and reviewing concept papers received.
	2017	Expand scope of battery testing lab for additional chemistries to be tested.	Additional testing requirements may be driven by Underwriters Lab 9540/9540A standard. As part of work with FDNY to develop interior siting requirements for advanced batteries, this will become clearer and will not require additional testing at this time.
✓	2017	Model permitting guides are developed.	Consolidated guidelines for recommended permitting requirements for exterior advanced battery systems completed and with FDNY and NYC Dept. of Buildings (DOB) for review. Weekly meetings have been held with FDNY and DOB, NYSERDA and subject matter experts from DNV GL and CUNY to review issues, conduct independent analysis to address questions, and recommend proposed solution to develop clear permitting guidelines for exterior advanced battery systems. Guidelines expected to be released Q2 2018 and then will be promulgated as FDNY/DOB rules and work to continue interior siting requirements.



**Table 49 Continued**

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2017	Public platform is launched including use cases, system performance results, and fact sheets.	Work is underway developing an online microsite to share information. Also, regularly communicating with CDH, the distributed generation portal developer, to ensure content on projects will be made available when the site is live.
	2017	Customers with deployed energy storage systems begin engaging for post-installation quality assurance to validate savings.	The technical assistance contractor is implementing M&V site plans with initial installations supported by NYSERDA.
✓	2017	Safety testing is completed on additional emerging commercial chemistries.	As noted in earlier milestone, UL 9540/9540A standard may provide sufficient testing requirements to alleviate the need for additional NYSERDA testing on battery chemistries. This would create a prescriptive testing path for developers to follow when seeking approval for energy storage installations in NYC. Facilitated independent testing at company's expense for a new chemistry by Urban Electric Power seeking permitting in NYC; no additional testing will be performed at this time.
✓	2017	Market segmentation for NYSERDA customer acquisition activities supported under this investment plan expands to non-interval metered customers.	First iteration of database with customer leads list developed and delivered. Customer leads list ranked all NYC customers over 50,000 sq. ft based on criteria findings from technoeconomic analysis of interval customers, prior research on best fit load profiles, and practical considerations. The findings from interval metered customers have been expanded to segment and rank all customers, both interval and non-interval metered. The leads list will be used for direct customer outreach and will continue to be updated as customer information becomes available and criteria findings are refined. The technical assistance contractor is analyzing interval load data to determine the characteristics that make a customer more likely than not to be a good fit. In tandem with preexisting research on the topic, ERS will continue to do its first-hand analysis and determine the characteristics found by analyzing interval data to target non-interval metered customers. These characteristics are technical and economical, as well as certain practical characteristics that make a customer a good fit.

Table 49 continued

Complete ✓	Time Frame	Milestone	Explanation of Progress
	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.	Year-long outreach campaign underway. Technical assistance to initial customers has begun, information on energy storage business models is being released, webinar on behind the meter storage applications published, and potential customers are being discovered and engaged. Increasing numbers of customers are being added to the pipeline from direct engagement and are seeking information on storage solutions.
	2017	Increasing numbers of energy storage vendors are engaged in New York State, as surveyed at least annually.	Vendor outreach underway, including working group meetings, a webinar, development of fact sheets, a technology conference, etc. Feedback is continually being collected from vendors. NY-BEST (technical assistance contractor) began outreach program on September 1. Focusing on one-on-one guidance and training, with particular emphasis on the practical requirements to take advantage of current opportunities.
	2018	Safety testing is completed on additional emerging commercial chemistries.	As previously noted, additional testing may not require NYSERDA support if UL 9540/9540A requirements are sufficient.
	2018	Model permitting guides are updated.	Working on release of first set of model permitting guides with FDNY and DOB.
	2018	Convincing use cases and best-fit customer characteristics and acquisition tools are publicized.	Working with ERS, soft-cost technical assistance contractor, on developing use cases based on deployed projects. A webinar and fact sheet on the behind-the-meter use case for energy storage are being distributed during active customer outreach and engagement activities.
	2018	Pilots convert prospective installations into installed energy storage projects that are used to provide customer benefit and address electric system needs.	Applications under value stacking PON increased with expanded outreach and are starting to build a pipeline of potential projects.
	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 installation cost decreases, revenue opportunities are better quantified, and results of pilots increase performance confidence.	

**Table 50. Electric Vehicles Initiative: EV Rebate Results**

**Approval Date:** August 17, 2016

**Launch Date:** March 21, 2017

See Endnotes section for more information<sup>28</sup>

Market Development Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2020)	% of Total Target through Initiative Completion (2020)
Energy Efficiency	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MMBtu Annual	189,899	49,013	238,912	-	238,912	390,000	61%	1,430,000	17%
	MMBtu Lifetime	1,898,990	490,125	2,389,116	-	2,389,116	3,900,000	61%	14,300,000	17%
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	8,463	2,204	10,667	-	10,667	20,925	51%	76,730	14%
Customer Bill Savings (millions)	Lifetime Tons	84,633	22,039	106,672	-	106,672	209,250	51%	767,300	14%
	Annual Dollars	\$4.87	\$1.26	\$6.13	-	\$6.13	*	-	*	-
Private Investment (millions)	Lifetime Dollars	\$48.70	\$12.59	\$61.29	-	\$61.29	*	-	*	-
	Dollars	\$112.46	\$31.01	\$143.47	-	\$143.47	\$280.75	51%	\$1,027.00	14%
Participants	Participants	3,213	886	4,099	-	4,099	7,938	52%	29,250	14%

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

**Table 51. Key Milestones for Electric Vehicles Initiative: EV Rebate**

Complete	Time Frame	Milestone	Explanation of Progress
✓	2017	EV Rebate Program Launch.	Launched March 21, 2017. As of 3/31/18, there are more than 500 car dealers signed up for the program and 6,030 approved applications with rebates totaling \$7.8 million (including both CEF and non-CEF funding).

**Table 52. 2030 Greenhouse Lighting and Systems Engineering (GLASE) Initiative Results**

**Approval Date:** September 15, 2016

**Launch Date:** January 1, 2017

Market Development Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2022)	% of Total Target through Initiative Completion (2022)
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	-	-	-	-	-	*	-	*	-
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	-	-	-	1,826	1,826	1,830	100%	1,830	100%
Customer Bill Savings (millions)	Lifetime Tons	-	-	-	18,258	18,258	18,300	100%	18,300	100%
	Annual Dollars	-	-	-	\$0.29	\$0.29	\$0.29	101%	\$0.29	101%
Private Investment (millions)	Lifetime Dollars	-	-	-	\$2.91	\$2.91	\$2.92	100%	\$2.92	100%
	Dollars	-	-	-	\$9.46	\$9.46	\$9.46	100%	\$9.46	100%
Participants	Participants	-	-	-	1	1	5	20%	25	4%

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

**Table 53. Key Milestones for Greenhouse Lighting and Systems Engineering (GLASE)**

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2016	Contract with core Consortium members.	Contracts are fully executed.
✓	2016	Review and approve Scientific Advisory Panel structure.	Selection of members is completed. Contractual arrangements are also completed between members and universities regarding how they be reimbursed for participation.
	2017	Review and approve Consortium business plan to attain financial self-sustainability in 2023.	The Executive Director of GLASE completed a draft business plan. However, the marketing plan will be used to refine the business plan. The business plan will be updated in an iterative fashion throughout the project. Marketing plan matrix was completed in February 2018. Work continues on the business plan.
	2018	Monitor small (6,000 square feet) pilot demonstration of a basic light and shade control system.	The Principal Investigator at Cornell assessed and interviewed potential sites for the pilot. and is continuing to assess an appropriate small demonstration site.
	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.	The principal investigator at Cornell is in discussions with potential site for the large demonstration and is working on an agreement with such site.
	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 54. Advancing Agricultural Energy Technologies Initiative Results**

**Approval Date:** December 1, 2017

**Anticipated Launch Date:** Q2 2018

Market Development Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2022)	% of Total Target through Initiative Completion (2022)
Energy Efficiency	MWh Annual	-	-	-	-	-	-	-	1,642	-
	MWh Lifetime	-	-	-	-	-	-	-	24,630	-
	MMBtu Annual	-	-	-	-	-	*	-	*	-
	MMBtu Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	Annual Tons	-	-	-	-	-	-	-	864	-
	Lifetime Tons	-	-	-	-	-	-	-	12,960	-
Customer Bill Savings (millions)	Annual Dollars	-	-	-	-	-	-	-	\$0.24	-
	Lifetime Dollars	-	-	-	-	-	-	-	\$3.58	-
Private Investment (millions)	Dollars	-	-	-	-	-	-	-	\$0.75	-
Participants	Participants	-	-	-	-	-	-	-	20	-

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

**Table 55. Key Milestones for Advancing Agricultural Energy Technologies**

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2018	Identify technologies to demonstrate.	Conducted voice of customer (VOC) with multiple stakeholders, vendors, academia, and end-users to identify technologies to demonstrate.
	2018	Issue Solicitation to select teams of technology vendor and farms to demonstrate technologies.	Launch of PON in Q2 2018 is anticipated to coordinate with release of Agriculture Audit program.
	2019	Contract with teams to demonstrate underused and emerging technologies.	
	2020	Publish and disseminate business case scenarios that support underused and emerging technology implementation.	
	2021	<p>Perform targeted outreach of successful business-case scenarios to farms suitable for implementing the demonstrated technology.</p> <p>Reliable market sources compile, develop, and maintain current information on advanced clean energy technologies for use by local information-exchange networks.</p> <p>Advanced technologies are installed by farms outside of demonstration projects.</p> <p>Agriculture vendors and suppliers use energy efficiency as a tool to sell their products.</p>	

**Table 56. RetrofitNY Initiative Results**

**Approval Date:** August 31, 2016

**Launch Date:** April 4, 2017

Market Development Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2025)	% of Total Target through Initiative Completion (2025)
Energy Efficiency	MWh Annual	-	-	-	-	-	-	-	187,100	-
	MWh Lifetime	-	-	-	-	-	-	-	3,742,000	-
	MMBtu Annual	-	-	-	-	-	-	-	3,356,000	-
	MMBtu Lifetime	-	-	-	-	-	-	-	67,130,000	-
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	-	-	-	-	-	-	-	290,200	-
Customer Bill Savings (millions)	Lifetime Tons	-	-	-	-	-	-	-	5,804,000	-
	Annual Dollars	-	-	-	-	-	-	-	\$56.16	-
Private Investment (millions)	Lifetime Dollars	-	-	-	-	-	-	-	\$1,122	-
	Dollars	-	-	-	-	-	-	-	\$1,411	-
Participants	Participants	-	-	-	-	-	170	-	100,000	-

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



**Table 57. Key Milestones for RetrofitNY**

<b>Complete</b>	<b>Time Frame</b>	<b>Milestone</b>	<b>Explanation of Progress</b>
✓	2016	Criteria to be met by technical solutions are defined.	Criteria finalized.
✓	2017	Sufficient potential demand for deep energy retrofits is aggregated.	Sufficient demand was aggregated. First round of design launched in February 2018.
✓	2017	Competitive solicitation for the first round of the design-build competition is released.	The solicitation was released on February 6, 2018. 22 applications were received the first month. Eight teams and eight buildings qualified as of 4/13/18.
	2018	One or more solutions are built and tested through the design-build competition.	NYSERDA identified target building typologies and is in the process of identifying potential pilot buildings.
	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 State market.	
	2025	Financing solutions exist for building owners to purchase these solutions with minimal upfront cost.	
	2025	Solutions are implemented on non-Affordable Housing buildings without subsidy.	

**Table 58. REVitalize Initiative Results**

**Approval Date:** August 31, 2016

**Launch Date:** June 27, 2017

See Endnotes section for more information<sup>29</sup>

Market Development Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	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	-	-	-	2,352	2,352	1,760	134%	2,994	79%
	MWh Lifetime	-	-	-	47,040	47,040	35,200	134%	59,880	79%
	MW	-	-	-	2	2	1	165%	2	97%
CO2e Emission Reduction (metric tons)	Annual Tons	-	-	-	1,238	1,238	1,120	110%	1,960	63%
	Lifetime Tons	-	-	-	24,751	24,751	22,400	110%	39,210	63%
Customer Bill Savings (millions)	Annual Dollars	-	-	-	\$0.30	\$0.30	\$0.33	92%	\$0.57	53%
	Lifetime Dollars	-	-	-	\$5.98	\$5.98	\$6.52	92%	\$11.38	53%
Private Investment (millions)	Dollars	-	-	-	\$4.63	\$4.63	\$6.74	69%	\$11.86	39%
Participants	Participants	-	-	-	4	4	5	80%	5	80%

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

**Table 59. Key Milestones for REVitalize**

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2017	Issue a competitive solicitation seeking proposals for a community energy planning effort that benefits low- to moderate-income (LMI) communities and residents.	Solicitation launched June 29, 2017. Proposals were due September 11, 2017. Scoring Committee took place on October 3, 2017.
	2017	Selection of five communities to receive financial and technical support, contract development, and contract execution by Q4 2017.	Four contracts will be awarded. One contract is executed and three more are in development
	2017	Commencement of community planning activities, development of community plan, testing of the toolkit.	The marketing consultant presented NYSERDA its findings and recommendations from the Barriers and Challenge survey. A brainstorming session, facilitated by the marketing consultant, assisted NYSERDA in identifying ideas (tools/resources) that would be most beneficial to the CBOs in moving their projects along and those that would be easy for NYSERDA to implement.
	2017	Community-scale clean energy project development and implementation started.	Southern Tier Solar Works (STSW) hosted their kick off meeting to discuss their REVitalize project.
	2018	NYSERDA receives feedback from community groups and on the toolkit.	Waiting for tool kits to be developed and all contracts to be executed.
	2019	Completion of five community energy projects.	Southern Tier Solar Works started their REVitalize planning process to implement a community solar system. The three other REVitalize projects are waiting for execution.
	2019	NYSERDA refines toolkit and conducts technology transfer to communicate effective models of finance and ownership, as well as the toolkit.	

**Table 60. Low-Income Forum on Energy Initiative Results**

**Approval Date:** August 31, 2016

**Launch Date:** August 31, 2016

Market Development Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2025)	% of Total Target through Initiative Completion (2025)
Participants	Participants	1,439	191	1,630	-	1,630	1,145	142%	7,629	21%

**Table 61. Key Milestones for Low-Income Forum on Energy**

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2017	Issue a competitive solicitation for program support.	The solicitation was issued with a due date of March 23, 2017. Agreement was executed on September 25, 2017.
✓	2017	Implement a series of regional meetings across the State in Q2 of 2017.	A series of seven LIFE 2017 regional meetings were held throughout May 2017. The meeting series included each of the following NYS regions: New York City, Long Island, Western New York, Southern Tier, North Country, Hudson Valley, and Capital Region. In total, there were 445 participants in attendance, representing 236 organizations.
	2018	Implement a statewide conference in Q2 of 2018.	Planning for the LIFE 2018 statewide conference, to be held on May 22-23, 2018, began in Q3 of 2017. A planning subcommittee comprised of LIFE steering committee members was assembled in Q4 of 2017. A preliminary agenda has been assembled and reviewed by DPS. Marketing efforts, including postcards and e-distributions, have begun. Registration opened in March 2018.

**Table 61 continued**

Complete ✓	Time Frame	Milestone	Explanation of Progress
	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.	A competitive solicitation for program support or a contract extension for existing implementation services will be initiated, as applicable.
	2024	Implement a statewide conference in Q2 of 2024.	Planning for the LIFE 2024 Statewide Conference, to be held in May 2024, will begin in Q3/2023.

**Table 62. Key Milestones for Healthy Homes Feasibility Study**

**Approval Date:** August 31, 2016

**Launch Date:** January 20, 2017

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2017	Complete feasibility study and decide on whether to continue with the pilot design and implementation phase.	An interim analysis using publicly available aggregate data was undertaken. A draft version of the report, along with interim quantitative analysis, was reviewed internally and shared with partner agencies (DOH, HCR) to engage feedback. Discussions with partner agencies determined to move forward based on results of the interim analysis. No further revisions of the feasibility study are necessary.
	2017	Begin the pilot design phase, if NYSERDA and NYS agency partners decide to go forward.	Given affirmative results of the interim analysis and discussions with DOH and NYSHCR, initial considerations for pilot design began in Q4/2017 and are continuing.
	2017	Pilot design is complete.	In the case that pilot design is formally pursued, completion is expected by Q2/2018.
	2017	Commencement of pilot activities.	In the case that pilot implementation is pursued, it will begin in Q4/2018.
	2018	Preliminary determination of health benefits and healthcare cost savings.	Contingent upon pilot implementation.
	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.	Contingent upon pilot implementation.

**Table 63. Low- to Moderate-Income Single-Family Initiative: Low-Income Results**

**Approval Date:** February 29, 2016

**Launch Date:** March 1, 2016

See Endnotes section for more information<sup>30</sup>

Market Development Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2021)	% of Total Target through Initiative Completion (2021)
Energy Efficiency	MWh Annual	6,977	1,195	8,172	2,107	10,279	11,298	91%	29,620	35%
	MWh Lifetime	104,659	17,920	122,579	31,603	154,182	169,400	91%	444,500	35%
	MMBtu Annual	185,017	40,287	225,304	58,086	283,390	291,000	97%	729,000	39%
	MMBtu Lifetime	4,625,436	1,007,163	5,632,599	1,452,157	7,084,757	7,282,500	97%	14,970,000	47%
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	Annual Tons	13,817	2,857	16,675	4,299	20,974	22,325	94%	56,750	37%
	Lifetime Tons	308,722	65,147	373,868	96,388	470,256	499,750	94%	1,078,000	44%
Customer Bill Savings (millions)	Annual Dollars	\$3.43	\$0.65	\$4.07	\$1.14	\$5.21	\$5.32	98%	\$13.55	38%
	Lifetime Dollars	\$76.53	\$14.52	\$91.05	\$25.24	\$116.29	\$115.00	101%	\$251.50	46%
Private Investment (millions)	Dollars	-	-	-	-	-	\$1.13	-	\$5.70	-
Participants	Participants	12,460	2,161	14,621	3,772	18,393	21,112	87%	53,948	34%

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

**Table 64. Low- to Moderate-Income Single-Family Initiative: Moderate-Income Results**

**Approval Date:** February 29, 2016

**Launch Date:** March 1, 2016

See Endnotes section for more information<sup>31</sup>

Market Development Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2021)	% of Total Target through Initiative Completion (2021)
Energy Efficiency	MWh Annual	2,057	286	2,343	149	2,492	2,177	115%	4,236	59%
	MWh Lifetime	30,857	4,287	35,144	2,238	37,382	32,575	115%	63,520	59%
	MMBtu Annual	99,686	11,155	110,841	11,016	121,857	130,275	94%	282,300	43%
	MMBtu Lifetime	2,492,138	278,879	2,771,017	275,400	3,046,416	3,265,000	93%	5,986,000	51%
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	6,891	755	7,646	724	8,370	8,515	98%	18,160	46%
Customer Bill Savings (millions)	Lifetime Tons	161,445	17,378	178,823	17,324	196,147	199,950	98%	368,400	53%
	Annual Dollars	\$1.40	\$0.14	\$1.54	\$0.17	\$1.71	\$1.93	89%	\$4.08	42%
Private Investment (millions)	Lifetime Dollars	\$32.61	\$3.18	\$35.79	\$3.99	\$39.78	\$44.80	89%	\$82.50	48%
	Dollars	\$17.85	\$2.48	\$20.33	\$2.16	\$22.49	\$20.35	111%	\$43.06	52%
Participants	Participants	3,704	623	4,327	459	4,786	4,921	97%	11,258	43%

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



**Table 65. Key Milestones for Low- to Moderate-Income Single-Family**

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2017	Host regional contractor meetings to gather stakeholder input.	Four regional contractor’s meetings were held in July in Syracuse, Mt. Kisco, Batavia, and Latham with more than 250 attendees in total.
✓	2017	Competitive solicitation for technical implementation services.	The Technical Implementation Services RFP 3446 closed in late June 2017. Contract negotiations are completed, and the agreement was executed in Q1 2018.
✓	2017	Deploy new low-income referral tracking database.	The EmPower NY referral tracking database was initially deployed in Salesforce in August and file adjustments are being made for use by referral entities and implementation staff.
	2017	Update policies and procedures manual.	Materials have been updated to reflect recent implementation shifts toward shared services and a new technical services implementation contractor.  NYSERDA is also working on combining all forms and applications between Assisted Home Performance and EmPower NY for consistency. This is expected to be completed in 2018.
	2018	Host regional contractor meetings to gather stakeholder input.	

**Table 66. Low- to Moderate-Income Multifamily Initiative Results**

**Approval Date:** February 29, 2016

**Launch Date:** May 19, 2016

Market Development Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2021)	% of Total Target through Initiative Completion (2021)
Energy Efficiency	MWh Annual	-	-	-	4,411	4,411	7,485	59%	47,720	9%
	MWh Lifetime	-	-	-	66,167	66,167	112,350	59%	716,100	9%
	MMBtu Annual	-	-	-	86,679	86,679	102,100	85%	650,100	13%
	MMBtu Lifetime	-	-	-	1,300,190	1,300,190	1,532,000	85%	9,762,000	13%
Renewable Energy	MW	-	-	-	4	4	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	-	-	-	6,929	6,929	9,890	70%	62,990	11%
Customer Bill Savings (millions)	Lifetime Tons	-	-	-	103,934	103,934	148,400	70%	945,900	11%
	Annual Dollars	-	-	-	\$1.06	\$1.06	\$2.07	51%	\$13.15	8%
Private Investment (millions)	Lifetime Dollars	-	-	-	\$15.93	\$15.93	\$30.90	52%	\$197.00	8%
	Dollars	-	-	-	-	-	\$31.52	-	\$175.54	-
Number of Units Served	Participants	-	-	-	4,620	4,620	6,013	77%	39,464	12%

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

**Table 67. Key Milestones for Low- to Moderate-Income Multifamily**

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2017	Increase incentive levels and decrease minimum threshold.	The program has been updated, and marketing activities have been launched. Projects are expected within the next few weeks.
✓	2017	Host annual provider summit understand market impacts and future needs.	The 2017 summit saw record attendance with more than 140 participants. NYSERDA received positive feedback on the adjustment made to the program design earlier in 2017.
	2018–2021	Continue to evaluate market response to incentive levels and thresholds and adjust as needed.	The market response has grown stronger over the first quarter of 2018. However, program intake is still lower than projected and no adjustments of the incentive levels or savings thresholds requirements are warranted at this time.

**Table 68. Low Income Community Solar Initiative Results**

**Approval Date:** December 1, 2017

**Anticipated Launch Date:** Q2 2018

Market Development Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2025)	% of Total Target through Initiative Completion (2025)
Participants	Participants	-	-	-	-	-	750	-	10,000	-

**Table 69. Key Milestones for Low Income Community Solar**

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2017	Issue solicitation for community solar projects to dedicate generation to low-income customers with a standard offer subscription.	The first round of this solicitation will be released in Q2 of 2018.
	2018	Execute agreements with community solar projects for capacity dedicated to low income subscriptions.	Agreements will be executed after awards from the first solicitation are issued.
	2018	Initiate low-income customer outreach and enrollment.	Progress towards this milestone is expected to begin in Q3 2018.
	2018-2020	Issue additional solicitation(s) for community solar projects, if needed.	Progress towards this milestone is expected to begin in Q4 2018.
	2018-2020	Execute additional agreements with community solar projects for low-income subscriptions, if needed.	Progress towards this milestone is expected to begin in Q1 2019.
	2020	Finalize post-initiative transition strategy.	

**Table 70. Industry Partnerships Initiative Results**

**Approval Date:** September 15, 2016

**Launch Date:** January 13, 2017

Market Development Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2019)	% of Total Target through Initiative Completion (2019)
Energy Efficiency	MWh Annual	-	-	-	48,301	48,301	69,575	69%	147,400	33%
	MWh Lifetime	-	-	-	386,406	386,406	557,000	69%	1,179,000	33%
	MMBtu Annual	-	-	-	328,242	328,242	460,500	71%	975,800	34%
	MMBtu Lifetime	-	-	-	2,625,937	2,625,937	3,687,500	71%	7,806,000	34%
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	-	-	-	42,864	42,864	61,075	70%	129,300	33%
Customer Bill Savings (millions)	Lifetime Tons	-	-	-	342,912	342,912	489,000	70%	1,034,000	33%
	Annual Dollars	-	-	-	\$8.24	\$8.24	\$11.80	70%	\$24.99	33%
Private Investment (millions)	Lifetime Dollars	-	-	-	\$65.89	\$65.89	\$94.40	70%	\$199.90	33%
	Dollars	-	-	-	\$5.54	\$5.54	\$4.70	118%	\$9.95	56%
Participants	Participants	-	-	-	16	16	20	80%	42	38%

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

**Table 71. 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 and one-on-one discussions with industry partners continued through 2017.
✓	2016	Identify employer champions, those who will help NYSERDA to lead the initiative, for building operations and maintenance.	Industry champions have been identified and are working with NYSERDA as well as with their peers to identify labor-related gaps and inform intervention strategies.
✓	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 or need for culture change within organizations to establish self-sustaining change. PON 3442 closed in July 2017 and resulted in 11 approved applications for funding, which are either executed or currently under contract negotiation. NYSERDA issued a second building O&M solicitation (PON 3715) in October 2017 with a 1/31/18 closing date. Seven proposals were received by the due date and the PON was extended, as planned, through the end of May 2018. The solicitation is open enrollment and accepts applications on a first come, first served basis.
	2017	Data collected from demonstration sites to help demonstrate the business case for training.	Data collection is underway in four business case demonstration projects.
✓	2017-2018	Identify and implement up to six business demonstrations. Collect performance data from demonstration sites for case studies and sharing results.	Six business case demonstrations are underway: high schools owned by the Archdiocese of NY, BMS training with two upstate high schools, the Association for Energy Affordability and several MF buildings in NYC, and 32BJ with MF properties in the Bronx.
✓	2017-2019	Issue a solicitation(s) to support the development of building operations and maintenance training initiatives that address skill gaps and facilitate career paths with multiple due dates as appropriate.	NYSERDA issued a second building O&M solicitation (PON 3715) in October 2017. The current solicitation is open enrollment and will accept applications on a first come, first served basis through May 30, 2018
✓	2018	Identify one additional area (by sectors, industry, or technology) to initiate industry partnership strategy to address workforce development and training needs to advance goals of CEF.	Offshore wind, HVAC, renewable heating and cooling, and other related energy efficiency areas have been identified as topics for industry partnerships to address talent pipeline and skill gaps issues.
	2018-2019	Develop and implement marketing plan to share results of business case demonstrations and building operations and maintenance project results. Share intervention templates with industry.	NYSERDA is developing a marketing plan to share the results of the projects and business cases demonstrations.

**Table 72. Heat Pumps and Solar Thermal Initiative Results**

**Approval Date:** May 16, 2017

**Launch Date:** May 30, 2017

See Endnotes section for more information<sup>32</sup>

Market Development Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2021)	% of Total Target through Initiative Completion (2021)
Energy Efficiency	MWh Annual	148	228	376	2	378	*	-	*	-
	MWh Lifetime	3,697	5,702	9,398	57	9,455	*	-	*	-
	MMBtu Annual	4,032	6,080	10,111	224,500	234,611	123,700	190%	841,600	28%
	MMBtu Lifetime	100,793	151,990	252,783	5,612,500	5,865,283	3,097,500	189%	21,040,000	28%
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	211	344	555	8,451	9,006	5,560	162%	34,810	26%
Customer Bill Savings (millions)	Lifetime Tons	5,281	8,606	13,886	211,268	225,154	139,050	162%	870,300	26%
	Annual Dollars	\$0.07	\$0.1	\$0.2	\$1.26	\$1.46	\$0.94	155%	\$5.63	26%
Private Investment (millions)	Lifetime Dollars	\$1.86	\$3.12	\$4.98	\$31.40	\$36.38	\$23.55	154%	\$140.80	26%
	Dollars	\$1.29	\$1.46	\$2.75	\$49.23	\$51.98	\$8.49	613%	\$122.90	42%
Participants	Participants	49	82	131	10	141	378	37%	3,487	4%

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

**Table 73. Key Milestones Heat Pumps and Solar Thermal**

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2017	Solicit for and contract with technical support contractor for community campaigns	RFP 3751 was released on November 16, 2017. Four proposals were received on 1/10/17.
	2017	Launch GSHP contractor mentoring program.	Contract signed 8/30/17.  GSHP market partners have signaled that this timing is pre-mature and prefer a pilot in a geographical area that can be expanded statewide.
✓	2017	Release competitive solicitation to select community campaigns (repeat annually).	PON 3723 was released on 11/16/17. Ten proposals were received 1/17/18.
✓	2017	Release open enrollment solicitation for GSHP incentive.	The Ground Source Heat Pump Rebate (PON 3620) was released on May 30, 2017
✓	2017	Provide list of qualified GSHP designers, installers, and drillers to market.	As of December 31, 2017, 57 qualified GSHP designers, installers and drillers were listed on NYSERDA's website.
✓	2017	Contract with consultants to perform QA and design review for GSHP incentive projects.	Notices to proceed issued to four contractors on July 28, 2017.
	2018	Provide marketing toolkit and installer selection model solicitations to pilot community campaigns.	The marketing toolkit is under development using the Solarize marketing toolkit as a starting point.  Installer selection model RFP will be developed by the Technical Assistance contractor using the HeatSmart RFP as a starting point.
	2018	Launch community campaigns (repeat annually).	Round 1 selected proposals are currently undergoing contract negotiation.
✓	2018	Contract with consultants to perform screening assessments and schematic designs for college and university campuses and State and local buildings.	NYPA has entered into contract with ICF to perform screening, draft Best Practices / Lessons Learned document, and design and engineering service scope of work documents.
	2018	Provide standardized contracts and best practices manual to market.	"Lessons Learned" and "Best Practices" documents relating to Geothermal Campus Challenge are part of scope of work of contractor (ICF).
	2018	Complete assessment of M&V methodologies for system performance and share with market participants.	To be included as part of scope of work for consultants to be procured under NYPA to perform ASHRAE Level 2 audits and schematic designs.  NYSERDA is collaborating with NYPA on the document.



Complete ✓	Time Frame	Milestone	Explanation of Progress
	2019	Disseminate RH&C case studies and design and installation best practices to the market.	
	2019	Develop aggregated procurement for colleges and universities and State and local buildings.	One contractor (ICF) will be used to perform screenings. A separate contractor may be procured to perform ASHRAE Level 2 audits, and schematic designs for program participants. Determination of whether aggregation strategies can be applied to eventual construction of projects is being explored.
	2024	Complete commissioning and M&V on large commercial, campus, and State and local building projects.	

**Table 74. Renewable Heat NY Initiative Results**

**Approval Date:** May 16, 2017

**Launch Date:** May 9, 2017

Market Development Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2021)	% of Total Target through Initiative Completion (2021)
Energy Efficiency	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MMBtu Annual	3,836	3,638	7,474	608	8,081	4,493	180%	17,640	46%
	MMBtu Lifetime	76,726	72,753	149,479	12,150	161,630	89,950	180%	352,900	46%
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	240	237	477	65	543	331	164%	1,296	42%
Customer Bill Savings (millions)	Lifetime Tons	4,800	4,749	9,549	1,308	10,856	6,608	164%	25,920	42%
	Annual Dollars	\$0.09	\$0.09	\$0.17	\$0.02	\$0.19	\$0.12	168%	\$0.45	43%
Private Investment (millions)	Lifetime Dollars	\$1.73	\$1.71	\$3.44	\$0.44	\$3.88	\$2.30	169%	\$9.03	43%
	Dollars	\$0.57	\$0.60	\$1.17	\$0.09	\$1.27	\$3.37	38%	\$15.36	8%
Participants	Participants	165	157	322	3	325	477	68%	1,629	20%

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

**Table 75. Key Milestones Renewable Heat NY**

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2017	Modify incentives to reflect current market conditions and re-issue open enrollment solicitation.	Broad program modifications, including incentive modifications, are being developed based on additional stakeholder feedback. Planned completion in Q3 2018.
	2017	Contract with Alliance for Green Heat to provide funding to Wood Stove Design Challenge on an annual basis through 2019.	Planning for the 2018 Wood Stove Design Challenge by the Alliance for Green Heat is underway. This competition will focus on automated wood stoves and be held in Washington D.C. on November 9-14, 2018. Contracting to be completed in Q2 2018.
	2017	Launch marketing campaign.	PON 3694 (Cooperative Advertisement and Promotions for HVAC Partners) has been amended to include Biomass heating technologies. Revisions to be released in Q2 2018.
	2018	Contract with research partners to provide studies on wood smoke and public health.	NYSERDA is pursuing discussions with relevant stakeholders to determine critical study topics and factors.
	2018	Launch community sponsored purchasing campaigns.	PON 3723 was released on 11/16/17. Proposals were received 1/17/18.
	2018	Contract with manufacturers selected under competitive solicitation.	Milestone #7 must be completed prior to initiating this milestone.
	2019	Issue competitive solicitation to seek proposals from advanced biomass heating equipment manufacturers on technology improvements.	A future round of PON 3519 Next Gen HVAC will solicit proposals for advanced biomass improvement.
	2019	Reissue workforce development program based on market feedback.	

**Table 76. Underutilized Product Support Initiative Results**

**Approval Date:** May 16, 2017

**Launch Date:** August 17, 2017

See Endnotes section for more information<sup>33</sup>

Market Development Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2020)	% of Total Target through Initiative Completion (2020)
Energy Efficiency	MWh Annual	-	-	-	-	-	6,250	-	89,790	-
	MWh Lifetime	-	-	-	-	-	81,400	-	1,167,000	-
	MMBtu Annual	83,969	50,739	134,708	-	134,708	55,900	241%	399,000	34%
	MMBtu Lifetime	1,259,541	761,085	2,020,626	-	2,020,626	837,000	241%	5,985,000	34%
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	3,269	1,978	5,247	-	5,247	5,430	97%	62,610	8%
Customer Bill Savings (millions)	Lifetime Tons	49,031	29,672	78,703	-	78,703	75,050	105%	844,600	9%
	Annual Dollars	\$1.04	\$0.62	\$1.66	-	\$1.66	\$1.67	99%	\$17.96	9%
Private Investment (millions)	Lifetime Dollars	\$15.59	\$9.30	\$24.89	-	\$24.89	\$23.46	106%	\$245.50	10%
	Dollars	\$6.56	\$6.22	\$12.78	-	\$12.78	\$17.18	74%	\$161.30	8%
Advanced Rooftop Units	Participants	-	-	-	-	-	148	-	2,190	-
Air Source Heat Pumps		1,154	596	1,750	-	1,750	1,600	109%	11,430	15%

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

**Table 77. Key Milestones Underutilized Product Support**

See Endnotes section for more information<sup>34</sup>

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2017	Launch open enrollment incentive program for Advanced Rooftop Units (ARTU).	ARTU program is on hold pending additional research and market engagement. The initiative was intended to promote the stocking and sales of the most efficient and controllable RTUs on the market, but the intended technology performance levels are not readily available in the supply chain at this point. NYSERDA is looking at alternate structures and technologies to address commercial HVAC, including advanced controls retrofits and variable refrigerant flow systems. VRF market analysis research is in progress with results due in Q2 2018. If the VRF research comes back positive, we will plan to launch an initiative in early 2019. This milestone will need to be revised.
✓	2017	Release solicitation for shared awareness and education campaigns, as well as customer targeting and acquisition.	The solicitation for co-op marketing was released in December. The solicitation covers marketing, outreach, and training and will initially focus on supporting efforts to promote cold climate ASHPs and GSHPs, but it can be expanded if other programs for technologies are offered.
	2017	HVAC trainings assessed and compiled to facilitate increased contractor participation.	HVAC trainings are offered by manufacturers and distributors for their associated contractors.  ASHP trainings have been assessed and there looks to be sufficient diversity and supply to meet current and expected demand. In Q3 2018, options will exist for contractors to learn about available trainings in the State through NYSEDA, which will be updated in an ongoing manner by manufacturers and distributors.
	2017	Case studies developed and deployed in the market, along with current resources from regional and national organizations.	NYSERDA is deploying best practice resources for contractors from the Northeast Energy Efficiency Partnership.  For ASHP case studies, the development time will push this into the second half of 2018.

Table 77 continued

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2017	Issue competitive solicitation for technical analysis related to product and appliance standards.	Solicitation for technical analysis of potential product standards was released in August and the work was completed in November.
	2018	Efficiency and cost calculator released in the market.	Working to assess current market offerings across technologies. It is most likely that a tool will need to be updated or developed to meet needs. Any tool developed will be applicable across technologies to maximize impact for contractors.
	2018	Mapping tool for Air-Source Heat Pumps (ASHP) potential released in the market.	The customer targeting/mapping tool solicitation scoring committee meeting was held the awardee is in the contracting phase now. The goal of this work is to test methods for collecting and processing publicly available data that can be used to identify high potential opportunities for efficiency retrofits in advance of end of life replacement.
✓	2018	Launch open enrollment incentive program for ASHPs.	ASHP program was launched in August.
	2018	Issue competitive solicitation to identify and test alternative business models.	NYSERDA will work to identify, test, and expand existing business models in the energy efficiency retrofit space, especially into the small and medium business market. Possible options include expanding energy service agreements, leasing of efficient equipment, and promoting efficiency-as-a-service.
	2018	Issue competitive solicitation for pilots to identify and deploy solutions for the integration of traditional and advanced systems, such as ASHPs.	<p>NYSERDA plans to offer this as part of the second round of the Next Generation HVAC Technology Challenge (PON 3519).</p> <p>Continuing conversations have taken place with manufacturers, northeast program administrators, and other stakeholders on this topic. There is a tremendous amount of interest in addressing this challenge, and a wide belief that current technology can be applied to this challenge. NYSERDA is working with NEEP to find other states/programs that might be interested in offering a joint or parallel solicitation.</p>
	2019	Issue open solicitation to expand alternative business models based on results from competitive solicitation in 2018.	This open solicitation is dependent on the outcome of the Business Model Innovation solicitation in 2018.

**Table 78. Energy Efficiency Soft Cost Challenge Initiative Results**

**Approval Date:** July 19, 2017

**Anticipated Launch Date:** TBD

Innovation and Research Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2025)	% of Total Target through Initiative Completion (2025)
Energy Efficiency	MWh Annual	-	-	-	-	-	2,215	-	17,720	-
	MWh Lifetime	-	-	-	-	-	22,150	-	177,200	-
	MMBtu Annual	-	-	-	-	-	73,750	-	590,600	-
	MMBtu Lifetime	-	-	-	-	-	737,500	-	5,906,000	-
Renewable Energy	MW	-	-	-	-	-	-	-	-	-
	MWh Annual	-	-	-	-	-	-	-	-	-
	MWh Lifetime	-	-	-	-	-	-	-	-	-
CO2e Emission Reduction (metric tons)	MW	-	-	-	-	-	-	-	-	-
	Annual Tons	-	-	-	-	-	5,825	-	46,570	-
Customer Bill Savings (millions)	Lifetime Tons	-	-	-	-	-	58,250	-	465,700	-
	Annual Dollars	-	-	-	-	-	\$1.39	-	\$11.11	-
Private Investment (millions)	Lifetime Dollars	-	-	-	-	-	\$13.90	-	\$111.10	-
	Dollars	-	-	-	-	-	\$0.92	-	\$7.00	-
Participants	Participants	-	-	-	-	-	13	-	20	-

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

**Table 79. Key Milestones for Energy Efficiency Soft Cost Challenge**

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2017	Issue competitive solicitation for first round of the challenge.	Draft of solicitation in process.
✓	2017	Select an implementation consultant.	An implementation consultant has been selected.
	2017	Hold bidder's presentation to answer questions on the challenge.	The bidder's presentation will be held after the solicitation has been issued.
	2017	Select preliminary winners.	Preliminary winner will be selected after the solicitation has been issued and proposals received.
	2018	Contract projects with 10 preliminary winners. Monitor and provide assistance and resources to preliminary winners.	Progress will begin after the solicitation is issued.
	2018	Hold business plan presentations to a panel of judges.	Progress will begin after the solicitation is issued.
	2018	Select up to five, grand prize winners.	Progress will begin after the solicitation is issued.
	2018	Contract projects with first round grand prize winners.	Progress will begin after the solicitation is issued.
	2018	Issue competitive solicitation for second round of the challenge.	Progress will begin after the solicitation is issued.
	2018	Hold bidder's presentation to answer questions on the challenge.	Progress will begin after the solicitation is issued.
	2018	Select preliminary winners.	Progress will begin after the solicitation is issued.
	2019	Contract projects with 10 preliminary winners. Monitor and provide assistance and resources to preliminary winners.	
	2019	Hold business plan presentations to a panel of judges.	
	2019	Select up to five, grand prize winners.	
	2019	Contract projects with second round grand prize winners.	

**Table 80. Technical Services Initiative Results**

**Approval Date:** October 3, 2017

**Launch Date:** November 9, 2017

Innovation and Research Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2025)	% of Total Target through Initiative Completion (2025)
Energy Efficiency	MWh Annual	-	-	-	1,362	1,362	5,050	27%	87,310	2%
	MWh Lifetime	-	-	-	23,154	23,154	85,750	27%	1,484,000	2%
	MMBtu Annual	-	-	-	12,840	12,840	28,500	45%	471,300	3%
	MMBtu Lifetime	-	-	-	218,280	218,280	485,000	45%	8,012,000	3%
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	46	-	1,645	-
	MWh Lifetime	-	-	-	-	-	788	-	27,970	-
CO2e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	-	-	-	1,399	1,399	4,225	33%	72,280	2%
Customer Bill Savings (millions)	Lifetime Tons	-	-	-	23,787	23,787	71,750	33%	1,229,000	2%
	Annual Dollars	-	-	-	\$0.25	\$0.25	1	29%	15	2%
Private Investment (millions)	Lifetime Dollars	-	-	-	\$4.24	\$4.24	15	29%	249	2%
	Dollars	-	-	-	\$0.09	\$0.09	5	2%	91	0%
Participants	Participants	-	-	-	1	1	4	27%	1,445	0%

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



**Table 81. Key Milestones for Technical Services**

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2017	Identify qualified energy-focused consultants to participate in pilots and serve customers engaging in pilots or cost-shared energy assessments.	Identified qualified energy-focused consultants to participate in pilots.
✓	2018	Issue solicitation for On Site Energy Manager pilot.	Issued solicitation for On Site Energy Manager pilot on November 9, 2017.
	2018	Award funding to initial entities selected under On-Site Energy Manager pilot.	First project expected to be awarded in April 2018.
	2018	Issue solicitation, New Aggregation Models pilot.	The solicitation is expected to launch in Q2 or Q3 2018.
	2018	Contract with third-party to support best practices development including the farm management best practices guide.	Work to solicit technical content for an energy-related farm management best practice guide will begin in Q3 2018.
	2019	Award funding to initial entities selected under New Aggregation Models pilot.	
	2019	Disseminate best practices materials.	
	2019	Issue revised open enrollment Agriculture Energy Audit component of FlexTech.	
	2019	Begin examining the results of pilot(s) to determine if additional rounds of the same pilot are needed in the market or if new pilots are needed. Subsequent milestones will be updated accordingly based on the result of this review.	
	2020	Issue revised open enrollment FlexTech Program.	
	2022	Issue third pilot solicitation. It is anticipated that the third pilot will be available through 2024.	

**Table 82. Clean Energy Advanced Market Performance (AMP) Challenge Initiative Results**

**Approval Date:** December 1, 2017

**Anticipated Launch Date:** Q2 2018

Innovation and Research Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2018)	% of Total Target through Initiative Completion (2018)
Energy Efficiency	MWh Annual	-	-	-	-	-	6,475	-	25,930	-
	MWh Lifetime	-	-	-	-	-	97,250	-	389,000	-
	MMBtu Annual	-	-	-	-	-	38,000	-	152,100	-
	MMBtu Lifetime	-	-	-	-	-	570,000	-	2,282,000	-
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	1,173	-	4,693	-
	MWh Lifetime	-	-	-	-	-	17,600	-	70,400	-
	MW	-	-	-	-	-	1	-	4	-
CO2e Emission Reduction (metric tons)	Annual Tons	-	-	-	-	-	6,175	-	24,690	-
	Lifetime Tons	-	-	-	-	-	92,500	-	370,400	-
Customer Bill Savings (millions)	Annual Dollars	-	-	-	-	-	1	-	3	-
	Lifetime Dollars	-	-	-	-	-	13	-	52	-
Private Investment (millions)	Dollars	-	-	-	-	-	14	-	55	-
Participants	Participants	-	-	-	-	-	1	-	2	-

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

**Table 83. Key Milestones for Clean Energy Advanced Market Performance (AMP) Challenge**

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2018	Issue competitive solicitation.	Release of solicitation imminent.
	2018	Contract with selected participants.	Contracting will occur after the release of solicitation and review of received proposals.
	2018	Finalize participants' Clean Energy Action Plans for 2019 during participants' capital planning cycles. Clean Energy Action Plan updates will be conducted on an annual basis with updates for 2020 and 2021 being made during capital planning cycles in 2019 and 2020, respectively.	Finalization of clean energy action plans will occur immediately after contracting.
	2020	Conduct M&V for implemented 2019 projects. M&V will be conducted on an ongoing basis through 2022. Assess program performance and participant satisfaction to test, measure, and adjust on an annual basis.	M&V plans contingent of the details of selected proposals through solicitation.
	2022	Issue AMP Summary report detailing lessons learned to date and potential for replicability.	

**Table 84. Clean Energy Siting and Soft Cost Reduction Initiative Results**

**Approval Date:** December 1, 2017

**Launch Date:** March 9, 2018

See Endnotes section for more information<sup>35</sup>

Market Development Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2020)	% of Total Target through Initiative Completion (2020)
Authorities Having Jurisdiction (AHJs)	Participants	30	81	111	-	111	15	740%	160	69%
Working Group Participants		113	-	113	-	113	5	2260%	60	188%

**Table 85. Key Milestones for Clean Energy Siting and Soft Cost Reduction**

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2018	Establish a soft cost working group.	A soft cost working group has been established. This group of stakeholders have worked and provided feedback on chapters of the Solar Guidebook, as well as other potential venues for soft cost reductions.
	2018	Issue a solicitation to select a pool of contractors and organizations to develop, disseminate, and implement soft cost solutions.	NYSERDA has begun working on developing an RFP document and identifying potential contractors. The planned release for this RFP is June 2018.
	2018	Contract with a pool of contractors and organizations.	Anticipated in Q3 after the solicitation has been issued.
	2018	Complete trainings for technical assistance providers.	Proposals from technical assistance providers were received in March 2018. Training will occur after technical assistance providers have been selected
	2018	Launch a statewide outreach and education campaign to publicize soft cost solutions and technical assistance services, including convening regional meetings for LSR stakeholders.	Statewide outreach and education campaign was launched on 3/9/2018.
	2018	Issue the incentive grant solicitation for AHJs taking significant steps to reduce solar soft costs.	This is currently in the planning stages with anticipation of launch later this year. The initial design is to provide AHJs with a grant when they adopt a PILOT agreement, the Solar Model Law, and the Unified Solar Permit.
	2018	Issue the Soft Cost Innovation solicitation.	This solicitation has not been started yet.
	2018	Contract with Soft Cost Innovation award recipients.	This will occur after the solicitation for Soft Cost Innovation has been distributed and proposals have been received.
	2019	Compile and publish a document of all case studies to highlight best soft cost reduction strategies and clean energy-friendly communities.	This is an ongoing process. Under this milestone NYSERDA has developed the Solar Guidebook, which contains best practice guidance on how to be a solar ready community. As NYSERDA continues through the investment plan, additional chapters will include case studies of successful implementation by AHJs.

**Table 86. Code to Zero Initiative Results**

**Approval Date:** December 1, 2017

**Anticipated Launch Date:** Q4 2018

Innovation and Research Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2022)	% of Total Target through Initiative Completion (2022)
Energy Efficiency	MWh Annual	-	-	-	-	-	-	-	165,700	-
	MWh Lifetime	-	-	-	-	-	-	-	4,142,000	-
	MMBtu Annual	-	-	-	-	-	-	-	132,200	-
	MMBtu Lifetime	-	-	-	-	-	-	-	3,306,000	-
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	-	-	-	-	-	-	-	94,830	-
Customer Bill Savings (millions)	Lifetime Tons	-	-	-	-	-	-	-	2,371,000	-
	Annual Dollars	-	-	-	-	-	-	-	\$23.37	-
Private Investment (millions)	Lifetime Dollars	-	-	-	-	-	-	-	\$584.30	-
	Dollars	-	-	-	-	-	-	-	\$513.50	-
Trainings	Participants	-	-	-	-	-	625	-	7,750	-
Pilots		-	-	-	-	-	-	-	6	-

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

**Table 87. Key Milestones for Code to Zero**

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2017	Extend training and third-party plan review contracts.	One remaining training contract is working through NYSEERDA's internal approval.
✓	2017	Issue a procurement to provide third-party services through 2018.	A mini-bid was issued Q4 2017 among FlexTech and technical review consultants to secure third-party service providers through 2019. However, RGGI funding is being used for these services; funds are no longer coming from CEF as previously expected.

Table 87 continued

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2018	Issue NY Stretch-Energy stretching off IECC22 2018.	Public comment on draft closed April 3, 2018. Approximately 150 comments were received and NYSERDA is in the process of reviewing. NYSERDA maintains regular contact with NYC to ensure delivery of final code meets their schedule.
	2018	Issue Pilot #1 solicitation to pilot alternative enforcement structures.	NYSERDA will beginning work on this milestone in April 2018.
	2018	Issue Pilot #2 solicitation for pilot communities to adopt NY Stretch-Energy (IECC2018).	NYSERDA expects to begin work on this milestone second quarter 2018.
	2018	Issue solicitation for audience-specific training content and approaches.	RFQL 3711 was issued during this quarter. NYSERDA expects to use contractors selected from this solicitation to contribute to CEF-funded training development and delivery for at least some of the work associated with this milestone. Work on this milestone will continue in second and third quarters.
	2018	Finalize plan to codify stretch-to-zero as baseline by 2030.	No update on progress.
	2019	Contract Pilot(s) #1 for alternative enforcement business structures.	
	2019	Contract Pilot(s) #2 for adoption of NY Stretch-Energy (IECC2018).	
	2019	Contracts for audience-specific training content and approaches.	
	2019	Issue Solicitation to develop NY Stretch-Energy stretching off IECC2021.	
	2019	Issue Pilot #3 solicitation for pilot communities to test Stretch to Zero code approaches.	
	2020	Contract for development of NY Stretch-Energy (IECC2021).	
	2020	Contract Pilot(s) #3 to test stretch-to-zero code approaches.	
	2021	Issue NY Stretch-Energy stretching off IECC 2021.	
	2021	Disseminate results of pilots for alternative enforcement business structures.	

**Table 88. Fuel Cells Initiative Results**

**Approval Date:** December 1, 2017

**Anticipated Launch Date:** Q2 2018

Innovation and Research Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2019)	% of Total Target through Initiative Completion (2019)
Energy Efficiency	MWh Annual	-	-	-	-	-	8,325	-	66,580	-
	MWh Lifetime	-	-	-	-	-	166,500	-	1,332,000	-
	MMBtu Annual	-	-	-	-	-	*	-	*	-
	MMBtu Lifetime	-	-	-	-	-	*	-	*	-
Renewable Energy	MW	-	-	-	-	-	-	-	-	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	-	-	-	-	-	938	-	7,502	-
Customer Bill Savings (millions)	Lifetime Tons	-	-	-	-	-	18,750	-	150,000	-
	Annual Dollars	-	-	-	-	-	\$0.75	-	\$5.99	-
Private Investment (millions)	Lifetime Dollars	-	-	-	-	-	\$14.98	-	\$119.80	-
	Dollars	-	-	-	-	-	\$5.13	-	\$41.00	-
Participants	Participants	-	-	-	-	-	4	-	27	-

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

**Table 89. Key Milestones for Fuel Cells**

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2018	Issue open enrollment solicitation.	
	2018	Contract with accepted open enrollment solicitation applicants as they apply through 2019.	
	2018	Confirm installation of equipment at site. This will start in 2018 and continue in 2019 based on timing of applications.	
	2019	Confirm first annual performance of fuel cell operation. This will start in 2019 and continue in 2020 based on timing of applications.	

**Table 90. New Construction Market Rate and Initiative Results**

**Approval Date:** December 1, 2017

**Anticipated Launch Date:** Q2 2018

Innovation and Research Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2020)	% of Total Target through Initiative Completion (2020)
Energy Efficiency	MWh Annual	-	-	-	-	-	7,975	-	147,100	-
	MWh Lifetime	-	-	-	-	-	176,500	-	3,374,000	-
	MMBtu Annual	-	-	-	-	-	16,775	-	368,500	-
	MMBtu Lifetime	-	-	-	-	-	375,000	-	8,440,000	-
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	-	-	-	-	-	5,075	-	99,060	-
Customer Bill Savings (millions)	Lifetime Tons	-	-	-	-	-	113,000	-	2,227,000	-
	Annual Dollars	-	-	-	-	-	\$1.18	-	\$22.77	-
Private Investment (millions)	Lifetime Dollars	-	-	-	-	-	\$26.25	-	\$513.00	-
	Dollars	-	-	-	-	-	\$3.03	-	\$94.33	-
Market Rate Housing-Units Participants		-	-	-	-	-	125	-	8,300	-
Market Rate Commercial Buildings	Participants	-	-	-	-	-	10	-	184	-
Market Rate Training Participants		-	-	-	-	-	61	-	726	-

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



**Table 91. Low Income New Construction Initiative Results**

**Approval Date:** December 1, 2017

**Anticipated Launch Date:** Q2 2018

Innovation and Research Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2020)	% of Total Target through Initiative Completion (2020)
Energy Efficiency	MWh Annual	-	-	-	-	-	525	-	19,260	-
	MWh Lifetime	-	-	-	-	-	13,150	-	482,800	-
	MMBtu Annual	-	-	-	-	-	2,205	-	103,600	-
	MMBtu Lifetime	-	-	-	-	-	55,000	-	2,592,000	-
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	-	-	-	-	-	395	-	15,740	-
Customer Bill Savings (millions)	Lifetime Tons	-	-	-	-	-	9,900	-	394,600	-
	Annual Dollars	-	-	-	-	-	\$0.09	-	\$3.60	-
Private Investment (millions)	Lifetime Dollars	-	-	-	-	-	\$2.35	-	\$90.01	-
	Dollars	-	-	-	-	-	\$0.86	-	\$54.95	-
LMI Housing Unit Participants	Participants	-	-	-	-	-	125	-	9,282	-
LMI Training Participants		-	-	-	-	-	49	-	582	-

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

**Table 92. Key Milestones for Market Rate and Low Income New Construction**

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2018	Issue first competitive solicitation for Buildings of Excellence Competition.	RFP is drafted and under internal NYSERDA review.
	2018	Contract with awardees for Buildings of Excellence Competition.	Expect to have awardees identified by end of Q3/2018
	2018	Issue solicitation to launch Simplified Design and Tools: Model Measure Packages activity.	Planning to develop solicitation in Q2 for Q3 release.
	2018	Contract with awardees for Simplified Design and Tools: Model Measure Packages activity.	Planning to solicit in Q3 for services
	2018	Issue solicitation for Commercial Pilot Incentive Program.	New Construction CEF Chapter revision will postpone the Commercial Pilot until 2019.
	2018	Contract with awardees for Commercial Pilot Incentive Program.	New Construction Commercial Pilot will be postponed until 2019 in the New Construction CEF Chapter Revision Approved April 12, 2018.
	2018	Issue competitive RFP for Simplified Design and Tools: Online Platform development.	Work is underway to scope the requirements and resources needed for this solicitation.
	2018	Contract with awardees for Simplified Design and Tools: Online Platform development.	Solicitation will likely be released by the end of Q2
	2018	Issue mini-bid for technical reviewers through existing NYSERDA umbrella contracts to begin performance analysis to assess project performance.	Programs will identify projects and begin to scope need in Q2.
	2018	Contract with technical reviewers for Performance Analysis to assess project performance.	Will mini-bid technical reviewers in Q3.
	2018	Issue solicitation for Simplified Design and Tools: Integrated design practices advisor for first-time developers.	Program will begin planning this initiative in Q2.
	2018	Contract with awardees for Simplified Design and Tools: Integrated design practices advisor for first-time developers.	Program will begin planning this initiative in Q2.
	2018	Issue second competitive solicitation for Buildings of Excellence Competition.	New Construction CEF Chapter revision approved on April 12, 2018, only one Buildings of Excellence solicitation will be released per calendar year.
	2019	Contract with awardees for second round of Buildings of Excellence Competition.	
	2019	Issue third competitive solicitation for Buildings of Excellence Competition.	

Table 92 continued

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2019	Contract with awardees for third round of Buildings of Excellence Competition.	
	2020	Issue fourth competitive solicitation for Buildings of Excellence Competition.	
	2020	Contract with awardees for fourth round of Buildings of Excellence Competition.	

Table 93. Engaging New Markets Initiative Results

Approval Date: December 1, 2017

Anticipated Launch Date: Q3 2018

Innovation and Research Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2020)	% of Total Target through Initiative Completion (2020)
Energy Efficiency	MWh Annual	-	-	-	-	-	6	-	1,194	-
	MWh Lifetime	-	-	-	-	-	94	-	17,920	-
	MMBtu Annual	-	-	-	-	-	470	-	89,580	-
	MMBtu Lifetime	-	-	-	-	-	11,725	-	2,239,000	-
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	Annual Tons	-	-	-	-	-	31	-	5,930	-
	Lifetime Tons	-	-	-	-	-	743	-	142,000	-
Customer Bill Savings (millions)	Annual Dollars	-	-	-	-	-	\$0.01	-	\$1.48	-
	Lifetime Dollars	-	-	-	-	-	\$0.18	-	\$34.99	-
Private Investment (millions)	Dollars	-	-	-	-	-	\$0.19	-	\$28.17	-
Customer	Participants	-	-	-	-	-	123	-	11,467	-
Market Actor		-	-	-	-	-	7	-	265	-

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

**Table 94. Key Milestones for Engaging New Markets**

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2018	Develop a package of energy efficiency related trainings for market actors prior to pilot implementation.	Preliminary research has begun; however, work on the specific activity is not yet underway.
	2018	Deploy new content on NYSERDA website.	NYSERDA has begun the planning process for the new content on the website.
	2018	Launch first of targeted consumer education and awareness campaigns.	Initial planning is underway.
	2018	Implement initial pilot for contractors delivering home energy ratings as a sales tool.	Implementation planning is underway.
	2018	Implement initial pilot to imbed home energy ratings into real estate transactions.	Implementation planning is underway.
	2018	Implement initial pilot for leveraging relationships that upstream market actors have with contractors.	Early planning work has begun, and planning activities will increase in Q2 2018.
	2019	Implement initial pilot for providing energy efficiency information to consumers from home improvement retailers and their contractor network.	
	2020	Develop resources, such as templates or toolkits, for market actors to support the business case for incorporating energy efficiency into their business models.	
	2021	Data collection and analysis from all pilots completed and results distributed to additional market actors to support intervention adoption.	
	2021	Kits available for communities to use in imbedding home energy ratings in the home sales process.	

## 4 Innovation and Research Initiative Specific Results

**Table 95. Innovation and Research Initiative Budgets and Spending**

See Endnotes section for more information<sup>36,37</sup>

Initiative	Budget Approved as of December 31, 2017 <sup>a</sup>	Expended Funds <sup>b</sup>	Open Encumbrances <sup>c</sup>	Contract Pre-Encumbrances <sup>d</sup>	Committed Funds <sup>e</sup>	% of Approved Budget Committed <sup>f</sup>	Budget Approved Remaining Balance <sup>g</sup>
<b>Market Characterization &amp; Design Chapter</b>	<b>\$250,000</b>	<b>\$653</b>	<b>-</b>	<b>-</b>	<b>\$653</b>	<b>0.3%</b>	<b>\$249,347</b>
<b>Grid Modernization Chapter</b>							
DER Interconnection	\$6,300,000	\$1,149,647	\$1,537,832	-	\$2,687,479	43%	\$3,612,521
High Performing Grid	\$110,500,000	\$1,505,622	\$6,064,390	\$3,696,970	\$11,266,982	10%	\$99,233,018
Next Generation Power Electronics	\$16,700,000	\$6,479,502	\$10,220,498	-	\$16,700,000	100%	-
<b>Grid Modernization Chapter Total</b>	<b>\$133,500,000</b>	<b>\$9,134,771</b>	<b>\$17,822,720</b>	<b>\$3,696,970</b>	<b>\$30,654,461</b>	<b>23%</b>	<b>\$102,845,539</b>
<b>Innovation Capacity and Business Development Chapter</b>							
CleanTech Startup Growth	\$49,200,000	\$400,845	\$8,161,530	\$2,767,056	\$11,329,431	23%	\$37,870,569
Manufacturing Corps	\$12,000,000	\$39,596	\$49,000	\$4,000,000	\$4,088,596	34%	\$7,911,404
Novel Business Models and Offerings	\$16,100,000	-	-	-	-	-	\$16,100,000
<b>Innovation Capacity and Business Development Chapter</b>	<b>\$77,300,000</b>	<b>\$440,441</b>	<b>\$8,210,530</b>	<b>\$6,767,056</b>	<b>\$15,418,027</b>	<b>20%</b>	<b>\$61,881,973</b>
<b>Building Innovation Chapter</b>							
NextGen HVAC	\$15,000,000	\$140,432	\$115,729	\$8,191,404	\$8,447,565	56%	\$6,552,435
<b>Building Innovation Chapter Total</b>	<b>\$15,000,000</b>	<b>\$140,432</b>	<b>\$115,729</b>	<b>\$8,191,404</b>	<b>\$8,447,565</b>	<b>56%</b>	<b>\$6,552,435</b>
<b>Clean Transportation Chapter</b>							
Electric Vehicles	\$11,850,000	\$260,241	\$439,492	-	\$699,733	6%	\$11,150,267
Public Transportation and Electrified Rail	\$18,500,000	\$5,216	\$73,684	\$600,000	\$678,900	4%	\$17,821,100
<b>Clean Transportation Chapter Total</b>	<b>\$30,350,000</b>	<b>\$265,457</b>	<b>\$513,176</b>	<b>\$600,000</b>	<b>\$1,378,633</b>	<b>5%</b>	<b>\$28,971,367</b>
<b>Energy-Related Environmental Research Chapter</b>							
Environmental Research	\$30,000,000	\$188,302	\$3,801,690	\$2,457,169	\$6,447,161	21%	\$23,552,839
<b>Energy-Related Environmental Research Chapter Total</b>	<b>\$30,000,000</b>	<b>\$188,302</b>	<b>\$3,801,690</b>	<b>\$2,457,169</b>	<b>\$6,447,161</b>	<b>21%</b>	<b>\$23,552,839</b>
<b>Renewables Optimization Chapter</b>			<b>\$7,603,380</b>				
Energy Storage Innovations	\$33,000,000	\$19,605	-	\$1,700,731	\$1,720,336	5%	\$31,279,664
<b>Renewables Optimization Chapter Total</b>	<b>\$33,000,000</b>	<b>\$19,605</b>	<b>-</b>	<b>\$1,700,731</b>	<b>\$1,720,336</b>	<b>5%</b>	<b>\$31,279,664</b>
<b>NYS Cost Recovery Fee</b>	<b>\$8,102,032</b>	<b>\$107,019</b>	<b>-</b>	<b>-</b>	<b>\$107,019</b>	<b>1%</b>	<b>\$7,995,013</b>
<b>Innovation Capacity and Bus. Dev. Chapter Total</b>	<b>\$327,502,032</b>	<b>\$10,296,679</b>	<b>\$30,463,845</b>	<b>\$23,413,330</b>	<b>\$64,173,854</b>	<b>20%</b>	<b>\$263,328,178</b>

Table notes are on the next page.

- a Funds approved by DPS as of March 31, 2018.
- 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 Sum of Expended Funds, Open Encumbrances, and Contract Pre-Encumbrances.
- f Percentage of the budget that has been committed.
- g Difference between Budget Approved Funds and Committed Funds.

**Table 96. Distributed Energy Resource Interconnection Initiative Results**

**Approval Date:** May 23, 2016

**Launch Date:** October 20, 2016

Innovation and Research Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	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	-	-	-	\$3.61	\$3.61	\$5.83	62%	\$5.83	62%
Participants	Participants	-	-	-	9	9	9	100%	13	69%

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

**Table 97. 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 road map for advancement of the technology and tools necessary to support an advanced, integrated, high-performing grid in New York State.	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 State.	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 opportunity launched in October 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 via the NY Grid Modernization Advisory Committee.
✓	Q1 2017	Contract with awardees selected under the funding opportunity focused on innovation to reduce DER interconnection burdens in New York State.	The Investment Evaluation Panel for PON 3404 took place on January 25, 2017. Notification letters were sent to proposers on 2/28/2017 and NYSERDA entered into contract negotiations with proposals selected for award. Contracts have been established with proposals selected for award.
✓	Q2 2017	Grid Modernization Roadmap complete.	NY Grid Modernization Roadmap complete.

**Table 98. High-Performing Grid Initiative Results**

**Approval Date:** May 23, 2016

**Launch Date:** September 16, 2016

Innovation and Research Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2022)	% of Total Target through Initiative Completion (2022)
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	-	-	-	\$68.35	\$68.35	\$80.75	85%	\$309.00	22%
Participants	Participants	-	-	-	37	37	17	218%	64	58%

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



**Table 99. 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 a due date of January 11, 2017 (Round#1); June 28, 2017 (Round#2).
✓	2017	Enter into contracts for projects awarded under the broad competitive solicitation #1.	PON 3397 round 1 closed on January 11, 2017. Greenlight approved 11 to contract with awardees under Round #1 granted April 2017. PON 3397 Round 2 closed on June 28, 2017. Greenlight approved ten (10) to contract with awardees under Round #2 grant September 2017. PON 3397 is now closed.
✓	2017	Identify near-term opportunities for applied research that are aligned with utility supplemental DSIPs and the NY Grid Modernization Roadmap.	Initial and Supplemental DSIP filings have been thoroughly reviewed. The NY Grid Modernization Roadmap was completed March 30, 2018.
	2017	Issue targeted competitive solicitation #2, guided by utility supplemental DSIPs and the NY Grid Modernization Roadmap.	Solicitation delayed allowing broad competitive solicitation #3 to be issued. Solicitation #2 anticipated to be released in mid-2018.
	2017	Enter into contracts for projects awarded under the targeted competitive solicitation #2.	Solicitation delayed allowing broad competitive solicitation #3 to be issued. Solicitation #2 anticipated to be released in mid-2018.
	2018	Identify technology gaps necessary to support community grid operation based on completed NY Prize Stage 2 evaluations.	NY Prize Stage 2 project teams are actively working to complete State 2 deliverables.
✓	2018	Issue broad competitive solicitation #3.	PON 3770 released in March 2018.
	2018	Enter into contracts for projects awarded under the broad competitive solicitation #3.	PON 3770 is open and contracts will be established as proposals are awarded.
	2018	Issue targeted competitive solicitation #4.	Estimated to be released in late 2018.
	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.	

**Table 99 continued**

Complete ✓	Time Frame	Milestone	Explanation of Progress
	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.	
	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 100. Power Electronics Manufacturing Consortium Initiative Results**

**Approval Date:** July 19, 2017

**Launch Date:** October 13, 2017

	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2019)	% of Total Target through Initiative Completion (2019)
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	-	-	-	\$80.00	\$80.00	\$55.25	145%	\$80.00	100%
Participants	Participants	-	-	-	12	12	5	240%	12	100%

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

**Table 101. Key Milestones for Power Electronics Manufacturing Consortium**

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2017	Business plan completed and submitted to NYSERDA for review.	Business plan development is in progress.
	2017	Consortium expanded to include at least four partner companies/customers.	Two consortium partners confirmed. Negotiations are in progress with additional partners.
✓	2018	Contract with SUNY Research Foundation for the PEMC.	Contract was signed October 13, 2017. Kick-off was held December 14, 2017 at SUNY POLY PEMC Line.
	2018	Production capacity fab infrastructure complete.	Fab Infrastructure is in place. Equipment qualification final acceptance is complete for all equipment. Tool owner training and qualification is in progress. Total Reflection X-ray Florescence and Foreign Material qualification is complete. Statistic Process Control development is near completion. Standard Operating Procedure development is in progress.
	2018	Three successive batches of SiC MOSFET wafers fabricated.	Completed three qualification lots with record composition yield of ~65% and delivered lots to General Electric for AEC-Q101 reliability testing.
	2018	Quality management system implemented.	Awarded contracts for Manufacturing Execution System and the Yield Management System.
	2018	ISO-9001 certification complete.	Expected in Q2 2018
	2018	AEC-Q101 qualification complete.	Completed three qualification lots with record composition yield of ~65% and delivered lots to General Electric for AEC-Q101 reliability testing.
	2018	Consortium expanded to include at least eight partner companies/customers.	Two consortium partners confirmed. Negotiations are in progress with additional partners.
	2019	Consortium expanded to include at least 12 partner companies/customers.	

**Table 102. Cleantech Startup Growth Initiative Results**

**Approval Date:** May 23, 2016

**Launch Date:** October 12, 2016

Innovation and Research Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2019)	% of Total Target through Initiative Completion (2019)
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	-	-	-	\$124.50	\$124.50	\$131.50	95%	\$442.90	28%
Participants	Participants	-	80	80	-	80	271	30%	4,307	2%

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

**Table 103. Key Milestones for Cleantech Startup Growth Incubators**

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2016	First competitive solicitation launched.	Solicitation was released on October 12, 2016. Round 1 due date was December 1, 2016. Round 2 opened October 2, 2017 and closed November 29, 2017.
✓	2017	Awards from first solicitation are contracted.	Four awarded contracts were fully executed by August 31, 2017.
✓	2017	Second competitive solicitation launched.	Announced as part of Round 1. Round 2 opened October 2, 2017 and closed November 29, 2017.
	Starting 2017	Networking event held.	Networking events are held as part of the routine operation of the incubators. Networking events have been held as planned throughout 2017.
	Starting 2017	Entrepreneur boot camp held.	Entrepreneurial-type of boot camps/workshops are held throughout the operation of the incubators. Entrepreneur boot camps have been held as planned throughout 2017.
	2018	Awards from second solicitation are contracted.	Round 2 closed November 29, 2017. Five proposals were received. Award notifications were sent to proposers on March 9, 2017. Two contracts with awardees are currently being negotiated and finalized. Contracts expected to be fully executed in Q2 2018.

**Table 104. Key Milestones for Cleantech Startup Growth Ignition Grants**

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2017	Formal voice of customer exercise is completed.	Voice of Customer exercise has been initiated and will ramp up after awards are announced and contracts are fully executed for Incubators funded in Round 1. Companies working with Incubators awarded in Rounds 1 and 2 will be eligible for Ignition Grants.
	2017	Solicitation launched.	Planning to launch competitive solicitation in Q2 2018.
✓	2017	Investment Committee established.	Investment committee has been established.
	Starting 2017	Investment Committee meetings held.	Investment committee meetings will be held once the investment committee is fully established and the solicitation is launched, which is expected to be in Q2 2018. Currently waiting to launch solicitation until the two new incubator contracts are fully executed, which is expected to be in Q2 2018.
	Starting 2017	Ignition grant awards issued on ongoing basis.	Ignition grants solicitation is expected to launch in Q2 2018. Currently waiting to launch solicitation until the two new incubator contracts are fully executed, which is expected to be in Q2 2018.

**Table 105. Key Milestones for Cleantech Startup Growth Geographic Coverage**

<b>Complete</b> ✓	<b>Time Frame</b>	<b>Milestone</b>	<b>Explanation of Progress</b>
✓	2016	Competitive solicitation launched.	Solicitation was released on October 12, 2016. Round 1 due date was December 1, 2016.
✓	2017	Awards from solicitation are contracted (~6 months following solicitation due date).	Scoring Committee for Round 1 was held on January 11, 2017. Presented Scoring Committee results and Team recommendations at Greenlight on February 14, 2017. The one award under this milestone was fully executed by August 31, 2017.
✓	2017	Inventory of entrepreneurial assets in Southern Tier completed.	An inventory of assets was completed during the initiation phase of 76West (PPR for RFQL 3101). Following selection of Cornell to operate the competition, we have relied on Cornell to maintain many of the relationships with these assets and to add others to the inventory. The usefulness of the inventory is in the management of the 76West program. This function has essentially been internalized within the work of Cornell.
	2017	Entrepreneurship training programs established.	NYSERDA will no longer be pursuing this milestone and will remove in an investment plan modification in the future.
✓	Starting 2017	Networking events held.	Ongoing networking events have already been held and more are planned for future dates. Networking events have been held as planned throughout 2017.

**Table 106. Key Milestones for Cleantech Startup Growth Proof-of-Concept Centers (POCCs)**

<b>Complete</b> ✓	<b>Time Frame</b>	<b>Milestone</b>	<b>Explanation of Progress</b>
	2018	Competitive solicitation for POCCs launched.	Solicitation will launch by end of April 2018.
	2018	Award(s) from solicitation for POCCs contracted.	Awards will be made after launch of the solicitation.
	2019	Competitive solicitation for POCC support services launched.	
	2019	Award(s) from solicitation for POCC support services contracted.	



**Table 107. Key Milestones for Cleantech Startup Growth Entrepreneurs-In-Residence**

<b>Complete</b> ✓	<b>Time Frame</b>	<b>Milestone</b>	<b>Explanation of Progress</b>
✓	2018	Competitive solicitation launched.	Solicitation was launched on February 28, 2018.
	2018	Award(s) from solicitation contracted.	Awards will be made after launch of the solicitation.
	2018	Company reviews initiated.	Company reviews will initiate once the new contract is fully executed and the program is formally launched.
	2018	Company engagements initiated.	Company engagements will initiate once the new contract is fully executed and the program is formally launched.
	2018	Office hours and expert presentations initiated.	Office hours and expert presentations will initiate once the new contract is fully executed and the program is formally launched.
	Each year starting in 2018	Practice Pitch, SWAT Team, and other engagements initiated.	Practice Pitch, SWAT Team, and other engagements will initiate once the new contract is fully executed and the program is formally launched.

**Table 108. Key Milestones for Cleantech Startup Growth Investor, Corporate, and Customer Engagement**

<b>Complete</b> ✓	<b>Time Frame</b>	<b>Milestone</b>	<b>Explanation of Progress</b>
	2018	Competitive solicitations launched.	Solicitation(s) expected to launch in Q3/Q4 2018.
	2018	Awards from solicitations contracted.	Awards will be made after launch of the solicitation.

**Table 109. Novel Business Models and Offerings**

**Approval Date:** December 1, 2017

**Anticipated Launch Date:** Q2 2018

Innovation and Research Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	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	-	-	-	-	-	\$8.23	-	\$168.40	-
Participants	Participants	-	-	-	-	-	2	-	33	-

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

**Table 110. Key Milestones for Novel Business Models and Offerings**

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2018	Release solicitation for new business models and offerings proposals for both scaling and validation support.	Solicitation expected to launch in Q2/Q3 2018.
	2018	Contract with first-round NBMO awardees.	Contracting will occur following review of applications that respond to the solicitation scheduled for Q2/Q3 2018.
	2018	Contract with second-round NBMO awardees.	Contracting will occur following review of applications that respond to the solicitation scheduled for Q2/Q3 2018.
	2019	Conduct preliminary program process assessment, examining the distribution of proposers, scope of proposed impact, and marketing and selection processes through first two rounds, and revise the solicitation as necessary.	
	2020	Re-release solicitation if necessary for the third round.	
	2020	Contract with third-round NBMO awardees.	
	2020	Perform program assessment to determine continuation.	
	2020	Contract with fourth-round NBMO awardees if the program is continued.	

**Table 111. Manufacturing Corps Initiative Results**

**Approval Date:** February 14, 2017

**Launch Date:** June 29, 2017

Innovation and Research Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2020)	% of Total Target through Initiative Completion (2020)
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	-	-	-	-	-	-	-	\$60.00	-
Participants	Participants	-	-	-	-	-	-	-	450	-

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

**Table 112. Key Milestones for Manufacturing Corps**

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2017	Competitive solicitation launched for pilot sites.	Solicitation launched 6/29/2017. Proposals were due 9/14/2017.
	2017	Awards from RFQ are contracted.	This milestone will be removed in the next revision of the investment plan. This milestone has been consolidated into the larger M-Corps pilot program solicitation.
	2018	Awards from pilot site solicitation are contracted. Pilot program launched.	Awards made. Contracting is underway and will be completed Q2 2018.
	2020	Pilot program ends. Metrics reviewed based on pilot program performance and adjustments identified to implement in statewide solicitation.	
	2020	Statewide competitive solicitation based on pilot program launched.	
	2020	Awards from statewide solicitation are contracted. Statewide program launched.	
	2023	NYSERDA investment in statewide program ends. Metrics reviewed based on statewide program performance.	

**Table 113. NextGen HVAC Initiative Results**

**Approval Date:** August 17, 2016

**Launch Date:** June 28, 2017

Innovation and Research Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2019)	% of Total Target through Initiative Completion (2019)
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	-	-	-	\$16.60	\$16.60	\$27.50	60%	\$75.00	22%
Participants	Participants	-	-	-	13	13	7	186%	25	52%

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

**Table 114. Key Milestones for NextGen HVAC**

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2016	Issue RFI to evaluate and establish technology challenge areas and targets.	RFI issued Jan. 13, 2017, Informational Webinar held on Feb. 1, 2017 (60+ attendees), RFI submissions received on Feb 22, 2017.
✓	2016	Issue first technology challenge.	NextGen HVAC Technology Challenge (PON 3517) was issued on 6/28/2017 with four identified challenges: air-source heat pumps, advanced HVAC controls, compressorless cooling, and ground heat exchanger. Informational webinar held on July 24, 2017 with 99 unique attendees, including a viewing group organized by the Syracuse CoE.
	2017	Contract projects from first technology challenge.	Contracts will be executed in Q2 and Q3 2018.
✓	2017	Review portfolio of activities, solicit market input, and reassess technology challenges areas and targets.	The assessment of the needs was undertaken with stakeholders and led to the identification of needs.
✓	2017	Issue second technology challenge.	The second of four challenges was issued on March 22, 2018.
	2018	Contract projects from second technology challenge.	Projects will be contracted once awards have been made from the second technology challenge.
	2018	Review portfolio of activities, benefits to date, solicit market input and reassess technology challenges areas and targets.	A review will be conducted once awards have been made from the second technology challenge.
	2018	Issue third technology challenge.	The third technology challenge is expected in Q4 2018.
	2019	Contract projects from third technology challenge.	

**Table 115. Electric Vehicles Initiative: EV Innovation Results**

**Approval Date:** August 17, 2016

**Launch Date:** September 15, 2017

Innovation and Research Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	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	-	-	-	\$1.37	\$1.37	\$9.08	15%	\$31.70	4%
Participants	Participants	-	-	-	6	6	10	60%	33	18%

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



**Table 116. Key Milestones for Electric Vehicles Initiative: EV Innovation**

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2017	Support the launch of new business offerings for charging station leasing.	NYSERDA recently finalized an MOU with NYPA to have them offer on-bill financing of EV charging stations to their Recharge NY customers (private sector companies). The MOU was signed in December 2017 and the joint program is underway.
✓	2017	Issue first competitive solicitation for the development and demonstration of EV-enabling technologies.	A new PON (3578), which includes opportunities for product development and demonstration, was issued in November 2017, with proposals due in two rounds, starting in February 2018. NYSERDA received 31 proposals in the first round.
	2017	Contract with projects awarded in first competitive solicitation for the development and demonstration of EV-enabling technologies.	This activity will begin once proposals are received and awards made for PON 3578, which is expected to take place in Q2 2018.
✓	2017	Initiate aggregation pilots for EVs and EV charging stations, which will begin engaging customers and facilitating initial bulk purchases.	The program with NYPA aggregates purchases of EV charging stations with NYPA's public and private sector customers. NYSERDA is also developing a program for EV charging stations that will be released in 2018. For vehicle aggregation, the DEC continues to lead aggregate purchases of EVs for public fleets. NYSERDA's contractor Sustainable Hudson Valley worked on an aggregate purchase for individuals in 2017, which facilitated more than 150 aggregated vehicle purchases.
	2018	Complete bench-scale prototypes of economically viable technologies that enable smart charging.	Due to a delay in the launch of the solicitation, this milestone is expected to be achieved in 2019.
	2018	Issue second competitive solicitation for the development and demonstration of EV-enabling technologies.	In place of a second solicitation, NYSERDA will offer a second due date for PON 3578. Revisions to the PON in advance of this second due date will be issued in Q2 or Q3 2018, with the due date for proposals in Q3 2018.
	2018	Contract with projects awarded in second competitive solicitation for the development and demonstration of EV-enabling technologies.	Projects will be contracted once awards from the second round of PON 3578 have been made.
	2018	Contract with projects awarded in third competitive solicitation for the development and demonstration of EV-enabling technologies.	The third solicitation is not expected to launch until 2019.

Table 116 continued

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2018	Fast-charging station network expanded to 30 locations statewide along major interstate corridors.	NYSERDA is actively investigating ways to expand DC fast charger (DCFC) networks in NYS, including establishing programs to support installations, working with Electrify America, investigating ways to reduce the impact of demand charges on DCFC economics, and enhancing planning for DCFCs. The Transportation and Climate Initiative conducted a geographical analysis for DCFCs to identify priority locations and NYS is analyzing major travel corridors to determine which are highest priority for DCFCs.
✓	2018	Completion of first collaborative consumer awareness activities.	<p>Consumer awareness activities are underway. Initial collaborative partnerships underway in the Hudson Valley (through Sustainable Hudson Valley - completed), Syracuse (through Clean Cities - completed), and Rochester (through the Electrification Coalition - underway) and have shown strong results to date.</p> <p>NYSERDA and other Northeast states worked with automakers to develop a plan for a multi-state brand-neutral EV awareness campaign, which was completed in April 2017. In Q4 2017 the States and automakers raised funds and agreed to move forward with the campaign, which kicked off in March 2018.</p>
	2019	Issue third competitive solicitation for the development and demonstration of EV-enabling technologies.	

**Table 117. Public Transportation and Electrified Rail Initiative Results**

**Approval Date:** October 3, 2017

**Launch Date:** February 22, 2018

Innovation and Research Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2022)	% of Total Target through Initiative Completion (2022)
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	-	-	-	\$1.36	\$1.36	\$2.00	68%	\$42.00	3%
Participants	Participants	-	-	-	1	1	2	50%	33	3%

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

**Table 118. Key Milestones for Public Transportation and Electrified Rail**

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2017	Issue first competitive solicitation for the development and demonstration of public transportation technologies.	NYSERDA is in the process of developing the first solicitation under this initiative, which is expected to be released in late Q2 2018.
	2018	Contract with projects awarded in first competitive solicitation for the development and demonstration of public transportation technologies.	This will begin after projects are awarded under first PON.
	2018	Issue second competitive solicitation for the development and demonstration of public transportation technologies.	The second solicitation should be released in 2019.
	2018	Initiate project to identify ways to update transit agency procurement processes so that they explicitly value energy savings from efficient transit technologies.	This project is expected to launch in late 2018 or early 2019.
	2019	Contract with projects awarded in second competitive solicitation for the development and demonstration of public transportation technologies.	
	2019	Issue third competitive solicitation for the development and demonstration of public transportation technologies.	
	2020	Contract with projects awarded in third competitive solicitation for the development and demonstration of public transportation technologies.	
	2020	Issue fourth competitive solicitation for the development and demonstration of public transportation technologies.	
	2021	Contract with projects awarded in fourth competitive solicitation for the development and demonstration of public transportation technologies.	

**Table 119. Energy Related Environmental Research**

**Approval Date:** February 14, 2017

**Launch Date:** February 15, 2017

Innovation and Research Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	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	-	-	-	\$4.01	\$4.01	\$2.65	151%	\$7.50	53%
Participants	Participants	6	3	9	33	42	35	120%	100	42%

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

**Table 120. Key Milestones for Energy Related Environmental Research**

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2017	Solicitations issued for research projects consistent with the research plan.	Two solicitations were issued in 2017 Q3 and are in the final stages of approval. Contracting of new agreements, contract modifications, and research planning is ongoing, including the development of \$3.6M in single-source agreements for long-term monitoring projects.
	2017	Projects contracted from solicitations.	Contracting from the two solicitations issued in 2017 Q3 is anticipated to be complete in Q2 2018. Three contracts currently are out for signature.
✓	2017	Outreach, technology transfer, and briefings to share research findings.	Outreach supported with other funding sources continues. Dissemination of research findings are ongoing via workshops, briefings and similar.
	2018	Solicitations issued for research projects consistent with the research plan.	Development of a solicitation for Q2 2018 is ongoing.
	2018	Projects contracted from solicitations.	Agreements totaling ~\$2.5 M have been contracted for long-term monitoring projects. An additional ~\$2.4M in agreements for long-term monitoring are also in development.
	2018	Outreach, technology transfer, and briefings to share research findings.	Outreach supported with this and other funding sources continues. Dissemination of research findings is ongoing via workshops, briefings and similar.
	2019	Solicitations issued for research projects consistent with the research plan.	
	2019	Projects contracted from solicitations.	
	2019	Outreach, technology transfer, and briefings to share research findings.	
	2020	Solicitations issued for research projects consistent with the research plan.	
	2020	Projects contracted from solicitations.	
	2020	Outreach, technology transfer, and briefings to share research findings.	
	2021	Solicitations issued for research projects consistent with the research plan.	
	2021	Projects contracted from solicitations.	
	2021	Outreach, technology transfer, and briefings to share research findings.	

**Table 121. Energy Storage Technology and Product Development Initiative Results**

**Approval Date:** March 27, 2017

**Launch Date:** June 21, 2017

Innovation and Research Initiative	Units	Completed Projects through December 31, 2017 with Adjustments	Completed Projects through 1/1/2018-3/31/2018	Total Completed Projects through March 31, 2018	Current Pipeline Through March 31, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Target Through Q1 2018	% of Cumulative Current Target Through Q1 2018	Total Target through Initiative Completion (2025)	% of Total Target through Initiative Completion (2025)
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	-	-	-	\$8.50	\$8.50	\$9.10	93%	\$165.00	5%
Participants	Participants	-	-	-	3	3	8	38%	118	3%

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

**Table 122. Key Milestones for Energy Storage Technology and Product Development**

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2017	Issue first competitive solicitation.	PON 3585 Energy Storage Technology and Product Development was issued on June 21, 2017.
	2017	Contract projects from first competitive solicitation.	Three Round 1 projects were approved November 21, 2017. First contract is executed. Remaining two contracts are ready for participant signature.
✓	2017	Review portfolio of activities, solicit market input, and reassess technology challenge areas and targets.	PON 3585 - Energy Storage Technology and Product Development round 1 and round 2 results to date have informed the design of the third and fourth competitive solicitations (rounds) for this plan.
✓	2017	Issue second competitive solicitation.	PON 3585 - Energy Storage Technology and Product Development round 2 concept papers have been received and reviewed by scoring committee. Fourteen concept paper submitters were invited to submit proposals. Proposals have been reviewed by scoring committee and eight proposals have been recommended for funding.
	2018	Contract projects from second competitive solicitation.	PON 3585 Round 2 Concept Paper scoring committee meeting was completed January 10, 2018. Fourteen invited proposals have been reviewed by scoring committee and eight proposals have been recommended for funding.
	2018	Review portfolio of activities, solicit market input, and reassess technology challenge areas and targets.	Learning from first four rounds will be used to inform next solicitation targeted for late 2018 or early 2019.
	2018	Issue third competitive solicitation.	Twelve round 3 concept papers were received 2/8/2018. Concept papers have been reviewed by scoring committee and six have been recommended to be invited to submit proposals.
	2019	Contract projects from third competitive solicitation.	
	2019	Review portfolio of activities, solicit market input, and reassess technology challenge areas and targets.	
	2019	Issue fourth competitive solicitation.	Twenty-nine round 4 concept papers were received 4/12/2018.



## Appendix A: Table of Investment Plan Approvals

	Case Number/Reference	Effective Date
Commercial Resource Acquisition Transition and Flextech Industrial Resource Acquisition Transition Agriculture Resource Acquisition Transition Multifamily Market-Rate Resource Acquisition Transition Multifamily LMI Resource Acquisition Transition Single-Family Market-Rate Resource Acquisition Transition Single-Family LMI Resource Acquisition Transition Commercial New Construction Resource Acquisition Transition Low-Rise New Construction Market-Rate Resource Acquisition Transition Low-Rise New Construction LMI Resource Acquisition Transition Multifamily New Construction Market-Rate Resource Acquisition Transition Multifamily New Construction LMI Resource Acquisition Transition Anaerobic Digesters Resource Acquisition Transition Fuel Cells Resource Acquisition Transition Small Wind Resource Acquisition Transition Solar Thermal Resource Acquisition Transition Combined Heat and Power Resource Acquisition Transition	Case 14-M-0094 -Resource Acquisition Approval Letter	February 29, 2016

**Table A-1 continued**

	<b>Case Number/Reference</b>	<b>Effective Date</b>
Real Estate Tenant Real Time Energy Management Reforming the Energy Vision Campus Challenge Continuous Energy Improvement Clean Energy Communities Offshore Wind Master Plan Offshore Wind Pre-Development Activities REV Connect Distributed Energy Resource Interconnection Cleantech Startup Growth	Case 14-M-0094 - DPS Approval of NYSERDA's CEF Investment Plan Chapters	May 23, 2016
High-Performing Grid Reducing Barriers to Energy Storage Deployment Electric Vehicles Rebate NextGen HVAC Electric Vehicle Innovation	Matter 16-00681 - DPS Approval of NYSERDA's CEF Investment Plan Chapters	August 17, 2016
Retrofit NY REVitalize Low-Income Forum on Energy Healthy Homes Feasibility Study	Matter 16-00681 - DPS Approval of NYSERDA's CEF Investment Plan Chapters	August 31, 2016
Greenhouse Lighting and Systems Engineering Industry Partnerships	Matter 16-00681 - DPS Approval of NYSERDA's CEF Investment Plan Chapters	September 15, 2016
Manufacturing Corps Energy Related Environmental Research	Matter 16-00681 - DPS Approval of NYSERDA's CEF Investment Plan Chapters	February 13, 2017
Community Energy Engagement Energy Storage Technology and Product Development	Matter 16-00681 - DPS Approval of NYSERDA's CEF Investment Plan Chapters	March 27, 2017
Underutilized Products Support Renewable Heat NY Heat Pumps and Solar Thermal	Matter 16-00681 - DPS Approval of NYSERDA's CEF Investment Plan Chapters	May 16, 2017
Energy Efficiency Soft Cost Challenge Power Electronics Manufacturing Consortium	Matter 16-00681 - DPS Approval of NYSERDA's CEF Investment Plan Chapters	July 19, 2017

**Table A-1 continued**

Technical Services Public Transportation and Electrified Rail	Matter 16-00681 - DPS Approval of NYSERDA's CEF Investment Plan Chapters	October 3, 2017
Code to Zero New Construction Fuel Cells Engaging New Markets Clean Energy Advanced Market Performance (AMP) Challenge Clean Energy Siting and Soft Cost Reduction Advancing Agricultural Energy Technologies K-12 Schools Novel Business Models and Offerings	Matter 16-00681 - DPS Approval of NYSERDA's CEF Investment Plan Chapters	December 1, 2017
Low-Income Community Solar	Matter 16-00681 - DPS Approval of NYSERDA's CEF Investment Plan Chapters	December 6, 2017

# Endnotes

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- <sup>1</sup> 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.
- <sup>2</sup> NY-Sun and NY Green Bank investments and benefits are reported in separate quarterly reports available on NYSERDA’s website.
- <sup>3</sup> The 88 million MWh renewable energy goal is not shown in Figure 2 as it is mainly supported by NY-Sun.
- <sup>4</sup> NYSERDA’s electricity emission reduction factor of 1,160 pounds CO<sub>2</sub>e/MWh is derived using the marginal emission-rate analysis for CO<sub>2</sub> from “Appendix: The Benefits and Costs of Net Energy Metering in New York” Figure 28 and applying a line loss factor of 7.2%. <http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterSeq=49636&MNO=15-E-0703>
- <sup>5</sup> Customer Bill Savings are calculated as direct energy bill savings realized by customers participating in NYSERDA’s programs.
- <sup>6</sup> Beginning with Q4 2016, NYSERDA 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 ([nyserd.ny.gov/About/Publications/EA-Reports-and-Studies/Energy-Statistics](http://nyserd.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](http://www1.nyc.gov/assets/sustainability/downloads/pdf/publications/ NYC_GHG_Inventory_2014.pdf)).
- <sup>7</sup> NYSERDA pre-encumbered an additional \$20.2 million to solicitations with upcoming due dates that are not shown in Table 3. When including these funds, NYSERDA committed 26% 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.
- <sup>8</sup> Completed projects through September 30, 2017 contains adjustments from programs due to lagged data and QA/QC.
- <sup>9</sup> Completed projects through September 30, 2017 contain adjustments from programs due to lagged data and QA/QC.
- <sup>10</sup> NYSERDA committed an additional \$3,192,483 to solicitations with upcoming due dates not shown in Table 6. When including these funds, NYSERDA committed 52% 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.
- <sup>11</sup> Completed projects through September 30, 2017 contain adjustments due to lagged data and QA/QC.
- <sup>12</sup> Consistent with the filed investment plan, the committed and completed projects savings and private investment are based upon a 47% adoption rate. This adoption rate will be evaluated and is subject to change as more data is gathered.
- <sup>13</sup> Cumulative Current Target through Q4 2017 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.
- <sup>14</sup> 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%, based on historic program data. Actual attrition will be reflected in the reported values as it occurs.
- <sup>15</sup> Private investment is only reported for pipeline projects at the encumbered stage or later.
- <sup>16</sup> NYSERDA makes no claim to the environmental attributes or any NYGATS certificates that may be associated with these projects.
- <sup>17</sup> NYSERDA makes no claim to the environmental attributes or any NYGATS certificates that may be associated with these projects.
- <sup>18</sup> Cumulative Current Target (2016) and Total Target through Initiative Completion (2018) contain metrics from the Market Transformation of Marketplace table in the Resource Acquisition Chapter, which could be considered indirect benefit targets. Indirect benefits are not reflected because it will take time for the benefits to be realized.

- 19 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.
- 20 CHP targets and reporting methods associated with fuel used to run the CHP systems are being examined and may be adjusted in future reports.
- 21 Energy Efficiency values represent MWh savings from the use of CHP systems; natural gas required to run CHP systems is 1,327,420 MMBtu cumulative annual and 19,911,303 MMBtu lifetime. Expected 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 that subtract from the benefits.
- 22 NYSERDA committed an additional \$7,626,151 to solicitations with upcoming due dates not included in Table 23. When including these funds, NYSERDA committed 20% of the approved budget to date for the Market Development Chapter. Committed benefits presented in this report does not include benefits associated with awards made because of these solicitations.
- 23 The Market Characterization and Design Chapter line item includes funds to support overarching, non-initiative-specific evaluation studies.
- 24 Program received preliminary project specific estimates for a small subset of projects that is significantly higher than the project specific estimates applied to develop these targets.
- 25 Program received preliminary project specific estimates for a small subset of projects that are significantly higher than the project specific estimates applied to develop these targets.
- 26 Due to the split-funded nature of this program, NYSERDA is also tracking and reporting savings associated with completed High-Impact Actions in the Regional Greenhouse Gas Initiative (RGGI) report according to the percentage of RGGI funding currently committed for the Clean Energy Communities Program.
- 27 NYSERDA makes no claim to the environmental attributes or any NYGATS certificates that may be associated with these projects.
- 28 Energy Efficiency values represent MMBtu savings from the use of electric vehicles; the electricity required to charge the vehicle is 12,268 MWh cumulative annual and 122,680 MWh lifetime. Expected Emission reductions and customer bill savings are net, including both MMBtu that add to the benefits and the electricity required to charge the electric vehicles that subtract from the benefits.
- 29 NYSERDA makes no claim to the environmental attributes or any NYGATS certificates that may be associated with these projects.
- 30 Cumulative Current Target through Q3 2017 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.
- 31 Cumulative Current Target through Q3 2017 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.
- 32 Energy Efficiency values represent MMBtu savings from the use of renewable heating and cooling technologies; electricity required to utilize the RH&C technology is 9,522 MWh annual and 238,049 lifetime. Expected emission reductions and customer bill savings are net, including both MMBtu's that add to the benefits and additional electricity required to run the system that subtract from the benefits.
- 33 Energy Efficiency values represent MMBTU savings from ASHPs; the electricity required to utilize the RH&C technology is 8,945 MWh annual and 134,181 lifetime. Expected emission reductions and customer bill savings are net, including both the MMBtu's that add to the benefits and addition MWh's required to run the system that subtract from the benefits.
- 34 The launch dates for the ASHP and ARTU are not in alignment with what was presented in the investment plan. NYSERDA will correct these launch dates in a future filing based on guidance from the Department of Public Service.
- 35 Program activities commenced prior to launch of the initiative.
- 36 NYSERDA committed an additional \$9,383,341 to solicitations with upcoming due dates not included in the table above. When including these funds, NYSERDA committed 23% 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.
- 37 The Market Characterization and Design Chapter line item includes funds to support overarching, non-initiative-specific evaluation studies.



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