

Clean Energy Fund Quarterly Performance Report through September 30, 2018

Final Report | November 2018

| Revised January 2019

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

Document Title
Clean Energy Fund Quarterly Performance Report through September 30, 2018

Revision Date	Description of Changes	Revision on Page(s)
November 14, 2018	Original Issue	
January 18, 2019	A data correction was made to the Clean Energy Communities program renewable energy MWH and MW as well as the associated portfolio level roll up tables/figures and narratives.	Figure 1 – pg. 2 Table 1 – pg. 6 Table 5 – pg. 10 Table 6 – pg. 11 Table 37 – pg. 45

**Clean Energy Fund
Quarterly Performance Report
through September 30, 2018**

Final Report

Prepared by:

New York State Energy Research and Development Authority

Albany, NY

November 2018

About This Report

The Clean Energy Fund (CEF) Order was issued on January 21, 2016.¹ The CEF is comprised of four distinct portfolios (CEF Portfolio) including:

- Market Development (MD)
- Innovation and Research (I&R)
- NY-SUN
- NY Green Bank

The CEF order required quarterly reporting for the MD and I&R portfolios specifically to explain the following:

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

Reporting of performance for NY-SUN and NY Green Bank is filed separately from this report with the exception of Figure 1, which includes collective targets and progress against those targets for all four portfolios combined. All other performance data throughout this report reflects MD and I&R portfolios as noted within each section and graphic.

This report represents quarterly and cumulative activity through September 30, 2018 and achievements of all initiatives approved prior to and during the reporting period. This includes the transition programs incorporated 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.

This report reflects planned and achieved direct benefits from participation in NYSERDA's programs through September 30, 2018, as shown in the graphics, tables, and performance profiles 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 best-practice market evaluation approaches to quantify the indirect impacts expected to accrue over time. Indirect benefits will be reflected in progress reporting as these benefits begin to be realized and evaluated.

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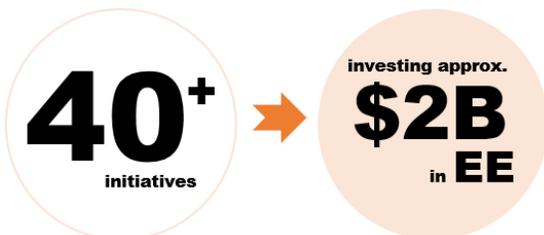
1 Overview

The Clean Energy Fund is designed to accelerate the use of clean energy and energy innovation, while simultaneously delivering on New York State’s commitment to reduce ratepayer collections and driving economic development.

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 previous Commission actions have already advanced, energy efficiency is a cornerstone of New York State’s strategies to promote clean energy and affordable solutions for consumers while addressing climate change. The recommendations in the comprehensive energy efficiency initiative white paper issued by DPS and NYSERDA on April 26, 2018 guided by a new 2025 energy efficiency target of 185 TBtu of cumulative annual site energy savings, will accelerate progress towards the State’s ambitious clean energy goals, including meeting one third of the emissions necessary to achieve 40% reduction of GHG emissions by 2030 (“40 by 30”) from 1990 levels.²

Through all its CEF portfolios, NYSERDA is investing close to \$2 billion in funding over the CEF’s 10-year life span to support energy efficiency across all fuels, delivering a minimum of 10.6 million megawatt-hours (MWh) in electric savings and 13.4 million MMBtu in non-electric fuel savings. Through the Market Development portfolio, NYSERDA will drive actions to develop a more robust and value-creating market for energy efficiency, with particular attention to reducing the costs of energy efficiency retrofits and new construction, accelerating innovative solutions that drive deeper energy retrofits, and advancing targeted financial support to both help overcome cost barriers to efficiency investments and to ease access for private capital to allow new clean energy interventions to scale. The end goal of CEF MD interventions is to reduce the barriers to energy efficiency deployment and adoption, and ultimately foster self-sustaining markets for energy efficiency.

CEF Energy Efficiency



The CEF offers solutions that will:

- Drive significant carbon emissions reductions related to energy efficiency targets
- Deliver billions of dollars 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

Figure 1 presents a more comprehensive picture of progress, with the 10-year budget and 10-year minimum goals reflecting all four CEF portfolios (MD, I&R, NY-Sun, and NY Green Bank). Progress shown against each key performance indicator (KPI) represents:

- Results through September 30, 2018 for Market Development and Innovation and Research
- Results through December 31, 2017 for NY-Sun and NY Green Bank

Figure 1. CEF Portfolio Expected Investment and Benefits toward 10-year minimum Goals as of September 30, 2018 (millions)³

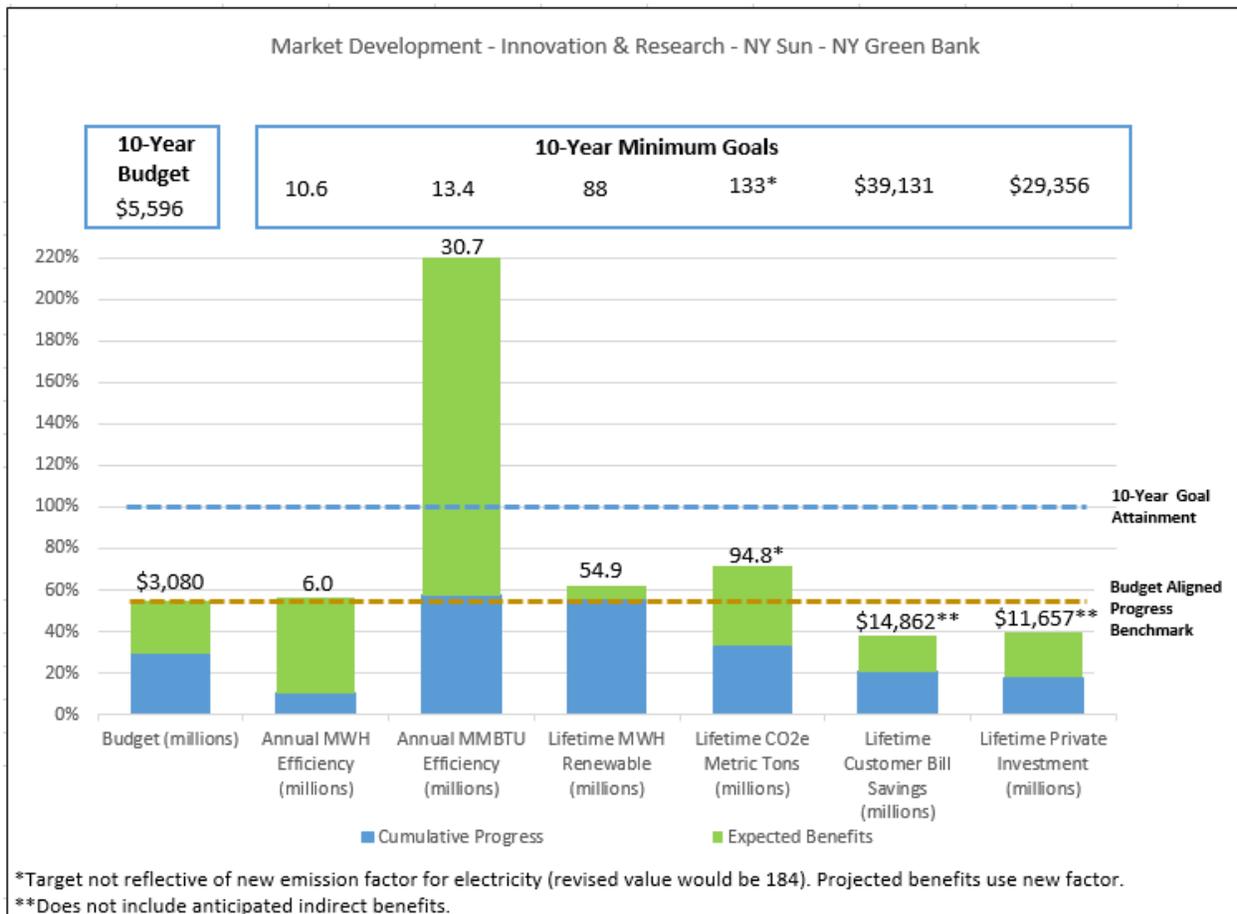


Figure 1 illustrates that deployment of funds is well-aligned with energy and carbon KPI progress at this time.⁴ Here, “Cumulative Progress” (committed budgets and benefits) is combined with “Expected Benefits” (approved but not yet committed budgets and benefits) to demonstrate total progress towards NYSERDA’s targets.

Progress towards “no backsliding from EEPS” energy efficiency MWh and MMBtu goals targets remains on track, with MMBtu expected benefits significantly greater than the minimum projected benefits already. Carbon dioxide equivalent (CO₂e) emission reduction progress is on track to meet the overall goal for the CEF. The CEF’s fuel-neutral approach is an important driver of success on the CO₂e metric.⁵

Performance of the customer (participant) bill savings⁶ and lifetime private investment metrics appears low at this time because it is not yet inclusive of estimated indirect benefits expected to occur (and be measured) later in the 10-year life of the portfolio. NYSERDA has begun baseline and follow-up market measurements in order to quantify indirect benefits and expects the addition of these currently unaccounted for indirect benefits to raise overall performance up to a level that tracks well against the overall goals.

Composition and Management of MD and I&R Portfolios

Through September 2018, 61 MD and I&R initiatives were developed by NYSERDA and filed with the Public Service Commission, of which 51 initiatives have been formally launched. Following the release of the CEF Order NYSERDA introduced 39 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. As previously noted, energy efficiency strategies serve as the foundation for the CEF, encompassing the majority of initiatives that will achieve energy and carbon targets.

Collectively, one could liken NYSERDA’s management of this portfolio of initiatives to that of a financial advisor managing a stock portfolio: building out the diversity of the portfolio in a way that can deliver the long-term investment goals while keeping a close eye on the performance of every element to keep the portfolio on track over time. NYSERDA commonly refers to this approach with the CEF, in the spirit of “market transformation”, as the Test-Measure-Adjust model.

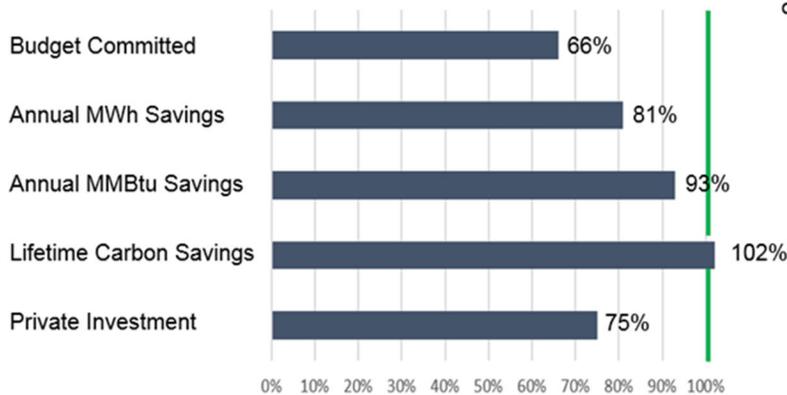
Performance to Plan

NYSERDA closely monitors MD and I&R portfolio performance, specifically of each initiative against its investment plan forecast of benefits over time. NYSERDA's planned benefits for Q3 2018 are defined as 100% of the 2016 and 2017 annual planned benefits plus 75% of the 2018 annual planned benefits. However, it is important to note that actual progress may not be equal each quarter of a calendar year. Furthermore, especially for new initiatives in the Market Development portfolio, forecasting market uptake and return on investment can be challenging, so NYSERDA is continually gathering and assessing data on progress and reviewing these forecasts for accuracy.

Below is a high-level view of NYSERDA's MD and I&R portfolio performance to plan. Broadly speaking, committed benefits are exceeding the committed budget at this time, yielding a higher return on investment than anticipated. Still, with the exception of CO₂e and MMBtu, the pace of commitment and attainment of benefits is below 90% of plan at this point in time, so NYSERDA is placing great emphasis on hastening the pace at which projects are being committed to ensure progress towards achieving the CEF targets remains on track.

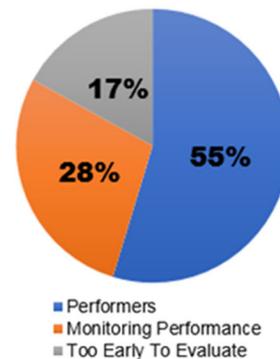
MD and I&R Portfolio Performance-To-Plan

How does performance to date compare with the projected/forecasted results at this point in time?



Portfolio Initiative Performance

Categorizing the status of all active (launched) initiatives within the portfolio in relationship to our planned performance to date



The pie chart characterizes performance of all active initiatives in the MD and I&R portfolio according to three categories:

Performers are generally doing well in terms of market uptake and benefits delivery and represent the majority (55%) of initiatives

Monitoring Performance constitutes about a quarter (28%) of initiatives that may still deliver as planned, but need some degree of confirmation of their market uptake and/or benefits delivery/quantification, and potentially adjustment or corrective action

Too Early to Evaluate characterizes a small percentage (17%) of initiatives that are expected to deliver as planned, but are newly launched and needing more experience in the market before they can be assessed.

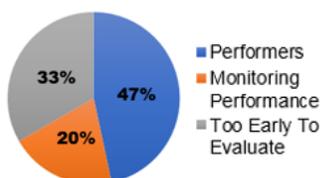
Achieving greater impact per ratepayer dollar involves experimentation with intervention approaches with tolerance for failure provided it is addressed swiftly and the portfolio is on track to meet long-term outcomes. Accordingly, NYSERDA is using a “test-measure-adjust” approach to be as responsive to market conditions in real time as possible and redeploy resources from underperforming efforts when appropriate. Overall the composition of the portfolio in terms of Performers, Monitoring Performance and Too Early to Evaluate is aligned with these design and management expectations.

Spotlight On “Top Carbon Impact” Initiatives In NYSERDA’s MD and I&R portfolio, 15 key initiatives currently account for 82% of the expected lifetime CO₂e benefits and 47% of the approved budget. Notably, these top contributors also include a very strong focus on energy efficiency.

Although NYSERDA closely manages the performance of all the initiatives in the portfolio, these top 15 initiatives are worthy of special attention due to the weight they carry in terms of the overall success of the CEF in delivering expected benefits. This section of the overview ranks the initiatives from largest to smallest expected CO₂e contribution inside of the three status categories introduced earlier: Performers (Table 1), Monitoring Performance (Table 2) and Too Early to Evaluate (Table 3). Additional information on performance of all initiatives in the portfolio is included within each “performance profile” shown in sections 2, 3, and 4.

“Top 15” Performance

Categorizing the status of the largest carbon savings initiatives within the portfolio in relationship to planned performance to date



Carbon Impact

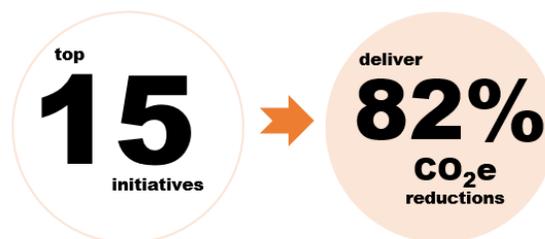


Table 1. Status of CEF Top 15 Initiatives for Carbon Impact | Performers

Initiative	Approved Portfolio	Initiative Performance-to-Date		Initiative Performance Narrative
	% of Total Planned CO2e Impact	% of Planned Participants (Market Uptake)	% of Planned Lifetime CO2e Savings	
Industrial Transition	11%	123%	153%	Market uptake and benefits are exceeding expectations at this time. Some very large projects are contributing significantly to benefits projections. Very cost-effective carbon reduction initiative to date (< \$10/ton).
Industry Partnerships (Workforce Development)	11%	129%	79%	Market uptake is excellent with more participation than expected and with portfolio companies (with multiple buildings) now engaged. ROI is somewhat lower than expected, but still a cost-effective carbon reduction initiative to date (< \$22/ton). 5th round project selection underway now for completion in Q4 2018.
Clean Energy Communities	7%	191%	91%	Market uptake is excellent with significantly more participation than expected and incentives nearly exhausted. Very cost-effective carbon reduction initiative to date (< \$12/ton)
Continuous Energy Improvement (Industry)	5%	47%	90%	After a longer-than-expected time period to secure participant commitment in Strategic Energy Management and On-Site Energy Manager, meaningful engagement is now occurring, and project benefits are more favorable than planned. Energy Management Information Systems expects its first applications in Q4 2018 as vendors develop projects. NYSERDA is currently gathering additional market insight the barriers/needs of all sizes of industrial customers. Very cost-effective carbon reduction initiative to date (< \$10/ton)
Electric Vehicles Rebate	3%	51%	49%	Although there is less direct participation than expected in the NYSERDA rebate program, market growth of EVs is strong and aligned with original forecast. NYSERDA estimates that only ~60% of EV sales have applied for the rebate.
Low-to-Moderate Income Single Family	2%	87%	99%	Market uptake and benefits are well aligned with forecast. The initiative is performing as planned.
Combined Heat & Power Transition	2%	121%	98%	Higher participation than expected and most metrics at or above 100% of what was expected at this point.

Table 2. Status of CEF Top 15 Initiatives for Carbon Impact | Monitoring Performance

Initiative	Approved Portfolio	Initiative Performance-to-Date		Initiative Performance Narrative
	% of Total Planned CO2e Impact	% of Planned Participants (Market Uptake)	% of Planned Lifetime CO2e Savings	
Energy Management	8%	94%	63%	Energy Management continues to see significant market uptake through the Real-time Energy Management (RTEM) program. Projects are generally smaller and less costly than expected, but early analysis of actual project data indicates that overall plan benefits will be met, and ROI may be more favorable than forecasted.
REV Campus Challenge	3%	105%	43%	REV Campus Challenge is exceeding market uptake expectations. The apparent lag on benefits metrics is the result of inadequate data to quantify these benefits. NYSERDA is reviewing available data and will collect the necessary data on member activity to more accurately and completely account for energy savings in future reports.
Technical Services	2%	596%	74%	The key component of Technical Services, the Energy Study Aggregation Program, launched at the end of Q2 2018. As the aggregation component ramps up, NYSERDA expects a performance to increase and overall initiative goals to be met. Cost-effective carbon reduction initiative to date (< \$22/ton)

Table 3. Status of CEF Top 15 Initiatives for Carbon Impact | Too Early to Evaluate

Initiative	Approved Portfolio	Initiative Performance-to-Date		Initiative Performance Narrative
	% of Total Planned CO ₂ e Impact	% of Participants Plan (Market Uptake)	% of CO ₂ e Lifetime Metric Tons Plan	
RetrofitNY	9%	0%	0%	Newly launched initiative. The first potential pilot projects have been selected and design/construction industry teams have started designing deep energy retrofit solutions for these buildings.
New Construction	9%	0%	0%	Newly launched with key components to kick off in late 2018 through early 2019.
Code to Zero	6%	0%	0%	On schedule to launch Q4 2018. Leading up to the official initiative launch there has been major success in support of NYC stretch code adoption. Code official training has occurred to date with non-CEF funds.
Underutilized Product Support	2%	82%	85%	The Air Source Heat Pump program is performing as expected. Trainings and case studies will be available for ASHP contractors in Q3-Q4 2018. The Advanced Rooftop Unit program has been put on hold as the desired 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 and NYSERDA will ultimately revise this plan accordingly.
K-12	2%	133%	134%	This initiative is still laying the groundwork with stakeholders to prepare for successful execution of the approved plan.

MD and I&R Portfolio Performance Data Tables—Budget and Benefits

Table 4 provides an accounting of portfolio budget progress to date against the funding approved for implementation. More detailed breakdowns of funding related to Transition, Market Development and Innovation & Research focus areas can be found within sections 2, 3, and 4 of the report. A detailed summary of benefits progress through September 30, 2018, both annual (Table 5) and lifetime (Table 6) concludes this overview.

Table 4. Market Development and Innovation and Research Portfolio Level Budgets and Spending

See Endnotes section for more information⁷

Initiative	Total Budget ^a	Budget Approved as of September 30, 2017 ^b	% of Ordered Budget Funds Approved ^c	Expended Funds ^d	Open Encumbrances ^e	Contract Pre-Encumbrances ^f	Committed Funds ^g	% of Approved Budget Committed ^h	Budget Approved Remaining Balance ⁱ
Market Development									
Program Funds									
NYS Cost Recovery Fee	\$2,346,051,964	\$1,413,832,597	60%	\$179,650,030	\$140,457,076	\$91,645,696	\$411,752,803	29%	\$1,002,079,794
Innovation & Research									
Program Funds									
NYS Cost Recovery Fee	\$619,090,948	\$359,788,316	58%	\$23,712,307	\$35,971,112	\$14,642,470	\$74,325,888	21%	\$285,462,428
Administration	\$268,934,758	\$158,987,064	59%	\$61,377,451	\$705,403	\$20,183	\$62,103,037	39%	\$96,884,027
Evaluation	\$127,606,798	\$54,733,825	43%	\$2,169,305	\$4,120,266	\$11,450	\$6,301,021	12%	\$48,432,804
Total	\$3,361,684,468	\$1,987,341,802	59%	\$266,909,093	\$181,253,857	\$106,319,798	\$554,482,748	28%	\$1,432,859,053

^a 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 June 30, 2021 proposed in RGGI Operating Plan approved January 2018.

^b Funds approved by DPS as of September 30, 2018.

^c Percentage of the approved budget.

^d Invoices processed for payment by NYSERDA.

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

^f Planned funding for contracts awarded and under negotiation.

^g Sum of Expended Funds, Open Encumbrances, and Contract Pre-Encumbrances.

^h Percentage of the committed budget.

ⁱ Difference between Budget Approved Funds and Committed Funds.

Table 5. Market Development and Innovation and Research Portfolio

Committed Benefits Progress to Date—Annual⁸

Initiative	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/18-9/30/18	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Annual Planned Benefits Through Q3 2018	% of Cumulative Annual Planned Benefits Through Q3 2018	Total Cumulative Annual Planned Benefits through 2025	% of Total Cumulative Annual Planned Benefits through 2025
Market Development									
Energy Efficiency (MWh)	150,258	15,701	165,959	912,222	1,078,181	1,335,676	81%	3,431,561	31%
Energy Efficiency (MMBtu)	2,785,536	481,948	3,267,484	4,440,326	7,707,810	8,293,276	93%	21,240,606	36%
Energy Efficiency (MW)	2.1	0	2	85	87	*	-	*	-
Renewable Energy (MWh)	33,052	256	33,308	11,200	44,509	*	-	*	-
Renewable Energy (MW)	27	0	27	4	31	*	-	*	-
CO2e Reductions (metric tons)	561,484	31,616	593,100	632,921	1,226,021	*	-	*	-
Customer Bill Savings (\$ million)	\$42.24	\$6.93	\$49.17	\$138.61	\$187.77	*	-	*	-
Private Investment (\$ million)	\$502.84	\$89.39	\$592.23	\$954.58	\$1,546.81	*	-	*	-
Innovation and Research									
Energy Efficiency (MWh)	-	-	-	-	-	*	-	*	-
Energy Efficiency (MMBtu)	-	-	-	-	-	*	-	*	-
Energy Efficiency (MW)	-	-	-	-	-	*	-	*	-
Renewable Energy (MWh)	-	-	-	-	-	*	-	*	-
Renewable Energy (MW)	-	-	-	-	-	*	-	*	-
CO2e Reductions (metric tons)	-	-	-	-	-	*	-	*	-
Customer Bill Savings (\$ million)	-	-	-	-	-	*	-	*	-
Private Investment (\$ million)	184.85	53.85	238.70	\$209.63	\$448.33	*	-	*	-
Total Energy Efficiency (MWh)	150,258	15,701	165,959	912,222	1,078,181				
Total Energy Efficiency (MMBtu)	2,785,536	481,948	3,267,484	4,440,326	7,707,810				
Total Energy Efficiency (MW)	2.1	0.1	2	85	87				
Total Renewable Energy (MWh)	33,052	256	33,308	11,200	44,509				
Total Renewable Energy (MW)	27	0	27	4	31				
Total CO2e Reductions (metric tons)	561,484	31,616	593,100	632,921	1,226,021				
Total Customer Bill Savings (\$ million)	\$42.24	\$6.93	\$49.17	\$138.61	\$187.77				
Total Private Investment (\$ million)	\$687.69	\$143.24	\$830.93	\$1,164.22	\$1,995.15				

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

Table 6. Market Development and Innovation and Research Portfolio

Committed Benefits Progress to Date—Lifetime⁸

Initiative	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/18-9/30/18	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Lifetime Planned Benefits Through Q3 2018	% of Cumulative Lifetime Planned Benefits Through Q3 2018	Total Cumulative Lifetime Planned Benefits through 2025	% of Total Cumulative Lifetime Planned Benefits through 2025
Market Development									
Energy Efficiency (MWh)	2,328,976	239,139	2,568,115	13,942,915	16,511,029	*	-	*	-
Energy Efficiency (MMBtu)	45,719,408	6,419,056	52,138,464	69,032,198	121,170,662	*	-	*	-
Renewable Energy (MWh)	500,183	3,849	504,032	145,784	649,817	1,698,288	38%	3,829,200	17%
CO2e Reductions (metric tons)	8,696,955	438,544	9,135,499	9,287,717	18,423,216	18,100,229	102%	45,694,264	40%
Customer Bill Savings (\$ million)	\$673.26	\$95.75	\$769.00	\$2,089.08	\$2,858.09	\$3,495.40	82%	\$9,291.17	31%
Private Investment (\$ million)	\$502.84	\$89.39	\$592.23	\$954.58	\$1,546.81	\$2,088.59	74%	\$6,398.93	24%
Innovation and Research									
Energy Efficiency (MWh)	-	-	-	-	-	*	-	*	-
Energy Efficiency (MMBtu)	-	-	-	-	-	*	-	*	-
Renewable Energy (MWh)	-	-	-	-	-	*	-	*	-
CO2e Reductions (metric tons)	-	-	-	-	-	*	-	*	-
Customer Bill Savings (\$ million)	-	-	-	-	-	*	-	*	-
Private Investment (\$ million)	\$184.85	\$53.85	\$238.70	\$209.63	\$448.33	\$567.74	79%	\$1,444.03	31%
Total Energy Efficiency (MWh)	2,328,976	239,139	2,568,115	13,942,915	16,511,029	-	-	-	-
Total Energy Efficiency (MMBtu)	45,719,408	6,419,056	52,138,464	69,032,198	121,170,662	-	-	-	-
Total Renewable Energy (MWh)	500,183	3,849	504,032	145,784	649,817	-	-	-	-
Total CO2e Reductions (metric tons)	8,696,955	438,544	9,135,499	9,287,717	18,423,216	-	-	-	-
Total Customer Bill Savings (\$ million)	\$673.26	\$95.75	\$769.00	\$2,089.08	\$2,858.09	-	-	-	-
Total Private Investment (\$ million)	\$687.69	\$143.24	\$830.93	\$1,164.22	\$1,995.15	-	-	-	-

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

2 Resource Acquisition Transition Initiative Specific Results

Table 7. Resource Acquisition Transition Initiative Level Budgets and Spending

See Endnotes section for more information ⁹

Initiative	Budget Approved as of December 31, 2017 ^a	Expended Funds ^b	Open Encumbrances ^c	Contract Pre-Encumbrances ^d	Committed Funds ^e	% of Approved Budget Committed ^f	Budget Approved Remaining Balance ^g
Resource Acquisition Transition Chapter							
Commercial	\$26,392,500	\$3,131,664	\$2,714,701	\$523,778	\$6,370,143	24%	\$20,022,357
Industrial	\$69,562,932	\$8,377,977	\$23,291,551	\$19,845,760	\$51,515,288	74%	\$18,047,644
Agriculture	\$3,600,000	\$3,219,202	\$375,128	-	\$3,594,329	100%	\$5,670.60
Multifamily Market Rate	\$156,628	\$150,236	\$6,336	-	\$156,573	100%	\$55
Single Family Market Rate	\$22,024,680	\$14,537,420	\$1,646,122	\$695,230	\$16,878,772	77%	\$5,145,908
Commercial New Construction	\$30,683,999	\$2,107,378	\$2,709,656	\$14,848,822	\$19,665,856	64%	\$11,018,143
Low Rise New Construction	\$13,324,000	\$2,926,902	\$4,756,929	\$391,750	\$8,075,581	61%	\$5,248,419
Multifamily New Construction	\$13,613,000	\$1,528,798	\$5,023,990	\$2,851,501	\$9,404,288	69%	\$4,208,712
Anaerobic Digesters	\$20,150,000	\$296,611	\$1,842,898	\$2,000,000	\$4,139,508	21%	\$16,010,492
Small Wind	\$6,090,000	\$1,697,587	\$704,576	\$23,500	\$2,425,663	40%	\$3,664,337
Solar Thermal	\$399,000	\$172,365	\$146,229	\$30,046	\$348,639	87%	\$50,361
Combined Heat & Power	\$71,550,000	\$7,425,008	\$23,312,024	\$8,369,368	\$39,106,400	55%	\$32,443,600
TOTAL	\$277,546,739	\$45,571,148	\$66,530,139	\$49,579,754	\$161,681,041	58%	\$115,865,698

^a Funds approved by the DPS as of September 30, 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 committed budget.

^g Difference between Budget Approved Funds and Committed Funds.

Performance Profile: Commercial Resource Acquisition Transition and FlexTech Initiative

Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 2%	CO ₂ e Benefit 3%	Top 15 Initiative NO
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 37%	CO ₂ e Impact 23%	Participants 63%
Explanation of Progress	The Commercial Implementation Program closed April 2017 and NYSERDA will be revising the portfolio plan to formally close out this initiative by Q1 2019. There were eight approved projects, and the planned benefits for this program component will not be met. A revision to the FlexTech Program launched in Q2 2018. It is expected this revision will generate additional interest in the program leading to more projects and savings toward FlexTech planned benefits.		
Key Dates	Approval: February 29, 2016	Launch: March 1, 2016	Refiling Approved: July 17, 2017

Table 8. Commercial Resource Acquisition Transition and FlexTech Initiative Results

Resource Acquisition Transition Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2019)	% of Total Planned Benefits through Initiative Completion (2019)
Energy Efficiency	MWh Annual	250	-	250	17,540	17,790	69,350	26%	109,600	16%
	MWh Lifetime	4,126	-	4,126	289,415	293,540	1,144,750	26%	1,809,000	16%
	MMBtu Annual	660	-	660	131,788	132,448	617,500	21%	980,000	14%
	MMBtu Lifetime	10,890	-	10,890	2,174,503	2,185,393	10,182,500	21%	16,170,000	14%
	MW	0	-	0.4	0.2	0.6	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	Annual Tons	167	-	167	16,235	16,402	71,960	23%	114,160	14%
	Lifetime Tons	2,750	-	2,750	267,880	270,629	1,193,750	23%	1,891,000	14%
Customer Bill Savings (millions)	Annual Dollars	\$0.04	-	\$0.04	\$3.10	\$3.14	\$15.56	20%	\$24.63	13%
	Lifetime Dollars	\$0.71	-	\$0.71	\$51.08	\$51.80	\$257.30	20%	\$406.80	13%
Private Investment (millions)	Dollars	\$0.29	-	\$0.29	\$18.99	\$19.28	\$61.90	31%	\$92.00	21%
Implementation Assistance	Participants	5	-	5	3	8	20	40%	20	40%
Technical Assistance		-	-	-	149	149	228	65%	320	47%

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

Performance Profile: Industrial Resource Acquisition Transition Initiative

Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 4%	CO ₂ e Benefit 11%	Top 15 Initiative YES
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 109%	CO ₂ e Impact 153%	Participants 125%
Explanation of Progress	Market uptake (participants) and emissions benefits are exceeding expectations at this time, with excellent ROI. Some very large projects are contributing significantly to benefits projections.		
Key Dates	Approval: February 29, 2016	Launch: March 1, 2016	Refiling Approved: July 17, 2017

Table 9. Industrial Resource Acquisition Transition Initiative Results

Resource Acquisition Transition Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2019)	% of Total Planned Benefits through Initiative Completion (2019)
Energy Efficiency	MWh Annual	38,815	4,541	43,356	239,739	283,096	311,400	91%	421,400	67%
	MWh Lifetime	582,232	68,112	650,343	3,596,090	4,246,433	4,679,000	91%	6,329,000	67%
	MMBtu Annual	1,471,405	-	1,471,405	2,173,647	3,645,052	2,990,000	122%	3,590,000	102%
	MMBtu Lifetime	22,071,080	-	22,071,080	32,604,703	54,675,783	44,800,000	122%	53,800,000	102%
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	419,232	2,389	421,621	239,567	661,188	431,850	153%	521,600	127%
Customer Bill Savings (millions)	Lifetime Tons	6,288,476	35,838	6,324,314	3,593,510	9,917,824	6,477,750	153%	7,827,000	127%
	Annual Dollars	\$2.82	\$0.34	\$3.16	\$39.51	\$42.67	\$49.18	87%	\$63.80	67%
Private Investment (millions)	Lifetime Dollars	\$42.34	\$5.08	\$47.42	\$592.66	\$640.08	\$742.25	86%	\$961.00	67%
	Dollars	\$127.71	\$0.51	\$128.22	\$360.96	\$489.19	\$492.75	99%	\$761.00	64%
IPE	Participants	54	1	55	148	203	153	133%	218	93%
Technical Assistance		-	-	-	56	56	55	102%	80	70%

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

Performance Profile: Agriculture Resource Acquisition Transition Initiative

Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 0.2%	CO ₂ e Benefit 0.2%	Top 15 Initiative NO
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 106%	CO ₂ e Impact 124%	Participants 107%
Explanation of Progress	The initiative is exceeding all planned benefits at this time and is on a strong path to meet or exceed all of its total planned goals.		
Key Dates	Approval: February 29, 2016	Launch: March 1, 2016	Refiling Approved: July 17, 2017

Table 10. Agriculture Resource Acquisition Transition Initiative Results

See Endnotes section for more information¹⁰

Resource Acquisition Transition Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2018)	% of Total Planned Benefits through Initiative Completion (2018)
Energy Efficiency	MWh Annual	11,064	817	11,882	1,325	13,207	12,750	104%	14,000	94%
	MWh Lifetime	165,965	12,262	178,227	19,882	198,109	191,250	104%	210,000	94%
	MMBtu Annual	26,355	745	27,100	247	27,347	6,250	438%	7,000	391%
	MMBtu Lifetime	395,325	11,174	406,499	3,703	410,202	93,750	438%	105,000	391%
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	991	31	1,023	-	1,023	*	-	*	-
	MWh Lifetime	14,870	471	15,341	-	15,341	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	Annual Tons	7,784	504	8,287	711	8,998	7,250	124%	8,000	112%
	Lifetime Tons	116,755	7,556	124,312	10,658	134,970	108,750	124%	120,000	112%
Customer Bill Savings (millions)	Annual Dollars	\$2.09	\$0.15	\$2.24	\$0.19	\$2.44	\$1.90	128%	\$2.09	117%
	Lifetime Dollars	\$31.32	\$2.29	\$33.61	\$2.92	\$36.53	\$28.63	128%	\$31.45	116%
Private Investment (millions)	Dollars	\$13.18	\$0.71	\$13.90	-	\$13.90	\$11.19	124%	\$12.24	114%
Participants	Participants	660	35	695	52	747	700	107%	765	98%

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

Performance Profile: Multifamily Market-Rate Resource Acquisition Transition Initiative

Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 0.1%	CO ₂ e Benefit 0.1%	Top 15 Initiative NO
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 100%	CO ₂ e Impact 40%	Participants 256%
Explanation of Progress	The initiative is no longer accepting applications July 17, 2017 and will be formally closed out during the 2019 planning cycle. The program received less applications but more units than anticipated, which explains why progress is greatly exceeding the planned value for participants. However, the energy conservation measures implemented were low-cost and yielded less savings than initially projected; therefore, relative progress against other benefit metrics is lower than planned.		
Key Dates	Approval: February 29, 2016	Launch: May 19, 2016	Refiling Approved: July 17, 2017

Table 11. Multifamily Market-Rate Resource Acquisition Transition Initiative Results

Resource Acquisition Transition Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2019)	% of Total Planned Benefits through Initiative Completion (2019)
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	9,870	43%	9,870	43%
	MMBtu Lifetime	546	-	546	62,820	63,366	148,000	43%	148,000	43%
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	Annual Tons	2	-	2	238	240	598	40%	598	40%
	Lifetime Tons	29	-	29	3,565	3,594	8,970	40%	8,970	40%
Customer Bill Savings (millions)	Annual Dollars	\$0.0002	-	\$0.0002	\$0.02	\$0.02	\$0.11	22%	\$0.11	22%
	Lifetime Dollars	\$0.002	-	\$0.002	\$0.36	\$0.36	\$1.63	22%	\$1.63	22%
Private Investment (millions)	Dollars	\$0.07	-	\$0.07	\$0.74	\$0.81	\$0.42	194%	\$0.42	194%
Participants	Participants	18	-	18	459	477	186	256%	186	256%

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

Performance Profile: Single-Family Market-Rate Resource Acquisition Transition Initiative

Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 1%	CO ₂ e Benefit 1%	Top 15 Initiative NO
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 82%	CO ₂ e Impact 73%	Participants 85%
Explanation of Progress	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. NYSERDA will determine to what extent audit participants are completing projects outside of the program. The program is still performing relatively well versus planned benefits to date.		
Key Dates	Approval: February 29, 2016	Launch: March 1, 2016	Refiling Approved: July 17, 2017

Table 12. Single-Family Market-Rate Resource Acquisition Transition Initiative Results

See Endnotes section for more information¹¹

Resource Acquisition Transition Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2018)	% of Total Planned Benefits through Initiative Completion (2018)
Energy Efficiency	MWh Annual	2,497	269	2,766	109	2,875	3,233	89%	3,510	82%
	MWh Lifetime	37,457	4,034	41,491	1,633	43,124	48,350	89%	52,500	82%
	MMBtu Annual	129,176	9,114	138,290	8,040	146,330	210,250	70%	230,700	63%
	MMBtu Lifetime	3,229,400	227,850	3,457,250	201,000	3,658,250	5,250,000	70%	5,760,000	64%
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	Annual Tons	9,218	690	9,908	549	10,457	14,435	72%	15,820	66%
	Lifetime Tons	217,316	15,837	233,152	13,149	246,302	338,500	73%	371,000	66%
Customer Bill Savings (millions)	Annual Dollars	\$2.33	\$0.17	\$2.50	\$0.14	\$2.64	\$3.71	71%	\$4.07	65%
	Lifetime Dollars	\$54.87	\$4.01	\$58.87	\$3.42	\$62.30	\$87.20	71%	\$95.60	65%
Private Investment (millions)	Dollars	\$43.94	\$5.34	\$49.28	\$2.43	\$51.71	\$70.05	74%	\$77.30	67%
Participants	Participants	6,116	771	6,887	335	7,222	8,448	85%	9,300	78%

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

Performance Profile: Commercial New Construction Resource Acquisition Initiative

Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 2%	CO ₂ e Benefit 1%	Top 15 Initiative NO
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 66%	CO ₂ e Impact 151%	Participants 115%
Explanation of Progress	The program is significantly exceeding expectations regarding all planned benefits.		
Key Dates	Approval: February 29, 2016	Launch: March 1, 2016	Refiling Approved: July 17, 2017

Table 13. Commercial New Construction Resource Acquisition Transition Initiative Results

See Endnotes section for more information^{12,13}

Resource Acquisition Transition Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2018)	% of Total Planned Benefits through Initiative Completion (2018)
Energy Efficiency	MWh Annual	7,223	-	7,223	63,254	70,477	59,150	119%	66,200	106%
	MWh Lifetime	144,460	-	144,460	1,265,087	1,409,547	1,183,000	119%	1,324,000	106%
	MMBtu Annual	(9,245)	-	(9,245)	329,910	320,665	91,375	351%	105,100	305%
	MMBtu Lifetime	(184,900)	-	(184,900)	6,598,209	6,413,309	1,830,000	350%	2,105,000	305%
Renewable Energy	MW	0.9	-	0.9	18	18	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	3,309	-	3,309	50,821	54,130	35,875	151%	40,300	134%
	Lifetime Tons	66,181	-	66,181	1,016,416	1,082,597	719,250	151%	808,000	134%
Customer Bill Savings (millions)	Annual Dollars	\$0.93	-	\$0.93	\$11.55	\$12.48	\$8.40	149%	\$9.41	133%
	Lifetime Dollars	\$18.54	-	\$18.54	\$231.04	\$249.58	\$168.05	149%	\$188.30	133%
Private Investment (millions)	Dollars	\$1.76	-	\$1.76	\$73.19	\$74.96	\$40.93	183%	\$42.07	178%
Participants	Participants	8	-	8	148	156	135	115%	147	106%

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

Performance Profile: Low-Rise New Construction Resource Acquisition Transition Initiative

Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 1%	CO ₂ e Benefit 0.5%	Top 15 Initiative NO
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 68%	CO ₂ e Impact 104%	Participants 82%
Explanation of Progress	Market uptake has been strong for the low-income and moderate for the market rate program. It is expected that planned benefits will closely align with committed values at the conclusion of the program. ROI has also been good with current market rate participant metrics reflecting significant participation of single-family homes, which have a higher potential savings on a per dwelling unit (or participant) basis.		
Key Dates	Approval: February 29, 2016	Launch: March 1, 2016	Refiling Approved: July 17, 2017

Table 14. Low-Rise New Construction Resource Acquisition Transition Initiative

Market-Rate Results

Resource Acquisition Transition Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2018)	% of Total Planned Benefits through Initiative Completion (2018)
Energy Efficiency	MWh Annual	2,959	199	3,158	2,678	5,836	6,318	92%	7,010	83%
	MWh Lifetime	59,184	3,981	63,165	53,551	116,716	126,475	92%	140,300	83%
	MMBtu Annual	67,831	4,843	72,674	13,053	85,727	71,275	120%	78,900	109%
	MMBtu Lifetime	1,356,617	96,860	1,453,477	261,056	1,714,533	1,424,500	120%	1,577,000	109%
	MW	-	-	-	-	-	-	*	-	*
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	Annual Tons	5,186	363	5,549	2,104	7,652	7,103	108%	7,870	97%
	Lifetime Tons	103,720	7,258	110,978	42,071	153,048	142,050	108%	157,400	97%
Customer Bill Savings (millions)	Annual Dollars	\$0.93	\$0.06	\$0.99	\$0.51	\$1.50	\$1.69	89%	\$1.87	80%
	Lifetime Dollars	\$18.58	\$1.20	\$19.78	\$10.14	\$29.92	\$33.55	89%	\$37.20	80%
Private Investment (millions)	Dollars	\$4.99	\$0.58	\$5.57	\$3.59	\$9.16	\$15.95	57%	\$17.80	51%
Participants	Participants	1,036	120	1,156	602	1,758	2,624	67%	2,926	60%

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

Table 15. Low-Rise New Construction Resource Acquisition Transition Initiative

Low- to Moderate-Income Results

Resource Acquisition Transition Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2018)	% of Total Planned Benefits through Initiative Completion (2018)
Energy Efficiency	MWh Annual	541	374	915	4,961	5,876	6,845	86%	7,770	76%
	MWh Lifetime	10,820	7,483	18,303	99,216	117,519	136,700	86%	155,200	76%
	MMBtu Annual	6,175	6,924	13,099	56,451	69,549	59,450	117%	66,900	104%
	MMBtu Lifetime	123,490	138,480	261,970	1,129,017	1,390,987	1,187,000	117%	1,336,000	104%
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	Annual Tons	621	565	1,186	5,611	6,797	6,748	101%	7,630	89%
	Lifetime Tons	12,426	11,299	23,725	112,224	135,950	134,950	101%	152,600	89%
Customer Bill Savings (millions)	Annual Dollars	\$0.16	\$0.10	\$0.25	\$1.15	\$1.40	\$1.64	85%	\$1.86	75%
	Lifetime Dollars	\$3.14	\$1.95	\$5.09	\$22.94	\$28.04	\$32.95	85%	\$37.30	75%
Private Investment (millions)	Dollars	\$1.96	\$1.33	\$3.29	\$13.87	\$17.16	\$22.88	75%	\$25.70	67%
Participants	Participants	465	304	769	3,513	4,282	4,772	90%	5,329	80%

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

Performance Profile: Multifamily New Construction Resource Acquisition Transition Initiative			
Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 1%	CO ₂ e Benefit 1%	Top 15 Initiative NO
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 80%	CO ₂ e Impact 72%	Participants 74%
Explanation of Progress	The low-income component of the initiative is expected to achieve planned values; however, the market-rate component may not deliver as planned, but participation is expected to increase by the end of 2018. NYSERDA intends to modify the multifamily initiative in Q4 of 2018, delivering more effective strategies of this initiative based on the recently approved New Construction Chapter of the CEF Investment Plan.		
Key Dates	Approval: February 29, 2016	Launch: August 8, 2016	Refiling Approved: July 17, 2017

Table 16. Multifamily New Construction Resource Acquisition Transition Initiative

Market-Rate Results

Resource Acquisition Transition Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2018)	% of Total Planned Benefits through Initiative Completion (2018)
Energy Efficiency	MWh Annual	-	-	-	1,411	1,411	4,586	31%	5,271	27%
	MWh Lifetime	-	-	-	28,222	28,222	91,875	31%	105,600	27%
	MMBtu Annual	-	-	-	9,205	9,205	24,540	38%	28,490	32%
	MMBtu Lifetime	-	-	-	184,096	184,096	490,500	38%	569,500	32%
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	Annual Tons	-	-	-	1,232	1,232	3,721	33%	4,291	29%
	Lifetime Tons	-	-	-	24,636	24,636	74,300	33%	85,700	29%
Customer Bill Savings (millions)	Annual Dollars	-	-	-	\$0.27	\$0.27	\$0.75	36%	\$0.86	31%
	Lifetime Dollars	-	-	-	\$5.42	\$5.42	\$14.93	36%	\$17.19	32%
Private Investment (millions)	Dollars	-	-	-	\$4.30	\$4.30	\$18.17	24%	\$20.82	21%
Participants	Participants	-	-	-	792	792	2,339	34%	2,689	29%

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

Table 17. Multifamily New Construction Resource Acquisition Transition Initiative

Low- to Moderate-Income Results

Resource Acquisition Transition Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2019)	% of Total Planned Benefits through Initiative Completion (2019)
Energy Efficiency	MWh Annual	-	-	-	12,205	12,205	14,148	86%	15,520	79%
	MWh Lifetime	-	-	-	244,103	244,103	282,700	86%	310,200	79%
	MMBtu Annual	-	-	-	58,883	58,883	73,200	80%	81,100	73%
	MMBtu Lifetime	-	-	-	1,177,660	1,177,660	1,464,000	80%	1,622,000	73%
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	-	-	-	9,552	9,552	11,310	84%	12,450	77%
Customer Bill Savings (millions)	Lifetime Tons	-	-	-	191,045	191,045	226,475	84%	249,300	77%
	Annual Dollars	-	-	-	\$2.31	\$2.31	\$2.29	101%	\$2.51	92%
Private Investment (millions)	Lifetime Dollars	-	-	-	\$46.14	\$46.14	\$45.68	101%	\$50.20	92%
	Dollars	-	-	-	\$39.61	\$39.61	\$57.13	69%	\$62.40	63%
Participants	Participants	-	-	-	6,266	6,266	7,157	88%	7,857	80%

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

Performance Profile: Anaerobic Digesters Resource Acquisition Transition Initiative

Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 1%	CO ₂ e Benefit 0.4%	Top 15 Initiative NO
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 26%	CO ₂ e Impact 17%	Participants 7%
Explanation of Progress	A delay in launching 2017 and 2018 activities caused the lag in performance. Progress is expected to better align with expectations once these activities launch in Q4 2018 and proposals are accepted.		
Key Dates	Approval: February 29, 2016	Launch: July 8, 2016	Refiling Approved: September 24, 2018

Table 18. Anaerobic Digesters Resource Acquisition Transition Initiative Results

See Endnotes section for more information¹⁴

Resource Acquisition Transition Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2018)	% of Total Planned Benefits through Initiative Completion (2018)
Energy Efficiency	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MMBtu Annual	-	-	-	-	-	*	-	*	-
	MMBtu Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	7,444	7,444	66,465	11%	86,140	9%
	MWh Lifetime	-	-	-	74,440	74,440	445,650	17%	569,400	13%
	MW	-	-	-	1	1	-	-	-	-
CO ₂ e Emission Reduction (metric tons)	Annual Tons	-	-	-	3,917	3,917	35,120	11%	45,520	9%
	Lifetime Tons	-	-	-	39,168	39,168	236,450	17%	302,200	13%
Customer Bill Savings (millions)	Annual Dollars	-	-	-	\$1.08	\$1.08	\$8.87	12%	\$11.49	9%
	Lifetime Dollars	-	-	-	\$10.83	\$10.83	\$59.49	18%	\$75.99	14%
Private Investment (millions)	Dollars	-	-	-	\$8.00	\$8.00	\$81.03	10%	\$101.70	8%
Participants	Participants	-	-	-	2	2	28	7%	36	6%

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

Performance Profile: Small Wind Resource Acquisition Transition Initiative

Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 0.4%	CO ₂ e Benefit 0.1%	Top 15 Initiative NO
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 43%	CO ₂ e Impact 40%	Participants 41%
Explanation of Progress	The program has not achieved planned benefits due to smaller-sized projects and fewer developers than anticipated.		
Key Dates	Approval: February 29, 2016	Launch: March 1, 2016	

Table 19. Small Wind Resource Acquisition Transition Initiative Results

See Endnotes section for more information¹⁵

Resource Acquisition Transition Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2018)	% of Total Planned Benefits through Initiative Completion (2018)
Energy Efficiency	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MMBtu Annual	-	-	-	-	-	*	-	*	-
	MMBtu Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	880	-	880	645	1,525	4,500	34%	5,000	31%
	MWh Lifetime	17,609	-	17,609	12,894	30,503	74,000	41%	82,000	37%
	MW	0.4	-	0.4	0.3	1	2	45%	2	39%
CO ₂ e Emission Reduction (metric tons)	Annual Tons	463	-	463	339	802	2,750	29%	3,000	27%
	Lifetime Tons	9,265	-	9,265	6,784	16,050	39,750	40%	44,000	36%
Customer Bill Savings (millions)	Annual Dollars	\$0.11	-	\$0.11	\$0.08	\$0.19	\$0.65	29%	\$0.72	26%
	Lifetime Dollars	\$2.17	-	\$2.17	\$1.63	\$3.80	\$13.00	29%	\$14.40	26%
Private Investment (millions)	Dollars	\$1.79	-	\$1.79	\$1.54	\$3.33	\$6.50	51%	\$7.20	46%
Participants	Participants	23	-	23	25	48	117	41%	129	37%

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

Performance Profile: Solar Thermal Resource Acquisition Transition Initiative

Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 0.02%	CO ₂ e Benefit 0.01%	Top 15 Initiative NO
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 87%	CO ₂ e Impact 100%	Participants 73%
Explanation of Progress	This program is no longer accepting applications but has projects in the pipeline and is on pace to achieve expected planned benefits.		
Key Dates	Approval: February 29, 2016	Launch: March 1, 2016	Refiling Approved: July 17, 2017

Table 20. Solar Thermal Resource Acquisition Transition Initiative Results

Resource Acquisition Transition Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2016)	% of Total Planned Benefits 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	-	-	-	-	-	*	-	*	-
CO ₂ e 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		5	-	5	-	5	20	25%	20	25%

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

Performance Profile: Combined Heat and Power Resource Acquisition Transition Initiative

Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 4%	CO ₂ e Benefit 2%	Top 15 Initiative YES
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 66%	CO ₂ e Impact 98%	Participants 121%
Explanation of Progress	The initiative is performing strongly. Market uptake and benefits metrics are aligned with expectations at this time.		
Key Dates	Approval: February 29, 2016	Launch: March 1, 2016	

Table 21. Combined Heat and Power Resource Acquisition Transition Initiative Results

See Endnotes section for more information^{16,17,18,19}

Resource Acquisition Transition Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2019)	% of Total Planned Benefits through Initiative Completion (2019)
Energy Efficiency	MWh Annual	3,246	371	3,617	253,776	257,393	266,400	97%	320,300	80%
	MWh Lifetime	64,912	7,424	72,335	5,059,855	5,132,190	5,336,500	96%	6,416,000	80%
	MMBtu Annual	-	-	-	-	-	*	-	*	-
	MMBtu Lifetime	-	-	-	-	-	*	-	*	-
	MW	0.6	0.1	0.7	48	48	51	96%	61	79%
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	Annual Tons	675	76	751	53,363	54,114	54,690	99%	65,760	82%
	Lifetime Tons	13,501	1,516	15,017	1,059,015	1,074,031	1,094,000	98%	1,315,000	82%
Customer Bill Savings (millions)	Annual Dollars	\$0.40	\$0.05	\$0.45	\$25.79	\$26.24	\$26.53	99%	\$31.91	82%
	Lifetime Dollars	\$7.91	\$1.04	\$8.95	\$513.76	\$522.71	\$531.70	98%	\$639.20	82%
Private Investment (millions)	Dollars	\$13.37	\$0.97	\$14.35	\$211.85	\$226.19	\$218.50	104%	\$238.00	95%
Participants	Participants	30	3	33	82	115	112	103%	139	83%
Technical Assistance		-	-	-	20	20	*	-	*	-

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

3 Market Development Initiative Specific Results

Table 22. Market Development Initiative Budgets and Spending

See Endnotes for more information^{20,21}

Initiative	Budget Approved as of December 31, 2017 ^a	Expended Funds ^b	Open Encumbrances ^c	Contract Pre-Encumbrances ^d	Committed Funds ^e	% of Approved Budget Committed ^f	Budget Approved Remaining Balance ^g
Market Characterization & Design Chapter	\$21,150,000	\$4,191,338	\$1,291,182	\$150,500	\$5,633,020	27%	\$15,516,980
Commercial Chapter							
Energy Management	\$59,805,000	\$2,292,902	\$8,476,424	\$1,107,388	\$11,876,713	20%	\$47,928,287
Real Estate Tenant	\$25,499,999	\$1,521,692	\$2,998,622	\$210,146	\$4,730,460	19%	\$20,769,539
REV Campus Challenge	\$21,650,002	\$900,527	\$2,924,877	\$2,922,312	\$6,747,716	31%	\$14,902,286
K-12	\$21,600,000	\$25,186	\$3,932,543	\$725,465	\$4,683,194	22%	\$16,916,806
Commercial Chapter Total	\$128,555,001	\$4,740,307	\$18,332,466	\$4,965,310	\$28,038,083	22%	\$100,516,918
Industrial Chapter							
Continuous Energy Improvement	\$17,539,000	\$2,442,280	\$2,697,811	-	\$5,140,091	29%	\$12,398,909
Industrial Chapter Total	\$17,539,000	\$2,442,280	\$2,697,811	-	\$5,140,091	29%	\$12,398,909
Communities Chapter							
Clean Energy Communities	\$14,218,527	\$1,431,064	\$5,946,495	\$1,839,814	\$9,217,372	65%	\$5,001,155
Community Energy Engagement	\$4,409,882	\$558,198	\$3,849,620	-	\$4,407,818	100%	\$2,064
Communities Chapter Total	\$18,628,409	\$1,989,262	\$9,796,115	\$1,839,814	\$13,625,190	73%	\$5,003,219
Large-Scale Renewables Chapter							
Offshore Wind Master Plan	\$5,000,000	\$1,519,916	\$181,842	-	\$1,701,758	34%	\$3,298,242
Offshore Wind Pre-Development Activities	\$10,000,000	\$5,483,462	\$1,592,012	\$2,924,526	\$10,000,000	100%	\$0
Large-Scale Renewables Chapter Total	\$15,000,000	\$7,003,378	\$1,773,853	\$2,924,526	\$11,701,757	78%	\$3,298,243
REV Technical Assistance Chapter							
REV Connect	\$2,500,000	\$2,121,514	\$323,572	-	\$2,445,086	98%	\$54,914
REV Technical Assistance Chapter Total	\$2,500,000	\$2,121,514	\$323,572	-	\$2,445,086	98%	\$54,914
Energy Storage Chapter							
Reducing Barriers to Distributed Deployment	\$24,450,000	\$2,201,711	\$4,469,278	\$3,761,982	\$10,432,972	43%	\$14,017,028
Solar Plus Energy Storage	\$40,000,000	-	-	-	-	-	\$40,000,000
Energy Storage Chapter Total	\$64,450,000	\$2,201,711	\$4,469,278	\$3,761,982	\$10,432,972	16%	\$54,017,028
Clean Transportation Chapter							
Electric Vehicles	\$39,500,000	\$9,077,579	\$324,870	-	\$9,402,449	24%	\$30,097,551
Clean Transportation Chapter Total	\$39,500,000	\$9,077,579	\$324,870	-	\$9,402,449	24%	\$30,097,551
Agriculture Chapter							
2030 GLASE	\$5,000,000	\$469,318	\$4,530,682	-	\$5,000,000	100%	-
Advancing Agricultural Energy Technologies	\$3,760,000	\$1,879	-	-	\$1,879	0.05%	\$3,758,121
Agriculture Chapter Total	\$8,760,000	\$471,197	\$4,530,682	-	\$5,001,879	57%	\$3,758,121

Table 22 continued

Initiative	Budget Approved as of December 31, 2017 ^a	Expended Funds ^b	Open Encumbrances ^c	Contract Pre-Encumbrances ^d	Committed Funds ^e	% of Approved Budget Committed ^f	Budget Approved Remaining Balance ^g
Low- to Moderate-Income Chapter							
Healthy Homes Feasibility Study	\$215,000	\$137,089	\$75,058	-	\$212,147	99%	\$2,853
LMI Multifamily	\$50,189,418	\$1,879,536	\$5,373,586	\$5,946,962	\$13,200,084	26%	\$36,989,334
LMI Single Family	\$229,261,861	\$81,650,977	\$3,886,312	\$17,594,314	\$103,131,604	45%	\$126,130,257
Low-Income Forum on Energy	\$1,300,000	\$153,497	\$134,391	-	\$287,888	22%	\$1,012,112
Retrofit NY	\$30,503,500	\$622,931	\$497,164	\$39,000	\$1,159,095	4%	\$29,344,405
REVitalize	\$725,000	\$102,541	\$208,028	-	\$310,569	43%	\$414,431
Low Income Community Solar	\$21,245,000	\$172,739	\$405,010	-	\$577,749	2.7%	\$20,667,251
Low- to Moderate-Income Chapter Total	\$333,439,779	\$84,719,311	\$10,579,549	\$23,580,276	\$118,879,136	36%	\$214,560,643
Workforce Development and Training Chapter							
Industry Partnerships	\$21,345,000	\$953,149	\$3,123,276	\$1,808,107	\$5,884,531	28%	\$15,460,469
Clean Technology and Energy Efficiency Talent Pipeline	\$47,000,000	-	\$600,000	-	\$600,000	1%	\$46,400,000
Workforce Development and Training Chapter Total	\$68,345,000	\$953,149	\$3,723,276	\$1,808,107	\$6,484,531	9%	\$61,860,469
Renewable Heating and Cooling							
Heat Pumps and Solar Thermal	\$33,211,843	\$4,691,083	\$8,811,352	\$1,792,432	\$15,294,867	46%	\$17,916,976
Renewable Heat NY	\$13,487,000	\$1,843,563	\$894,613	\$184,846	\$2,923,022	22%	\$10,563,978
Renewable Heating and Cooling Total	\$46,698,843	\$6,534,646	\$9,705,966	\$1,977,278	\$18,217,889	39%	\$28,480,953
Clean Energy Products Chapter							
Underutilized Product Support	\$28,896,000	\$4,229,744	\$553,111	\$125,001	\$4,907,856	17%	\$23,988,144
Clean Energy Products Chapter Total	\$28,896,000	\$4,229,744	\$553,111	\$125,001	\$4,907,856	17%	\$23,988,144
Multi-Sector Solutions Chapter							
Soft Cost Challenge	\$10,000,000	\$88,002	-	-	\$88,002	1%	\$9,911,998
Technical Services	\$21,898,040	\$89,622	\$1,449,038	\$218,169	\$1,756,829	8%	\$20,141,211
Clean Energy AMP Challenge	\$10,500,000	\$32,700	-	-	\$32,700	0%	\$10,467,300
Clean Energy Siting & Soft Cost Reduction	\$8,795,000	\$41,697	\$495,231	\$21,000	\$557,928	6%	\$8,237,072
Pay for Performance Pilot	\$55,756,709	-	-	\$116,480	\$116,480		\$55,640,229
Multi-Sector Solutions Chapter Total	\$106,949,749	\$252,021	\$1,944,269	\$355,649	\$2,551,939	2%	\$104,397,810
Codes Chapter							
Code to Zero	\$21,000,000	\$128,854	\$498,068	-	\$626,922	3.0%	\$20,373,078
Codes Chapter Total	\$21,000,000	\$128,854	\$498,068	-	\$626,922	3.0%	\$20,373,078
On-Site Power Chapter							
Fuel Cells	\$15,000,000	\$20,089	-	\$577,500	\$597,589	4.0%	\$14,402,411
On-Site Power Chapter Total	\$15,000,000	\$20,089	-	\$577,500	\$597,589	4.0%	\$14,402,411
New Construction Chapter							
New Construction	\$149,049,432	\$205,708	\$515,532	-	\$721,240	0.5%	\$148,328,192
New Construction Chapter Total	\$149,049,432	\$205,708	\$515,532	-	\$721,240	0.5%	\$148,328,192
Residential Chapter							
Engaging New Markets	\$15,988,015	\$131,299	\$2,867,337	-	\$2,998,637	19%	\$12,989,378
Residential Chapter Total	\$15,988,015	\$131,299	\$2,867,337	-	\$2,998,637	19%	\$12,989,378
NYS Cost Recovery Fee	\$34,836,630	\$2,665,497	-	-	\$2,665,497	8%	\$32,171,133
Total Market Development	\$1,136,285,858	\$134,078,882	\$73,926,937	\$42,065,942	\$250,071,761	22%	\$886,214,096

Table notes are on the next page.

- a Funds approved by the DPS as of September 30, 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.

Commercial: Tables 23-30

Performance Profile: Real Estate Tenant Initiative			
Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 1%	CO ₂ e Benefit 2%	Top 15 Initiative NO
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 70%	CO ₂ e Impact 78%	Participants 128%
Explanation of Progress	The Real Estate Tenant initiative made significant progress since program changes in Q3 2017. Participant/market uptake is exceeding expectations since the new approach was introduced. NYSERDA anticipates continued growth in participation and strong performance moving forward.		
Key Dates	Approval: May 23, 2016	Launch: July 19, 2016	Refiling Approved: July 17, 2017

Table 23. Real Estate Tenant Initiative Results

Market Development Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2018)	% of Total Planned Benefits through Initiative Completion (2018)
Energy Efficiency	MWh Annual	-	-	-	24,356	24,356	31,296	78%	124,921	19%
	MWh Lifetime	-	-	-	194,851	194,851	250,718	78%	999,968	19%
	MMBtu Annual	-	-	-	25,772	25,772	33,053	78%	131,828	20%
	MMBtu Lifetime	-	-	-	206,179	206,179	264,020	78%	1,054,820	20%
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	Annual Tons	-	-	-	14,186	14,186	18,190	78%	72,620	20%
	Lifetime Tons	-	-	-	113,490	113,490	145,564	78%	581,564	20%
Customer Bill Savings (millions)	Annual Dollars	-	-	-	\$3.61	\$3.61	\$4.34	83%	\$17.33	21%
	Lifetime Dollars	-	-	-	\$28.90	\$28.90	\$34.66	83%	\$138.66	21%
Private Investment (millions)	Dollars	-	-	-	\$0.92	\$0.92	\$3.04	30%	\$12.16	8%
Participants	Participants	-	-	-	361	361	282	128%	1,349	27%

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

Table 24. Near-Term 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).	A total of 361 sites are currently enrolled in the program. Initial projects have resulted in greater energy efficiency in tenant spaces and have "primed" the sector for more energy efficiency projects. A major program revision is in the planning stages and aims to increase participation and drive deeper energy savings in tenant spaces.
	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 have started to make use of them. NYSERDA is seeing different use cases emerge and will continue to track this development to inform future program direction. In the new program revision that is currently in the planning stages, NYSERDA is investigating ways to further engage building owners and portfolios specifically, which can benefit from this more standardized approach to identifying energy savings.
	2018–2024	Engagement with stakeholders involves all identified market actors.	Brokers and large property management companies have historically been a hard to reach audience and NYSERDA continues to test new ways to engage them in the process. . NYSERDA has already conducted a few voice of customer surveys with property management firms and convened a steering committee to inform development of the revised program, providing new perspectives from a new group of stakeholders.
	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. Some building owners have understood the value of generic packages to engage tenants, while others still need to better understand how to leverage the opportunity and realize the benefits of including this information in their leasing packages. NYSERDA will continue to evaluate how building owners are using generic packages.

Table 24 Continued

Complete ✓	Time Frame	Milestone	Explanation of Progress
	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.
	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 determines 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 milestone above.
	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 and service providers are just beginning to understand the value of the generic package and are exploring different use cases within their organizations. More time is needed to assess tenant uptake.

Performance Profile: Energy Management Initiative

Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 3%	CO ₂ e Benefit 8%	Top 15 Initiative YES
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 82%	CO ₂ e Impact 63%	Participants 94%
Explanation of Progress	Energy Management continues to see significant market uptake through the Real-time Energy Management (RTEM) program. Projects are generally smaller and less costly than expected, but early analysis of actual project data indicates that overall plan benefits will be met and ROI may be more favorable than forecasted.		
Key Dates	Approval: May 23, 2016	Launch: June 20, 2016	

Table 25. Energy Management Initiative Results

Market Development Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2024)	% of Total Planned Benefits through Initiative Completion (2024)
Energy Efficiency	MWh Annual	-	-	-	83,797	83,797	138,438	61%	443,887	19%
	MWh Lifetime	-	-	-	670,377	670,377	1,107,320	61%	3,552,780	19%
	MMBtu Annual	-	-	-	59,518	59,518	60,350	99%	184,278	32%
	MMBtu Lifetime	-	-	-	476,141	476,141	482,550	99%	1,474,320	32%
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	Annual Tons	-	-	-	47,598	47,598	76,170	62%	243,702	20%
	Lifetime Tons	-	-	-	380,785	380,785	608,640	63%	1,948,940	20%
Customer Bill Savings (millions)	Annual Dollars	-	-	-	\$14.99	\$14.99	\$18.93	79%	\$60.36	25%
	Lifetime Dollars	-	-	-	\$119.96	\$119.96	\$151.26	79%	\$483.80	25%
Private Investment (millions)	Dollars	-	-	-	\$15.61	\$15.61	\$50.51	31%	\$362.22	4%
Participants (Number of RTEM Buildings)	Participants	-	-	-	248	248	165	150%	822	30%
Participants (Number of REM Buildings)	Participants	-	-	-	-	-	98	-	640	-

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

Table 26. Near-Term Milestones for Energy Management

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2017–2020	Incentives, Qualified Vendor Listing, and Independent RTEM advisor services help convert prospective customers into committed and installed RTEM projects.	A total of 248 buildings are participating in approved RTEM projects with installation/services underway and 60 additional project applications have been received and are pending approval. Projects can take a year to install and then proceed for 1 to 5 years during which time the program collects data on recommended and installed energy efficiency measures. NYSERDA should start reporting findings 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 New York. Furthermore, due to the program structure, vendors looking to enter the New York’s market can partner with vendors who already have business in the State and can leverage existing relationships, thus expediting business development opportunities.
	2017–2020	Secure REM Advisor and begin development of market standards.	Contractors selected through REM RFP 3681 began market engagement 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 completed in Q2 2018, and vendors are now engaging the market.
	2017–2020	Stimulate interest and market activity with an open enrollment incentive offering for REM.	Contracting with the REM vendors selected through RFP 3681 completed in Q2 2018 and selected vendors are now engaging the market.
	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.

Table 26 Continued

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2017–2020	RTEM Technical Guidance Document is drafted and tested. RTEM Technical Guidance Document is published.	NYSERDA created the initial installment of an “RTEM buying guide” targeted at end-use customers. The first seven chapters of this buying guide were workshopped with qualified RTEM vendors and industry experts, and the customer buying guide is now on the RTEM program website.
	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.
	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 collecting data on projects participating in RTEM 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 have sufficient data to publish anonymized data sets currently.
	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 regularly engages REM vendors to understand changing technology and market insight.

Performance Profile: Reforming the Energy Vision (REV) Campus Challenge Initiative

Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 1%	CO ₂ e Benefit 3%	Top 15 Initiative YES
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 100%	CO ₂ e Impact 43%	Participants 105%
Explanation of Progress	REV Campus Challenge is exceeding market uptake expectations. The apparent lag on benefits metrics is the result of inadequate data to quantify these benefits. NYSERDA is reviewing available data and will collect the necessary data on member activity to more accurately and completely account for energy savings in future reports.		
Key Dates	Approval: May 23, 2016	Launch: December 21, 2016	

Table 27. Reforming the Energy Vision (REV) Campus Challenge Initiative Results

Market Development Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2025)	% of Total Planned Benefits through Initiative Completion (2025)
Energy Efficiency	MWh Annual	-	996	996	17,118	18,113	40,600	45%	108,200	17%
	MWh Lifetime	-	14,938	14,938	256,763	271,701	607,250	45%	1,622,000	17%
	MMBtu Annual	-	6,134	6,134	105,444	111,578	252,000	44%	671,100	17%
	MMBtu Lifetime	-	92,016	92,016	1,581,661	1,673,677	3,762,500	44%	10,050,000	17%
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	2,573	-	8,810	-
	MWh Lifetime	-	-	-	-	-	38,500	-	132,000	-
CO ₂ e Emission Reduction (metric tons)	MW	-	-	-	-	-	2	-	9	-
	Annual Tons	-	850	850	14,612	15,462	36,050	43%	97,150	16%
	Lifetime Tons	-	12,751	12,751	219,183	231,935	540,750	43%	1,457,000	16%
Customer Bill Savings (millions)	Annual Dollars	-	\$0.19	\$0.19	\$2.97	\$3.17	\$6.77	47%	\$18.07	18%
	Lifetime Dollars	-	\$2.91	\$2.91	\$44.59	\$47.50	\$101.68	47%	\$271.20	18%
Private Investment (millions)	Dollars	-	\$0.07	\$0.07	\$1.18	\$1.25	\$23.35	5%	\$71.13	2%
Participants	Participants	102	1	103	-	103	98	105%	150	69%

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

Table 28. Near-Term 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 103 institutions signed up as of the end of Q3 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.	<p>REV Campus Challenge annual workshops were held in April and May 2018, with four members hosting to discuss on-campus projects and have students present.</p> <p>NYSERDA is coordinating with the Association for the Advancement of Sustainability in Higher Education to assist REVCC members in developing and submitting to the AASHE weekly newsletter (distributed nationally).</p> <p>NYSERDA plans to partner with the State of NY Sustainability to highlight State institutions that have been awarded or recognized this year for their clean energy efforts.</p>

Performance Profile: K-12 Schools Initiative

Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 1%	CO ₂ e Benefit 2%	Top 15 Initiative YES
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 350%	CO ₂ e Impact 134%	Participants 133%
Explanation of Progress	The program is exceeding expected results at this point in time, but is still laying the groundwork with stakeholders for successful execution. Spending is ahead of pace to date but is expected to realign with plan in the next few quarters.		
Key Dates	Approval: December 1, 2017	Launch: June 20, 2018	

Table 29. K-12 Schools Initiative Results

Market Development Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2025)	% of Total Planned Benefits through Initiative Completion (2025)
Energy Efficiency	MWh Annual	-	-	-	5,800	5,800	4,350	133%	90,470	6%
	MWh Lifetime	-	-	-	87,000	87,000	65,250	133%	1,356,000	6%
	MMBtu Annual	-	-	-	32,300	32,300	24,225	133%	500,000	6%
	MMBtu Lifetime	-	-	-	484,500	484,500	363,000	133%	7,500,000	6%
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	Annual Tons	-	-	-	4,903	4,903	3,668	134%	76,210	6%
	Lifetime Tons	-	-	-	73,542	73,542	55,050	134%	1,143,400	6%
Customer Bill Savings (millions)	Annual Dollars	-	-	-	\$1.07	\$1.07	\$0.80	134%	\$16.70	6%
	Lifetime Dollars	-	-	-	\$16.09	\$16.09	\$12.08	133%	\$250.60	6%
Private Investment (millions)	Dollars	-	-	-	\$7.20	\$7.20	\$5.36	134%	\$86.26	8%
Participants	Participants	-	-	-	200	200	150	133%	2,800	7%

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

Table 30. Near-Term Milestones for K-12 Schools

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2018	Launch a clean energy benchmarking open enrollment program.	The open enrollment program will launch in Q4 2018.
	2018	Begin examining efforts to minimize hard and soft costs associated with delivering technical analysis for schools such as energy master plan development.	The examination of efforts to minimize hard and soft costs associated with delivering technical analysis for schools will begin in Q4 2018.
	2018	Launch a competitive solicitation to provide gap assistance.	The competitive solicitation to provide gap assistance is expected to launch in Q4 2018.

Industrial: Tables 31-36

Performance Profile: Continuous Energy Improvement Initiative - Industry			
Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 1%	CO ₂ e Benefit 5%	Top 15 Initiative YES
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 51%	CO ₂ e Impact 90%	Participants 52%
Explanation of Progress	After a longer-than-expected time period to secure Industrial participant commitment in Strategic Energy Management and On-Site Energy Manager, meaningful engagement is now occurring. The number of participants is smaller than expected, but project benefits are favorable despite the participant engagement. Energy Management Information Systems expects its first applications in Q4 2018 as vendors develop projects. NYSERDA is currently gathering market insight on barriers/needs of all size industrial customers.		
Key Dates	Approval: May 23, 2016	Launch: September 12, 2016	

Table 31. Continuous Energy Improvement Initiative

On-Site Energy Manager Results²²

Market Development Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2019)	% of Total Planned Benefits through Initiative Completion (2019)
Energy Efficiency	MWh Annual	-	5,717	5,717	27,141	32,858	26,250	125%	42,000	78%
	MWh Lifetime	-	85,755	85,755	407,115	492,870	393,750	125%	630,000	78%
	MMBtu Annual	-	15,799	15,799	190,151	205,950	306,250	67%	500,000	41%
	MMBtu Lifetime	-	236,985	236,985	2,852,259	3,089,244	4,602,500	67%	7,510,000	41%
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	Annual Tons	-	3,829	3,829	24,156	27,985	31,150	90%	50,400	56%
	Lifetime Tons	-	57,430	57,430	362,347	419,776	467,250	90%	756,000	56%
Customer Bill Savings (millions)	Annual Dollars	-	\$0.52	\$0.52	\$3.42	\$3.94	\$4.83	82%	\$7.81	50%
	Lifetime Dollars	-	\$7.81	\$7.81	\$51.33	\$59.14	\$72.28	82%	\$117.00	51%
Private Investment (millions)	Dollars	-	\$0.89	\$0.89	\$9.35	\$10.25	\$35.22	29%	\$55.62	18%
Participants	Participants	-	1	1	8	9	26	34%	40	23%

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

Table 32. Near-Term Milestones for Continuous Energy Improvement

On-Site Energy Manager

Complete ✓	Time Frame	Milestone	Explanation of Progress
	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 that are submitted in the first quarter of the engagements. Nine total applications have been received with energy goals stated and seven Energy Management Plans have been submitted and approved with confirmed annual energy goals averaging 7% of site annual energy usage. Additional progress will be attained via a pipeline of 10 strong and 15 medium leads.
	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 for the active industrial projects.
	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). Engagements have different start/end dates; final deliverables from first three projects have been approved.
	2017 and 2018	Business case content for consultant marketing plans, which address this need in the industrial market.	Case studies and road maps will be developed for each project and distributed to the market via the OsEM webpage.
	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).	Three of the first pilot projects are complete, with the remaining three completing through Q4 2018. Two industrial sites retained the OsEM in a permanent role without additional financial support.
	2018	Transition of knowledge and tools from pilot On-site Energy Managers to long-term energy resource.	Case studies and road maps will be developed for each project and distributed to the market via the OsEM webpage.
	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.	

Table 33. Continuous Energy Improvement Initiative

Strategic Energy Management Results²³

Market Development Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2019)	% of Total Planned Benefits through Initiative Completion (2019)
Energy Efficiency	MWh Annual	-	399	399	52,101	52,500	52,500	100%	52,500	100%
	MWh Lifetime	-	3,993	3,993	521,007	525,000	525,500	100%	525,500	100%
	MMBtu Annual	-	215,310	215,310	190,690	406,000	406,000	100%	406,000	100%
	MMBtu Lifetime	-	2,153,101	2,153,101	1,906,899	4,060,000	4,060,000	100%	4,060,000	100%
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	Annual Tons	-	11,393	11,393	37,317	48,710	50,600	96%	50,600	96%
	Lifetime Tons	-	113,925	113,925	373,174	487,100	506,000	96%	506,000	96%
Customer Bill Savings (millions)	Annual Dollars	-	\$1.22	\$1.22	\$5.43	\$6.65	\$7.88	84%	\$7.88	84%
	Lifetime Dollars	-	\$12.20	\$12.20	\$54.27	\$66.47	\$78.80	84%	\$78.80	84%
Private Investment (millions)	Dollars	-	\$26.03	\$26.03	\$55.64	\$81.67	\$84.00	97%	\$84.00	97%
Participants	Participants	-	7	7	16	23	35	66%	40	58%

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

Table 34. Near-Term 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 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>At the end of Q3 2018, the initial industrial concluded year one of their SEM effort, all eight participants have an energy map, identified savings opportunities, developed project registers and plans for project implementation, and held employee engagement activities at their facilities. This cohort has completed all activities in this milestone. The solicitation for the second industrial cohort was released in December 2017 and eight industrial customers comprise the second pilot which started Q3 2018. The first Strategic Energy Management solicitation for a Water Resource Recovery Facilities Cohort was released in Q2 2018 and started in Q3 2018.</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.</p> <p>Continuation of energy champion and team beyond the cohort (for participating facilities) or the adoption of an energy champion and/or team (for new facilities). Executive support to implement energy-related projects.</p>	<p>The end date for this milestone will be at the end of 2018 as this milestone takes place after the end of the first cohort. Progress will be reported at that time.</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>The materials are in development and information from the first cohort's successes is being collected. It is projected progress on this milestone will occur toward end of Q4 2018 and beginning of Q1 2019.</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. Critical staff can express how the energy measures they've implemented have affected their bottom line. 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 occur toward end of Q4 2018 and beginning of Q1 2019.</p>

Table 35. Continuous Energy Improvement Initiative

Energy Management Information System Results

Market Development Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2019)	% of Total Planned Benefits through Initiative Completion (2019)
Energy Efficiency	MWh Annual	-	-	-	-	-	3,758	-	67,110	-
	MWh Lifetime	-	-	-	-	-	37,575	-	671,100	-
	MMBtu Annual	-	-	-	-	-	29,025	-	993,000	-
	MMBtu Lifetime	-	-	-	-	-	290,250	-	9,930,000	-
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	Annual Tons	-	-	-	-	-	3,615	-	91,420	-
	Lifetime Tons	-	-	-	-	-	36,150	-	914,200	-
Customer Bill Savings (millions)	Annual Dollars	-	-	-	-	-	\$0.56	-	\$14.12	-
	Lifetime Dollars	-	-	-	-	-	\$5.63	-	\$141.21	-
Private Investment (millions)	Dollars	-	-	-	-	-	\$0.16	-	\$3.19	-
Participants	Participants	-	-	-	-	-	7	-	79	-

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

Table 36. Near-Term Milestones for Continuous Energy Improvement Initiative

Energy Management Information Systems

Complete ✓	Time Frame	Milestone	Explanation of Progress
	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.	

Communities: Tables 37-40

Performance Profile: Clean Energy Communities Initiative			
Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 1%	CO ₂ e Benefit 7%	Top 15 Initiative YES
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 134%	CO ₂ e Impact 91%	Participants 191%
Explanation of Progress	Market uptake is excellent with significantly more participation than expected and incentives nearly exhausted. This initiative remains one of the most cost-effective strategies in the MD and I&R portfolio.		
Key Dates	Approval: May 23, 2016	Launch: August 3, 2016	

Table 37. Clean Energy Communities Initiative Results

See Endnotes section for more information^{24,25}

Market Development Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2018)	% of Total Planned Benefits through Initiative Completion (2018)
Energy Efficiency	MWh Annual	71,316	388	71,704	7,446	79,150	56,025	141%	118,600	67%
	MWh Lifetime	1,069,744	5,818	1,075,561	111,691	1,187,252	839,750	141%	1,780,000	67%
	MMBtu Annual	213,166	2,457	215,623	19,788	235,411	315,000	75%	667,500	35%
	MMBtu Lifetime	3,197,491	36,851	3,234,342	296,816	3,531,158	4,717,500	75%	9,990,000	35%
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	31,057	222	31,279	45	31,324	59,475	53%	126,000	25%
	MWh Lifetime	465,854	3,331	469,185	672	469,857	892,000	53%	1,889,000	25%
	MW	27	0.2	27	0	27	51	53%	107	25%
CO ₂ e Emission Reduction (metric tons)	Annual Tons	66,223	464	66,687	5,134	71,821	78,675	91%	166,700	43%
	Lifetime Tons	993,349	6,960	1,000,309	77,009	1,077,318	1,181,000	91%	2,502,000	43%
Customer Bill Savings (millions)	Annual Dollars	\$15.79	\$0.11	\$15.90	\$1.26	\$17.16	\$18.30	94%	\$38.74	44%
	Lifetime Dollars	\$236.85	\$1.61	\$238.46	\$18.87	\$257.33	\$273.75	94%	\$580.30	44%
Private Investment (millions)	Dollars	\$57.37	\$0.62	\$57.99	-	\$57.99	\$38.08	152%	\$80.73	72%
Participants	Participants	-	191	191	-	191	100	191%	171	112%

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

Table 38. Near-Term 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 September 30, 2018, 216 communities completed at least four actions and are officially designated Clean Energy Communities. In total, 454 Communities completed 1,255 High-Impact Actions; 1,068 of which were completed after program launch ('new').</p> <p>Anticipated savings from the 1,068 'new' completed High-Impact Actions and the 146 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"> • 188,572 MWh Efficiency Savings • 162,189 MWh Renewable Generation • 177.88 MW Renewable Generation • 421,527 MMBtu Natural Gas Savings • 34,396 MMBtu Gasoline Savings • 104,698 MMBtu Distillate Fuel Savings
	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. In addition, NYSERDA is in the process of developing an Investment Plan update to better serve communities interested in taking advanced action beyond the original program design.

Performance Profile: Community Energy Engagement Initiative

Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 0.3%	CO ₂ e Benefit n/a	Top 15 Initiative NO
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 101%	CO ₂ e Impact n/a	Participants 100%
Explanation of Progress	The lag in private investment is primarily due to lower than anticipated cost-share from the 10 locally based organizations' contracts.		
Key Dates	Approval: March 27, 2017	Launch: October 10, 2017	

Table 39. Community Energy Engagement Initiative Results

Market Development Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2021)	% of Total Planned Benefits through Initiative Completion (2021)
Energy Efficiency	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MMBtu Annual	-	-	-	-	-	*	-	*	-
	MMBtu Lifetime	-	-	-	-	-	*	-	*	-
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	Annual Tons	-	-	-	-	-	*	-	*	-
	Lifetime Tons	-	-	-	-	-	*	-	*	-
Customer Bill Savings (millions)	Annual Dollars	-	-	-	-	-	*	-	*	-
	Lifetime Dollars	-	-	-	-	-	*	-	*	-
Private Investment (millions)	Dollars	-	-	-	\$1.27	\$1.27	\$1.73	74%	\$1.73	74%
Participants	Participants	-	-	-	3,350	3,350	3,355	100%	3,355	100%

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

Table 40. Near-Term Milestones Community Energy Engagement

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2018	NYSERDA initiates awards proposals for regional-specific pilot projects.	NYSERDA anticipates this activity will be developed in Q4 2018 and executed in Q1 2019.
	2018–2020	NYSERDA develops one or more case studies on regional-specific pilot projects and other support provided through the base activities.	Outreach kicked off in May of 2018. NYSERDA expects to begin developing case studies in early 2019. The first case studies will likely focus on participant successes, while the regional-specific pilot case studies will likely be delayed until post-pilot launch, sometime in late 2019.
	2019	Conduct surveys of customers assisted by local-based organizations (LBO) to assess performance.	

Large-Scale Renewables: Tables 41-43

Performance Profile: Offshore Wind Master Plan Initiative			
Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 0.3%	CO ₂ e Benefit n/a	Top 15 Initiative NO
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 34%	CO ₂ e Impact n/a	Participants n/a
Explanation of Progress	The Master Plan was filed in early 2018, but ongoing work continues to advance its goals.		
Key Dates	Approval: May 23, 2016	Launch: September 15, 2016	

Table 41. Offshore Wind Master Plan Initiative Results

Market Development Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Target through Initiative Completion (2019)	Total Planned Benefits through Initiative Completion (2019)
Energy Efficiency	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MMBtu Annual	-	-	-	-	-	*	-	*	-
	MMBtu Lifetime	-	-	-	-	-	*	-	*	-
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	-	-	-	-	-	*	-	*	-
	Lifetime Tons	-	-	-	-	-	*	-	*	-
Customer Bill Savings (millions)	Annual Dollars	-	-	-	-	-	*	-	*	-
	Lifetime Dollars	-	-	-	-	-	*	-	*	-
Private Investment (millions)	Dollars	-	-	-	-	-	*	-	*	-
Participants	Participants	-	-	-	-	-	*	-	*	-

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

Performance Profile: Offshore Wind Pre-Development Activities Initiative

Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 1%	CO ₂ e Benefit n/a	Top 15 Initiative NO
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 117%	CO ₂ e Impact n/a	Participants n/a
Explanation of Progress	The initiative has made good progress against its current implementation milestones.		
Key Dates	Approval: May 23, 2016	Launch: December 12, 2016	

Table 42. Offshore Wind Pre-Development Activities Initiative Results

Market Development Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Target through Initiative Completion (2019)	Total Planned Benefits through Initiative Completion (2019)
Energy Efficiency	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MMBtu Annual	-	-	-	-	-	*	-	*	-
	MMBtu Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	Annual Tons	-	-	-	-	-	*	-	*	-
	Lifetime Tons	-	-	-	-	-	*	-	*	-
Customer Bill Savings (millions)	Annual Dollars	-	-	-	-	-	*	-	*	-
	Lifetime Dollars	-	-	-	-	-	*	-	*	-
Private Investment (millions)	Dollars	-	-	-	-	-	*	-	*	-
Participants	Participants	-	-	-	-	-	*	-	*	-

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

Table 43. Near-Term Milestones for Offshore Wind Pre-Development Activities

Complete ✓	Time Frame	Milestone	Explanation of Progress
	n/a	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. 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 through August 2017 with final report completed by December 31, 2017 and published January 29, 2018.</p> <p>Working on plans for deploying one or more buoys for measuring wind, wave, and other data in 2018. Contractors have been hired to build a supply chain database and a cost assessment of New York port infrastructure. Both studies will be completed in Q4 2018.</p>

REV Technical Assistance: Tables 44-45

Performance Profile: REV Connect Initiative			
Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 0.1%	CO ₂ e Benefit n/a	Top 15 Initiative NO
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 99%	CO ₂ e Impact n/a	Participants n/a
Explanation of Progress	<p>Metrics progress is behind for the program's singular metric of private investment but does not reflect the activity spurred in just over one year of operation including:</p> <ul style="list-style-type: none"> • 250+ submissions to date with 11+ partnerships in development • 150+ utility-to-market conversations facilitated • 1,700+ participants in REV Connect events and webinars, including an Innovation Summit in October 2017 • 32,000+ portal visits • 1,300+ company contacts in the REV Connect CRM 		
Key Dates	Approval: May 23, 2016	Launch: August 9, 2016	

Table 44. REV Connect Initiative Results

Market Development Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2018)	% of Total Planned Benefits through Initiative Completion (2018)
Energy Efficiency	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MMBtu Annual	-	-	-	-	-	*	-	*	-
	MMBtu Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	Annual Tons	-	-	-	-	-	*	-	*	-
	Lifetime Tons	-	-	-	-	-	*	-	*	-
Customer Bill Savings (millions)	Annual Dollars	-	-	-	-	-	*	-	*	-
	Lifetime Dollars	-	-	-	-	-	*	-	*	-
Private Investment (millions)	Dollars	\$0.07	-	\$0.07	-	\$0.07	\$0.44	15%	\$0.50	13%
Participants	Participants	-	-	-	-	-	*	-	*	-

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

Table 45. Near-Term Milestones for REV Connect

Complete ✓	Time Frame	Milestone	Explanation of Progress
n/a	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.

Energy Storage: Tables 46-49

Performance Profile: Reducing Barriers to Deploying Distributed Energy Storage Initiative			
Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 1%	CO ₂ e Benefit 0.5%	Top 15 Initiative NO
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 73%	CO ₂ e Impact 89%	Participants 78%
Explanation of Progress	Value stacking pilot applications did not begin until mid-2017, but it is anticipated that progress against milestones will be made up over time. Major milestone achieved with New York City's recent storage permitting guidelines. Market uptake is exceeding expectations and most benefits metrics are near expected levels at this time.		
Key Dates	Approval: August 17, 2016	Launch: November 7, 2016 (TA)	Launch: April 19, 2017 (pilot)

Table 46. Reducing Barriers to Deploying Distributed Energy Storage Initiative Results

Market Development Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2019)	% of Total Planned Benefits through Initiative Completion (2019)
Energy Efficiency	MWh Annual	143	-	143	5,296	5,438	6,125	89%	13,800	39%
	MWh Lifetime	1,428	-	1,428	52,955	54,383	61,250	89%	138,000	39%
	MMBtu Annual	-	-	-	-	-	*	-	*	-
	MMBtu Lifetime	-	-	-	-	-	*	-	*	-
Renewable Energy	MW	0.3	-	0.3	9	9	12	80%	25	38%
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	75	-	75	2,786	2,861	3,223	89%	7,260	39%
Customer Bill Savings (millions)	Lifetime Tons	751	-	751	27,863	28,615	32,225	89%	72,600	39%
	Annual Dollars	\$0.02	-	\$0.02	\$0.70	\$0.73	\$0.81	89%	\$1.84	40%
Private Investment (millions)	Lifetime Dollars	\$0.24	-	\$0.24	\$7.04	\$7.28	\$8.15	89%	\$18.36	40%
	Dollars	-	-	-	\$8.04	\$8.04	\$17.20	47%	\$30.00	27%
Number of customers engaged (sites for developments)	Participants	18	-	18	6	24	64	38%	120	20%
Number of vendors engaged	Participants	2	-	2	44	46	26	175%	45	102%

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

Table 47. Near-Term Milestones for Reducing Barriers to Deploying Distributed Energy Storage

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2017	Customers with deployed energy storage systems begin engaging for post-installation quality assurance to validate savings.	The technical assistance contractor selected is implementing M&V site plans with initial installations supported by NYSERDA.
✓	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, 2017. Focusing on one-on-one guidance and training, with emphasis on the practical requirements to take advantage of current opportunities.
	2018	Safety testing is completed on additional emerging commercial chemistries.	Additional testing may not require NYSERDA support if UL 9540/9540A requirements are sufficient.
	2018	Model permitting guides are updated.	Outdoor energy storage permitting guide for New York City published and being examined as city agencies develop regulations/bulletin.
✓	2018	Convincing use cases and best-fit customer characteristics and acquisition tools are publicized.	Working with a 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. Case studies are under discussion.
	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. Three projects have been awarded.

Table 47 Continued

Complete ✓	Time Frame	Milestone	Explanation of Progress
	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's direct support for specific projects is reduced annually as installation cost decreases, revenue opportunities are better quantified, and results of pilots increase performance confidence.	

Performance Profile: Solar Plus Energy Storage Initiative

Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 2%	CO ₂ e Benefit n/a	Top 15 Initiative NO
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 0%	CO ₂ e Impact n/a	Participants 0%
Explanation of Progress	New Initiative. Anticipated to launch Q4 2018.		
Key Dates	Approval: September 11, 2018	Launch: Anticipated Q4 2018	

Table 48. Solar Plus Energy Storage Initiative Results

Market Development Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2020)	% of Total Planned Benefits through Initiative Completion (2020)
Energy Efficiency	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MMBtu Annual	-	-	-	-	-	*	-	*	-
	MMBtu Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	4	-	38	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	Annual Tons	-	-	-	-	-	*	-	*	-
	Lifetime Tons	-	-	-	-	-	*	-	*	-
Customer Bill Savings (millions)	Annual Dollars	-	-	-	-	-	*	-	*	-
	Lifetime Dollars	-	-	-	-	-	*	-	*	-
Private Investment (millions)	Dollars	-	-	-	-	-	\$3.75	-	\$40.00	-
Participants	Participants	-	-	-	-	-	4	-	40	-

Table 49. Near-Term Milestones for Solar Plus Energy Storage

Complete	Time Frame	Milestone	Explanation of Progress
	2018	Launch changes to the NY-Sun program providing incentives for paired solar plus energy storage projects.	Changes to the NY-Sun program, adding the Solar Plus Energy Storage incentive, are under development for inclusion in the program in Q4 2018. Stakeholder feedback has been solicited on critical program design elements.
	2018	Participation in IPWG and ITWG meetings throughout the year to address issues of adding storage to solar.	Solar plus storage issues have been on the Interconnection Technical Working Group (ITWG) agenda in 2018. Additional topics important to solar plus storage are being drafted and considered for future Interconnection Policy Working Group/ ITWG meetings.
	2018–2020	Award incentives to solar plus storage projects.	No awards have been made yet because the solar plus storage program is not yet active under NY-Sun. The incentive will be available to the public in Q4 of 2018.
	2019–2021	Completion of solar plus storage projects.	
	2019	Publish case studies with learnings from initial solar plus storage projects.	
	2019	Participation in IPWG and ITWG meetings throughout the year to address issues of adding storage to solar.	

Clean Transportation: Tables 50-51

Performance Profile: Electric Vehicles Initiative - EV Rebate			
Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 2%	CO ₂ e Benefit 3%	Top 15 Initiative YES
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 51%	CO ₂ e Impact 49%	Participants 51%
Explanation of Progress	There is less direct participation than expected in the NYSERDA rebate program which can be attributed to only ~60% of eligible EV sales utilizing the rebate since the program launched. ROI is as expected for this initiative and broader market growth of EVs is strong and aligned with original forecast. More than 10,000 electric cars were sold in New York in 2017, a 67% increase over 2016, compared to a 22 percent increase nationally. Between March 2017, when the Drive Clean Rebate started, and August 2018, more than 17,000 EVs have been sold in New York, second among states only to California.		
Key Dates	Approval: August 17, 2016	Launch: March 21, 2017	

Table 50. Electric Vehicles Initiative: EV Rebate Results

See Endnotes section for more information²⁶

Market Development Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2020)	% of Total Planned Benefits through Initiative Completion (2020)
Energy Efficiency	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MMBtu Annual	316,752	84,027	400,779	-	400,779	670,000	60%	1,429,000	28%
	MMBtu Lifetime	3,167,520	840,268	4,007,789	-	4,007,789	6,700,000	60%	14,290,000	28%
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	14,052	3,591	17,643	-	17,643	35,975	49%	76,700	23%
	Lifetime Tons	140,521	35,911	176,432	-	176,432	359,750	49%	767,000	23%
Customer Bill Savings (millions)	Annual Dollars	\$8.12	\$2.14	\$10.26	-	\$10.26	*	-	*	-
	Lifetime Dollars	\$81.17	\$21.40	\$102.57	-	\$102.57	*	-	*	-
Private Investment (millions)	Dollars	\$190.93	\$49.35	\$240.28	-	\$240.28	\$482.25	50%	\$1,027.70	23%
Participants	Participants	5,455	1,410	6,865	-	6,865	13,563	51%	29,250	23%

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

Table 51. Near-Term Milestones for Electric Vehicles Initiative: EV Rebate

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2017	EV Rebate Program Launch.	As of September 30, 2018, more than 530 car dealers signed up for the program and applications for more than 10,000 rebates have been approved, totaling nearly \$14 million (including both CEF and non-CEF funding).

Agriculture: Tables 52-55

Performance Profile: 2030 Greenhouse Lighting and Systems Engineering (GLASE) Initiative			
Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 0.3%	CO ₂ e Benefit 1%	Top 15 Initiative NO
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 100%	CO ₂ e Impact 100%	Participants 112%
Explanation of Progress	The initiative is on track to achieve the anticipated planned values.		
Key Dates	Approval: September 15, 2016	Launch: January 1, 2017	

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

Market Development Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2022)	% of Total Planned Benefits 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	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	Annual Tons	-	-	-	1,826	1,826	1,830	100%	1,830	100%
	Lifetime Tons	-	-	-	18,258	18,258	18,300	100%	18,300	100%
Customer Bill Savings (millions)	Annual Dollars	-	-	-	\$0.29	\$0.29	\$0.29	100%	\$0.29	100%
	Lifetime Dollars	-	-	-	\$2.91	\$2.91	\$2.92	100%	\$2.92	100%
Private Investment (millions)	Dollars	-	-	-	\$9.46	\$9.46	\$9.46	100%	\$9.46	100%
Participants	Participants	-	-	-	14	14	13	112%	25	56%

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

Table 53. Near-Term Milestones for Greenhouse Lighting and Systems Engineering (GLASE)

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2017	Review and approve Consortium business plan to attain financial self-sustainability in 2023.	The Executive Director of GLASE completed a draft business plan. In February 2018, a marketing plan matrix was completed and is currently being refined. The two plans are dependent on each other and, consequently, the business plan is also being refined. It is anticipated to be complete by the end of 2018.
	2018	Monitor small (6,000 square feet) pilot demonstration of a basic light and shade control system.	The Principal Investigator (PI) located a new pilot site and is working on an agreement.
	2018	Publish case study of demonstration.	Case study dependent on small pilot demonstration. Progress continues on the demonstration project.
	2019	Monitor small (6,000 square feet) pilot demonstration of CO ₂ 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 pilot. The site is ideal as a side-by-side baseline data and modified environment data collection could be performed.
	2019	Publish case study of demonstrations.	

Performance Profile: Advancing Agricultural Energy Technologies Initiative

Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 0.2%	CO ₂ e Benefit 0.03%	Top 15 Initiative NO
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 13%	CO ₂ e Impact 0%	Participants 0%
Explanation of Progress	New Initiative. Anticipated to launch in Q4 2018.		
Key Dates	Approval: December 1, 2017	Launch: Anticipated Q4 2018	

Table 54. Advancing Agricultural Energy Technologies Initiative Results

Market Development Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2019)	% of Total Planned Benefits through Initiative Completion (2019)
Energy Efficiency	MWh Annual	-	-	-	-	-	-	-	1,640	-
	MWh Lifetime	-	-	-	-	-	-	-	24,640	-
	MMBtu Annual	-	-	-	-	-	*	-	*	-
	MMBtu Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	Annual Tons	-	-	-	-	-	-	-	864	-
	Lifetime Tons	-	-	-	-	-	-	-	12,960	-
Customer Bill Savings (millions)	Annual Dollars	-	-	-	-	-	-	-	\$0.24	-
	Lifetime Dollars	-	-	-	-	-	-	-	\$3.60	-
Private Investment (millions)	Dollars	-	-	-	-	-	-	-	\$0.76	-
Participants	Participants	-	-	-	-	-	-	-	20	-

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

Table 55. Near-Term Milestones for Advancing Agricultural Energy Technologies

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2018	Issue Solicitation to select teams of technology vendor and farms to demonstrate technologies.	NYSERDA anticipates the solicitation will be issued in Q4 2018.
	2019	Contract with teams to demonstrate underused and emerging technologies.	

Low- to Moderate-Income: Tables 56-59

Performance Profile: RetrofitNY Initiative			
Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 2%	CO ₂ e Benefit 9%	Top 15 Initiative YES
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 11%	CO ₂ e Impact 0%	Participants 0%
Explanation of Progress	While it is too early to evaluate performance, the initiative has made rapid progress in this last quarter against its current implementation milestones. The first potential pilot projects have been selected and design/construction industry teams have started designing deep energy retrofit solutions for six potential pilot buildings.		
Key Dates	Approval: August 31, 2016	Launch: April 4, 2017	

Table 56. RetrofitNY Initiative Results

Market Development Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2025)	% of Total Planned Benefits through Initiative Completion (2025)
Energy Efficiency	MWh Annual	-	-	-	-	-	203	-	187,075	-
	MWh Lifetime	-	-	-	-	-	4,050	-	3,737,540	-
	MMBtu Annual	-	-	-	-	-	3,630	-	3,356,370	-
	MMBtu Lifetime	-	-	-	-	-	72,600	-	67,167,800	-
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	Annual Tons	-	-	-	-	-	314	-	290,619	-
	Lifetime Tons	-	-	-	-	-	6,285	-	5,797,280	-
Customer Bill Savings (millions)	Annual Dollars	-	-	-	-	-	\$0.06	-	\$56.07	-
	Lifetime Dollars	-	-	-	-	-	\$1.22	-	\$1,124	-
Private Investment (millions)	Dollars	-	-	-	-	-	-	-	\$1,410	-
Participants	Participants	-	-	-	-	-	298	-	100,000	-

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

Table 57. Near-Term Milestones for RetrofitNY

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2018	One or more solutions are built and tested through the design-build competition.	Six design/construction teams started designing retrofit solutions on six affordable housing buildings in early June 2018. Mid-point deliverables have been received by NYSERDA. The teams are now focusing on reducing the cost of the solutions they have designed. Final deliverables expected late December 2018.

Performance Profile: REVitalize Initiative			
Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 0.04%	CO ₂ e Benefit 0.4%	Top 15 Initiative NO
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 45%	CO ₂ e Impact 88%	Participants 80%
Explanation of Progress	A delay in the launch of the solicitation caused a lag in performance against current implementation milestones. As of Q3 2018, NYSERDA is under contract with four projects and working with those projects and conducting market research to develop content for toolkit development.		
Key Dates	Approval: August 31, 2016	Launch: June 27, 2017	

Table 58. REVitalize Initiative Results

See Endnotes section for more information²⁷

Market Development Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2025)	% of Total Planned Benefits through Initiative Completion (2025)
Energy Efficiency	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MMBtu Annual	-	-	-	-	-	*	-	*	-
	MMBtu Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	2,352	2,352	2,683	88%	2,990	79%
	MWh Lifetime	-	-	-	47,040	47,040	53,725	88%	59,900	79%
	MW	-	-	-	2	2	2	131%	2	115%
CO ₂ e Emission Reduction (metric tons)	Annual Tons	-	-	-	1,238	1,238	1,413	88%	1,575	79%
	Lifetime Tons	-	-	-	24,751	24,751	28,250	88%	31,500	79%
Customer Bill Savings (millions)	Annual Dollars	-	-	-	\$0.30	\$0.30	\$0.42	70%	\$0.47	63%
	Lifetime Dollars	-	-	-	\$5.98	\$5.98	\$8.49	70%	\$9.46	63%
Private Investment (millions)	Dollars	-	-	-	\$4.63	\$4.63	\$5.35	87%	\$5.88	79%
Participants	Participants	-	-	-	4	4	5	80%	5	80%

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

Table 59. Near-Term Milestones for REVitalize

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2018	NYSERDA receives feedback from community groups and on the toolkit.	The creation of tool kits has been placed on hold until NYSERDA identifies the necessary content, based on market input.
	2019	Completion of five community energy projects.	
	2019	NYSERDA refines toolkit and conducts technology transfer to communicate effective models of finance and ownership, as well as the toolkit.	

Performance Profile: Low-Income Forum on Energy Initiative			
Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 0.1%	CO ₂ e Benefit n/a	Top 15 Initiative NO
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 96%	CO ₂ e Impact n/a	Participants 141%
Explanation of Progress	The initiative has received greater than expected participation to date		
Key Dates	Approval: August 31, 2016	Launch: August 31, 2016	

Table 60. Low-Income Forum on Energy Initiative Results

Market Development Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2025)	% of Total Planned Benefits through Initiative Completion (2025)
Participants	Participants	1,993	176	2,169	-	2,169	1,534	141%	7,629	28%

Table 61. Near-Term Milestones for Low-Income Forum on Energy

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.	

Performance Profile: Healthy Homes Feasibility Study Initiative			
Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 0.01%	CO ₂ e Benefit n/a	Top 15 Initiative NO
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 99%	CO ₂ e Impact n/a	Participants n/a
Explanation of Progress	The feasibility study is complete. Progress against implementation milestones is lagging as there was initial difficulty obtaining the data required for completion of the study. In addition, NYSERDA adjusted the approach to the healthy homes pilot design based on input from the market and Department of Health. As of Q3 2018, NYSERDA and the Department of Health have aligned on a pilot model and progress against implementation milestones will continue.		
Key Dates	Approval: August 31, 2016	Launch: January 20, 2017	

Table 62. Near-Term Milestones for Healthy Homes Feasibility Study

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2017	Pilot design is complete.	Completion of pilot design is expected by Q4 2018.
	2017	Commencement of pilot activities.	Pilot implementation is expected to begin in Q1 2019.
	2018	Preliminary determination of health benefits and healthcare cost savings.	Contingent upon pilot implementation.

Performance Profile: Low- to Moderate-Income Single-Family Initiative

Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 13%	CO ₂ e Benefit 2%	Top 15 Initiative YES
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 84%	CO ₂ e Impact 99%	Participants 87%
Explanation of Progress	Market uptake and benefits for both the low- and moderate-income components are aligned with forecast and the initiative is performing as planned.		
Key Dates	Approval: February 29, 2016	Launch: March 1, 2016	

Table 63. Low- to Moderate-Income Single-Family Initiative

Low-Income Results ²⁸

Market Development Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2021)	% of Total Planned Benefits through Initiative Completion (2021)
Energy Efficiency	MWh Annual	9,073	1,277	10,350	2,554	12,904	14,313	90%	29,620	44%
	MWh Lifetime	136,102	19,155	155,256	38,307	193,564	214,600	90%	444,500	44%
	MMBtu Annual	246,982	41,579	288,562	110,575	399,137	363,000	110%	729,000	55%
	MMBtu Lifetime	6,174,558	1,039,481	7,214,039	2,764,375	9,978,414	9,087,500	110%	14,970,000	67%
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	Annual Tons	18,178	2,949	21,127	7,353	28,479	27,995	102%	56,770	50%
	Lifetime Tons	406,706	67,005	473,710	170,376	644,086	625,250	103%	1,078,000	60%
Customer Bill Savings (millions)	Annual Dollars	\$4.24	\$0.65	\$4.89	\$1.84	\$6.73	\$6.67	101%	\$13.55	50%
	Lifetime Dollars	\$93.81	\$14.43	\$108.23	\$42.04	\$150.27	\$144.00	104%	\$251.50	60%
Private Investment (millions)	Dollars	\$0.0	\$0.0	\$0.0	-	\$0.00	\$1.88	0%	\$5.70	0%
Participants	Participants	16,089	2,318	18,407	4,423	22,830	26,503	86%	53,948	42%

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

Table 64. Low- to Moderate-Income Single-Family Initiative

Moderate-Income Results ²⁹

Market Development Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2021)	% of Total Planned Benefits through Initiative Completion (2021)
Energy Efficiency	MWh Annual	2,523	183	2,705	107	2,812	2,572	109%	4,236	66%
	MWh Lifetime	37,844	2,738	40,582	1,604	42,186	38,525	110%	63,520	66%
	MMBtu Annual	120,843	8,503	129,346	7,896	137,242	159,425	86%	282,300	49%
	MMBtu Lifetime	3,021,076	212,573	3,233,649	197,400	3,431,049	3,995,000	86%	5,986,000	57%
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	Annual Tons	8,259	575	8,834	519	9,353	10,365	90%	18,160	52%
	Lifetime Tons	193,199	13,424	206,622	12,418	219,040	243,450	90%	368,400	59%
Customer Bill Savings (millions)	Annual Dollars	\$1.64	\$0.12	\$1.76	\$0.12	\$1.89	\$2.34	80%	\$4.08	46%
	Lifetime Dollars	\$38.20	\$2.79	\$40.99	\$2.86	\$43.84	\$54.53	80%	\$82.50	53%
Private Investment (millions)	Dollars	\$22.25	\$2.00	\$24.26	\$1.55	\$25.80	\$24.69	105%	\$43.06	60%
Participants	Participants	4,880	468	5,348	329	5,677	6,136	93%	11,258	50%

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

Table 65. Near-Term Milestones for Low- to Moderate-Income Single-Family

Complete ✓	Time Frame	Milestone	Explanation of Progress
	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 by the end of 2018.
✓	2018	Host regional contractor meetings to gather stakeholder input.	Four regional meetings were held in August 2018 to engage contractors, collect feedback and provide program redesign updates. Feedback from these regional meetings is being compiled for Program review and action.

Performance Profile: Low- to Moderate-Income Multifamily Initiative

Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 3%	CO ₂ e Benefit 1%	Top 15 Initiative NO
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 63%	CO ₂ e Impact 74%	Participants 68%
Explanation of Progress	Although numerous new projects entered the pipeline, progress against planned benefits is lower than expected as many of these new projects were smaller buildings, resulting in a lower number of participants (dwelling units) and lower amount of savings than expected. NYSERDA rolled out new communication and outreach efforts to continue to improve program intake.		
Key Dates	Approval: February 29, 2016	Launch: May 19, 2016	

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

Market Development Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2021)	% of Total Planned Benefits through Initiative Completion (2021)
Energy Efficiency	MWh Annual	-	-	-	11,770	11,770	12,175	97%	47,720	25%
	MWh Lifetime	-	-	-	176,545	176,545	182,850	97%	716,100	25%
	MMBtu Annual	-	-	-	108,743	108,743	166,100	65%	650,100	17%
	MMBtu Lifetime	-	-	-	1,631,148	1,631,148	2,492,000	65%	9,762,000	17%
	MW	-	-	-	10	10	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	Annual Tons	-	-	-	11,974	11,974	16,090	74%	62,990	19%
	Lifetime Tons	-	-	-	179,606	179,606	241,400	74%	945,900	19%
Customer Bill Savings (millions)	Annual Dollars	-	-	-	\$2.38	\$2.38	\$3.36	71%	\$13.15	18%
	Lifetime Dollars	-	-	-	\$35.74	\$35.74	\$50.30	71%	\$197.00	18%
Private Investment (millions)	Dollars	-	-	-	\$21.51	\$21.51	\$49.47	43%	\$175.54	12%
Number of Units Served	Participants	-	-	-	6,719	6,719	9,867	68%	39,464	17%

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

Table 67. Near-Term Milestones for Low- to Moderate-Income Multifamily

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2018–2021	Continue to evaluate market response to incentive levels and thresholds and adjust as needed.	NYSERDA is launching new communication and outreach efforts to broaden the reach and continue to improve program intake.

Performance Profile: Low-Income Community Solar Initiative			
Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 1%	CO ₂ e Benefit n/a	Top 15 Initiative NO
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 7%	CO ₂ e Impact n/a	Participants 1%
Explanation of Progress	The initiative began participant enrollment in Q3 2018 and will contract with the first round of community solar projects in Q4 2018, after which performance can begin to be evaluated.		
Key Dates	Approval: December 1, 2017	Launch: May 24, 2018	

Table 68. Low-Income Community Solar Initiative Results

Market Development Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2025)	% of Total Planned Benefits through Initiative Completion (2025)
Participants	Participants	-	-	-	16	16	2,250	1%	10,000	0.2%

Table 69. Near-Term Milestones for Low-Income Community Solar

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2018	Execute agreements with community solar projects for capacity dedicated to low-income subscriptions.	First round solicitation responses were received in Q3 2018, and agreements with selected community solar projects will be executed in Q4 2018.
✓	2018	Initiate low-income customer outreach and enrollment.	Low-income customer outreach and enrollment began in Q3 2018.
	2018–2020	Issue additional solicitation(s) for community solar projects, if needed.	
	2018–2020	Execute additional agreements with community solar projects for low-income subscriptions, if needed.	

Workforce Development and Training: Tables 70-73

Performance Profile: Industry Partnerships Initiative – Workforce Development			
Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 1%	CO ₂ e Benefit 11%	Top 15 Initiative YES
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 102%	CO ₂ e Impact 79%	Participants 129%
Explanation of Progress	Market uptake is excellent with more participation than expected and portfolio companies (with multiple buildings) now engaged. Project benefit per NYSERDA dollar is somewhat lower than expected, but ROI still very favorable. Fifth round project selection underway now for completion in Q4.		
Key Dates	Approval: September 15, 2016	Launch: January 13, 2017	

Table 70. Industry Partnerships Initiative Results

Market Development Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2019)	% of Total Planned Benefits through Initiative Completion (2019)
Energy Efficiency	MWh Annual	-	-	-	60,417	60,417	77,775	78%	335,400	18%
	MWh Lifetime	-	-	-	483,338	483,338	621,750	78%	2,688,000	18%
	MMBtu Annual	-	-	-	410,585	410,585	514,250	80%	2,224,000	18%
	MMBtu Lifetime	-	-	-	3,284,683	3,284,683	4,112,500	80%	17,790,000	18%
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	Annual Tons	-	-	-	53,617	53,617	68,200	79%	294,600	18%
	Lifetime Tons	-	-	-	428,934	428,934	545,250	79%	2,358,000	18%
Customer Bill Savings (millions)	Annual Dollars	-	-	-	\$10.30	\$10.30	\$13.18	78%	\$57.00	18%
	Lifetime Dollars	-	-	-	\$82.42	\$82.42	\$105.40	78%	\$455.20	18%
Private Investment (millions)	Dollars	-	-	-	\$6.33	\$6.33	\$6.84	93%	\$21.92	29%
Participants	Participants	-	-	-	20	20	16	129%	67	30%

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

Table 71. Near-Term Milestones for Industry Partnerships

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2017–2018	Data collected from demonstration sites to help demonstrate the business case for training.	Data collection is underway in all six business case demonstration projects. Final or interim reports, in some cases, should be completed by Q4 2018.
	2018–2020	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.

Performance Profile: Clean Technology and Energy Efficiency Talent Pipeline Initiative

Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 3%	CO ₂ e Benefit n/a	Top 15 Initiative NO
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 80%	CO ₂ e Impact n/a	Participants 0%
Explanation of Progress	New initiative. Scheduled to launch in Q4 2018.		
Key Dates	Approval: June 22, 2018	Launch: Anticipated Q4 2018	

Table 72. Clean Technology and Energy Efficiency Talent Pipeline Initiative Results

Market Development Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2025)	% of Total Planned Benefits through Initiative Completion (2025)
Energy Efficiency	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MMBtu Annual	-	-	-	-	-	*	-	*	-
	MMBtu Lifetime	-	-	-	-	-	*	-	*	-
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	-	-	-	-	-	*	-	*	-
	Lifetime Tons	-	-	-	-	-	*	-	*	-
Customer Bill Savings (millions)	Annual Dollars	-	-	-	-	-	*	-	*	-
	Lifetime Dollars	-	-	-	-	-	*	-	*	-
Private Investment (millions)	Dollars	-	-	-	-	-	\$0.02	-	\$68.64	-
Participants	Participants	-	-	-	-	-	22	-	25,173	-

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

Table 73. Near-Term Milestones for Clean Technology and Energy Efficiency Talent Pipeline

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2018	Issue clean energy training infrastructure and capacity building solicitation, round 1.	The solicitation is complete and will be launched in Q4 2018.
	2018	Issue open enrollment OJT program.	
	2018	Issue open enrollment internship program.	

Renewable Heating and Cooling: Tables 74-77

Performance Profile: Heat Pumps and Solar Thermal Initiative			
Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 2%	CO ₂ e Benefit 1%	Top 15 Initiative NO
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 98%	CO ₂ e Impact 117%	Participants 42%
Explanation of Progress	. Although the number of projects (participants) is lower than expected, the initiative is seeing greater savings per project and exceeding all benefits expectations at this time.		
Key Dates	Approval: May 16, 2017	Launch: May 30, 2017	

Table 74. Heat Pumps and Solar Thermal Initiative Results

See Endnotes section for more information³⁰

Market Development Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2021)	% of Total Planned Benefits through Initiative Completion (2021)
Energy Efficiency	MWh Annual	548	71	619	136	755	*	-	*	-
	MWh Lifetime	13,703	1,770	15,473	3,407	18,880	*	-	*	-
	MMBtu Annual	18,321	3,061	21,381	306,222	327,603	218,700	150%	842,200	39%
	MMBtu Lifetime	458,021	76,513	534,535	7,458,981	7,993,515	5,472,500	146%	21,040,000	38%
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	894	93	987	10,873	11,860	9,900	120%	34,810	34%
	Lifetime Tons	22,362	2,323	24,684	263,921	288,605	247,550	117%	869,800	33%
Customer Bill Savings (millions)	Annual Dollars	\$0.31	\$0.0	\$0.3	\$1.69	\$2.04	\$1.68	122%	\$5.63	36%
	Lifetime Dollars	\$7.80	\$0.94	\$8.73	\$39.28	\$48.01	\$42.05	114%	\$140.90	34%
Private Investment (millions)	Dollars	\$4.65	\$0.72	\$5.37	\$65.01	\$70.38	\$16.34	431%	\$122.96	57%
Participants	Participants	194	23	217	128	345	824	42%	3,488	10%

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

Table 75. Near-Term 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.	One proposal from RFP 3751 was selected and the contract has been executed.
	2017	Launch GSHP contractor mentoring program.	GSHP market partners have signaled that this timing is premature and prefer a pilot in a geographical area that can be expanded statewide.
	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	Provide standardized contracts and best practices manual to market.	Development of the best practices and lessons learned guides relating to the Geothermal Campus Challenge eligible facilities are included in the contractor's (ICF) scope of work and in process.
	2018	Complete assessment of M&V methodologies for system performance and share with market participants.	NYSERDA is collaborating with NYPA on the document.
	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.

Performance Profile: Renewable Heat NY Initiative

Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 1%	CO ₂ e Benefit 0.05%	Top 15 Initiative NO
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 68%	CO ₂ e Impact 186%	Participants 72%
Explanation of Progress	NYSERDA has seen strong interest and market uptake on wood pellet stoves while biomass boiler activity is lagging.		
Key Dates	Approval: May 16, 2017	Launch: May 16, 2017	

Table 76. Renewable Heat NY Initiative Results

Market Development Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2021)	% of Total Planned Benefits through Initiative Completion (2021)
Energy Efficiency	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MMBtu Annual	8,476	1,005	9,481	3,819	13,300	6,558	203%	17,640	75%
	MMBtu Lifetime	169,514	20,108	189,622	76,382	266,003	131,250	203%	352,900	75%
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	486	23	508	389	897	482	186%	1,296	69%
	Lifetime Tons	9,714	452	10,166	7,775	17,941	9,643	186%	25,930	69%
Customer Bill Savings (millions)	Annual Dollars	\$0.18	\$0.01	\$0.19	\$0.13	\$0.32	\$0.17	190%	\$0.45	71%
	Lifetime Dollars	\$3.59	\$0.21	\$3.80	\$2.58	\$6.38	\$3.35	190%	\$9.02	71%
Private Investment (millions)	Dollars	\$1.35	\$0.22	\$1.57	\$0.37	\$1.94	\$5.00	39%	\$15.36	13%
Participants	Participants	401	79	480	15	495	690	72%	1,629	30%

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

Table 77. Near-Term 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, were completed & released in August 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	Contract with manufacturers selected under competitive solicitation.	This will begin once the competitive solicitation has been released and proposals selected.
	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.	

Clean Energy Products: Tables 78-79

Performance Profile: Underutilized Product Support Initiative			
Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 2%	CO ₂ e Benefit 2%	Top 15 Initiative YES
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 61%	CO ₂ e Impact 85%	Participants 82%
Explanation of Progress	The Air Source Heat Pump program is performing as expected. Trainings and case studies will be available for ASHP in Q3-Q4 2018. The Advanced Rooftop Unit program has been put on hold as the desired 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 and NYSERDA will ultimately revise this plan.		
Key Dates	Approval: May 16, 2017	Launch: August 17, 2017	

Table 78. Underutilized Product Support Initiative Results

See Endnotes section for more information³¹

Market Development Initiative	Units	Prior Completed	Current Completed	Total Completed	Current Pipeline	Grand Total	Quarter Target	Percent Cum Target	Total Planned Benefits through Initiative Completion (2020)	% of Total Planned Benefits through Initiative Completion (2020)
Energy Efficiency	MWh Annual	-	-	-	-	-	14,150	-	89,800	-
	MWh Lifetime	-	-	-	-	-	184,400	-	1,166,900	-
	MMBtu Annual	168,736	82,399	251,135	-	251,135	132,900	189%	399,200	63%
	MMBtu Lifetime	2,531,039	1,235,984	3,767,022	-	3,767,022	1,987,000	190%	5,982,000	63%
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	6,571	3,207	9,778	-	9,778	12,530	78%	62,580	16%
	Lifetime Tons	98,567	48,099	146,666	-	146,666	173,550	85%	843,800	17%
Customer Bill Savings (millions)	Annual Dollars	\$2.11	\$1.04	\$3.15	-	\$3.15	\$3.88	81%	\$17.97	18%
	Lifetime Dollars	\$31.70	\$15.60	\$47.30	-	\$47.30	\$54.51	87%	\$245.63	19%
Private Investment (millions)	Dollars	\$17.06	\$0.00	\$17.06	-	\$17.06	\$39.98	43%	\$161.38	11%
Advanced Rooftop Units	Participants	-	-	-	-	-	343	-	2,190	-
Air Source Heat Pumps		2,180	1,218	3,398	-	3,398	3,800	89%	11,430	30%

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

Table 79. Near-Term Milestones Underutilized Product Support

See Endnotes section for more information³²

Complete ✓	Time Frame	Milestone	Explanation of Progress
n/a	2017	Launch open enrollment incentive program for Advanced Rooftop Units (ARTU).	ARTU program has been put 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.
n/a	2017	HVAC trainings assessed and compiled to facilitate increased contractor participation.	This milestone is no longer handled within the Products initiative and subsequent activities will be associated with the Clean Heating and Cooling chapter.
	2017	Case studies developed and deployed in the market, along with current resources from regional and national organizations.	Initially, NYSERDA deployed best practice resources for contractors from the Northeast Energy Efficiency Partnership. The development of case studies to exhibit savings potential will follow. A total of 50 NYSERDA-funded ASHP demonstration projects have been awarded, with 16 currently functioning and monitoring data. Compiling viable results from these projects for dissemination will push development time of case studies to Q1 2019.
	2018	Efficiency and cost calculator released in the market.	Working to assess current market offerings across technologies. Most likely a tool will have to be updated or developed to meet needs. Any tool developed will be applicable across technologies to maximize impact for contractors. Commencement of work on this is currently dependent on roll out of the mapping tool.

Table 79 continued

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2018	Mapping tool for Air Source Heat Pumps (ASHP) potential released in the market.	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. Testing of the product demo began in Q3 2018 with a roll out to HVAC partners in Q1 2019.
	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.	NYSERDA plans to offer this as part of the second round of the Next Generation HVAC Technology Challenge (PON 3519). Proposals were received, reviewed and awarded under Round 2 of PON 3519 looking at the integration of legacy HVAC and heat pump systems. 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.
	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.

Multi-Sector Solutions: Tables 80-89

Performance Profile: Energy Efficiency Soft Cost Challenge Initiative			
Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 1%	CO ₂ e Benefit 1%	Top 15 Initiative NO
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 2%	CO ₂ e Impact 0%	Participants 0%
Explanation of Progress	The initiative is currently on hold. NYSERDA is further investigating soft costs and exploring other opportunities to integrate soft cost reduction strategies within the single-family, multifamily, and commercial programs.		
Key Dates	Approval: July 19, 2017	Launch: TBD	

Table 80. Energy Efficiency Soft Cost Challenge Initiative Results

Innovation and Research Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2025)	% of Total Planned Benefits through Initiative Completion (2025)
Energy Efficiency	MWh Annual	-	-	-	-	-	6,645	-	17,720	-
	MWh Lifetime	-	-	-	-	-	66,450	-	177,200	-
	MMBtu Annual	-	-	-	-	-	221,250	-	590,000	-
	MMBtu Lifetime	-	-	-	-	-	2,212,500	-	5,900,000	-
	MW	-	-	-	-	-	-	-	-	-
Renewable Energy	MWh Annual	-	-	-	-	-	-	-	-	-
	MWh Lifetime	-	-	-	-	-	-	-	-	-
	MW	-	-	-	-	-	-	-	-	-
CO ₂ e Emission Reduction (metric tons)	Annual Tons	-	-	-	-	-	17,475	-	46,600	-
	Lifetime Tons	-	-	-	-	-	174,750	-	466,000	-
Customer Bill Savings (millions)	Annual Dollars	-	-	-	-	-	\$4.17	-	\$11.12	-
	Lifetime Dollars	-	-	-	-	-	\$41.70	-	\$111.20	-
Private Investment (millions)	Dollars	-	-	-	-	-	\$2.75	-	\$7.32	-
Participants	Participants	-	-	-	-	-	18	-	20	-

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

Table 81. Near-Term Milestones for Energy Efficiency Soft Cost Challenge

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2017	Issue competitive solicitation for first round of the challenge.	Solicitation on hold. The initiative as outlined within the investment plan is currently on hold. NYSERDA is exploring opportunities to integrate soft cost reduction strategies within the single-family, multifamily, and commercial programs.

Performance Profile: Technical Services Initiative

Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 1%	CO ₂ e Benefit 2%	Top 15 Initiative YES
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 75%	CO ₂ e Impact 74%	Participants 596%
Explanation of Progress	The second component of Technical Services, the Energy Study Aggregation Program, launched at the end of Q2 2018. As the aggregation component ramps up, NYSERDA expects performance to increase and overall initiative goals to be met. Participant goals are significantly exceeding planned values as the Agriculture Energy Audit Program began funding farm audits sooner than anticipated.		
Key Dates	Approval: October 3, 2017	Launch: November 9, 2017	

Table 82. Technical Services Initiative Results

Innovation and Research Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2025)	% of Total Planned Benefits through Initiative Completion (2025)
Energy Efficiency	MWh Annual	59	99	158	9,317	9,475	15,150	63%	87,350	11%
	MWh Lifetime	1,001	1,677	2,678	158,390	161,068	257,250	63%	1,483,900	11%
	MMBtu Annual	(133)	48	(85)	83,412	83,327	85,500	97%	471,330	18%
	MMBtu Lifetime	(2,258)	813	(1,445)	1,418,008	1,416,562	1,455,000	97%	8,014,000	18%
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	3	3	8	11	139	8%	1,645	1%
	MWh Lifetime	-	48	48	135	183	2,363	8%	28,000	1%
	MW	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	Annual Tons	23	56	80	9,341	9,421	12,675	74%	72,390	13%
	Lifetime Tons	396	960	1,357	158,793	160,150	215,250	74%	1,228,100	13%
Customer Bill Savings (millions)	Annual Dollars	\$0.01	\$0.02	\$0.02	\$1.71	\$1.73	3	68%	15	12%
	Lifetime Dollars	\$0.10	\$0.27	\$0.38	\$29.01	\$29.39	44	67%	249	12%
Private Investment (millions)	Dollars	\$0.02	\$0.04	\$0.07	\$6.01	\$6.07	14	42%	91	7%
Participants	Participants	2	12	14	53	67	11	596%	1,445	4.6%

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

Table 83. Near-Term Milestones for Technical Services

Complete ✓	Time Frame	Milestone	Explanation of Progress
	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 Q4 2018.
✓	2019	Award funding to initial entities selected under New Aggregation Models pilot.	The first project awarded in September 2018.
	2019	Disseminate best practices materials.	
	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.	

Performance Profile: Clean Energy Advanced Market Performance (AMP) Challenge Initiative

Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 1%	CO ₂ e Benefit 1%	Top 15 Initiative NO
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 1%	CO ₂ e Impact 0%	Participants 0%
Explanation of Progress	NYSERDA expects to achieve planned benefits once contracting is finalized. The Commercial and Industrial Carbon Challenge launched in Q2 2018 after extensive input from stakeholders.		
Key Dates	Approval: December 1, 2017	Launch: May 14, 2018	

Table 84. Clean Energy Advanced Market Performance (AMP) Challenge Initiative Results

Innovation and Research Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2018)	% of Total Planned Benefits through Initiative Completion (2018)
Energy Efficiency	MWh Annual	-	-	-	-	-	19,425	-	25,900	-
	MWh Lifetime	-	-	-	-	-	291,750	-	389,000	-
	MMBtu Annual	-	-	-	-	-	114,000	-	152,000	-
	MMBtu Lifetime	-	-	-	-	-	1,710,000	-	2,280,000	-
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	3,518	-	4,690	-
	MWh Lifetime	-	-	-	-	-	52,800	-	70,400	-
	MW	-	-	-	-	-	3	-	4	-
CO ₂ e Emission Reduction (metric tons)	Annual Tons	-	-	-	-	-	18,525	-	24,700	-
	Lifetime Tons	-	-	-	-	-	277,500	-	370,000	-
Customer Bill Savings (millions)	Annual Dollars	-	-	-	-	-	3	-	3	-
	Lifetime Dollars	-	-	-	-	-	39	-	52	-
Private Investment (millions)	Dollars	-	-	-	-	-	41	-	55	-
Participants	Participants	-	-	-	-	-	2	-	2	-

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

Table 85. Near-Term Milestones for Clean Energy Advanced Market Performance (AMP) Challenge

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2018	Contract with selected participants.	As of Q3 2018, proposals have been reviewed and awardees have been notified. Proceeding toward contracts, however, completion of the milestone will be postponed by one quarter due to a delay in solicitation launch as expected.
	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.

Performance Profile: Clean Energy Siting and Soft Cost Reduction Initiative			
Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 1%	CO ₂ e Benefit n/a	Top 15 Initiative NO
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 25%	CO ₂ e Impact n/a	Participants 567%
Explanation of Progress	Although budget commitment is slower than expected, the initiative has received significantly greater participation than expected.		
Key Dates	Approval: December 1, 2017	Launch: March 9, 2018	

Table 86. Clean Energy Siting and Soft Cost Reduction Initiative Results

See Endnotes section for more information³³

Market Development Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2020)	% of Total Planned Benefits through Initiative Completion (2020)
Authorities Having Jurisdiction (AHJs)	Participants	142	-	142	-	142	30	473%	100	142%
Working Group Participants		113	-	113	-	113	15	753%	60	188%

Table 87. Near-Term Milestones for Clean Energy Siting and Soft Cost Reduction

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2018	Contract with a pool of contractors and organizations.	A bid was issued in March 2018 to hire contractors to support the Clean Energy Siting. NYSERDA received proposals from firms to providing technical assistance to local governments regarding all issues of Clean Energy Siting. Contracting is in process. Separately, a bid was issued to hire legal counsel—three legal firms were hired. Additionally, three contractors were hired to assist with code enforcement, site plan review, and land-use regulations.
	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. Creation of a new role at NYSERDA to oversee clean energy siting and soft cost reduction for all programs shifted the responsibility for training technical assistance provided to the Senior Advisor for Clean Energy Siting. Contractor selection and training has been placed on hold at this time.
	2018	Launch a statewide outreach and education campaign to publicize soft cost solutions and technical assistance services, including convening regional meetings for large scale renewable (LSR) stakeholders.	A statewide outreach and education campaign was launched on March 9, 2018. A new role was created to oversee siting and soft cost reduction across all NYSERDA programs. The campaign is now being led by the Senior Advisor for Clean Energy Siting. NYSERDA completed a plan to reach out and meet with 2018 LSR solicitation host towns and continues to hold workshops.
	2018	Issue the incentive grant solicitation for authorities having jurisdiction 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 authorities having jurisdiction with a grant when they adopt a Payment In-Lieu of Taxes agreement, the Solar Model Law, and the Unified Solar Permit.
	2018	Issue the Soft Cost Innovation solicitation.	
	2018	Contract with Soft Cost Innovation award recipients.	
	2019	Compile and publish a document of all case studies to highlight best soft cost reduction strategies and clean energy-friendly communities.	The Solar Guidebook with additional chapters has been published and new Wind Guidebook is in process.

Performance Profile: Pay for Performance Initiative

Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 3%	CO ₂ e Benefit 1%	Top 15 Initiative NO
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 4%	CO ₂ e Impact 0%	Participants 0%
Explanation of Progress	New initiative. Anticipated to launch Q3 2019.		
Key Dates	Approval: September 7, 2018	Launch: Anticipated Q3 2019	

Table 88. Pay for Performance Initiative Results

Innovation and Research Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2021)	% of Total Planned Benefits through Initiative Completion (2021)
Energy Efficiency	MWh Annual	-	-	-	-	-	-	-	124,846	-
	MWh Lifetime	-	-	-	-	-	-	-	1,517,590	-
	MMBtu Annual	-	-	-	-	-	-	-	171,200	-
	MMBtu Lifetime	-	-	-	-	-	-	-	2,900,700	-
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	Annual Tons	-	-	-	-	-	-	-	75,870	-
	Lifetime Tons	-	-	-	-	-	-	-	972,300	-
Customer Bill Savings (millions)	Annual Dollars	-	-	-	-	-	-	-	19	-
	Lifetime Dollars	-	-	-	-	-	-	-	246	-
Private Investment (millions)	Dollars	-	-	-	-	-	-	-	118	-
Participants	Participants	-	-	-	-	-	-	-	12,575	-

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

Table 89. Near-Term Milestones for Pay for Performance

Complete	Time Frame	Milestone	Explanation of Progress
	2018	Release key pilot design parameters for stakeholder feedback and complete P4P pilot design.	Pilot Design is in development. A stakeholder meeting is anticipated to be held in November 2018. Feedback will be incorporated into Pilot Design for the remainder of 2018.
	2018	Make available historical program performance data utilizing CalTRACK results.	On September 17, 2018, performance data from Home Performance with Energy Star® Market Rate and Assisted projects from 2007–2012 was published on OpenNY. The savings data associated with this data was calculated using the CalTRACK methodology. Measure specific data about these projects will be posted shortly. An additional evaluation of historic program performance in the residential sector is currently underway to assess the performance of more recent projects using the CalTRACK methodology.
	2018	Release RFP and execute contract to procure advanced measurement and verification (AMV) software solution.	The RFP to select an AMV Solution Provider was launched on August 17, 2018. Proposals were submitted on September 17, 2018, and a top ranked proposer was selected on September 25, 2018. Contracting is expected to be finalized by the end of the year.
	2018	Release Phase 1 procurement document(s) with utility co-administrators to solicit aggregator bids.	Procurement documentation is currently under development by NYSERDA and Utility Administrators. It is anticipated that the Aggregator RFP will be released in Q1 2019.
	2019	Execute Phase 1 aggregator contracts and begin Phase 1 work.	
	2019	Adjust design elements based on market feedback and prepare for Phase 2 solicitations.	

Codes: Tables 90-91

Performance Profile: Code to Zero Initiative			
Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 1%	CO ₂ e Benefit 6%	Top 15 Initiative YES
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 24%	CO ₂ e Impact 0%	Participants 0%
Explanation of Progress	On schedule to launch Q4 2018. There has been major success in support of NYC stretch code adoption leading up to the official initiative launch. Code official training has occurred to date with non-CEF funds.		
Key Dates	Approval: December 1, 2017	Launch: Anticipated Q4 2018	

Table 90. Code to Zero Initiative Results

Innovation and Research Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2022)	% of Total Planned Benefits through Initiative Completion (2022)
Energy Efficiency	MWh Annual	-	-	-	-	-	-	-	165,700	-
	MWh Lifetime	-	-	-	-	-	-	-	4,150,000	-
	MMBtu Annual	-	-	-	-	-	-	-	132,200	-
	MMBtu Lifetime	-	-	-	-	-	-	-	3,300,000	-
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	-	-	-	-	-	-	-	94,800	-
Customer Bill Savings (millions)	Lifetime Tons	-	-	-	-	-	-	-	2,369,000	-
	Annual Dollars	-	-	-	-	-	-	-	\$23.35	-
Private Investment (millions)	Lifetime Dollars	-	-	-	-	-	-	-	\$585.00	-
	Dollars	-	-	-	-	-	-	-	\$513.00	-
Trainings	Participants	-	-	-	-	-	1,375	-	7,750	-
Pilots		-	-	-	-	-	-	-	6	-

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

Table 91. Near-Term Milestones for Code to Zero

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 and is still on schedule for producing the final code.
	2018	Issue Pilot #1 solicitation to pilot alternative enforcement structures.	NYSERDA began work on this milestone in Q2 2018. Voice of customer will be performed in November 2018.
	2018	Issue Pilot #2 solicitation for pilot communities to adopt NY Stretch-Energy (IECC2018).	
	2018	Finalize plan to codify stretch-to-zero as baseline by 2030.	Part of New Buildings Institute contract "Policy Analysis and Development to Support NY Climate Objectives" work on a roadmap started during Q3 2018.
	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.	

Fuel Cells: Tables 92-93

Performance Profile: Fuel Cells Initiative			
Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 1%	CO ₂ e Benefit 0.2%	Top 15 Initiative NO
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 11%	CO ₂ e Impact 17%	Participants 10%
Explanation of Progress	Although market uptake appears to be lagging plans, it is too early to evaluate performance with less than two quarters of activity.		
Key Dates	Approval: December 1, 2017	Launch: May 3, 2018	

Table 92. Fuel Cells Initiative Results

See Endnotes section for more information³⁴

Innovation and Research Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2019)	% of Total Planned Benefits through Initiative Completion (2019)
Energy Efficiency	MWh Annual	-	-	-	4,369	4,369	24,975	17%	66,600	7%
	MWh Lifetime	-	-	-	87,381	87,381	499,500	17%	1,332,000	7%
	MMBtu Annual	-	-	-	-	-	*	-	*	-
	MMBtu Lifetime	-	-	-	-	-	*	-	*	-
Renewable Energy	MW	-	-	-	1	1	3	18%	8	7%
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	-	-	-	490	490	2,813	17%	7,500	7%
Customer Bill Savings (millions)	Lifetime Tons	-	-	-	9,790	9,790	56,250	17%	150,000	7%
	Annual Dollars	-	-	-	\$0.58	\$0.58	\$2.25	26%	\$6.00	10%
Private Investment (millions)	Lifetime Dollars	-	-	-	\$11.53	\$11.53	\$44.93	26%	\$119.80	10%
	Dollars	-	-	-	\$0.69	\$0.69	\$15.38	4%	\$41.00	2%
Participants	Participants	-	-	-	1	1	11	10%	27	4%

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

Table 93. Near-Term Milestones for Fuel Cells

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2018	Contract with accepted open enrollment solicitation applicants as they apply through 2019.	Three applications have been received and one contract has been initiated.
	2018	Confirm installation of equipment at site. This will start in 2018 and continue in 2019 based on timing of applications.	These activities will commence as projects are contracted.
	2019	Confirm first annual performance of fuel cell operation. This will start in 2019 and continue in 2020 based on timing of applications.	

New Construction: Tables 94-96

Performance Profile: New Construction Initiative – Market Rate and Low Income			
Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 9%	CO ₂ e Benefit 9%	Top 15 Initiative YES
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 3%	CO ₂ e Impact 0%	Participants 0%
Explanation of Progress	Newly launched with key components to kick off in late 2018/early 2019.		
Key Dates	Approval: December 1, 2017	Launch: April 12, 2018	

Table 94. New Construction Market Rate Initiative Results

Innovation and Research Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2020)	% of Total Planned Benefits through Initiative Completion (2020)
Energy Efficiency	MWh Annual	-	-	-	-	-	29,670	-	191,920	-
	MWh Lifetime	-	-	-	-	-	542,175	-	4,199,900	-
	MMBtu Annual	-	-	-	-	-	50,325	-	369,100	-
	MMBtu Lifetime	-	-	-	-	-	1,125,000	-	8,440,000	-
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	-	-	-	-	-	21,270	-	146,140	-
Customer Bill Savings (millions)	Lifetime Tons	-	-	-	-	-	471,750	-	3,264,000	-
	Annual Dollars	-	-	-	-	-	\$4.29	-	\$28.73	-
Private Investment (millions)	Lifetime Dollars	-	-	-	-	-	\$95.55	-	\$643.90	-
	Dollars	-	-	-	-	-	\$9.68	-	\$135.10	-
Market Rate Housing-Units Participants		-	-	-	-	-	375	-	8,300	-
Market Rate Commercial Buildings	Participants	-	-	-	-	-	40	-	270	-
Market Rate Training Participants		-	-	-	-	-	182	-	726	-

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

Table 95. Low-Income New Construction Initiative Results

Innovation and Research Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2020)	% of Total Planned Benefits through Initiative Completion (2020)
Energy Efficiency	MWh Annual	-	-	-	-	-	1,575	-	19,260	-
	MWh Lifetime	-	-	-	-	-	39,450	-	482,600	-
	MMBtu Annual	-	-	-	-	-	6,615	-	103,620	-
	MMBtu Lifetime	-	-	-	-	-	165,000	-	2,600,000	-
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	Annual Tons	-	-	-	-	-	1,185	-	15,740	-
	Lifetime Tons	-	-	-	-	-	29,700	-	395,600	-
Customer Bill Savings (millions)	Annual Dollars	-	-	-	-	-	\$0.28	-	\$3.60	-
	Lifetime Dollars	-	-	-	-	-	\$7.06	-	\$90.01	-
Private Investment (millions)	Dollars	-	-	-	-	-	\$2.59	-	\$55.05	-
LMI Housing Unit Participants	Participants	-	-	-	-	-	375	-	8,700	-
LMI Training Participants		-	-	-	-	-	146	-	582	-

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

Table 96. Near-Term 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.	The Request for Proposals has been drafted. NYSERDA is currently soliciting guidance from stakeholders through a new engagement process to provide feedback on multi-year programs to deliver targeted support for marketing, outreach, and education/training, in order to achieve the greatest impact from this competitive solicitation. Due to other design competitions in the market in Q4 2018, NYSERDA determined that the Buildings of Excellence Competition would be advanced Q1 of 2019 in order to maximize the potential for success.
	2018	Contract with awardees for Buildings of Excellence Competition.	Expect to have awardees identified the quarter following the release of the Buildings of Excellence competitive solicitation.
	2018	Issue solicitation to launch Simplified Design and Tools: Model Measure Packages activity.	In Q3, NYSERDA completed a selection of vendors through RFQL 3711, which will provide the pool of vendors that will complete the analysis of high-performance projects and identify model measure packages. Currently, NYSERDA is completing the contract negotiation process with successful vendors. The program expects to release the mini-bid soliciting these vendors to analyze measure packages in Q4 2018.
	2018	Contract with awardees for Simplified Design and Tools: Model Measure Packages activity.	Task Work Order contract(s) will follow the release of the mini-bid to the select successful RFQL 3711 vendors.
	2018	Contract with awardees for Net Zero Energy Commercial/Industrial competition.	The Consolidated Funding Application closed on July 27, 2018 and the proposals were scored in September 2018. Award winners will be announced in late Q4 2018 and contracting will follow.
	2018	Issue competitive RFP for Simplified Design and Tools: Online Platform development.	In Q3, NYSERDA completed a selection of vendors through RFQL 3711, which will provide the pool of vendors that will be solicited to develop the online platform. Currently, NYSERDA is completing the contract negotiation process with successful vendors. The program expects to release the mini-bid soliciting these vendors to develop the online platform in Q4 or early Q1 2019.

Table 96 Continued

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2018	Contract with awardees for Simplified Design and Tools: Online Platform development.	Task Work Order contract(s) will follow the release of the mini-bid to the select successful RFQL 3711 vendors.
	2018	Issue mini-bid for technical reviewers through existing NYSERDA umbrella contracts to begin performance analysis to assess project performance.	Evaluating timing based on project completion estimates.
	2018	Contract with technical reviewers for Performance Analysis to assess project performance.	The timing of the issuance of the mini-bid is currently being evaluated. Contracts with technical reviewers will follow the mini-bid release.
	2018	Issue solicitation for Simplified Design and Tools: Integrated design practices advisor for first-time developers.	This program initiative is being rolled into the Portfolio Owner Support program, which will work with large developers or portfolio owners to define net zero and build, facilitate, and operate facilities to achieve net zero performance. VOCs have begun, and the RFP is going through the final internal approvals and will launch early Q4 2018.
	2018	Contract with awardees for Simplified Design and Tools: Integrated design practices advisor for first-time developers.	Portfolio Owner Support RFP will be released in Q4 2018—it is expected that contract awards will take place in Q1 to Q4 of 2019, or when funding is exhausted.
	2019	Issue solicitation for Commercial Pilot Incentive Program.	
	2019	Contract with awardees for Commercial Pilot Incentive Program.	
	2019	Issue second competitive solicitation for Buildings of Excellence Competition.	
	2019	Contract with awardees for second round of Buildings of Excellence Competition.	
	2019	Issue second Solicitation for Net Zero Energy Commercial/Industrial Competition.	
	2019	Contract with awardees for second Net Zero Energy Commercial/Industrial Competition.	
	2019	Contract with awardees for third round of Buildings of Excellence Competition.	

Residential: Tables 97-98

Performance Profile: Engaging New Markets Initiative			
Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 1%	CO ₂ e Benefit 0%	Top 15 Initiative NO
Key Performance Indicators (Commitments vs. Plan-to-Date)	Budget 49%	CO ₂ e Impact 0%	Participants 0%
Explanation of Progress	The initiative is scheduled to launch in Q4 2018.		
Key Dates	Approval: December 1, 2017	Launch: Anticipated Q4 2018	

Table 97. Engaging New Markets Initiative Results

Innovation and Research Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2020)	% of Total Planned Benefits through Initiative Completion (2020)
Energy Efficiency	MWh Annual	-	-	-	-	-	19	-	1,194	-
	MWh Lifetime	-	-	-	-	-	281	-	17,955	-
	MMBtu Annual	-	-	-	-	-	1,410	-	89,580	-
	MMBtu Lifetime	-	-	-	-	-	35,175	-	2,238,900	-
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO ₂ e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	-	-	-	-	-	93	-	5,934	-
Customer Bill Savings (millions)	Lifetime Tons	-	-	-	-	-	2,228	-	141,970	-
	Annual Dollars	-	-	-	-	-	\$0.02	-	\$1.48	-
Private Investment (millions)	Lifetime Dollars	-	-	-	-	-	\$0.55	-	\$34.93	-
	Dollars	-	-	-	-	-	\$0.57	-	\$28.16	-
Customer	Participants	-	-	-	-	-	369	-	11,344	-
Market Actor		-	-	-	-	-	20	-	258	-

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

Table 98. Near-Term 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.	Development is underway and on track for completion in Q4 2018. Pilot design and participant selection process work has extended the timeline into Q4.
	2018	Deploy new content on NYSEERDA website.	All content has been developed and is in beta testing. Deployment is expected Q4 2018.
	2018	Launch first of targeted consumer education and awareness campaigns.	Strategy planning is underway; website updates need to be launched first and other strategies are in development.
	2018	Implement initial pilot for contractors delivering home energy ratings as a sales tool.	Implementation planning is underway; solicitation and contract work are also underway.
	2018	Implement initial pilot to embed home energy ratings into real estate transactions.	
	2018	Implement initial pilot for leveraging relationships that upstream market actors have with contractors.	Early planning work has begun, and planning activities continue. This milestone is expected to be completed in Q1 2019.
	2019	Implement initial pilot for providing energy efficiency information to consumers from home improvement retailers and their contractor network.	

4 Innovation and Research Initiative Specific Results

Table 99. Innovation and Research Initiative Budgets and Spending

See Endnotes for more information^{35,36}

Initiative	Budget Approved as of December 31, 2017 ^a	Expended Funds ^b	Open Encumbrances ^c	Contract Pre-Encumbrances ^d	Committed Funds ^e	% of Approved Budget Committed ^f	Budget Approved Remaining Balance ^g
Market Characterization & Design Chapter	\$250,000	\$653	-	-	\$653	0.3%	\$249,347
Grid Modernization Chapter							
DER Interconnection	\$6,300,000	\$1,711,276	\$976,609	-	\$2,687,885	43%	\$3,612,115
High Performing Grid	\$110,500,000	\$2,838,522	\$8,359,260	\$278,675	\$11,476,457	10%	\$99,023,543
Next Generation Power Electronics	\$16,700,000	\$12,901,872	\$3,798,128	-	\$16,700,000	100%	-
Grid Modernization Chapter Total	\$133,500,000	\$17,451,670	\$13,133,997	\$278,675	\$30,864,342	23%	\$102,635,658
Innovation Capacity and Business Development Chapter							
CleanTech Startup Growth	\$58,200,000	\$2,734,230	\$8,254,683	\$5,740,000	\$16,728,913	29%	\$41,471,087
Manufacturing Corps	\$12,000,000	\$380,850	\$3,740,000	-	\$4,120,850	34%	\$7,879,150
Novel Business Models and Offerings	\$16,100,000	\$30,561	-	-	\$30,561	\$0	\$16,069,439
Innovation Capacity and Business Development Chapter	\$86,300,000	\$3,145,641	\$11,994,683	\$5,740,000	\$20,880,324	24%	\$65,419,676
Building Innovation Chapter							
NextGen HVAC	\$15,000,000	\$485,499	\$1,749,491	\$3,672,555	\$5,907,545	39%	\$9,092,455
Building Innovation Chapter Total	\$15,000,000	\$485,499	\$1,749,491	\$3,672,555	\$5,907,545	39%	\$9,092,455
Clean Transportation Chapter							
Electric Vehicles	\$11,850,000	\$529,717	\$291,745	\$2,458,681	\$3,280,143	28%	\$8,569,857
Public Transportation and Electrified Rail	\$18,500,000	\$70,961	\$271,939	\$336,000	\$678,900	4%	\$17,821,100
Clean Transportation Chapter Total	\$30,350,000	\$600,678	\$563,684	\$2,794,681	\$3,959,043	13%	\$26,390,957
Energy-Related Environmental Research Chapter							
Environmental Research	\$30,000,000	\$817,889	\$7,181,346	\$14,000	\$8,013,236	27%	\$21,986,764
Energy-Related Environmental Research Chapter Total	\$30,000,000	\$817,889	\$7,181,346	\$14,000	\$8,013,236	27%	\$21,986,764
Renewables Optimization Chapter							
Energy Storage Innovations	\$33,000,000	\$553,652	\$1,347,911	\$2,142,559	\$4,044,122	12%	\$28,955,878
National Offshore Wind Research & Development Consortium	\$22,500,000	-	-	-	-	-	\$22,500,000
Renewables Optimization Chapter Total	\$55,500,000	\$553,652	\$1,347,911	\$2,142,559	\$4,044,122	7%	\$51,455,878
NYS Cost Recovery Fee	\$8,888,316	\$656,625	-	-	\$656,625	7%	\$8,231,691
Innovation Capacity and Bus. Dev. Chapter Total	\$359,788,316	\$23,712,307	\$35,971,112	\$14,642,470	\$74,325,888	21%	\$285,462,428

Table notes are on the next page

- a Funds approved by DPS as of September 30, 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.

Grid Modernization: Tables 100-104

Performance Profile: Distributed Energy Resource Interconnection Initiative			
Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 0.4%	High-Level Performance Indicators (commitments vs. Plans to Date)	Budget 43%
Explanation of Progress	Given the amount of budget invested, ROI in terms of leveraged funds achieved to date is good. The release of the second solicitation has been delayed in order to incorporate lessons learned from the first solicitation and is anticipated to be released in Q1 2019. Progress on performance metrics is expected to improve in Q2 2019 after contracts from the second solicitation have been awarded.		
Key Dates	Approval: May 23, 2016	Launch: October 20, 2016	

Table 100. Distributed Energy Resource Interconnection Initiative Results

Innovation and Research Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2019)	% of Total Planned Benefits 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	\$0.25	-	\$0.25	\$3.44	\$3.68	\$5.83	63%	\$5.83	63%
Participants	Participants	-	-	-	9	9	12	77%	13	69%

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

Performance Profile: High-Performing Grid Initiative

Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 6%	High-Level Performance Indicators (commitments vs. Plans to Date)	Budget 30%
Explanation of Progress	Participant uptake is excellent. Private investment is currently behind due in part to a natural lag in data collection of metrics and in some cases, the completion of project deliverables. Progress is expected to improve in Q4 2018.		
Key Dates	Approval: May 23, 2016	Launch: September 16, 2016	

Table 101. High-Performing Grid Initiative Results

Innovation and Research Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2022)	% of Total Planned Benefits through Initiative Completion (2022)
Energy Efficiency	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MMBtu Annual	-	-	-	-	-	*	-	*	-
	MMBtu Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	Annual Tons	-	-	-	-	-	*	-	*	-
	Lifetime Tons	-	-	-	-	-	*	-	*	-
Customer Bill Savings (millions)	Annual Dollars	-	-	-	-	-	*	-	*	-
	Lifetime Dollars	-	-	-	-	-	*	-	*	-
Private Investment (millions)	Dollars	\$1.88	-	\$1.88	\$41.95	\$43.83	\$110.25	40%	\$309.00	14%
Participants	Participants	-	-	-	37	37	22	170%	64	58%

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

Table 102. Near-Term Milestones for High-Performing Grid

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2017	Issue targeted competitive solicitation #2, guided by utility supplemental distributed system implementation plans (DSIPs) and the NY Grid Modernization Roadmap.	Solicitation delayed allowing broad competitive solicitation #3 to be issued. Solicitation #2 anticipated to be released in Q1 2019.
	2017	Enter into contracts for projects awarded under the targeted competitive solicitation #2.	
	2018	Identify technology gaps necessary to support community grid operation based on completed NY Prize Stage 2 evaluations.	NY Prize Stage 2 project teams are actively working to complete State 2 deliverables.
	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 mid-2019.
	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.	

Performance Profile: Power Electronics Manufacturing Consortium Initiative

Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 1%	High-Level Performance Indicators (commitments vs. Plans to Date)	Budget 100%
Explanation of Progress	The initiative is performing very well against its performance metrics and is exceeding planned values for both private investment and participants.		
Key Dates	Approval: July 19, 2017	Launch: October 13, 2017	

Table 103. Power Electronics Manufacturing Consortium Initiative Results

	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2019)	% of Total Planned Benefits 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	\$135.00	-	\$135.00	-	\$135.00	\$71.75	188%	\$80.00	169%
Participants	Participants	12	-	12	-	12	7	171%	12	100%

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

Table 104. Near-Term Milestones for Power Electronics Manufacturing Consortium

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2017	Consortium expanded to include at least four partner companies/customers.	Two consortium partners confirmed. Negotiations are in progress with additional partners. Focus continues on adding new tier 1 partner prior to adding additional partners.
✓	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 complete. Total Reflection X-ray Florescence and Foreign Material qualification is complete. Statistic Process Control development is complete. Standard Operating Procedure development is complete.
✓	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. Testing is complete and successful
✓	2018	Quality management system implemented.	"Go live" milestone for Manufacturing Execution System (MES) and Yield Management System (YMS) has been reached
	2018	ISO-9001 certification complete.	Tool acceptance, Quality Management System definition, and quality objectives documentation are complete. Quality processes and external products and services specifications development are 95% complete. Internal audit and formal ISO certification audit steps remain.
	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. Testing has been completed successfully with positive results.
	2018	Consortium expanded to include at least eight partner companies/customers.	Focus continues on adding new tier 1 partner prior to adding additional partners.
	2019	Consortium expanded to include at least 12 partner companies/customers.	

Innovation Capacity and Business Development: Tables 105-115

Performance Profile: Cleantech Startup Growth Initiative			
Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 3%	High-Level Performance Indicators (commitments vs. Plans to Date)	Budget 81%
Explanation of Progress	Progress on metrics for this program is behind due to a natural lag in the timing of metrics collection, which for Cleantech initiatives, are collected on a semi-annual basis. Progress will be reassessed in Q1 2019 when metrics from the prior two quarters is reported.		
Key Dates	Approval: May 23, 2016	Launch: October 12, 2016	

Table 105. Cleantech Startup Growth Initiative Results

Innovation and Research Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2019)	% of Total Planned Benefits 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	\$47.62	\$53.85	\$101.47	\$72.98	\$174.45	\$224.06	78%	\$387.00	45%
Participants	Participants	120	53	173	-	173	568	30%	4,335	4%

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

Table 106. Near-Term Milestones for Cleantech Startup Growth Incubators

Complete ✓	Time Frame	Milestone	Explanation of Progress
	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 and 2018.
	Starting 2017	Entrepreneur boot camp held.	Entrepreneurial-type boot camps/workshops are held throughout the operation of the incubators. Entrepreneur boot camps have been held as planned throughout 2017 and 2018.
	2018	Awards from second solicitation are contracted.	Round 2 closed November 29, 2017. Two contracts were awarded, and one contract was executed May 30, 2018. Contracting with the other awardee is still in process.

Table 107. Near-Term Milestones for Cleantech Startup Growth Ignition Grants

Complete ✓	Time Frame	Milestone	Explanation of Progress
	Starting 2017	Investment Committee meetings held.	Investment Committee Meetings are scheduled to begin July 19, 2018 and reoccur every three weeks.
	Starting 2017	Ignition grant awards issued on ongoing basis.	The solicitation launched June 1, 2018 and awards are being issued on an ongoing basis.

Table 108. Near-Term Milestones for Cleantech Startup Growth Proof-of-Concept Centers (POCCs)

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2018	Award(s) from solicitation for POCCs contracted.	Proposals were due July 26, 2018. No awards made, solicitation will be modified and reissued in Q4 2018.
	2019	Competitive solicitation for POCC support services launched.	
	2019	Award(s) from solicitation for POCC support services contracted.	

Table 109. Near-Term Milestones for Cleantech Startup Growth Entrepreneurs-In-Residence

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2018	Award(s) from solicitation contracted.	Contract negotiation currently underway, contract execution expected in Q4 2018.
	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 110. Near-Term Milestones for Cleantech Startup Growth

Investor, Corporate, and Customer Engagement

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2018	Competitive solicitations launched.	Solicitation(s) expected to launch in Q1/Q2 2019.
	2018	Awards from solicitations contracted.	Awards will be made after launch of the solicitation.

Table 111. Near-Term Milestones for Cleantech Startup Growth 76 West

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2018	Awardees from third round selected.	Awards from third round have been selected.
	2019	Awards from third round contracted.	Awards from third round expected to be contracted by Q1 2019.
	2019	Awardees from fourth round selected.	
	2019	Awardees from fourth round contracted.	

Table 112. Near-Term Milestones for Cleantech Startup Growth Innovation Advisors

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2019	Competitive solicitation launched.	
	2019	Awards from solicitation contracted.	

Performance Profile: Manufacturing Corps Initiative

Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 1%	High-Level Performance Indicators (commitments vs. Plans to Date)	Budget 133%
Explanation of Progress	This program is making good progress on its performance metrics. The slight lag in private investment is due to semi-annual the timing of metrics collection for this initiative.		
Key Dates	Approval: February 14, 2017	Launch: June 29, 2017	Re-filed: September 24, 2018

Table 113. Manufacturing Corps Initiative Results

Innovation and Research Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2020)	% of Total Planned Benefits through Initiative Completion (2020)
Energy Efficiency	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MMBtu Annual	-	-	-	-	-	*	-	*	-
	MMBtu Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	Annual Tons	-	-	-	-	-	*	-	*	-
	Lifetime Tons	-	-	-	-	-	*	-	*	-
Customer Bill Savings (millions)	Annual Dollars	-	-	-	-	-	*	-	*	-
	Lifetime Dollars	-	-	-	-	-	*	-	*	-
Private Investment (millions)	Dollars	\$0.01	-	\$0.01	\$24.33	\$24.34	\$31.25	78%	\$60.00	41%
Participants	Participants	77	-	77	95	172	75	229%	450	38%

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

Performance Profile: Novel Business Models and Offerings Initiative

Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 1%	High-Level Performance Indicators (commitments vs. Plans to Date)	Budget 1%
Explanation of Progress	The initiative launched in Q3 2018 and first benefits are expected in Q1 2019.		
Key Dates	Approval: December 1, 2017	Launch: September 26, 2018	

Table 114. Novel Business Models and Offerings

Innovation and Research Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2021)	% of Total Planned Benefits through Initiative Completion (2021)
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	-	-	-	-	-	\$24.68	-	\$168.40	-
Participants	Participants	-	-	-	-	-	7	-	33	-

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

Table 115. Near-Term Milestones for Novel Business Models and Offerings

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2018	Release solicitation for Novel Business Models and Offerings (NBMO) proposals for both scaling and validation support.	PON 3932 launched September 25, 2018.
	2018	Contract with first-round NBMO awardees.	Contracting will occur after proposal reviews for the first-round due date of November 26, 2018.
	2018	Contract with second-round NBMO awardees.	Contracting will occur after proposal reviews for the second-round due date of May 23, 2019.
	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.	

Building Innovation: Tables 116-117

Performance Profile: NextGen HVAC Initiative			
Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 1%	High-Level Performance Indicators (commitments vs. Plans to Date)	Budget 70%
Explanation of Progress	This initiative is behind on private investment due to the withdrawal of two contracts. Progress is anticipated to increase as new contracts are expected to be awarded by Q4 2018.		
Key Dates	Approval: August 17, 2016	Launch: June 28, 2017	

Table 116. NextGen HVAC Initiative Results

Innovation and Research Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2019)	% of Total Planned Benefits 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	-	-	-	\$28.89	\$28.89	\$42.50	68%	\$75.00	39%
Participants	Participants	-	-	-	11	11	11	100%	25	44%

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

Table 117. Near-Term Milestones for NextGen HVAC

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2017	Contract projects from first technology challenge.	All contracts will be executed by Q4 2018.
	2018	Contract projects from second technology challenge.	Full proposals for second challenge received on August 14, 2018. Approval for awards received Oct 9, 2018. Projects from this round expected to be under contract by the end of Q4 2018.
	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.	

Clean Transportation: Tables 118-121

Performance Profile: Electric Vehicles Initiative - EV Innovation			
Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 1%	High-Level Performance Indicators (commitments vs. Plans to Date)	Budget 63%
Explanation of Progress	Electric Vehicle Innovation is performing well on acquiring participants in accordance with the initiative's plan to date, but it is behind on private investment. Private investment is anticipated to catch up to plan by Q1 2019 as more contracts are expected to be awarded within that timeframe.		
Key Dates	Approval: August 17, 2016	Launch: September 15, 2017	

Table 118. Electric Vehicles Initiative

EV Innovation Results

Innovation and Research Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2021)	% of Total Planned Benefits 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	-	-	-	-	-	*	-	*	-
	Lifetime Tons	-	-	-	-	-	*	-	*	-
Customer Bill Savings (millions)	Annual Dollars	-	-	-	-	-	*	-	*	-
	Lifetime Dollars	-	-	-	-	-	*	-	*	-
Private Investment (millions)	Dollars	-	-	-	\$8.58	\$8.58	\$12.83	67%	\$31.70	27%
Participants	Participants	-	-	-	18	18	14	129%	33	55%

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

Table 119. Near-Term Milestones for Electric Vehicles Initiative

EV Innovation

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2017	Contract with projects awarded in first competitive solicitation for the development and demonstration of EV-enabling technologies.	Contracts are being negotiated with initial award recipients from PON 3578, Round 1.
	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.	Proposals for the second round of PON 3578 were received in September 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.
	2018	Fast-charging station network expanded to 30 locations statewide along major interstate corridors.	In June 2018, NYPA announced a major \$40 million direct current fast charge (DCFC) investment to install 200 DCFC stations—NYSERDA will monitor their implementation.
	2019	Issue third competitive solicitation for the development and demonstration of EV-enabling technologies.	

Performance Profile: Public Transportation and Electrified Rail Initiative

Initiative Size Relative to NYSDA MD and I&R Portfolio	Budget 1%	High-Level Performance Indicators (commitments vs. Plans to Date)	Budget 19%
Explanation of Progress	Metrics progress is behind for this initiative as it was launched relatively recently and is still ramping up activity. These metrics are anticipated to catch up to planned values by Q1 2019 as more contracts are expected to be awarded within that timeframe.		
Key Dates	Approval: October 3, 2017	Launch: February 22, 2018	

Table 120. Public Transportation and Electrified Rail Initiative Results

Innovation and Research Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2022)	% of Total Planned Benefits through Initiative Completion (2022)
Energy Efficiency	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MMBtu Annual	-	-	-	-	-	*	-	*	-
	MMBtu Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
Renewable Energy	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MW	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	Annual Tons	-	-	-	-	-	*	-	*	-
	Lifetime Tons	-	-	-	-	-	*	-	*	-
Customer Bill Savings (millions)	Annual Dollars	-	-	-	-	-	*	-	*	-
	Lifetime Dollars	-	-	-	-	-	*	-	*	-
Private Investment (millions)	Dollars	-	-	-	\$2.24	\$2.24	\$6.00	37%	\$42.00	5%
Participants	Participants	-	-	-	3	3	7	44%	33	9%

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

Table 121. Near-Term 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.	The first solicitation was released in July 2018. NYSERDA received concept papers in August 2018 and invited select proposers to submit full proposals.
	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 solicitation. Full proposals are due in November 2018.
	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 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.	

Energy Related Environmental Research: Tables 122-123

Performance Profile: Energy Related Environmental Research			
Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 2%	High-Level Performance Indicators (commitments vs. Plans to Date)	Budget 47%
Explanation of Progress	The initiative is on track to achieve the expected planned benefits.		
Key Dates	Approval: February 14, 2017	Launch: February 15, 2017	

Table 122. Energy Related Environmental Research

Innovation and Research Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2021)	% of Total Planned Benefits through Initiative Completion (2021)
Energy Efficiency	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
	MMBtu Annual	-	-	-	-	-	*	-	*	-
	MMBtu Lifetime	-	-	-	-	-	*	-	*	-
Renewable Energy	MW	-	-	-	-	-	*	-	*	-
	MWh Annual	-	-	-	-	-	*	-	*	-
	MWh Lifetime	-	-	-	-	-	*	-	*	-
CO2e Emission Reduction (metric tons)	MW	-	-	-	-	-	*	-	*	-
	Annual Tons	-	-	-	-	-	*	-	*	-
Customer Bill Savings (millions)	Lifetime Tons	-	-	-	-	-	*	-	*	-
	Annual Dollars	-	-	-	-	-	*	-	*	-
Private Investment (millions)	Lifetime Dollars	-	-	-	-	-	*	-	*	-
	Dollars	-	\$0.00	\$0.00	\$4.25	\$4.26	\$4.23	101%	\$7.50	57%
Participants	Participants	21	11	32	45	77	56	138%	100	77%

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

Table 123. Near-Term Milestones for Energy Related Environmental Research

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2017	Projects contracted from solicitations.	Contracting from both solicitations issued in Q3 2017 was completed in August 2108.
	2018	Solicitations issued for research projects consistent with the research plan.	A Q3 solicitation was released July 31, 2018. A second Q4 2018 solicitation is in development.
	2018	Projects contracted from solicitations.	Contracting to follow release of the two planned 2018 solicitations.
	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.	

Renewables Optimization: Tables 124-127

Performance Profile: Energy Storage Technology and Product Development Initiative			
Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 2%	High-Level Performance Indicators (commitments vs. Plans to Date)	Budget 78%
Explanation of Progress	This initiative is behind on its participants due to a delay in awarding contracts from competitive solicitations. Progress on this metric is anticipated to catch up to plan as more contracts are expected to be awarded in Q1 2019.		
Key Dates	Approval: March 27, 2017	Launch: June 21, 2017	

Table 124. Energy Storage Technology and Product Development Initiative Results

Innovation and Research Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2025)	% of Total Planned Benefits 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	\$0.09	-	\$0.09	\$22.97	\$23.06	\$25.90	89%	\$165.00	14%
Participants	Participants	-	-	-	11	11	22	51%	118	9%

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

Table 125. Near-Term Milestones for Energy Storage Technology and Product Development

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2018	Contract projects from second competitive solicitation.	Eight proposals have been recommended awarded and contracting for each are currently progressing.
	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 early 2019.
	2018	Issue third competitive solicitation.	Twelve round 3 concept papers were received on February 8, 2018. Concept papers have been reviewed and six were invited to submit proposals. Three proposals were received and two projects were awarded.
	2019	Contract projects from third competitive solicitation.	Contracting for two projects are progressing
	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 on April 12, 2018, and 12 were invited for proposal. Final proposals are scheduled for review November 9, 2018

Performance Profile: National Offshore Wind Research and Development Consortium Initiative

Initiative Size Relative to NYSERDA MD and I&R Portfolio	Budget 1%	High-Level Performance Indicators (commitments vs. Plans to Date)	Budget 0%
Explanation of Progress	New initiative. Anticipated to launch Q4 2018.		
Key Dates	Approval: September 11, 2018	Launch: Anticipated Q4 2018	

Table 126. National Offshore Wind Research and Development Consortium Initiative Results

Innovation and Research Initiative	Units	Completed Projects through June 30, 2018 with Adjustments	Completed Projects through 7/1/2018-9/30/2018	Total Completed Projects through September 30, 2018	Current Pipeline Through September 30, 2018 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Planned Benefits Through Q3 2018	% of Cumulative Current Planned Benefits Through Q3 2018	Total Planned Benefits through Initiative Completion (2025)	% of Total Planned Benefits through Initiative Completion (2025)
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	-	-	-	-	-	\$8.48	-	\$112.60	-
Participants	Participants	-	-	-	-	-	1	-	31	-

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

Table 127. Near-Term Milestones

National Offshore Wind Research and Development Consortium

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2018	National Offshore Wind Research and Development Consortium incorporated.	The National Offshore Wind Research and Development Consortium was incorporated in New York State as a 501(c)(3) not-for-profit corporation on March 15, 2018.
	2018	Approval of Consortium bylaws, governance procedures, membership procedures, and operating procedures by Consortium Board of Directors (Board) and DOE.	Amendments to the Consortium bylaws have been drafted and submitted to the Consortium Board of Directors (Board) for approval. The Board meets to consider the Bylaws in October 2018. Draft governance, membership, and operating procedures are in progress and are scheduled to be reviewed by the Board in December 2018.
✓	2018	Consortium kickoff meeting held	An informal gathering of Consortium board members and program staff was held on August 27, 2018 in New York City to kick off the Consortium. Ad hoc working groups were formed at this kickoff meeting to begin work on various procedures documents necessary to achieve future milestones.
	2018	Contract establishing Consortium fully executed with DOE.	A Conditional Collaborative Award was executed with DOE on September 12, 2018. Some pre-award spending has been authorized by the Department of Energy (DOE) pending removal of the conditions. NYSERDA expects that conditions will be removed, and project spending can fully commence in October 2018.
	2018	Release of initial R&D priorities.	A draft Research and Development Roadmap prioritizing technical R&D efforts has been completed and submitted to members of the Consortium Board of Directors. Consideration of this initial Roadmap is expected at the Board meeting on October 18, 2018.
	2018	Consortium staff and membership structure approved by Consortium Board of Directors.	Draft staff and membership structures have been prepared and are under review. Consideration by the Consortium Board of Directors is scheduled for December 2018.

Table 127 Continued

Complete	Time Frame	Milestone	Explanation of Progress
	2018	Intellectual property management plan approved by Board of Directors and DOE.	NYSERDA has commenced discussions and obtained relevant example models for an intellectual property management plan. Board and DOE review/approval of the intellectual property management plan is scheduled for January 2019.
	2019	Consortium communication and outreach strategy approved by Consortium CEO.	
	2019	Consortium website launched.	
	2019	Project financial, intellectual property, and contractual templates, terms and conditions, guidelines and policies approved by the Consortium Board of Directors.	
	2019	Collaboration agreement and standard project terms and conditions with each national research and test facility partner approved by Consortium legal staff and CEO.	
	2019	U.S. manufacturing and data management plans approved by Board of Directors and DOE.	
	2019	Investor and public sponsor outreach strategies approved by Board of Directors.	
	2019	Competitive solicitation procedures and processes, templates, scoring guidelines and mechanisms approved by the Consortium Board of Directors.	
	2019	Issue competitive solicitations for initial R&D priorities.	
	2019	Contract projects selected through initial solicitations.	
	2019	Update R&D priorities.	
	2019	Revise competitive solicitations to align with updated R&D priorities.	

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
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

Table A-1 continued

	Case Number/Reference	Effective Date
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
Technical Services Public Transportation and Electrified Rail	Matter 16-00681 - DPS Approval of NYSERDA's CEF Investment Plan Chapters	October 3, 2017

Table A-1 continued

	Case Number/Reference	Effective Date
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
Clean Technology and Energy Efficiency Talent Pipeline	Matter 16-00681 - DPS Approval of NYSERDA's CEF Investment Plan Chapters	June 22, 2018
Pay for Performance	Matter 16-00681 - DPS Approval of NYSERDA's CEF Investment Plan Chapters	September 7, 2018
Solar Plus Energy Storage National Offshore Wind Research & Development Consortium	Matter 16-00681 - DPS Approval of NYSERDA's CEF Investment Plan Chapters	September 11, 2018

Endnotes

- ¹ Case 14-M-0094 – *Proceeding on Motion of the Commission to Consider a Clean Energy Fund*, Ordering Authorizing the Clean Energy Fund Framework. Issued and effective January 21, 2016.
- ² NYSERDA and DPS. 2018. "New Efficiency: New York". NYSERDA. <https://www.nyserdera.ny.gov/About/Publications/New-Efficiency>.
- ³ 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 ([nyserdera.ny.gov/About/Publications/EA-Reports-and-Studies/Energy-Statistics](https://www.nyserdera.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).
- ⁴ The 88 million MWh renewable energy goal is not shown in Figure 2 as it is mainly supported by NY-Sun.
- ⁵ NYSERDA's electricity emission reduction factor of 1,160 pounds CO₂e/MWh is derived using the marginal emission-rate analysis for CO₂ from "Appendix: The Benefits and Costs of Net Energy Metering in New York" Figure 28 and applying a line loss factor of 7.2%. <http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?MatterSeq=49636&MNO=15-E-0703>
- ⁶ Customer Bill Savings are calculated as direct energy bill savings realized by customers participating in NYSERDA's programs.
- ⁷ NYSERDA pre-encumbered an additional \$36.8 million to solicitations with upcoming due dates that are not shown in Table 3. When including these funds, NYSERDA committed 30% 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.
- ⁸ Completed projects through June 30, 2018 contains adjustments from programs due to lagged data and QA/QC.
- ⁹ NYSERDA committed an additional \$4,159,592 to solicitations with upcoming due dates not shown in Table 6. When including these funds, NYSERDA committed 60% 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.
- ¹⁰ 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.
- ¹¹ Cumulative Current Target through Q3 2018 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.
- ¹² 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.
- ¹³ Private investment is only reported for pipeline projects at the encumbered stage or later.
- ¹⁴ NYSERDA makes no claim to the environmental attributes or any NYGATS certificates that may be associated with these projects.
- ¹⁵ NYSERDA makes no claim to the environmental attributes or any NYGATS certificates that may be associated with these projects.
- ¹⁶ Cumulative Current Target (2016) and Total Target through Initiative Completion (2019) contain metrics from the Market Transformation of Marketplace table in the Resource Acquisition Chapter, which could be considered indirect benefit targets. Indirect benefits are not reflected because it will take time for the benefits to be realized.
- ¹⁷ 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.
- ¹⁸ CHP targets and reporting methods associated with fuel used to run the CHP systems are being examined and may be adjusted in future reports.

- 19 Energy Efficiency values represent MWh savings from the use of CHP systems; natural gas required to run CHP systems is 1,539,681 MMBtu cumulative annual and 30,793,622 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.
- 20 NYSERDA committed an additional \$9,350,955 to solicitations with upcoming due dates not included in Table 23. When including these funds, NYSERDA committed 23% 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.
- 21 The Market Characterization and Design Chapter line item includes funds to support overarching, non-initiative-specific evaluation studies.
- 22 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.
- 23 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.
- 24 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.
- 25 NYSERDA makes no claim to the environmental attributes or any NYGATS certificates that may be associated with these projects.
- 26 Energy Efficiency values represent MMBtu savings from the use of electric vehicles; the electricity required to charge the vehicle is 21,057 MWh cumulative annual and 210,574 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.
- 27 NYSERDA makes no claim to the environmental attributes or any NYGATS certificates that may be associated with these projects.
- 28 Cumulative Current Target through Q3 2018 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.
- 29 Cumulative Current Target through Q3 2018 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.
- 30 Energy Efficiency values represent MMBtu savings from the use of renewable heating and cooling technologies; electricity required to utilize the RH&C technology is 14,290 MWh annual and 344,658 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.
- 31 Energy Efficiency values represent MMBTU savings from ASHPs; the electricity required to utilize the RH&C technology is 16,684 MWh annual and 250,263 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.
- 32 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.
- 33 Program activities commenced prior to launch of the initiative.
- 34 Energy Efficiency values represent MWh savings from the use of Fuel Cell systems; natural gas required to run Fuel Cell systems is 34,035 MMBtu cumulative annual and 680,698 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 Fuel Cell systems that subtract from the benefits.
- 35 NYSERDA committed an additional \$23,314,320 to solicitations with upcoming due dates not included in the table. When including these funds, NYSERDA committed 27% 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.
- 36 The Market Characterization and Design Chapter line item includes funds to support overarching, non-initiative-specific evaluation studies.

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

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

17 Columbia Circle
Albany, NY 12203-6399

toll free: 866-NYSERDA
local: 518-862-1090
fax: 518-862-1091

info@nyserdera.ny.gov
nyserdera.ny.gov



New York State Energy Research and Development Authority

Richard L. Kauffman, Chair | Alicia Barton, President and CEO