

# Clean Energy Fund Quarterly Performance Report through June 30, 2020

Final Report | August 2020

## **NYSERDA's Promise to New Yorkers:**

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

### **Mission Statement:**

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

### **Vision Statement:**

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



# **Clean Energy Fund Quarterly Performance Report through June 30, 2020**

*Final Report*

Prepared by:

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

Albany, NY

August 2020

# About This Report

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The Clean Energy Fund (CEF) Order was issued on January 21, 2016.<sup>1</sup> The CEF is comprised of four distinct portfolios (CEF Portfolio):

- 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 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

Starting with the fourth quarter 2018 reporting, New York State Energy Research and Development Authority (NYSERDA) files a scorecard with the Public Service Commission containing metrics for each investment plan. This data fulfills part of the ordered reporting requirements and is featured in the public NY Clean Energy Dashboard, along with metrics data for utility programs. Over time, NYSERDA anticipates that this report will evolve to focus on higher level summary and qualitative progress information not contained in the scorecard or the NY Clean Energy Dashboard.

Reporting 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 the CEF Portfolio combined. All other performance data in this report reflects MD and I&R portfolios only.

The report represents quarterly and cumulative activity through June 30, 2020 and achievements of all initiatives approved prior to and during the reporting period. This includes transition programs in the Resource Acquisition Transition chapter as well as new initiatives in the MD and I&R chapters.<sup>2</sup>

The report reflects planned and achieved direct benefits from participation in NYSERDA's programs through June 30, 2020. Many CEF initiatives also anticipate accruing indirect, long-term market effects from follow-on market activity. These indirect impacts are based on a theory of change developed for each initiative, and NYSERDA will use best-practice market evaluation approaches to quantify the indirect impacts 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

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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 drive economic development.

The CEF supports Governor Andrew M. Cuomo's Reforming the Energy Vision (REV) strategy to make New York's energy system more affordable and resilient as well as advance the State's clean energy and climate goals. Energy efficiency is a cornerstone of New York State's strategies to promote clean energy solutions for consumers while addressing climate change. Most recently, the New Efficiency New York recommendations, as advanced in the white paper issued by the Department of Public Service (DPS) and New York State Energy Research and Development Authority (NYSERDA) on April 26, 2018 and as adopted by the Commission in its December 13, 2019 Order, establishes a new 2025 energy efficiency target of 185 trillion British thermal units (Tbtu) of cumulative annual site energy savings.<sup>3</sup> This will accelerate progress toward the State's ambitious clean energy goals, including meeting one-third of the emissions necessary to achieve 40% reduction of greenhouse gas (GHG) emissions by 2030 (40 by 30) from 1990 levels.<sup>4</sup>

The Climate Leadership and Community Protection Act (CLCPA) adopted this energy efficiency target as one of the primary clean energy goals for the State to help reduce greenhouse gas (GHG) emissions from all anthropogenic sources 85% below 1990 levels by the year 2050, as well as the 40 by 30 interim goal. The CLCPA also adopted the following clean energy goals:

- Six thousand megawatts (MW) of solar by 2025
- Seventy percent renewable electricity by 2030
- Nine thousand MW of offshore wind by 2035
- Zero-emission electricity by 2040

With these goals, New York State is undertaking one of the most aggressive clean energy agendas in the nation. Through the CEF and its other portfolios, NYSERDA works to foster the transformation of markets, pushing them to accurately value clean energy, energy efficiency, and resilience while encouraging competition and innovation that delivers value to consumers.

The CEF portfolios will continue to emphasize investments in energy efficiency over the CEF’s 10-year life span, delivering a minimum of 10.6 million megawatt-hours (MWh) in electric savings and 13.4 million British thermal units (MMBtu) in non-electric fuel savings. NYSERDA’s approved investment plans comprise more than \$1.5 billion of investment in energy efficiency across the commercial, residential, multifamily, and industrial sectors. These approved investments in energy efficiency are expected to deliver 78 million metric tons of carbon dioxide equivalent (CO<sub>2</sub>e) savings over the life of the installed measures, with greater impact anticipated as the remainder of the CEF portfolio is programmed and deployed.

Through the Market Development portfolio, NYSERDA is taking action to develop a more robust and value-creating market for energy efficiency, with particular attention to (1) reducing energy efficiency retrofit and new construction costs, (2) accelerating innovative solutions that drive deeper energy retrofits, and (3) advancing targeted financial support to help overcome cost barriers to efficiency investments and 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.

The CEF offers solutions that will accomplish the following:

- Drive significant carbon emission 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 investment, leveraging billions of dollars over the life of the CEF

## Energy Efficiency

A snapshot of the progressively-built CEF portfolio’s planned contributions towards EE by market sector as of June 2020.

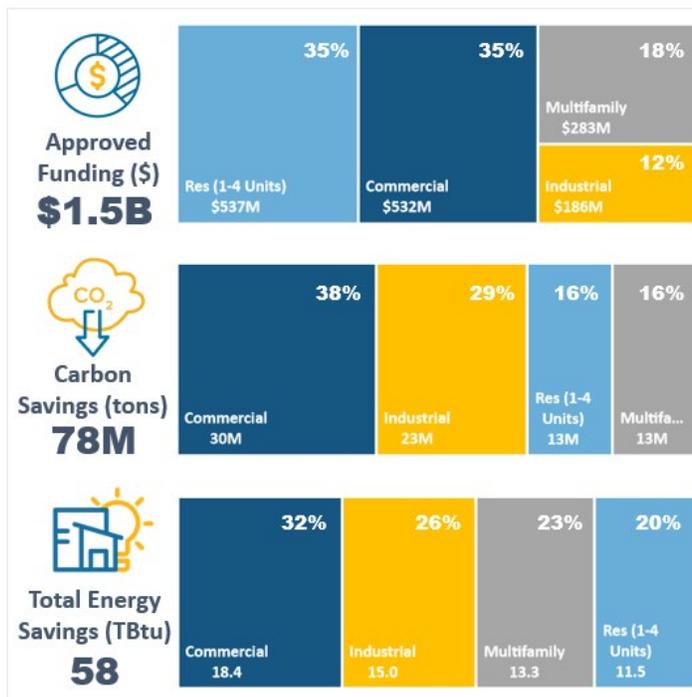


Figure 1 presents a more comprehensive picture of progress, with the 10-year budget and 10-year minimum goals reflecting all four CEF portfolios (MD, I&R, NY-Sun, and NY Green Bank). Progress shown against each key performance indicator (KPI) represents results through June 30, 2020 and accounts for overlap across portfolios where it is known to occur.

**Figure 1. CEF Portfolio Expected Investment and Benefits**

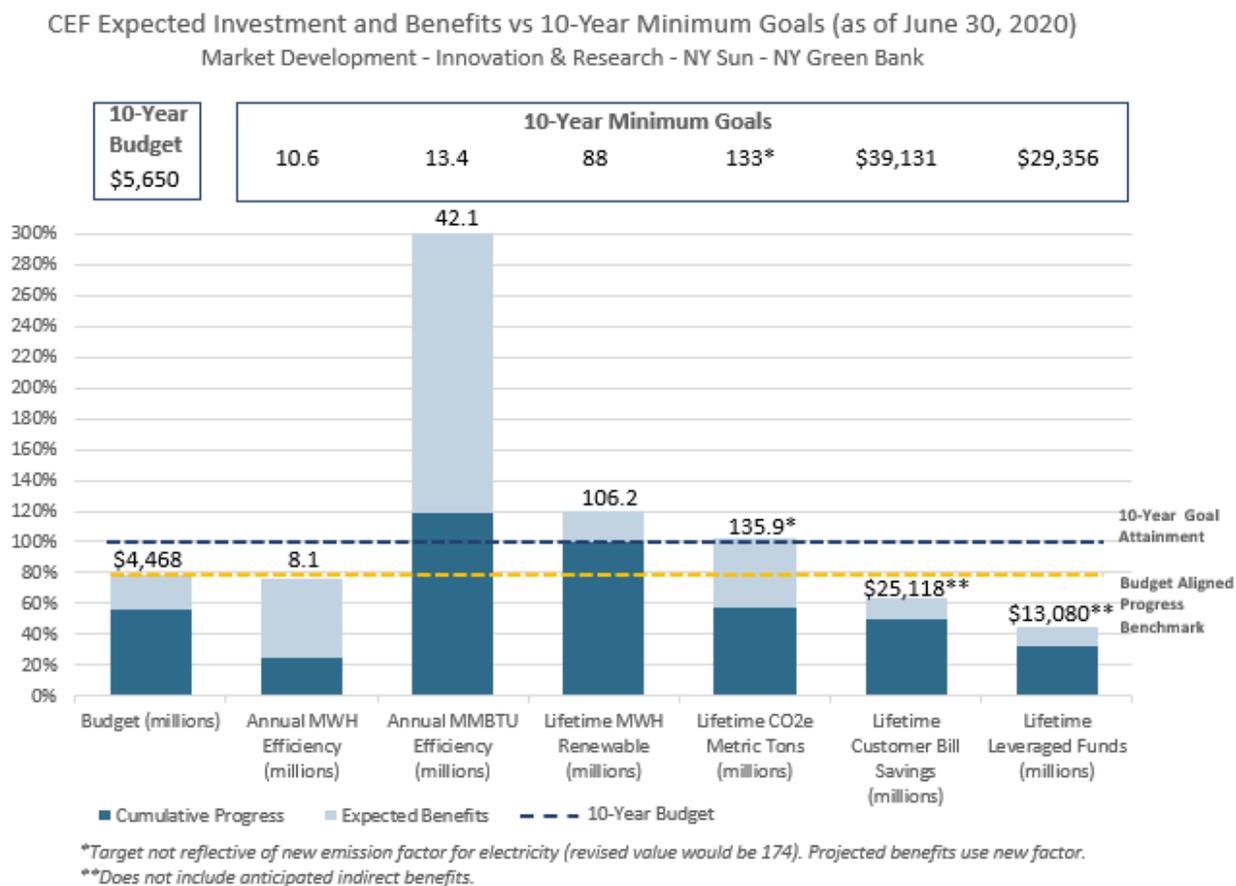


Figure 1 illustrates<sup>5</sup> that deployment of funds is generally well-aligned with energy and carbon KPI progress at this time. Here, the value Cumulative Progress (committed budgets and benefits) is combined with the value Expected Benefits (approved but not yet committed budgets and benefits) to demonstrate total progress toward NYSERDA’s targets.

Progress remains on track with the energy efficiency MWh and MMBtu targeted goals, with MMBtu expected benefits already significantly greater than the minimum projected benefits. Note that these energy efficiency goals were set based on “no backslide” from the prior Energy Efficiency Portfolio Standard programs. Carbon dioxide equivalent (CO<sub>2</sub>e) emission reduction progress is on track to meet the overall goal for the CEF.

While performance appears low at this time for metrics relating to the customer (participant) bill savings<sup>6</sup> and lifetime leveraged funds, these metrics are 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 benefits to raise overall performance up to a level that tracks well against the overall goals.

## **Composition and Management of Market Development and Innovation and Research Portfolios**

Following the 2016 release of the CEF Order, NYSERDA introduced 41 new model market transformation initiatives alongside 14 resource acquisition transition initiatives—a purposeful portfolio mix intended to introduce a greater proportion of market-enabling activities without disrupting existing market momentum accustomed to more traditional NYSERDA and utility approaches. Through June 2020, a total of 68 MD and I&R initiatives have been developed by NYSERDA and filed with the Public Service Commission, of which 51 initiatives were considered active, engaging the marketplace during this period. As of January 1, 2020, each of the original resource acquisition transition initiatives are no longer considered active in the marketplace.

Collectively, NYSERDA’s management of this portfolio is similar to that of a financial advisor managing a retirement portfolio: building out portfolio diversity in a way that can deliver investment goals, while monitoring the performance of every element to keep the portfolio on track for the long term. NYSERDA commonly refers to this approach with the CEF in the spirit of market transformation as the “test-measure-adjust model,” which proactively shifts investments as needed to maintain a balanced portfolio, while targeting areas of greatest strategic opportunity.

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 forecasts for accuracy. In that spirit and aligned with the preparation of the annual Investment Plan Performance Report (IPPR), NYSERDA completes a comprehensive annual review of all CEF portfolio program’s performance against plans. This process includes incorporating the actual progress of the previous year into the operating plan for each program, while refining the forward-looking view based on an understanding of history and the current/anticipated market landscape. In doing so, NYSERDA sets a clear expectation for what programs are likely to achieve as they evolve as well as where the MD and I&R portfolios are likely to finish. Both views are vital to properly growing and guiding the CEF portfolio to achieve CEF Order targets. The annual update of all CEF program

forecasts completed in 2020 was done prior to the coronavirus pandemic and the NY on PAUSE Executive Order, and as such, these plans would now be considered aggressive from a near-term planning and performance measurement standpoint.

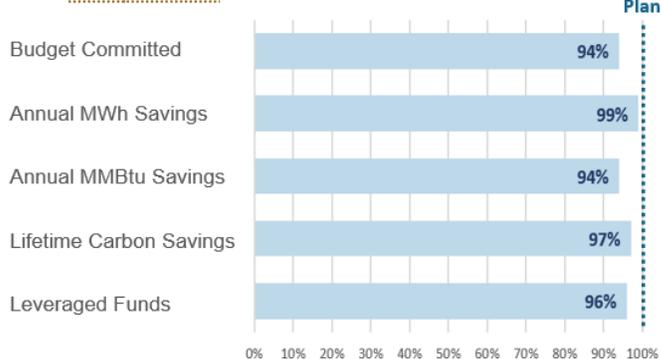
## Performance to Plan

NYSERDA closely monitors MD and I&R portfolio performance, specifically measuring each initiative against its investment plan forecast of budget and benefits over time. As 2020 continues to unfold and the full impact of COVID-19 on New York State’s economy becomes clear, NYSERDA recognizes the likelihood that plans established for the year will exceed the market’s ability to respond, and that measurement of the key performance indicators (KPI) have begun to reflect this situation in Q2 2020. NYSERDA will continuously seek market input to refine expectations for near-term progress, incorporating what has been learned into adjusted forecasts to better serve stakeholders assessing the progress and to strengthen NYSERDA’s ability to manage each individual program effectively.

The following figure is a high-level view of NYSERDA’s MD and I&R portfolio performance to plan. NYSERDA’s planned benefits through Q2 2020 are defined as 100% of 2016–2019 and 50% of 2020 annual planned benefits. Indirect planned impacts will be included as they are measured.

### MD and I&R Portfolio Performance-To-Plan

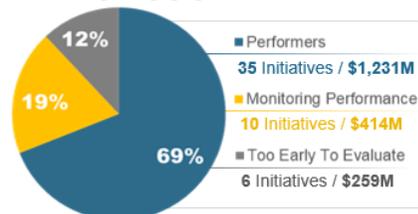
How does performance to date compare with the projected/forecasted results at this point in time?



### Portfolio Initiative Performance

Categorizing the status of all (51) active initiatives (those engaging the market) across the CEF portfolio in relationship to our expected performance & accomplishments to date; the sum of approved budgets by category provide scale to performance.

As the portfolio is progressively built each year, this chart will reflect those changes, particularly as new initiatives begin engaging the market.



**Performers**  
generally doing well in terms of market uptake and benefits delivery.

**Monitoring Performance**  
may still deliver as planned, but need some degree of confirmation of their market uptake and/or benefits quantification, and potentially some adjustment or corrective action.

**Too Early To Evaluate**  
expected to deliver as planned, but still too close to launch to effectively assess performance or impact

Broadly speaking, the portfolio remains in good standing when assessing progress through the first half of the year despite the economic conditions resulting from the pandemic. The majority of active initiatives are still considered performers with two top carbon impact initiatives now characterized as monitoring, described in detail below.

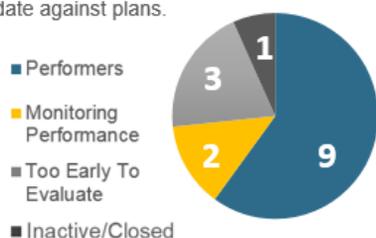
Achieving greater impact per ratepayer dollar involves experimentation with intervention approaches and tolerance for failure, provided it is addressed swiftly and the portfolio is on track to meet long-term outcomes. Accordingly, NYSERDA is using a test-measure-adjust approach to be as responsive to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

## Spotlight on the Top Carbon Impact Initiatives

In NYSERDA’s MD and I&R portfolio, 15 key initiatives currently account for approximately 85% of the expected lifetime CO<sub>2</sub>e benefits and 40% of the total approved budget. These top contributors also include a very strong focus on energy efficiency, not unlike the majority of CEF programs.

### Top 15 Performance

Categorizing the status and quantity of the largest carbon savings initiatives within the portfolio in relationship to performance to date against plans.



### Top 15 Carbon Impact



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 CO<sub>2</sub>e contribution within the three status categories previously introduced: Performers (Table 1), Monitoring Performance (Table 2), and Too Early to Evaluate (Table 3). There is one final group (Table 4) that captures programs no longer active in the market.

The composition of performance status across the top 15 programs has shifted in Q2 2020 as a result of anticipated delays engaging the market for two of the top programs. Nine mature programs categorized as performers are still showing strong results at this point in the year.

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

Initiative	Scale	Performance		Initiative Performance Narrative
	% of Portfolio Planned CO2e Impact	% of Planned Participants (Market Uptake)	% of Planned Lifetime CO2e Savings	
Energy Management Technology	13%	111%	99%	Market interest and uptake in Real Time Energy Management continues to be strong. Adoption rates are highest in commercial office, healthcare, retail and multifamily market-rate housing. Program continues to meet its targets in terms of energy savings, greenhouse gas emission reduction, and private sector investment. Program has begun to report acquired savings based on performance data from projects that have been operational for over a year.
Clean Energy Communities	10%	92%	63%	The release of new program elements has been delayed by COVID-19 which can be observed in slowing of commitments compared to original plan. In total for CEF participants, 515 communities completed 1,365 high-impact actions. NYSERDA is in the process of developing the Clean Energy Communities Leadership Round which will build on the program's success to date and drive the next level of impact.
Building Operations and Maintenance Partnerships	7%	100%	88%	The solicitation was revised and streamlined in Q1. Since then, seven proposals have been received to date and three projects are being funded. This brings the total number of new projects to five through Q2. Though application constraints were addressed, COVID-19 has stifled progress since most of the training activities are on site and in person. Current projects are shifting to more online training where possible, and it is anticipated that on-site training activities and new proposals may pick up Q1 2021.
Technical Services	6%	139%	123%	This multisector initiative, historically a combination of commercial, industrial, and agriculture efforts, has now expanded to include multifamily projects in 2020. The program continues to perform well and is now providing technical assistance on electrification projects in support of the NY Clean Heat Market Development Plan.
Energy Management Practices	5%	97%	84%	NYSERDA continues industrial stakeholder engagement to build pipeline participation with more case studies being developed to showcase success for the marketplace. Development of expanding the strategic energy management offering, a self-service model, will enhance carbon savings and is scheduled to be released early Q3 2020.
Electric Vehicles Rebate	2%	105%	98%	Rebates in Q2 2020 were double the number of rebates over the same time period in 2019, despite the NY PAUSE affecting a portion of the period. Overall, numbers still trail earlier projections because of lower EV sales than anticipated (both in NY and nationwide) in 2019 and 2020.
REV Campus Challenge	2%	97%	121%	The initiative continues to see good market participation. Clean energy benefits from all member activities continues to be strong. The third round of the Energy to Lead competition closed in Q1; contracts are being negotiated. Additional outreach and COVID-19 related assistance is forthcoming.

**Table 1 continued**

Initiative	Scale	Performance		Initiative Performance Narrative
	% of Portfolio Planned CO2e Impact	% of Planned Participants (Market Uptake)	% of Planned Lifetime CO2e Savings	
Heat Pumps Phase 1 (2017)	2%	89%	105%	NYSERDA’s ASHP and GSHP Incentive programs closed to new applications on March 31, 2020. There is strong interest in participation of the Clean Heating and Cooling Community Campaigns, with increased effort to capture all installations in each community. A recent solicitation for a new round of communities will continue to grow the HeatSmart activity in NYS, including awards focused on LMI activities in several communities. High savings committed through the Geothermal Clean Energy Challenge are expected; large campus projects have longer installation timelines and have yet to be installed and realized. High-level screenings of these projects have been completed and will be used to update the original savings estimates in Q3 timeframe.
P-12 Schools	2%	150%	100%	The P-12 Schools Initiative offers operational and benchmarking assessments over multiple years. The Program exceeded its previous goals. The Clean Green Energy Solutions Program launched in late 2019 and technical assistance applications have been received. Additional outreach is planned for 2020 as well as new initiatives in 2021 due to COVID-19.
	48%			

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

Initiative	Scale	Performance		Initiative Performance Narrative
	% of Portfolio Planned CO2e Impact	% of Planned Participants (Market Uptake)	% of Planned Lifetime CO2e Savings	
Market Challenges	6%	77%	67%	The Commercial and Industrial Carbon Challenge (CICC) scheduled to be released through the consolidated funding application aiming to attract beneficial electrification and carbon neutral energy projects is on pause due to COVID-19. A targeted Westchester Commercial and Industrial Carbon Challenge to address natural gas constrained areas is on pause as well. With the delay of CICC, its projected commitment of significant funds will not occur until Q2 2021 and, therefore, performance to plan will show an increasing gap throughout 2020. The newly approved Empire Building Challenge component of this initiative is slated for launch Q3 2020.
New Construction - Market Rate	5%	53%	71%	Program uptake is substantially higher in housing for both market rate and LMI through the end of Q2 2020 as compared to the same time period for 2019. While there has been a small increase in the volume of projects, most of the impact is due to projects being larger and achieving higher performance levels in alignment with changes in programs and outreach outcomes. A decrease in commercial activity levels is expected due to COVID-19 impacts in the second half of 2020 and due to the delay of the CFA for 2020.
	11%			

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

Initiative	Scale	Performance		Initiative Performance Narrative
	% of Portfolio Planned CO2e Impact	% of Planned Participants (Market Uptake)	% of Planned Lifetime CO2e Savings	
Product and Appliance Standards	11%	n/a	6%	Research and engagement in this area continues, although actual progress on carbon reduction is dependent on statutory changes and promulgation of standards.
Heat Pumps Phase 2 (2020)	1%	n/a	119%	This Clean Heating & Cooling Investment Plan was approved on May 29, 2020. Work to begin the initiatives within this plan is now underway.
Residential	1%	28%	53%	The two key initiatives driving 2020 projections, Comfort Home and Residential Energy Audits, were just starting to get traction near the end of Q1 2020 when field operations were paused due to COVID-19. NYSERDA has been working with contractors to build a pipeline using remote strategies through the pause and will continue to work with the market to advance more remote and lower touch strategies to complete energy audits and retrofit installations safely. Our Life Moments marketing campaign was also paused and will resume in the fall, bolstered by the NYSERDA/ConEd joint marketing campaign targeting Westchester.
	14%			

**Table 4. Status of CEF Top 15 Initiatives for Carbon Impact | Inactive/Closed**

Initiative	Scale	Performance		Initiative Performance Narrative
	% of Portfolio Planned CO2e Impact	% of Planned Participants (Market Uptake)	% of Planned Lifetime CO2e Savings	
Industrial Transition	13%	96%	97%	The initiative concluded accepting new applications in December 2019. Existing energy efficiency and process improvement projects are providing carbon savings and are progressing towards installation over the next four years. Utilities now offer financial support for similar new energy projects through each of their commercial and industrial custom efficiency programs.

## Market Development and Innovation and Research Portfolio Performance Data Tables—Budget and Benefits

Table 5 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 and Research focus areas can be found in Tables 6, 7, and 8 of the report. A detailed summary of benefits progress through the current reporting period concludes this overview—both annual (Table 9) and lifetime (Table 10).

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

See endnote section for more information.<sup>7</sup>

Initiative	Total Budget <sup>a</sup>	Budget Approved as of June 30, 2020 <sup>b</sup>	% of Ordered Budget Funds Approved <sup>c</sup>	Expended Funds <sup>d</sup>	Committed Funds <sup>e</sup>	Total Progress <sup>f</sup>	% of Approved Budget Committed <sup>g</sup>	Budget Approved Remaining Balance <sup>h</sup>
<b>Market Development</b>								
Program Funds	\$2,393,728,000	\$1,866,120,655	78%	\$464,643,094	\$460,625,216	\$925,268,309	50%	\$940,852,346
NYS Cost Recovery Fee								
<b>Innovation &amp; Research</b>								
Program Funds	\$631,672,000	\$390,241,777	62%	\$69,072,336	\$128,763,294	\$197,835,630	51%	\$192,406,146
NYS Cost Recovery Fee								
<b>Administration</b>	\$274,400,000	\$199,569,360	73%	\$102,928,240	\$250,004	\$103,178,244	52%	\$96,391,116
<b>Evaluation</b>	\$130,200,000	\$76,852,829	59%	\$6,011,665	\$7,703,984	\$13,715,649	18%	\$63,137,180
<b>Total</b>	<b>\$3,430,000,000</b>	<b>\$2,532,784,621</b>	<b>74%</b>	<b>\$642,655,335</b>	<b>\$597,342,499</b>	<b>\$1,239,997,833</b>	<b>49%</b>	<b>\$1,292,786,788</b>

<sup>a</sup> During the quarter ending March 31, 2019, the CEF Budgets were restored to the original ordered funding authorization, reversing a prior reduction of \$68.3 million in funding as a result of the RGGI Operating Plan approved by NYSERDA's board in January 2019.

<sup>b</sup> Funds approved by DPS as of June 30, 2020.

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

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

<sup>e</sup> Remaining funding obligated under a contract, purchase order, or incentive award and planned funding for contracts awarded and under negotiation.

<sup>f</sup> Sum of categories Expended and Committed Funds.

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

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

## 2 Resource Acquisition Transition Initiative Specific Progress

**Table 6. Resource Acquisition Transition Initiative-Level Budgets and Spending**

See endnote section for more information.

Initiative	Budget Approved as of June 30, 2020 <sup>a</sup>	Expended Funds <sup>b</sup>	Committed Funds <sup>c</sup>	Total Progress <sup>d</sup>	% of Approved Budget Committed <sup>e</sup>	Budget Approved Remaining Balance <sup>f</sup>
<b>Resource Acquisition Transition Chapter</b>						
Agriculture Transition	\$3,600,000	\$3,589,015	\$5,000	\$3,594,015	100%	\$5,985
Anaerobic Digesters Transition	\$13,916,258	\$1,588,988	\$11,634,207	\$13,223,195	95%	\$693,062
Combined Heat & Power Transition	\$59,486,517	\$21,580,227	\$37,243,426	\$58,823,654	99%	\$662,864
Commercial New Construction Transition	\$24,600,762	\$5,199,011	\$15,408,981	\$20,607,991	84%	\$3,992,771
Commercial Transition	\$12,576,271	\$8,068,586	\$4,416,213	\$12,484,798	99%	\$91,472
Industrial Transition	\$66,004,580	\$30,467,770	\$33,089,669	\$63,557,439	96%	\$2,447,141
Low Rise New Construction Transition - Market Rate	\$4,538,388	\$3,234,663	\$1,133,756	\$4,368,418	96%	\$169,970
Multifamily Market Rate Transition	\$156,214	\$156,214	-	\$156,214	100%	-
Multifamily New Construction Transition - Market Rate	\$2,487,777	\$880,132	\$1,421,383	\$2,301,515	93%	\$186,262
Single Family Market Rate Transition	\$24,079,440	\$23,224,924	\$630,773	\$23,855,696	99%	\$223,744
Small Wind Transition	\$3,587,089	\$2,723,644	\$843,747	\$3,567,391	99%	\$19,697
Solar Thermal Transition	\$293,770	\$287,513	\$4,944	\$292,457	100%	\$1,313
<b>TOTAL</b>	<b>\$215,327,066</b>	<b>\$101,000,687</b>	<b>\$105,832,098</b>	<b>\$206,832,785</b>	<b>96%</b>	<b>\$8,494,281</b>

<sup>a</sup> Funds approved by DPS as of June 30, 2020. Reflects “inactive”

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

<sup>c</sup> Remaining funding obligated under a contract, purchase order, or incentive award and planned funding for contracts awarded and under negotiation.

<sup>d</sup> Sum of categories Expended and Committed Funds.

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

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

### 3 Market Development Initiative Specific Results

**Table 7. Market Development Initiative Budgets and Spending**

See endnote section for more information.<sup>8,9,10</sup>

Initiative	Budget Approved as of June 30, 2020 <sup>a</sup>	Expended Funds <sup>b</sup>	Committed Funds <sup>c</sup>	Total Progress <sup>d</sup>	% of Approved Budget Committed <sup>e</sup>	Budget Approved Remaining Balance <sup>f</sup>
<b>Agriculture Chapter</b>						
2030 GLASE	\$5,000,000	\$1,268,402	\$3,731,598	\$5,000,000	100%	-
Advancing Agricultural Energy Technologies	\$3,760,000	\$99,235	\$2,470,298	\$2,569,532	68%	\$1,190,468
<b>Agriculture Chapter Total</b>	<b>\$8,760,000</b>	<b>\$1,367,637</b>	<b>\$6,201,895</b>	<b>\$7,569,532</b>	<b>86%</b>	<b>\$1,190,468</b>
<b>Clean Transportation Chapter</b>						
Electric Vehicles - Rebate	\$39,500,000	\$26,914,275	\$980,789	\$27,895,064	71%	\$11,604,936
<b>Clean Transportation Chapter Total</b>	<b>\$39,500,000</b>	<b>\$26,914,275</b>	<b>\$980,789</b>	<b>\$27,895,064</b>	<b>71%</b>	<b>\$11,604,936</b>
<b>Clean Heating and Cooling</b>						
Heat Pumps Phase 1 (2017)	\$65,776,685	\$38,476,551	\$17,824,796	\$56,301,347	86%	\$9,475,338
Heat Pumps Phase 2 (2020)	\$98,200,000	\$130,231	\$9,646,925	\$9,777,156	10%	\$88,422,844
Renewable Heat NY - Clean and Efficient Biomass Heating	\$13,487,000	\$8,157,744	\$1,288,114	\$9,445,858	70%	\$4,041,142
<b>Clean Heating and Cooling Total</b>	<b>\$177,463,685</b>	<b>\$46,764,526</b>	<b>\$28,759,835</b>	<b>\$75,524,361</b>	<b>43%</b>	<b>\$101,939,324</b>
<b>Codes Chapter</b>						
Code to Zero	\$21,000,000	\$1,955,242	\$5,748,156	\$7,703,397	37%	\$13,296,603
<b>Codes Chapter Total</b>	<b>\$21,000,000</b>	<b>\$1,955,242</b>	<b>\$5,748,156</b>	<b>\$7,703,397</b>	<b>37%</b>	<b>\$13,296,603</b>
<b>Commercial Chapter</b>						
Energy Management Technology	\$73,168,000	\$15,340,656	\$42,975,275	\$58,315,931	80%	\$14,852,069
P-12 Schools	\$21,600,000	\$1,459,511	\$4,103,172	\$5,562,683	26%	\$16,037,317
Real Estate Tenant	\$25,499,999	\$7,160,398	\$4,834,047	\$11,994,445	47%	\$13,505,554
REV Campus Challenge	\$21,650,002	\$3,592,284	\$11,348,818	\$14,941,101	69%	\$6,708,901
<b>Commercial Chapter Total</b>	<b>\$141,918,001</b>	<b>\$27,552,849</b>	<b>\$63,261,312</b>	<b>\$90,814,161</b>	<b>64%</b>	<b>\$51,103,840</b>
<b>Communities Chapter</b>						
Clean Energy Communities	\$81,271,963	\$10,444,057	\$8,323,244	\$18,767,301	23%	\$62,504,662
Community Energy Engagement	\$4,407,818	\$2,671,301	\$1,578,976	\$4,250,278	96%	\$157,540
<b>Communities Chapter Total</b>	<b>\$85,679,781</b>	<b>\$13,115,358</b>	<b>\$9,902,220</b>	<b>\$23,017,579</b>	<b>27%</b>	<b>\$62,662,202</b>
<b>Energy Storage Chapter</b>						
Reducing Barriers to Distributed Deployment	\$24,450,000	\$6,938,675	\$3,811,072	\$10,749,746	44%	\$13,700,254
Solar Plus Energy Storage	\$40,000,000	-	\$39,984,299	\$39,984,299	100%	\$15,701
<b>Energy Storage Chapter Total</b>	<b>\$64,450,000</b>	<b>\$6,938,675</b>	<b>\$43,795,371</b>	<b>\$50,734,046</b>	<b>79%</b>	<b>\$13,715,954</b>
<b>Industrial Chapter</b>						
Energy Management Practices	\$28,876,778	\$6,480,118	\$2,720,510	\$9,200,628	32%	\$19,676,150
<b>Industrial Chapter Total</b>	<b>\$28,876,778</b>	<b>\$6,480,118</b>	<b>\$2,720,510</b>	<b>\$9,200,628</b>	<b>32%</b>	<b>\$19,676,150</b>

Table 7 continued

Initiative	Budget Approved as of June 30, 2020 <sup>a</sup>	Expended Funds <sup>b</sup>	Committed Funds <sup>c</sup>	Total Progress <sup>d</sup>	% of Approved Budget Committed <sup>e</sup>	Budget Approved Remaining Balance <sup>f</sup>
<b>Large-Scale Renewables Chapter</b>						
Offshore Wind Master Plan	\$5,000,000	\$4,918,424	\$71,615	\$4,990,039	100%	\$9,961
Offshore Wind Pre-Development Activities	\$10,000,000	\$7,128,667	\$2,830,732	\$9,959,400	100%	\$40,600
<b>Large-Scale Renewables Chapter Total</b>	<b>\$15,000,000</b>	<b>\$12,047,092</b>	<b>\$2,902,347</b>	<b>\$14,949,439</b>	<b>100%</b>	<b>\$50,561</b>
<b>Low- to Moderate-Income Chapter</b>						
Healthy Homes Feasibility Study	\$212,147	\$177,126	\$35,021	\$212,147	100%	-
LMI Multifamily	\$53,834,420	\$8,036,050	\$15,956,579	\$23,992,628	45%	\$29,841,792
Low-Income Forum on Energy	\$1,300,000	\$334,030	\$113,445	\$447,475	34%	\$852,525
Low Rise New Construction Transition - LMI	\$8,487,000	\$4,113,373	\$4,206,313	\$8,319,686	98%	\$167,314
Multifamily New Construction Transition - LMI	\$10,879,000	\$2,064,728	\$8,695,357	\$10,760,085	99%	\$118,915
New Construction - LMI	\$24,784,800	\$1,569,167	\$29,598,870	\$31,168,038	126%	(\$6,383,238)
NYS Healthy Homes Value Based Payment Pilot	\$9,813,654	\$883,139	\$2,144,694	\$3,027,833	31%	\$6,785,821
RetrofitNY - LMI	\$30,503,500	\$2,487,114	\$1,804,014	\$4,291,129	14%	\$26,212,371
REVitalize	\$725,000	\$271,982	\$39,028	\$311,010	43%	\$413,990
Single Family - Low Income	\$169,760,983	\$114,565,768	\$3,676,007	\$118,241,775	70%	\$51,519,208
Single Family - Moderate Income	\$59,500,878	\$42,330,765	\$1,468,361	\$43,799,126	74%	\$15,701,752
Solar For All	\$21,245,000	\$1,957,024	\$10,568,727	\$12,525,751	59%	\$8,719,249
<b>Low- to Moderate-Income Chapter Total</b>	<b>\$391,046,382</b>	<b>\$178,790,266</b>	<b>\$78,306,417</b>	<b>\$257,096,683</b>	<b>66%</b>	<b>\$133,949,699</b>
<b>Multifamily Chapter</b>						
Multifamily	\$37,138,016	\$2,845	-	\$2,845	0%	\$37,135,171
<b>Multifamily Chapter Total</b>	<b>\$37,138,016</b>	<b>\$2,845</b>	<b>-</b>	<b>\$2,845</b>	<b>0%</b>	<b>\$37,135,171</b>
<b>Multi-Sector Solutions Chapter</b>						
Clean Energy Siting and Soft Cost Reduction	\$8,795,000	\$918,286	\$1,176,924	\$2,095,210	24%	\$6,699,790
Consumer Awareness	\$2,803,610	\$264,488	\$2,539,122	\$2,803,610	100%	-
Information Products and Brokering	\$8,500,000	\$576,478	\$650,978	\$1,227,456	14%	\$7,272,544
Market Challenges	\$105,222,650	\$3,581,167	\$15,728,679	\$19,309,846	18%	\$85,912,804
Pay for Performance	\$55,756,709	\$1,087,141	\$9,621,012	\$10,708,153	19%	\$45,048,556
Technical Services	\$62,097,185	\$3,725,723	\$17,332,693	\$21,058,416	34%	\$41,038,769
<b>Multi-Sector Solutions Chapter Total</b>	<b>\$243,175,154</b>	<b>\$10,153,283</b>	<b>\$47,049,408</b>	<b>\$57,202,691</b>	<b>24%</b>	<b>\$185,972,463</b>
<b>New Construction Chapter</b>						
New Construction - Market Rate	\$131,029,194	\$2,476,747	\$34,614,665	\$37,091,412	28%	\$93,937,782
<b>New Construction Chapter Total</b>	<b>\$131,029,194</b>	<b>\$2,476,747</b>	<b>\$34,614,665</b>	<b>\$37,091,412</b>	<b>28%</b>	<b>\$93,937,782</b>
<b>On-Site Power Chapter</b>						
Fuel Cells	\$11,310,030	\$232,905	\$10,381,875	\$10,614,780	94%	\$695,250
<b>On-Site Power Chapter Total</b>	<b>\$11,310,030</b>	<b>\$232,905</b>	<b>\$10,381,875</b>	<b>\$10,614,780</b>	<b>94%</b>	<b>\$695,250</b>

**Table 7 continued**

Initiative	Budget Approved as of June 30, 2020 <sup>a</sup>	Expended Funds <sup>b</sup>	Committed Funds <sup>c</sup>	Total Progress <sup>d</sup>	% of Approved Budget Committed <sup>e</sup>	Budget Approved Remaining Balance <sup>f</sup>
<b>Product and Appliance Standards Chapter</b>						
Product and Appliance Standards	\$21,699,000	\$171,908	\$26,809	\$198,717	1%	\$21,500,283
<b>Product and Appliance Standards Chapter Total</b>	\$21,699,000	\$171,908	\$26,809	\$198,717	1%	\$21,500,283
<b>Residential Chapter</b>						
Residential	\$49,641,366	\$2,973,099	\$3,154,599	\$6,127,698	12%	\$43,513,668
<b>Residential Chapter Total</b>	\$49,641,366	\$2,973,099	\$3,154,599	\$6,127,698	12%	\$43,513,668
<b>REV Technical Assistance Chapter</b>						
REV Connect	\$13,000,000	\$2,962,301	\$1,912,516	\$4,874,817	37%	\$8,125,183
<b>REV Technical Assistance Chapter Total</b>	\$13,000,000	\$2,962,301	\$1,912,516	\$4,874,817	37%	\$8,125,183
<b>Workforce Development and Training Chapter</b>						
Building Operations and Maintenance Partnerships	\$33,345,000	\$4,490,037	\$6,697,076	\$11,187,113	34%	\$22,157,887
Talent Pipeline	\$75,000,000	\$2,926,146	\$6,096,485	\$9,022,631	12%	\$65,977,369
<b>Workforce Development and Training Chapter Total</b>	\$108,345,000	\$7,416,183	\$12,793,561	\$20,209,744	19%	\$88,135,256
<b>Market Characterization &amp; Design Market Development</b>	\$29,395,589	\$8,806,249	\$2,280,831	\$11,087,081	38%	\$18,308,508
<b>NYS Cost Recovery Fee Market Development</b>	\$32,365,614	\$6,520,851	-	\$6,520,851	20%	\$25,844,763
<b>Total Market Development</b>	\$1,650,793,589	\$363,642,407	\$354,793,118	\$718,435,525	44%	\$932,358,065

\* Totals may not sum exactly due to rounding.

<sup>a</sup> Funds approved by DPS as of June 30, 2020.

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

<sup>c</sup> Remaining funding obligated under a contract, purchase order, or incentive award and planned funding for contracts awarded and under negotiation.

<sup>d</sup> Sum of categories Expended and Committed Funds.

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

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

## 4 Innovation and Research Initiative Specific Results

**Table 8. Innovation and Research Initiative-Level Budgets and Spending**

See endnote section for more information.<sup>11,12</sup>

Initiative	Budget Approved as of June 30, 2020 <sup>a</sup>	Expended Funds <sup>b</sup>	Committed Funds <sup>c</sup>	Total Progress <sup>d</sup>	% of Approved Budget Committed <sup>e</sup>	Budget Approved Remaining Balance <sup>f</sup>
<b>Building Innovation Chapter</b>						
NextGen HVAC	\$30,000,000	\$2,754,077	\$6,557,983	\$9,312,060	31%	\$20,687,940
<b>Building Innovation Chapter Total</b>	\$30,000,000	\$2,754,077	\$6,557,983	\$9,312,060	31%	\$20,687,940
<b>Clean Transportation Chapter</b>						
Electric Vehicles - Innovation	\$11,850,000	\$2,820,883	\$6,552,558	\$9,373,441	79%	\$2,476,559
Public Transportation and Electrified Rail	\$18,500,000	\$1,389,852	\$7,374,422	\$8,764,274	47%	\$9,735,726
<b>Clean Transportation Chapter Total</b>	\$30,350,000	\$4,210,735	\$13,926,980	\$18,137,715	60%	\$12,212,285
<b>Energy-Related Environmental Research Chapter</b>						
Energy-Related Environmental Research	\$37,800,000	\$4,669,845	\$17,951,984	\$22,621,829	60%	\$15,178,171
<b>Energy-Related Environmental Research Chapter Total</b>	\$37,800,000	\$4,669,845	\$17,951,984	\$22,621,829	60%	\$15,178,171
<b>Grid Modernization Chapter</b>						
High Performing Electric Grid	\$116,800,000	\$13,684,339	\$31,486,063	\$45,170,402	39%	\$71,629,598
Power Electronics Manufacturing Consortium	\$16,700,000	\$16,700,000	-	\$16,700,000	100%	-
<b>Grid Modernization Chapter Total</b>	\$133,500,000	\$30,384,339	\$31,486,063	\$61,870,402	46%	\$71,629,598
<b>Innovation Capacity and Business Development Chapter</b>						
CleanTech Startup Growth	\$67,602,009	\$14,395,194	\$32,116,204	\$46,511,398	69%	\$21,090,610
Manufacturing Corps	\$12,000,000	\$3,964,591	\$5,724,500	\$9,689,091	81%	\$2,310,909
Novel Business Models and Offerings	\$16,100,000	\$2,091,885	\$4,170,141	\$6,262,026	39%	\$9,837,974
<b>Innovation Capacity and Business Development Chapter Total</b>	\$95,702,009	\$20,451,670	\$42,010,845	\$62,462,515	65%	\$33,239,493
<b>Renewables Optimization Chapter</b>						
Energy Storage Technology and Product Development	\$33,000,000	\$3,466,686	\$6,700,556	\$10,167,242	31%	\$22,832,758
National Offshore Wind Research & Development Consortium	\$22,500,000	\$2,244,711	\$10,118,883	\$12,363,593	55%	\$10,136,407
<b>Renewables Optimization Chapter Total</b>	\$55,500,000	\$5,711,396	\$16,819,439	\$22,530,836	41%	\$32,969,164
<b>Market Characterization &amp; Design Innovation &amp; Research</b>	\$750,653	\$653	\$10,000	\$10,653	1%	\$740,000
<b>NYS Cost Recovery Fee Innovation &amp; Research</b>	\$6,639,115	\$889,621	-	\$889,621	13%	\$5,749,494
<b>Total Innovation and Research</b>	\$390,241,777	\$69,072,336	\$128,763,294	\$197,835,630	51%	\$192,406,146

Table notes are on the next page

- \* Totals may not sum exactly due to rounding.
- a Funds approved by DPS as of June 30, 2020 except for CleanTech Start-up Growth which was filed and approved in July 2020 and is included here.
- b Invoices processed for payment by NYSERDA.
- c Remaining funding obligated under a contract, purchase order, or incentive award, and planned funding for contracts awarded and under negotiation.
- d Sum of categories Expended and Committed Funds.
- e Percentage of the committed budget.
- f Difference between categories Budget Approved Funds and Committed Funds.

**Table 9. Market Development and Innovation and Research Portfolio**

Committed Benefits Progress to Date—Annual

See endnote section for more information.<sup>13</sup>

Initiative	Completed Projects through March 31, 2020 with Adjustments	Completed Projects through 4/1/20 - 6/30/20	Total Completed Projects through June 30, 2020	Current Pipeline Through June 30, 2020 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Annual Direct Planned Benefits Through Q2 2020	% of Cumulative Annual Direct Planned Benefits Through Q2 2020	Total Cumulative Annual Direct Planned Benefits through 2025	% of Total Cumulative Annual Direct Planned Benefits through 2025
<b>Market Development</b>									
Energy Efficiency (MWh)	732,000	129,757	861,758	1,751,860	2,613,617	2,655,336	98%	4,311,157	61%
Energy Efficiency (MMBtu)	8,449,569	385,441	8,835,010	7,041,866	15,876,876	16,805,138	94%	27,280,687	58%
Energy Efficiency (MW)	23	8	31	106	137	*	-	*	-
Renewable Energy (MWh)	237,382	964	238,346	67,371	305,717	*	-	*	-
Renewable Energy (MW)	262	0	262	3	265	*	-	*	-
CO2e Reductions (metric tons)	1,245,498	84,582	1,330,081	1,127,122	2,457,202	*	-	*	-
Customer Bill Savings (\$ million)	\$202.28	\$21.30	\$223.58	\$291.10	\$514.69	*	-	*	-
Leveraged Funds (\$ million)	\$1,369.20	\$236.09	\$1,605.29	\$1,790.38	\$3,395.67	*	-	*	-
<b>Innovation and Research</b>									
Energy Efficiency (MWh)	-	-	-	-	-	*	-	*	-
Energy Efficiency (MMBtu)	-	-	-	-	-	*	-	*	-
Energy Efficiency (MW)	-	-	-	-	-	*	-	*	-
Renewable Energy (MWh)	-	-	-	-	-	*	-	*	-
Renewable Energy (MW)	-	-	-	-	-	*	-	*	-
CO2e Reductions (metric tons)	-	-	-	-	-	*	-	*	-
Customer Bill Savings (\$ million)	-	-	-	-	-	*	-	*	-
Leveraged Funds (\$ million)	\$389.14	\$4.71	\$393.85	\$569.98	\$963.83	*	-	*	-
<b>Total Energy Efficiency (MWh)</b>	<b>732,000</b>	<b>129,757</b>	<b>861,758</b>	<b>1,751,860</b>	<b>2,613,617</b>				
<b>Total Energy Efficiency (MMBtu)</b>	<b>8,449,569</b>	<b>385,441</b>	<b>8,835,010</b>	<b>7,041,866</b>	<b>15,876,876</b>				
<b>Total Energy Efficiency (MW)</b>	<b>23</b>	<b>8</b>	<b>31</b>	<b>106</b>	<b>137</b>				
<b>Total Renewable Energy (MWh)</b>	<b>237,382</b>	<b>964</b>	<b>238,346</b>	<b>67,371</b>	<b>305,717</b>				
<b>Total Renewable Energy (MW)</b>	<b>262</b>	<b>0</b>	<b>262</b>	<b>3</b>	<b>265</b>				
<b>Total CO2e Reductions (metric tons)</b>	<b>1,245,498</b>	<b>84,582</b>	<b>1,330,081</b>	<b>1,127,122</b>	<b>2,457,202</b>				
<b>Total Customer Bill Savings (\$ million)</b>	<b>\$202.28</b>	<b>\$21.30</b>	<b>\$223.58</b>	<b>\$291.10</b>	<b>\$514.69</b>				
<b>Total Leveraged Funds (\$ million)</b>	<b>\$1,758.33</b>	<b>\$240.80</b>	<b>\$1,999.13</b>	<b>\$2,360.37</b>	<b>\$4,359.50</b>				

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

**Table 10. Market Development and Innovation and Research Portfolio**

Committed Benefits Progress to Date—Lifetime

Initiative	Completed Projects through March 31, 2020 with Adjustments	Completed Projects through 4/1/20 - 6/30/20	Total Completed Projects through June 30, 2020	Current Pipeline Through June 30, 2020 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Lifetime Direct Planned Benefits Through Q2 2020	% of Cumulative Lifetime Direct Planned Benefits Through Q2 2020	Total Cumulative Lifetime Direct Planned Benefits through 2025	% of Total Cumulative Lifetime Direct Planned Benefits through 2025
<b>Market Development</b>									
Energy Efficiency (MWh)	10,172,277	1,829,756	12,002,033	24,662,105	36,664,138	*	-	*	-
Energy Efficiency (MMBtu)	128,850,349	5,920,058	134,770,407	98,074,886	232,845,293	*	-	*	-
Renewable Energy (MWh)	1,651,339	14,720	1,666,059	746,722	2,412,781	3,580,731	67%	12,643,189	19%
CO2e Reductions (metric tons)	17,401,965	1,218,140	18,620,105	14,748,703	33,368,807	34,543,206	97%	57,392,622	58%
Customer Bill Savings (\$ million)	\$2,638.59	\$294.60	\$2,933.19	\$4,005.88	\$6,939.07	\$7,051.30	98%	\$12,106.72	57%
Leveraged Funds (\$ million)	\$1,369.20	\$236.09	\$1,605.29	\$1,790.38	\$3,395.67	\$3,479.25	98%	\$5,319.56	64%
<b>Innovation and Research</b>									
Energy Efficiency (MWh)	-	-	-	-	-	*	-	*	-
Energy Efficiency (MMBtu)	-	-	-	-	-	*	-	*	-
Renewable Energy (MWh)	-	-	-	-	-	*	-	*	-
CO2e Reductions (metric tons)	-	-	-	-	-	*	-	*	-
Customer Bill Savings (\$ million)	-	-	-	-	-	*	-	*	-
Leveraged Funds (\$ million)	\$389.14	\$4.71	\$393.85	\$569.98	\$963.83	\$1,015.45	95%	\$1,707.20	56%
<b>Total Energy Efficiency (MWh)</b>	<b>10,172,277</b>	<b>1,829,756</b>	<b>12,002,033</b>	<b>24,662,105</b>	<b>36,664,138</b>	-	-	-	-
<b>Total Energy Efficiency (MMBtu)</b>	<b>128,850,349</b>	<b>5,920,058</b>	<b>134,770,407</b>	<b>98,074,886</b>	<b>232,845,293</b>	-	-	-	-
<b>Total Renewable Energy (MWh)</b>	<b>1,651,339</b>	<b>14,720</b>	<b>1,666,059</b>	<b>746,722</b>	<b>2,412,781</b>	-	-	-	-
<b>Total CO2e Reductions (metric tons)</b>	<b>17,401,965</b>	<b>1,218,140</b>	<b>18,620,105</b>	<b>14,748,703</b>	<b>33,368,807</b>	-	-	-	-
<b>Total Customer Bill Savings (\$ million)</b>	<b>\$2,638.59</b>	<b>\$294.60</b>	<b>\$2,933.19</b>	<b>\$4,005.88</b>	<b>\$6,939.07</b>	-	-	-	-
<b>Total Leveraged Funds (\$ million)</b>	<b>\$1,758.33</b>	<b>\$240.80</b>	<b>\$1,999.13</b>	<b>\$2,360.37</b>	<b>\$4,359.50</b>	-	-	-	-

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

## Appendix A. Near-Term Milestones

### Near-Term Milestones for Code to Zero

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2020	Issue awards from Alternative Enforcement Structures solicitation.	The solicitation is expected to be issued in Q4 2020 and awards will follow.
	2020	Issue awards from pilot #2 Stretch to Zero assistance solicitation.	The solicitation for Stretch to Zero pilots is expected to be released in Q4 2020 following market research and voice of customer in Q3 2020.
	2020	Contract for development of NY Stretch-Energy (IECC2021).	Mini bid to be issued Q3 2020.
	2020	Issue awards from RFI for Technical input to NYStretch 2022.	The RFI is expected to be released in Q4 2020.

### Near-Term Milestones for Energy Management Technology

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2020	NYSERDA issues a challenge to entrepreneurs and innovators to explore RTEM data sets to advance efforts at demand reduction and peak load shaping.	NYSERDA is actively engaging with entrepreneurs and researchers to better understand value proposition of RTEM data to support innovation and advanced efficiency solutions. Team is on track to achieve this milestone by end of 2020.
	2020	NYSERDA makes publicly available anonymized RTEM project data to support market confidence in performance of RTEM systems and services.	NYSERDA is on track to achieve this milestone by end of year and has made significant progress standardizing data provided by the 40+ vendors active in the RTEM program.

### Near-Term Milestones for Real Estate Tenant

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2020	Launch training to educate stakeholders about energy-efficient tenant spaces.	NYSERDA is in the process of contracting with a consortium of highly respected organizations to design and deliver the training to all relevant stakeholder groups.

**Near-Term Milestones for Solar Plus Energy Storage**

<b>Complete</b> ✓	<b>Time Frame</b>	<b>Milestone</b>	<b>Explanation of Progress</b>
	2020	Publish and release case studies from recently completed projects to provide timely feedback to the market.	Project details have been compiled; once projects have been completed, case studies will be developed.

**Near-Term Milestones for Energy Management Practices Initiative**

Strategic Energy Management

<b>Complete</b> ✓	<b>Time Frame</b>	<b>Milestone</b>	<b>Explanation of Progress</b>
	2020	Launch self-serve, web-based SEM training as an alternative option to the cohort-based offering.	Program in development and expected to be launched later this year; will serve as the SEM training platform based on the U.S. Department of Energy’s 50001 Ready Navigator.
	2020	Release RFP for commercial SEM Energy Coach.	The RFP is delayed while program focus shifts to SEM self-serve option and will reassess in the future.
	2020	Release RFP for Energy Coach for additional industrial cohorts.	This RFP is in development and will be released in Q3 2020.

**Near-Term Milestones for New Construction—Low- to Moderate-Income**

<b>Complete</b> ✓	<b>Time Frame</b>	<b>Milestone</b>	<b>Explanation of Progress</b>
	2019	Announce awards for Round 2 of Buildings of Excellence.	Round 2 of the Buildings of Excellence program was released in October 2019, and proposals were due in May 2020. NYSERDA extended the due date from April to May in response to the COVID-19 State of Emergency. Awards are expected to be announced in October 2020.

### Near-Term Milestones for New York State Healthy Homes Value-Based Payment Pilot

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2020	Commencement of pilot field work.	Commencement of pilot field work has been delayed due to service interruptions related to COVID-19. NYSERDA anticipates pilot field work commencing in Q1 2021.
	2020	Assign pilot participation status to qualified energy/housing service providers, following the release of a request for qualifications.	NYSERDA's request for qualifications for energy/housing service providers is currently under internal review and is expected to be released in Q3 2020.
	2020	Secure all submissions of social determinants of health template for VBP Arrangement integration (rolling).	Social determinants of health templates associated with Pilot VBP Arrangements is occurring on a rolling basis. To date, one submission is finalized and four are pending.
	2020	Finalize specification list of healthy homes interventions to address asthma and household injury.	Specification list is drafted and currently being edited for consistency with related pilot documents.

### Near-Term Milestones for RetrofitNY—LMI

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2020	A demand charter is signed by building owners to aggregate and demonstrate potential demand for deep energy/net zero retrofits.	The demand charter has been finalized and is now being used with building owners to start aggregating demand. The charter was renamed The RetrofitNY Pledge based on stakeholder feedback and in consultation with NYSERDA.

### Near-Term Milestones for Clean Energy Siting and Soft-Cost Reduction

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2020	Issue awards from release of Soft-Cost Innovation solicitation.	The issuance of the Soft Cost Innovation solicitation has been postponed pending a needs analysis with respect to other complementary NYSERDA efforts (Environmental Research PON4270 and new Build Ready Program). NYSERDA expects to release the Soft Cost Innovation solicitation in Q4 2020 and issue awards in Q1 2021.

### Near-Term Milestones for Consumer Awareness

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2020	Buy and execute media placements.	Campaign launch is pending; once a date is finalized the media placements will be negotiated and purchased.
	2020	Develop an inbound communications strategy and architecture including appropriate referral destinations and responses for anticipated areas of interest.	Strategy is nearly finalized; working through final details on overlapping programs between NYSERDA and Con Edison.
	2020	Develop communications strategy for contractor, manufacturing, and distributor engagement.	Campaign launch is planned for Q3 2020. Once the inbound strategy is finalized, the external communication strategy will be developed.
	2020	Develop landing environment.	Landing environment is 90% built and on hold pending program finalization and collaboration with Con Edison.
	2020	Develop messaging and creative content.	Messaging has been developed; however, creative production was been halted due to COVID-19 and is currently rescheduled for Q3 2020.
	2020	Measure/analyze assets, adjust to optimize campaign performance.	Analysis will be performed after launch of the campaign.
	2020	Media and landing environment go live in market.	Media and landing environment will be live after launch of the campaign.

### Near-Term Milestones for Information Products and Brokering

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2020	Initial Asset Data pilot(s) are completed.	Analyses for the Monroe County pilot area were completed in Q2 2020 and NYSERDA is reviewing the results.
	2020	Asset Data Matching pilots and DER pilot platform testing completed with recommendations.	Next steps for the DER pilot platform were published in the IEDR (Integrated Energy Data Resource) whitepaper. Work attributable to the DER Data Platform Project, primarily maintenance and minor adjustments, will be completed over the next few months as the separate IEDR process ramps up.
	2020	Host second hackathon, with a focus on identifying solutions that overcome barriers to adoption of energy efficiency and clean energy for small- to medium-commercial owners. Attract 175 proposals. Issue one to four awards to support market demonstration of solutions developed by winners.	The second hackathon is planned for Q4 2020, building on last year's success. However, event may be delayed due to COVID-19. NYSERDA is evaluating online alternatives.

## Near-Term Milestones for Market Challenges

### Empire Building Challenge

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2020	Announce the participating real estate owners and their public commitments from Round 1 of solicitation.	Engagement with real estate owners is ongoing and the team is on track to complete this milestone by Q4 2020.
	2020	Publish preliminary results from global scan of low-carbon technologies and publish market data that provides OEMs and other solution providers better visibility into NY retrofit market needs and opportunities.	Engagement with research community and OEMs is ongoing and the team is on track to complete this milestone by the end of 2020

## Near-Term Milestones for Multifamily

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2020	Publish low-carbon playbooks for five prevalent multifamily building typologies.	The five prevalent multifamily building typologies have been identified. The first playbook has been drafted. NYSERDA is gathering feedback from key market actors before finalizing this first playbook and creating the four others.

## Near-Term Milestones for Pay for Performance (P4P)

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2020	Release procurement for Portfolio Managers targeting the residential sector with utility co-administrator.	Solicitation authored and under review by NYSERDA and utility co-administrator.
	2020	Launch commercial sector pilot.	Currently finalizing Portfolio Manager contracts and onboarding to prepare for pilot launch later this year.

**Near-Term Milestones for New Construction—Market Rate**

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2020	Announce awards for Round 2 of Buildings of Excellence.	Round 2 of the Buildings of Excellence program was released in October 2019, and proposals were due in May 2020. NYSERDA extended the due date from April to May in response to the COVID-19 State of Emergency. Awards are expected to be announced in October 2020.
	2020	Announce awards for Round 3 of Net Zero Energy Commercial/Carbon Competition.	The third round of the Net Zero Energy for Economic Development Program was anticipated to be released as part of Round 10 of the Consolidated Funding Application (CFA). The CFA was delayed due to the COVID-19 State of Emergency, and a new timeline has yet to be released.

**Near-Term Milestones Heat Pumps Phase 1 (2017)**

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2020	ASHP case studies developed and deployed in the market, along with current resources from regional and national organizations.	Monitoring of heat pump demonstration sites is wrapping up, allowing for analysis and reporting on actual savings—including case studies planned for Q3 2020 release.

### Near-Term Milestones Heat Pumps Phase 2 (2020)

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2020	Launch NYS Clean Heat Contractor Resource Landing Page.	NYS Clean Heat contractor resources landing page is live: <a href="https://saveenergyny.ny.gov/NYScleanheat/">https://saveenergyny.ny.gov/NYScleanheat/</a>
	2020	Launch focused marketing campaign to support the residential Comfort Home initiative.	Comfort Home Marketing will launch as part of the Westchester Consumer Awareness and Education marketing campaign in September 2020.
	2020	Launch revised Co-op Advertising offering to clean heat industry partners.	Phase 2 of co-op advertising is planned to launch at the end of August 2020.
	2020	Launch Co-branded utility marketing campaign within one or more electric utility territories.	A Marketing Working Group has been formed to guide rollout of co-branded campaign as part of Joint Management Committee. Expect campaign launch late 2020.
	2020	Launch final round of Phase 1 Community Campaigns.	Contracting in process. Campaigns likely to launch this Fall.
	2020	Receive and review submittals from RFI seeking input on LMI electrification demonstration/competition categories.	Released mini-bid solicitation for consultant to conduct LMI electrification market research and policy analysis to inform possible approaches. Working in parallel to gather initial LMI stakeholder feedback on approach to demonstrations while collaborating with consultant to facilitate disadvantaged community engagement in LMI electrification investment planning.
	2020	Initial LMI incentives (supplemental to utility incentives) are made available.	Initial LMI incentives are on track to be made available in Q4 2020.
	2020	Publish the Building Electrification Roadmap.	Convened a market advisory group and solicited input on the Roadmap scope as well as the central market barriers to building electrification by building type, to inform policy analysis. Analysis of technology and market readiness is ongoing. Developed an analytic tool for modeling achievable market uptake, with peer review of the model underway.

### Near-Term Milestones for Reforming the Energy Vision (REV) Connect

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2020	Release NYSERDA market test PON.	The PON was released June 23, 2020.
	2020	Initial in-field market tests enter the market.	To be completed after proposals are received via market test PON.

**Near-Term Milestones for Talent Pipeline**

<b>Complete</b> ✓	<b>Time Frame</b>	<b>Milestone</b>	<b>Explanation of Progress</b>
	2020	Issue a career pathway solicitation with multiple due dates, if needed, focus on heat pump training that places a priority on training for disadvantaged communities, low-income workers, and veterans.	The Career Pathway solicitation will be added to the workforce sin Q3 2020.

**Near-Term Milestones for NextGen HVAC**

<b>Complete</b> ✓	<b>Time Frame</b>	<b>Milestone</b>	<b>Explanation of Progress</b>
	2020	Issue awards following release of third innovation challenge.	Awards will be issued by the end of 2020.

**Near-Term Milestones for Electric Vehicles—Innovation**

<b>Complete</b> ✓	<b>Time Frame</b>	<b>Milestone</b>	<b>Explanation of Progress</b>
	2020	Fast-charging station network expanded to 30 locations statewide along major interstate corridors.	The number of fast-charging stations continues to increase along major interstate corridors. There are now approximately 20 such locations in NYS.

**Near-Term Milestones for Public Transportation and Electrified Rail**

<b>Complete</b> ✓	<b>Time Frame</b>	<b>Milestone</b>	<b>Explanation of Progress</b>
	2020	Issue awards for third competitive solicitation for the development and demonstration of public transportation technologies.	NYSERDA expects to issue a new solicitation for public transportation technologies later in 2020.

### Near-Term Milestones for Energy-Related Environmental Research

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2020	Issues awards from solicitations released in 2020.	A Geophysical Survey in the NY Bight was contracted in Q2 2020 and begins July 15, 2020. A contract for developing updated climate change projections for New York State began with Columbia University in Q2 2020. A contract was signed with Industrial Economics in Q2 2020 for the scoping phase of an assessment of the economic impacts of climate change on New York State sectors. A scoping project for understanding the availability of weather files that incorporate future climate change, which can be used in energy modeling, began in Q2 2020. Flexergy mini bids for a coordinator and facilitator to assist with the statewide climate impacts assessment were released in Q2. A contract with the United States Geological Survey (USGS) was executed in Q2 2020 for the development of a Northeastern regional network to monitor changes in soil carbon storage. NYSERDA received proposals for PON 4230 Energy-Related Air Quality and Health Effects (\$2 million) and they are under review. NYSERDA held a Project Advisory Committee meeting with the Atmospheric Sciences Research Center at SUNY Albany on their long-term air quality monitoring program.

### Near-Term Milestones for High-Performing Grid

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2020	Issue awards following release of solicitation #6.	PON 4128 Round 3 contract awards planned for Q4 2020.

### Near-Term Milestones for Cleantech Start-up Growth Ignition Grants

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2020	Issuing awards from new solicitation.	Program has shifted in response to COVID-19. This milestone is no longer relevant. Milestones for this program will be updated with a revised investment plan.

**Near-Term Milestones for Cleantech Start-up Growth Incubators**

<b>Complete</b> ✓	<b>Time Frame</b>	<b>Milestone</b>	<b>Explanation of Progress</b>
	2020	Begin eight new demonstration projects.	COVID-19 has delayed incubator client activity. Completion timeframe may be delayed.

**Near-Term Milestones for Cleantech Start-up Growth Innovation Advisors**

<b>Complete</b> ✓	<b>Time Frame</b>	<b>Milestone</b>	<b>Explanation of Progress</b>
	2020	Issuance of awards from solicitation.	The solicitation will launch in Q3 2020. Awards are expected to be issued in Q4 2020.

**Near-Term Milestones for Cleantech Start-up Growth Proof-of-Concept Centers**

<b>Complete</b> ✓	<b>Time Frame</b>	<b>Milestone</b>	<b>Explanation of Progress</b>
	2020	Executive director hired to oversee proof-of-concept centers (POCC).	The contractor is actively recruiting candidates for the role and expects selection by Q3 2020.

**All near-term milestones have been completed and previously reported for the following programs:**

Advancing Agricultural Energy Technologies  
Building Operations and Maintenance Partnerships (formerly Workforce Development Industry Partnerships)  
Clean Energy Communities  
Cleantech Start-up Growth (76 West)  
Cleantech Start-up Growth (Entrepreneurs-In-Residence)  
Cleantech Start-up Growth (ICC Engagement)  
Community Energy Engagement  
Electric Vehicles—Rebate  
Energy Storage Technology and Product Development  
Fuel Cells (Inactive)  
Greenhouse Lighting and Systems Engineering (GLASE)  
Low-Income Forum on Energy  
Low- to Moderate-Income Multifamily  
Manufacturing Corps  
National Offshore Wind Research and Development Consortium

Novel Business Models and Offerings  
Offshore Wind Master Plan  
Offshore Wind Pre-Development Activities  
On-Site Energy Manager  
P-12 Schools  
Power Electronics Manufacturing Consortium  
Product and Appliance Standards (formerly Underutilized Product Support)  
Low-Income Single-Family  
Moderate-Income Single-Family  
Solar for All  
Reducing Barriers to Deploying Distributed Energy Storage  
Renewable Heat NY—Clean and Efficient Biomass Heating  
Residential (formerly Engaging New Markets)  
REV Campus Challenge  
Technical Services

# Endnotes

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- <sup>1</sup> Case 14-M-0094 – Proceeding on Motion of the Commission to Consider a Clean Energy Fund, Ordering Authorizing the Clean Energy Fund Framework. Issued and effective January 21, 2016.
- <sup>2</sup> To facilitate transparent and orderly tracking of these ongoing filings, a designated matter number related to Case 14-M-0094 was created by Notice issued by the New York State Public Service Commission on May 6, 2016 for Investment Plan chapters and related filings. As of May 6, 2016, all filings related to the Clean Energy Fund Investment Plan are filed in Matter Number 16-00681, In the Matter of the Clean Energy Fund Investment Plan.
- <sup>3</sup> <http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?Mattercaseno=18-M-0084>
- <sup>4</sup> NYSERDA and DPS. 2018. "New Efficiency: New York". NYSERDA. [nyserdera.ny.gov/About/Publications/New-Efficiency](http://nyserdera.ny.gov/About/Publications/New-Efficiency).
- <sup>5</sup> Beginning with Q4 2016, NYSERDA updated emission factors for natural gas, #2 oil, #6 oil, kerosene, propane, wood, and steam to be consistent with emission factors used in the updated NYS Greenhouse Gas Inventory ([nyserdera.ny.gov/About/Publications/EA-Reports-and-Studies/Energy-Statistics](http://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](http://www1.nyc.gov/assets/sustainability/downloads/pdf/publications/NYC_GHG_Inventory_2014.pdf)).
- <sup>6</sup> Customer Bill Savings are calculated as direct energy bill savings realized by customers participating in NYSERDA's programs.
- <sup>7</sup> If solicitations with upcoming due dates were factored into the total NYSERDA commitments in the Market Development and Innovation and Research Portfolio Level Budgets and Spending table, an additional \$142.6 million or 56.3% of the total approved budget to date, would be included with total NYSERDA commitments.
- <sup>8</sup> If solicitations with upcoming due dates were factored into the total NYSERDA commitments in the Market Development Initiative Research and Spending table, an additional \$58,679,111 or 47.1% of the total approved budget to date, would be included with total NYSERDA commitments.
- <sup>9</sup> The Market Characterization and Design chapter line item includes funds to support overarching, non-initiative-specific evaluation studies.
- <sup>10</sup> Initiative commitments that are in excess of their total budgets are in anticipation of program attrition. No initiative will have total expenditures in excess of that initiative's total budget at the close of the program.
- <sup>11</sup> If solicitations with upcoming due dates were factored into the total NYSERDA commitments in the Innovation and Research Initiative Budget and Spending table, an additional \$83,029,291 or 73.7% of the total approved budget to date, would be included with total NYSERDA commitments.
- <sup>12</sup> The Market Characterization and Design chapter line item includes funds to support overarching, non-initiative-specific evaluation studies.
- <sup>13</sup> Leveraged funds from the National Offshore Wind Consortium initiative are inclusive of contributions from the Department of Energy.



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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