

Clean Energy Fund Quarterly Performance Report through September 30, 2020

Final Report | November 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.

NYSERDA Record of Revision

Document Title
Clean Energy Fund Quarterly Performance Report through September 30, 2020

Revision Date	Description of Changes	Revision on Page(s)
November 30, 2020	Original Issue	

Clean Energy Fund Quarterly Performance Report

through September 30, 2020

Final Report

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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):

- 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 reflect MD and I&R portfolios only.

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

The report reflects planned and achieved direct benefits from participation in NYSERDA's programs through September 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

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 State's energy system more affordable and resilient as well as advance clean energy and climate goals. Energy efficiency is a cornerstone of the 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.³ 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.⁴

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 (CO₂e) 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 (MD) 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.

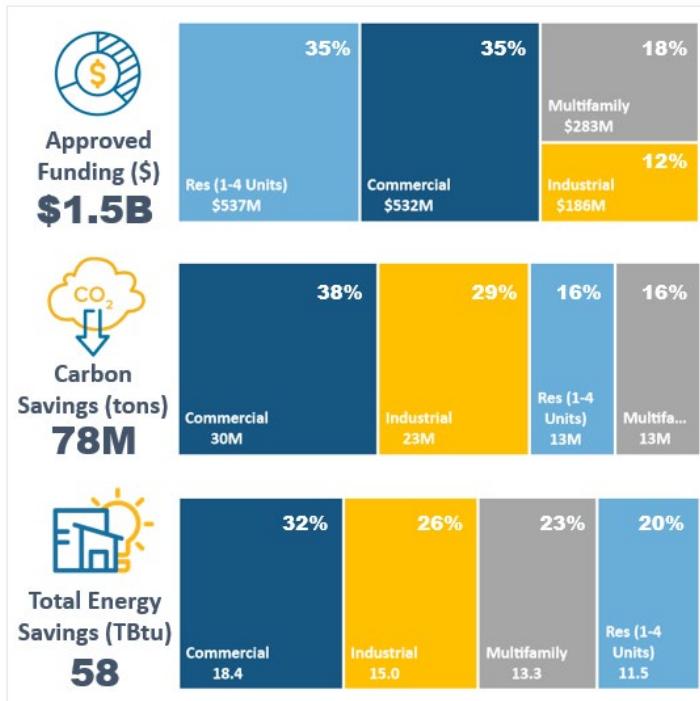


Figure 1 presents a more comprehensive picture of progress, with the 10-year budget and 10-year minimum goals reflecting all four CEF Portfolios (MD, I&R, NY-Sun, and NY Green Bank). Progress shown against each key performance indicator (KPI) represents results through September 30, 2020 and accounts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

Figure 1. CEF Portfolio Expected Investment and Benefits⁵

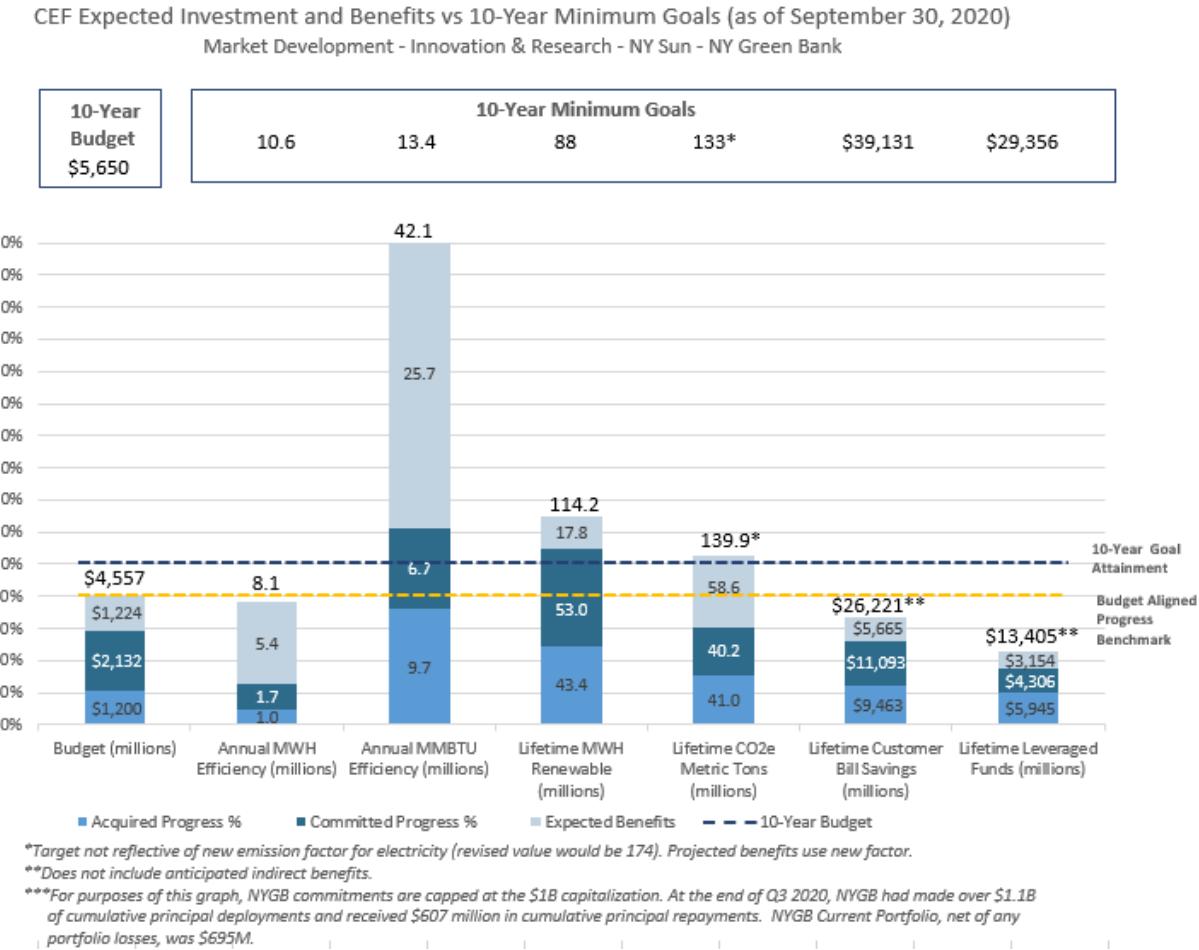


Figure 1 illustrates⁶ that deployment of funds is generally well-aligned with energy and carbon KPI progress currently. Here, the value Cumulative Progress (committed and acquired budgets and benefits) is combined with the value Expected Benefits (approved but not yet committed budgets and benefits) 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 (CO₂e) 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 savings⁷ 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 September 2020, a total of 68 MD and Innovation and Research (I&R) initiatives have been developed by NYSERDA and filed with the Public Service Commission, of which 52 initiatives were considered active, engaging the marketplace during this period. As of January 1, 2020, each of the original resource acquisition transition initiatives were 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 New York State on PAUSE Executive Order, and as such, these plans would now be considered aggressive from a near-term planning and performance measurement standpoint.

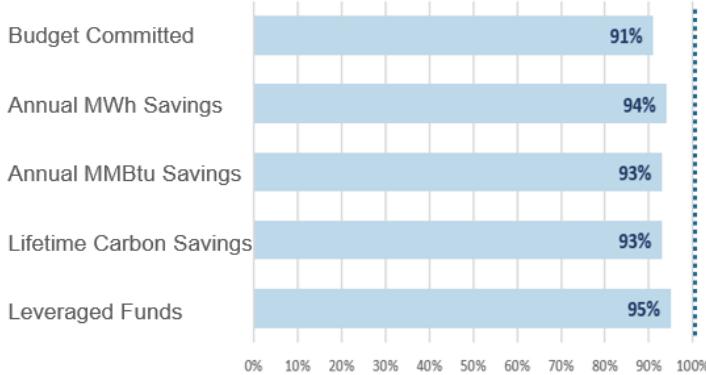
Performance to Plan

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 key performance indicators (KPI) have begun to reflect this more broadly in Q3 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 cumulative view of NYSERDA's MD and I&R portfolio performance to plan. NYSERDA's planned benefits through Q3 2020 are defined as 100% of 2016–2019 and 75% of 2020 annual planned benefits. Indirect planned impacts will be included as they are measured but are not currently a factor in performance measurement with the expectation that they will be delivered later in the CEF time period.

MD and I&R Portfolio Performance-To-Plan

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

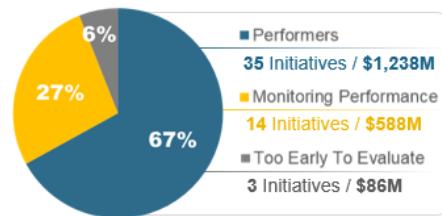


Q3
Plan

Portfolio Initiative Performance

A blend of quantitative and qualitative measures are used to categorize the status of the CEF portfolio's (52) active initiatives (those engaging the market) in relationship to our expected performance & accomplishments to date. Budget totals by category are provided for scale.

As the portfolio is progressively built out, 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 three quarters of the year despite the economic conditions resulting from the pandemic. The majority of active initiatives are still considered performers with four 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 CO₂e 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 against plan through current period.



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 CO₂e 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 Q3 2020 with four programs currently being monitored. Their performance is attributed to delays engaging the market for some programs and the impact of the pandemic on others. 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 CO ₂ e Impact	% of Planned Participants (Market Uptake)	% of Planned Lifetime CO ₂ e Savings	
Energy Management Technology	13%	73%	100%	Market interest and uptake in Real Time Energy Management continues to be strong and the program has seen a significant influx in new projects, partly in response to building owners concerns about indoor air quality. The commercial base building RTEM offer is expected to have fully exhausted its available incentives by the end of Q1 2021. The multifamily sector is showing positive signs of market growth, with increased interest from multifamily portfolio owners.	
Building Operations and Maintenance Partnerships	7%	89%	98%	Two new projects were received in Q3, both of which will be funded. Many existing contracts were modified in Q3 to accommodate numerous trainings shifting from in-person to online. Several proposers reached out to discuss proposal ideas for submission in Q4.	

Table 1 continued

Initiative	Scale	Performance		Initiative Performance Narrative
		% of Portfolio Planned CO2e Impact	% of Planned Participants (Market Uptake)	
Technical Services	6%	106%	134%	This multisector initiative serves a combination of commercial, industrial, multifamily and agriculture sectors. The program is offering up to 100% cost share on eligible projects through 2020 as well as indoor air quality focused studies to assist buildings in reopening and safe operations.
Energy Management Practices	5%	95%	89%	NYSERDA continues industrial stakeholder engagement to build pipeline participation with more case studies being developed to showcase success for the marketplace. Expanding the strategic energy management offering, a self-service model, will enhance carbon savings and was released in early Q3 2020.
Electric Vehicles Rebate	2%	103%	111%	The pace of EV rebates accelerated in Q3 2020, setting a new high for a calendar quarter at 3,500 rebates. The fast pace of EV sales in Q3 has the State on pace for a significant increase in 2020 EV sales compared to 2019.
REV Campus Challenge	2%	139%	93%	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 in negotiation. Additional outreach and COVID-19 related assistance is forthcoming.
P-12 Schools	2%	125%	153%	The P-12 Schools Initiative offers operational and benchmarking assessments over multiple years. The Clean Green Energy Solutions Program launched in late 2019 and technical assistance applications have been received. A new P-12 effort focused on serving disadvantaged communities is planned for 2021 and beyond.
Heat Pumps Phase 1 (2017)	2%	100%	84%	NYSERDA's ASHP and GSHP Incentive programs closed to new applications on March 31, 2020. Contracting for the recent round of Clean Heating and Cooling Community Campaigns is almost completed. This continues to grow the HeatSmart activity in NYS, including awards focused on LMI activities in several communities. Efforts are increasing to capture all clean energy technology installation and energy savings within the communities. High saving commitments through the Geothermal Clean Energy Challenge have been projected, though follow up with the New York Power Authority indicates that the total number of large campus installations will be lower than projected. High-level screenings of these projects have been completed and will be used to update the projected savings estimates in Q4.
Heat Pumps Phase 2 (2020)	1%	n/a	n/a	There has been good participation from manufacturers and installers in the Coop Marketing PON. The offer of 80% cost share until the end of 2020 is generating significant interest. The joint statewide Consumer Awareness working group is making good progress toward development and launch of the statewide awareness campaign in early 2021. LMI electrification research has been contracted and initiated, beginning with the creation of a NYS LMI building inventory.
	40%			

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)	
Clean Energy Communities	10%	101%	86%	The release of the Clean Energy Communities (CEC) Leadership Round has been delayed by COVID-19 due to the slowing of commitments compared to the original plan. In total for CEF participants, 515 communities completed 1,365 high-impact actions. NYSERDA is in the process of finalizing the Clean Energy Communities Leadership Round which will build on the program's success to date and drive the next level of impact. Launch of the Leadership Round is expected in Q4.
Market Challenges	6%	51%	70%	The Commercial and Industrial Carbon Challenge (CICC) scheduled to be released through the Consolidated Funding Application (CFA), aiming to attract beneficial electrification and carbon neutral energy projects, is on pause due to COVID-19. 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 was launched Q3 2020 with a call for applications from real estate owners to apply to become qualified partners and work with NYSERDA to develop replicable and scalable retrofit models. This effort will help move the State's existing tall building stock towards carbon neutrality.
New Construction - Market Rate	5%	33%	39%	Underperformance of the New Construction—Market Rate program is attributed to the CFA not launching as planned this year, heavily impacting the open enrollment commercial new construction program (a majority of projects come in during the CFA's competitive period) and the Net Zero Energy for Economic Development (NZEED) program. After a broad commercial market slowdown in Q2, early signs of revival are evident at the end of Q3 but market signals are far from clear on the future of near-term commercial activity. An off-round CFA will launch NZEED at the end of Q4, but commitments for that program will now be delayed until Q2 of 2021. Buildings of Excellence Round 2 awards are targeted for announcement in Q1 of 2021. Despite the noted underperformance in the commercial sector, program uptake in both market rate and LMI housing has continued to significantly outperform last year for both single-family and multifamily housing. Application volume is up only slightly, but project sizes are larger, and more projects are seeking higher levels of performance. Both single-family and multifamily housing (for both market rate and LMI) are signaling exceptionally strong market activity for the next several years.
	22%			

Table 3. Status of Clean Energy Fund 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)	
Residential	1%	19%	43%	Comfort Home is beginning to produce completed projects again after pausing due to COVID-19, and a mid-pilot review was completed including development of recommendations, which should begin implementation by January. In Q3 2020, NYSERDA launched the co-invest/co-save model with ConEd in Westchester, supported by our co-branded marketing campaign. Additionally, National Fuel Gas launched its MyHeat initiative, pointing customers to Comfort Home. This will be monitored closely to see how these initiatives impact the market uptake. Energy audits continue to lag, the Remote Audit Challenge initiatives will launch in Q4 which should help bolster participation and help build a better platform to support wide-scale deployment of audits going forward.
Product and Appliance Standards	11%	n/a	n/a	Research and engagement in this area continues, although actual progress on carbon reduction is dependent on statutory changes and promulgation of standards.
				11%

Table 4. Status of Clean Energy Fund Top 15 Initiatives for Carbon Impact | Inactive/Closed

Initiative	Scale	Performance		Initiative Performance Narrative
		% of Portfolio Planned CO2e Impact	% of Planned Participants (Market Uptake)	
Industrial Transition	13%	96%	94%	The initiative concluded accepting new applications in December 2019. Current energy efficiency and process improvement projects continue to provide carbon savings and are progressing toward installation over the next four years. Utilities now offer financial support for similar 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 benefit 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.⁸

Initiative	Total Budget ^a	Budget Approved as of Sept 30, 2020 ^b	% of Ordered Budget Funds Approved ^c	Expended Funds ^d	Committed Funds ^e	Total Progress ^f	% of Approved Budget Committed ^g	Budget Approved Remaining Balance ^h
Market Development								
Program Funds	\$2,393,728,000	\$1,842,755,041	77%	\$498,054,353	\$475,270,826	\$973,325,179	53%	\$885,643,251
NYS Cost Recovery Fee		\$23,274,817		\$7,061,429	-	\$7,061,429		
Innovation & Research								
Program Funds	\$631,672,000	\$383,602,662	61%	\$79,935,281	\$125,907,999	\$205,843,280	53%	\$181,351,816
NYS Cost Recovery Fee		\$4,641,743		\$1,049,309	-	\$1,049,309		
Administration	\$274,400,000	\$202,746,521	74%	\$109,324,814	\$1,208,438	\$110,533,252	55%	\$92,213,270
Evaluation	\$130,200,000	\$76,852,829	59%	\$3,193,359	\$8,408,854	\$11,602,213	15%	\$65,250,616
Total	\$3,430,000,000	\$2,533,873,614	74%	\$698,618,544	\$610,796,116	\$1,309,414,661	52%	\$1,224,458,953

^a 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.

^b Funds approved by DPS as of September 30, 2020.

^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 and planned funding for contracts awarded and under negotiation.

^f Sum of categories Expended Funds and Committed Funds.

^g Percentage of the committed budget.

^h 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 Sept 30, 2020 ^a	Expended Funds ^b	Committed Funds ^c	Total Progress ^d	% of Approved Budget Committed ^e	Budget Approved Remaining Balance ^f
Resource Acquisition Transition Chapter						
Agriculture Transition	\$3,600,000	\$3,592,413	\$5,000	\$3,597,413	100%	\$2,587
Anaerobic Digesters Transition	\$13,916,258	\$1,624,132	\$12,006,207	\$13,630,339	98%	\$285,919
Combined Heat & Power Transition	\$59,486,517	\$23,068,465	\$36,371,921	\$59,440,386	100%	\$46,131
Commercial New Construction Transition	\$24,600,762	\$5,581,543	\$14,118,715	\$19,700,258	80%	\$4,900,504
Commercial Transition	\$12,576,271	\$8,420,932	\$3,944,352	\$12,365,284	98%	\$210,987
Industrial Transition	\$66,004,580	\$32,566,190	\$27,591,404	\$60,157,594	91%	\$5,846,986
Low Rise New Construction Transition - Market Rate	\$4,538,388	\$3,340,764	\$1,058,075	\$4,398,839	97%	\$139,549
Multifamily Market Rate Transition	\$156,214	\$156,214	-	\$156,214	100%	-
Multifamily New Construction Transition - Market Rate	\$2,487,777	\$900,440	\$1,270,892	\$2,171,333	87%	\$316,445
Single Family Market Rate Transition	\$24,079,440	\$23,298,779	\$505,103	\$23,803,882	99%	\$275,558
Small Wind Transition	\$3,587,089	\$2,765,427	\$803,497	\$3,568,924	99%	\$18,165
Solar Thermal Transition	\$293,770	\$287,513	\$4,111	\$291,624	99%	\$2,146
TOTAL	\$215,327,066	\$105,602,812	\$97,679,277	\$203,282,089	94%	\$12,044,976

^a Funds approved by DPS as of September 30, 2020. Reflects “inactive.”

^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 Funds and Committed Funds.

^e Percentage of the committed budget.

^f 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.^{9,10,11}

Initiative	Budget Approved as of Sept 30, 2020 ^a	Expended Funds ^b	Committed Funds ^c	Total Progress ^d	% of Approved Budget Committed ^e	Budget Approved Remaining Balance ^f
Agriculture Chapter						
2030 GLASE	\$5,000,000	\$1,268,402	\$3,731,598	\$5,000,000	100%	-
Advancing Agricultural Energy Technologies	\$3,760,000	\$120,488	\$1,949,140	\$2,069,628	55%	\$1,690,372
Agriculture Chapter Total	\$8,760,000	\$1,388,890	\$5,680,738	\$7,069,628	81%	\$1,690,372
Clean Transportation Chapter						
Electric Vehicles - Rebate	\$39,500,000	\$30,973,689	\$904,547	\$31,878,236	81%	\$7,621,764
Clean Transportation Chapter Total	\$39,500,000	\$30,973,689	\$904,547	\$31,878,236	81%	\$7,621,764
Clean Heating and Cooling						
Heat Pumps Phase 1 (2017)	\$65,776,685	\$40,407,305	\$17,395,207	\$57,802,512	88%	\$7,974,173
Heat Pumps Phase 2 (2020)	\$98,200,000	\$252,695	\$10,734,937	\$10,987,632	11%	\$87,212,368
Renewable Heat NY - Clean and Efficient Biomass Heating	\$13,487,000	\$8,565,655	\$1,215,257	\$9,780,912	73%	\$3,706,088
Clean Heating and Cooling Total	\$177,463,685	\$49,225,655	\$29,345,401	\$78,571,056	44%	\$98,892,629
Codes Chapter						
Code to Zero	\$21,000,000	\$2,632,029	\$6,866,065	\$9,498,093	45%	\$11,501,907
Codes Chapter Total	\$21,000,000	\$2,632,029	\$6,866,065	\$9,498,093	45%	\$11,501,907
Commercial Chapter						
Energy Management Technology	\$73,168,000	\$18,535,291	\$43,821,920	\$62,357,211	85%	\$10,810,789
P-12 Schools	\$21,600,000	\$1,722,232	\$4,660,543	\$6,382,776	30%	\$15,217,224
Real Estate Tenant	\$25,499,999	\$8,308,815	\$5,615,732	\$13,924,547	55%	\$11,575,452
REV Campus Challenge	\$21,650,002	\$4,177,193	\$10,703,319	\$14,880,512	69%	\$6,769,490
Commercial Chapter Total	\$141,918,001	\$32,743,531	\$64,801,515	\$97,545,046	69%	\$44,372,955
Communities Chapter						
Clean Energy Communities	\$81,271,963	\$11,111,239	\$15,155,310	\$26,266,549	32%	\$55,005,414
Community Energy Engagement	\$4,407,818	\$3,053,615	\$1,196,679	\$4,250,294	96%	\$157,524
Communities Chapter Total	\$85,679,781	\$14,164,854	\$16,351,989	\$30,516,843	36%	\$55,162,938
Energy Storage Chapter						
Reducing Barriers to Distributed Deployment	\$24,450,000	\$8,274,464	\$2,766,545	\$11,041,009	45%	\$13,408,991
Solar Plus Energy Storage	\$40,000,000	-	\$39,984,297	\$39,984,297	100%	\$15,703
Energy Storage Chapter Total	\$64,450,000	\$8,274,464	\$42,750,843	\$51,025,307	79%	\$13,424,693
Industrial Chapter						
Energy Management Practices	\$28,876,778	\$6,981,922	\$3,952,553	\$10,934,475	38%	\$17,942,303
Industrial Chapter Total	\$28,876,778	\$6,981,922	\$3,952,553	\$10,934,475	38%	\$17,942,303

Table 7 continued

Initiative	Budget Approved as of Sept 30, 2020 ^a	Expended Funds ^b	Committed Funds ^c	Total Progress ^d	% of Approved Budget Committed ^e	Budget Approved Remaining Balance ^f
Large-Scale Renewables Chapter						
Offshore Wind Master Plan	\$5,000,000	\$4,918,430	\$71,615	\$4,990,045	100%	\$9,955
Offshore Wind Pre-Development Activities	\$10,000,000	\$7,497,576	\$2,461,849	\$9,959,425	100%	\$40,575
ORES Support	\$9,000,000	\$28,257	\$2,806,818	\$2,835,075	32%	\$6,164,925
Large-Scale Renewables Chapter Total	\$24,000,000	\$12,444,264	\$5,340,281	\$17,784,545	74%	\$6,215,455
Low- to Moderate-Income Chapter						
Healthy Homes Feasibility Study	\$212,147	\$177,126	\$35,021	\$212,147	100%	-
LMI Multifamily	\$53,834,420	\$9,774,155	\$22,129,086	\$31,903,241	59%	\$21,931,179
Low-Income Forum on Energy	\$1,300,000	\$359,507	\$208,797	\$568,305	44%	\$731,695
Low Rise New Construction Transition - LMI	\$8,487,000	\$4,425,553	\$4,437,385	\$8,862,938	104%	(375938)
Multifamily New Construction Transition - LMI	\$10,879,000	\$2,269,887	\$8,321,412	\$10,591,299	97%	\$287,701
New Construction - LMI	\$24,784,800	\$1,944,514	\$30,922,378	\$32,866,892	133%	(\$8,082,092)
NYS Healthy Homes Value Based Payment Pilot	\$9,813,654	\$893,368	\$2,232,232	\$3,125,601	32%	\$6,688,053
RetrofitNY - LMI	\$30,503,500	\$2,815,574	\$1,551,080	\$4,366,654	14%	\$26,136,846
REVitalize	\$725,000	\$271,991	\$39,028	\$311,019	43%	\$413,981
Single Family - Low Income	\$169,760,983	\$121,653,061	\$2,589,760	\$124,242,821	73%	\$45,518,162
Single Family - Moderate Income	\$59,500,878	\$44,858,605	\$1,166,490	\$46,025,095	77%	\$13,475,783
Solar For All	\$21,245,000	\$2,416,047	\$10,195,843	\$12,611,890	59%	\$8,633,110
Low- to Moderate-Income Chapter Total	\$391,046,382	\$191,859,390	\$83,828,512	\$275,687,902	71%	\$115,358,480
Multifamily Chapter						
Multifamily	\$37,138,016	\$7,753	\$60,562	\$68,314	0.2%	\$37,069,702
Multifamily Chapter Total	\$37,138,016	\$7,753	\$60,562	\$68,314	0.2%	\$37,069,702
Multi-Sector Solutions Chapter						
Clean Energy Siting and Soft Cost Reduction	\$8,795,000	\$1,246,248	\$1,028,499	\$2,274,746	26%	\$6,520,254
Consumer Awareness	\$2,803,610	\$485,353	\$2,318,257	\$2,803,610	100%	-
Information Products and Brokering	\$8,500,000	\$619,224	\$819,922	\$1,439,146	17%	\$7,060,854
Market Challenges	\$105,222,650	\$4,085,463	\$15,665,171	\$19,750,634	19%	\$85,472,016
Pay for Performance	\$55,756,709	\$1,283,585	\$10,225,964	\$11,509,549	21%	\$44,247,160
Technical Services	\$62,097,185	\$4,671,938	\$20,826,250	\$25,498,188	41%	\$36,598,997
Multi-Sector Solutions Chapter Total	\$243,175,154	\$12,391,811	\$50,884,062	\$63,275,873	26%	\$179,899,281
New Construction Chapter						
New Construction - Market Rate	\$131,029,194	\$3,695,428	\$35,494,886	\$39,190,314	30%	\$91,838,880
New Construction Chapter Total	\$131,029,194	\$3,695,428	\$35,494,886	\$39,190,314	30%	\$91,838,880
On-Site Power Chapter						
Fuel Cells	\$11,310,030	\$234,815	\$10,381,875	\$10,616,690	94%	\$693,340
On-Site Power Chapter Total	\$11,310,030	\$234,815	\$10,381,875	\$10,616,690	94%	\$693,340

Table 7 continued

Initiative	Budget Approved as of Sept 30, 2020 ^a	Expended Funds ^b	Committed Funds ^c	Total Progress ^d	% of Approved Budget Committed ^e	Budget Approved Remaining Balance ^f
Product and Appliance Standards Chapter						
Product and Appliance Standards	\$21,699,000	\$171,908	\$9,822	\$181,730	1%	\$21,517,270
Product and Appliance Standards Chapter Total	\$21,699,000	\$171,908	\$9,822	\$181,730	1%	\$21,517,270
Residential Chapter						
Residential	\$49,641,366	\$3,408,526	\$3,006,289	\$6,414,815	13%	\$43,226,551
Residential Chapter Total	\$49,641,366	\$3,408,526	\$3,006,289	\$6,414,815	13%	\$43,226,551
REV Technical Assistance Chapter						
REV Connect	\$13,000,000	\$3,122,185	\$1,756,038	\$4,878,223	38%	\$8,121,777
REV Technical Assistance Chapter Total	\$13,000,000	\$3,122,185	\$1,756,038	\$4,878,223	38%	\$8,121,777
Workforce Development and Training Chapter						
Building Operations and Maintenance Partnerships	\$33,345,000	\$4,984,548	\$7,103,945	\$12,088,493	36%	\$21,256,507
Talent Pipeline	\$75,000,000	\$4,238,074	\$7,171,726	\$11,409,800	15%	\$63,590,200
Workforce Development and Training Chapter Total	\$108,345,000	\$9,222,622	\$14,275,670	\$23,498,293	22%	\$84,846,707
Market Characterization & Design Market Development	\$29,395,589	\$9,507,805	\$1,899,902	\$11,407,707	39%	\$17,987,882
NYS Cost Recovery Fee Market Development	\$23,274,817	\$7,061,429	-	\$7,061,429	30%	\$16,213,389
Total Market Development	\$1,650,702,793	\$399,512,969	\$377,591,549	\$777,104,518	47%	\$873,598,274

* Totals may not sum exactly due to rounding.

^a Funds approved by DPS as of September 30, 2020.

^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 Funds and Committed Funds.

^e Percentage of the committed budget.

^f 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.^{12,13}

Initiative	Budget Approved as of Sept 30, 2020 ^a	Expended Funds ^b	Committed Funds ^c	Total Progress ^d	% of Approved Budget Committed ^e	Budget Approved Remaining Balance ^f
Building Innovation Chapter						
NextGen HVAC	\$30,000,000	\$3,195,954	\$9,116,574	\$12,312,528	41%	\$17,687,472
Building Innovation Chapter Total	\$30,000,000	\$3,195,954	\$9,116,574	\$12,312,528	41%	\$17,687,472
Clean Transportation Chapter						
Electric Vehicles - Innovation	\$11,850,000	\$2,976,996	\$6,523,061	\$9,500,057	80%	\$2,349,943
Public Transportation and Electrified Rail	\$18,500,000	\$1,626,347	\$8,963,512	\$10,589,859	57%	\$7,910,141
Clean Transportation Chapter Total	\$30,350,000	\$4,603,343	\$15,486,573	\$20,089,916	66%	\$10,260,084
Energy-Related Environmental Research Chapter						
Energy-Related Environmental Research	\$37,800,000	\$9,640,668	\$15,396,651	\$25,037,320	66%	\$12,762,680
Energy-Related Environmental Research Chapter Total	\$37,800,000	\$9,640,668	\$15,396,651	\$25,037,320	66%	\$12,762,680
Grid Modernization Chapter						
High Performing Electric Grid	\$116,800,000	\$15,419,263	\$30,438,883	\$45,858,146	39%	\$70,941,854
Power Electronics Manufacturing Consortium	\$16,700,000	\$16,700,000	-	\$16,700,000	100%	-
Grid Modernization Chapter Total	\$133,500,000	\$32,119,263	\$30,438,883	\$62,558,146	47%	\$70,941,854
Innovation Capacity and Business Development Chapter						
CleanTech Startup Growth	\$67,602,009	\$16,997,049	\$30,323,599	\$47,320,648	70%	\$20,281,361
Manufacturing Corps	\$12,000,000	\$4,015,806	\$5,682,000	\$9,697,806	81%	\$2,302,194
Novel Business Models and Offerings	\$16,100,000	\$2,904,469	\$3,268,246	\$6,172,714	38%	\$9,927,286
Innovation Capacity and Business Development Chapter Total	\$95,702,009	\$23,917,323	\$39,273,844	\$63,191,167	66%	\$32,510,841
Renewables Optimization Chapter						
Energy Storage Technology and Product Development	\$33,000,000	\$4,013,211	\$6,146,289	\$10,159,500	31%	\$22,840,500
National Offshore Wind Research & Development Consortium	\$22,500,000	\$2,426,517	\$9,867,533	\$12,294,050	55%	\$10,205,950
Renewables Optimization Chapter Total	\$55,500,000	\$6,439,728	\$16,013,822	\$22,453,550	40%	\$33,046,450
Market Characterization & Design Innovation & Research	\$750,653	\$19,002	\$181,651	\$200,653	27%	\$550,000
NYS Cost Recovery Fee Innovation & Research	\$4,641,743	\$1,049,309	-	\$1,049,309	23%	\$3,592,434
Total Innovation and Research	\$388,244,405	\$80,984,590	\$125,907,999	\$206,892,588	53%	\$181,351,816

Table notes are on the next page

- * Totals may not sum exactly due to rounding.
- ^a Funds approved by DPS as of September 30, 2020.
- ^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 Funds 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.¹⁴

Initiative	Completed Projects through June 30, 2020 with Adjustments	Completed Projects 7/1/20 - 9/30/20	Total Completed Projects through Sept 30, 2020	Current Pipeline Through Sept 30, 2020 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Annual Direct Planned Benefits Through Q3 2020	% of Cumulative Annual Direct Planned Benefits Through Q3 2020	Total Cumulative Annual Direct Planned Benefits through 2025	% of Total Cumulative Annual Direct Planned Benefits through 2025
Market Development									
Energy Efficiency (MWh)	858,917	91,375	950,292	1,700,440	2,650,733	2,830,122	94%	4,311,157	61%
Energy Efficiency (MMBtu)	8,760,003	894,944	9,654,947	6,742,671	16,397,618	17,720,811	93%	27,280,687	60%
Energy Efficiency (MW)	28	2	29	104	133	*	-	*	-
Renewable Energy (MWh)	238,864	548	239,412	67,488	306,900	*	-	*	-
Renewable Energy (MW)	287	0	288	3	291	*	-	*	-
CO2e Reductions (metric tons)	1,327,272	91,820	1,419,092	1,091,612	2,510,704	*	-	*	-
Customer Bill Savings (\$ million)	\$224.32	\$20.36	\$244.68	\$289.12	\$533.80	*	-	*	-
Leveraged Funds (\$ million)	\$1,630.31	\$133.63	\$1,763.93	\$1,796.97	\$3,560.90	*	-	*	-
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)	-	-	-	-	-	*	-	*	-
Leveraged Funds (\$ million)	\$493.84	\$3.06	\$496.90	\$577.69	\$1,074.59	*	-	*	-
Total Energy Efficiency (MWh)	858,917	91,375	950,292	1,700,440	2,650,733				
Total Energy Efficiency (MMBtu)	8,760,003	894,944	9,654,947	6,742,671	16,397,618				
Total Energy Efficiency (MW)	28	2	29	104	133				
Total Renewable Energy (MWh)	238,864	548	239,412	67,488	306,900				
Total Renewable Energy (MW)	287	0	288	3	291				
Total CO2e Reductions (metric tons)	1,327,272	91,820	1,419,092	1,091,612	2,510,704				
Total Customer Bill Savings (\$ million)	\$224.32	\$20.36	\$244.68	\$289.12	\$533.80				
Total Leveraged Funds (\$ million)	\$2,124.15	\$136.69	\$2,260.84	\$2,374.65	\$4,635.49				

* 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 June 30, 2020 with Adjustments	Completed Projects 7/1/20 - 9/30/20	Total Completed Projects through Sept 30, 2020	Current Pipeline Through Sept 30, 2020 (Committed but not complete)	Grand Total Completed Projects + Pipeline	Cumulative Current Lifetime Direct Planned Benefits Through Q3 2020	% of Cumulative Lifetime Direct Planned Benefits Through Q3 2020	Total Cumulative Lifetime Direct Planned Benefits through 2025	% of Total Cumulative Lifetime Direct Planned Benefits through 2025
Market Development									
Energy Efficiency (MWh)	11,771,363	1,392,692	13,164,055	23,704,750	36,868,806	*	-	*	-
Energy Efficiency (MMBtu)	132,367,485	13,695,867	146,063,352	93,066,624	239,129,976	*	-	*	-
Renewable Energy (MWh)	1,673,075	8,537	1,681,612	742,628	2,424,240	4,147,605	58%	12,643,189	19%
CO2e Reductions (metric tons)	18,420,746	1,410,903	19,831,649	14,108,127	33,939,777	36,517,218	93%	57,392,622	59%
Customer Bill Savings (\$ million)	\$2,913.61	\$300.18	\$3,213.78	\$3,915.42	\$7,129.21	\$7,505.76	95%	\$12,134.81	59%
Leveraged Funds (\$ million)	\$1,630.31	\$133.63	\$1,763.93	\$1,796.97	\$3,560.90	\$3,723.60	96%	\$5,319.56	67%
Innovation and Research									
Energy Efficiency (MWh)	-	-	-	-	-	*	-	*	-
Energy Efficiency (MMBtu)	-	-	-	-	-	*	-	*	-
Renewable Energy (MWh)	-	-	-	-	-	*	-	*	-
CO2e Reductions (metric tons)	-	-	-	-	-	*	-	*	-
Customer Bill Savings (\$ million)	-	-	-	-	-	*	-	*	-
Leveraged Funds (\$ million)	\$493.84	\$3.06	\$496.90	\$577.69	\$1,074.59	\$1,155.49	93%	\$1,769.64	61%
Total Energy Efficiency (MWh)	11,771,363	1,392,692	13,164,055	23,704,750	36,868,806	-	-	-	-
Total Energy Efficiency (MMBtu)	132,367,485	13,695,867	146,063,352	93,066,624	239,129,976	-	-	-	-
Total Renewable Energy (MWh)	1,673,075	8,537	1,681,612	742,628	2,424,240	-	-	-	-
Total CO2e Reductions (metric tons)	18,420,746	1,410,903	19,831,649	14,108,127	33,939,777	-	-	-	-
Total Customer Bill Savings (\$ million)	\$2,913.61	\$300.18	\$3,213.78	\$3,915.42	\$7,129.21	-	-	-	-
Total Leveraged Funds (\$ million)	\$2,124.15	\$136.69	\$2,260.84	\$2,374.65	\$4,635.49	-	-	-	-

* 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 are expected in Q1 2021.
	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 and awards are expected in Q1 2021..
	2020	Contract for development of NY Stretch-Energy (IECC2021).	Mini-bid is under development and will be issued Q4 2020.
	2020	Issue awards from RFI for Technical input to NYStretch 2022.	The RFI is expected to be released in Q4 2020 and awards are expected in Q1 2021..

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. NYSERDA 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, including rollout of a central data repository.

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 has contracted with a consortium of highly respected organizations to design and deliver the training to all relevant stakeholder groups. An official kick-off meeting occurred in September 2020.

Near-Term Milestones for Solar Plus Energy Storage

Complete ✓	Time Frame	Milestone	Explanation of Progress
	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

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2020	Launch self-serve, web-based SEM training as an alternative option to the cohort-based offering.	This program launched in July of 2020.
	2020	Release RFP for commercial SEM Energy Coach.	The RFP has been developed but is paused temporarily due to COVID-19.
	2020	Release RFP for Energy Coach for additional industrial cohorts.	Due to COVID-19 and the inability to gather in large groups, the value proposition of cohorts is less appealing to the market at this time. As such, this approach is on pause and will be re-evaluated in 2021. The milestone will be revised appropriately.

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

Complete ✓	Time Frame	Milestone	Explanation of Progress
	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. Awards are expected to be announced in Q4 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 beginning 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 Q4 2020.
	2020	Secure all submissions of social determinants of health template for VBP Arrangement integration (rolling).	Finalization of social determinants of health templates associated with Pilot VBP Arrangements is occurring on a rolling basis. To date, four submissions are finalized and five 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. The charter was renamed The RetrofitNY Pledge. Initial potential demand approaching 300,000 units has been aggregated under the pledge.

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 was 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 launched on September 21, 2020. Media through November 30, 2020 has been purchased and is in the market.
✓	2020	Develop an inbound communications strategy and architecture including appropriate referral destinations and responses for anticipated areas of interest.	Potential participants complete an online quiz to determine eligibility of programs and financing solutions. At quiz completion, participants are given specific contact information for the programs/financing they are eligible for.
✓	2020	Develop communications strategy for contractor, manufacturing, and distributor engagement.	Contractors, manufacturers, and distributors have been alerted to the campaign launch and their potential increase in business. Each has also been encouraged to participate in NYSERDA's Cooperative Advertising program to augment marketing exposure in the area.
✓	2020	Develop landing environment.	Landing environment is live: SaveEnergy.ny.gov.
✓	2020	Develop messaging and creative content.	Messaging and creative content have been finalized and are reflected on the media that is in market.
	2020	Measure/analyze assets, adjust to optimize campaign performance.	Optimization is happening daily. However, an extensive analysis will be performed after the initial campaign sprint concludes on November 30, 2020.
✓	2020	Media and landing environment go live in market.	Media is in market and landing environment is live: SaveEnergy.ny.gov.

Near-Term Milestones for Information Products and Brokering

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2020	Initial Asset Data pilot(s) are completed.	NYSERDA has reviewed the results of this analysis with market stakeholders and expects the project findings to be made public by end of year.
	2020	Asset Data Matching pilots and DER pilot platform testing completed with recommendations.	Asset Data Matching study results have been vetted with market stakeholders and are expected to be made public by the end of the year.
	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 will focus on tenant energy management. The competition will launch November 2020 and winners are expected to be announced by March 2021.

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 New York State 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 has gathered feedback key market actors to inform the playbook content and structure and is currently working to finalize all five playbooks.

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.	The solicitation was released November 5, 2020.
	2020	Launch commercial sector pilot.	The commercial sector pilot will launch in Q1 2021.

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. Awards are expected to be announced in Q4 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 Q4 2020 release.

Near-Term Milestones Heat Pumps Phase 2 (2020)

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2020	Launch focused marketing campaign to support the residential Comfort Home initiative.	Comfort Home Marketing is planned to launch as part of the Life Moments campaign slated for January of 2021.
✓	2020	Launch revised co-op advertising offering to clean heat industry partners.	Co-op advertising has been relaunched under Program Opportunity Notice (PON) 4482.
	2020	Launch co-branded utility marketing campaign within one or more electric utility territories.	The Marketing Working Group (subset of the Joint Management Committee) is meeting bi-weekly and expects to launch a statewide campaign during Q1 of 2021.
	2020	Launch final round of Phase 1 Community Campaigns.	Final contract will be signed in Q4 2020 and campaigns will launch shortly after.
	2020	Receive and review submittals from RFI seeking input on LMI electrification demonstration/competition categories.	Development of this RFI is underway. New estimated milestone completion date is Q1-Q2 2021.
	2020	Initial LMI incentives (supplemental to utility incentives) are made available.	Framework is in development. Expect offering to be in the marketplace by Q4 2020.
	2020	Publish the Building Electrification Roadmap.	New expected date for publishing this roadmap is Q1 2021.

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

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2020	Initial in-field market tests enter the market.	This will be completed once the market test PON has been issued however the PON has been delayed and this milestone likely will not be completed until 2021.

Near-Term Milestones for Talent Pipeline

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	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.	Due to delays in relaunching the workforce CFA, the Career Pathway was released as a traditional NYSERDA solicitation on September 29, 2020. Proposals are due December 17, 2020.

Near-Term Milestones for NextGen HVAC

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2020	Issue awards following release of third innovation challenge.	The awards have been issued and should be contracted by the end of the year.

Near-Term Milestones for Electric Vehicles—Innovation

Complete ✓	Time Frame	Milestone	Explanation of Progress
	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 25 such locations in NYS. NYSERDA expects to launch a new solicitation supporting direct current fast charger development in Q4 2020.

Near-Term Milestones for Public Transportation and Electrified Rail

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2020	Issue awards for third competitive solicitation for the development and demonstration of public transportation technologies.	NYSERDA made three awards from PON 4448, the Transit Tech Lab Partnership Program, in Q3 2020. These awards support demonstrations of innovative technologies in partnership with the MTA, Port Authority of New York and New Jersey, and New York City Department of Transportation.

Near-Term Milestones for Energy-Related Environmental Research

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2020	Issues awards from solicitations released in 2020.	Five proposals were approved for funding through PON 4230. A contract with Tetra Tech is ongoing to provide technical services support for the Offshore Wind Fisheries Technical Working Group. A contract with Stove Boat LLC was signed in late Q3 2020 to focus on creating a centralized website where offshore wind developers can easily provide updated project information for fishermen. A Geophysical Survey to support offshore wind energy development in the NY Bight was conducted over Q3. The survey vessel will demobilize early in Q4, followed by data analysis. Five contracts were executed in Q3 2020 in response to PON 4270. NYSERDA held a Project Advisory Committee meeting with the United States Fish and Wildlife Agency on their project developing monitoring protocols for automated radio telemetry studies at offshore wind farms. An assessment of stakeholder needs regarding climate change projections and information was completed in Q3 2020. A project to explore potential ways people might migrate into and within New York State as a result of climate change began in Q3 2020. Contracts were signed and Phase 1 work began in Q3 2020 for a coordinator and facilitator to assist with the statewide climate impacts assessment.

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 Geographic Coverage

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2020	Entrepreneurship training programs established.	Awards have been made and contracts are being negotiated. Expected completion by Q4 2020.

Near-Term Milestones for Cleantech Start-Up Growth COVID-19 Response Program

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2020	Formal Voice of Customer exercise completed.	Over 100 startups and investors were interviewed to determine optimal program design.
✓	2020	Solicitation launched	The solicitation was launched November 13, 2020.
	2020	External Investment Committee (EIC) established.	A list of potential committee members has been constructed and a final external investment committee will be established by Q2 2021.
	2020	Issue awards from solicitation	Awards are expected by Q2 2021.

Near-Term Milestones for Cleantech Start-Up Growth Incubators

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2020	Begin eight new demonstration projects.	This milestone is no longer applicable and will be revised in future investment plan filings.

Near-Term Milestones for Cleantech Start-Up Growth Innovation Advisors

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2020	Issuance of awards from solicitation.	Solicitation launched and applications received. Awards are expected to be issued in Q2 2021.

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

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2020	Executive director hired to oversee proof-of-concept centers (POCC).	Executive directors/program director hired for both the upstate and downstate POCC programs.

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

Advancing Agricultural Energy Technologies	Novel Business Models and Offerings
Building Operations and Maintenance Partnerships (formerly Workforce Development Industry Partnerships)	Offshore Wind Master Plan
Clean Energy Communities	Offshore Wind Pre-Development Activities
Cleantech Start-Up Growth (76 West)	On-Site Energy Manager
Cleantech Start-Up Growth (Entrepreneurs-In-Residence)	P-12 Schools
Cleantech Start-Up Growth (ICC Engagement)	Power Electronics Manufacturing Consortium
Community Energy Engagement	Product and Appliance Standards (formerly Underutilized Product Support)
Electric Vehicles—Rebate	Low-Income Single-Family
Energy Storage Technology and Product Development	Moderate-Income Single-Family
Fuel Cells (Inactive)	Solar for All
Greenhouse Lighting and Systems Engineering (GLASE)	Reducing Barriers to Deploying Distributed Energy Storage
Low-Income Forum on Energy	Renewable Heat NY—Clean and Efficient Biomass Heating
Low- to Moderate-Income Multifamily	Residential (formerly Engaging New Markets)
Manufacturing Corps	REV Campus Challenge
National Offshore Wind Research and Development Consortium	Technical Services

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 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.
- ³ <http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?Mattercaseno=18-M-0084>
- ⁴ NYSERDA and DPS. 2018. "New Efficiency: New York". NYSERDA. nyserda.ny.gov/About/Publications/New-Efficiency.
- ⁵ The May 2020 NY-Sun Expansion Order approved a total requested budget of \$573 million to expand the capacity target from 3 GW by 2023 to 6 GW by 2025. The Commission ordered that the initial \$230 million in funds to support the expansion were authorized to be committed and expended. Order Extending and Expanding Distributed Solar Incentives, May 14, 2020, available at <http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={A67E946F-40B0-49C4-93CD-7BC454987CDF}>. This graph is not yet updated with new funding/goal.
- ⁶ 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 (nyserda.ny.gov/About/Publications/EA-Reports-and-Studies/Energy-Statistics). These factors are derived from EPA's February 2016 State Inventory Tool release (<https://www.epa.gov/statelocalclimate/state-inventory-and-projection-tool>). Steam emission factors have been updated to be consistent with New York City's updated Greenhouse Gas Inventory. (http://www1.nyc.gov/assets/sustainability/downloads/pdf/publications/NYC_GHG_Inventory_2014.pdf).
- ⁶ Customer Bill Savings are calculated as direct energy bill savings realized by customers participating in NYSERDA's programs.
- ⁷ 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 \$151.4 million or 59.4% of the total approved budget to date, would be included with total NYSERDA commitments.
- ⁸ If solicitations with upcoming due dates were factored into the total NYSERDA commitments in the Market Development Initiative Research and Spending table, an additional \$55,509,375 50.4% of the total approved budget to date, would be included with total NYSERDA commitments.
- ⁹ The Market Characterization and Design chapter line item includes funds to support overarching, non-initiative-specific evaluation studies.
- ¹⁰ 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.
- ¹¹ 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 \$95,193,820 or 77.8% of the total approved budget to date, would be included with total NYSERDA commitments.
- ¹² The Market Characterization and Design chapter line item includes funds to support overarching, non-initiative-specific evaluation studies.
- ¹³ 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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