

Clean Energy Fund Quarterly Performance Report through March 31, 2021

Final Report | June 2021

NYSERDA's Promise to New Yorkers:

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

Our Vision:

New York is a global climate leader building a healthier future with thriving communities; homes and businesses powered by clean energy; and economic opportunities accessible to all New Yorkers.

Our Mission:

Advance clean energy innovation and investments to combat climate change, improving the health, resiliency, and prosperity of New Yorkers and delivering benefits equitably to all.

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Final Report

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About This Report

The Clean Energy Fund (CEF), approved by PSC Order on January 21, 2016¹, 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 is comprised of four distinct portfolios (CEF Portfolio):

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

This report represents quarterly and cumulative activity for the MD and I&R portfolios through March 31, 2021, and a collective view of all four portfolios progress against minimum CEF targets in Figure 1. 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

This report is accompanied by a scorecard (spreadsheet) that contains all plan and progress information related to CEF activity, also filed quarterly. This NYSERDA scorecard is consolidated with each State utility scorecard to publish data on [Open NY](#) where it is available to all stakeholders. Finally, the publishing of these datasets coincide with a similar update to the [Clean Energy Dashboard](#), an interactive and dynamic tool first published in 2019 to improve accessibility and transparency of ratepayer-funded clean energy program reporting statewide.

NY Sun reports progress quarterly within the NYSERDA scorecard and Clean Energy Dashboard (CED). Quarterly reporting for NY Green Bank is similarly provided within NYSERDA's quarterly scorecard and the CED, but also within a separately filed report.

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1 Performance Overview

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. 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.² The Climate Leadership and Community Protection Act (Climate Act), signed July 2019 and effective January 1, 2020, adopted this energy efficiency target and puts the State on a path to complete carbon-neutrality across all sectors of the economy, including power generation, transportation, buildings, industry, and agriculture. This sets the State target to reduce greenhouse gas (GHG) emissions from all anthropogenic sources 85 percent below 1990 levels by the year 2050, including an interim target of a zero-carbon emissions electricity sector by the year 2040 and mandates the following:

- Six thousand megawatts (MW) of solar by 2025
- Seventy percent renewable electricity by 2030
- Nine thousand MW of offshore wind by 2035
- Carbon-free electricity by 2040
- Three thousand MW of Energy Storage by 2030
- Disadvantaged communities shall receive no less than thirty-five percent of the overall benefits of spending on clean energy and energy efficiency programs, projects, or investments

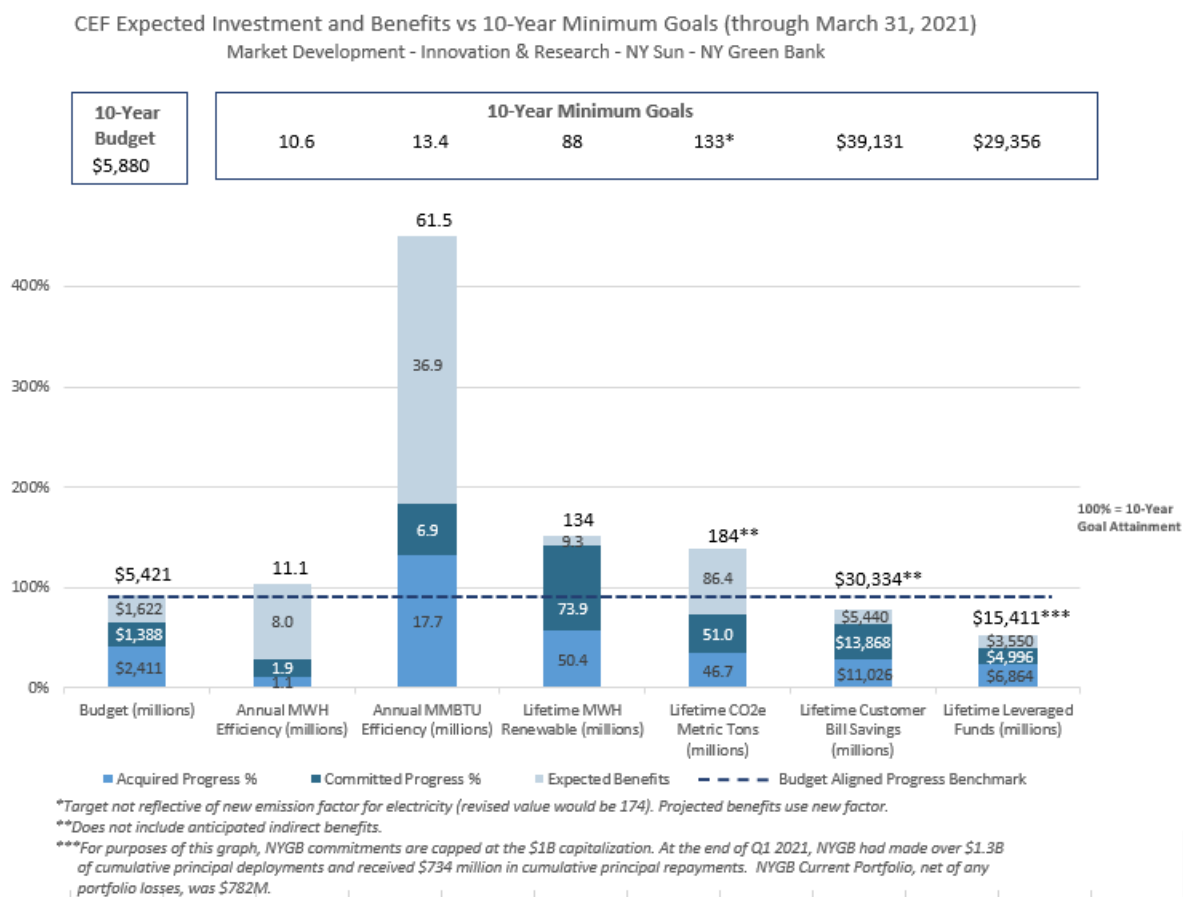
With these goals, New York State is undertaking one of the most aggressive clean energy agendas in the nation. Through the CEF and its other portfolios, NYSERDA works to foster the transformation of markets, pushing them to accurately value clean energy, energy efficiency, and resilience, while encouraging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

CEF Portfolio Performance

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 metric represents results through March 31, 2021 and nets out overlap across portfolios where it is known to occur. NYSERDA’s planning horizon for CEF initiatives extends beyond 2025 to encompass the timing of both expenditures and acquired benefits (completed projects) which are expected to occur beyond the original 10-year timeline of funding commitments.

Figure 1. CEF Portfolio Expected Investment and Benefits

See endnote section for more information.³



As Figure 1 illustrates,⁴ progress toward realization of benefits is well aligned with overall goals and deployment of funds for most metrics. 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. An overview of performance to these primary metrics is as follows:

- MMBtu expected benefits are already significantly greater than the minimum projected benefits, due largely to the expansion into all fuels and the significant potential that exists, particularly in the areas of industrial, clean transportation, industry partnerships and across multisector solutions.
- MWh electricity savings acquired and committed total has lagged the pace of other benefits, but is still forecasted to reach CEF minimum targets as projects are completed. As the CEF evolves and strategies like building electrification expand their reach, greater emphasis shifts to MMBtu fuel savings across the portfolio.
- Renewable energy MWh generation shows excellent progress largely due to NY-Sun, which began in 2014 and is performing strongly against its original goal. In May 2020, the Public Service Commission authorized additional funding to support the new State goal of installing 6 GW of solar capacity by 2025. While progress reporting continues in Figure 1, including the commitment of newly approved funds, the minimum performance target from the original CEF Order has not yet been officially updated.
- Carbon dioxide equivalent (CO₂e) emission reduction progress is on track, and NYSERDA is positioned to meet the original goal for the CEF.
- Performance of the customer (participant) bill savings metric is somewhat low, but it is not yet inclusive of indirect bill savings resulting from the execution of approved MD initiatives; this progress will be measured and reported later in the 10-year time frame.
- Progress on lifetime leveraged funding benefits is trending behind pace of other metrics. NYSERDA anticipates progress to ultimately fall short of the original 2016 CEF goal, largely due to a more rapid-than-anticipated decline in distributed solar costs as well as an emphasis in the NY-Sun portfolio on larger systems (e.g., community solar) that bring greater economies of scale. CEF MD and I&R portfolios continue to make steady progress toward their anticipated contribution to this goal.

Indirect impacts will be reported alongside direct impacts for the first time in 2021 as the earliest evaluation projects conclude and this data becomes available. As with all metrics, indirect benefits will be reported in NYSERDA's scorecard and ultimately within the Clean Energy Dashboard.

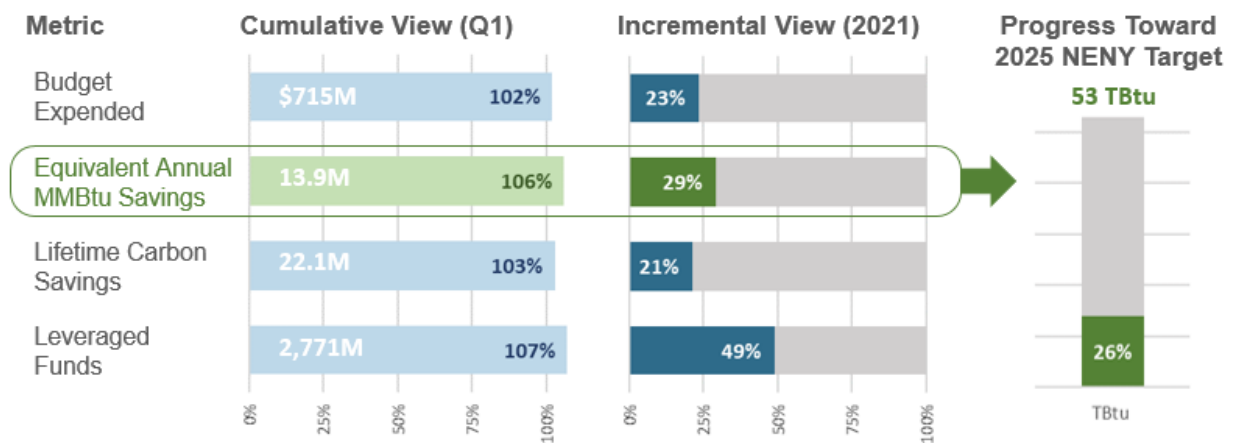
MD and I&R Performance to Plan

In the Fall of 2020 NYSERDA completed its annual update to forecasts for all CEF initiatives, which incorporates reported historical progress and revises forward looking plans to account for that history as well as learning from the market. Cumulative performance against plans is the ultimate measure of success for delivering on the 10-year CEF minimum benefits (targets); however NYSERDA also monitors incremental progress towards the current year goal to provide another viewpoint from which to assess performance, including how quickly funds are being put to work in the market based on near term expectations. Both cumulative and incremental values can be reviewed in granular detail for the portfolio and for each program and metric within the [Clean Energy Dashboard](#).

The following figure provides a high-level view of NYSERDA’s MD and I&R portfolio performance to plan, measuring progress towards expended funding and acquired benefits plans through Q1 2021. As previously noted, indirect impacts will be included as they are measured but are not currently a factor in performance measurement, with the expectation they will be delivered in the second half of the 10-year CEF timeline.

- The Cumulative View Q1 is pro-rated, representing all previous years beginning in 2016 plus 25% of the current year.
- The Incremental View 2021 represents progress made in the current calendar year against the current calendar year plan, with the expectation that approximately 25% of the plan should be achieved at the end of the first quarter, assuming equal or linear progress throughout the year.
- New Efficiency: New York (NENY) is the 2025 statewide energy efficiency target established in 2018 to achieve 185 TBtu end-use savings in buildings and industrial facilities below the 2025 energy-use forecast. NYSERDA’s CEF initiatives are expected to acquire 53 TBtu of that ambitious total for New York State⁵. NYSERDA’s forecast for 2021 and beyond indicates an acceleration of acquired savings through 2025 with the earlier foundation of project commitments now firmly in place.

Figure 2. CEF MD/I&R Progress and Performance Through Q1 2021



While 2020 was a challenging year and the CEF fell short of its commitment goals in the midst of the pandemic, the portfolio is starting 2021 showing good progress towards plans for the year. A more detailed assessment of the portfolio’s top energy savings impact programs can be found in the following sections.

Spotlight on the Top Energy Impact Initiatives

In NYSERDA’s MD portfolio, 15 key initiatives currently account for approximately 89% of the expected total energy savings benefits (represented by equivalent annual MMBtu) and 47% of the total approved budget. These 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. These top contributors also include a very strong focus on energy efficiency, as do the majority of CEF programs.

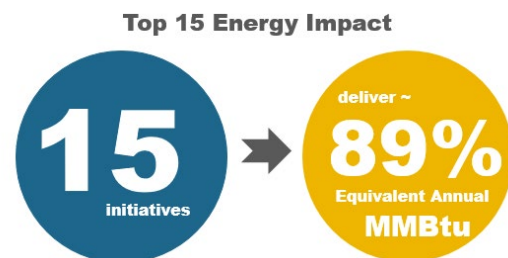


Table 1. CEF MD/I&R Top Energy Impact Initiatives Performance Summary

Initiative	Impact Rank	Budget Performance	Energy Performance	Progress Narrative
		Cumul. % to Expended Plan	Cumul. % to Acquired Plan	
Energy Management Technology	1	119%	96%	Progress of budget expenditures is trending favorably to plan after one quarter. Program pipeline is robust, with large projects beginning to report acquired savings in Q3/4 2021.
Product and Appliance Standards	2	72%	n/a	Energy savings for product and appliance standards is dependent on passage and implementation of legislation. That legislation is currently pending before the Legislature. Budget expenditures are on track to exceed targets in preparation for bill passage.
Building Operations and Maintenance Partnerships	3	100%	12%	Progress in many projects delayed significantly due to COVID as most of the training was focused on hands-on, in-person training. Energy savings are not reported until all training completed. Projects now resuming and about 10-12 projects are expected to be completed by end of Q4.
Electric Vehicles - Rebate	4	105%	107%	Q1 EV sales and rebate applications were well above similar figures for the same quarter in previous years. This strong showing exhausted the remaining CEF funding for Drive Clean Rebate incentives.
Energy Management Practices	5	95%	104%	Progress of budget expenditures and energy benefits is trending favorably to plan after the first quarter.
Industrial Transition	6	88%	100%	Progress of several projects are delayed due to COVID. Based on market feedback expenditures anticipated to pick up and still reach plan by Q4.
Technical Services	7	144%	155%	Progress of budget expenditures and energy benefits are trending favorably to plan after the first quarter.
LMI Multifamily	8	106%	35%	A number of projects have been delayed because of COVID-19, but progress of budget expenditures is trending favorably to plan after the first quarter. Projects under this program take on average two years to complete. Program intake (and budget commitments) accelerated rapidly in Q4 2020 and Q1 2021 and it is expected that expenditures and acquired energy savings will continue to progress over the next few quarters.
Market Challenges	9	122%	n/a	Progress of budget expenditures is trending favorably to plan after the first quarter. This program does not anticipate acquiring initial project benefits until 2022.

Table 1 Continued

Initiative	Impact Rank	Budget Performance Cumul. % to Expended Plan	Energy Performance Cumul. % to Acquired Plan	Progress Narrative
Clean Energy Communities	10	101%	107%	Progress of budget expenditures and metrics are trending favorably to plan after one quarter.
New Construction - Market Rate	11	127%	118%	Progress of expenditures and energy metrics are trending favorably to plan after one quarter. An error was identified in benefits reporting where MWh and MMBtu values were mistakenly transposed. This has been corrected.
New Construction - LMI	12	104%	104%	Progress of expenditures and energy metrics are trending favorably to plan after one quarter.
RetrofitNY - LMI	13	94%	0%	Progress of budget expenditures is trending favorably to plan after the first quarter. Acquired benefits begin to pick up pace starting in 2023. The first pilot is under construction and experienced some delays because of COVID.
Multifamily	14	3%	n/a	This program does not anticipate acquiring initial project benefits until 2023. The main component of the program is expected to launch in Q2 or Q3 2021. Expenditures will increase following the launch.
REV Campus Challenge	15	137%	123%	Progress of expenditures and energy metrics are trending favorably to plan after one quarter.

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

Table 2 provides an account 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 3, 4, and 5 of the report. A detailed summary of benefit progress through the current reporting period concludes this overview in Table 6.

Table 2. Market Development and Innovation and Research Portfolio-Level Budgets and Spending

See endnote section for more information.⁶

Initiative	Total Authorized Budget ^a	Budget Approved Through Q1 2021 ^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	\$2,399,728,000	\$2,202,764,847	93%	\$602,260,697	\$500,865,478	\$1,103,126,175	50%	\$1,117,111,005
NYS Cost Recovery Fee		\$25,846,468		\$8,374,135	-	\$8,374,135		
Innovation & Research								
Program Funds	\$631,672,000	\$422,723,388	68%	\$103,632,574	\$129,838,625	\$233,471,198	55%	\$192,766,236
NYS Cost Recovery Fee		\$4,860,988		\$1,346,943	-	\$1,346,943		
Administration	\$274,400,000	\$237,656,393	87%	\$121,635,717	\$268,696	\$121,904,413	51%	\$115,751,980
Evaluation	\$124,200,000	\$76,852,829	62%	\$9,754,862	\$15,461,952	\$25,216,815	33%	\$51,636,014
Total	\$3,430,000,000	\$2,970,704,913	87%	\$847,004,927	\$646,434,751	\$1,493,439,678	50%	\$1,477,265,235

^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 currently approved by DPS.

^c Percentage of the authorized budget now approved.

^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 approved budget now committed.

^h Difference between categories Budget Approved and Total Progress.

2 Resource Acquisition Transition Initiative Specific Progress

Table 3. Resource Acquisition Transition Initiative—Budgets and Spending

See endnote section for more information.

Initiative	Budget Approved Through Q1 2021 ^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	\$3,598,821	\$3,598,821	-	\$3,598,821	100%	-
Anaerobic Digesters Transition	\$13,634,032	\$3,693,506	\$9,997,910	\$13,691,417	100%	(\$57,385)
Combined Heat & Power Transition	\$59,485,543	\$25,921,558	\$33,586,470	\$59,508,028	100%	(\$22,485)
Commercial New Construction Transition	\$20,162,139	\$6,904,376	\$9,465,490	\$16,369,867	81%	\$3,792,272
Commercial Transition	\$12,576,271	\$9,777,202	\$2,874,773	\$12,651,975	101%	(\$75,705)
Industrial Transition	\$61,158,483	\$34,545,936	\$24,988,170	\$59,534,106	97%	\$1,624,377
Low Rise New Construction Transition - Market Rate	\$4,538,388	\$3,498,225	\$1,022,974	\$4,521,199	100%	\$17,189
Multifamily Market Rate Transition	\$156,214	\$156,214	-	\$156,214	100%	-
Multifamily New Construction Transition - Market Rate	\$2,487,777	\$1,102,375	\$867,877	\$1,970,252	79%	\$517,526
Single Family Market Rate Transition	\$23,805,217	\$23,464,560	\$142,195	\$23,606,755	99%	\$198,462
Small Wind Transition	\$3,569,207	\$2,829,569	\$742,247	\$3,571,816	100%	(\$2,609)
Solar Thermal Transition	\$293,770	\$287,513	-	\$287,513	98%	\$6,257
TOTAL	\$205,465,862	\$115,779,854	\$83,688,108	\$199,467,962	97%	\$5,997,900

^a Funds currently approved by DPS.

^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 approved budget now committed.

^f Difference between categories Budget Approved and Total Progress.

3 Market Development Initiative Specific Results

Table 4. Market Development Initiative—Budgets and Spending

See endnote section for more information.^{7,8,9}

Initiative	Budget Approved Through Q1 2021 ^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	\$1,509,627	\$3,490,373	\$5,000,000	100%	-
Advancing Agricultural Energy Technologies	\$3,760,000	\$193,089	\$1,876,666	\$2,069,755	55%	\$1,690,245
Agriculture Chapter Total	\$8,760,000	\$1,702,716	\$5,367,038	\$7,069,755	81%	\$1,690,245
Clean Transportation Chapter						
Electric Vehicles - Rebate	\$39,500,000	\$38,898,663	\$601,337	\$39,500,000	100%	-
Clean Transportation Chapter Total	\$39,500,000	\$38,898,663	\$601,337	\$39,500,000	100%	-
Clean Heating and Cooling						
Heat Pumps Phase 1 (2017)	\$65,776,685	\$44,574,909	\$11,671,991	\$56,246,900	86%	\$9,529,785
Heat Pumps Phase 2 (2020)	\$98,200,000	\$2,635,957	\$12,959,643	\$15,595,600	16%	\$82,604,400
Renewable Heat NY - Clean and Efficient Biomass Heating	\$13,487,000	\$10,696,770	\$1,874,770	\$12,571,540	93%	\$915,461
Clean Heating and Cooling Total	\$177,463,685	\$57,907,636	\$26,506,404	\$84,414,040	48%	\$93,049,645
Codes Chapter						
Code to Zero	\$21,000,000	\$3,731,168	\$6,295,423	\$10,026,592	48%	\$10,973,408
Codes Chapter Total	\$21,000,000	\$3,731,168	\$6,295,423	\$10,026,592	48%	\$10,973,408
Commercial Chapter						
Energy Management Technology	\$122,398,101	\$25,681,929	\$46,470,608	\$72,152,537	59%	\$50,245,564
P-12 Schools	\$21,600,000	\$2,881,079	\$3,588,806	\$6,469,884	30%	\$15,130,116
Real Estate Tenant	\$15,798,390	\$10,185,508	\$5,414,132	\$15,599,639	99%	\$198,751
REV Campus Challenge	\$21,650,002	\$6,775,490	\$10,279,881	\$17,055,372	79%	\$4,594,630
Commercial Chapter Total	\$181,446,493	\$45,524,006	\$65,753,427	\$111,277,433	61%	\$70,169,061
Communities Chapter						
Clean Energy Communities	\$81,271,963	\$13,749,692	\$11,756,904	\$25,506,596	31%	\$55,765,367
Community Energy Engagement	\$4,407,818	\$3,506,166	\$876,459	\$4,382,625	99%	\$25,193
Communities Chapter Total	\$85,679,781	\$17,255,858	\$12,633,364	\$29,889,221	35%	\$55,790,560
Energy Storage Chapter						
Reducing Barriers to Distributed Deployment	\$24,450,000	\$8,878,099	\$2,524,891	\$11,402,990	47%	\$13,047,010
Solar Plus Energy Storage	\$40,000,000	-	\$39,968,693	\$39,968,693	100%	\$31,307
Energy Storage Chapter Total	\$64,450,000	\$8,878,099	\$42,493,584	\$51,371,683	80%	\$13,078,317
Industrial Chapter						
Energy Management Practices	\$28,876,778	\$8,074,703	\$4,323,255	\$12,397,957	43%	\$16,478,821
Industrial Chapter Total	\$28,876,778	\$8,074,703	\$4,323,255	\$12,397,957	43%	\$16,478,821

Table 4 continued

Initiative	Budget Approved Through Q1 2021 ^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	\$4,936,305	\$53,745	\$4,990,051	100%	\$9,950
Offshore Wind Pre-Development Activities	\$10,000,000	\$7,912,326	\$1,953,085	\$9,865,411	99%	\$134,589
ORES Support	\$9,000,000	\$1,271,265	\$1,534,116	\$2,805,381	31%	\$6,194,619
Large-Scale Renewables Chapter Total	\$24,000,001	\$14,119,896	\$3,540,946	\$17,660,843	74%	\$6,339,158
Low- to Moderate-Income Chapter						
Healthy Homes Feasibility Study	\$212,147	\$177,126	\$35,021	\$212,147	100%	-
LMI Multifamily	\$128,808,112	\$13,973,656	\$28,777,196	\$42,750,852	33%	\$86,057,260
LMI Pilots	\$2,443,532	-	-	-	0%	\$2,443,532
Low-Income Forum on Energy	\$44,467,401	\$454,839	\$1,438,612	\$1,893,451	4%	\$42,573,950
Low Rise New Construction Transition - LMI	\$8,487,000	\$5,490,810	\$3,013,397	\$8,504,208	100%	(\$17,208)
Multifamily New Construction Transition - LMI	\$10,879,000	\$3,077,198	\$6,662,277	\$9,739,475	90%	\$1,139,525
New Construction - LMI	\$138,831,361	\$3,623,911	\$42,185,004	\$45,808,915	33%	\$93,022,446
NYS Healthy Homes Value Based Payment Pilot	\$9,791,293	\$950,754	\$2,191,134	\$3,141,889	32%	\$6,649,404
RetrofitNY - LMI	\$30,503,500	\$3,278,858	\$1,148,725	\$4,427,583	15%	\$26,075,917
REVitalize	\$310,924	\$291,424	\$19,500	\$310,924	100%	-
Single Family - Low Income	\$235,627,453	\$139,515,167	\$5,588,229	\$145,103,396	62%	\$90,524,057
Single Family - Moderate Income	\$89,751,836	\$55,315,202	\$3,038,461	\$58,353,663	65%	\$31,398,173
Solar For All	\$21,218,418	\$2,728,764	\$9,981,203	\$12,709,967	60%	\$8,508,451
Low- to Moderate-Income Chapter Total	\$721,331,977	\$228,877,710	\$104,078,759	\$332,956,469	46%	\$388,375,508
Multifamily Chapter						
Multifamily	\$37,138,016	\$30,960	\$329,231	\$360,190	1%	\$36,777,826
Multifamily Chapter Total	\$37,138,016	\$30,960	\$329,231	\$360,190	1%	\$36,777,826
Multi-Sector Solutions Chapter						
Clean Energy Siting and Soft Cost Reduction	\$8,795,000	\$810,892	\$502,693	\$1,313,585	15%	\$7,481,415
Consumer Awareness	\$2,803,610	\$1,011,966	\$1,791,644	\$2,803,610	100%	-
Information Products and Brokering	\$8,500,000	\$786,684	\$2,112,880	\$2,899,564	34%	\$5,600,436
Market Challenges	\$105,222,650	\$7,366,322	\$16,587,529	\$23,953,851	23%	\$81,268,799
Pay for Performance	\$55,756,709	\$1,710,641	\$10,610,013	\$12,320,654	22%	\$43,436,055
Technical Services	\$62,097,185	\$8,675,579	\$31,129,114	\$39,804,693	64%	\$22,292,492
Multi-Sector Solutions Chapter Total	\$243,175,154	\$20,362,084	\$62,733,873	\$83,095,957	34%	\$160,079,197
New Construction Chapter						
New Construction - Market Rate	\$131,029,194	\$6,588,990	\$40,351,940	\$46,940,930	36%	\$84,088,264
New Construction Chapter Total	\$131,029,194	\$6,588,990	\$40,351,940	\$46,940,930	36%	\$84,088,264
On-Site Power Chapter						
Fuel Cells	\$11,310,030	\$1,584,044	\$9,036,250	\$10,620,294	94%	\$689,737
On-Site Power Chapter Total	\$11,310,030	\$1,584,044	\$9,036,250	\$10,620,294	94%	\$689,737

Table 4 continued

Initiative	Budget Approved Through Q1 2021 ^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	\$260,113	\$172,927	\$433,039	2%	\$21,265,961
Product and Appliance Standards Chapter Total	\$21,699,000	\$260,113	\$172,927	\$433,039	2%	\$21,265,961
Residential Chapter						
Residential	\$49,641,366	\$4,731,805	\$3,241,617	\$7,973,422	16%	\$41,667,944
Residential Chapter Total	\$49,641,366	\$4,731,805	\$3,241,617	\$7,973,422	16%	\$41,667,944
REV Technical Assistance Chapter						
REV Connect	\$13,000,000	\$3,492,009	\$4,220,228	\$7,712,237	59%	\$5,287,763
REV Technical Assistance Chapter Total	\$13,000,000	\$3,492,009	\$4,220,228	\$7,712,237	59%	\$5,287,763
Workforce Development and Training Chapter						
Building Operations and Maintenance Partnerships	\$33,345,000	\$5,970,101	\$8,747,882	\$14,717,982	44%	\$18,627,018
Talent Pipeline	\$75,000,000	\$8,122,148	\$10,319,406	\$18,441,554	25%	\$56,558,446
Workforce Development and Training Chapter Total	\$108,345,000	\$14,092,249	\$19,067,288	\$33,159,537	31%	\$75,185,463
Market Characterization & Design Market Development	\$29,452,510	\$10,368,134	\$6,430,480	\$16,798,614	57%	\$12,653,896
NYS Cost Recovery Fee Market Development	\$25,846,468	\$8,374,135	-	\$8,374,135	32%	\$17,472,333
Total Market Development	\$2,023,145,453	\$494,854,977	\$417,177,370	\$912,032,347	45%	\$1,111,113,105

^a Funds currently approved by DPS.

^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 approved budget now committed.

^f Difference between categories Budget Approved and Total Progress.

4 Innovation and Research Initiative Specific Results

Table 5. Innovation and Research Initiative—Budgets and Spending

See endnote section for more information.^{10,11}

Initiative	Budget Approved Through Q1 2021 ^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	\$4,164,437	\$9,148,409	\$13,312,845	44%	\$16,687,155
Building Innovation Chapter Total	\$30,000,000	\$4,164,437	\$9,148,409	\$13,312,845	44%	\$16,687,155
Clean Transportation Chapter						
Electric Vehicles - Innovation	\$19,850,000	\$4,289,894	\$5,378,545	\$9,668,440	49%	\$10,181,560
Public Transportation and Electrified Rail	\$18,500,000	\$2,326,127	\$8,831,407	\$11,157,534	60%	\$7,342,466
Clean Transportation Chapter Total	\$38,350,001	\$6,616,022	\$14,209,952	\$20,825,974	54%	\$17,524,027
Energy-Related Environmental Research Chapter						
Energy-Related Environmental Research	\$37,800,000	\$13,915,600	\$14,135,745	\$28,051,345	74%	\$9,748,655
Energy-Related Environmental Research Chapter Total	\$37,800,000	\$13,915,600	\$14,135,745	\$28,051,345	74%	\$9,748,655
Grid Modernization Chapter						
High Performing Electric Grid	\$116,800,000	\$20,050,127	\$36,088,185	\$56,138,312	48%	\$60,661,688
Power Electronics Manufacturing Consortium	\$16,694,490	\$16,694,490	-	\$16,694,490	100%	-
Grid Modernization Chapter Total	\$133,494,490	\$36,744,617	\$36,088,185	\$72,832,802	55%	\$60,661,688
Innovation Capacity and Business Development Chapter						
CleanTech Startup Growth	\$97,728,245	\$24,056,159	\$29,135,426	\$53,191,585	54%	\$44,536,660
Manufacturing Corps	\$12,000,000	\$5,663,998	\$4,111,625	\$9,775,623	81%	\$2,224,377
Novel Business Models and Offerings	\$16,100,000	\$3,518,071	\$3,116,484	\$6,634,554	41%	\$9,465,446
Innovation Capacity and Business Development Chapter Total	\$125,828,245	\$33,238,228	\$36,363,534	\$69,601,762	55%	\$56,226,483
Renewables Optimization Chapter						
Energy Storage Technology and Product Development	\$33,000,000	\$5,161,556	\$5,194,906	\$10,356,462	31%	\$22,643,538
National Offshore Wind Research & Development Consortium	\$22,500,000	\$3,564,756	\$14,310,099	\$17,874,854	79%	\$4,625,146
Renewables Optimization Chapter Total	\$55,500,000	\$8,726,311	\$19,505,004	\$28,231,316	51%	\$27,268,684
Market Characterization & Design Innovation & Research	\$1,750,653	\$227,359	\$387,795	\$615,154	35%	\$1,135,499
NYS Cost Recovery Fee Innovation & Research	\$4,860,988	\$1,346,943	-	\$1,346,943	28%	\$3,514,046
Total Innovation and Research	\$427,584,377	\$104,979,516	\$129,838,625	\$234,818,141	55%	\$192,766,236

Table notes are on the next page.

- a Funds currently approved by DPS.
- 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 approved budget now committed.
- f Difference between categories Budget Approved and Total Progress.

Table 6. Market Development and Innovation and Research Portfolio

Acquired and Committed Benefits Progress to Date
See endnote section for more information.¹²

Metric	Acquired Benefits through Q4 2020 with Adjustments	Acquired Benefits in Q1 2021	Total Acquired Benefits through Q1 2021	Cumulative Direct Acquired Planned Benefits through Q1 2021	Acquired as % of Cumulative Direct Planned Benefits through Q1 2021	Committed Benefits through Q1 2021 (Committed but not acquired)	Grand Total Committed and Acquired Benefits	Total Cumulative Direct Planned Benefits through 2030	Grand Total as % of Total Cumulative Direct Planned Benefits through 2030
Market Development									
Electricity Savings (MWh), Annual	1,013,599	108,625	1,122,224	1,166,888	96%	1,781,636	2,903,859	4,778,549	61%
Electricity Savings (MWh), Lifetime	14,189,729	1,559,639	15,749,367	16,506,973	95%	24,011,568	39,760,936	64,618,651	62%
Fuel Savings (MMBtu), Annual	9,956,521	952,231	10,908,752	10,503,191	104%	6,894,253	17,803,005	32,554,779	55%
Fuel Savings (MMBtu), Lifetime	151,680,785	14,445,482	166,126,267	156,325,420	106%	90,582,917	256,709,184	487,471,798	53%
Total Energy Savings (MMBtu), Annual	12,641,518	1,290,532	13,932,050	13,089,444	106%	10,275,461	24,207,511	45,510,195	53%
Total Energy Savings (MMBtu), Lifetime	187,924,677	19,312,691	207,237,368	188,022,587	110%	118,503,416	325,740,784	644,259,931	51%
Electricity Peak Demand Reductions (MW)	34	5	38	42	91%	93	131	90	145%
Renewable Energy Generation (MWh), Annual	252,877	1,268	254,145	279,946	91%	65,257	319,402	1,262,809	25%
Renewable Energy Generation (MWh), Lifetime	1,785,965	20,453	1,806,418	1,942,882	93%	717,749	2,524,167	8,324,924	30%
Renewable Energy Capacity (MW)	481	0	481	382	126%	3	484	6,256	8%
CO2e Emission Reductions (metric tons), Annual	1,467,233	103,417	1,570,650	1,555,108	101%	1,149,732	2,720,382	4,963,485	55%
CO2e Emission Reductions (metric tons), Lifetime	20,579,192	1,525,122	22,104,315	21,428,224	103%	14,334,834	36,439,148	64,866,769	56%
Participant Bill Savings (\$ million), Annual	\$265.23	\$20.69	\$285.92	\$276.18	104%	\$299.74	\$585.66	\$1,026.55	57%
Participant Bill Savings (\$ million), Lifetime	\$3,495.97	\$298.26	\$3,794.23	\$3,607.42	105%	\$3,935.59	\$7,729.82	\$13,169.71	59%
Leveraged Funds (\$ million)	\$1,904.04	\$148.88	\$2,052.93	\$2,034.36	101%	\$1,829.88	\$3,882.81	\$6,040.19	64%
Innovation and Research									
Leveraged Funds (\$ million)	\$714.39	\$4.17	\$718.56	\$556.81	129%	\$688.84	\$1,407.40	\$2,800.49	50%
Market Development & Innovation and Research									
Total Leveraged Funds (\$ million)	\$2,618.43	\$153.06	\$2,771.49	\$2,591.17	107%	\$2,518.72	\$5,290.21	\$8,840.68	60%

Note: NYSERDA will track additional benefits related to Innovation and Research projects; however, specific targets were not ordered.

Appendix A. Near-Term Milestones

Near-Term Milestones for 2030 Greenhouse Lighting and Systems Engineering

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2021	Formal training offered to service providers.	A short course is currently under development to provide comprehensive greenhouse management course work integrating developed tools and GLASE expertise. It is anticipated that the multi-module course will be delivered in Q3 2021.

Near-Term Milestones for Advancing Agricultural Energy Technologies

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2021	Perform targeted outreach of successful business case scenarios to farms suitable for implementing the demonstrated technology.	Outreach is delayed due to COVID 19 and business case scenarios are still under development.

Near-Term Milestones for Code to Zero

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2020	Issue awards from Alternative Enforcement Structures solicitation.	The mini-bid issued in Q4 2020 and Task Work Order issued in February 2021, following selection of a contractor supports NYSERDA to develop necessary resources and training for a third-party energy code enforcement pilot solicitation. Prior to issuing this solicitation--expected Q3 2021--the contractor and NYSERDA will define the criteria for qualifying third-party enforcement providers, which will be leveraged by pilot communities.
	2020	Issue awards from pilot #2 Stretch to Zero assistance solicitation.	Voice of customer work to inform solicitation design will be completed Q1 2021. The solicitation will be issued Q2 2021 and awards made Q3 2021.
	2020	Contract for development of NY Stretch-Energy (IECC2021).	A mini-bid for the facilitation and development of NYStretch 2023 was issued in February 2021. Proposals were received in March 2021 and work on Stretch development will begin in May 2021.
	2020	Issue awards from RFI for Technical input to NYStretch 2022.	A Request for Information to assist in the development of NYStretch 2023 was issued in December of 2020. Responses were accepted until February 16 th , 2021 and will be transferred to the consultant responsible for the facilitation and development of NYStretch 2023.

Near-Term Milestones for Energy Management Technology

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2021	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 Q2 2021. Significant progress has been made standardizing data provided by the 40+ vendors active in the RTEM program, including rollout of a central data repository.
✓	2021	RFQ issued to qualify vendors that meet advanced capability and performance standards for RTEM + Tenant.	The RTEM+Tenants RFQ was approved and released publicly on March 23, 2021.
✓	2021	PON issued with open enrollment incentives for RTEM projects that extend into commercial tenant spaces.	The RTEM+Tenants PON was approved and released publicly on April 15, 2021.
	2021	PON issued with open enrollment incentives for RTEM projects that serve small-medium businesses and other hard to reach commercial buildings.	NYSERDA is on track to achieve this milestone by the end of Q3 2021. NYSERDA is working on defining the rules and eligibility criteria for projects.

Near-Term Milestones for Real Estate Tenant

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2021	Develop and disseminate tools and resources to promote landlord-tenant collaboration.	The Building Energy Exchange has been contracted to support the development and dissemination of resources to raise awareness about issues impacting energy consumption in leased office spaces. The Strategy Development phase is almost complete and will pave the way for the creation of resources, trainings and other materials, to promote landlord-tenant collaboration.

Near-Term Milestones for P-12 Schools

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2021	Distribute first annual survey for schools to provide feedback on clean energy progress specific to energy use intensity and greenhouse gas emissions data, projects and recognition.	NYSERDA anticipates starting an impact evaluation in Q3 2021. The contractor selected to coordinate the impact evaluation will distribute a survey to the P-12 sector.
	2021	Deploy clean energy case studies and guidance documents based on successful execution of prior milestones and other plan activities	NYSERDA is planning on developing case studies based on successful Benchmarking Program and Green and Clean Energy Solutions Program projects in Q4 2021.

Near-Term Milestones for Solar Plus Energy Storage

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2020-2021	Publish and release case studies from recently completed projects to provide timely feedback to the market.	Project details have been compiled and once projects have been completed, case studies will be developed.

Near-Term Milestones for Fuel Cells Initiative

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2021	Confirm installation of equipment. This will start in 2020 and continue in 2021 based on complexity of installation.	Confirmation of installed equipment is in process and the program is on track to complete the milestone.

Near-Term Milestones for Office of Renewable Energy Siting (ORES) Support

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2021	Finalize regulations and uniform standards and conditions.	Draft regulations and uniform standards and conditions were issued by ORES for public comment on September 16, 2020, with final versions adopted and effective as of March 3, 2021.
	2021	Issue first ORES permit approval.	No ORES permit approvals have been issued. Three projects have applications under review, with 19 other projects in the queue to be transferred to ORES from the Article 10 process.

Near-Term Milestones for Energy Management Practices

Strategic Energy Management

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2020	Release RFP for commercial SEM Energy Coach.	This RFP was delayed due to COVID-19 and will be released in Q2 2021.
	2020	Release RFP for Energy Coach for additional industrial cohorts.	The RFP for a new Energy Coach for industrial will be combined with the commercial RFP. This RFP will be released in Q2 2021—delayed due to COVID-19. However, the Energy Coach will support SEM On Demand. It is not anticipated that NYSERDA will continue the cohort model due to budget changes and COVID-19 impacts.
N/A	2021	Release PON for commercial SEM cohorts.	The cohort aspect of SEM is no longer being pursued as the value proposition for the program doesn't currently work. The strategy has pivoted to focus on remote delivery. Both industrial and commercial sectors are being addressed with the SEM On-Demand program which launched in July 2020.
	2021	Complete the market dissemination plan inclusive of stakeholders, vendors, and end-use customers to increase the awareness and adoption of SEM.	This is in progress and expected to wrap up in Q4 2021. NYSERDA is developing case studies and other materials to share lessons learned and successes.

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 Soft Cost Innovation solicitation NYSERDA planned to launch in 2020 has been replaced to incorporate expertise available in existing contractor pools through mini bids. Those mini bids may be augmented by a solicitation if there are gaps in relevant areas of expertise among existing prequalified contractors. A mini-bid for assistance with legal and property tax issues was released in Q1 of 2021, and a mini-bid for the Flexergy and Flextech programs is in process. Contractors for both Mini Bids are expected to be selected in Q2 2021.
	2021	Compile and publish a document of all case studies to highlight best soft cost reduction strategies and clean energy-friendly communities.	NYSERDA identified appropriate candidates for case studies in Q1 2021 and is planning to contact those potential case study participants in Q2 2021.

Near-Term Milestones for Information Products and Brokering

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2021	Issue award for development of value proposition calculator to support adoption of energy efficiency in the residential sector.	NYSERDA is developing two value proposition calculators, scheduled for completion by mid-2021. One is a multi-state effort specific to residential properties. The other supports both commercial and residential GSHP analysis starting in Westchester County.
✓	2021	Host third hackathon, with a focus on identifying solutions that overcome barriers to adoption of energy efficiency and clean energy for residential home owners. Attract 250 proposals. Issue 1-4 awards to support market demonstration of solutions developed by winners.	This hackathon was completed on April 27, 2021 with 12 proposals and four finalists with awards issued.

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.	The solicitation to select the first cohort of real estate partners was launched in Q3 2020 and a public announcement of the first cohort of real estate partners was made in Q1 2021.
	2021	Issue awards following release of round 1 of the solicitation.	The solicitation for the first round of retrofit project funding is planned for Q3 2021.
	2021	Announce the partnering of real estate owners and their public commitments from round 2 of solicitation.	Currently, the second round of funding for low carbon retrofit projects is planned for Q1 2022.

Commercial and Industrial Carbon Challenge

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2021	Issue awards following release of competitive solicitation.	Solicitation to be executed in the next Consolidated Funding Application, anticipated Q2 2021.

Near-Term Milestones for Multifamily

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2020	Publish low-carbon playbooks for five prevalent multifamily building typologies.	NYSERDA published the Multifamily Low Carbon Retrofit playbooks in Q1 2021.
N/A	2021	Issue awards for the building influencer' heating efficiency pilot program solicitation.	This milestone is no longer applicable and will be updated in a future plan refiling.
	2021	Complete assessment to determine if there is a viable path to support the monetization of non-energy benefits by building owners and managers.	NYSERDA is in the process of integrating non-energy benefits into upcoming low carbon capital planning support for multifamily buildings as preliminary means of learning more about non-energy benefits in multifamily sector.
	2021	Publish technical assistance tools and resources (e.g., sample bid documents, 'starter' energy models, standard specifications).	NYSERDA is identifying areas of research or other tools needed to support market needs.

Near-Term Milestones for Pay for Performance (P4P)

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2020	Launch commercial sector pilot.	The commercial sector pilot launched in Q1 2021.
	2021	Launch residential sector pilot.	The residential sector pilot is expected to launch in Q3 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 Awards of the Buildings of Excellence program were announced on March 11, 2021 in a virtual awards ceremony with the winners.
	2020	Announce awards for round 3 of Net Zero Energy Commercial/Carbon Competition.	The third round of the Carbon Neutral Economic Development program (formerly known as the Net Zero Energy for Economic Development Program) is anticipated to be released as part of Round 11 of the Consolidated Funding Application (CFA). The CFA was not launched in 2020 due to the COVID-19, however, it is anticipated that the 2021 CFA will be launched in Q2 2021, and awards announced in Q4 2021.
	2021	Announce awards for Round 3 of Buildings of Excellence.	NYSERDA anticipates choosing the Buildings of Excellence round three winners in Q3 2021, and expects to announce awards in Q1 or Q2 2022.
	2021	Announce awards for Round 4 of Net Zero Energy Commercial/Carbon Competition.	As Round 3 of the Carbon Neutral Economic Development program (formerly Net Zero Energy for Economic Development program) was delayed until 2021, Round 4 will occur in 2022.

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 launched in February 2021 in 15 markets across the State. The marketing will run through the first week in September 2021.
✓	2020	Launch co-branded utility marketing campaign within one or more electric utility territories.	The Statewide campaign launched on April 12, 2021 across all six investor-owned electric utility territories.
	2020	Launch final round of Phase 1 Community Campaigns.	Contracting is in process and all Round 3 (PON 4114) campaign teams will launch their first campaigns by Q2 2021.
	2020	Receive and review submittals from RFI seeking input on LMI electrification demonstration/competition categories.	This RFI is under consideration. Its direction will be informed by research currently underway, initial pilot learnings, and continued stakeholder engagement.
	2020	Publish the Building Electrification Roadmap.	The timing and prioritization of some initiative efforts shifted in 2020; the roadmap is now expected to be published in Q4 2021.
	2021	Finalize and release the Heat Pump Pattern Book through a public web-based interface.	Phase 1 on the Heat Pump Pattern Book in the form of .pdf documents has been developed. The scope of work for the public web-based interface is under development.
	2021	Development of revised QA/QC protocols to support the NYS Clean Heat Pump.	The revised QA/QC protocols are under development and will improve the quality of the ASHP installations. The protocols will become a requirement in the New York State Clean Heart program in Jan 2022.
	2021	Award contracts to experts to support scoping, design and construction of district systems.	A solicitation (PON 4614) was issued on February 4, 2021, with multiple due dates. Awards are anticipated to be announced in Q2 2021.

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

	2021	Develop action plan for the next phase of cost reduction work, following the publication of the Building Electrification Roadmap to be issued Q4 2020.	Engaged contractor to conduct internal and external interviews regarding cost compression opportunities and lead a workshop to further develop potential strategies. Strategic action plan will be developed using the learnings from these activities.
	2021	Award RFP seeking LMI electrification demonstration/competition proposals.	The RFP is currently under consideration.
	2021	Establish a network of trade allies.	A contractor was selected to lead the Upstream Partners initiative, through which a trade ally network will be developed.
	2021	Launch Business Support offer to marketplace to provide business development support and technical resources.	A contractor was selected to lead the Upstream Partners initiative, through which business development support and technical resources will be developed.

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.	The issuance of the market test PON was delayed so in-field market tests have not yet entered the market. This milestone will likely be completed in Q2 2021.

Near-Term Milestones for Product and Appliance Standards

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2021	Issue competitive solicitation to support the development of product standards.	NYSERDA issued a mini-bid to the contractor pool for RFQL 3711 Category B: Product and Appliance Standards contractor, to select a contractor to provide technical and regulatory support to assist the State Administrative Procedures Act process in anticipation of the passage of the Standards Act. The mini-bid for this project was released on April 5, 2021 with responses due by April 28, 2021.
✓	2021	Issue competitive solicitation to support compliance with product standards, in conjunction with other states.	In partnership with the US Climate Alliance, Appliance Standards Awareness Project, California, Washington, the Northeast Energy Efficiency Partnership (NEEP), and NEEP members in the Northeast and Mid-Atlantic region, NEEP issued a competitive solicitation to develop a multi-state compliance tool along with resources to support consistent compliance and enforcement. NYSERDA is directly supporting NEEP for broader coordination to advance these appliance standards.

Near-Term Milestones for Residential

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2021	Implement a remote energy audit available to all consumers.	In the later part of 2020, NYSERDA released the Remote Audit Challenge Solicitation with the goal of exploring approaches for remote and virtual residential energy audits. The solicitation consisted of two categories. Category 1 focused on efficiency contractors, supporting the development and implementation of remote audit approaches. A group of 12 contractors selected for Category 1 are currently testing remote audit strategies in the market to support the most effective approaches. Category 2 was geared toward software and customer engagement organizations. NYSERDA is currently negotiating with two Category 2 awardees. A second round of the Remote Audit Challenge solicitation will be released in the coming weeks to support additional remote audit approaches.

Near-Term Milestones for Building Operation and Maintenance Partnerships

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2021	Work with SUNY, NYSDOL and Empire State Development to issue training infrastructure and capacity building solicitation focused on OSW.	NYSERDA issued the solicitation November 2020 and proposals were reviewed in April 2021.

Near-Term Milestones for Talent Pipeline

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2021	Reconvene industry partners for building operation and maintenance to disseminate learnings and best practices.	This meeting is currently on hold indefinitely due to COVID 19.

Near-Term Milestones for Electric Vehicles—Innovation

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2021	Issue awards for third competitive solicitation for the development and demonstration of EV-enabling technologies.	NYSERDA is evaluating whether to issue the third solicitation.

Near-Term Milestones for Public Transportation and Electrified Rail

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2021	Issue awards for fourth competitive solicitation for the development and demonstration of public transportation technologies.	NYSERDA is evaluating whether to issue the fourth solicitation.

Near-Term Milestones for Energy-Related Environmental Research

Complete ✓	Time Frame	Milestone	Explanation of Progress
	2021	Issues awards from solicitations released in 2021.	A total of 10 contracts were issued and/or executed by NYSERDA from solicitations and other procurement processes during Q1 2021.

Near-Term Milestones for National Offshore Wind Research and Development Consortium

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2021	Issue awards for projects selected through solicitations.	Twenty additional projects were awarded in Q1 2021.

Near-Term Milestones for NextGen HVAC

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2021	Issue awards following release of 4th Innovation Challenge.	Awards were issued and contracts are either in contract negotiation or signed.

Near-Term Milestones for High-Performing Grid

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2021	Issue awards following release of broad competitive solicitation #7.	Awards were made in Q1 2021.
	2021	Issue awards following release of targeted competitive solicitation #8.	Future Grid Challenge to be released in Q2 2021 with awards issued Q4 2021.
	2021	Issue awards following release of broad competitive solicitation #9.	Additional broad solicitations are under consideration.

Near-Term Milestones for Cleantech Start-Up Growth Geographic Coverage

Complete	Time Frame	Milestone	Explanation of Progress
✓	2020	Entrepreneurship training programs established.	Entrepreneurship training program launched in April 2021.

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

Complete	Time Frame	Milestone	Explanation of Progress
✓	2020	External Investment Committee (EIC) established.	The EIC members signed agreements to become official scoring committee members within the New York Climate Progress program.
	2020	Issue awards from solicitation.	Awards are expected by Q3 2021.

Near-Term Milestones for Cleantech Start-Up Growth Incubators

Complete	Time Frame	Milestone	Explanation of Progress
✓	2021	Extend Existing Contracts Through Q2 2022.	Contract negotiations are in process for extension through Q2 2022.

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. The scoring process took longer than anticipated but awards are expected to be issued in Q2 2021.
✓	2021	Issuance of awards from solicitation.	Solicitation launched and applications received. Three awards were made in Q1 2021.

Near-Term Milestones for Cleantech Start-Up Growth Corporate Challenges

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2021	Startups accepted into the first cohort.	Both active corporate challenges accepted their respective 1st cohorts.

Near-Term Milestones for Cleantech Start-Up Growth Carbotech Development Initiative

Complete ✓	Time Frame	Milestone	Explanation of Progress
✓	2021	Launch competitive solicitation for Program Administrator.	Competitive solicitation for Program Administrator launched on April 7, 2021. Press release: https://www.nyserda.ny.gov/About/Newsroom/2021-Announcements/2021-04-07-Governor-Cuomo-Announces-10-Million-to-Establish-the-Carbotech-Development-Initiative
	2021	Issue awards from solicitation.	The Program Administrator will issue awards from solicitation, near the end of 2021 after a Program Administrator is selected and issues grant funding solicitation(s).
	2021	At least \$2,500,000 in cost share due from Program Administrator.	The Program Administrator will issue awards from solicitation, near the end of 2021, after the Program Administrator is selected and issues its grant funding solicitation(s).
	2021	Issue solicitation for Fellowship Partner.	The solicitation for the Fellowship Partner is in development and expected to be issued in mid-2021.

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

Advancing Agricultural Energy Technologies
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
Consumer Awareness
Electric Vehicles—Rebate
Energy Storage Technology and Product Development
Heat Pumps Phase 1, 2017
Manufacturing Corps

Novel Business Models and Offerings
Offshore Wind Master Plan
Offshore Wind Pre-Development Activities
On-Site Energy Manager
Power Electronics Manufacturing Consortium
Reducing Barriers to Deploying Distributed Energy Storage
Renewable Heat NY—Clean and Efficient Biomass Heating
REV Campus Challenge
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 <http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?Mattercaseno=18-M-0084>
- 3 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 budget/goal.
- 4 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 (nyserderda.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).
- 5 New Efficiency: New York <https://www.nyserderda.ny.gov/About/Publications/New-Efficiency>
- 6 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 55.5% of the total approved budget to date, would be included with total NYSERDA commitments.
- 7 If solicitations with upcoming due dates were factored into the total NYSERDA commitments in the Market Development Initiative Research and Spending table, an additional \$55,589,289 or 46.4% of the total approved budget to date, would be included with total NYSERDA commitments.
- 8 The Market Characterization and Design chapter line item includes funds to support overarching, non-initiative-specific evaluation studies.
- 9 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.
- 10 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 \$95,092,847 or 81.1% of the total approved budget to date, would be included with total NYSERDA commitments.
- 11 The Market Characterization and Design chapter line item includes funds to support overarching, non-initiative-specific evaluation studies.
- 12 Leveraged funds from the National Offshore Wind Consortium initiative are inclusive of contributions from the Department of Energy.

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