Clean Energy Fund Quarterly Performance Report through September 2025

Final Report | December 2025

NEW YORK STATE | NYSERDA
New York State Energy Research and Development Authority

50 YEARS 1975-2025

NYSERDA's Mission:

NYSERDA catalyzes New York's clean energy transition.

Our Vision:

Clean energy that supports a healthier and thriving future for all New Yorkers.

Our Promise to New Yorkers:

NYSERDA serves New York State as a trusted and credible resource for energy information, policies, and programs, through objective analysis and planning, innovative solutions, and impactful investments that are valued by New York residents and businesses.

NYSERDA Record of Revision

Document Title
Clean Energy Fund Quarterly Performance Report through September 30, 2025

Revision Date	Description of Changes	Revision on Page(s)
December 1, 2025	Original Issue	

Clean Energy Fund Quarterly Performance Report through September 30, 2025

Final Report

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About The Clean Energy Fund and This Report

The Clean Energy Fund (CEF), approved by the Public Service Commission (PSC) Order on January 21, 2016[1] and later modified on September 9, 2021,[2] was established as a commitment to clean energy and efficiency measures, recognizing that deploying programs at scale has potential to address the pressing environmental and energy challenges, while providing enormous economic opportunity for New York State. The CEF supports New York State's advancement of clean energy and climate goals along with a more affordable and resilient energy system. Energy efficiency is a cornerstone of the State's strategy 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 or the Authority) on April 26, 2018, and as adopted by the Public Service 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] The Climate Leadership and Community Protection Act (Climate Act), signed July 2019 and effective January 1, 2020, adopted this energy efficiency target, which puts the State on a path to complete carbon-neutrality across all sectors of the economy, including power generation, transportation, buildings, industry, and agriculture. In April 2022, the PSC approved an expansion to the NY-Sun program to further support efforts meeting the State's clean electricity goals. The Climate Act mandates the following:

- 85% Reduction in GHG Emissions by 2050
- 100% Zero-emission Electricity by 2040
- 70% Renewable Energy by 2030
- 9,000 MW of Offshore Wind by 2035
- 3,000 MW of Energy Storage by 2030[4]
- 6,000 MW of Solar by 2025 and 10,000 MW of Solar by 2030
- 22 million tons of carbon reduction through Energy Efficiency and Electrification
- Minimum 35 percent of the benefits of clean energy investments are directed to disadvantaged communities

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 resiliency, while encouraging competition and innovation that delivers value to consumers.

The CEF is comprised of four distinct portfolios (CEF Portfolio):

- Market Development (MD)
- Innovation & Research (IR)
- NY-Sun
- NY Green Bank

This report provides a collective view of progress for all four portfolios against CEF targets (Figures 1 and 2) and further details quarterly and cumulative activity for the MD and IR portfolios through September 30, 2025 (Figure 3). The September 9, 2021, PSC Order requires quarterly reporting for the MD and IR portfolios which continue to include the following:

- Progress toward cumulative and annually-prorated incremental targets and budgets.
- Progress toward the CEF's contribution to New Efficiency: New York (NE:NY) targets.
- A performance summary discussion of key CEF initiatives.
- A summary of acquired benefits and projected benefits committed, compared to investment plan projections.

To meet these reporting requirements, this report document is accompanied by a scorecard (spreadsheet) that contains all plan and progress information related to CEF activity, also filed quarterly. This New York State Energy Research and Development Authority (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 data sets coincides with a similar update to the Clean Energy Dashboard (CED), 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 CED and is summarized in section 3 of this report. Quarterly reporting for NY Green Bank is similarly provided within NYSERDA's quarterly scorecard and the CED, but also within a separately filed report.[5]

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1 Clean Energy Fund Performance Overview

1.0 Progress Toward Aggregate Clean Energy Fund Goals

Figures 1 and 2 present a comprehensive picture of progress against the CEF authorized budget and associated benefit targets reflecting all four CEF Portfolios (MD, IR, NY-Sun, and NY Green Bank). Progress shown against each key performance metric represents results through September 30, 2025, and nets out overlap across portfolios where it is known to occur. Plans depicted throughout this report reflect the November 21, 2025 Compiled Investment Plan (CIP) filing made by NYSERDA.

Figure 1 captures the status of CEF funding while Figure 2 depicts progress of the combined portfolios against the latest CEF ordered benefit targets. Figures 1 and 2 should be viewed together to properly relate investments to results. In each of these visuals, combining what has been expended/acquired with encumbered/committed results demonstrates NYSERDA's total progress toward CEF targets, while adding in the remaining expected (planned) values serves to illustrate the full potential in NYSERDA's programmed portfolios.

Figure 1. Clean Energy Fund Portfolio Expected Investment Versus Targets

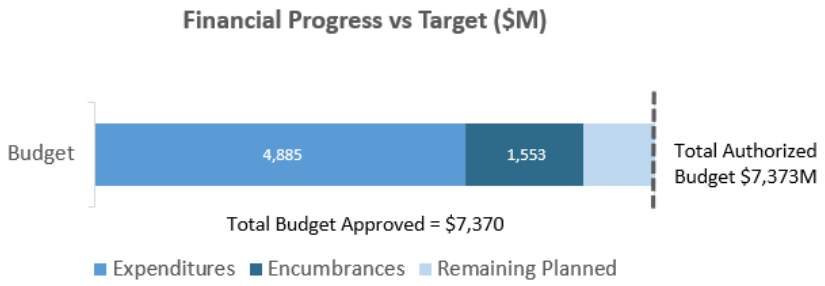


Figure 1 Supporting Data		Total Authorized Budget	Budget Approved Current Total	Budget Approved % of Authorized	Expended Funds Current Total	Expended Funds % of Authorized	Encumbered Funds Current Total	Encumbered Funds % of Authorized	Remaining Planned Total Balance	Remaining Planned % of Authorized	Funding Not Yet Approved
Market Development (MD)	Program Funds	$ 2,399.7 M	$ 2,370.9 M	100%	$ 1,619.0 M	68%	$ 582.1 M	24%	$ 169.7 M	7%	$ 0.9 M
	NYS Cost Recovery Fee		$ 28.0 M		$ 19.0 M		$ 0.0 M		$ 9.0 M		
Innovation & Research (IR)	Program Funds	$ 631.7 M	$ 623.0 M	100%	$ 361.5 M	58%	$ 173.4 M	27%	$ 88.2 M	14%	$ 1.9 M
	NYS Cost Recovery Fee		$ 6.8 M		$ 3.7 M		$ 0.0 M		$ 3.0 M		
MD and IR combined	Administration	$ 274.4 M	$ 274.4 M	100%	$ 238.3 M	87%	$ 0.0 M	0%	$ 36.1 M	13%	$ 0.0 M
	Evaluation	$ 124.2 M	$ 124.2 M	100%	$ 55.9 M	45%	$ 23.2 M	19%	$ 45.0 M	36%	$ 0.0 M
	MD and IR Total	**$ 3,430.0 M**	**$ 3,427.2 M**	**100%**	**$ 2,297.4 M**	**67%**	**$ 778.8 M**	**23%**	**$ 351.1 M**	**10%**	**$ 2.8 M**
NY-Sun	Program Funds	$ 2,904.8 M	$ 2,904.8 M	100%	$ 1,592.7 M	55%	$ 773.6 M	27%	$ 538.5 M	19%	$ 0.0 M
	NYS Cost Recovery Fee	$ 28.8 M	$ 28.8 M	100%	$ 14.5 M	50%	$ 0.0 M	0%	$ 14.3 M	50%	$ 0.0 M
	Administration	$ 58.8 M	$ 58.8 M	100%	$ 31.1 M	53%	$ 0.0 M	0%	$ 27.7 M	47%	$ 0.0 M
	Evaluation	$ 3.5 M	$ 3.5 M	100%	$ 1.8 M	52%	$ 0.2 M	6%	$ 1.5 M	42%	$ 0.0 M
	NY-Sun Total	**$ 2,995.8 M**	**$ 2,995.8 M**	100%	**$ 1,640.1 M**	**55%**	**$ 773.8 M**	**26%**	**$ 581.9 M**	**19%**	$ 0.0 M
NY Green Bank	**Total**	**$ 947.1 M**	**$ 947.1 M**	**100%**	**$ 947.1 M**	**100%**	**$ 0.0 M**	-	**$ 0.0 M**	-	-
CEF Total		**$ 7,372.9 M**	**$ 7,370.2 M**	**100%**	**$ 4,884.6 M**	**66%**	**$ 1,552.6 M**	**21%**	**$ 933.0 M**	**13%**	**$ 2.8 M**

- Authorized Funding per Order: Approving Clean Energy Fund Modifications, issued and effective September 9, 2021, and inclusive of the approved 10 GW Distributed Solar Roadmap in April 2022, and later revision to NY-Sun funding and distributed solar Target issued April, 2025.
- NY-Sun totals shown here exclude $407 million in non-CEF NYSERDA funded solar project expenditures (see Table 12).

The summary of benefit progress reflects evaluated totals, incorporating verified gross acquired savings where evaluations have been completed, and reflects gross savings values elsewhere. Through Q3 2025, measurement and verification activities have resulted in an adjustment to direct gross total energy savings by approximately -3.1 TBtu. Indirect benefits from market transformation are included in acquired totals where they have been quantified through evaluation, now adding approximately 7.2 TBtu total energy savings. Conservative estimates of indirect benefits are also included in the remaining plans generally reflecting 50 percent of the anticipated achievement as is consistent with other plan filings that account for uncertainty in timing and potential overlap across the portfolio that has yet to be fully evaluated.

Figure 2. Clean Energy Fund Portfolio Expected Benefits versus Targets

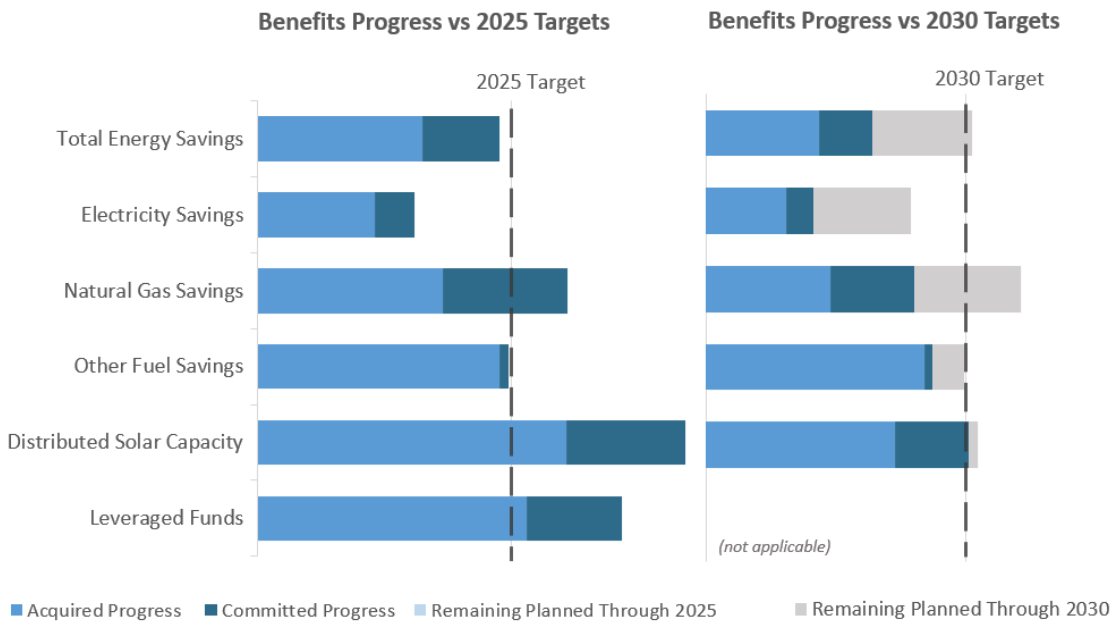


Figure 2 Supporting Data	Acquired Progress	Committed Progress	Remaining Planned Through 2025	Total Expected Through 2025	2025 Order Target	Remaining Planned Through 2030	Total Expected Through 2030	2030 Order Target
Total Energy Savings (MMBtu equivalent, millions)	34.5	16.0	-	46.5	53.0	30.4	80.9	79.0
Electricity Savings (MWh, millions)	3.1	1.0	0.2	4.4	6.7	3.8	7.9	10.0
Natural Gas Savings (MMBtu, millions)	18.3	12.2	-	25.8	25.0	15.6	46.1	38.0
Other Fuels Savings (MMBtu, millions)	14.3	0.5	-	14.3	15.0	2.1	16.9	17.0
Distributed Solar Capacity (Renewable MW)	7,291	2,814	-	10,105	6,000	363	10,469	10,000
Leveraged Funds ($ millions)	$21,188	$7,464	-	$28,652	$20,000	-	$28,652	n/a

Benefits Metrics Progress as Percent of Totals	Acquired + Committed (values summed from above)	Acquired + Committed as a Percentage of Total Expected Through 2025	Acquired + Committed as a Percentage of 2025 Order Target	Acquired + Committed as a Percentage of Total Expected Through 2030	Acquired + Committed as a Percentage of 2030 Order Target
Total Energy Savings (MMBtu equivalent, millions)	50.5	109%	95%	62%	64%
Electricity Savings (MWh, millions)	4.1	95%	62%	52%	41%
Natural Gas Savings (MMBtu, millions)	30.5	118%	122%	66%	80%
Other Fuels Savings (MMBtu, millions)	14.8	104%	99%	88%	87%
Distributed Solar Capacity (Renewable MW)	10,105	100%	168%	97%	101%
Leveraged Funds ($ millions)	$28,652	100%	143%	100%	n/a

- Energy savings values are annual; Total Energy Savings measures the combined Electricity and Fuel savings net of usage; therefore, values will not sum to the total of individual electric and fuel savings values.

- CEF initiatives not dedicated to building energy efficiency (Electric Vehicles - Rebate, Combined Heat and Power, and Fuel Cells) have been excluded from progress and plans toward the first four energy saving targets shown above.
- Energy savings forecast updated for Q3 2025 to reflect November 21, 2025 CIP filing. This filing was made to address an error discovered with Energy Management Technology and LMI Multifamily projections, lowering the forecast of indirect energy savings and subsequently the overall forecast of total energy savings in Figure 2.
- Overlap where it is known or perceived to exist between portfolios has been removed from progress reported.
- Distributed Solar Capacity includes 1,481 MW of non-NYSERDA installations taken from the Statewide Solar Projects dashboard, which is populated with data from utility interconnection inventories. This data set includes all distributed solar interconnected in NYS, including hundreds of MWs which did not receive NYSERDA funding. Committed project data is maintained by NYSERDA independently of interconnection data. Since the two data sets define project completion date differently, some projects reported as committed may also be included as acquired under the "Non-NYSERDA Statewide Installations" (interconnection balance) figure. As the pipeline of NYSERDA commitments are drawn down over time (projects are considered acquired in both data sources), this overlap will be systematically eliminated.
- Distributed Solar 2030 Order Target updated to reflect April 2025 DPS Order.
- Leveraged Funds progress here includes non-CEF NYSERDA funded solar projects of $2,057 million acquired and $96 million committed, consistent with overall reporting toward CEF distributed solar targets which include all solar statewide.
- Leveraged Funds Total Expected benefit values do not currently include any anticipated indirect impacts.
- Neither Distributed Solar or Leveraged Funds Total Expected Through 2025 and 2030 values include forward-looking estimates from NY Sun or NY Green Bank portfolios at this time.
- Benefits metrics that have not been given 2030 Targets in the Order are shown as "not applicable."

As Figures 1 and 2 illustrate, NYSERDA has made significant progress positioning the collective portfolios to achieve the CEF Order Targets on both 2025 and 2030 timelines. An explanation of progress and the current portfolio mix is as follows:

- Over nine years into the ten-year CEF commitment timeline, every metric with the exception of electricity savings is near or above a linear measure of progress when comparing the total committed benefits through the current quarter, and this progress will be bolstered as more evaluation studies enable reporting of indirect impacts from the CEF.
- Acquired Total Energy Savings (MMBtu equivalent) through 2025 continue to show the effects of current clean energy and broader market challenges (supply chain disruptions, skilled labor availability, increased construction costs) however the outlook for impact anticipated through 2030 remains positive, with Targets achievable through the combination of direct benefits related to projects and indirect market impacts influenced by programs broadly.
- Electricity savings are being delivered more slowly than fuel savings as illustrated by the Figure 2 visual, but the strong foundation of fuel-related projects, of which significant savings are already considered acquired in the portfolio, is boosting the near-term 2025 view and firming up the overall potential for 2030 achievement.
- Renewable energy capacity MW surpassed the 6GW 2025 target in Q3 2024 and the portfolio is well positioned to achieve the expanded 2030 target of 10.5 GW.
- Leveraged funding acquired and committed progress is outpacing other metrics due to strong NY-Sun and Innovation & Research returns, still reflecting significant gains this quarter as a result of reporting follow-on funding for a large number of innovation projects for the first time in Q4 last year, as well as significant investment in a company supported through the Long Duration Energy Storage initiative.

The September 2021 CEF Order included a target regarding equity for disadvantaged communities (DACs), specifically that a minimum of 35 percent of the benefits of CEF investments would accrue to

disadvantaged communities. In April 2025, NYSERDA filed the third installment of this Disadvantaged Communities Report focused on ratepayer funded programs, which included place-based investments and benefits across the Clean Energy Fund portfolio, covering years 2020–2024.

Additionally, NYSERDA is required to track and report other reference metrics outlined in Appendix C of the CEF Order, and monitors other impacts as well. Carbon emissions reductions and bill saving metrics are presented below for the combined CEF portfolios. Outdoor air quality improvements from fuel savings include reductions in particulate matter (PM 2.5), nitrogen oxides (NOx), sulfur dioxide (SO_2), ammonia (NH_3), and volatile organic compounds (VOC). Avoided co-pollutants contribute to improved health outcomes in communities across the State.

Table 1. Other Anticipated Benefits through 2025 and 2030

Annual Benefits Metrics ** Direct + Indirect Benefits ** Overlap Accounted	Acquired Progress	Committed Progress	Total Progress as of Current Reporting Period	2025 Order Expectation (Anticipated Benefit)	2030 Order Expectation (Anticipated Benefit)
Emissions Reductions (CO2e Metric Tons, millions)	7.8	3.1	10.8	9.0	14.0
Participant Bill Savings ($ millions)	$1,412	$700	$2,112	n/a	n/a
PM 2.5 (lbs, millions)	308	6	314	n/a	n/a
NOx (lbs, millions)	11,442	1,548	12,990	n/a	n/a
SO2 (lbs, millions)	96	11	107	n/a	n/a
NH3 (lbs, millions)	431	72	502	n/a	n/a
VOC (lbs, millions)	576	79	655	n/a	n/a

- As with other tables presented earlier, overlap where it is known or perceived to exist between portfolios has been removed from progress reported.
- Air pollutant emissions factors were applied to direct and indirect annual energy savings by sector (commercial, industrial, residential, transportation) and fuel type (coal, diesel, distillate oil, natural gas, residual oil, wood).
- Where a factor was not available for relevant program fuel savings, the closest conservative approximation was used.
- Commercial, Industrial and Residential factor sources include USA EPA, and other technical reports.[6, 7, 8]
- Transportation factors were developed using EPA's Motor Vehicle Emissions Simulator (MOVES).

2 Market Development and Innovation & Research Performance

On May 20, 2022, NYSERDA filed a comprehensive update to all MD and IR portfolio plans in the first edition of the Compiled Investment Plans (CIP), as prescribed in the CEF Order. These plans convey expected funding and benefit progress for each initiative, which are used to gauge progress over time as outlined in these quarterly reports and elsewhere. Each fall, NYSERDA completes 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 to learn from the market. This update was filed November 1, 2024, approved by DPS December 20, 2024 and operational beginning January 1, 2025. The plans were later updated with two subsequent filings in April and November, both of which have been incorporated into the plans presented throughout this report. In October NYSERDA filed an extension request regarding the annual Fall reforecast and CIP update for 2025, which was later approved by DPS. NYSERDA will incorporate actual progress reported through 2025 for all budgets and benefits updated in the CIP along with other traditional forecast updates when the plans are filed April 1, 2026.

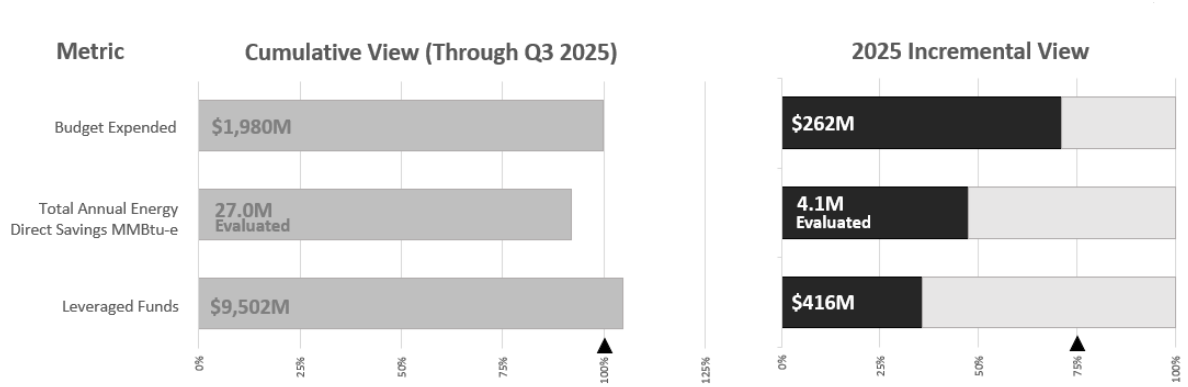
NYSERDA closely monitors progress of the portfolios towards CEF benefits targets using both cumulative and incremental measures, which can be reviewed in granular detail for the portfolio and for each program and metric within the Clean Energy Dashboard. In addition to these resources, NYSERDA also reports CEF-related efforts specific to the Low-to-Moderate Income Joint Implementation Plan[9] and the New York State Clean Heat Implementation Plan in respective Annual Reports.

Figure 3 provides a high-level view of NYSERDA's MD and IR portfolio performance to plan, measuring progress toward expended funding and acquired direct benefit plans through Q3 2025[10]. Key points to understand the data presented in Figure 3 include:

- The Cumulative View (Through Q3 2025) represents years 2016–2024 and three quarters of 2025; 100 percent in this view represents the cumulative *planned* amounts for that timeframe, prorated to enable comparison of progress through the current quarter.
- The 2025 Incremental View represents progress reported in the current calendar year against the current calendar year plan in total, with an expectation that 100 percent of the plan should be achieved by year-end. This secondary measure helps NYSERDA monitor and assess specific trends throughout the year. Progress illustrated in this view can be influenced by how NYSERDA finishes the previous year as those plans represent an estimate; the portfolio may start the new year either ahead or behind the forecasted finish of the previous year.
- Total Annual Energy Savings is measured in MMBtu equivalents consistent with Figure 2; Gross and Evaluated (Verified Gross) reported savings scenarios are reflected in these progress bars to illustrate both viewpoints of progress as the results from evaluation studies become more prominent in NYSERDA progress reporting.

- For each of these metrics, all CEF MD and IR initiatives are included (no exclusions); CEF Admin, Evaluation, and NYS Cost Recovery Fees are excluded from the budget totals.

Figure 3. Market Development/Innovation & Research Progress and Performance



Cumulative measures of NYSERDA's performance in Figure 3 show strong progress through Q3 2025, though the incremental view shows slower progress toward the 2025 plan for total energy savings and leveraged funding. Because NYSERDA estimates how the previous year is expected to finish a full quarter before it closes, the subsequent year always begins with some level of progress over/under the forecasted plan. In the case of 2024, NYSERDA finished the year with benefits totals higher than the revised plan forecasted in the 11/1/24 filing for both energy savings and leveraged funding, meaning less *incremental* progress is necessary in 2025 to deliver on the *cumulative* goal. *Incremental* progress is likely to appear lagging plan throughout the year for leveraged funding considering the plan has not yet been updated to reflect the significant gains reported in Q4 2024. Progress to date shows that NYSERDA has surpassed the cumulative leveraged funding goal through year-end 2025 (as well as the 2025 Order Target for all CEF), in large part due to the reporting of follow-on funding for Innovation & Research projects in Q4 2024. NYSERDA is also forecasting the largest single-year of energy savings acquired since launch, acknowledging some lag to an assumed linear plan through the third quarter with progress discussed in greater detail for the Top 15 Energy Savings Impact initiatives in Table 2 that follows.

2.0 Top Energy Impact Initiative Performance Summary

In NYSERDA's Market Development portfolio, 15 key initiatives currently account for approximately 92 percent of the expected total energy saving benefits (represented by equivalent annual MMBtu) and 55 percent of the total approved Market Development budget. These initiatives warrant special attention due to the weight they carry in terms of the overall success of the CEF in delivering expected benefits and are characterized in greater detail in Table 2 that follows.

See table next page.

Table 2. Performance Summary for Market Development's Top Energy Impact Initiatives

Cumulative progress to plan is measured on a prorated basis through Q3 as described in detail for Figure 3 above. Budget Percent Performance is progress against approved funding expenditure plans while Energy Percent Performance is progress against the equivalent annual MMBtu acquired plan. Benefits analysis represents verified gross direct savings where evaluated through studies and gross savings only where evaluation results are not applicable.

MMBtu Impact Rank	Initiative	Cumulative Progress (% Performance To Plan) Budget %	Savings Type	Energy %	Progress Narrative
1	Technical Services	113%	Evaluated:	127%	Progress of budget expenditures and benefits remains strong. Technical Services will be fully committed by end of 2025, if not sooner. An impact evaluation for the Technical Services portfolio is underway and future reports will detail results.
2	Product and Appliance Standards	102%		n/a	Work is ongoing to implement standards adopted in 2023 with the expansion of the statewide compliance program. This initiative forecasts all impacts as indirect savings. An evaluation is underway; future reports will summarize findings and benefits will be reported per study results.
3	Market Challenges	86%	Gross:	29%	There are 28 active Carbon Challenge projects in various stages of implementation, with 3 large projects anticipated to acquire savings by the end of 2025, including the 4th largest gas-saving project by volume in the program portfolio. Active projects have continually experienced delays due to supply chain and labor lead times impacting energy savings acquired. The program is monitoring projects for potential impacts on equipment delivery related to federal action on tariffs. Empire Building Challenge has 19 demonstration projects in different stages of design and implementation, with the first project now completed and 3 more projects at 80-90% completion. Savings will be reported as measures are installed per the phased implementation plans of these large demonstrations. An evaluation is anticipated to begin early 2026 and future quarterly reports will summarize findings.
4	Building Operations and Maintenance Partnerships	102%	Evaluated:	93%	The program closed to new applications October 31, 2025, and all CEF funds will be committed. An impact and market evaluation were completed in Q1 2025. A follow-up study is underway now and is anticipated to be complete Q1 2026.

Table 2 continued

MMBtu Impact Rank	Initiative	Cumulative Progress (% Performance To Plan) Budget %	Savings Type	Energy %	Progress Narrative
5	Energy Management Technology	99%	Evaluated:	41%	Expenditures are trending favorably, though energy benefits still lag plan. An evaluation of verified gross savings completed in 2021 significantly reduced energy savings from the gross values reported. A notable amount of this reduction was due to delayed installation of capital improvement measures, (observed across several NYSERDA initiatives) and a longer-than-anticipated timeline for measure installations, which created a delay in acquiring savings. A second evaluation concluded in 2023 showing improved realization rates and a third study was completed in Q3 2025 for Commercial/Industrial and Multifamily direct and indirect benefits. C/I realization rates were consistent from prior evaluations for electric and doubled for natural gas while indirect benefits were quantified to be higher than originally estimated. Multifamily realization rates were low for both electric and natural gas but quantified indirect benefits tracked close to program estimates for electricity and higher for natural gas. Energy projections for indirect savings were updated in a November 2025 CIP filing to correct an error discovered in the underlying forecast method; energy savings projections through 2030 reduced by 7.3 TBtu-e as a result.
6	Industrial Transition	100%	Evaluated:	98%	Inactive program with one remaining open project to close out this initiative in 2026. A final Impact Evaluation was completed in Q3 2025 showing high realization rates; section 4 summarizes findings.
7	LMI Multifamily	116%	Evaluated:	103%	Progress continues closing out projects in the Multifamily Performance Program (MPP) and all projects are expected to be completed by end of December 2025. Phase 1 of the impact closeout evaluation of MPP is expected to be completed by Q1 2026. Tech Assistance Multifamily LMI and Owner's Rep will commit all remaining incentives by end of 2025. Technical Assistance is undergoing an impact evaluation that will include the LMI Multifamily component and the results of that evaluation are expected in Q2 2026. Details of evaluation results will be shared in future quarterly reports. Affordable housing partnership (Direct Injection) program expenditures are trending favorably. Additionally, NYS Department of Housing and Community Renewal (HCR) and NYC Department of Housing Preservation and Development (HPD) retrofit projects, representing $20M+ and $2M+, respectively shall be awarded in Q4 2025. Evaluation activities are ongoing for Direct Injection and Phase 1 of the study is anticipated to be complete by Q1 2026. Future quarterly reports will summarize findings. Energy projections for indirect savings were updated in a November 2025 CIP filing to correct an error discovered in the underlying forecast method; energy savings projections through 2030 reduced by 0.7 TBtu-e as a result.
8	Energy Management Practices	98%	Evaluated:	104%	The pace of progress for both expenditures and benefits remains strong. Strategic Energy Manager program closed to Virtual Treasure Hunt applications in July and On Demand applications in October, with projects continuing through 2026. On-site Energy Manager program remains open and will collect CEF applications through Q4 2025.

Table 2 continued

MMBtu Impact Rank	Initiative	Cumulative Progress (% Performance To Plan) Budget %	Savings Type	Energy %	Progress Narrative
9	Codes and Standards for Carbon Neutral Buildings	94%		n/a	NYS successfully adopted a new energy code in July 2025, making New York the first state to officially adopt the 2024 model I-Codes. This work represents the successful culmination of a 5-year development, advancement, and regulatory process for the NYSERDA team. Core work for code training and resources to support to a code update is moving forward. This initiative forecasts all impacts as indirect savings. An evaluation was completed in Q1 2025. As presented in this study, NYSERDA exceeded its targets in each of the 5 years of the evaluation and delivered approximately 2.0 TBtu of savings from CEF-specific activities over that time. Since 2015, work on codes has delivered 3.7 TBtu of savings (all funding sources).
10	New Construction – Market Rate	110%	Evaluated:	88%	The initiative continues to perform well on progress of both budget and energy benefits, with significant expenditures coming from Building Cleaner Communities (BCC), Buildings of Excellence (BOE), and the New Construction-Commercial and New Construction-Housing legacy programs as projects advance through construction stages toward completion. The Buildings of Excellence Early Design Support program also remains open and contributing toward progress to date. The 2025 Round of BCC was launched in Q2 2025 and closed in Q3 2025 with awards likely coming in Q4 2025 or Q1 2026. Round 6 of BOE was launched in Q2 2025 with awards announced later in 2026. Programmatic direct contracting for technical assistance support will also occur in Q4 2025. An evaluation focusing on multifamily and commercial projects was completed Q1 2025 showing strong realization rates. An update is underway now and anticipated to be complete Q4 2025. New Construction initiatives are similar across both the market rate and LMI sectors. Project cancellations across the portfolio do still continue, but the funding is repurposed wherever possible.
11	Clean Energy Communities	101%	Evaluated:	n/a	NYSERDA's Clean Energy Communities (CEC) Program has been successful, gaining participation from approximately 88% of local governments across the state, with 77% of Disadvantaged Communities (DACs) completing at least one High Impact Action (HIA) and 50% of DACs completing four or more. These HIAs and coordinator assistance provide energy efficiency, renewable energy, and sustainable development projects for NYS communities. Strong demand required NYSERDA to suspend the application process in November 2024 with funding fully allocated. CEC now reports all impacts as indirect benefits and an updated evaluation is underway to properly characterize & report indirect benefits across years 2019 - 2023, anticipated to be complete Q4 2025. This study will also include an assessment of grant offerings and leveraged funds.

Table 2 continued

MMBtu Impact Rank	Initiative	Cumulative Progress (% Performance To Plan) Budget %	Savings Type	Energy %	Progress Narrative
12	New Construction LMI	97%	Evaluated:	95%	The initiative continues to perform well on both budget and energy benefits, with significant expenditures also coming from Buildings of Excellence (BOE) and the New Construction-Housing legacy program as projects advance through construction stages toward completion. The Buildings of Excellence Early Design Support program also remains open and contributing toward progress to date. Round 6 of BOE was launched in Q2 2025 with awards announced later in 2026. Programmatic direct contracting for technical assistance support will also occur in Q4 2025. An updated impact and market evaluation are underway and anticipated to be completed in Q4 2025. New Construction initiatives are similar across both the market rate and LMI sectors. Project cancellations across the portfolio do still continue, but the funding is repurposed wherever possible.
13	Clean Green Campuses	110%	Evaluated:	112%	Initiative progress is in good standing and all funding is now fully committed. As projects are completed, excess funding will be recommitted while possible to provide continued outreach support to the sector.
14	P-12 Schools	117%	Gross:	69%	Program incentives are fully committed. Progress of expenditures continues to be strong while acquired savings are lagging due to two large projects being delayed and the impact evaluation being postponed until more projects are completed. The acquired savings will continue to increase as more Clean Green Schools Initiative technical assistance projects are completed. A market and impact evaluation (through a larger Technical Services impact evaluation) are both underway and future reports will summarize findings.
15	Heat Pumps Phase 2 (2020)	95%		n/a	Pace of expenditures is trending favorably. This initiative forecasts all impacts as indirect savings and to date, NYSERDA has measured over 1.2 TBtus of equivalent energy savings covering period 2020 - 2023, considerably higher than the forecast savings for that same time period. Analysis for the 2024 program year will begin in January 2026 incorporating utility heat pump project data and, as available, Heating & Air Conditioning Distributor Information (HARDI) data. Results will be detailed in future reports.

2.1 Quarterly Benefits Progress Versus Plan

Table 3. Market Development and Innovation & Research Portfolio—Annual Direct Benefits

The table that follows represents all Market Development and Innovation & Research initiatives and their associated direct benefits. Progress reported here is a blend of verified gross and gross savings. Where evaluation studies have been completed and yield realization rates, verified gross acquired savings are reported. Where studies are not yet complete, those initiatives and/or time periods will continue reporting gross savings. Note: measurement and verification activities have reduced gross savings by approximately 3.1 TBtu through Q3 2025.

Market Development Innovation & Research Annual Benefits Metrics ** Direct Only **	**Planned Incremental Acquired Benefits in Current Year**	**Current Year Acquired Benefits Through Current Quarter**	**Cumulative Acquired Benefits Through Current Quarter**	**Committed Benefits as of Current Quarter** (Committed but not acquired)	**Total Progress as of Current Quarter** (Total Acquired + Committed)	**Total Expected Benefits Through 2025**	**Total Progress as % of Total Expected Benefits Through 2025**	**Total Expected Benefits Through 2030**	**Total Progress as % of Total Expected Benefits Through 2030**
Total Energy Savings (MMBtu)	8,576,282	4,071,320	27,024,842	16,004,586	43,029,428	31,504,850	137%	46,171,234	93%
Electricity Savings (MWh)	720,265	234,612	2,581,948	1,045,846	3,627,794	3,017,313	120%	3,873,767	94%
Total Fuel Savings (MMBtu)	6,431,241	3,741,961	29,003,917	12,784,706	41,788,623	31,496,593	133%	43,631,794	96%
Natural Gas Fuel Savings (MMBtu)	6,001,365	2,700,466	14,651,546	12,242,630	26,894,176	17,876,508	150%	28,786,854	93%
Other Fuel Savings (MMBtu)	429,875	1,041,495	14,352,371	542,076	14,894,447	13,620,085	109%	14,844,939	100%
Renewable Energy Generation (MWh)	14,093	14,138	303,941	55,713	359,655	170,575	211%	172,255	209%
Renewable Energy Capacity (MW)	1	10	442	12	455	184	247%	184	247%
Total Leveraged Funds ($M)	$1,162	$416	$9,502	$3,943	$13,445	$9,357	144%	$12,713	106%

- Verified savings as a percent of total reported direct savings varies by metric and includes electricity (60% verified), natural gas (60%), and other fuels (12%). The measurement and verification work to verify savings is done on a periodic basis, most commonly covering at least 1-2 years of program activity. This work can only begin once adequate post-installation operation has occurred. Additionally, methods and data availability vary significantly between electricity, natural gas, and other fuels, which is one of the underlying causes of varying percentages of savings verified.
- Total Energy Savings measures the combined electricity and fuel savings net of usage; therefore, may not sum to the total of individual electric and fuel savings values.
- NYSERDA makes no claim to the environmental attributes or any New York Generation Attribute Tracking System (NYGATS) certificates that may be associated with these projects.

Table 4. Market Development and Innovation & Research Portfolio—Annual Indirect Benefits

Indirect benefits are defined as long-term market effects from market activity not directly funded by NYSERDA. Progress is reported as market impacts are verified through the completion of market evaluation studies which will occur over time, depending upon the period of each study, which varies from one initiative to another. More information on the Evaluation, Measurement, and Verification can be found in Section 4 of this report. NYSERDA makes conservative estimates of indirect benefits, generally reflecting 50 percent of the remaining planned, anticipated achievement, accounting for uncertainty in timing and potential overlap across the portfolio that has yet to be fully evaluated. Note that while indirect benefits quantified through Q3 2025 generally show higher evaluated results than planned for programs that have been evaluated, NYSERDA has not yet evaluated and quantified all indirect benefits anticipated across the portfolio through 2025 and 2030.

Market Development ** Indirect Only **	Cumulative Indirect Benefits Evaluated Through Previous Period	Indirect Benefits Evaluated in Current Reporting Period	Total Indirect Benefits Evaluated Through Current Reporting Period	Total Indirect Benefits Expected Through 2025	Total Indirect Benefits Evaluated as % of Total Expected Through 2025	Total Indirect Benefits Expected Through 2030	Total Indirect Benefits Evaluated as % of Total Expected Through 2030
Total Energy Savings (MMBtu equivalent)	6,607,290	599,341	7,206,630	14,965,650	48%	34,745,438	21%
Electricity Savings (MWh)	735,524	119,187	854,711	1,685,141	51%	4,360,785	20%
Total Fuel Savings (MMBtu)	4,475,744	192,674	4,668,418	9,694,270	48%	20,499,005	23%
Natural Gas Fuel Savings (MMBtu)	3,437,264	192,674	3,629,939	7,961,645	46%	17,323,975	21%
Other Fuel Savings (MMBtu)	1,038,480	-	1,038,480	1,732,625	60%	3,175,030	33%
Renewable Energy Generation (MWh)	478,683	-	478,683	785,183	61%	1,157,877	41%
Renewable Energy Capacity (MW)	58	-	58	369	16%	516	11%

- Cumulative Indirect Benefits Evaluated Through Previous Period reflects the total reported indirect benefits as of the period, but not necessarily all indirect savings anticipated through the reporting period, since additional studies will likely conclude for past periods and add to these overall figures.
- Total Indirect Benefits Evaluated Through Current Reporting Period, Total Energy Savings updated to include Energy Usage which is not presented as its own metric on this table. Of reported Electricity Usage, -110,803 MWh is netted in the Total Energy Savings calculation.
- Indirect leveraged funding will be captured with future assessments.
- In alignment with the 2022 Electric Vehicles - Rebate impact evaluation findings and the program's theory of change, which indicated broader market effects and adoption from a variety of programmatic efforts, NYSERDA has removed the indirect benefits forecasted for this initiative as reflected in April 2025 CIP filing.
- Per the November 21, 2025 CIP filing, Energy Management Technology and LMI Multifamily energy projections have been updated to correct an error discovered in the underlying forecast method which was incorrectly referencing lifetime savings projections rather than annual savings projections as it should have.

2.2 Quarterly Budgets Progress Versus Plan

Table 5. Market Development Initiatives by Focus Area—Budgets and Spending

See endnote section for more information.[11, 12, 13]

Market Development Focus Area | Initiative	Current Year Expenditures Plan	Current Year Expenditures Through Current Quarter	Encumbrances as of Current Quarter	Total Progress as of Current Quarter (Expended + Encumbered)	Total Expected Expenditures Through 2025	Total Progress as % of Total Expenditures Through 2025	Total Expected Expenditures Through 2030	Total Progress as % of Total Expenditures Through 2030
Clean Heat & Cooling								
Heat Pumps Phase 1 (2017)	$667,179	$325,447	$698,598	$56,444,945	$56,102,697	101%	$56,502,537	100%
Heat Pumps Phase 2 (2020)	$4,240,868	$3,853,270	$13,907,601	$57,006,868	$43,477,697	131%	$62,168,595	92%
Renewable Heat NY - Clean and Efficient Biomass Heating	$115,703	$40,093	$34,721	$13,410,575	$13,410,575	100%	$13,410,575	100%
Solar Thermal Transition	-	-	-	$287,513	$287,513	100%	$287,513	100%
Clean Heat & Cooling Total	**$5,023,749**	**$4,218,809**	**$14,640,920**	**$127,149,901**	**$113,278,482**	**112%**	**$132,369,221**	**96%**
Codes and Standards, & Other Multisector Initiatives								
Codes and Standards for Carbon Neutral Buildings	$8,837,592	$4,783,373	$17,747,486	$44,475,578	$30,782,311	144%	$50,500,000	88%
Information Products and Brokering	$750,000	$307,619	$1,656,329	$4,304,754	$3,281,162	131%	$4,299,998	100%
Market Characterization & Design Market Development	$1,868,916	$745,748	$2,289,063	$22,944,292	$21,778,397	105%	$24,574,225	93%
Product and Appliance Standards	$3,879,143	$3,171,207	$4,999,874	$15,689,810	$11,449,094	137%	$17,199,002	91%
NYGridConnect	$1,484,735	$730,121	$1,962,977	$10,654,666	$9,129,296	117%	$13,000,000	82%
Codes and Standards, & Other Multisector Initiatives Total	**$16,820,386**	**$9,738,069**	**$28,655,729**	**$98,069,100**	**$76,420,259**	**128%**	**$109,573,225**	**90%**
Commercial / Industrial / Agriculture								
Advancing Agricultural Energy Technologies	$1,084,399	$138,000	$1,145,400	$2,100,088	$2,104,449	100%	$2,104,449	100%
Agriculture Transition	-	-	-	$3,598,821	$3,598,821	100%	$3,598,821	100%
Clean Green Campuses	$2,075,000	$2,578,622	$3,081,147	$21,652,901	$17,358,472	125%	$21,650,002	100%
Commercial Transition	$124,999	$173,204	$0	$12,424,392	$12,424,397	100%	$12,424,397	100%
Energy Management Practices	$3,121,236	$1,960,394	$3,203,322	$25,338,233	$23,295,753	109%	$26,476,777	96%
Energy Management Technology	$11,806,692	$7,428,792	$29,393,292	$99,734,611	$73,146,793	136%	$108,298,861	92%
Greenhouse Lighting and Systems Engineering	$729,513	$374,909	$404,604	$5,000,000	$4,950,000	101%	$5,000,000	100%
Industrial Transition	$168,404	$9,331	$153,753	$45,195,765	$45,196,736	100%	$45,196,736	100%
Market Challenges	$21,832,030	$7,120,094	$62,196,407	$107,554,641	$60,070,169	179%	$148,132,457	73%
P-12 Schools	$3,620,000	$5,224,275	$39,368,601	$57,892,518	$16,735,306	346%	$57,600,000	101%
Pay for Performance	-	-	$79,417	$1,779,034	$1,699,616	105%	$1,699,616	105%
Real Estate Tenant	$1,200,116	$346,166	$958,439	$15,723,624	$15,398,346	102%	$15,798,390	100%
Technical Services	$15,786,103	$21,177,376	$38,174,794	$111,454,087	$67,888,020	164%	$122,927,780	91%
Commercial / Industrial / Agriculture Total	**$61,548,492**	**$46,531,163**	**$178,159,176**	**$509,448,715**	**$343,866,876**	**148%**	**$570,908,285**	**89%**
Communities								
Clean Energy Communities	$10,598,056	$6,086,366	$19,006,140	$65,991,756	$49,363,723	134%	$66,271,963	100%
Community Energy Engagement	-	-	-	$4,388,546	$4,388,546	100%	$4,388,546	100%
Communities Total	**$10,598,056**	**$6,086,366**	**$19,006,140**	**$70,380,302**	**$53,752,270**	**131%**	**$70,660,509**	**100%**

Table 5 continued

Market Development Focus Area | Initiative	Current Year Expenditures Plan	Current Year Expenditures Through Current Quarter	Encumbrances as of Current Quarter	Total Progress as of Current Quarter (Expended + Encumbered)	Total Expected Expenditures Through 2025	Total Progress as % of Total Expenditures Through 2025	Total Expected Expenditures Through 2030	Total Progress as % of Total Expenditures Through 2030
Low-to-Moderate Income								
Healthy Homes Feasibility Study	-	-	$32,865	$212,147	$179,282	118%	$179,282	118%
Heat Pumps Phase 2 (2020)	$4,034,206	$1,551,809	$9,362,143	$19,612,098	$12,732,352	154%	$28,000,000	70%
LMI Multifamily	$31,529,880	$22,588,148	$76,519,615	$168,510,664	$87,488,496	193%	$179,529,592	94%
LMI Outreach & Engagement	$2,921,022	$1,055,627	$2,058,189	$7,074,829	$7,015,918	101%	$8,467,401	84%
LMI Pilots	-	-	-	$852,665	$852,665	100%	$852,665	100%
Low Rise New Construction Transition - LMI	$232,000	$148,227	$289,484	$7,926,284	$7,728,133	103%	$7,920,376	100%
Multifamily New Construction Transition - LMI	$610,000	$478,192	$449,830	$7,713,031	$7,340,693	105%	$7,970,981	97%
New Construction - LMI	$16,479,608	$10,420,349	$51,040,947	$123,954,500	$78,972,813	157%	$131,806,255	94%
NYS Healthy Homes Value Based Payment Pilot	$997,750	$858,606	$233,563	$4,254,945	$4,255,016	100%	$4,255,016	100%
Regional Clean Energy Hubs	$20,344,958	$7,330,341	$23,151,080	$42,441,365	$35,155,803	121%	$47,000,000	90%
RetrofitNY - LMI	$2,011,698	$842,781	$703,053	$8,711,546	$8,005,928	109%	$8,717,439	100%
REVitalize	-	-	-	$291,424	$291,424	100%	$291,424	100%
Single Family - Low Income	$33,829,378	$33,680,134	$121,784	$281,828,249	$281,855,709	100%	$281,855,709	100%
Single Family - Moderate Income	$2,560,548	$1,923,557	$253,064	$102,751,323	$102,716,289	100%	$102,751,836	100%
Solar for All	$1,300,000	$354,814	$5,231,007	$12,206,929	$8,189,120	149%	$12,839,585	95%
Low-to-Moderate Income Total	**$116,851,048**	**$81,232,583**	**$169,446,623**	**$788,341,998**	**$642,779,641**	**123%**	**$822,437,561**	**96%**
Multifamily Residential								
Energy Management Technology	$2,224,891	$384,236	$3,803,556	$12,064,338	$10,101,438	119%	$14,056,041	86%
Market Challenges	$2,503,544	$439,355	$5,555,366	$12,879,570	$7,477,145	172%	$13,300,000	97%
Multifamily Low Carbon Pathways	$1,670,074	$1,112,611	$13,669,658	$18,042,593	$5,498,156	328%	$19,670,380	92%
Multifamily Market Rate Transition	-	-	-	$156,214	$156,214	100%	$156,214	100%
Technical Services	$5,702,460	$4,970,724	$9,599,624	$29,022,456	$19,720,955	147%	$30,717,634	94%
Multifamily Residential Total	**$12,100,969**	**$6,906,926**	**$32,628,203**	**$72,165,170**	**$42,953,907**	**168%**	**$77,900,268**	**93%**
New Construction								
Commercial New Construction Transition	$1,055,000	$1,308,098	$1,038,349	$12,441,434	$11,211,782	111%	$12,645,983	98%
Low Rise New Construction Transition - Market Rate	$61,200	$15,973	$64,503	$4,381,292	$4,363,224	100%	$4,381,285	100%
Multifamily New Construction Transition - Market Rate	$162,248	$81,682	$153,920	$1,672,953	$1,614,346	104%	$1,626,873	103%
New Construction - Market Rate	$11,170,827	$12,481,962	$77,207,539	$121,703,947	$43,185,273	282%	$157,975,614	77%
New Construction Total	**$12,449,275**	**$13,887,715**	**$78,464,310**	**$140,199,626**	**$60,374,625**	**232%**	**$176,629,755**	**79%**

Table 5 continued

Market Development Focus Area | Initiative	Current Year Expenditures Plan	Current Year Expenditures Through Current Quarter	Encumbrances as of Current Quarter	Total Progress as of Current Quarter (Expended + Encumbered)	Total Expected Expenditures Through 2025	Total Progress as % of Total Expenditures Through 2025	Total Expected Expenditures Through 2030	Total Progress as % of Total Expenditures Through 2030
Renewables / Distributed Energy Resources (DER)								
Anaerobic Digesters Transition	$1,855,229	$656,331	$7,929,981	$15,414,066	$12,593,213	122%	$13,245,671	116%
Clean Energy Siting and Soft Cost Reduction	$1,439,353	$461,174	$3,936,954	$7,897,710	$4,991,535	158%	$8,795,000	90%
Combined Heat & Power Transition	$5,397,027	$3,847,464	$785,862	$50,736,299	$51,499,999	99%	$51,499,999	99%
Fuel Cells	-	-	-	$4,786,644	$4,786,644	100%	$4,786,644	100%
Offshore Wind Master Plan	-	-	-	$4,965,882	$4,965,882	100%	$4,965,882	100%
Offshore Wind Pre-Development Activities	-	-	$84,700	$9,618,801	$9,789,462	98%	$9,789,462	98%
ORES Support	$381,600	$218,772	$1,228,891	$4,304,117	$3,413,346	126%	$4,176,546	103%
Reducing Barriers to Distributed Deployment	$3,241,160	$1,316,405	$3,857,726	$15,283,091	$14,639,708	104%	$15,450,000	99%
Small Wind Transition	-	-	-	$3,323,673	$3,323,673	100%	$3,323,673	100%
Solar Plus Energy Storage	$2,272,609	$1,424,500	-	$34,449,989	$35,298,116	98%	$35,298,116	98%
Renewables / Distributed Energy Resources (DER) Total	**$14,586,978**	**$7,924,648**	**$17,824,115**	**$150,780,273**	**$145,301,578**	**104%**	**$151,330,992**	**100%**
Single Family Residential								
Consumer Awareness	-	-	-	$2,251,671	$2,251,671	100%	$2,251,671	100%
Heat Pumps Phase 2 (2020)	$4,825,000	$1,430,064	$3,632,765	$10,374,729	$10,136,900	102%	$14,337,698	72%
Pay for Performance	-	-	-	$885,684	$885,684	100%	$885,684	100%
Residential	$13,986,659	$6,640,683	$4,348,414	$52,456,471	$53,158,531	99%	$56,998,862	92%
Single Family Market Rate Transition	-	-	-	$23,528,344	$23,528,344	100%	$23,528,344	100%
Single Family Residential Total	**$18,811,659**	**$8,070,747**	**$7,981,179**	**$89,496,899**	**$89,961,130**	**99%**	**$98,002,260**	**91%**
Transportation								
Electric Vehicles - Rebate	$64,000	-	-	$39,406,074	$39,486,074	100%	$39,498,889	100%
EV Charging and Engagement	$1,500,000	$4,982,025	$318,671	$5,613,031	$2,200,001	255%	$7,184,091	78%
Transportation Total	**$1,564,000**	**$4,982,025**	**$318,671**	**$45,019,105**	**$41,686,075**	**108%**	**$46,682,980**	**96%**
Workforce Development								
Building Operations and Maintenance Partnerships	$4,278,752	$3,653,850	$8,546,671	$31,481,350	$23,559,580	134%	$31,365,551	100%
Talent Pipeline	$10,609,141	$8,873,256	$26,467,269	$78,580,615	$53,849,230	146%	$83,000,000	95%
Workforce Development Total	**$14,887,893**	**$12,527,106**	**$35,013,940**	**$110,061,964**	**$77,408,810**	**142%**	**$114,365,551**	**96%**
NYS Cost Recovery Fee Market Development	$3,217,757	$1,668,370	-	$18,968,674	$20,518,062	92%	$27,978,633	68%
Total Market Development	**$288,460,262**	**$203,774,528**	**$582,139,007**	**$2,220,081,726**	**$1,708,301,715**	**130%**	**$2,398,839,240**	**93%**

Table 6. Innovation & Research Initiatives by Focus Area—Budgets and Spending

See endnote section for more information. [14, 15, 16]

Innovation & Research Focus Area | Initiative	Current Year Expenditures Plan	Current Year Expenditures Through Current Quarter	Encumbrances as of Current Quarter	Total Progress as of Current Quarter (Expended + Encumbered)	Total Expected Expenditures Through 2025	Total Progress as % of Total Expenditures Through 2025	Total Expected Expenditures Through 2030	Total Progress as % of Total Expenditures Through 2030
Buildings Innovation								
Climatetech Commercialization Support	$3,550,000	$5,964,685	$980,840	$9,995,525	$6,850,000	146%	$10,000,000	100%
NextGen Buildings	$7,587,395	$6,854,962	$32,568,273	$58,104,652	$25,817,664	225%	$65,000,000	89%
Buildings Innovation Chapter Total	**$11,137,395**	**$12,819,647**	**$33,549,113**	**$68,100,177**	**$32,667,664**	**208%**	**$75,000,000**	**91%**
Clean Transportation Innovation								
Electric Vehicle Innovation	$9,192,445	$1,620,874	$16,592,700	$30,543,716	$20,762,520	147%	$31,850,000	96%
Public Transportation and Mobility	$3,200,000	$2,327,244	$10,867,376	$21,276,347	$11,621,052	183%	$22,500,000	95%
Clean Transportation Innovation Total	**$12,392,445**	**$3,948,118**	**$27,460,076**	**$51,820,064**	**$32,383,572**	**160%**	**$54,350,000**	**95%**
Climate Resilience Innovation								
Grid ClimateTech Ready Capital	-	-	-	-	-	0%	$12,000,000	0%
Hydrogen Innovation	$1,310,836	$110,297	$4,453,637	$4,646,179	$1,392,029	334%	$7,000,000	66%
Market Characterization & Design Innovation & Research	$190,506	$97,543	$229,921	$1,750,653	$1,601,546	109%	$1,750,653	100%
Climate Resilience Innovation Total	**$1,501,342**	**$207,840**	**$4,683,558**	**$6,396,832**	**$2,993,575**	**214%**	**$20,750,653**	**31%**
Energy Focused Environmental Research								
Energy-Related Environmental Research	$5,800,000	$2,504,149	$9,431,618	$45,421,639	$40,303,952	113%	$47,800,000	95%
Energy Focused Environmental Research Total	**$5,800,000**	**$2,504,149**	**$9,431,618**	**$45,421,639**	**$40,303,952**	**113%**	**$47,800,000**	**95%**
Gas Innovation								
Hydrogen Innovation	$4,163,540	$5,523,335	$10,550,502	$18,373,965	$5,704,786	322%	$24,800,000	74%
Long Duration Energy Storage	$3,430,000	$2,432,661	$13,834,939	$17,000,000	$5,276,678	322%	$17,000,000	100%
Utility Thermal Network Technical Support	$500,000	$175,893	$550,135	$1,047,802	$955,516	110%	$3,000,000	35%
Gas Innovation Total	**$8,093,540**	**$8,131,889**	**$24,935,577**	**$36,421,768**	**$11,936,981**	**305%**	**$44,800,000**	**81%**
Grid Modernization								
Future Grid Performance Challenge	$7,885,157	$6,116,256	$20,073,669	$44,204,061	$25,308,795	175%	$58,063,066	76%
Grid ClimateTech Ready Capital	$2,425,000	$3,560,569	$7,092,794	$11,278,236	$3,124,013	361%	$22,000,000	51%
High Performing Electric Grid	$5,708,237	$781,371	$13,976,812	$59,906,049	$50,856,102	118%	$64,800,000	92%
Power Electronics Manufacturing Consortium	-	-	-	$16,694,490	$16,694,490	100%	$16,694,490	100%
Grid Modernization Chapter Total	**$16,018,394**	**$10,458,197**	**$41,143,275**	**$132,082,836**	**$95,983,401**	**138%**	**$161,557,556**	**82%**
Negative Emissions Technologies								
CarbonTech Development	$1,627,083	$1,560,417	$303,980	$5,113,980	$4,837,500	106%	$5,113,980	100%
Natural Carbon Solutions	$4,444,587	$3,505,398	$7,762,610	$12,297,825	$5,798,501	212%	$20,486,020	60%
Negative Emissions Technologies Total	**$6,071,670**	**$5,065,815**	**$8,066,590**	**$17,411,805**	**$10,636,001**	**164%**	**$25,600,000**	**68%**
Renewables Optimization								
Energy Storage Technology and Product Development	$4,168,000	$3,241,452	$10,758,599	$28,642,381	$18,808,330	152%	$39,500,000	73%
National Offshore Wind Research & Development Consortium	$2,442,556	$1,424,177	$1,064,562	$22,253,853	$21,828,185	102%	$22,500,000	99%
Renewables Optimization Total	**$6,610,556**	**$4,665,629**	**$11,823,161**	**$50,896,234**	**$40,636,515**	**125%**	**$62,000,000**	**82%**
Technology to Market								
CarbonTech Development	$4,382,083	$3,771,585	$973,753	$14,284,315	$13,842,985	103%	$14,362,020	99%
Catalytic Capital for Climatetech	$461,740	$144,934	$1,060,035	$19,360,221	$18,513,186	105%	$19,360,229	100%
Climatetech Commercialization Support	$7,647,777	$4,109,075	$2,855,759	$50,156,764	$51,056,915	98%	$54,927,913	91%
Climatetech Expertise & Talent	$1,620,947	$1,321,294	$2,497,486	$12,049,275	$9,852,249	122%	$12,049,276	100%
Manufacturing Corps	$1,442,500	$601,408	$2,038,978	$17,058,959	$15,723,575	108%	$17,058,959	100%
Novel Business Models and Offerings	$664,558	$2,634,491	$2,873,314	$13,384,141	$13,383,394	100%	$13,383,394	100%
Technology to Market Total	**$16,219,605**	**$12,582,787**	**$12,299,325**	**$126,293,676**	**$122,372,303**	**103%**	**$131,141,791**	**96%**
NYS Cost Recovery Fee Innovation & Research	$945,836	$435,439	-	$3,740,140	$4,250,538	88%	$6,780,273	55%
Total Innovation and Research	**$84,790,782**	**$60,819,509**	**$173,392,292**	**$538,585,170**	**$394,164,501**	**137%**	**$629,780,273**	**86%**

3 NY-Sun Performance

As represented in Figure 2 above, NYSERDA's NY-Sun Portfolio continues to show strong progress toward the CEF distributed solar capacity targets. Benefits progress in the following tables is conveyed in both capacity (megawatts direct current) and generation (megawatt-hours). Additional detail around progress by year can be found in the NYSERDA-Supported Solar Projects dashboard. Major highlights that speak to progress through the current quarter include:

- In October 2024, NYSERDA announced that 6 GW of distributed solar had been successfully installed, marking the first completion of a Climate Act target. As of the end of Q3 2025, there are 7,291 MW of distributed solar completed in the state.
- New York's national leadership in community solar continued, with 860 MW completed in 2024 and 703 MW completed in the first three quarters of 2025.
- There are over 2,800 MW of solar in development with NYSERDA awards. These projects are at an advanced stage of development and will contribute to the 10.5 GW by 2030 target.
- On April 24, 2025, the Public Service Commission issued an *Order Approving NY-Sun Program Modifications*.[17] The Order increased NY-Sun's 10 GW goal by an incremental 500 MW, specifying that the additional capacity must be dedicated to community solar projects using the Statewide-Solar For All model. The Order also reduced the NY-Sun budget to $2.996 billion, by removing $271 million in expected surplus funding. These changes have been incorporated throughout this report (Figures 1, 2; Tables 7, 10).

Quarterly benefit and budget progress is conveyed in the tables that follow.

3.0 Quarterly Benefits Progress

Table 7. NY-Sun—Installed Capacity and Production (NY-Sun Only)

Table 7 shows installed solar capacity (MW) and production (MWh) across major market sectors. The table includes all projects receiving NY-Sun funding, including those that are supported by the Solar Energy Equity Framework (SEEF). Projects included in SEEF benefit low- to moderate-income (LMI) households, affordable housing providers, residents of disadvantaged communities (DACs), and public schools serving DACs. As an example, a solar installation at the residence of an eligible LMI homeowner in Albany would be included in the "Upstate-Residential" category in Table 8, as well as in the "SEEF Only" Table 8. Community solar projects are categorized based on their location and size, with most of the State's total community solar capacity categorized as "Upstate-Commercial/Industrial" for the purpose of this table.

Annual Benefits		Evaluated Totals (verified gross where evaluated; gross where not)						
NY-Sun ** Includes SEEF and non-SEEF Projects **		**Projects Completed (Installed) through Prior Year**	**Projects Completed (Installed) in Current Year**	**Cumulative Projects Completed (Installed Units) through Current Quarter**	**Projects Approved or Contracted But Not Yet Completed (Current Pipeline)**	**Total Progress (Installed + Pipeline) through Current Quarter**	**Total Expected Installed Projects through 2030**	**Total Progress as % of 2030 Goal**
Distributed Solar Energy Capacity (MW)	Commercial/Industrial (Competitive)	117.6	-	117.6	-	117.6	117.6	100%
	Upstate - Residential	554.5	47.6	602.1	29.4	631.5	527.0	120%
	Upstate - Nonresidential	168.3	12.0	180.3	32.6	212.9	279.0	76%
	Upstate - Commercial/Industrial	2,951.9	622.1	3,574.0	2,539.5	6,113.5	6,613.0	92%
	Con Ed - Residential	403.2	41.5	444.7	8.8	453.5	441.0	103%
	Con Ed - Nonresidential	213.3	43.0	256.3	164.0	420.3	835.0	50%
	Capacity Total	**4,408.7**	**766.1**	**5,174.8**	**2,774.4**	**7,949.2**	**8,812.6**	90%
Distributed Solar Energy Production (MWh)	Commercial/Industrial (Competitive)	136,193	-	136,193	-	136,193	n/a	
	Upstate - Residential	564,344	45,001	609,345	28,650	637,994		
	Upstate - Nonresidential	186,441	11,785	198,225	35,129	233,354		
	Upstate - Commercial/Industrial	3,764,442	968,173	4,732,615	3,417,003	8,149,618		
	Con Ed - Residential	416,351	40,798	457,148	8,917	466,065		
	Con Ed - Nonresidential	258,246	60,923	319,169	193,920	513,089		
	Production Total	**5,326,017**	**1,126,678**	**6,452,695**	**3,683,619**	**10,136,314**		

Table 8. NY-Sun—Installed Capacity and Production (NY-Sun SEEF Only)

Table 8 is limited to projects that are supported by SEEF, which includes "adder" incentives for qualifying projects that are offered in addition to the "base" NY-Sun incentives received by all qualifying projects in the applicable market sector. The projects included in Table 8 are a subset of those in Table 7.

Annual Benefits		**Evaluated Totals** (verified gross where evaluated; gross where not)				
NY-Sun ** Solar Energy Equity Framework ONLY **		**Projects Completed (Installed Units) Through Prior Year**	**Projects Completed (Installed Units) in Current Year**	**Cumulative Projects Completed (Installed Units) Through Current Quarter**	**Projects Approved or Contracted But Not Yet Completed (Current Pipeline)**	**Total (Installed + Pipeline) Through Current Quarter**
Distributed Solar Energy Capacity (MW)	Upstate - Residential	9.0	4.5	13.5	3.3	16.8
	Upstate - Nonresidential	2.2	0.4	2.6	1.1	3.7
	Upstate - Commercial/Industrial	172.6	135.7	308.2	435.7	743.9
	Con Ed - Residential	9.9	5.3	15.2	1.0	16.2
	Con Ed - Nonresidential	33.1	11.0	44.2	29.0	73.1
	Capacity Total	**226.8**	**156.8**	**383.6**	**470.1**	**853.7**
Distributed Solar Energy Production (MWh)	Upstate - Residential	9,328	4,107	13,435	3,196	16,631
	Upstate - Nonresidential	2,160	415	2,576	1,150	3,726
	Upstate - Commercial/Industrial	297,567	247,546	545,113	604,607	1,149,721
	Con Ed - Residential	10,365	5,453	15,819	1,093	16,912
	Con Ed - Nonresidential	43,875	17,529	61,404	32,697	94,102
	Production Total	**363,296**	**275,050**	**638,347**	**642,744**	**1,281,091**

Table 9. All Other Solar—Installed Capacity and Production Beyond NY-Sun

Table 9 tracks all other reported progress toward the statewide solar deployment goals of 6 GW by 2025 and 10.5 GW by 2030. It includes projects that received non-CEF NYSERDA funding as well as projects installed independent of NYSERDA funding. NYSERDA utilizes data from utility interconnection inventories published by the Department of Public Service to determine non-NYSERDA reported installations. Since the two data sets can define project completion date differently, some overlap may exist between the two, however the totals presented here (MW, MWh) will never exceed the reported interconnected totals. As the pipeline of NYSERDA commitments are drawn down over time (projects are considered acquired in both data sources), this overlap is systematically eliminated.

Annual Benefits		**Evaluated Totals** (verified gross where evaluated; gross where not)				
Other Solar Installations		**Projects Completed (Installed Units) Through Prior Year**	**Projects Completed (Installed Units) in Current Year**	**Cumulative Projects Completed (Installed Units) Through Current Quarter**	**Projects Approved or Contracted But Not Yet Completed (Current Pipeline)**	**Total (Installed + Pipeline) Through Current Quarter**
Distributed Solar Energy Capacity (MW)	NYSERDA (non-CEF) Installations	614.1	21.3	635.4	39.6	675.0
	Non-NYSERDA Statewide Installations			1,481.2		1,481.2
	Capacity Total	**614.1**	**21.3**	**2,116.6**	**39.6**	**2,156.1**
Distributed Solar Energy Production (MWh)	NYSERDA (non-CEF) Installations	672,966	18,799	691,765	46,448	738,213
	Non-NYSERDA Statewide Installations			1,217,980		1,217,980
	Production Total	**672,966**	**18,799**	**1,909,745**	**46,448**	**1,956,193**

3.1 Quarterly Budgets Progress

Table 10. NY-Sun—Budgets and Spending

Table 10 shows encumbrances and expenditures across major market sectors and programmatic areas with the NY-Sun initiative. The "MW Block Incentives & Adders" section breaks down encumbrances and expenditures across the major market sectors, excluding funding with the Solar Energy Equity Framework. All SEEF encumbrances and expenditures, including "adder" incentives, are tracked as a line item. As an example, for a solar installation at the residence of an eligible LMI homeowner in Albany the expenditure of the "base" NY-Sun incentive would be included in the "Upstate-Residential" sub-category in the "MW Block Incentives & Adder" section, while the "adder" incentive from the SEEF budget would be included in the "Solar Energy Equity Framework (SEEF)" line item. Table 11 provides a more in-depth look at SEEF encumbrances and expenditures and tracks the total NY-Sun funding committed to SEEF-eligible projects.

NY-Sun	Expenditures through Prior Year	Current Year Expenditures through Current Quarter	Cumulative Expenditures through Current Quarter	Encumbrances as of Current Quarter	Total Progress as of Current Quarter (Expended + Encumbered	Total Expected Expenditures	Total Progress as % of Total Expected Expenditures
MW Block Incentives & Adders							
Commercial/Industrial (Competitive)	$48,616,265	$0	$48,616,265	$299,343	$48,915,609	n/a	
Upstate - Residential	$235,868,900	$8,004,562	$243,873,462	$4,617,228	$248,490,690		
Upstate - Nonresidential	$71,562,815	$3,406,170	$74,968,985	$10,008,352	$84,977,337		
Upstate - Commercial/Industrial	$720,127,270	$149,961,720	$870,088,990	$387,031,179	$1,257,120,169		
Con Ed - Residential	$115,794,759	$7,091,650	$122,886,409	$1,534,147	$124,420,556		
Con Ed - Nonresidential	$125,410,589	$29,807,373	$155,217,961	$111,975,892	$267,193,854		
MW Block Subtotal	**$1,317,380,598**	**$198,271,475**	**$1,515,652,073**	**$515,466,141**	**$2,031,118,214**	**$2,227,201,000**	71%
Solar Energy Equity Framework (SEEF) Adder	$31,357,588	$20,100,572	$51,458,160	$83,771,971	$135,230,131	$399,764,000	34%
Funds to Assist Transition to Prevailing Wage	$0	$2,550,050	$2,550,050	$169,402,256	$171,952,306	$238,725,000	72%
Consumer Education	$1,603,540	$156,876	$1,760,416	$1,739,584	$3,500,000	$6,500,000	54%
Implementation and Quality Assurance	$19,445,417	$1,863,913	$21,309,330	$3,207,595	$24,516,925	$32,600,000	75%
Administration	$28,252,331	$2,821,223	$31,073,554	$0	$31,073,554	$58,756,000	53%
Evaluation	$1,620,397	$194,037	$1,814,434	$223,827	$2,038,261	$3,500,000	58%
NYS Cost Recovery	$12,838,258	$1,631,323	$14,469,580	$0	$14,469,580	$28,800,000	50%
NY-Sun Total	**$1,412,498,130**	**$227,589,467**	**$1,640,087,597**	**$773,811,374**	**$2,413,898,971**	**$2,995,846,000**	81%

Table 11. NY-Sun—Solar Energy Equity Framework (SEEF) Spending Details

This table is a subset of budget and spending data reported in Table 10 intended to provide greater detail on SEEF and Other Incentive investments relative to the broader NY-Sun budget. Other Incentives shown here reflect the base MW Block and non-SEEF incentive adders and are a subset of spending shown in Table 11 under MW Block Incentives & Adders.

Solar Energy Equity Framework (SEEF)	SEEF Adder Expenditures	Other Incentive Expenditures	SEEF Adder Encumbrances	Other Incentive Encumbrances	SEEF Adder Total Progress	Other Incentive Total Progress	SEEF Total Progress
Upstate - Residential	$6,305,883	$3,594,428	$2,201,158	$532,536	$8,507,042	$4,126,963	$12,634,005
Upstate - Nonresidential	$1,319,233	$821,432	$770,467	$287,563	$2,089,701	$1,108,994	$3,198,695
Upstate - Commercial/Industrial	$13,226,152	$62,383,561	$50,472,775	$98,826,515	$63,698,927	$161,210,076	$224,909,003
Con Ed - Residential	$8,790,986	$2,924,559	$693,540	$194,073	$9,484,526	$3,118,632	$12,603,158
Con Ed - Nonresidential	$15,376,610	$23,375,484	$26,362,254	$19,071,343	$41,738,864	$42,446,827	$84,185,691
Technical Assistance and Implementation	$6,439,295	$0	$3,271,777	$0	$9,711,072	$0	$9,711,072
Total	**$51,458,160**	**$93,099,463**	**$83,771,971**	**$118,912,029**	**$135,230,131**	**$212,011,493**	**$347,241,624**

Table 12. Non-CEF NYSERDA Solar Spending

This table quantifies NYSERDA investments in solar projects that are funded outside of the Clean Energy Fund. Project costs related to other non-NYSERDA installed solar (statewide interconnections) is not available and therefore not included.

Other Solar Installations	Expenditures through Prior Year	Current Year Expenditures through Current Quarter	Cumulative Expenditures through Current Quarter	Encumbrances as of Current Quarter	Total Progress as of Current Quarter (Expended + Encumbered
NYSERDA (non-CEF) Installations	$399,466,357	$7,054,493	$406,520,850	$30,510,501	$437,031,351

4 Evaluation, Measurement, and Verification Summary

In accordance with the Department of Public Service CE-05: Evaluation, Measurement, & Verification (EM&V) Guidance, NYSERDA is required to file all final EM&V Reports in the Document and Matter Management system. This section will include a compilation of the high-level summaries of the EM&V reports due for filing within the reporting period.

For the Q3 2025 reporting period, six evaluation studies were finalized as presented in Table 13. For more information on the schedule of studies as they pertain to NYSERDA's Market Development and Innovation & Research initiatives, please reference the Compiled Investment Plan or view reporting for historical periods to see past summaries both found on NYSERDA's website.

Table 13. Evaluations Completed Q3 2025

Evaluated Program	Evaluation type	Evaluated program year(s)
Industrial Process Efficiency	Impact	Q1 2018 – Q2 2023
Build-Ready	Process	2025
Real Time Energy Management: Commercial/Industrial	Impact/market	Q1 2022 – Q2 2024 (impact); Q1 207 – Q2 2024 (market)
Real Time Energy Management: Multifamily	Impact/Market	Q1 2022 – Q2 2024 (impact); Q1 2018 – Q4 2023 (market)
Clean Energy Communities	Process	Q3 2024 – Q1 2025
Single Family Retrofit Programs	Impact	2023

The latest Compiled Investment Plans:

https://www.nyserda.ny.gov/About/Funding/Clean-Energy-Fund/

Clean Energy Fund Reports:

https://www.nyserda.ny.gov/About/Publications/Program-Planning-Status-and-Evaluation-Reports/Clean-Energy-Fund-Reports

Note that NYSERDA began providing these summaries with the 2021 Annual CEF Performance Report.

4.0 Recommendation Tracking Updates

NYSERDA periodically reviews and tracks the status of recommendations that have been "pending" in quarterly CEF reports. As shown in Table 14, during Q3, the following NYSERDA responses to recommendations have been updated from "pending" since their presentation in these CEF quarterly reports, beginning with the 2021 Annual CEF Performance Report. For reference purposes, since early 2017, when NYSERDA began conducting CEF evaluations, 320 recommendations have been published. Of these, 254 have been implemented, 40 have been rejected and 26 are still pending.

From the 2021 Annual CEF Performance Report through the latest status review (Q3 2025) recommendation statuses from evaluation studies have been updated as follows:

- 19 recommendations is/are still pending.
- 11 recommendation(s) has/have since been implemented, as detailed in Table 14.
- 3 recommendation(s) has/have since been rejected, as shown in Table 14.

Table 14. Summary of CEF Evaluation Study Recommendations through Q3 2025

Study Name	Published Date	Recommendation	New Status	Update
New Construction Market and Impact Study	6/30/2023	It is recommended that NYSERDA develop a 2020 baseline home to base savings on for both Ekotrope and REM/Rate models. This will help facilitate the use of appropriate baselines and improved realization rates in future evaluations.	Rejected	We will close this recommendation. Both the legacy single family new construction program and the Building Better Homes program are closed. Any need for modeling tied to policy changes would not be directly tied to this effort or with this contractor.

Clean Transportation Market and Impact Evaluation (2022)	9/9/2022	To improve upon NYSERDA's existing Electric Vehicle Calculator, NYSERDA should advertise this tool to all personal vehicle customers interested in purchasing a new vehicle, not just those explicitly interested in EVs; this may also include building in the opportunity to compare to specific non-EV vehicles. To address concerns about range anxiety, NYSERDA should also include reference to their Electric Vehicle Station Locator tool in their Electric Vehicle Calculator tool.	Implemented	NYSERDA continues to see good use of its web resources around EVs, including the EV calculator.
Regional Clean Energy Hubs Market Evaluation and Baseline Customer Survey	8/1/2024	NYSERDA should support Hubs by developing materials with talking points explaining the benefits of the clean energy economy, such as the role of battery storage in ensuring stability of electricity service and framing educational materials around non-energy benefits such as health and comfort to reduce misunderstandings and negative perceptions about electrification.	Implemented	Given the complexity of each region, different messaging resonates with the target audience. The Hub and Marketing Teams continues to work with each hub on the development of marketing materials and talking points. When program teams approach the Hubs to promote their programs, we recommend they provide a webinar, one pager, talking

		NYSERDA has past experience in addressing consumer reluctance to embrace solar PV and wind power that may be useful to Hubs as they work to address negative perceptions about grid reliability in the transition to a grid powered by renewable generation. Additionally, NYSERDA has long documented non-energy benefits in its evaluations and can use this information to help Hubs make a case to consumers for clean energy solutions.		points and direct contact to the program. this ensures the Hubs are adequately supported in educating customers on NYSERDA programs.
Single-Family Low- to Moderate-Income Heat Pump Demonstration Study (Pilot Period 2021-2022) Market Characterization	7/24/2024	Since surveyed customers were relatively new heat pump owners at the time of thisevaluation, consider conducting follow-up research with Pilot Program participants to assess if and how theyhave changed their system usage over time and whether they have increased familiarity with heat pumps.	Implemented	Future evaluations will consider a follow up assessment to understand changes in system usage.

Agriculture Technical Services Market Update (PY 2020-2021)	12/31/2024	NYSERDA should improve the application by including check boxes that ask if the farmer expects to use the audit results for a grant application, their goals of the audit (adding new technologies, assessing recently built structures or new processes, etc.), and a reminder that promptly providing utility bills and farm design drawings will speed up their audit process and report receipt.	Rejected	The Implementation Contractor calls each farm upon application submission and inquires about the goals of the audit, if the audit report will be used for a grant application, and reminding the customer of the benefit of promptly providing utility bills. The program is set to close at the end of 2025.
Codes and Standards for Carbon Neutral Buildings Initiative Market Evaluation (Program Years 2023-2024)	3/1/2025	With NYS at the end of the current code cycle and adoption of a new state code expected in 2025, continue plans to offer increased support to familiarize stakeholders with the upcoming code and minimize the anticipated drop in compliance, to the extent possible. Prioritize support to jurisdictions with limited bandwidth to further energy code compliance by focusing on increasing their understanding of and engagement with new requirements. Continue to provide technical support to larger jurisdictions, such as New York City, to	Implemented	NYSERDA contractor selection is underway with training providers for plans to continue offering training and support on the new state Energy Code.

		enable collaboration and demonstration. Continue to explore opportunities for engaging building professionals and market actors who can influence the quality of projects brought to code officers.		
Codes and Standards for Carbon Neutral Buildings Initiative Market Evaluation (Program Years 2023-2024)	3/1/2025	Develop packages of resources specifically focused on residential projects and additions and alterations and explore new ways to market these resources to building professionals with limited bandwidth for compliance activities. When developing compliance resources, ensure that the resources serve market actors of all types of projects (small and large, residential and commercial, new construction and alterations).	Implemented	NYSERDA contractor selection is underway with training providers for plans to specifically address additions and alterations in residential and commercial buildings and investigate new marketing strategies for these resources
Codes and Standards for Carbon Neutral Buildings Initiative Market Evaluation (Program Years 2023-2024)	3/1/2025	Develop a protocol for assessing community capacity for compliance, considering potential inputs such as number of code officials, number of trained building professionals, points of engagement with NYSERDA, and others. Use findings from this analysis to support the development of more opportunities to	Implemented	NYSERDA program contracting is currently underway to support targeted local resources that allow communities to pursue energy code compliance with their already limited bandwidth.

		target specific communities with resources that allow them to pursue energy code compliance without sacrificing already limited bandwidth. Explore opportunities to build local resources that support compliance and limit administrative, procurement, and maintenance requirements for code officials, builders, and other permit applicants.		
Codes and Standards for Carbon Neutral Buildings Initiative Market Evaluation (Program Years 2023-2024)	3/1/2025	Where feasible, leverage existing pilot activities to enhance communication of the value proposition to communities. Given the ways in which compliance and motivating policies vary across jurisdictions, it may be beneficial in some cases to explore working meetings and collaboration with community leadership and stakeholders in select jurisdictions to assess different jurisdictions' needs and provide customized support aligned with their needs and interests.	Implemented	Meetings have been scheduled with communities and stakeholders in select jurisdictions to assess jurisdictions/ needs and promote the value proposition of energy code compliance.

Codes and Standards for Carbon Neutral Buildings Initiative Market Evaluation (Program Years 2023-2024)	3/1/2025	As was done ahead of code adoption in 2020, increase training efforts and resources near the upcoming energy code update. Providing additional support in the ramp up and following a code change will support code officials and building professionals with the transition. Continue to explore the impact of diversifying the energy code trainings' reach by experimenting with training formats (e.g., asynchronous online training options). Interview feedback noted that complex technical slides can be overwhelming and that providing real-world examples, pictures, and case studies could help engage trainees.	Implemented	NYSERDA is supporting training in the next energy code update with contacting currently underway.
Energy Efficiency and Electrification Soft Costs in New York Market Evaluation (Program Years 2023-2024)	3/1/2025	While NYSERDA has a robust set of trainings and standardized bid packages for the residential and multifamily sectors, conducting outreach to contractors not currently within their network may increase the awareness of these offerings. This effort could involve strengthening existing partnerships with industry groups or	Implemented	Implemented for SF. We use measure packages for our market rate Comfort Home program and we are exploring how to expand that approach to the LMI sector through EmPower+. In terms of contractor outreach, we engage regularly with the Building Performance Contractors

		utilities as they expand their electrification offerings. Engaging new contractors is critical for advancing the market toward greater efficiency.		Association, host a minimum of four meetings per year of the Residential Market Advisory Group open to all residential sector actors, and leverage the Clean Heat Connect partner network of heat pump manufacturers and distributors to access and channel technical knowledge and business development resources to the broad HVAC contractor community mark
Heat Pumps Phase 2 Market Evaluation (2023-2024)	9/1/2023	Continue efforts to gain access to HARDI data.	Implemented	The HARDI data is currently in procurement and will be available for Q4 2025.
Workforce Development Impact and Market Evaluation (Q1 2021 – Q4 2023)	3/1/2025	At the ex-ante savings estimation stage, the vendor may not know the full extent of training, however, a preliminary plan may be acceptable at this stage. A final submission should be required that documents each measure's training, its expected savings as a fraction of the usage, and explicit references	Rejected	Based on project scopes and budgets, it is not feasible for all individual training vendors to develop a measure-by-measure analysis of savings estimates for each customized training project. Additionally, as the program will be ending, it is not practical for

		to slides or documentation in the training materials. This more directly ties the savings estimates to the training that is delivered. NYSERDA could streamline this with a reference list of measures, their expected savings impacts, and a description of appropriate training.		NYSERDA to invest in developing a comprehensive reference list of measures that align with the variety of training topics at this time.
Workforce Development Impact and Market Evaluation (Q1 2021 – Q4 2023)	3/1/2025	When relying on the training vendor or applicant's estimate of savings, require vendor or applicant to submit a preliminary and final listing of the measures covered in training and their approximate impact on total savings by fuel. This will encourage vendors to support the claimed savings fraction.	Implemented	In training vendor's final reports, they include a general discussion on energy impacts from the training, in some cases including examples of results with some sample savings analysis. While this information may not be at the measure level or fuel specific in all cases, the additional information and insight provided by the vendors on energy impacts of the project is taken into account when NYSERDA finalizes a claimed savings amount.

4.1 Industrial and Process Efficiency Close-Out Impact Evaluation (Q1 2018 – Q3 2023)

Summary of Report Findings, Recommendations, and NYSERDA Response to Recommendations.

Key findings and associated recommendations from the Industrial and Process Efficiency Close-Out Impact evaluation include:[18]

Finding 1: Program savings and realization rates

Overall, the IPE program achieved energy savings of 1,658,967 MMBtu. This verified savings result corresponds to an overall 94% realization rate for program annual electric energy savings and a 90% realization rate for combined heating fuel (fossil fuel) energy savings. The concurrent evaluation and M&V of program sites shortly after implementation largely produced accurate estimations of energy savings. However, some discrepancies in baselines, calculation methodologies, and measure interactivity were discovered between realized project savings and savings estimated by the prior M&V as described in Recommendations 2 through 3.

- **Recommendation 1:** N/A. Recommendations to reduce discrepancies between estimated and verified savings are provided in Recommendations 2 through 3.

Finding 2: Project documentation requirements

The evaluation contractor team determined the data provided was sufficient for evaluation. The program team maintained strong record keeping, including for projects that were up to six years old, and savings calculations were available for every project. Project documentation and files collected through the program typically consisted of engineering analysis (EA) review, measurement and verification (M&V) plan, project installation report (PIR), and M&V report.

In some cases, the evaluation contractor team found that the project files did not contain sufficient information regarding the baseline systems and operations to thoroughly support the reported savings. Additionally, the project files did not contain information to confirm that the decommissioned systems were running in the baseline case before project implementation.

- **Recommendation 2:** Ensure program submissions include guidelines and requirements for documenting the baseline case, systems, operations, and conditions.
    - **NYSERDA Response to Recommendation 2:** Implemented. NYSERDA is aligned with this recommendation and aims to accomplish it on all projects, leveraging the Baseline Guidance Document developed in collaboration with Michaels Energy during the 2018 Concurrent Evaluation.

Finding 3: Tracking of energy penalties

In some cases, electric penalties were not captured in the tracking savings data. While the installed measure resulted in increased electricity usage, the reduction in fossil fuel usage was significant enough to offer net energy savings.

- **Recommendation 3:** Continue documenting any relevant energy penalties for implemented measures in the tracking savings data.
    - **NYSERDA Response to Recommendation 3:** N/A. During the IPE program, NYSERDA collected ancillary usage. This is a past practice since discontinued by NYSERDA. NYSERDA currently collects actual usage data by fuel.

4.2 Build-Ready Program Process Evaluation (2025)

Summary of Report Findings

Key findings from the Build-Ready Program Process Evaluation include:[19]

Finding 1: Institutional knowledge and network building NYSERDA's Build-Ready (BR) Program staff have developed robust institutional knowledge, tools and resources (e.g., an interactive map), and processes for identifying and assessing prioritized sites. Additionally, the program has developed relationships with partner agencies and renewable energy developers.

Finding 2: Adaptive management The Build-Ready Program exemplifies NYSERDA's test-measure-adjust approach, fostering a culture of adaptive management. Program staff have continuously pivoted in response to roadblocks.

Finding 3: Validation of market barriers Despite significant effort, only one build-ready site - Benson Mines - has been auctioned to a developer, despite the hard work of NYSERDA and BR program staff. BR's development challenges for brownfields, landfills, and other prioritized sites are ultimately similar to the challenges that private sector developers face when considering the same sites and have been documented by other states and federal agencies. Many of the sites evaluated by the BR program had been rejected by the private sector due to the same technical and economic constraints that ultimately made them unviable for the BR Program.

Finding 4: Identified future pathways In the spirit of adaptive management, BR program staff ha e worked to find viable pathways for the program, and the BR team is continuing to explore options for pathways the program can take to mitigate the current obstacles faced when developing prioritized sites for renewable energy generation. BR staff have explored everything from floating solar to parking lot solar, adjacent landfill siting, and ways to support other related technologies, such as battery energy storage systems (BESS). Numerous brainstorming sessions and onsite retreats have informed their efforts to identify new pathways, and the team continues to explore options as part of its visioning for the program.

4.3 Clean Energy Communities Process Evaluation (Q3 2024-Q1 2025)

Summary of Report Findings, Recommendations and NYSERDA Response to Recommendations

Key findings and associated recommendations from the Clean Energy Communities Process Evaluation include:[20]

Finding 1: Smaller municipalities may be at a disadvantage compared to larger municipalities because of their staff size and financial resources. Municipal participants expressed that the support and motivation from Coordinators, who provide expertise and additional capacity, is essential to their ability to successfully participate in the program. Despite the staffing support that Coordinators provide, participating municipalities may still face a combination of resource and technical barriers that make it harder for them to implement clean energy solutions at the same pace as others. The financial and digital divide between under-resourced municipalities and other municipalities may exacerbate their disadvantage.

- **Recommendation 1. Prioritize additional CEC Program funding and extended program timelines to sustain the availability of match-free grants for a longer period.** As part of this program extension, implement funding caps for municipalities of different sizes to provide increased access to resources across participating municipalities.

    - **NYSERDA Response to Recommendation 1: Pending.** NYSERDA acknowledges the challenges municipalities face, particularly in managing budget constraints and limited staff capacity. The CEC Program also tailors its incentive structure based on municipal size, recognizing that the needs and capacities of smaller and larger communities differ significantly. Larger communities often require

more substantial incentives to initiate action, while smaller communities may benefit more from targeted support and require smaller funding levels. This differentiated approach has proven effective in fostering engagement in the program. Additionally, the program's High Impact Action Items (HIAs) are intentionally weighted to reflect their relative complexity and potential benefits as well as greenhouse gas emission reduction potential. This points-based system ensures that funding levels align with the scope of work and impact achieved by each municipality.

Finding 2. CEC Coordinators are confronted with challenges in serving municipal participants due to a lack of transparent communication from NYSERDA. In particular, Coordinators emphasized that NYSERDA's inconsistent messaging about program/application requirements and possible flexibilities not widely communicated in bundling grants for initiating more expensive clean energy projects has frustrated municipal participants. Conflicting information from Coordinators or from the website on things like application steps and deadlines sometimes hindered municipalities from achieving the "snowball effect" that allows them to gain points on the projects implemented with NYSERDA grant money. The evaluation contractor team conducted interviews as CEC Program funding for match-free grants dwindled and then ran out, so some of the feedback the evaluation contractor team received was directly focused on the lack of information about when grant funding would no longer be available.

Despite some complaints from municipalities about changing program structure and lack of transparent communication from NYSERDA, this evaluation provides a positive demonstration that the relative continuity of the CEC Coordinators and the relationships they have built are a core factor in the program success, *particularly for resource-limited communities*.

- **Recommendation 2. Improve the CEC Program documentation and communicate updates routinely to ensure clarity, accessibility, and transparency for all applicants, especially regarding funding availability.** Program documents (e.g., factsheets, toolkits, etc.) should be clear, concise, and easy to follow, offering step-by-step instructions that provide clarity on topics like combining grants, meeting important deadlines, or what internet browser(s) to use when attempting to submit HIAs.

    - **NYSERDA Response to Recommendation 2: Implemented.** NYSERDA is committed to improving the Clean Energy Communities (CEC) Program experience for municipal partners and will be taking several steps in response to the suggestions received. Website enhancements will be considered to improve overall navigation and ensure that key guidance documents including those related to grant bundling and deliverable submittals to ensure they are more accessible and easier to find. NYSERDA will explore the creation of a Frequently Asked Questions (FAQ) document to address common inquiries related to High Impact Action Item requirements and submittal documents. The Clean Energy Community Coordinators will continue to be an essential resource, and NYSERDA strive to equip them with the most current and relevant information to effectively support municipalities. To further assist with program navigation, NYSERDA will explore improvements to Salesforce which aim to enhance the customer experience.

Finding 3. Gamification, recognition, and sustainability inspire ongoing municipal participation in the program, but money is still an essential driver, even for long-term participants. This finding strongly aligned with the program's own learnings from municipal feedback as well as the evaluation contractor team's findings that match-free grant funding for completed HIAs is essential to municipalities' participation in the program. Municipal participants indicated that they would have difficulty implementing clean energy projects without the match-free funding for HIAs available through the program. Smaller municipalities often do not have the budget to implement clean energy initiatives, so Coordinators help identify the HIAs that can help them maximize low- or no-cost activities to achieve momentum with the program. For champions or volunteers that have municipal authorization (but no budget) to participate in the program, securing the first grant is an essential step to additional CEC participation.

Recommendation 3: N/A.

4.4 Real Time Energy Management: Commercial/Industrial Direct and Indirect Benefits (Direct: Q1 2022 – Q2 2024; Indirect: Q1 2017 – Q2 2024 Indirect)

Summary of Report Findings, Recommendations and NYSERDA Response to Recommendations

Key findings and associated recommendations from the Real Time Energy Management: Commercial/Industrial Direct and Indirect Benefits Evaluation include:[21]

Finding 1: The two most significant indirect pathways of influence for the RTEM program are additional and unreported actions by participating organizations at participating buildings, which resulted in 30,694 MWh and 73,845 MMBtu of energy savings, and contributions from participating vendors at nonparticipating buildings, which generated 50,561 MWh and 20,865 MMBtu in savings.

- **Recommendation 1:** Any future versions of the RTEM program, when considered, should support and strengthen these pathways to optimize indirect benefits that could be achieved over time.
    - **NYSERDA Response to Recommendation 1:** Pending. NYSERDA will assess the pathways revealed in this evaluation that apply to future programs that feature characteristics that can be replicated.

Finding 2: Unreported and additional actions from participating organizations at nonparticipating buildings resulted in 23,012 MWh and 22,317 MMBtu of indirect energy savings. Meanwhile, participating vendors at

participating buildings contributed 6,434 MWh and 15,845 MMBtu of indirect energy savings. These pathways show somewhat less evidence of indirect benefits for the RTEM program.

- **Recommendation 2:** Future versions of this program, when considered, should explore program interventions to help participating organizations scale RTEM to their portfolio of buildings. This is already occurring in a limited way, and there is room to optimize the pathway of influence.
    - **NYSERDA Response to Recommendation 2:** Implemented. NYSERDA is scaling these considerations for certain subsectors in the RTEM + tenant program.

Finding 3: Although there is evidence of the NYSERDA RTEM program influencing New York utilities' RTEM programs, it is too early to estimate indirect benefits from this influence pathway.

- **Recommendation 3:** As utility RTEM programs scale over time, NYSERDA should revisit and estimate the indirect benefits associated with those projects, since NYSERDA did influence the design and launch of those programs.

    - **NYSERDA Response to Recommendation 3:** Pending. NYSERDA will revisit this recommendation once utility programs have matured.

Finding 4: Interviews revealed that, on average, each vendor has over 10 RTEM projects that continue using RTEM services after NYSERDA engagement to support non-energy benefits (e.g., building occupant comfort).

- **Recommendation 4:** NYSERDA should consider quantifying non-energy benefits in future versions of this program as part of the evaluation process.

    - **NYSERDA Response to Recommendation 4:** Pending. NYSERDA will be capturing non-energy benefits for future versions of this program.

Finding 5: From Q1 2022 through Q2 2024, the RTEM program achieved electric direct energy savings of 79,889 MWh (realization rate: 62%) and non-electric direct energy savings of 47,717 MMBtu (realization rate: 66%). Beyond these direct impacts, the program influenced owners and managers of participating buildings to take additional actions outside of vendor service reports, contributing to notable indirect energy savings. Estimating total savings for this program is challenging to quantify ex post, as effects from specific measures implemented through RTEM systems are often indistinguishable and may not be fully captured in available documentation.

- **Recommendation 5a:** To better capture the full scope of program impacts, consider requiring vendors to report implemented savings, or establishing another systematic method for capturing savings attributable to RTEM systems. Direct savings estimates from vendors who provided this information were higher than those from sites without such reporting, while indirect savings estimates often rely on customer reported actions that can be affected by recall bias. More consistent documentation of implemented actions and associated savings would reduce underestimation risk and provide a clearer picture of the program's influence on operational practices and decision making in the market.
    - **NYSERDA Response to Recommendation 5a:** Pending. NYSERDA will revisit during future iterations of the program.
- **Recommendation 5b:** Consider requesting, at program intake, key technical details for equipment monitored by the RTEM system - for example, manufacturer spec sheets, system capacity, square footage or space served, and other relevant characteristics (e.g., for HVAC units, whether they are connected to other systems). While some of this information has been collected during application submission, it has not been part of the program process to identify site by site specific savings. Having these details readily available would be valuable during future evaluations that follow a similar process, as it would help evaluators determine what actions customers took because of the RTEM system and better understand the magnitude of associated savings. Collecting this information at intake is generally more efficient and less burdensome than attempting to gather it retrospectively during evaluation.
    - **NYSERDA Response to Recommendation 5b:** Pending. NYSERDA will consider this feature for future program iterations.

Finding 6: The RTEM program achieved savings in different sectors, showing the flexibility of the system to address complex situations. For forecasting purposes, it is important to understand differences in outcomes in terms of percent savings in different sectors. EM systems in commercial, retail, and institutional facilities reported a focus on building schedules and savings came primarily from HVAC settings and maintenance. Customer-reported goals for EM systems in these facilities were tenant comfort and energy savings. EM systems in industrial and agricultural facilities were focused on industrial processes, with customers indicating a desire to reduce the price per unit of their products. While reductions in cost per unit can come from reduced energy use, the facilities reported taking other actions that reduced cost without a reduction in energy use. While the sample size for industrial facilities was not large enough to say definitively, the study found less savings as a percentage of consumption in industrial facilities than in other sectors.

- **Recommendation 6:** Consider forecasting savings based on facility type with different expectations for savings as a percentage of consumption in sectors who use the EM system in different ways.
    - **NYSERDA Response to Recommendation 6:** Implemented. This is already a feature of program reporting where aligned with facility type and/or sector.

Finding 7: Electronic Data Interchange (EDI) data were successfully obtained for approximately 40% of sites. For the remaining sites, no usable data were returned from the EDI request. In addition, while the program collected some preinstallation consumption data, these data were only sufficient to support a sanity check for about 2% of sites, as the vast majority included just a single month of consumption. The lack of complete, standardized baseline data significantly limited opportunities to conduct a formal billing analysis to derive savings.

- **Recommendation 7:** To support robust evaluation and long-term market insights, the program could consider requesting EDI data for all participating sites for each program year. If adopted, the program could extract account numbers and points of delivery (PoDs) from applications and submitted bills/proof of account upon program intake then immediately attempt to acquire baseline data to confirm the accuracy of the account numbers and PoDs in the tracking data. This will ensure data is available for savings estimation and evaluation. Note: there are some measures where billing data may be unable to provide direct quantification of savings, for example early identification of a system needing repair will often not have a period operating in poor condition to support billing or even advanced metering infrastructure–based estimation of savings because the increase in usage was avoided. Despite this risk, having more of the consumption data can enable better savings estimates even when used indirectly and can provide better baseline consumption estimates than the current square footage estimates provide. This, in turn, strengthens the program's ability to demonstrate its role in transforming market practices and decision-making over time.
    - **NYSERDA Response to Recommendation 7:** Pending. Some, but not all NYSERDA programs will have this feature moving forward.

Finding 8: Vendor service reports provide the best available information for measure installation and savings verification for the RTEM program and thus are the primary source for evaluation of direct savings. This is a key risk for the program, as vetting of the savings claims with engineering and baseline assessments was not possible. As described previously, customer reports suffer from recall bias, and billing data was largely

unavailable or incomplete. The evaluation contractor team confirmed that vendor-reported implementations were completed and identified indirect benefits from participating sites, but where savings magnitudes were not reported, evaluator estimates of these savings may be lower than actual savings.

- **Recommendation 8:** Continue to assess available methods for evaluation of the RTEM program. For instance, concurrent evaluation of targeted sites with large estimated savings and multi-site projects within two years of EM system installation would have a much higher likelihood of capturing measure-level post-installation information and participating organization intentions for future installations, associated savings data, and non-routine events from major equipment upgrades or industrial process improvements. Similarly, utility billing data would be more readily available through an EDI request. Customer and vendor interviews at this early stage would provide feedback to vendors on the critical importance of vendor service report data for evaluation of program direct benefits and capture more real-time indirect benefits as they are planned and occur.

    - **NYSERDA Response to Recommendation 8:** Implemented. NYSERDA is implementing pre-install interviews on select programs.

Finding 9: Vendor reports often included activities that might incur cost savings through diagnostics and fault detection events, but did not report any annual energy savings from such measures. NYSERDA assumes modeled energy savings for all fuels serving a site, so the presence of these activities can substantially depress realization rates and projected savings as a percentage of estimated baseline.

- **Recommendation 9:** Consider including a post-installation verification step to confirm actual vendor-reported and installed energy-saving measures upon project completion or as part of the acquired savings process. This step will help verify actual baseline energy consumption and vendor-reported energy savings from installed measures. Post-installation verification will also identify instances where only diagnostics or fault-detection activities were implemented, which result in cost savings for a site but not significant annual energy savings.

    - **NYSERDA Response to Recommendation 9:** Implemented. NYSERDA is implementing a post-installation verification on select programs.

4.5 Real Time Energy Management: Multifamily (Direct: Q1 2022 – Q2 2024; Indirect: Q1 2018 – Q4 2023)

Summary of Report Findings, Recommendations and NYSERDA Response to Recommendations

Key findings and associated recommendations from the Real Time Energy Management: Multifamily Direct and Indirect Benefits Evaluation include:[22]

Finding 1: In the multifamily sector, the largest source of indirect benefits was from participating building owners/managers implementing additional operation/maintenance upgrades and changes at participating buildings (Source A), which resulted in 5,691 MWH and 50,595 MMBtu. The second largest source of indirect benefits came from participating vendors also introducing RTEM to some of their customers without receiving NYSERDA incentives (Source C), resulting in 2,166 MWH and 9,208 MMBtu.

- **Recommendation 1:** In future programs, NYSERDA could continue to support these sources of indirect benefits by making sure that projects have strong "energy champions" that continue to push the potential for energy savings that RTEM enables. Several of the vendors who shared evidence of indirect benefits also mentioned that they had specifically had someone who pushed for using RTEM to generate additional energy saving ideas.
    - **NYSERDA Response to Recommendation 1:** Implemented. Programs maintain the importance of onsite energy champions to enhance uptake and persistence of energy efficiency measure savings, in addition to non-energy benefits from NYSERDA program engagement.

Finding 2: There is not enough evidence yet to indicate that the program has transformed the New York EM market for the multifamily sector. Rather, it appears that a large swath of the New York multifamily market still needs some sort of support to adopt RTEM. Of the five participating customers who managed buildings in their portfolio that did not receive a NYSERDA incentive, only one decided to implement RTEM at these other buildings. As a result, Source B only generated 630 MWH and 0 MMBtu. Furthermore, only one-third of participating vendors had replicated RTEM projects with customers that did not receive incentives. Among the four vendors that also completed both multifamily and commercial projects through the program, there was a consensus that while multifamily projects tended to be smaller, multifamily building owners often expressed a greater need for financial support due to more limited resources.

- **Recommendation 2:** NYSERDA could consider follow-up outreach with customers that did not adopt RTEM at all the properties in their portfolio to better understand multifamily owners/managers' decision-making process.
    - **NYSERDA Response to Recommendation 2:** Pending. NYSERDA will consider follow-up outreach with RTEM MF customers to collect additional direct and subsequent indirect benefits.

Finding 3: Participating vendors and customers frequently lauded the non-energy benefits of RTEM systems. Vendors described improvements to temperature control and regulation, improving occupancy comfort, while also highlighting improved building management efficiency. RTEM systems allowed for quicker troubleshooting of operational issues, and the remote monitoring of building systems by smartphone made fault detection and repair easier and faster.

- **Recommendation 3:** In future programs, NYSERDA could consider working with affiliated vendors to make non-energy benefits a bigger selling point for potential customers. All interviewed customers reported using RTEM for non-energy benefits despite their initial focus on energy savings. NEBs could serve as a gateway towards greater adoption of EM technology if they were more frequently communicated.
    - **NYSERDA Response to Recommendation 3:** Implemented. Non-energy benefits are incorporated into programs where relevant.

Finding 4: Among multifamily facilities, the RTEM program achieved electric direct energy savings of 2,008 MWh, with a realization rate of 9%, and non-electric direct energy savings of 1,288 MMBtu, with a realization rate of 3%, during the current evaluation period (Q1 2022–Q2 2024). Since inception (Q1 2017–Q2 2024), the RTEM program achieved electric and non-electric direct energy savings of 13,865 MWh, with a realization rate of 27%, and 22,198 MMBtu, with a realization rate of 20%, respectively among multifamily facilities. The program influenced owners and managers of participating buildings to complete additional actions outside of those reported in vendor service reports, and those actions were associated with notable energy savings accounted for as indirect benefits.

- **Recommendation 4a:** To better capture the full scope of program impacts, consider requiring vendors to report implemented savings, or establishing another systematic method for capturing savings attributable to RTEM systems. Direct savings estimates from vendors who provided this information were higher than those from sites without such reporting, while indirect savings estimates often rely on

customer reported actions that can be affected by recall bias. More consistent documentation of implemented actions and associated savings would reduce underestimation risk and provide a clearer picture of the program's influence on operational practices and decision making in the market.

  - **NYSERDA Response to Recommendation 4:** Pending. NYSERDA will revisit during future iterations of the program.

- **Recommendation 4b:** Consider requesting, at program intake, key technical details for equipment monitored by the RTEM system - for example, manufacturer spec sheets, system capacity, square footage or space served, and other relevant characteristics (e.g., for HVAC units, whether they are connected to other systems). While some of this information has been collected during application submission, it has not been part of the program process to identify site by site specific savings. Having these details readily available would be valuable during future evaluations that follow a similar process, as it would help evaluators determine what actions customers took because of the RTEM system and better understand the magnitude of associated savings. Collecting this information at intake is generally more efficient and less burdensome than attempting to gather it retrospectively during evaluation.
  - **NYSERDA Response to Recommendation:** Pending. NYSERDA will consider this feature for future program iterations.

Finding 5: Electronic Data Interchange (EDI) data were successfully obtained for 40 sites. For the remaining sites, no usable data were returned from the EDI request. In addition, while the program collected some pre-installation consumption data, these data were only sufficient for 2 sites, as the vast majority included just a single month of consumption. The lack of complete, standardized baseline data significantly limited opportunities to conduct billing analysis to derive savings.

- **Recommendation 5:** To support robust evaluation and long-term market insights, the program could consider requesting EDI data for all participating sites for each program year. If adopted, the program could extract account numbers and points of delivery (PoDs) from applications and submitted bills/proof of account upon program intake then immediately attempt to acquire baseline data to confirm the accuracy of the account numbers and PoDs in the tracking data. This will ensure data is available for savings estimation and evaluation. Note: there are some measures where billing data may be unable to provide direct quantification of savings, for example early identification of a system needing repair will often not have a period operating in poor condition to support billing or even advanced metering infrastructure–based estimation of savings because the increase in usage was avoided. Despite this risk,

having more of the consumption data can enable better savings estimates even when used indirectly and can provide better baseline consumption estimates than the current square footage estimates provide. This, in turn, strengthens the program's ability to demonstrate its role in transforming market practices and decision-making over time.

i. **NYSERDA Response to Recommendation 5:** Pending. Some, but not all NYSERDA programs will have this feature moving forward.

Finding 6: Vendor service reports provide the best available information for measure installation and savings verification for the RTEM program and thus are the primary source for evaluation of direct savings. This is a key risk for the program, as vetting of the savings claims with engineering and baseline assessments was not possible. As described previously, customer reports suffer from recall bias, and billing data was largely unavailable or incomplete. The evaluation team confirmed that vendor-reported implementations were completed, but where savings magnitudes were not reported, evaluator estimates of these savings may be lower than actual savings.

- **Recommendation 6:** Continue to assess available methods for evaluation of the RTEM program. For instance, concurrent evaluation of targeted sites with large estimated savings and multi-site projects within two years of EM system installation would have much higher likelihood of capturing measure-level post-installation information and participating organization intentions for future installations, associated savings data, and non-routine events such as major equipment upgrades. Similarly, utility billing data would be more readily available through EDI request. Customer and vendor interviews at this early stage would provide feedback to vendors on the critical importance of vendor service report data for evaluation of program direct benefits and capture more real-time indirect benefits as they are planned and occur.
    - **NYSERDA Response to Recommendation 6:** Implemented. NYSERDA is implementing pre-install interviews on select programs.

Finding 7: Vendor reports often included activities that might incur cost-savings through diagnostics and fault detection events, but did not report any annual energy savings from such measures. NYSERDA assumes modeled energy savings for all fuels serving a site, so the presence of these activities can substantially depress realization rates and projected savings as a percentage of estimated baseline.

- **Recommendation 7:** Consider including a post-installation verification step to confirm actual vendor-reported and installed energy-saving measures upon project completion or as part of the acquired

savings process. This step will help verify actual baseline energy consumption and vendor-reported energy savings from installed measures. Post-installation verification will also identify instances where only diagnostics or fault-detection activities were implemented, which result in cost savings for a site but not significant annual energy savings.

- **NYSERDA Response to Recommendation 7:** Implemented. NYSERDA is implementing a post-installation verification on select programs

4.6 Single Family Retrofit Programs Evaluation: Natural Gas and Electric Billing Analysis Impact Evaluation (Program Year 2023)

Summary of Report Findings, Recommendations and NYSERDA Response to Recommendations

Key findings Single Family Retrofit Programs Evaluation include:[23]

Finding 1: The realization rates are 20% for gas savings and 18% for electric savings. Realization rates show how evaluated savings compare to estimated savings and are influenced by factors like end-uses present in the home, usage patterns, and existing efficiencies of installed measures. They are not a measure of a program's actual impact, but they are a measure of how well the impact was estimated. Various factors can cause differences between actual savings and estimated savings, including assumptions made during the estimation process. If both estimated and evaluated savings perfectly matched actual savings, realization rates would be 1.

Finding 2: Changes in the way estimated savings are calculated have resulted in lower realization rates. While PY2023 evaluated savings values are similar to previous studies, estimated savings are much higher, leading to lower realization rates. The engineering analysis found that the program software adheres well to the NY Technical Resource Manual (TRM) methodologies for calculating estimated savings, and so the high estimated savings are a product of the TRM itself. In 2023, the program shifted to using the TRM to calculate estimated savings rather than using a proprietary tool, EmPCalc, as was done in previous years. Unlike the TRM, the EmPCalc tool accounted for interactive effects between measures and was calibrated to previous year evaluated savings. The change from EmPCalc to the TRM coincides with the increase in estimated savings.

Finding 3: Electric savings have been diminishing since 2011. The average evaluated electric savings have been decreasing in each evaluation since the evaluation for PY2011. As LED lighting becomes more widely adopted electric baselines have gotten more efficient making it harder to achieve additional savings. The main

driver of electric savings in PY2023 identified by the billing analysis, replacement refrigerators and freezers, also has diminishing savings (430 kwh yr in 2019 to 218 kwh/yr in 2023.

Finding 4: EmPower+ has greater impact on gas consumption than on electric consumption. The billing analysis found evaluated gas savings representing 8% of baseline usage, while electric savings were only 1% of baseline usage. The gas savings are similar to previous evaluations, while the electric savings are slightly lower than previous evaluations. Gas savings are driven by insulation and air sealing measures. For both gas and electric savings, there is no significant difference between geographic DAC status, utility, or geographic region.

Finding 5: There is some indication of beneficial snapback which leads to positive outcomes for customers associated with an increase in energy consumption. For example, if the program repairs broken heating, cooling, or water heating equipment, the customer can use that equipment again which would result in an increase in energy consumption. Indeed, the billing analysis found that equipment repair measures were associated with negative savings. Additionally, during the add-on participant survey, 35% of respondents who used a secondary source of heating for part of their home reported using that secondary source less often after participating.

Key recommendations from the evaluation include:

Recommendation 1: Consider focusing on fossil fuel savings and beneficial electrification rather than electric savings. The evaluation found the program is more effective at achieving gas and delivered fuel savings while electric savings have been diminishing over time. New York State climate goals also call for electrification of heating and water heating systems, which increases electric consumption. As electric baselines become more efficient, achieving electric savings will only become more difficult, and payback time on electric measures will increase. A focus on fossil fuel savings and electrification may better align the program with real-world limitations and New York state climate goals.

- **NYSERDA Response to Recommendation 1**: Implemented. Beginning in March 2025, EmPower+ began to phase out incentivizing the replacement of refrigerator and freezer incentives due to limited opportunities to achieve electric savings and ability to meet cost effective payback. Further, the program expects to phase out incentives for LED lighting beginning in 2027 as a non-strategic measure identified by the NY Technical Resource Manual.

Recommendation 2: Engage with NYS Department of Public Service and Technical Resource Manual (TRM) Management Committee to address the overestimation of program savings resulting from the TRM. NYSERDA could explore the possibility of applying lessons learned from the EmPCalc tool to the New York Home Energy Portal (NYHEP) portal calculation methodology. This could include discussion of allowing NYHEP to be calibrated to previous estimations of evaluated savings and account for interactive effects, rather than just using the TRM methodology.

- **NYSERDA Response to Recommendation 2**: Pending. The TRM management process includes use of evaluation findings and recommendations to continually improve methods. NYSERDA will consider this recommendation.

Endnotes

[1] Order Authorizing the Clean Energy Fund Framework, issued and effective January 21, 2016. [LINK]

[2] Order Approving Clean Energy Fund Modifications, issued and effective September 9, 2021. [LINK]

[3] http://documents.dps.ny.gov/public/MatterManagement/CaseMaster.aspx?Mattercaseno=18-M-0084 [NYS Department of Public Service Commission Files]

[4] Governor Hochul announces new framework to achieve nation-leading energy storage target (6GW by 2030), which can be referenced in the PSC filing of the Energy Storage Roadmap https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={7D4753BA-916B-483E-9E35-6749B20384A6}

[5] https://greenbank.ny.gov/Resources/Public-Filings [NY Green Bank Public Filings]

[6] US EPA. 2004. Emission Inventory Improvement Program. Estimating Ammonia Emissions from Anthropogenic Sources, Draft Final Report. Prepared by E.H. Pechan and Associates, Inc.; III-1

[7] US EPA. 1996. Compilation of Air Pollutant Emission Factors, 5th Edition, AP-42, Volume I: Stationary Point and Area Sources.

[8] McDonald, R. 2009. Evaluation of Gas, Oil, and Wood Pellet Fueled Residential Heating System Emission Characteristics. Brookhaven National Laboratory.

[9] For purposes of reporting, funding and associated benefits for Low-to-Moderate Income programs for years 2016-2019 are considered pre-Statewide Low-and-Moderate-Income Portfolio Implementation Plan (Statewide LMI Plan). All funding thereafter will be associated with the Statewide LMI Plan.

[10] For purposes of reporting, funding and associated benefits for Low-to-Moderate Income programs for years 2016-2019 are considered pre-Statewide Low-and-Moderate-Income Portfolio Implementation Plan (Statewide LMI Plan). All funding thereafter will be associated with the Statewide LMI Plan

[11] If solicitations with upcoming due dates were factored into the total NYSERDA commitments in the Market Development Budgets and Spending table, an additional $18,333,422 (reflecting 94% of the total approved budget to date), would be included with total NYSERDA commitments.

[12] The Market Characterization and Design initiative includes funds to support overarching, non-initiative-specific evaluation studies.

[13] 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.

[14] If solicitations with upcoming due dates were factored into the total NYSERDA commitments in the Innovation and Research Budget and Spending table, an additional $34,276,121 (reflecting 91% of the total approved budget to date) would be included with total NYSERDA commitments. NYSERDA anticipates attrition over time.

[15] The Market Characterization and Design initiative includes funds to support overarching, non-initiative-specific evaluation studies.

[16] A modification on September 9, 2022, to the Renewables Optimization Investment Plan expanded the activities and budget of the Energy Storage Technology and Product Development initiative to focus on solutions providing 10 to 100+ hours of storage for various grid applications to enable the transition away from natural gas infrastructure. In a subsequent filing on November 1, 2022, this new portion of the initiative was renamed to Long Duration Energy Storage as its own initiative the Gas Innovation focus area.

[17] Order Approving NY-Sun Program Modifications, issued and effective April 24, 2025. [LINK]

[18] The final study will be posted Q4 2025.

[19] The final report can be found here: https://www.nyserda.ny.gov/-/media/Project/Nyserda/Files/Publications/PPSER/NYSERDA/Build-Ready-Final-Report.pdf.

[20] The final study will be posted Q4 2025.

[21] The final study will be posted Q4 2025.

[22] The final study will be posted Q4 2025.

[23] The final study will be posted Q4 2025.

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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