New York State
Clean Heat Program
2024 Annual Report

Jointly Filed By:

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Consolidated Edison Company of New York, Inc.
Niagara Mohawk Power Corporation d/b/a National Grid
New York State Electric & Gas Corporation
New York State Energy Research and Development Authority
Orange and Rockland Utilities, Inc.
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Executive Summary

In 2024, the NYS Clean Heat Program supported, via incentives, the installation of a total of 22,741 heat pump projects. More than 80% of these projects were full load space heating projects. Of these full load space heating projects, 96% were air source projects and 4% were ground source. The Clean Heat Program also supported 3,973 heat pump water heater ("HPWH") projects in 2024. In addition, the Long Island Power Authority ("LIPA") supported 10,222 heat pump projects in 2024, for a total of 32,963 heat pump projects installed in 2024 across New York State.

In 2024, the NYS Clean Heat Program spent over $253 million and achieved over 1,420,000 MMBtu of energy savings. Clean Heat delivered 181% of targeted savings[1] at 266% of the targeted budget for 2024 authorized in the 2020 New Efficiency New York ("NE:NY") Order.[2] Actual 2024 savings achievement and spend includes budget transfers from electric portfolios and Continuity Funding Mechanisms for certain utilities,[3] which were not included in the 2020 NE:NY Order and were authorized in subsequent orders.

Since the NYS Clean Heat Program launch on April 1, 2020, cumulative program spend has totaled over $1.06 billion and the Program has achieved over 5,936,000 MMBtu of savings as of December 31, 2024.[4] As of the end of 2024, the Program has achieved over 222% of the 5-year (2020-2024) NE:NY MMBtu savings target and spent 302% of the combined 5-year incentive program budget. The actual spend and savings figures include the additional budget transfers and Continuity Funding Mechanisms authorized to fund NYS Clean Heat. Details on individual Utility performance can be found in Section 3 of this report.

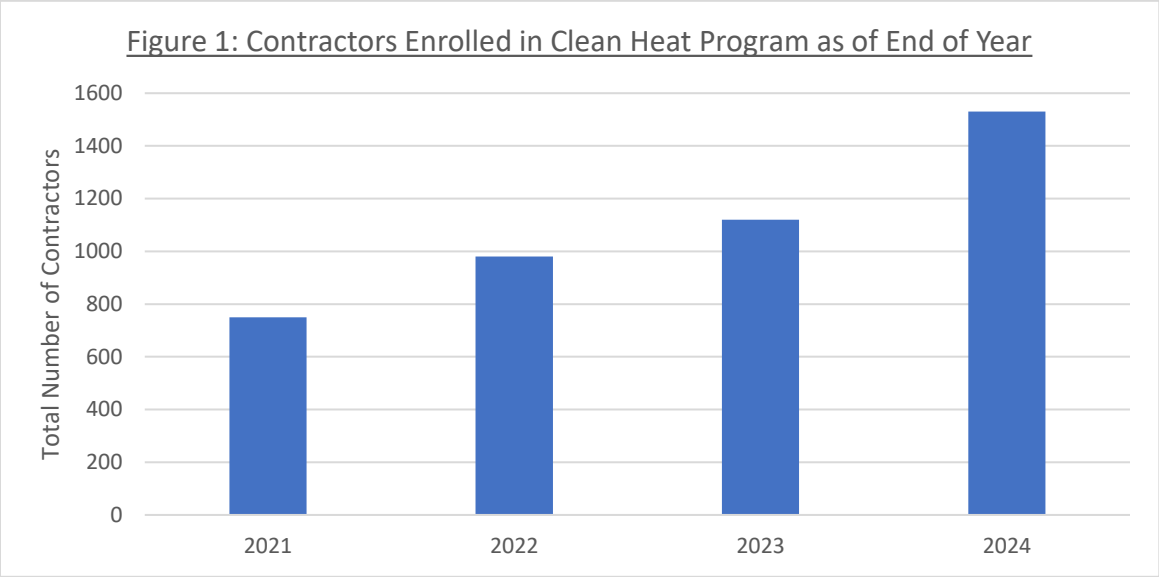
Successful recruitment efforts continue to expand the pool of air source heat pump ("ASHP") and ground source heat pump ("GSHP") contractors. As of the end of 2024, there were 1,530 contractors enrolled in the Clean Heat Program, reflecting a 37% increase from 2023 and a 104% increase from the first full year of the program in 2021. Figure 1 shows additional detail on contractors enrolled in the NYS Clean Heat Program by year. To complement this expansion and recruitment, the Program has increased efforts to provide education opportunities and other support to help Participating Contractors complete quality installations.

[1] Unless otherwise noted, "savings" in this report refer to annual savings.

[2] Case 18-M-0084, In the Matter of a Comprehensive Energy Efficiency Initiative ("NE:NY Proceeding"), Order Authorizing Utility Energy Efficiency and Building Electrification Portfolios Through 2025 (issued January 16, 2020) ("2020 NE:NY Order")

[3] See Sections 3.1, 3.2, and 3.4 for further detail.

[4] The prior heat pump achievement in Q1 2020 – as acquired by NYSERDA – was incorporated into the respective NY Electric Utilities' individual 2020 budgets and targets, pursuant to the 2020 NE:NY Order.



Over 1,200 individuals across the heat pump supply chain were trained in 2024, advancing the goal of growing a quality-oriented skilled labor force. NYSERDA's market development efforts included $43.1 million in spending across various initiatives. A summary is provided in Section 2, with specific program details provided in Section 4.

Key Program Accomplishments and Planned Areas of Improvement

The Joint Efficiency Providers[5] engaged in many activities throughout 2024 in their efforts to develop, support, and improve the NYS Clean Heat Program. The key accomplishments, which fall into four categories – Program Administration, Process Enhancements, Heat Pump Incentives, and Market Development – are summarized below.

[5] The Joint Efficiency Providers are defined as the New York State Energy Research and Development Authority ("NYSERDA") and the NY Electric Utilities. The NY Electric Utilities are defined as Central Hudson Gas & Electric Corporation ("Central Hudson"); Consolidated Edison Company of New York, Inc. ("Con Edison"); Niagara Mohawk Power Corporation d/b/a National Grid ("National Grid"); New York State Electric & Gas Corporation ("NYSEG"); Orange and Rockland Utilities, Inc. ("Orange & Rockland"); and Rochester Gas and Electric Corporation ("RG&E") (collectively, "NY Electric Utilities")."

Program Administration

- Maintained and improved key communications including updates to the NYS Clean Heat Program Manuals[6], Implementation Plan[7], Program website[8], and Working Group Series for Participating Contractors and Industry Partners ("PC&IP").[9]
- Updated, enhanced, and published the statewide NYS Clean Heat custom calculators to help contractors determine project savings and incentives. These tools include:
    - Category 4 tool to calculate space heating and cooling savings as well as envelope and ERV/HRV savings
    - Category 6 tool to calculate domestic hot water savings
    - Tool to evaluate Heat Recovery Chiller/Heat Pump Chiller savings
- Removed the EPA 608 Certificate as a required document for contractor enrollment

Process Enhancements

- Made QA/QC process enhancements including creation of an air-to-water heat pump ("AWHP") assessment checklist and promotion of 53 Clean Heat contractors to Full status
- Enhanced application process cycle times through increased program staffing, improved communication with participants, and increased training opportunities for industry partners
- Maintained low frequency of application errors and expedient resolution time
- National Grid changed their inspection procedure in Q4 2024. NYS Clean Heat rebates may be delayed or withheld while pre-payment field assessments/corrective actions are in progress or under program review. Rebate payments are released when a project either passes the field assessment or the contractor corrects outstanding nonconformance inspection results.

Heat Pump Incentives

- Central Hudson, National Grid, NYSEG, RG&E, and Orange & Rockland introduced Category 4b for space heating projects in multifamily buildings between 5-99 units. These projects are incentivized on a dollar per dwelling unit basis and are offered by Con Edison under Category 2c.
- Central Hudson, National Grid, NYSEG, RG&E, and Orange & Rockland introduced Category 6a for custom domestic hot water ("DHW") projects in multifamily buildings with 5-99 units. This measure was already offered by Con Edison under Category 6a.
- All utility Program Administrators in the NYS Clean Heat program began offering incentives for projects involving AWHPs under Category 2e.
- The Full Load Heating System requirement was updated to 100% of total building heating load ("BHL") at design conditions.
- Con Edison also implemented several changes specific to their service territory:

[6] NE:NY Proceeding, NYS Clean Heat: Statewide Heat Pump Program Manual ("Program Manual"), (initially filed on March 16, 2020 and most recently refiled April 1, 2025); NYS Clean Heat Con Edison Heat Pump Program Manual, (initially filed on January 12, 2023 and most recently refiled April 1, 2025) (together, "Program Manuals").
[7] NE:NY Proceeding, NYS Clean Heat: Statewide Heat Pump Program Implementation Plan, Version 9 (April 1, 2025) ("Implementation Plan"). The Joint Efficiency Providers' work in coordinating development of the NYS Clean Heat Program began in 2019, following the issuance of the Commission's NE:NY Order - NE:NY Proceeding, Order Authorizing Accelerated Energy Efficiency Targets (issued December 13, 2018) ("2018 NE:NY Order").
[8] https://cleanheat.ny.gov/
[9] https://cleanheat.ny.gov/resources-for-applications/. See "Working Group Series" subsection.

- Introduced an incentive for Thermal Conductivity Testing for non-residential GSHP projects
- Expanded eligibility of Category 2c for multifamily buildings up to 100 units
- Offered Limited-Time Offers to spur program achievement across multiple sectors
- Added a revised disciplinary process and other refinements to improve program oversight and drive quality installations

Market Development

- NYSERDA advanced numerous market development initiatives, as outlined in Sections 2.1.4 and Section 4.

Planned Areas of Improvement in 2025

The Joint Efficiency Providers are committed to improving the program, particularly in response to feedback from participants. Planned areas of improvement in 2025 include:

- Undertake additional efforts to help Participating Contractors grow their heat pump businesses and increase participation in the program with trainings and marketing materials (as detailed in Section 2.2)
- Explore new measures and implement improvements/clarifications to existing measures

The Joint Efficiency Providers will also continue to collaborate with stakeholders to evaluate potential changes such as incentive categories or levels and the addition of new eligible technologies in both residential and non-residential applications.

Section 2 details the key activities completed in 2024 and planned areas of improvement for 2025.

2025 Lookahead

In 2025, the Joint Efficiency Providers look forward to supporting New York State's electrification goals through achievement in the NYS Clean Heat Program. The Joint Efficiency Providers will work with the New York State Department of Public Service and other stakeholders on the evolution of the Program, as dictated by a Commission Order in the NE:NY Interim Review, including updated Program budgets, targets and structures.

1 Introduction

Pursuant to the January 16, 2020 *Order Authorizing Utility Energy Efficiency and Building Electrification Portfolios through 2025* ("2020 NE:NY Order"),[10] the New York State Energy Research and Development Authority ("NYSERDA") and the NY Electric Utilities[11] (collectively, "Joint Efficiency Providers") hereby file this New York State Clean Heat Statewide Heat Pump Program ("NYS Clean Heat Program" or "Program") Annual Report for 2024 ("Annual Report").

The NYS Clean Heat Program, which launched on April 1, 2020, provides customers, contractors, and other heat pump solution providers with a consistent experience and business environment throughout New York State. The NYS Clean Heat Program supports a consistent statewide heat pump program designed to achieve the State's ambitious heat pump goals and build the market infrastructure for a low-carbon future.

The NYS Clean Heat Program includes initiatives to advance the adoption of efficient electric heat pump systems for space and water heating applications throughout New York State. The NY Electric Utilities provide incentives to support customer adoption of eligible heat pump technologies, including cold climate air source heat pump ("ccASHP") systems, AWHP systems, GSHP systems, variable refrigerant flow ("VRF") systems, larger scale heat pump systems in commercial and multifamily buildings, and HPWHs, as well as their promotion and pricing by contractors and other heat pump solution providers. The Implementation Plan and the two Program Manuals provide detail about the Program, including incentive structures and levels, eligible technologies, program rules and processes, and information for participating contractors.[12] The Program is implemented in coordination with a portfolio of NYSERDA-led market development initiatives, which aim to build market capacity to deliver building electrification solutions. The market development efforts, which are described in Appendix 1 of the Implementation Plan, include support for training and qualification of contractors, processes to assure quality installations, marketing and education initiatives to help customers understand and select among options and to operate systems optimally, and research and demonstration initiatives.

[10] NE:NY Proceeding, 2020 NE:NY Order, p. 93.

[11] Central Hudson Gas & Electric Corporation ("Central Hudson"); Consolidated Edison Company of New York, Inc. ("Con Edison"); Niagara Mohawk Power Corporation d/b/a National Grid ("National Grid"); New York State Electric & Gas Corporation ("NYSEG"); Orange and Rockland Utilities, Inc. ("Orange & Rockland"); and Rochester Gas and Electric Corporation ("RG&E") (collectively, "NY Electric Utilities")."

[12] Both the Implementation Plan and Program Manual are revised, as necessary and with prior notice, on a separate schedule from this Annual Report.

2 NYS Clean Heat – Statewide Heat Pump Incentive Program

This 2024 Annual Report describes the milestones, activities, results, and findings for 2024 and planned areas of improvement for the NYS Clean Heat Program for 2025. Table 1 shows 2024 program achievement as compared to the budgets and targets from the 2020 NE:NY Order.[13] Table 2 shows cumulative achievement for the Program since it began in 2020. Actual savings achievement and spend in both Tables 1 and 2 include budget transfers from electric portfolios and Continuity Funding Mechanisms for certain utilities which were not included in the 2020 NE:NY Order and were authorized in subsequent orders. Tables 3 and 4 show the number of heat pump projects that were installed and provided incentives in 2024 by program category.

Statewide Program Performance

Table 1. NYS Clean Heat Statewide Program Spend and Achievement 2024

Category	Spend ($)	Savings (MMBtu)*
2024 Actual	$253,665,160	1,420,879
2024 NE:NY Budget/Target	$95,269,250	787,187
Difference Between 2024 Actual and NE:NY Budget/Target	$158,395,910	633,692

Table 2. NYS Clean Heat Statewide Program Cumulative Spend and Achievement versus 2020 NE:NY Order [14]

Category	Spend ($)	Savings (MMBtu)*
2020-2024 Spend/Achievement[15]	$1,069,735,948	5,936,606
2020 NE:NY Order 2020-2024 Budget/Target	$353,946,178	2,670,509
Realized Through 2024 to 2020-2024 NE:NY Order Budget/Target	302%	222%
NE:NY 2020-2025 Budget/Target	$454,318,222	3,566,590
Realized Through 2024 to 2020-2025 NE:NY Budget/Target	235%	166%

** Equivalent Annual MMBtu, net of all energy savings and associated usage*

[13] NE:NY Proceeding, 2020 NE:NY Order, Appendix C; NE:NY Proceeding, Implementation Plan, p. 6. Similar tables are shown for each utility in Section 4.

[14] The prior heat pump achievement in Q1 2020 – as acquired by NYSERDA – was incorporated into the respective NY Electric Utilities' individual 2020 budgets and targets, pursuant to the 2020 NE:NY Order.

[15] This also includes transfers from electric portfolios and Continuity Funding Mechanisms. For more detail, please see Section 3.1 for Central Hudson, 3.2 for Con Edison and 3.4 for RG&E.

Table 3. Projects Installed and Provided Incentives in 2024 by Electric Utility and Category

Category	Description	Central Hudson	Con Edison	National Grid	NYSEG	RG&E	ORU	Total by Category
1	*ccASHP: Partial Load Heating*	1	1	82	10	1	-	95
2	*ccASHP: Full Load Heating*	501	41	815	882	91	65	2,395
2a	*w/ Integrated Controls*	11	31	25	32	3	25	127
2b	*w/ Decommissioning*	817	12,763	384	526	89	157	14,736
2c	ASHP MF Full Load Heating with Decommissioning	-	174	-	-	-	-	174
2d	ASHP SMB Full Load Heating with Decommissioning	-	131	-	-	-	-	131
2e	Full Load Air-to-Water Heat Pump, for Space Conditioning	1	-	-	1	-	-	2
3	*GSHP: Full Load Heating*	85	144	155	199	83	16	682
4	*Custom Space Heating Applications*	8	130	62	19	4	10	233
4a	*Heat Pump + Envelope*	-	22	11	6	1	2	42
5	*HPWH (up to 120 gal)*	404	546	1,650	634	661	43	3,938
6	*Custom Hot Water Heating Applications*	-	26	9	-	-	-	35
7	*GSHP Desuperheater*	7	-	39	51	20	-	117
8	*Dedicated DHW WWHP*	3	-	7	10	1	1	22
9[16]	*Simultaneous Install of Space & Water Heating*	-	-	-	-	-	-	-
10	*Custom Partial Load Space Heating*	-	9	3	-	-	-	12
Total Project Count[17]		1,838	14,018	3,242	2,370	954	319	22,741

[16] Category 9: *Simultaneous Install of Space & Water Heating* is indicative of a bonus incentive and is not included in Total Project Count.

[17] Total Project Count is the total number of customer heat pump projects installed and provided incentives in 2024. A single parcel (i.e., or customer) may have multiple projects. *See,* NE:NY Proceeding, NYS Clean Heat: Program Manuals *Glossary of Terms* for definition of Clean Heat Project. For instance, a customer may have a Category 2 space heating and a Category 5 water heating installation. Total project counts may also deviate from those reported in annual utility scorecard filings.

Table 4. Cumulative Projects Installed and Provided Incentives, Program to Date 2020-2024 by Electric Utility and Category

Category	Description	Central Hudson	Con Edison	National Grid	NYSEG	RG&E	ORU	Total by Category
1	*ccASHP: Partial Load Heating*	1,460	5,026	1,417	1,413	387	74	9,777
2	*ccASHP: Full Load Heating*	5,169	9,935	3,100	4,709	714	596	24,223
2a	*w/ Integrated Controls*	23	2,331	63	65	20	98	2,600
2b	*w/ Decommissioning*	1,994	23,337	762	1,091	215	388	27,787
2c	*ASHP MF Full Load Heating with Decommissioning*	-	218	-	-	-	-	218
2d	*ASHP SMB Full Load Heating with Decommissioning*	-	160	-	-	-	-	160
2e	Full Load Air-to-Water Heat Pump, for Space Conditioning	1	-	-	1	-	-	2
3	*GSHP: Full Load Heating*	398	525	680	874	316	75	2,868
4	*Custom Space Heating Applications*	34	453	115	52	14	22	690
4a	*Heat Pump + Envelope*	1	48	16	20	3	2	90
5	*HPWH (up to 120 gal)*	2,532	1,331	4,147	2,141	1,689	162	12,002
6	*Custom Hot Water Heating Applications*	-	65	10	-	-	-	75
7	*GSHP Desuperheater*	72	107	206	267	98	23	773
8	*Dedicated DHW WWHP*	17	3	31	48	12	2	113
9	*Simultaneous Install of Space & Water Heating*	422	303	314	506	151	33	1,729
10	*Custom Partial Load Space Heating Applications*	-	10	3	-	-	-	13
Total Project Count[18]		12,123	43,852	10,864	11,187	3,619	1,475	83,120

[18] Total Project Count is the total number of customer heat pump projects installed and provided incentives in 2024. A single parcel (i.e., or customer) may have multiple projects. *See,* NE:NY Proceeding, NYS Clean Heat: Program Manuals *Glossary of Terms* for definition of Clean Heat Project. Cumulative totals from 2020 do not include projects that were funded under the prior NYSERDA program.

Each NY Electric Utility's individual performance is presented in more detail under its respective "Utility-Specific Progress" section.

2.1 Summary of NYS Clean Heat Program in 2024

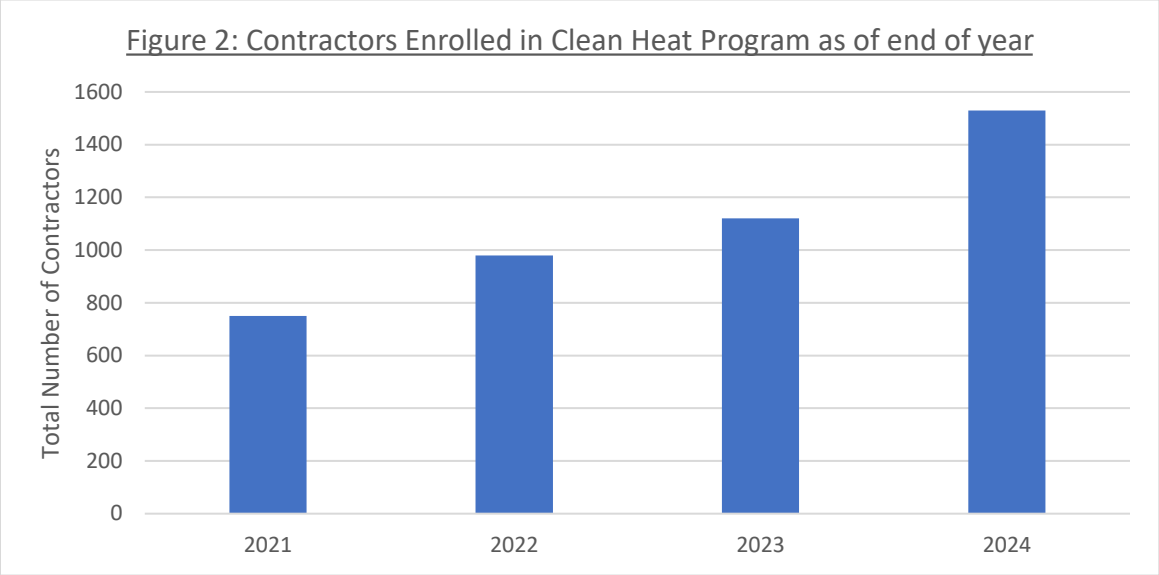
2.1.1 Program Administration Activities

The Joint Efficiency Providers conduct a range of program administration activities and implement continuous improvement practices to make implementation more efficient, make rules and communication clearer, and to respond to participant feedback and market developments.

These activities are ongoing and will continue going forward, with modifications to reflect programmatic needs or changing market conditions. Key activities include:

- **Maintain and improve key communications, including:**
  - Updates to the Program Manuals filed in March 2024 (Version 11 and Version 4 Con Edison); June 2024 (Version 5 Con Edison); September 2024 (Version 12 and Version 6 Con Edison); and December 2024 (Version 12.1 and Version 7 Con Edison).[19] The Joint Efficiency Providers will continue to file updated documents in 2025.
  - Updates to the NYS Clean Heat Implementation Plan (March and September 2024)
  - Development and support of the customer-facing NYS Clean Heat webpages[20]
  - Reorganization and streamlined support of the contractor-facing NYS Clean Heat webpages[21]
  - Continuation of the Working Group Series for Participating Contractors and Industry Partners. In 2024, meetings were held in April, June, September, and December with an average of 105 attendees per session.
- **Grow and support the Clean Heat Contractor Network**
  - The Program processed enrollment applications and provided orientation to new contractors, increasing participation from 1,120 to 1,530. See Figure 2, below, for additional detail on contractors enrolled in the NYS Clean Heat Program by year.

[19] *See,* NE:NY Proceeding, NYS Clean Heat: Program Manual
[20] https://cleanheat.ny.gov/
[21] https://cleanheat.ny.gov/contractors/



- 53 registered statewide Clean Heat contractors achieved "Full" status – no limitations or conditions regarding participation – in 2024.
- The JMC conducted 38 School of Clean Heat training webinars with 1,437 attendees and numerous one-on-one trainings with individual contractors. Recordings were posted for on-demand access and received 447 views in 2024.
- The Joint Efficiency Providers posted recorded trainings focused on various topics, which can be viewed anytime at:
  - https://www.gotostage.com/channel/605e6790b2d043e5b2d270c27c6b517d for Con Edison and
  - https://www.gotostage.com/channel/ac7f5f9bccc643a5a3a6c0841311f18e for the non-Con Edison utilities
- A new table was added to the Program Manual that clearly outlines roles and responsibilities for Participating Contractors.

- **Drive high-quality installations**
  - On March 1, 2024, the non-Con Edison utilities increased minimum participation levels for participating contractors from one project submission every 24 months to one project submission every 6 months
  - Con Edison released an updated disciplinary process in Fall 2024
  - In the April 2024 PC&IP call, the JMC shared information on whole-home heat pump installation best practices
  - The JMC published supporting resources to the NYS Clean Heat webpage including: 1) protecting heat pumps from electrical surges and 2) the transition to low global warming potential refrigerants

2.1.2 Process Enhancements

As part of the effort in developing, initiating, and implementing the NYS Clean Heat Program, the Joint Efficiency Providers achieved the following key process improvements in 2024:

2.1.2.1 Key Accomplishments in 2024

- **QA/QC Process Enhancements**

    - Published an air-to-water heat pump field assessment checklist
- **Statewide Heat Pump Technical Study**
    - The statewide heat pump technical study conducted by Department of Public Service ("DPS") Staff was completed in Q3 2024
    - Findings and recommendations from the study included improved Technical Resource Manual ("TRM") savings algorithms and assumptions, elimination of prescriptive partial load rebates, and additional program guidance
- **Enhancements to the Custom Savings and Incentive Calculators**
    - The Statewide Clean Heat Program Category 4 Calculator tool was updated to reflect the latest updates in the Program Manuals and changes were made to improve usability, correct bugs, and add new features. Main updates are in cadence with Program Manual updates, and other intermediate updates are made as well.
    - The Category 6 – Domestic Hot Water Custom Calculator was updated and re-published to add new features and fix bugs as needed. The tool is updated in cadence with Program Manual updates, and other intermediate updates are made as well.
    - The Heat Recovery Chiller Custom Calculator was updated to include a Heat Pump Chiller module
- **Efforts to Reduce the Frequency of Application Errors and the Duration of Time to Resolve Errors**
    - To reduce application errors and reduce processing timelines, School of Clean Heat training sessions concentrated on going over common sources of application errors and providing tips on how to avoid them. The rate of applications with flaws for all utilities remained steady throughout 2024 with an average of 34%.

2.1.2.2 Planned Areas of Enhancement

- **Increase Support Offered to Program Contractors**
    - The non-Con Edison utilities will institute a contractor badging system on the Find a Contractor tool intended to help Participating Contractors and market participants understand how each company is engaging with the Clean Heat Program
    - The Program will provide group and contractor training on specific nonconformance items
    - The Program, in conjunction with its Implementation Contractors, will partner with software manufacturers to offer hands-on Manual J training
    - The Program will continue to develop resources to support installation best practices and will work with NYSERDA, through the Clean Heat Connect Program, to align on messaging
    - Moving forward, the Program will review and grade projects for assignment in the new contractor badging system. Badges will be assigned to qualifying contractors based on cumulative submission across all utilities and re-evaluated on an ongoing basis.
    - The Program will coordinate with NYSERDA to develop shared resources supporting improvements to load calculations, equipment sizing and selection, system design, and installation based on lessons learned from both the EmPower+ and Clean Heat programs. Lessons learned will be leveraged to inform future program design.
- **Maintain Application Process Cycle Time**
    - The Utilities will work to improve upon the application processing time for prescriptive applications.

- **Maintain High Standard of Application Quality and Timeliness in Resolving Errors**
    - A certain percentage of applications to the NYS Clean Heat Program include some level of error that requires correction from contractors. The Program will continue to expand contractor training in 2025 and provide one-on-one process assistance and retraining to resolve and drive down error rates. In addition, the Utilities will enforce the deadline for contractors to submit missing and/or corrected information that was introduced in 2022, in order to find more timely resolutions.[22]
    - As part of the expanded training for contractors, the Program will continue to build upon the existing School of Clean Heat library

2.1.3 Heat Pump Incentives

2.1.3.1 Key Accomplishments in 2024

Updates and changes to incentive offerings included:

- **Introduced Dollar per Dwelling Unit Incentive for Multifamily Projects (5-99 units)**
    - Beginning in September 2024, Central Hudson, National Grid, NYSEG, RG&E, and Orange & Rockland introduced Category 4b for space heating projects in multifamily buildings between 5-99 units. These projects are incentivized on a dollar per dwelling unit basis and are offered by Con Edison under Category 2c.
    - Category 4b projects follow the custom process and criteria and require pre-approval and decommissioning of existing fossil fuel equipment.
- **Custom DHW Multifamily Projects (5-99 units)**
    - Effective September 1, 2024, Central Hudson, National Grid, NYSEG, RG&E, and Orange & Rockland introduced Category 6a for custom DHW projects in multifamily buildings with 5-99 units. This measure is already offered by Con Edison under Category 6a.
    - Category 6a projects must follow the custom application process and requirements.
- **Addition of Category 10 Custom Partial Load Space Heating**
    - In September 2024, the Clean Heat program introduced incentives for Category 4 and 4a-eligible projects that do not install full load heating systems.
    - Projects must displace at least 50% of the existing on-site fossil fuel consumption annually or provide at least 4,000 MMBtu of annual savings.
    - Projects must follow the custom application process, require pre-approval, and will be reviewed on a case-by-case basis.
- **Addition of Air-to-Water Heat Pump Incentives**
    - Effective March 1, 2024, the NYS Clean Heat program offered incentives for AWHP projects under Category 2e for heat pumps listed on the NYS Clean Heat AWHP Qualified Product List.
    - Eligible projects must meet 100% of BHL at design conditions and be sized to no more than 120% of the space heating load.
- **Utility-Specific Enhanced Incentive Rates**

[22] The electric utility will notify the Participating Contractor if an application contains missing or inaccurate information. As of March 1, 2022, Participating Contractors are granted 45 days from the date that the electric utility contacts the Participating Contractor with a missing information request to complete their application. See NYS Clean Heat: Statewide Program Manual, Version 6, March 1, 2022, p.71.

- Con Edison introduced an incentive for Thermal Conductivity Testing for non-residential GSHP projects.
- Con Edison expanded eligibility for its prescriptive multifamily incentive (Category 2c) to buildings up to 100 apartments. The Con Edison Clean Heat Program ran a successful Limited-Time Offer in the first half of 2024 to spur achievement.

2.1.4 Market Development

2.1.4.1 Key Accomplishments in 2024

- **Market Development**
  NYSERDA Market Development activities were funded through the Clean Energy Fund ("CEF").

  NYSERDA conducts a range of critical market development activities to help accelerate access to and adoption of heat pumps. A summary of highlights is included below, while additional details on the achievements are included in Section 4.

  - In 2024, NYSERDA continued to deepen and broaden its relationships with critical supply chain actors, from manufacturers to distributors and contractors, to help support the growth of heat pump adoption in New York State, including:
    - Expanded the Clean Heat Connect[23] Network by seven members – which now includes 11 HVAC manufacturers and 15 distributors and covers a majority of the New York State market. Network members promote adoption of educational and technical tools and resources through their contractor networks.
  - Launched a variety of new contractor-oriented tools and resources through the Clean Heat Connect network, as described in the Critical Tools portion of Section 4.
    - NYSERDA's Technical Assistance programs, which provide decision-quality information to help buildings plan for decarbonization and heat pumps, received 307 study applications in 2024 that focused on electrification or had an electrification component. Most of these studies are for multifamily facilities, commercial real estate, and Pre K-12 schools. The studies completed in 2024 identified and evaluated 1,358 electrification measures: 510 ccASHP, 121 VRF measures, 401 domestic hot water electrification, and 326 GSHP measures.
    - In 2024, Comfort Home, which focuses on packaged weatherization measures to get homes heat-pump ready, increased its project count by 40% compared to 2023, completing 2,816 load reduction projects and leveraging $16.6M in private consumer investment.
  - The Empire Building Challenge ("EBC") announced 11 new multifamily program partners, including nine affordable housing developers who collectively own more than 1.7 million square feet of real estate and 133,500 residential units throughout New York State. Through EBC, these partners are advancing 29 showcase buildings, 25 of which are in Disadvantaged Communities, while unlocking over $50 million in private investment and attracting solution providers globally to bring innovation and business investment to New York State.

[23] https://cleanheatconnect.ny.gov/

- In 2024, NYSERDA continued its partnerships with affordable housing agencies to advance electrification and bring the benefits of comfort and improved air quality to low- and moderate-income residents.
    - In partnership with NYS Homes and Community Renewal ("HCR"), NYSERDA continues to implement the Clean Energy Initiative ("CEI"), which integrates both technical assistance and funding for electrification directly into HCR's affordable housing financing pipelines, beginning with affordable new construction and adaptive reuse projects. To date, HCR has awarded CEI funding to 68 projects comprised of 6,366 dwelling units.
    - NYSERDA continues to expand its partnership with NYC Housing Preservation and Development ("HPD") in 2024. The Retrofit Electrification Pilot was replaced with the Resilient and Equitable Decarbonization Initiative for Existing Buildings ("REDi: EB"), which incentivizes the same scopes as the previous program while also providing additional incentives for building envelope and ventilation improvements. Under these programs, HPD has awarded funding to 17 projects comprised of 1,007 dwelling units. HPD and NYSERDA also launched the Future Housing Initiative ("FHI") in 2023. To date, FHI has awarded funding to 15 new construction projects; this funding will be used to support installing all-electric systems and achieving Passive House certification and performance.
- In 2024, the Large-Scale Thermal program, PON 5614, was launched and completed one funding round. PON 5614 supports the design of large single-building and multi-building projects using heat pumps and low-carbon thermal resources.
- NYSERDA's NextGen HVAC Innovation Challenges (renamed the NextGen Building Innovation Challenge), PON 3519, completed Rounds 7 and 8 in 2023 and 2024. For 2025, a new PON will be issued to target innovative, commercial, near-ready solutions addressing New York State's unique heating and cooling requirements.
- NYSERDA completed the first year of the Experience Clean Heat ("ECH") Initiative to "win the hearts and minds" of consumers, piloting 12 locations where consumers can enjoy personal experiences with heat pumps in common public spaces.
- In 2024, the NYS Clean Heat marketing campaign experienced a 13% increase in customer actions taken on the homepage of the website over 2023.

2.2 2025 Lookahead

The Joint Efficiency Providers of the NYS Clean Heat program continue to monitor and participate in policy developments that may inform or influence the program.

- As mandated in the 2020 NE:NY Order,[24] the Commission initiated an Interim Review process in 2022, and, in July 2023, the Commission released its *Order Directing Energy Efficiency and Building Electrification Proposals* ("EE/BE Order").[25] Pursuant to the EE/ BE Order, on November 1, 2023, each of the Joint Efficiency Providers submitted proposals which, among other things, provided proposed Clean Heat budgets and targets for 2026-2030 and addressed other topics

[24] NE:NY Proceeding, 2020 NE:NY Order, p. 59-60.
[25] NE:NY Proceeding, Order Directing Energy Efficiency and Building Electrification Proposals ("EE/ BE Order") (Issued July 20, 2023).

related to the NYS Clean Heat Program.[26] The Commission is expected to set budgets and targets in 2025. The Joint Efficiency Providers will continue to actively participate in and support the process related to the Interim Review and EE/BE Order in 2025.

- NYSEG, RG&E, and National Grid plan to increase incentive rates for select categories effective March 1st, 2025. Specifics regarding the categories impacted can be found in Version 13 of the Program Manual.

3 Utility-Specific Progress

3.1 Central Hudson

Table 5. 2024 Clean Heat Program Spend and Achievement

Category	Spend ($)	Savings (MMBtu)
2024 Actual	$8,268,721	103,544
2024 NE:NY Budget/Target	$9,186,504	56,479
Difference Between 2024 Actual and NE:NY Budget/Target	($917,783)	47,065

Table 6. Clean Heat Program Spend and Achievement 2020-2024

Category	Spend ($)	Savings (MMBtu)
Cumulative 2020-2024 Spend/Achievement	$62,701,842	686,370
Cumulative NE:NY 2020-2025 Budget/Target	$43,221,312	255,292
Share of NE:NY Budget/Target Realized Through 2024	145%	269%

[26] Pursuant to letter request from DPS Staff, each of the Joint Efficiency Providers provided supplemental information on their proposal on January 12, 2024. See, NE:NY Proceeding, EE-BE Proposal Supplemental Information Request, New York Department of Public Service (December 14, 2023).

Table 7. Central Hudson Clean Heat Program Spend and Achievement 2020-2024 with Authorized Funding Transfers

Category	Spend ($)	Savings (MMBtu)
Cumulative 2020-2024 Spend/Achievement	$62,701,842	686,370
Cumulative NE:NY 2020-2025 Budget/Target w authorized funding transfers	$69,000,597	255,292
Share of adjusted NE:NY Budget/Target Realized Through 2024	91%	269%

3.1.1 2024 Program Performance

In 2024, Central Hudson saw continued growth in the program, exceeded its annual savings target, and achieved nearly 270% of its cumulative program savings goal. Central Hudson nearly doubled its 2024 annual savings target while expending less than its allotted annual budget. This cost-effective activity has continued through the additional authorized funds for the remainder of the Clean Heat program.

In 2024, Category 2b decommissioning project counts exceeded all other program measures, while accounting for over 46% of overall annual program savings. Since its introduction to the program in spring of 2022, full load decommissioning has accounted for a greater share of program savings each year. Moving forward, decommissioning projects remain a focus for Central Hudson with continued workforce development centered on proper displacement of legacy fossil-fuel systems.

Order Approving Additional Funding for Central Hudson's Clean Heat Program

In June of 2023, the Commission authorized additional funding for the program via previously authorized and unspent funds, reallocated future energy efficiency funds, and a continuity funding mechanism after previous authorized funding sources are exhausted[27].

Central Hudson received approval for the use of $3.97 million of previously collected, unspent funds, along with the transfer of $13.5 million of future non-LMI Energy Efficiency funds, $1.7 million of accrued interest from the Company's Clean Energy Fund, and $6 million in continuity funding, not to exceed $1 million per month. The Company's Clean Energy Fund interest and continuity funding mechanisms have been assigned a cost per unit target of $93.03 MMBtu. Additionally, any unspent monthly continuity funds will carry over to future months for use. In total, the Order approved the use of just over $25 million in additional funds to support continued Clean Heat activity in Central Hudson territory. Central Hudson utilized the approved transfers and Clean Energy Funds in 2024, and anticipates the use of the continuity funding mechanism beginning in 2025.

[27] NE:NY Proceeding, Order Approving Funding for Clean Heat Program (issued June 22, 2023) ("Central Hudson Clean Heat Order")

3.2 Con Edison

3.2.1 2024 Program Performance

Table 8. Con Edison 2024 Clean Heat Program Spend and Achievement

Category	Spend ($)	Savings (MMBtu)
2024 Actual	$200,825,277	873,463
2024 NE:NY Budget/Target	$48,526,394	219,927
Difference Between 2024 Actual and NE:NY Budget/Target	$152,298,883	653,536

Table 9: Con Edison Clean Heat Program Spend and Achievement 2020-2024 with Authorized Funding Transfers

Category	Spend ($)	Savings (MMBtu)
Cumulative 2020-2024 Spend/Achievement	$859,097,555	3,698,978
Cumulative NE:NY 2020-2025 Budget/Target	$227,315,835	1,000,000
Share of NE:NY Budget/Target Realized Through 2024	378%	370%

After relaunching the Con Edison Clean Heat Program for ASHP in 2023, 2024 was a year of stability. Con Edison achieved its cumulative 2020-2025 program targets under the originally authorized NE:NY funding in Q1 2022 and then paused accepting new ASHP applications in May 2022. In January 2023, as part of the relaunch, Con Edison began accepting new applications for projects installed within the approved budgets set forth under the Continuity Funding Mechanism. In 2023, under the Continuity Funding Mechanism, Con Edison achieved annual energy savings of 289,095 MMBtu at a spend of $38,151,026. Together with its initial authorizations, the Company achieved 672,721 MMBtu of annual energy savings at a spend of $147,681,304.

In 2024, Con Edison supported 14,018 projects, which offered 873,463 MMBtu of savings, with a total spend of $200,825,277. Compared to 2023, in 2024 Con Edison supported almost three times as many projects, with spending up 36%.

Con Edison continues to help catalyze a shift toward residential customers decommissioning their fossil fuel systems. In 2023, ASHP installations with decommissioning of existing fossil fuel heating systems accounted for approximately 92% of all residential ASHP projects acquired which rose to over 99% in 2024.

2024 Program Changes

After relaunching the ASHP Program in 2023, Con Edison made more modest program adjustments in 2024. The Company introduced an incentive for Thermal Conductivity Testing for non-residential GSHP projects. It expanded eligibility for its prescriptive multifamily incentive (Category 2c) to buildings up to 100 units. The Con Edison Clean Heat Program ran a successful Limited-Time Offer in the first half of 2024 to spur achievement. In September, Con Edison introduced a prescriptive per-apartment rate for multifamily GSHP projects. Also, the Program introduced a revised disciplinary process for contractors.

3.3 National Grid

Table 10. National Grid (Niagara Mohawk) Clean Heat Program Spending and Achievement 2024

Category	Spend ($)	Savings (MMBtu)
2024 Actual	$23,664,251	216,944
2024 NE:NY Budget/Target	$17,190,980	245,889
Difference Between 2024 Actual and NE:NY Budget/Target	$6,473,271	(28,945)

Table 11. National Grid (Niagara Mohawk) Clean Heat Program Spending and Achievement 2020-2024

Category	Spend ($)	Savings (MMBtu)
Cumulative 2020-2024 Spend/Achievement	$65,958,881	668,957
Cumulative NE:NY 2020-2025 Budget/Target	$84,398,834	1,112,681
Share of NE:NY Budget/Target Realized Through 2024	78%	60%

3.3.1 2024 Program Performance

National Grid's heat pump programs are offered to customers in Niagara Mohawk Power Corporation d/b/a National Grid's Upstate New York service territory. For the 2024 program year, National Grid did not achieve its annual NE:NY savings target and overspent its 2024 annual NE:NY Clean Heat budget but did not exceed total available funding because of unspent market-rate Niagara Mohawk Power Company (NMPC) electric portfolio funds transferred during 2023 to support program years 2024 and 2025. National Grid filed the March 2024 SEEP plan showing the transfer of funds from electric non-LMI unspent funds to National Grid Clean Heat.

Savings in 2024 were less than 1% lower than 2023, with the program achieving 88% of its 2024 annual NE:NY savings target. National Grid experienced reduced participation in 2024 due in part to removal of Category 1 incentives for partial rebate installations. Additionally, the NYSERDA EmPower+ program

incentivized heat pump and HPWH installations outside of the NYS Clean Heat program. During the fall, National Grid offered a limited time increased incentive for prescriptive projects to encourage greater contractor and customer participation.

National Grid and its program implementation vendor continued to invest in onboarding and training new and existing contractors, adding 97 new National Grid participating contractors for a total of 425 active enrolled industry partners by the end of the year.

A notable success of the National Grid program was sustained growth in custom Commercial, Industrial, and Multifamily projects with a 72% increase in savings from 2023.

National Grid continued to grow its heat pump water heater distribution midstream offering from 751 units in 2023 to 875 units in 2024. 19 distributors were enrolled, and 93 contractors installed units through the program.

3.4 NYSEG and RG&E

Table 12. NYSEG Clean Heat Program Spend and Achievement 2024

Category	Spend ($)	Savings (MMBtu)
2024 Actual	$13,621,687	151,959
2024 NE:NY Budget/Target	$15,300,267	219,558
Difference Between 2024 Actual and NE:NY Budget/Target	($1,678,580)	(67,599)

Table 13. NYSEG Clean Heat Program Spend and Achievement 2020-2024

Category	Spend ($)	Savings (MMBtu)
Cumulative 2020-2024 Spend/Achievement	$54,101,302	612,856
Cumulative NE:NY 2020-2025 Budget/Target	$75,130,577	992,737
Share of NE:NY Budget/Target Realized Through 2024	72%	62%

Table 14. RG&E Clean Heat Program Spend and Achievement 2024

Category	Spend ($)	Savings (MMBtu)
2024 Actual	$3,397,386	37,662
2024 NE:NY Budget/Target	$1,900,472	26,422
Difference Between 2024 Actual and NE:NY Budget/Target	$1,496,914	11,240

Table 15. RG&E Clean Heat RG&E Program Spend and Achievement 2020-2024

Category	Spend ($)	Savings (MMBtu)
Cumulative 2020-2024 Spend/Achievement	$12,700,022	147,296
Cumulative NE:NY 2020-2025 Budget/Target	$9,247,776	119,223
Share of NE:NY Budget/Target Realized Through 2024	137%	124%

Table 16. RG&E Clean Heat Program Spend and Achievement 2020-2024 with NE:NY Flexibility Funding Transfer

Category	Spend ($)	Savings (MMBtu)
Cumulative 2020-2024 Spend/Achievement	$12,700,022	147,296
Cumulative NE:NY 2020-2025 Budget/Target w NE:NY flexibility transfer	$19,694,470	119,223
Share of adjusted NE:NY Budget/Target Realized Through 2024	64%	124%

Table 17. NYSEG Clean Heat Program Spend and Achievement 2020-2024 with NE:NY Flexibility Funding Transfer

Category	Spend ($)	Savings (MMBtu)
Cumulative 2020-2024 Spend/Achievement	$54,101,302	612,856
Cumulative NE:NY 2020-2025 Budget/Target w NE:NY flexibility transfer	$80,130,577	992,737
Share of adjusted NE:NY Budget/Target Realized Through 2024	68%	62%

3.4.1 2024 Program Performance

The RG&E Clean Heat program exceeded NE:NY savings targets by 40% in 2024. This resulted in greater spend, while maintaining the originally budgeted cost of savings. NYSEG faced a drop in 2024 production due in part to removal of Category 1 incentives for partial rebate installations. Additionally, the NYSERDA EmPower+ program incentivized heat pump and HPWH installations outside of the NYS Clean Heat program. The programs focused on the continued development of the participating contractor and implementation partner network. The Companies' participating contractor network continued to see growth in 2024. Both NYSEG and RG&E saw sustained production in ASHP installations, which constituted 75% of total savings for the year.

NE:NY Flexibility Funding for NYSEG and RG&E Clean Heat Program

In 2022, 2023, and 2024, RG&E experienced significant growth in the program and exceeded the annual savings targets and budgets.

Due to accelerated program achievement, RG&E filed a revision to the June 2023 SEEP plan allowing for the transfer of funds from electric non-LMI unspent funds to RG&E Clean Heat. Since RG&E was able to meet their electric NE:NY goals, unspent funds could be transferred to the RG&E Clean Heat program allowing it to operate seamlessly without the need for a pause or shut down. In total, RG&E was able to

transfer $10,446,694 of unspent electric non-LMI funds to the RG&E Clean Heat program.

Since NYSEG was able to meet their electric NE:NY goals in 2022, unspent funds could be transferred to the NYSEG Clean Heat program, allowing it to operate seamlessly without the need for a pause or shutdown. NYSEG filed the October 2024 SEEP plan showing the transfer of funds from electric non-LMI unspent funds to NYSEG Clean Heat. In total, NYSEG was able to transfer $5,000,000 of unspent electric non-LMI funds to the NYSEG Clean Heat program.

3.5 Orange & Rockland

3.5.1 2024 Program Performance

Table 18. Orange & Rockland 2024 Clean Heat Program Spend and Achievement

Category	Spend ($)	Savings (MMBtu)
2024 Actual	$3,887,838	37,307
2024 NE:NY Budget/Target	$3,164,633	18,912
Difference Between 2024 Actual and NE:NY Budget/Target	$723,205	18,395

Table 19. Orange & Rockland Clean Heat Program Spend and Achievement 2020-2024

Category	Spend ($)	Savings (MMBtu)
Cumulative 2020-2024 Spend/Achievement	$15,176,346	122,149
Cumulative NE:NY 2020-2025 Budget/Target	$15,003,887	86,657
Share of NE:NY Budget/Target Realized Through 2024	101%	141%

Orange & Rockland's program participation remained consistent in 2024 with a total of 319 completed projects. This resulted in exceeding savings and expenditures in both 2024 and cumulatively since program inception. ASHP installations were completed in over 95% of all 2024 projects while GSHP installations accounted for 5% of projects. Full load with integrated controls projects accounted for 30% of projects. Full load with fossil fuel displacement accounted for 55%. Heat pump water heaters accounted for the remaining 15% of projects. Residential projects accounted for 90% of all projects.

Planned Savings in 2024 and 2025 reflect a transfer in funding from the 2019-2023 unspent NE:NY Electric EE budget to the 2024-2025 NYS Clean Heat budget, allowing Orange & Rockland to achieve 101% of the NE:NY Target. Updated budgets and targets were filed in the NYS Clean Heat Statewide Heat Pump Program Implementation Plan on September 11, 2024.

Incentive Level Changes

Since September 1, 2024, Orange & Rockland has not made any incentive level adjustments for

residential (1-4) family air source heat pump projects (Categories 2, 2a and 2b), and custom space and hot water heating applications (Categories 4, 4a and 6) to manage its remaining authorized Clean Heat program budget.

4 Market Development Plan

4.1 Overview

Starting in Q2 2020, the NY Electric Utilities launched the NYS Clean Heat Statewide Heat Pump incentive program. To achieve the statewide heat pump goals and build the market infrastructure for a low-carbon future, the incentive program has been paired with a portfolio of market development initiatives implemented by NYSERDA.

NYSERDA has expended over $130 million in market-enabling initiatives, funded through CEF, to support the NYS Clean Heat Market Development Plan, which aims to build market capacity to deliver building electrification solutions. NYSERDA plans to expend a cumulative total of over $280 million in this area through the CEF period.

The NYS Clean Heat Market Development Plan is designed to address critical barriers and market needs through the initiatives listed in the table below. These initiatives have been approved through various NYSERDA CEF Investment Plans.

While NYSERDA does report benefits such as energy savings and leveraged funding from various investments outlined in the following table in routine CEF reporting (from investment plans[28] unrelated to utility investments), NYSERDA's NYS Clean Heat performance is quantitatively assessed in the following manner:

1. Funding commitments made in comparison to the Implementation Plan
2. Progress against near-term output metrics and longer-term outcome metrics which are summarized in Appendix A of this report

4.2 NY Clean Heat Market Development Plan Funding Expenditures

The table below summarizes NYSERDA's progress in 2024 in funding expenditures per each Critical Market Need, as identified in the Market Development Plan. These metrics are also documented in quarterly/annual CEF reporting related to each NYSERDA investment plan supporting the Market Development Plan. Plans here align with NYSERDA's July 3, 2024 Compiled Investment Plan filing.

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

Table 20. NYSERDA 2024 Progress per Critical Market Need

Critical Market Need	Initiative	Expended Through 2023	Expended in 2024	Planned 2024 Expenditures	Difference Actual v Projected 2024	NYSCH Goal (all years)	Total Expended as % of NYSCH Goal
Train and develop the needed clean heating and building electrification workforce	Workforce Development	$11.1M	$5.8M	$6.1M	-$0.3M	$38.2M	44%
Build consumer demand and market confidence and reduce customer acquisition costs	Marketing	$19.2M	$6.2M	$4.6M	$1.6M	$26.1M	98%
	Community Campaigns	$1.9M	$0.4M	$1.6M	-$1.2M	$10.0M	23%
	Critical Tools	$1.1M	$0.5M	$0.5M	$0.0M	$2.4M	65%
	Technical Assistance	$10.2M	$4.3M	$5.7M	-$1.3M	$28.8M	50%
Drive performance improvements, reduce cost, and deliver new economic solutions through technology innovation and demonstrations	Thermal Energy Networks	$7.6M	$2.9M	$3.8M	-$0.9M	$30.7M	34%
	HVAC Technology Challenges	$11.1M	$2.5M	$4.4M	-$1.9M	$40.3M	34%
	Empire Building Challenge	$3.2M	$5.9M	$5.4M	$0.4M	$15.0M	61%
	Multifamily Building Demos	$1.1M	$1.6M	$3.9M	-$2.4M	$18.9M	14%
Make electrification solutions available for LMI consumers	LMI	$7.9M	$0.8M	$5.3M	-$4.5M	$30.0M	29%
Make products available when and where consumers need them by building the clean heat supply chain	Clean Heat Supply Chain	$3.4M	$2.1M	$5.8M	-$3.7M	$17.8M	31%
Minimize winter electrical peak by investing in demand reducing "heat-pump ready" solutions	Comfort Home	$11.6M	$10.1M	$7.4M	$2.7M	$22.7M	96%
Develop a long-term building electrification roadmap to guide the transformation of how New Yorkers heat and cool their buildings	Building Electrification Roadmap	$1.0M	$0.0M	$0.0M	$0.0M	$1.0M	99%
Totals		**$90.3M**	**$43.1M**	**$54.6M**	**-$11.5M**	**$281.8M**	**47%**

4.3 2024 Updates: Critical Market Needs and Market Development Initiatives

1. TRAIN AND DEVELOP THE NEEDED CLEAN HEATING AND BUILDING ELECTRIFICATION WORKFORCE

2024 Performance

During 2024, 1,204 individuals were trained (9,400 cumulative to date) in initiatives funded through the NYSERDA Workforce Development and Training-led funding opportunities. Approximately 64% of those trained to date are associated with HVAC or building electrification occupations in the areas of sales, installation, and design.

Additional contractors were trained through complementary initiatives developed through Clean Heat Connect and EmPower+ contractor trainings coordinated by the NYSERDA Quality and Market Standards team.

2025 Lookahead

Plans for 2025 include continued offering and promotion of programs that build capacity for heat pump training to meet growing demand and address market gaps. This includes supporting union apprenticeships and pre-apprenticeships to expand clean energy training related to building electrification and heat pumps, career pathways training for new heat pump workers, hiring support programs for the heat pump industry such as on-the-job-training, internships, and fellowships, and partnerships with the Clean Energy Hubs to increase reach of workforce development programs. NYSERDA is also looking to offer additional introduction to heat pump webinars or other trainings to targeted audiences and will launch a series of short duration installation best practices training videos.

2. BUILD CONSUMER DEMAND AND MARKET CONFIDENCE AND REDUCE CUSTOMER ACQUISITION COSTS

2024 Performance

Marketing

In 2024, the NYS Clean Heat marketing campaign drove over 1.5 million visitors to the cleanheat.ny.gov website and continued to engage customers with over 600,000 actions (or clicks to additional content on the site). The homepage alone generated over 189,000 actions, which is a 13% increase over 2023. 2024 saw a marked increase in visitors, sessions, and pageviews; this can be attributed to increased awareness of and familiarity with the NYS Clean Heat program. As expected, site traffic and actions were highest when a full mix of marketing channels were live.

The Cooperative Advertising and Training Program for Clean Energy Partners, Program Opportunity Notice ("PON") 4482, closed at the end of 2024. Through the end of 2024, 165 total participants advertising heat pumps received cost-sharing reimbursements, and over 935 heat pump contractors were trained with the support of program funding from NYSERDA.

Since launching the marketing campaign in April 2021, over 4 million visitors have come to the cleanheat.ny.gov website. As of the end of 2024, 102,055 unique users have clicked through either the "Find a Contractor" or "Available Rebates" modules and provided their physical address. To evaluate campaign effectiveness, the address data collected on the website was matched with reported utility project data, in accordance with DPS Guidance, Matter 19-00087, to gain insights into conversion rates for the web-based portion of the campaign. Table 21 shares the findings from this new process that

matched website address data to utility project data and represents cumulative data for the years 2021 through 2024.

Table 21. "Find a Contractor" & "Available Rebate Programs" Web Campaign Conversion Rate (2021-2024)

Utility Territory	Unique Household Engagements	Conversions	Conversion Rate
Central Hudson Gas & Electric	9,256	1,584	17.1%
Consolidated Edison	16,759	2,613	15.6%
NYS Electric & Gas	24,608	2,155	8.8%
National Grid	39,977	2,435	6.1%
Orange & Rockland Utilities	3,379	253	7.5%
Rochester Gas & Electric	8,076	548	6.8%
Total	**102,055**	**9,588**	**9.4%**

The cumulative results for years 2021, 2022, 2023, and 2024 for the marketing efforts collected 102,055 unique customer address accounts through the "Find a Contractor" or "Available Rebates" paths, with 9,588 of those converted to projects, achieving an 9.4% overall conversion rate. The Central Hudson Gas and Electric territory had the highest conversion rate at 18.9%, while Con Edison territory had the most conversions at 2,613.

Based on available data from such sources as Statista and Hubspot, conversion rates for home appliance installation typically range from 1-2%, and electrical and commercial equipment similarly range between 1.3-2.5%. These industry benchmarks encompass a wide range of marketing channels and tactics, some more effective than others. Sources such as Convertcart suggest that e-commerce for electronics and home appliances has conversion rates closer to 3.6%. These different benchmarks suggest that the 9.4% conversion rate for the NYS Clean Heat web-based campaign was higher than industry marketing benchmarks.

Community Campaigns

The Phase 1 Clean Heating and Cooling Community Campaigns successfully increased awareness, built demand, and boosted market confidence in energy efficiency and heat pump technologies, including ccASHPs, GSHPs, and HPWHs. Community Campaigns engaged a variety of partner networks to promote key messaging in single-family and multifamily residential, commercial, and other markets in a variety of income brackets, including LMI residents. Through 2024, over 8,000 people have participated in clean heating and cooling campaigns and installed approximately 1,600 energy efficiency and heat pump installations.

Critical Tools

NYSERDA, through its Clean Heat Connect Network (CHC) of air source heat pump manufacturers and distributors, launched a variety of new contractor-oriented tools and resources in 2024 including:

- Cold-Climate Air Source Heat Pumps: Selling Comfort & Health guide

- Cold-Climate Air Source Heat Pumps: Service Plans
- Cold-Climate Air Source Heat Pumps: Durability and Maintenance
- Why Quality Control Matters guidance sheet
- Online course: “Adding Heat Pumps to Your Business” for non-traditional installers such as electricians, solar contractors, plumbers, and others seeking to add a heat pump service line

The CleanHeatConnect.ny.gov website attracted over 10,500 visitors who engaged in over 160,000 actions (or clicks to additional content on the site). In July 2024, a paid search effort was launched to effectively attract new users that were not hearing about the tools and resources directly from NYSERDA or the Clean Heat Connect partners. The paid search has proved effective to date, bringing 6% of the total traffic to the site within six months.

The Network also continued to provide significant promotion and support for NYSERDA contractor programs including On-the-Job Training funding, Coop Advertising and Training funding, and Green Jobs-Green New York Financing. The network also played a critical role in clarifying information around proposed refrigerant regulation through the New York State Department of Environmental Conservation.

Technical Assistance

The Technical Assistance programs received 307 study applications in 2024 that focused on electrification or had an electrification component. Most of these studies are from multifamily facilities, commercial real estate, and Pre K-12 schools. The studies completed in 2024 identified and evaluated 1,358 electrification measures: 510 ccASHP measures, 121 VRF measures, 401 Domestic Hot Water electrification measures, and 32 GSHP measures.

2025 Lookahead

Marketing

2025 is the final planned year of marketing under the first phase of CEF funding. The marketing campaign is planning to reduce its spend for 2025 but will continue to focus on increasing familiarity and interest across key audiences in a cost efficient and highly targeted manner. Broadcast channels such as cable television and terrestrial radio (AM/FM radio) will no longer be used; instead the media spend will focus on reaching potential participants with targeted digital channels. Campaign messages will continue to include additional information about the incentives, Inflation Reduction Act (IRA) tax credits, NY State geothermal tax credits, and NYSERDA’s Green Jobs – Green New York (GJGNY) low-interest financing that is available to reduce the costs associated with heat pumps. Comfort, health, and safety will continue to be key messages as they continually drive high engagements of consumers to the website.

Community Campaigns

Most of the Phase 1 Clean Heating and Cooling Community Campaigns were concluded by the end of 2024.

Phase 2 Clean Heating and Cooling campaigns will be executed by the Regional Clean Energy Hubs and funding moved to the LMI Joint Implementation Plan. Campaigns under the Regional Clean Energy Hubs will be technology agnostic, focusing on connecting DACs with clean energy solutions and technologies that are in line with regional needs, including energy efficiency, clean heating and cooling, solar

photovoltaic ("PV"), electric vehicles, and demand response, and will serve all residential markets. Currently, the Regional Clean Energy Hubs are conducting community campaigns in the Finger Lakes and Southern Tier related to energy efficiency and community solar subscriptions, respectively. Additional campaign proposals will be due in late Q1 2025 for NYSERDA review.

Critical Tools

The Clean Heat Connect website will be reorganized to categorize its 30+ tools and resources into a more user-friendly menu and tiled format for easier reference. Field teams will spend more time with distributor teams to promote existing tools for adoption, provide staff and contractor training, and attend manufacturer and distributor events. Several additional tools will be developed, such as narrated slide videos of the heat pump QA guidance sheets. Clean Heat Connect also expects to begin case studies of actual performance of full-load cold-climate heat pumps with no back-up fossil fuel heating. During the 2025-2026 heating season, temperature data from 10-12 homes will be collected and homeowners will be interviewed, focusing on comfort levels during the coldest days of the year.

In support of the Custom Measure 6, Heat Pump Plus Weatherization Retrofit Standard Simulation for Measure Packages (HP+Retrofit) in the NY TRM, NYSERDA is continuing to validate the approach with in-field measurement to document the correlation between modeled and measured energy savings, contributing factors, and risks. NYSERDA is also examining how the method can be expanded to include additional building types (e.g., row houses, manufactured homes) and additional types of equipment (e.g., ground source heat pumps) to support beneficial electrification efforts. NYSERDA will review these analyses with DPS and the JMC to determine potential updates to the NY TRM documentation of the method.

Technical Assistance

NYSERDA is engaging in sector-specific electrification-centric efforts, such as the promotion of a healthcare protocol playbook and higher education playbook to create sector-specific roadmaps for decarbonization and resiliency.

NYSERDA is also targeting approximately 150 new, completed Flex Tech studies in 2025 that include a recommended electrification measure or electrification component.

3. DRIVE PERFORMANCE IMPROVEMENTS, COST REDUCTIONS, AND DELIVER NEW ECONOMIC SOLUTIONS THROUGH TECHNOLOGY INNOVATION AND DEMONSTRATIONS

2024 Performance

Clean Thermal District Systems

The Community Heat Pump Systems Solicitation, PON 4614 for the development of clean thermal energy networks, closed in Q4 2023 after completing 10 funding rounds and demonstrating strong interest for thermal energy networks as a solution to decarbonize building heating and cooling on campuses and in communities. The program helped develop a pipeline of projects, some of which are advancing to design and construction or are being considered for implementation by the utilities. Building off of this pilot program's success, the Large-Scale Thermal program, PON 5614, was launched in Q2 2024 to support the design of large single-building and multi-building projects using heat pumps and low-carbon thermal resources. The Large-Scale Thermal program will help large buildings and

project sites, such as campuses, to advance low-carbon heating and cooling solutions like thermal energy networks at scale. The Large-Scale Thermal program completed one round of funding in 2024.

Cost Reduction Strategies

In 2024, NYSERDA has continued to reference and update this research to assess and make efforts to address key market barriers to accelerating implementation of envelope improvements and subsequent ground source heat pump adoption.

Early efforts of Clean Heat Connect, Experience Clean Heat, and other Supply Chain activities are designed to support growth in contractor/installer capacity to deploy heat pumps and drive market development in New York State, including increasing the number of businesses supported by Clean Heat serving the heat pump and weatherization market.

HVAC Technology Challenges

NYSERDA's NextGen HVAC Innovation Challenge (renamed to NextGen Building Innovation Challenge), PON 3519, issued and completed Round 8 in 2024. The solicitation focused on accelerating the development and commercialization of innovative thermal storage and intelligent grid interaction building solutions. The solicitation received 45 concept papers and resulted in $4.8M in awards across 7 proposed projects. Outputs and outcomes for 2024 include:

- Setting up panel manufacturing within a disadvantaged community in Binghamton – resulting in 40 expected new hires – through working with Firomar.
- Establishing a new pathway for decarbonizing multifamily heating through development efforts with Gradient and Friedrich, and through the NYCHA Clean Heat for All demonstration program.
- Addressing barriers to market adoption of ultra-low Global Warming Potential (GWP) refrigerant through research and testing with AHRI.
- Developing new ground source heat pump technology through Dandelion Energy.
- Demonstrating advanced geothermal loop systems with Endurant Energy.
- Demonstrating whole-building retrofits, utilizing envelope panels with an integrated mechanical HVAC system, through Syracuse University.

Empire Building Challenge

The Empire Building Challenge is a $50 million initiative to form public-private partnerships with leading real estate portfolio owners, engineers, and technology providers to demonstrate commercially viable low carbon retrofit approaches that can decarbonize New York's existing stock of high-rise buildings.

There is significant interest from the real estate industry in clean heat technology innovations and demonstration projects. In 2023, NYSERDA began revamping and expanding the Empire Building Playbook, which includes the results and processes from deep technical analysis and strategic capital planning conducted by program partners. This Playbook – which has been rebranded as the "Retrofit Playbook for Large Buildings" – illustrates pathways for significant energy and carbon reduction in existing buildings at commercially acceptable returns. The revamped Playbook, which continues to grow, was launched on Earth Day 2024. To date, more than 15,000 users have visited the site.

In May 2024, EBC announced 11 new multifamily program partners, and in Q3 2024, the third funding round was launched. Demonstration projects resulting from this solicitation will be announced on Earth Day 2025.

Multifamily Building Demonstrations

In November 2023, the Low Carbon Pathway ("LCP") program was updated to increase participant eligibility and better align the offered measures, bonuses, and incentive values with market feedback received in the previous year. With these changes, the program has seen an increase in participation consisting of a nearly 70% increase in projects. At the end of 2024, the program has 44 committed projects representing 5,394 dwelling units.

2025 Lookahead

Clean Thermal District Systems

NYSERDA is continuing to support feasibility studies of thermal energy networks through the FlexTech program and launched a new funding opportunity, the Large-Scale Thermal program (PON 5614) in 2024 to help advance technically and economically feasible projects to the detailed design and engineering phase. PON 5614 completed one funding round in 2024 and additional projects will be selected in funding rounds offered in 2025. NYSERDA will continue outreach to building/site owners and energy managers, technical solution providers, and other project stakeholders to support the decarbonization of buildings with large-scale thermal approaches like thermal energy networks. NYSERDA will also continue research of technical solutions and opportunities to advance large-scale thermal development.

Cost Reduction Strategies

NYSERDA will continue to work directly with the market and all levels of the heat pump and building shell supply chain to identify creative strategies to address cost reduction. Efforts underway include:

- Working with distributors to increase stocking of "off the shelf" ccASHP heat pump solutions
- Completing a study on incentive structures to reduce total cost of heat pump systems
- Providing enhanced technical support and training to promote value-engineered heat pump system designs

HVAC Technology Challenges

In 2025, NYSERDA will issue a $5M solicitation focused on innovative, near-commercial ready technology solutions addressing New York State's heating and cooling requirements, that have prior or current government, foundation or non-profit funding.

Empire Building Challenge

Awarded projects from the third funding round of EBC are slated to be announced sometime in Q2 of 2025, and case studies for those projects will be posted in the Retrofit Playbook for Large Buildings, making analysis and best practices for the projects available to the market.

By the end of 2025, several Cohort 1 demonstration projects will be past the 50% construction completion mark, while Cohort 2 projects will be wrapping up their designs and gearing up to begin construction. Cohort 3 projects will be contracted and ready to begin implementation.

In the first half of 2025, the EBC program will work to develop a training series, to be delivered in person and then on-demand, leveraging lessons learned from EBC demonstration projects, to build industry capacity with respect to strategic decarbonization planning and implementation. An EBC "Roadshow" is in the planning stage, envisioned as a means to disseminate EBC learnings and insights throughout the entire state, as well as a "Manufacturer Showcase" virtual event series, to support supply side engagement.

Multifamily Building Demonstrations

NYSERDA will publish relevant insights from the Low Carbon Pathways program through case studies and video testimonials from initial project experiences and any learnings from these tenant surveys with the market. Additional opportunities for program updates, such as those informed through "Voice of the Customer" sessions, will be assessed based on market response to the program.

4. MAKE ELECTRIFICATION SOLUTIONS AVAILABLE FOR LOW-TO-MODERATE-INCOME (LMI) CONSUMERS AND AFFORDABLE HOUSING

2024 Performance

The electrification of heating and domestic hot water for LMI households and in affordable housing requires additional considerations for consumer protections related to the potential for energy burden impacts and the shifting of heating costs from landlords to tenants, the upfront cost for installing a heat pump, and necessary upgrades[29] to ensure optimal performance; and the development of performance thresholds and other technical supports for affordable housing agencies necessary to advance electrification throughout their portfolios. To inform strategies for increasing adoption of heat pump solutions in the LMI market segment, NYSERDA is undertaking a series of pilots, research and analysis, and collaborations with housing agencies.

Pilots and Demonstrations

In 2024, NYSERDA began its evaluation and market insights work based on projects that participated in the $5 million LMI Heat Pump Demonstration Pilot for 1-4 family homes. The Multifamily version of the Pilot remains ongoing with several projects in the pipeline. The LMI Heat Pump Demonstration Pilot provided heat pumps and heat pump water heaters as part of comprehensive efficiency upgrades in LMI homes and affordable multifamily buildings, focused on buildings using delivered fuels. Results on the pilot for 1-4 family homes are now available on NYSERDA's website.[30]

Research and Analysis

In 2024, NYSERDA continued market research and technical analysis to better understand the institutional barriers associated with electrification in the LMI market segment and identify opportunities for addressing these barriers, as well as to understand the potential impacts that electrification can have on energy bills.

The work included:

[29] Including weatherization, addressing health and safety or structural deficiencies associated with deferred maintenance, and electric panel upgrades.

[30] https://www.nyserda.ny.gov/About/Publications/Evaluation-Reports/Low--to-Moderate-Income

1. Utility bill modeling to assess the bill affordability impacts of electrification in different building sub-segments based on size, existing heating system type, metering configuration, regulatory/subsidy status, vintage, region, and other variables
2. Complementary qualitative research assessing the electrification readiness of non-market affordable housing sub-segments based on variables such as existing heating system type, metering configuration, and regulatory/subsidy status
3. Mapping scenarios of potential heating cost shifts between owners and tenants in rental housing, and the range of tenant protections available in subsidized affordable housing

It is expected that this research can lead to insights that can inform future LMI program design.

In addition, NYSERDA continues to support the DPS and the Energy Affordability Policy working group to conduct a low-income bill analysis, which will include a segmentation of low-income households and associated energy bills by demographic, housing type, and heating fuel. The analysis will also incorporate modeling of the impacts of various clean energy interventions on the energy bills of low-income households. The results of this analysis are expected to inform the structure of the EAP bill discount program to increase the impact of bill discounts for low-income customers, which can serve as one way to mitigate potential energy burden increases associated with heat pump adoption. Findings from this study will be published when available.

Collaboration with Housing Agencies

In 2024, NYSERDA continued its partnerships with affordable housing agencies to advance electrification and bring the benefits of comfort and improved indoor air quality to low- and moderate-income residents. This included the Clean Energy Initiative, a pilot with NYS HCR to integrate both technical assistance and funding for electrification directly into HCR's affordable housing finance applications, beginning with affordable new construction and adaptive reuse projects. Over the course of the CEI partnership, NYSERDA has committed $80.8 million to HCR for new construction, adaptive reuse, and existing building projects in HCR's project financing pipelines. To date, HCR has awarded $54.3 million in incentives to 68 projects comprised of 6,366 dwelling units.

NYSERDA also partnered with NYC HPD to implement the Retrofit Electrification Pilot, which incorporated incentives for space heating and cooling and/or domestic hot water electrification for existing multifamily building rehabilitation projects into HPD's preservation programs. HPD and NYSERDA expanded their partnership in 2024 and replaced the Retrofit Electrification Pilot with the Resilient and Equitable Decarbonization Initiative for Existing Buildings (REDi: EB). REDi: EB incentivizes the same scopes as the previous program, while also providing additional incentives for building envelope and ventilation improvements. Under these programs, HPD has awarded $15.6 million in incentives to 17 projects comprised of 1,007 dwelling units.

HPD and NYSERDA also launched its Future Housing Initiative with HPD in 2023. To date, FHI has awarded funding to 15 new construction projects; this funding will be used to support installing all-electric systems and achieving Passive House certification and performance.

Regional Clean Energy Hubs

Launched in December 2022, the Regional Clean Energy Hubs are playing an instrumental role in positioning disadvantaged communities to benefit from the clean energy transition by acting as trusted local resources for community members to learn more about the energy-related programs and

services available to them. The Hubs increase awareness of these programs and services by leveraging the expertise and trust of local organizations, developing outreach and engagement strategies to elevate the needs of communities and residents into program and policy development, and addressing gaps in and advancing diversity of the clean energy workforce by connecting residents and small businesses with educational, training, and program opportunities.

In 2024, the Regional Clean Energy Hubs focused on project coordination and outreach and awareness. The Hubs have provided over 6,000 program and loan application referrals to customers across New York State by working with partner organizations to assist customers with coordinating NYSERDA and non-NYSERDA funded projects, programs, and resources. Hubs have also conducted outreach targeted towards disadvantaged communities by hosting or participating in 2,000 community events (farmers markets, town halls, food pantries, and energy literacy workshops) and developing targeted marketing materials relevant to the local communities. To strengthen coordination and collaboration among NYSERDA and non-NYSERDA programs, Hubs were connected to the utilities that are part of the Joint Management Committee (JMC).

Additionally, the Hubs completed their Regional Assessment and Barriers Analysis ("RABA"). These reports identified barriers and opportunities to clean energy adoption within each region of NY State. Two Hubs (Finger Lakes and Southern Tier) began their community campaigns and local pilot projects. Community campaigns are technology-agnostic projects that increase adoption of clean energy technologies including heat pumps, solar, and electric vehicles. Local pilot projects are initiatives that increase access to clean energy projects, including providing grants for structurally deferred homes, contractor support, and clean energy themed murals.

2025 Lookahead

Engagement of DACs and LMI households around electrification and other clean energy topics is essential. DAC/LMI stakeholder engagement will help ensure strategies are informed by important policy, regulatory, and financial considerations that need to be addressed to accelerate electrification of the affordable housing sector.

Regional Clean Energy Hub activities planned for 2025 will continue to focus on project coordination and community engagement as well as conducting targeted community campaigns to promote a range of clean energy technologies and solutions, developing innovative outreach pilots that are replicable across the state, hosting energy education workshops, and promoting workforce development opportunities. After the completion of the RABAs, in Q1 2025 Hubs will complete their Outreach and Equitable Engagement Plans ("OEEP"). The OEEPs will outline the outreach strategies that Hubs will use to carry out the recommendations brought forth in the RABAs. Expanding the Hub network through partnership with community-based organizations and contractors is an important component to improving program access.

See the LMI Statewide Implementation Plan[31] and to- be concurrently filed Statewide LMI Annual Report for further details including specific milestones for 2022-2025.

[31] NE:NY Proceeding, Statewide Low- to Moderate Income Portfolio Implementation Plan Version 5 (filed December 20, 2024) https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={603E8C8B-0000-CE5E-B8C3-BEA76F8ECCAC}

5. *MAKE PRODUCTS AVAILABLE WHEN AND WHERE CONSUMERS NEED THEM BY BUILDING THE CLEAN HEAT SUPPLY CHAIN*

2024 Performance

NYSERDA expanded the Clean Heat Connect Network by seven members, which now includes 11 HVAC manufacturers and 15 distributors and covers a majority of the New York State market. The Network promotes the adoption of educational and technical tools and resources through their respective contractor networks. NYSERDA developed and promoted several additional resources, detailed in the Critical Tools section in Item 2 above, that are oriented toward HVAC contractors to support air source heat pump capacity.

Members include the top three heat pump manufacturers, Mitsubishi, Daikin, and Fujitsu, and some of the largest distributors such as ABCO, CE, Ferguson, and Meier Supply.

NYSERDA completed the first year of the Experience Clean Heat ("ECH") Initiative to "win the hearts and minds" of consumers, piloting 12 locations where consumers can enjoy personal experiences with heat pumps in common public spaces. The initiative reinforces the benefits of heat pumps and leverages a social media campaign to promote viral sharing of positive heat pump experiences and an augmented reality tool that enables a visitor to see how a heat pump can look in their own home. An expanded ECH Initiative for contractor businesses and technicians will launch in 2025, aiming to add up to 50 additional sites.

2025 Lookahead

Consulting and mentoring initiatives are underway with plans for NYSERDA to support new offers in 2025 to enable contractors interested in expanding their existing weatherization/heat pump business to retain professional consultants that will assess and make recommendations for business operations improvements and strategies to optimize sales, workforce recruitment and retention, and other key aspects of business expansion and optimization.

6. *MINIMIZE WINTER ELECTRICAL PEAK BY INVESTING IN DEMAND-REDUCING "HEAT-PUMP READY" SOLUTIONS THROUGH THE COMFORT HOME PILOT*

2024 Performance

Cumulatively through 2024, load reduction projects completed through Comfort Home are projected to save 127,751 MMBtu in annual fossil fuel savings and 2,653 MWh in annual electricity savings. Potential grid impacts resulting from the homes improved include an estimated avoided electrification-driven peak demand of up to 3,625 kW in future winter peak demand compared to electric resistance heat typically used as a backup for whole house heat pump installations. These basic measures are projected to reduce future winter peak demand by as much as 3,200 MW via reduced heat pump capacity needs and 6,500 MW in avoided electric resistance backup heat for the 1-4 unit residential market. NYSERDA continued its "co-invest, co-save" collaboration with Con Edison in Westchester County, delivering incentives for weatherization improvements by combining Comfort Home with Con Edison's existing weatherization program offering. The joint offering stacks weatherization incentives for the Good, Better, and Best measure packages to expand program reach and project work scope through a "co-invest, co-save" framework.

Comfort Home also enrolled 12 new participating contractors in 2024, for a total of 97 contractors. NYSERDA also supported the development and adoption into the TRM the Custom Measure Category 6 standardized simulation method to support simplified whole building energy simulations to model energy savings from measure packages including load reduction measures and heat pumps combined.

2025 Lookahead

NYSERDA will continue modeling analysis and launch a field study to further refine the definition of a heat pump ready envelope inclusive of all climate zones in New York State and establish guidance for right-sized supplemental heat where needed. 2025 work will continue further testing of demand impact calculation methods and quantification of comfort impacts for load reduction measure packages.

The project goal for 2025, based on the available budget, is 2,800 load reduction projects. Additional budget flexibility and/or utility partnerships could support accelerated and increased production levels.

7. DEVELOP A LONG-TERM BUILDING ELECTRIFICATION ROADMAP TO GUIDE THE TRANSFORMATION OF HOW NEW YORKERS HEAT AND COOL THEIR BUILDINGS

2024 Performance

Funds allocated under the Market Development Plan had been expended by the end of 2023.

As previously reported, analysis conducted in support of a Building Electrification Roadmap was incorporated into the New York State Climate Action Council deliberations, the economy-wide Integration Analysis, and New York's Scoping Plan (December 2022). In light of the publication of the Scoping Plan and New York's Carbon Neutral Buildings Roadmap, as well as ongoing collaboration among NYS agencies, utilities, other states, and stakeholders to develop priority actions to support building electrification, NYSERDA deprioritized release of this specific Roadmap.

5 Appendix A. NYSERDA Output/Outcome Progress Summary

Several NYSERDA investment plans (initiatives) support the NYS Clean Heat Market Development plan. However, not all initiatives have output/outcome indicators with targets attributed solely to NYS Clean Heat. Indicators shown below are limited to those specifically identifying targets for NYS Clean Heat.

Table 22. NYSERDA Output/Outcome Progress Summary

			Baseline	*Cumulative Progress*	*Cumulative Targets by Year*					
	Initiative	**Indicators**	**Before/Current**	**2024**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Outputs	Heat Pumps Phase 2 (2020)	Number of leads generated for contractors	1	784,834	30,000	140,000	250,000	430,000	680,000	1,000,000
		Customer acquisition costs offset, in dollars	0	$11,783,141	$185,000	$600,000	$1,000,000	$1,600,000	$2,250,000	$3,000,000
		Coop advertising campaign costs offset, in dollars	0	$16,876,018	$600,000	$3,150,000	$5,850,000	$8,250,000	$9,500,000	
		Number of Thermal Energy Network construction projects supported by NYSERDA	0	4				2	4	
		Businesses provided with tools, technical support, and business development assistance	0	917		50	75	125	175	225
		Number of energy-efficient electrified space and water heating technologies installed through NYS Clean Heat	0	79,247	3,900	18,200	32,500	55,900	88,400	130,000
	Multifamily Low-Carbon Pathways	Number of low carbon technology demonstrations in units	0 units	5358		96	1,141	3,143	4,932	7,403
	Building Operations and Maintenance Partnerships	Increase in number of workers trained (electrification target in parenthesis)	20	6,979 (39)		3,000 (0)	5,000 (100)	6,500 (250)	7,500 (400)	9,600 (1,000)
	Talent Pipeline	Number of students placed in internships by training providers	0	585 (142)		128 (0)	300 (75)	400 (150)	500 (225)	600 (300)
		Number of Interns and Fellows (electrification target in parenthesis)	0	1,358 (201)		1,050 (18)	1,200 (100)	1,350 (200)	1,600 (350)	2,000 (500)
		Number of New Hires (electrification target in parentheses)	0	1,446 (730)		650 (170)	900 (250)	1,100 (350)	1,550 (450)	1,750 (600)
Outcomes	Heat Pumps Phase 2 (2020)	Increase in awareness of CH&C technologies*	TBD	N/A			15%			50%
		Replication of Clean Thermal District System projects beyond NYSERDA supported projects	0	3					1	2
		Increase stocking of heat pumps above HARDI 2019 shipments*	0	30%		0%	20%	30%	40%	50%
		Increase penetration of high-performance cold climate heat pumps as a percent of all heat pumps shipped for space conditioning in New York*	61%	N/A		61%	70%	75%	85%	90%

Table notes

a. A 0 (zero) denotes that the actual value is currently believed to be zero for baseline/market metrics.

* Some investment plans supporting the NYS Clean Heat implementation plan include broader market progress metrics, for example overall heat pump market size and market penetration of cold climate heat pumps. These market progress metrics will be supported collectively by all of NYSERDA's market development activities that extend beyond any singular investment plan. NYSERDA will measure market progress broadly, rather than for each specific investment plan. Progress will be reported collectively within the Statewide Heat Pump Program.

6 Appendix B. Long Island Power Authority 2020-2024 Heat Pump Summary

LIPA has adopted a target of approximately 1.15 TBtu of savings through heat pump deployment on Long Island between 2020 and 2025. This equates to a goal of installing 30,000 new residential or commercial heat pumps for space, water, and pool heating in LIPA's service territory. Technologies supported include both full- and partial-load ASHP, heat pump water heaters, heat pump pool heaters, and GSHP. All residential, multifamily, and commercial customers are eligible, with added rebates for income-qualified residential customers who install full-load ccASHP.

As of December 31, 2024, LIPA has exceeded the TBtu goal with 1.22 TBTu savings, having deployed over 40,000 heat pumps with the support of PSEG Long Island-administered rebates. In 2020, LIPA customers installed nearly 6,000 heat pumps totaling over 218,000 net MMBtu of energy savings, with over $6.2 million in rebates and incentives provided to support heat pump deployment. In 2021, LIPA customers installed over 6,700 heat pumps totaling 272,000 net MMBtu of energy savings and over $7.6 million of rebates and incentives. In 2022, LIPA customers installed over 7,300 heat pumps totaling 182,000 net MMBtu of energy savings and over $12.3 million in rebates and incentives. In 2023, LIPA customers installed over 9,800 heat pumps totaling nearly 280,000 net MMBtu of energy savings and over $28.3 million in rebates and incentives. In 2024, LIPA customers installed over 10,000 heat pumps totaling more than 270,000 net MMBtu of energy savings and $24.8 million in rebates and incentives. Additional Attorney General Funding provided enhanced rebates to LMI heat pump customers for whole home heat pumps. In 2024, the number of participating contractors increased from 55 to 160, as a result of ongoing outreach efforts. The participating contractors are enrolled in the Home Comfort program who performed the majority of the space heating work, in addition to other pathways for participation for heat pump water heaters and pool heaters.

Full breakdown of program data is available below:

Table 23. LIPA Projects Installed and Provided Incentives, 2020-2024, By Category

LIPA	2020	2021	2022	2023	2024	Totals
Heat Pumps Installed[32]	5,973	6,722	7,384	9,868	10,222	40,169
Total MMBTUs	218,172	272,257	182,297	279,975	270,842	1,223,543
Total Rebates & Incentives	$6,210,640	$7,628,514	$12,323,961	$28,399,928	$24,811,127	79,374,170
# Participating Contractors	105	100	92	55	160	N/A
# Partial Air Source Heat Pumps	3,176	3,002	2,417	2,137	1,478	12,210
# Whole House Air Source Heat Pumps	587	1,088	1,643	4,370	5,560	13,248
# of Whole House Air to Water Heat Pumps	0	0	0	0	1	1
# Geothermal Heat Pumps	293	146	204	152	165	961
# Heat Pump Water Heaters	229	207	349	514	474	1,773
# Heat Pump Pool Heaters	1,635	1,867	1,217	1,393	1,406	7,518
# Commercial Heat Pumps[33]	53	412	1,554	1,302	1,138	4,459

[32] Heat pump pool heaters are not eligible under the New York State Clean Heat program.

[33] Includes heat pumps installed in both commercial and multifamily programs.