

Regional Clean Energy Hubs Market Evaluation and Customer Survey Baseline Update (2023-2024)

Final Report

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NYSERDA Record of Revision

Document Title
Regional Clean Energy Hubs Market Evaluation and Customer Survey Baseline Update (2023-2024) FINAL REPORT June 30, 2026

Revision Date	Description of Changes	Revision on Page(s)
June 30, 2026	Original Issue	Original Issue

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1 Introduction

The Regional Clean Energy Hubs (RCEH) program was developed by the New York State Energy Research and Development Authority (NYSERDA) and launched in 2022 as a strategy to assist New York State residents with accessing clean energy services and assistance. RCEH was also a key component of the Statewide Low- to Moderate-Income (LMI) Implementation Plan,¹ and will continue to receive funding under the state's Low-to-Moderate Energy Efficiency and Building Electrification Portfolio for 2026-2030.² The RCEH network, comprised of twelve Regional Clean Energy Hubs (Hubs), provides essential outreach, education, support, and referral services to individuals and organizations in disadvantaged communities (DACs) across NYS.³ Through direct engagement with customers, Hubs provide opportunities for residents and businesses to learn about clean energy programs and offer financial or technical assistance to support access to these programs.

Each of the 12 regional Hubs is led by a community-based non-profit organization that serves as the prime contractor and center of a network of subcontractor organizations (collectively “Hubs”). This network coordinates using NYSEDA resources to provide education, application support, project management support, workforce development opportunity referrals, and other resources to customers in their respective economic development regions. To further improve customer energy savings outcomes, the Hubs also leverage support from partner organizations in the community (referred to in this report collectively as “partners”), who provide a range of support including referrals, meeting space, shared education materials, or even co-advertising/co-hosting opportunities at community events. The purpose of the RCEH program is to provide regional loci to educate residents and businesses about NYSEDA offerings and other funding sources (e.g., utility and other state agency programs), and to increase participation in the clean energy economy.

¹ The Statewide Implementation Plan is available online, and is a collaboration between utilities and NYSEDA: <https://www.nyserda.ny.gov/All-Programs/Residential-and-Property-Owner-Income-Eligible-Programs/LMI-Stakeholder-Resources-New-Efficiency-New-York>.

² The order authorizing the state LMI EE/BE Portfolio was issued in May 2025: <https://documents.dps.ny.gov/public/MatterManagement/MatterFilingItem.aspx?FilingSeq=361530&MatterSeq=55825>

³ DACs are geographically defined using series of 45 indicators, including environmental burdens or vulnerability to climate change risks, population characteristics, and pollution exposures or other health vulnerabilities. See for more information: https://climate.ny.gov/-/media/Project/Climate/Files/Disadvantaged-Communities-Criteria/LMI-dacriteria-fs-1-v3_acc.pdf. For this evaluation, the term disadvantaged communities *also* refers to hard to reach, underserved rural communities, and other areas with high levels of poverty and limited access to resources. <https://www.nyserda.ny.gov/ny/disadvantaged-communities>.

1.1 Program Description

A total of 12 Hubs are located in 10 regional economic development communities (REDCs) across New York State; nine REDCs having one Hub each, with three Hubs serving New York City.⁴ In each Hub, a prime contractor works closely with a small network of subcontractors and a larger network of local partners to support customers under this NYSEERDA program.

The RCEH program serves as a high-throughput energy concierge program, where energy advisors – individuals who conduct the regular outreach and engagement activities of the Hub – educate individuals and communities in the Hub territory about the clean energy economy, and refer or help people to sign up for NYSEERDA’s and other organizations’ clean energy services and programs. Energy advisors within each Hub conduct the following core activities:⁵

- Discuss home or business energy assessments used to identify energy upgrades or retrofits to the customer’s home or business to reduce energy burden.
- Help prospective customers fill out applications for free home-energy assessments or energy incentives for which a household or business may qualify.
- Find a qualified contractor for customer home/business clean energy upgrades.
- Improve clean energy sector workforce inclusivity, refer individuals to training programs.
- Share information about electric vehicles (EVs), charging stations, or mobility programs.
- Help residents determine if they could benefit from a community solar subscription.
- Refer individuals to external programs that may or may not be clean energy related as a form of wraparound services, depending on the needs of the customer.

1.2 Purpose of the Evaluation

This evaluation builds on the RCEH market baseline study (completed in 2024), which focused on the initial launch and first year of activity for the program (September 1, 2022 to July 31, 2023).^{6, 7} This update to the baseline focuses on the program activities conducted in the period between September 1,

⁴ There is one Hub in each of the state’s ten economic development regions, with the exception of the New York City region, which has three Hubs to serve the five boroughs (Queens/Staten Island, Bronx/Brooklyn, and Manhattan).

⁵ Hubs are designed to be a “one stop shop” and can also refer customers to utility-run energy assistance, health and safety programs, nutrition assistance, and other types of services to help customers find the support they need.

⁶ Industrial Economics, Inc. 2024. Regional Clean Energy Hubs Market Evaluation and Baseline Consumer Survey: Report. <https://www.nyserda.ny.gov/-/media/Project/Nyserda/Files/Publications/PPSER/Program-Evaluation/Matter-No1602180NYSEERDARegional-Clean-Energy-Hubs-ImpactReportSeptember-2024.pdf>

⁷ This evaluation report is based on the evaluation plan titled, “Regional Clean Energy Hubs Market Evaluation Plan” filed Q3 2025, and can be found here:

<https://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId={90637899-0000-CC3A-A5EB-912CB30CD4}&DocTitle=Regional%20Clean%20Energy%20Hubs%20Eval%20Plan>

2023 to August 31, 2024, to assess efforts to raise customer awareness of clean energy opportunities, identify barriers to customer participation, and measure changes in these conditions since the baseline study period of evaluation. Primary data collection took place between May 2025 and February 2026, during which the Evaluation Contractor gathered consumer awareness data from residents in disadvantaged communities, along with perceptions data from Hub leadership teams, subcontractors, and partners. This study also includes new areas of investigation, including insights from an expanded list of subcontractors and partners, and new Hub activities and campaigns. This evaluation report provides a mid-cycle program evaluation update on the activities and progress of the Hubs toward their objectives.

1.3 Methodological Overview

To measure the progress of the RCEH program and changes in DAC consumer awareness since the baseline, the Evaluation Contractor reviewed available Hub data and collected primary data using interview, survey, and focus group methods. Hub data sources for this phase of evaluation included the Hub Membership List; Opportunities data; Monthly Engagement Reports; Regional Assessment and Barriers Analysis (RABAs); and Outreach and Equitable Engagement Plans (OEEPs).⁸

The primary data collection period for this evaluation included a survey and focus groups with DAC consumers, interviews with Hub leaders (primarily prime contractors), focus groups with representatives from Hub subcontractor organizations, and focus groups with representatives from partner organizations.⁹ The evaluation leveraged feedback from both NYSERDA and Hubs on the baseline evaluation findings presentations and report to shape the sampling strategy and data collection instruments. Analytical methods included textual coding of qualitative interview and focus group responses with synthesis of thematic findings, descriptive statistics for survey results, and a modified social network analysis.

The data collection objective, purpose, and key data sources for the evaluation are outlined in **Table 1** below. Additional analytical details and extended results are included in the **Appendices**.

Table 1. Data Collection Objective, Purpose, and Key Data Sources

Objective	Purpose	Key Data Source
Document Hub activities and progress, including context	• Characterize Hub outreach and engagement progress to date. • Gather information on perceptions about key barriers to clean energy adoption (especially in DACs). • Characterize the number of community campaigns and pilot projects. • Characterize the number of workshops and outreach efforts.	• Hub leadership interviews • Subcontractors focus groups • Partner focus groups (new) • Secondary Data Review: Opportunities Data, Monthly Engagement Reports,

⁸ These data sources were not available for the baseline study, but the Evaluation Contractor has incorporated them into the analysis for this phase of evaluation.

⁹ The Evaluation Contractor did not conduct partner focus groups in the baseline study, because Hub leader organizations were still setting subcontracts in place and did not yet have a defined network of partners.

Objective	Purpose	Key Data Source
	• Provide context for understanding total MWBEs and SDVOBs participating in the clean energy sector, as well as the efforts made to increase their inclusion/engagement with the Hub network.	USEER/NYS Clean Energy Industry Report
Map network of Hubs, subcontractors and partners	• Inform modified social network analysis of Hub/NYSERDA network.	• Hub Membership List • RABAs and OEEPs (new) • Modified social network analysis (MSNA – new)
Assess DAC consumer awareness	• Characterize DAC consumer awareness of clean energy services and opportunities for comparison against the 2024 baseline study. • Identify key barriers to clean energy adoption (especially in DACs).	• DAC consumer focus groups • DAC consumer survey • Statewide tracking study

2 Market Evaluation and Update to the Baseline Results

The results of this market evaluation are presented in two sections: 1) Hub network and outreach activities, and 2) consumer awareness of clean energy programs and perspectives on clean energy opportunities.

2.1 Hub Network and Outreach Activities

This section focuses on the Hubs' network of subcontractors and partners, as well as Hub activities at the time of evaluation, including referrals to external programs/providers, activities with Minority Woman-Owned Business Enterprises (MWBEs) and Service-Disabled Veteran-Owned Businesses (SDVOBs), pilot projects, community campaigns, and workforce development efforts. This section also describes the successes and challenges that Hubs have reported since the baseline period.

2.1.1 *What outreach and engagement progress have Hubs made?*

Since the baseline assessment, Hub staff (including subcontractor staff) have been working to establish themselves as trusted sources of information for communities, using their new and existing partnerships to encourage participation of residents and small businesses within disadvantaged communities in clean energy financial assistance programs and adoption of clean energy technologies. Hubs reported a **total of 4,480 opportunities** recorded from September 1, 2023 to August 31, 2024 (**Figure 1**).¹⁰ This represents a four-fold increase since the baseline year (1,042 opportunities from September 1, 2022 to July 31, 2023). Reported opportunities in 2023-2024 span more than 34 different NYSEERDA-offered programs, and more than 48

Definitions:

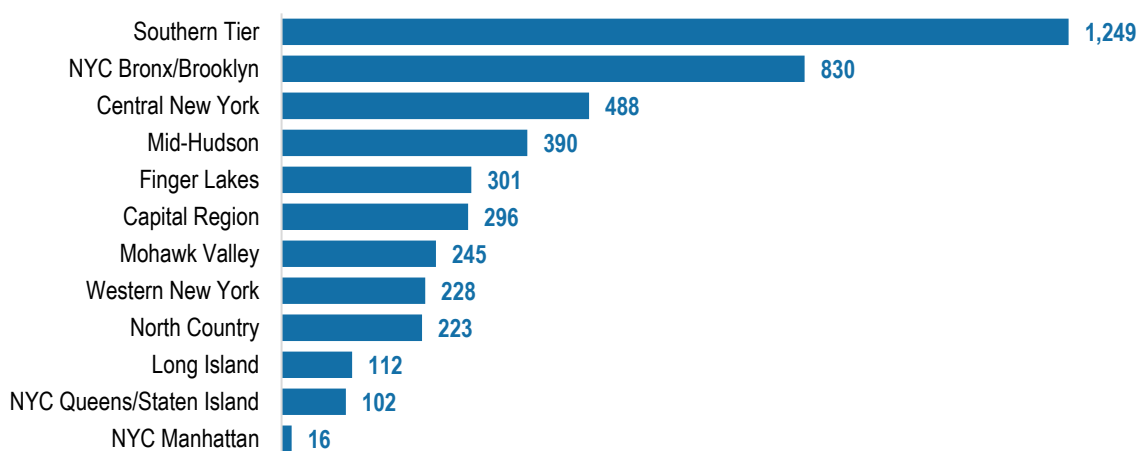
- **Opportunity** – Hub customer interactions that move beyond basic information sharing. Individuals sign up on a contact list, reach out to Hub staff for support with an application, etc. Hub staff are required to report opportunities as a metric for the RCEH program. Opportunities may stem from Hub engagements (e.g., educational activities, events), direct outreach from customers, or referrals from other organizations.
- **Contracted opportunities** – Opportunities in the database that have a contract in place for a project (e.g., installation, home repairs, weatherization, etc.).
- **Completed opportunities** – Customer opportunities that have been concluded or closed out (i.e., incentives paid out after equipment purchase, installation completed, etc.).
- **Referral** – Hub customer referrals are defined as any opportunity where a potential participant is provided information for, application to, or connected with staff for a non-NYSEERDA program.
- **Engagement** – Hub events/activities conducted in service of broader Hub outreach and education goals and reported monthly to NYSEERDA. Engagements are typically intended to reach a broad audience and include regular outreach events, energy education workshops, workforce development-related activities, and community campaigns (among others).

¹⁰ The baseline assessment included Opportunities and Monthly Engagement Reports data from September 1, 2022 to July 31, 2023 (just shy of one full contract year). To provide feedback on a timeline that makes the most sense for Hubs, the data for this evaluation year is confined to the contract year, with a month gap from where the last dataset left off.

different non-NYSERDA programs (e.g., the Home Energy Assistance Program, HEAP, offered by the Office of Temporary and Disability Assistance, OTDA).

Southern Tier is the leader in total opportunities reported, followed by NYC Bronx/Brooklyn and Central New York. NYC Manhattan, NYC Queens/Staten Island, and Long Island have the fewest reported opportunities, but this outcome is expected, as those Hubs did not participate in the RCEH predecessor (the Community Energy Engagement Program, CEEP) and were delayed in onboarding subcontractors and initiating outreach activities. Additionally, NYC Manhattan has experienced some turnover of Hub leadership staff, which may have hindered both outreach progress and opportunities reporting.¹¹

Figure 1. Total Hub Opportunities by Region (N=4,480)*



*Projects reported here were completed or contracted between September 1, 2023 and August 31, 2024.

Hubs also reported a **total of 8,376 engagements** during the evaluated period, a nearly three-fold increase over the baseline year (3,005 engagements). Of the more than 8,300 engagements from September 1, 2023 to August 31, 2024, Hubs reported increased activity across the board (**Table 2**), with a 33-fold increase in outreach and equitable engagement activities, an 11-fold increase in energy and education workshops, and an eight-fold increase in clean energy project application and coordination assistance.¹²

¹¹ Hubs with low opportunity counts may not have updated their reports in time to be captured by the update to the baseline, which required a substantial amount time to clean and prepare for the Evaluation Contractor. This dataset represents a snapshot in time.

¹² While opportunities represent the individual customer projects/referrals/applications in NYSERDA's pipeline, "engagements supporting clean energy project application and coordination" refers to the time and effort that Hubs spend to support customers in finding wraparound services, providing program advice or referrals, and generally answering questions that customers may have about their specific situation and eligibility.

Table 2. Activities Reported Since Fall 2023

Activity	Baseline Activity Count	Current Period Activity Count	X-Fold Increase	Customers Reached
Outreach and Equitable Engagement	103	3,367	33	65,093
Energy Education Workshops	12	121	10	310
Community Campaigns	3	32	11	190
Local Pilot Projects	4	15	4	102
Clean Energy Project Application + Coordination Assistance*	45	370	8	28
Total Outreach and Engagement Progress	163	3,890	24	65,621

***Note:** Clean energy project application and coordination assistance is likely underreported in the engagements dataset. Application assistance is a core Hub activity.

In interview discussions, Hub teams (inclusive of subcontractors) and their partners shared updates on activities, engagements, and other planned or ongoing initiatives that they have been working on since the baseline assessment. Of the Hub teams, nine Hub leaders and seven subcontractors discussed different types of community campaigns – larger scale strategic efforts centered around a key theme – that they had hosted or planned on hosting in the coming months. Four partners discussed similar planned activities. Community campaigns that Hubs have already conducted with their partners include:

- Conducting outreach to promote a solar training class for workers in marginalized communities.
- Helping EmPower+ customers address critical repairs/issues in their homes.
- Hosting community solar campaigns.
- Promoting use of electric vehicles, solar, heat pump installations.

A total of 11 Hub leaders and one subcontractor also discussed local pilot projects,¹³ including:

- Improving coordination between EmPower+ and weatherization programs.
- Improving emissions analysis calculations and split incentives between landlords and tenants.
- Designing a videogame to teach children about clean energy topics.
- Coordinating internships with universities to reach high school and non-traditional students.

Refer to **Appendix D** for an extended discussion of community campaigns and pilot projects.

2.1.2 What local organizations are Hubs working with in partnership?

Hubs were still establishing subcontracts and hiring energy navigator staff during the baseline study; as a result, the assessment of local organizations with whom Hubs had established partnerships was limited to Hub subcontractors (55 total) in that study, rather than the full complement of partner organizations or

¹³ While community campaigns focus on implementing broad education and outreach efforts within a community, local pilot projects are more targeted efforts to improve program coordination or develop resources for Hubs and their partners. Community campaigns and local pilot projects require Hub staff to apply and are funded through separate budget line items.

agencies that were anticipated to be part of the Hubs network. This evaluation considers both subcontractors and broader partnerships. For this update, Hubs identified **61 unique subcontractors** (**Table 3**) working directly on the RCEH program. Of these organizations, 15 (25%) are Cornell Cooperative Extension (CCE) offices.

Table 3. Hub Territory with Lead Organizations and Count of Subcontractors

Territory	Lead Organization	Count of Subcontractor Organizations
Capital Region	Affordable Housing Partnership	5
Central NY	Central NY Regional Planning & Development Board	3
Finger Lakes	Climate Solutions Accelerator of the Genesee-Finger Lakes Region	6
Long Island	Cornell Cooperative Extension (CCE) Nassau County	10 (includes multiple individual contractors)
Mid-Hudson	CCE Dutchess County	3
Mohawk Valley	CCE Oneida County	2
North Country	Adirondack North Country Association	4
NYC Bronx/Brooklyn	Association for Energy Affordability (AEA)	8
NYC Manhattan	WE ACT for Environmental Justice	6
NYC Richmond/Queens	Neighborhood Housing Services of Queens	7
Southern Tier	CCE Tompkins County	5
Western NY	PUSH Green/Buffalo	6
Total		61 Unique Orgs

Hub prime contractor and subcontractor organizations identified potential partner organizations as a part of the RABA documentation and OEEP development. Ultimately, these partner networking efforts yielded a list of **1,110 unique partner organizations that Hubs identified as supporting RCEH activities**. Partner support includes, but is not limited to, direct outreach to customers to provide Hub information (customer referrals), sharing space for presentations, and co-sponsoring events (see **Section 2.1.3** for more detail). While partners are not compensated by NYSERDA directly, some organizations in this network have existing funded relationships with RCEH subcontractor organizations with whom they share common interests and priorities.

After comprehensively documenting the extent of the Hubs social network, this information was used to develop a modified social network analysis (MSNA) (described in detail in **Appendix B**) (see **Figure 2**). This visualization includes all 12 Hub prime contractor and 61 subcontractor organizations indicated in **Table 2**. While it is not an output from a traditional SNA, the map does provide a snapshot in time of the Hubs' confirmed subcontractors and partners.

Within the RCEH network, Hub prime contractors reported an average of 108 connections each, with a total of 1,110 connections among them. Capital Region staff reported the most connections in a single territory (244), followed by Long Island (191), and Southern Tier (178). Hub subcontractors in each territory provided names for an average of 7 connections each during interviews (there is some overlap with the connections identified by Hub leadership teams).¹⁴

Though the dataset has some limitations, it does illustrate some initial patterns. Hubs partner most frequently with the following organization types:

- Housing providers and other general community services organizations (247 total),
- Environmental/climate issues and clean energy organizations (103 total),
- Local government agencies or organizations (86 total),
- Education programs or institutions (78 total, including Cornell Cooperative Extension), and
- Building and installation contractors (75 total).

Public transit authorities, tribes and tribal organizations, and financial institutions numbered among the least-frequently reported partner types.

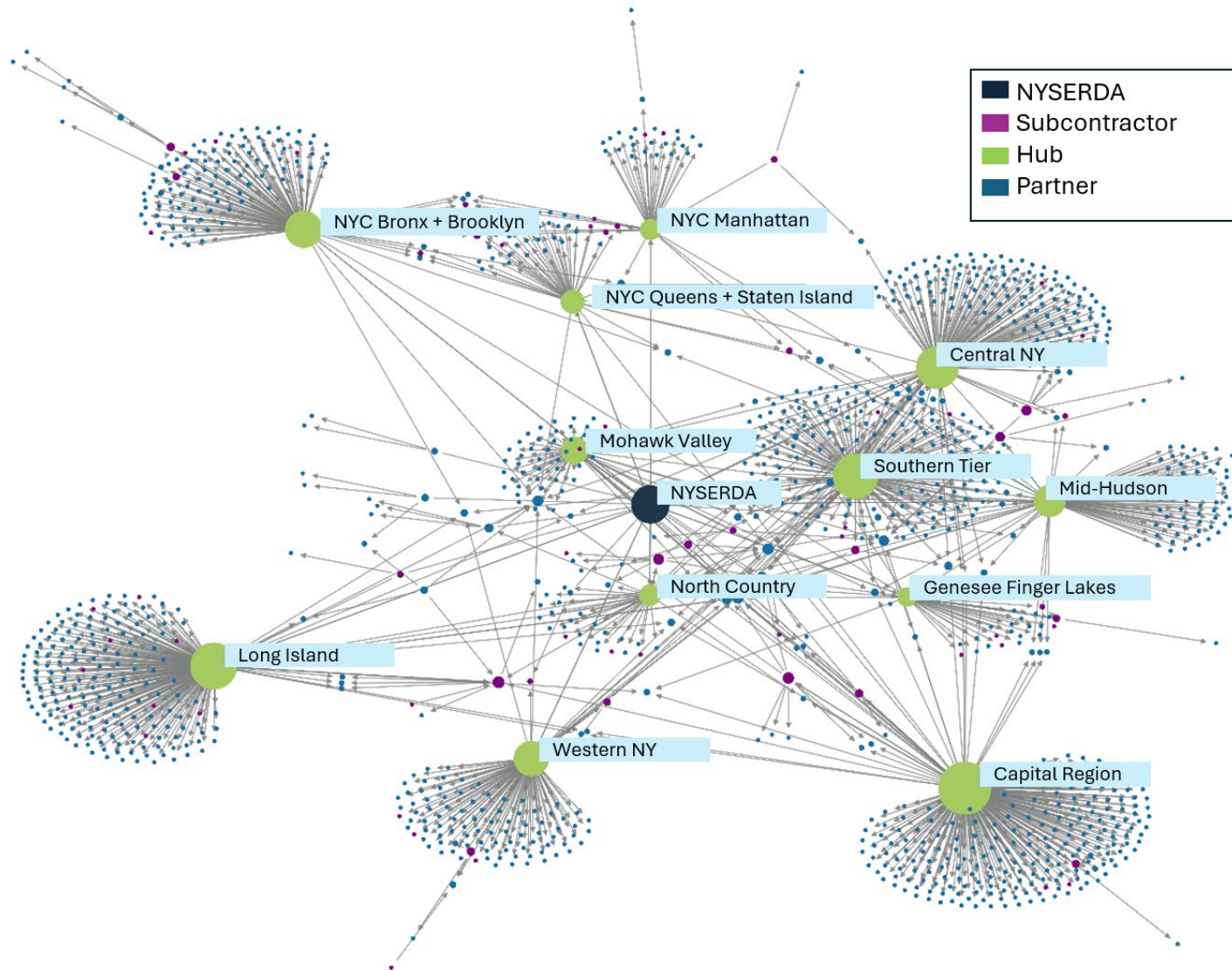
The goals of the identification of partners for a modified social network analysis was to illustrate the breadth of the RCEH network in New York State and gain insights into the localized structure of the program. For example, 75% of the total network is made up of partners that are unique to specific Hubs; even prime contractors from geographically proximate territories (Bronx/Brooklyn, Queens and Staten Island, and Manhattan) identified their partner organizations. This both illustrates the hyper-local nature of each Hub's network and the benefits of a program that connects localized expertise with wider channels of information-sharing and resources.

It should be noted that the network shown in **Figure 2** likely under-represents the number of partner organizations, and includes only limited insights into connections between partner organizations. While some Hub prime contractors provided comprehensive lists of partners (including prospective partners), other Hub prime contractors offered only their 30 most active partners. Additionally, subcontractors and partner organizations were not given the same opportunity to list or confirm partners in a comprehensive way; as such, the MSNA for the RCEH program shows connections that predominantly point outward, with limited documentation of partner organization interconnections.

Refer to **Appendix D** for a detailed depiction of individual regional-level Hub networks.

¹⁴ Subcontractors were not given the same opportunity to directly provide a complete list of their partners; instead, subcontractor focus group participants were asked about their "top" partners.

Figure 2. Hubs' Social Network Including Partner Organizations



Note: Organizations are represented by circles or “nodes” and color-coded, while connections are represented by lines or “edges.” Due to the volume of nodes and edges represented in the network, labels are limited to Hubs and NYSERDA. Appendix D includes a “zoomed in” view of each individual Hub network.

2.1.3 Did relationships with local organizations lead to increased NYSERDA project implementation?

This study aimed to assess if and how the local partner networks supported engagement with NYSERDA programs. While the Hubs opportunities data set does not directly report total number of projects contracted or completed with partners,¹⁵ it does capture information on referrals and other metrics that provide insights into how this program is supporting participation in clean energy programs offered within New York State (both NYSERDA and other organizations).¹⁶

During the period of evaluation, Hubs reported **1,596 opportunities with completed projects** (a 94-fold increase from the 17 projects completed in the baseline period), indicating substantial progress in moving customer opportunities through NYSERDA's pipeline.¹⁷ Of these, 446 opportunities with completed projects also had a referral to a non-NYSERDA program (potentially but not necessarily indicative of wraparound services). Hubs also reported **188 opportunities with contracted projects** (a 13-fold increase from the baseline period) (**Figure 3**),¹⁸ 23 of which also had a referral to a non-NYSERDA program (again, not necessarily indicative of wraparound services).

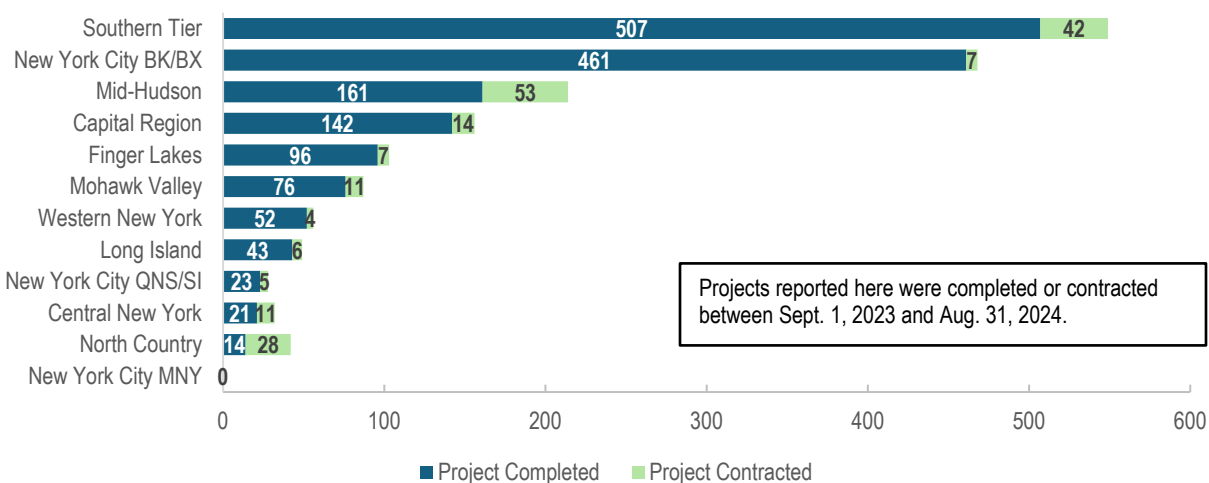
¹⁵ There is interest at NYSERDA in tracking this information, and the RCEH program has started to track the number of Hub EmPower+ opportunities to completed EmPower+ projects going forward.

¹⁶ The Hub Opportunities dataset does not directly track partnerships relationships with local organizations in relation to project implementation due to burdens this would pose on Hub staff for data entry. The field is optional for other NYSERDA programs for similar reasons, and therefore does not systematically link other NYSERDA program participation to Hub referrals.

¹⁷ This information underrepresents the number of completed projects, because this is a *voluntary* reporting item. Hub staff do not follow up with all customers to see if their projects moved forward (this would be highly burdensome), and Hub staff lose access to customer project status once the application goes through to a NYSERDA program. This is also true for non-NYSERDA programs.

¹⁸ Hubs are required to report opportunities as a key performance metric for the RCEH program. The Opportunities dataset is considered comprehensive, but represents a snapshot in time, and if Hubs were delayed in reported (e.g., NYC – Manhattan), then the dataset would show no activity.

Figure 3. Reported Opportunities with Completed and Contracted Projects



Hubs identified a total of 1,487 opportunities initiated between customers and a non-NYSERDA program during the period of evaluation,¹⁹ indicating a referral of a customer to a non-NYSERDA funded program or service (including non-contracted and non-completed stages). Referrals saw an increase of nearly six-fold from the baseline period (272 referrals).²⁰ As noted in the baseline report, customer referrals to external or non-NYSERDA-funded programs remain an important function of the Hubs. In this update, as of the interviews and focus groups, 10 Hub leaders, six partners, and five subcontractors indicated that they use referrals to help customers identify the best program or source of funds they need in their respective communities. Hub teams stressed the importance of referrals in helping customers gain access to critical services like home repairs, building a network of approved contractors, referring jobseekers to training programs, or helping customers find financial or technical assistance to address issues with their energy bills (e.g., support with negotiating with a utility about energy costs or completing an application for the OTDA’s HEAP program).

Beyond referrals and completed projects, Hub teams coordinated with partners in 561 of 8,376 total reported engagements. Specific outreach and engagement activities that Hubs have conducted with their partners include (but are not limited to):

- Education events and workshops translated or held in languages other than English.

¹⁹ The Hub Opportunities Dataset includes more than 48 different non-NYSERDA programs. Opportunities relating to non-NYSERDA programs are considered referrals.

²⁰ The Evaluation Contractor previously reported the number of completed projects that had received referrals, which underreports the coordination with other programs, as Hub staff do not always receive updates on project completion, or take the step to indicate completion of a referral project/opportunity in the NYSEDA Hub Opportunities database.

- Coordination of wraparound services and financial assistance considerations for whole home health needs (e.g., pest extermination, mold remediation, fall hazard screening).
- Activities to support no-heat situations in households.
- Support for elderly, aging, or disabled consumers.
- Cross-promotion or co-advertising with NYSERDA and non-NYSERDA programs/providers to improve reach and impact on mutually relevant or related topics, such as sustainability fairs, repair cafés, or workforce development trainings (e.g., Occupational Safety and Health Administration (OSHA) 10-hour safety and hazard training certification).²¹

See **Appendix D** for an extended discussion of specific outreach and engagement activities.

2.1.4 What diverse clean energy sector businesses are Hubs engaging with?

Hubs partner with hundreds of non-profit organizations and businesses. The modified social network analysis results (shown above in **Figure 2**) suggest that geographically these partners are very specialized and staffed with local talent. **Some of the Hubs' most numerous energy sector partners are contractors and installers that not only facilitate but implement customer projects.** As such, Hub staff are (increasingly) a critical interface between customers and contractors, providing informal quality assurance screening. While there is no systematic record of contractors that Hubs are engaging with (beyond the MSNA presented in **Appendix D.5**), during their interviews Hub leaders described the importance of their connections with contractors and installers in the clean energy sector, highlighting their role as trusted resource. One Hub leader stated that installer/contractor connections are critical to the successful implementation of the RCEH program.

Installers/contractors also support Hubs by playing an important front-line role in educating clients on the types of retrofit options, clean energy products, weatherization or envelope repairs, and other improvements they can implement in their homes. The best contractors embrace this role and work with Hub staff to stay up to date on program changes. Hubs, in turn, collate lists of knowledgeable, trusted, and preferred contractors, to whom Hub staff feel comfortable referring customers. This practice functions as a quality assurance step so customers can feel comfortable with the contractor they select. Additionally, Hub staff support local contractors in seeking specific small business certifications to increase their access to resources and create new marketing opportunities. In discussing their work with these partners, two subcontractors and three Hub leaders described how they are working to help local contractors seek their

²¹ OSHA 10-hour certification is a common training for entry-level employees in a range of clean energy-related fields. It focuses on job site safety and health hazards, and is required for employees in a number of industries (e.g., construction/electrical).

official MWBE or SDVOB certification. MWBE and SDVOB certifications can help contractors/installers and other clean energy businesses qualify for NYS contract opportunities and become eligible for business development funds from the Division of Minority and Women's Business Enterprise Development or the resources available through the Center for Veterans Enterprise. At the time of interviews and focus groups, eight Hub leaders, four partners, and four subcontractors described how they are targeting small businesses, MWBEs, and SDVOBs for engagement relating to workforce development and contractor opportunities. Other activities discussed included working with MWBEs to offer a workforce training program and helping MWBE certified installers qualify as NYSEERDA contractors or seek funding for business development. Because Hubs do not systematically track MWBE and SDVOB engagement, no summary statistics are available.

While Hub leader interviewees and subcontractor focus group participants did not provide an estimate of the number of contractors associated with their Hubs under the RCEH program, more than 1,000 participating NYSEERDA-approved installers/contractors specifically supporting NYSEERDA programs.²² Programs with participating contractors include NY-Sun residential and small commercial (208 approved contractors), EmPower+ (230 contractors), Comfort Home (89 contractors), Energy Storage Residential Contractors (four contractors that are not also NY-Sun contractors), Appliance Upgrade Program (214 contractors), and Multifamily Residential Energy Pathways Contractor Network (14 contractors). While this list of 762 contractors is not comprehensive (most notably missing Clean Heat approved contractors, which represent more than 1,000 firms) and may include some duplication of contractor listings across programs, it provides a rough approximation of the number of contractors participating in the clean energy sector with whom Hubs engage in their work.

2.1.5 What organizations are promoting clean energy technologies and/or opportunities?

In addition to the 12 Hub prime contractor organizations and 61 subcontractors, Hubs identified 12 utilities promoting clean energy technologies and/or opportunities. Hubs also reported partnering with more than 600 organizations to promote clean energy technologies and/or opportunities (including contractors/installers, colleges/universities, faith-based organizations, and more).²³

When asked what organizations they were working with to promote clean energy technologies, Hub leaders and subcontractors again highlighted the importance of collaborating with contractors, who are in a unique position to both provide services and act as another source of technical information for

²² Though there is some duplication across contact lists, particularly for heat pump installers, this estimate is considered conservative.

²³ This count excludes organizations partnering with Hubs on workforce development-related efforts and underrepresents total partners operating in the clean energy space, because partners were not always categorized.

consumers to learn more about clean energy opportunities. One Hub leader indicated that they want to engage more contractors from DACs and help individuals from DACs to enter the workforce generally, citing that their RABA report highlighted the systemic barriers that limit DAC residents' ability to find employment. Hub leaders also described that they were working with civic associations (e.g., homeowner associations), contractors, organizations offering trainings opportunities (e.g., BOCES, Green City Force, ANHG, United Way, and OSHA), universities like Hofstra University and SUNY schools, refugee centers, YMCAs, local social services offices, Hub subcontractors, and community solar providers.

Beyond supporting installers/contractors, subcontractor focus group participants identified activities they were undertaking with their partner organizations. Some examples of this work include:

- Outreach to community energy educators, human service agencies to address the older housing stock, and other community organizations to raise awareness about hybrid and electrical vehicles;
- Providing training to help individuals become weatherization technicians or electrical vehicle charger installers; and
- Partnering with other local initiatives (e.g., Project Warmth on Long Island) to help teach contractors how to build energy-efficient homes and how to transition from fuel oil to clean energy or heat pumps.

Partner focus group participants also described the breadth of work they are doing with other organizations to promote clean energy opportunities, including promoting specific clean energy equipment (e.g., heat pumps) and home electrification in general; encouraging individuals to get a no-cost energy audit to learn about options for their particular situation; working with utilities; and coordinating with contractors. One partner discussed how they are a clean energy career pathway referral training service focusing on delivering OSHA training and helping guide participants to other partners that offer vocational training. Partners also indicated that they were focused on raising awareness of energy efficiencies as a way of saving money and improving comfort in the home, with one participant highlighting that their biggest challenge was in supporting individuals who need the most repairs and upgrades to their homes.

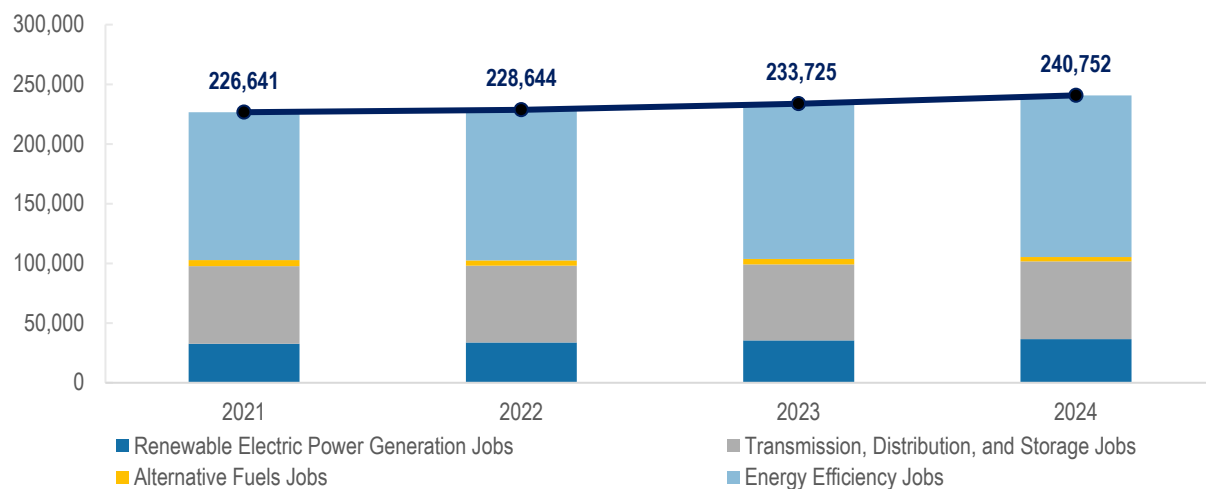
2.1.6 What workforce development progress have Hubs made to date?

Data from the 2024 U.S. Energy Employment Report (USEER) indicate a total of 240,752 clean energy jobs across all 10 economic development regions in New York State; an increase of 14,111 jobs from the

2021 total (226,641).^{24,25} While alternative fuel jobs decreased 30% in this time period, transmission and distribution job numbers were consistent, and both energy efficiency and renewable electricity power generation both increased (9% and 12%, respectively). USEER data do not reflect *all* clean energy-related jobs (i.e., the dataset is missing community organizing/education and manufacturing jobs, among others), however, they give a partial (but broad) indication of clean energy workforce trends in New York State.

Figure 4 shows clean energy job distribution by type and year between 2021 and 2024.

Figure 4. USEER Clean Energy Jobs by Year and Type for New York State



A total of **472 Hub engagements across 11 Hubs (with the exception of Western NY) were focused on promoting opportunities for clean energy workforce and small business development**, an eight-fold increase from the 58 workforce-development-related efforts reported in the baseline, when Hub activity in this focus area was nascent. Since August 2023, **Hub clean energy workforce and small**

²⁴ Importantly, the USEER data are published annually, but one year delayed. Jobs in fossil fuel or fossil-fueled electricity generation are excluded from this total. Additionally, motor vehicle related jobs were excluded because the USEER dataset does not provide granular enough information on fuel type to be able to isolate battery electric or plug-in hybrid electric vehicle-related jobs from the total number of motor vehicle jobs reported.

²⁵ The NYS Clean Energy Industry Report (<https://www.nyserda.ny.gov/About/Publications/New-York-Clean-Energy-Industry-Report>) is based on USEER data but does not provide the same level of county-level spatial granularity to illustrate regional trends. The baseline study similarly leveraged USEER data due to its spatial granularity, because Hubs do not have a specific sector jobs/workforce focus. For this reason, the Evaluation Contractor used USEER data, filtered to NYS counties, for the purpose of this report. Other than the granularity of the data reported, the main difference between the two reports is the sectoral division. The NYS Clean Energy Industry Report parses grid modernization and energy storage from transmission, distribution, and storage, and excludes more traditional transmission and distribution jobs, making USEER numbers higher. Additionally, the NYS report distinguishes clean and alternative fuels transportation from automotive. The present report does not include automotive and therefore excludes clean and alternative fuels transportation, consistent with the baseline study. Despite these differences, the trends in jobs by year and sector are consistent across the USEER and NYS Clean Energy Industry data. Should the Hubs target workforce development efforts to specific sectors in the future, it would be important to move away from USEER data to align with the NYS Clean Energy Industry Report.

business development-related engagements have collectively reached 1,153 attendees, representing potential customers, contractors, and new or prospective partner organizations. Twenty-eight (28) of these engagements were events coordinated in partnership with organizations including (but not limited to):²⁶ local chambers of commerce, colleges and universities, municipal government offices, community resource centers, career and technical education training providers, individual contractors, and trade associations.

At the time of the baseline assessment, 59% of subcontractor focus group participants indicated that their organizations were planning workforce development-related activities; other subcontractor participants indicated needing more clarity from NYSERDA on their role in this area. No partners were engaged in workforce development efforts at the time of the baseline assessment.

Terminology:

- **Hub Teams** – Refers to the combination of leadership teams and energy navigator staff that work together to plan, coordinate, and deliver RCEH events and other activities.
- **Hub Staff** – Refers to paid Hub organization staff (contractors and subcontractors) that implement the RCEH program.
- **RCEH Program Staff** – Refers to NYSERDA staff managing the RCEH program.

In this update to the baseline, during focus group discussions, 54% of subcontractor participants (N=24) and 62% of partner participants (N=29) described the different types of workforce development outreach, engagement, and referral activities they are currently undertaking.²⁷ While Hubs do not directly develop workforce development trainings, they do refer customers to their partners for training opportunities. Training opportunities offered by Hub partners cover a range of topics including solar panel installation, home insulation and weatherization, heating systems with more energy-efficient alternatives, heat pump installation and maintenance, and safety protocols in clean energy fields,

among others. Targeting high school students in outreach was also a commonly reported activity, promoting both education about clean energy and encouraging students to consider a clean energy job pathway in the future. Across Hub teams, participants expressed the importance of being able to provide training programs and opportunities that could be directly translated into a real job/position in the field. However, Hub teams also postulated that there is a supply and demand mismatch in the clean energy sector, as many employers are not hiring. One Hub leader explained how, while they have the funding and means to provide training opportunities for critical positions, such as Energy Auditors, there are not enough companies hiring for these positions.

²⁶ At the time of the baseline study, subcontractors were still seeking clarity on their respective roles with the Hub. The change from 59% to 54% of subcontractors reporting workforce development activity may therefore be representative of role clarity and alignment, rather than a true decrease.

²⁷ Importantly, Hubs do not directly conduct workforce development trainings; instead, they coordinate with partners who hold trainings to promote and offer interested workers.

Specific workforce development activities mentioned by Hub leaders and subcontractors include:

- Job search and other employment support (e.g., career fairs, job boards, career mapping, working with employment agencies, recruiting with local organizations).
- Training and education initiatives (e.g., hosting HVAC training, Building Performance Institute (BPI) certifications, learning/educational programs with high school students, and on-the-job training programs).
- Diversity, equity, and inclusion initiatives in the workforce.

A more in-depth discussion of specific workforce development activities is included within **Appendix D**.

2.1.7 How do RCEH activities and program structure respond to feedback from partners and customers?

Hub teams receive informal participant and partner feedback regarding challenges with RCEH implementation through their daily interactions, which they communicate to NYSERDA during monthly updates and workgroup meetings. While RCEH program staff use regular Hub leadership and all-staff check-in calls as well as other communication tools to gather feedback and share updates on NYSERDA programs, NYSERDA has acknowledged the challenges to RCEH program staff, Hub leaders, subcontractors, and other partners in keeping up with program changes. In response to this challenge, NYSERDA has implemented several outreach tools to help improve communication of important updates and program changes. As of September 2025, NYSERDA has consolidated updates for small residential (defined as 1- to 4-family) energy efficiency programs into a single email to participating contractors, vendors, and other relevant parties to minimize the number of emails for partners to keep track of. Additionally, acknowledging the critical role that NYSERDA-approved contractors have in communicating program requirements and technical aspects of clean energy upgrades to customers, NYSERDA has started to offer a monthly home modernization webinar for participating contractors in EmPower+, Residential Energy Assessments, and Comfort Home. However, despite improvements to NYSERDA's communication efforts, Hubs have identified two specific program-level bottlenecks that continue to affect successful RCEH implementation:

Mid-Stream Program Changes

Changes to NYSERDA program implementation disrupt Hub workflows and require an immediate response from Hub staff, both to inform customers impacted by the change, and to inform partners providing support for ongoing outreach, engagement, and education efforts. Depending on the type of change, adjustments to program implementation can prevent Hub staff from effectively serving communities and may undermine trust in NYSERDA. **NYSERDA staff can and should continue to serve as RCEH gatekeepers for Hub staff**, preventing NYSERDA programs from throwing additional requirements at the Hubs without support, such as written summary information, additional funding, or new programs/resources for customers who are no longer eligible for specific programs.

1. Changes to NYSERDA programs (e.g., changes to the EmPower+ application process) affect the entire RCEH network, and the onus is primarily on NYSERDA Hub staff to relay changes to their partners.

A synthesis report prepared by ILLUME Advising describes how the RABA reports document a lack of transparency regarding NYSERDA program requirements and rapidly changing guidelines for incentive eligibility.²⁸ The report cautions that these challenges can lead to misinformation or even dissuade participation among potential customers. Seven Hub leaders, eight subcontractors, and six partners discussed ongoing relationship maintenance challenges they face in keeping up with mid-course changes made to NYSERDA's programs. Hub leaders and subcontractors also explained that promoting a program only to issue midstream changes to process or incentive amounts puts Hub staff in a challenging position, where they must communicate program changes to waitlisted or prospective customers, eroding customers' trust in the program, the Hub organization, and ultimately, NYSERDA.

As an example of how this affects the Hubs and their networks, the changes made to EmPower+ over the past few years received complaints from multiple subcontractor and partner focus group participants. For example, two subcontractors pointed out changes to measures offered necessitated hurried outreach to contractors and installers to avoid giving incorrect information that might affect their role as a trusted resource; EmPower+ had revised their rebate offerings to exclude refrigerators, and then later excluded natural gas boilers from receiving rebates.²⁹ In another sudden change to the EmPower+ program, contractors are temporarily suspended from submitting applications on behalf of homeowners, placing the administrative burden of completing program paperwork on the consumer (and the Hubs). One Hub leader observed a drop in EmPower+ customer participation they felt was a result of withdrawal of contractor support with application submission, highlighting the value customers place on this type of administrative support.

For context, NYSERDA programs like EmPower+ that have multiple funding sources may have to implement program changes quickly to comply with requirements dictated by new sources of program funding. While this may cause mid-course changes to program eligibility requirements or processes, and may be disruptive in the short term, these changes allow the programs to continue to serve residents when older funding sources end or are unable to keep up with consumer demand.

²⁸ Future discussion or mention of the RABA reports generally will be in reference to the summary report prepared by ILLUME Advising: Michael, Leigh and Andie Gemme, *New York State Clean Energy Hubs Regional Barriers and Assessment Analysis - Crosscutting Barriers and Opportunities*. ILLUME Advising, LLC, April 2025, 22.

²⁹ Rebates are still available for high-efficiency natural gas heating from some utility energy programs (see for more information: <https://www.nyserdera.ny.gov/PutEnergyToWork/Energy-Program-and-Incentives/Heating-Cooling-Ventilation-Programs-and-Incentives>).

A suggestion offered by Hub staff to address issues with communication bottlenecks is to improve state-wide communication channels to proactively address program changes in real time to keep Hubs and other relevant parties informed. While the NYSERDA small residential programs email listserv (sent to Hub organizations) accomplishes direct communication to contractors, vendors, and other parties signed up to the distribution list, keeping them up-to-date with information on incentive availability,³⁰ a more user-friendly summary for more distantly-connected partners would reduce some of the direct burden on Hubs to communicate NYSERDA program changes to their networks. Additional lead time in notifying Hub leaders of changes to relevant programs would similarly reduce some friction between Hubs and the various partners with whom they communicate program changes. Hub networks run on the trusted relationships built and cultivated over time by the Hubs, and NYSERDA benefits from this trust.

2. Hub staff are playing an emergent customer advocacy role in technical discussions between customers and contractors regarding project scope and budget.

As described in **Section 2.1.4**, the Hubs' lists of trusted and knowledgeable contractors provide a level of quality assurance screening for customers seeking an installation contractor. Consistent with results documented in the baseline study, some Hub teams, particularly those in more rural REDCs, reported a limited number of NYSERDA-approved contractors able to serve their residential market for installation of home energy upgrades or energy efficient equipment; a limiting factor in getting customer projects under contract and completed. Feedback from two subcontractors, one partner, and two Hub leaders serving more rural RECHs indicated that contractor scarcity was a persistent issue in serving the needs of customers in their regions. One Hub leader indicated it was a challenge to find contractors in rural areas who are willing to apply for NYSERDA approval, due to their preference for market-rate projects and limited interest in or capacity for additional paperwork, regardless of the benefits (i.e., access to NYSERDA's customer pool and marketing opportunities as a NYSERDA-approved contractor). Separately, one Hub leader reported concerns about installation contractors operating in bad faith, an issue that has equity implications and raises trust issues for customers in DACs. This issue also underscores the importance of Hubs' relationship-building among installation contractors, and the development of pre-screened contractor lists.

Hubs also advocate for contractors to stay updated on program changes via the monthly NYSERDA home modernization webinar series.³¹ In addition to local availability, installation contractors who are

³⁰ NY-Sun, for example, has a tracker for the community adder: <https://www.nyserda.ny.gov/All-Programs/NY-Sun/Contractors/Dashboards-and-incentives/Community-Adder>

³¹ NYSERDA holds a monthly Home Modernization Contractor Webinar to provide updates regarding EmPower+, Residential Energy Assessments, and Comfort Home participating contractors: <https://hpwescontractorsupport.com/nyserda-home-modernization-monthly-contractor-webinar/>

knowledgeable about NYSERDA program offerings are an important asset to Hub staff. Three Hub leaders and two subcontractors cited installation contractor ability to be a customer resource on topics such as program requirements around critical repairs and weatherization as essential to a smooth customer handoff.

Beyond supporting customers in selecting trusted installation contractors, Hub staff also discussed the importance of supporting customers with greater need through deeper engagements within their networks. Hubs explained that they work closely with installation contractors and other resource providers to identify wraparound financial support where customer budgets are extremely limited, or the customer requires additional repairs. If a contractor proposes a scope of work that is beyond the customer's budget (including NYSERDA financial assistance), the customer may be unable to cover the difference in cost. In this type of situation, Hub staff described playing the role of customer advocate, stepping in to explain available options to the customer, coordinating with contractors regarding the scope of home energy updates, and generally acting as an expert resource and advisor. Existing implementation challenges such as high rates of staff turnover and a full Hub workload constrain the bandwidth of Hub staff to embrace this emerging customer advocacy role.

While this deeper customer advocacy is a natural extension of the concierge-style approach to meeting customer needs the Hubs were designed to provide, Hub staff shoulder the burden of advocating for single family customers and providing technical support where installation contractors do not have up-to-date information. Hub staff expressed a need for greater guidance and support from NYSERDA to either clearly define this responsibility for Hub staff (with appropriate additional resources) or formally shift this role to another program or provider.

Changes to Formal Feedback Mechanisms

Under the RCEH contract, NYSERDA requires Hubs to hold a series of public stakeholder forums to first solicit feedback directly from their communities and then communicate this feedback directly to elected officials. However, NYSERDA revised the public stakeholder forum requirement to take place in Year 4 of the RCEH program (in person or virtual), focus on the presentation of program successes, and gather feedback on potential improvements. As a result, this study does not reflect public stakeholder forum input.

2.2 Consumer Awareness and Activities Supporting DACs

This section reviews the results of the DAC consumer survey (N=286) and the five DAC consumer focus groups (N=50). The following subsections discuss DAC consumer awareness of clean energy topics, experience with clean energy programs and projects, and (where relevant) changes in consumer response

since the baseline period. Where relevant and possible, the Evaluation Contractor conducted statistical analyses to analyze the differences in survey response across years for statistical significance.³²

Discussion focuses on resident awareness of energy efficiency concepts, renewable energy generation and storage concepts, and experience with energy audits, clean energy technologies, or other programs.

Further, this section characterizes the outreach and engagement activities that NYSERDA and the Hub network have undertaken since the baseline to reduce barriers to entry into the clean energy economy.

2.2.1 Are DAC consumers aware of clean energy technologies?

DAC consumer awareness of clean energy technologies was split into two lines of investigation: “energy efficiency products” and “renewable energy generation and storage.”

Energy Efficiency Product Awareness: Consumer survey results indicate that *most* respondents are either somewhat aware (62%) or very aware (23%) of energy efficiency (N=286, Figure 5). Mean consumer awareness of energy efficiency concepts did not differ in a statistically significant way from the baseline survey.^{33, 34, 35, 36}

³² This included a two-way analysis of variance (ANOVA) style regression to test the difference in mean response to survey questions within and across years and strata, chi-square tests of independence (used to test association between categorical variables), and two-sample Welch’s t-tests for comparing the difference in mean response across two samples of equal variance.

³³ A two-way ANOVA-style test indicated a significant *main effect* of population density stratum on mean energy efficiency response in the baseline year. Post-hoc t-tests for the baseline year indicated that the urban mean awareness was significantly lower than the rural or suburban awareness.

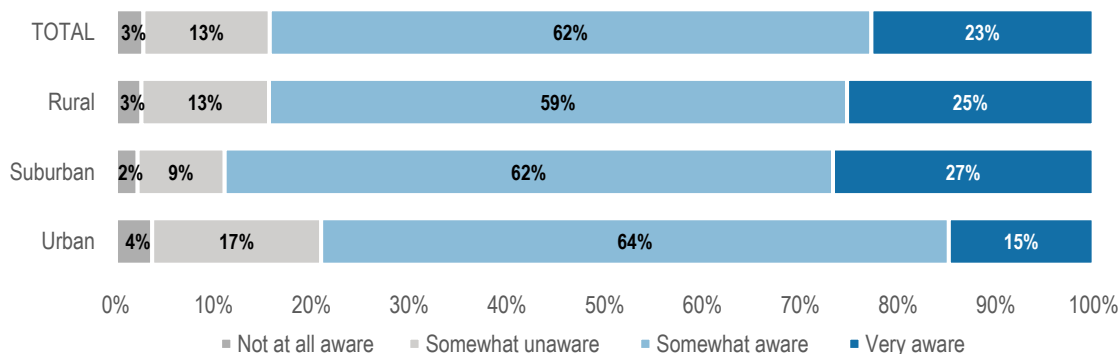
³⁴ Survey question: “Please select the response below that best represents your overall level of awareness of energy efficiency products.”

³⁵ The ANOVA indicated that the *interaction effect* of time (i.e., time x strata) does not differ by strata, suggesting that changes in mean awareness over time were similar across groups.

³⁶ In contrast to the baseline findings, post-hoc t-tests of the differences in mean awareness among respondents in the current evaluation year did not indicate a statistically significant difference in mean response across urban, rural, and suburban survey respondents.

Figure 5. Survey respondent awareness of the concept of "energy efficiency" (N=286)

Rural, urban, and suburban survey respondents are either **somewhat aware** or **very aware** of energy efficiency.

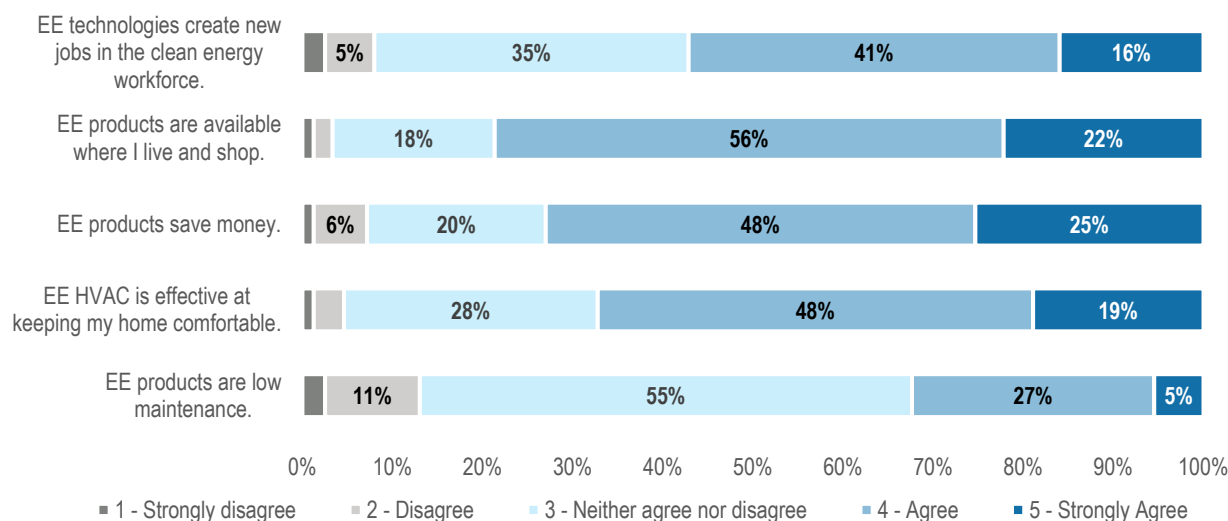


Note: Percentages are calculated relative to the sample (e.g., the proportion of rural respondents answering “very aware” was calculated relative to the total number of rural respondents).

Most survey respondents agreed or strongly agreed with the following statements about energy efficiency (Figure 6) : “energy efficient products are available where I live and shop” (78%, N=239), “energy efficient products save money” (73%, N=237), “energy efficient heating and cooling equipment is effective at keeping my home comfortable” (67%, N=238), and “energy efficient technologies create new jobs in the clean energy workforce” (57%, N=238).³⁷ Over half of survey respondents (55%, N=238) remained somewhat unsure about the following statements, neither agreeing nor disagreeing: “energy efficient products are low maintenance.”

³⁷ A chi-square test of independence to Likert responses from the current study when compared to the baseline indicated no statistically significant change in agreement among any of the phrases associated with energy efficiency.

Figure 6. Survey responses to statements about energy efficiency (N values vary by statement)



Note: Percentage values less than 5% are unlabeled.

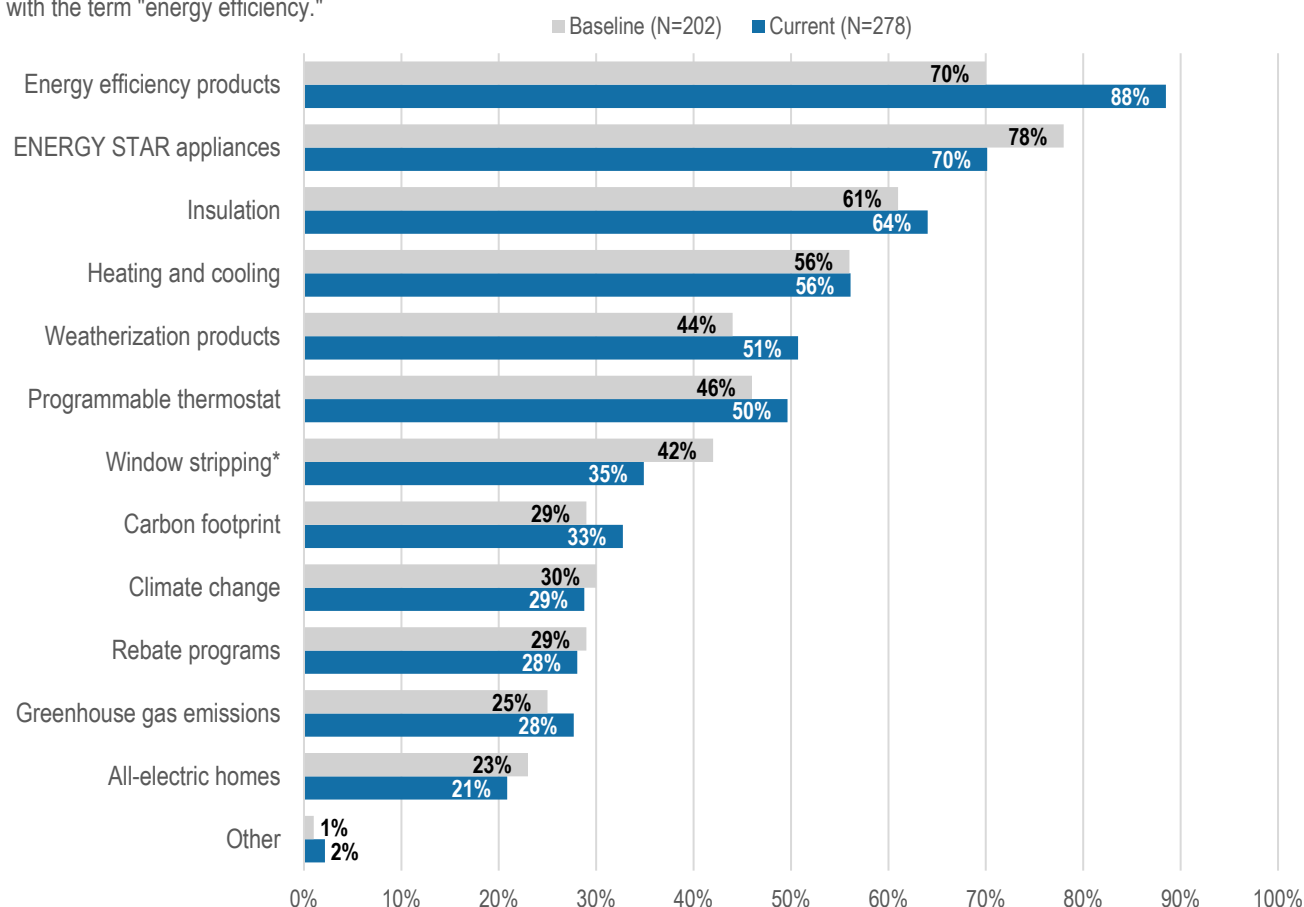
Recognition of energy efficiency products increased significantly from the baseline. When asked what phrases survey respondents most associated with the term “energy efficiency,” respondents most commonly identified “energy efficient products” (88%, N=278; **Figure 7**), which represents *a statistically significant increase* from the baseline (70%, N=202).³⁸ Respondents also frequently selected specific technologies such as ENERGY STAR® appliances (70%, N=278), insulation (64%, N=278), heating and cooling (56%, N=202), and programmable thermostats (51%, N=278).³⁹

³⁸ A two-proportion z-test indicated statistically significant changes in response proportion of this “select all that apply” category across two independent survey samples.

³⁹ Changes in response proportion of the remaining “select all that apply” categories were not significant.

Figure 7. Survey respondent awareness of energy efficiency products and ideas

Energy efficiency products and ENERGY STAR® appliances are the ideas respondents most associated with the term "energy efficiency."



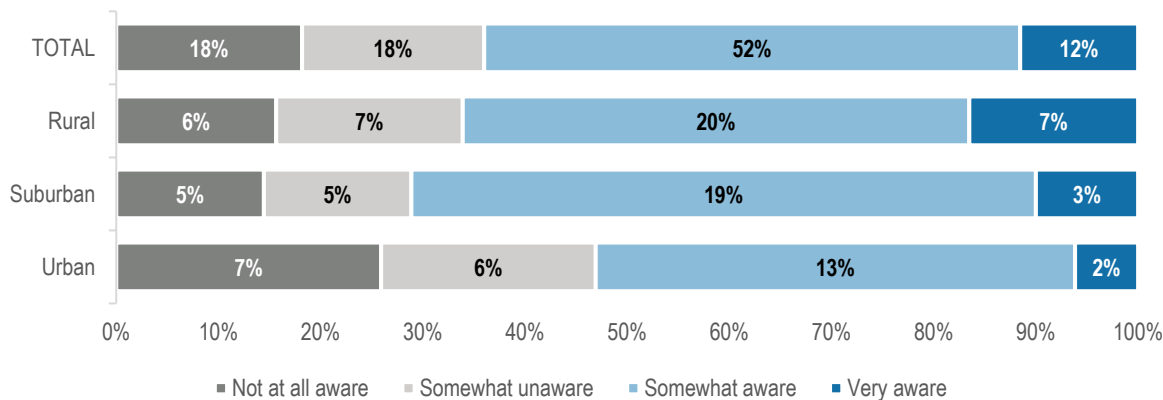
Note: In the baseline study, participants were asked about "weather stripping" whereas in the current study, participants were asked about "window stripping." Six individuals (2%) selected "other." Four of these respondents selected "other" but did not provide more clarity. Two people had comments suggesting that they have a broader, more philosophical skepticism about energy efficiency - one wrote "money laundering scam" and the other "A little of everything except for the climate change myth."

DAC focus group participants were also asked to discuss their awareness of clean energy technology concepts. Only 44% of focus group participants indicated that they were generally aware of the concept of energy efficiency products (N=50), compared to 85% of survey respondents. However, as the focus group question was open-ended (participants did not have the benefit of a list of terms with which to identify their awareness level), differing methodologies may account for the lower awareness response. Focus group participants who reported awareness shared ideas and words they associated with the term "energy efficiency" including, but not limited to: insulation (n=5), lower utility bills (n=4), windows (n=2), tax credits (n=1), LED lighting/lightbulbs (n=2), appliances (n=1), turning down the thermostat (n=1), cost effectiveness (n=1), and general mindfulness about energy waste and conserving energy (n=5).

Renewable Energy Generation and Storage Awareness: Results from the consumer survey indicate that most respondents are either somewhat aware (52%) or very aware (12%) of “renewable energy generation and storage” (N=286, Figure 7).⁴⁰ In contrast to the baseline study, mean awareness among respondents in the current evaluation detected statistically significant differences across strata.⁴¹ Suburban respondents had a statistically higher mean awareness (2.67) compared to urban respondents (2.33).^{42, 43} Likewise, rural respondents had a statistically higher mean awareness (2.67) compared to urban respondents.

Figure 8. Survey respondent awareness of “renewable energy generation and storage” (N=286)

Over half of the survey respondents indicated that they are **somewhat aware** or **very aware** of renewable energy generation and storage.



Note: Percentages were calculated relative to the sample (e.g., the proportion of rural respondents answering “very aware” was calculated relative to the total number of rural respondents).

Survey respondent agreement with key statements about renewable energy generation and storage decreased since the baseline. Specifically, survey respondents expressed a significantly lower rate of agreement with: “renewable energy generation and storage technologies reduce electricity bills”

⁴⁰ Survey question: “Please select the response below that best represents your overall level of awareness of **renewable energy generation and storage technologies**.”

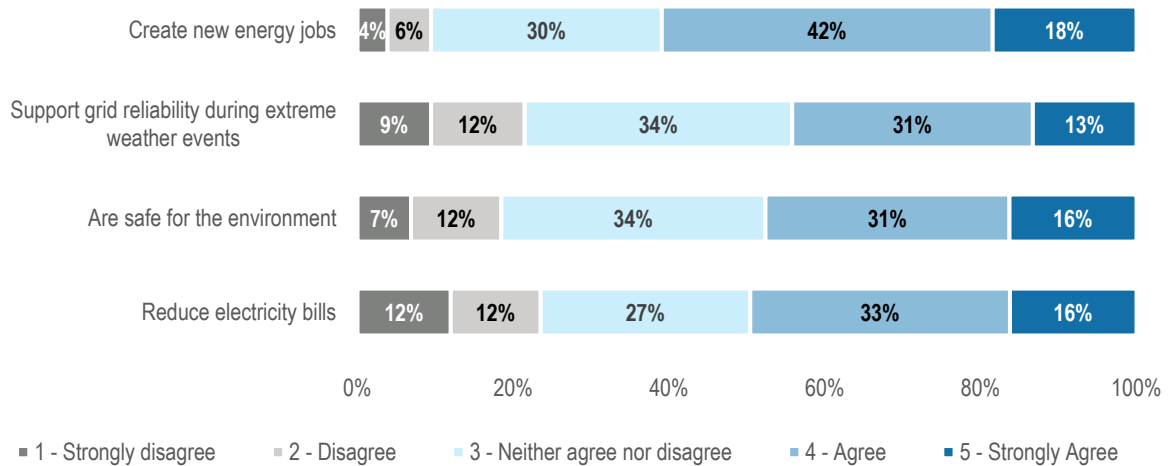
⁴¹ Comparison was conducted using a post-hoc t-test.

⁴² A two-way ANOVA indicated no significant *main effect* of population density stratum (i.e., the mean of suburban and rural responses did not differ from the mean urban response) in the baseline.

⁴³ The ANOVA did not detect a difference in the *interaction effect* of time by strata (i.e., time x strata), suggesting that changes in mean awareness over time were similar across groups, despite an apparent decrease in the proportion of “somewhat” and “very aware” respondents. There was also no significant *simple effect* of time (i.e., responses from the current study do not differ from the baseline study responses). Though Hubs are working to raise awareness of renewable energy generation and storage across NYS, no measurable difference can be observed since the baseline. A small majority of respondents (64%) were “somewhat aware” or “very aware” of renewable energy generation and storage concepts.

(50%, N=234; an 8% decrease compared to 58% in baseline).⁴⁴ Survey respondents also expressed lower rates of agreement (compared to the baseline) with: “renewable energy generation and storage technologies are safe for the environment” (48%, N=233), and “renewable energy generation and storage technologies support grid reliability during extreme weather events” (44%, N=233).⁴⁵ The one exception to this pattern was respondent agreement to the statement, “renewable energy generation and storage technologies create new energy jobs” (61%, N=233), which did not change since the baseline (**Figure 9**).

Figure 9. Survey responses to statements about renewable energy generation and storage technologies (N values vary by statement)



Survey respondents most commonly associate terms like “wind power” (73%), “rooftop solar panels” (71%), and “hydropower” (62%) with the term “renewable energy generation and storage” (N=234, **Figure 8**). Respondent association of wind power, hydropower, and geothermal power increased significantly since the baseline.⁴⁶

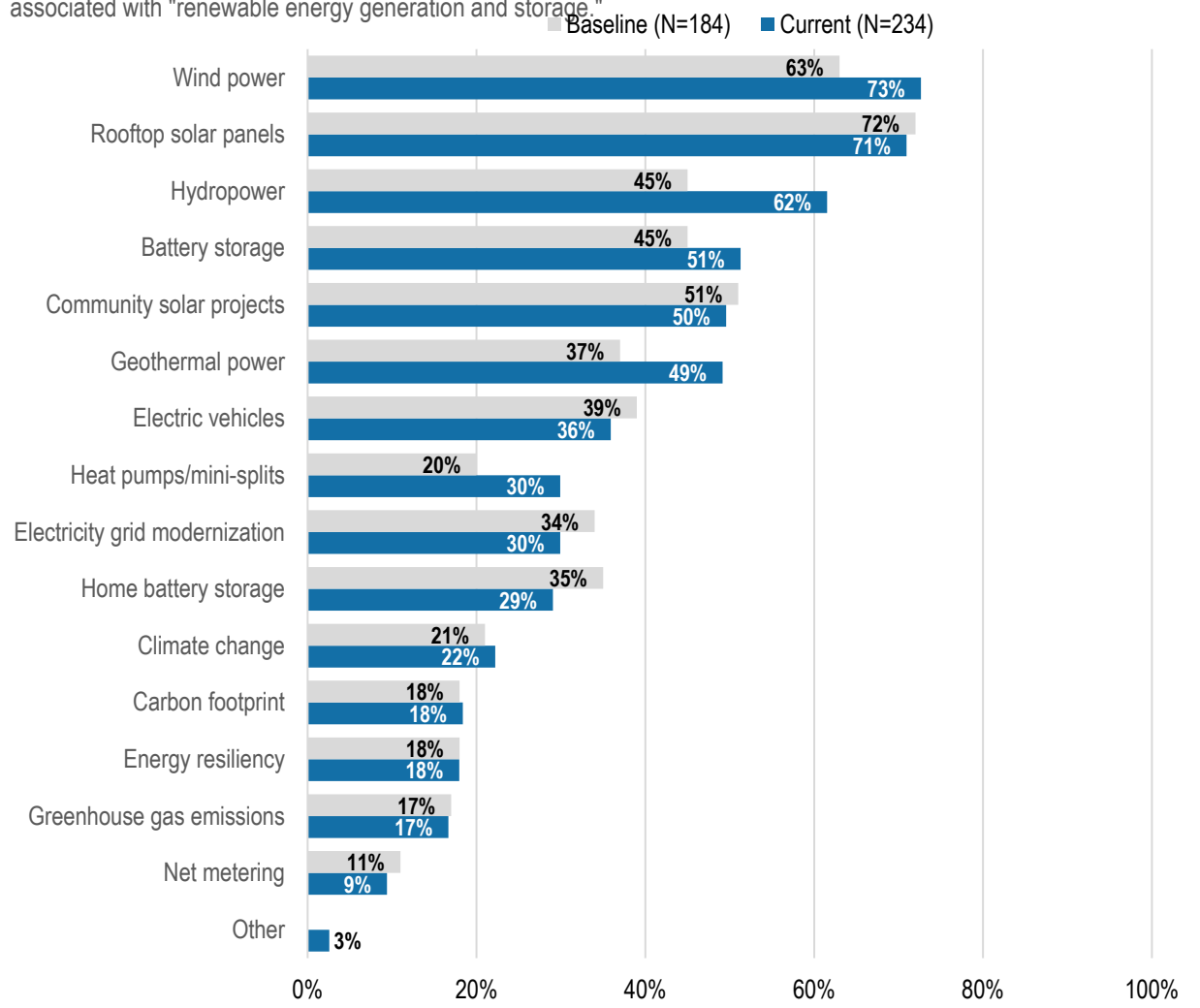
⁴⁴ A chi-square test of independence to Likert responses from the current study when compared to the baseline indicated a statistically significant decrease in agreement with the phrase “renewable energy generation and storage technologies reduce electricity bills.”

⁴⁵ Importantly, these decreases were not statistically significant.

⁴⁶ A two-proportion z-test indicated statistically significant changes in the response proportions of these “select all that apply” categories across two independent survey samples.

Figure 10. Survey respondent associations with "renewable energy generation and storage"

Rooftop solar panels and wind power are the two terms that survey respondents most associated with "renewable energy generation and storage."



Note: Six individuals (3%) selected "Other." Two of these respondents put nuclear power/energy, and another wrote that "Wind mills and solar panels do more to damage the environment." Two individuals also wrote "scam."

Focus group participants reported similar levels of awareness of the term renewable energy generation and storage (46%) as they had with energy efficiency products (44%), while still reporting lower awareness than survey respondents (N=50). Ideas and words associated with the term "renewable energy generation and storage" as a concept included energy providers or utilities (n=1), solar panels (n=4), wind (n=3), batteries/storage (n=6), reducing greenhouse gas emissions (n=1), and environmental impact in general (n=2).

2.2.2 Are DAC consumers participating in clean energy home audits?

Experience with Energy Audits: Free residential energy audits, conducted by either NYSERDA, utility representative, or other third-parties, are an opportunity for consumers to learn about ways to reduce home energy consumption, and save on energy bills. DAC consumer focus group discussions provided an opportunity to ask whether individuals were aware that free residential energy audits were available to them in New York State. **During the focus groups, 14 participants (28%) indicated that they had an energy audit conducted in their homes (N=50).** While most participants who received the audit indicated they were satisfied with the service, some consumers expressed dissatisfaction with the audit. One participant was unsure whether they received a real audit from a heating, ventilation, and air conditioning (HVAC) company or whether the firm was just trying to make a sale on heating and cooling equipment. Three participants claimed that they never heard back from the audit provider about their results and suggestions for next steps. Consumers also discussed challenges with their audit experience; for example, receiving long lists of items to improve or upgrade. Other respondents brought up that, having implemented improvements, they felt they had not realized sufficient benefits to outweigh the costs of the upgrades. One focus group participant noted that they had not moved forward with upgrades after a home energy audit due to similar concerns as those raised by the other participants.

A majority of survey respondents (71%; N=286) indicated that they had *not* received an energy audit, consistent with the baseline. Of the respondents who *did* receive an energy audit (N=58), 36% received it through NYSERDA, while 41% did not remember (**Figure 9**). In the baseline (N=44), 20 participants (45%) received the home energy audit through a NYSERDA program, while 19 (43%) did not remember. A clear majority (90%) of the survey respondents who had received a free energy audit with NYSERDA reported addressing issues in their home identified during the audit (N=21).⁴⁷

⁴⁷ In the baseline, participants who answered “Yes” to having a clean energy audit were shown both of the following: “Was the energy audit through a NYSERDA program?” and “Did you end up addressing any of the action items identified through the energy audit?” In the current study, if participants indicated that they did *not* have the audit through a NYSERDA program, the survey logic skipped the question regarding addressing items after the audit. Though the questions are similar, skip logic for this survey question was slightly different, leading to a larger group of respondents seeing the question. Due to this difference, the results for this similar question are not truly comparable across years using statistical methods.

Figure 11. Survey respondents reporting whether they received an energy audit

Most survey respondents in the current study (71%) indicated that they had not received a free energy audit.

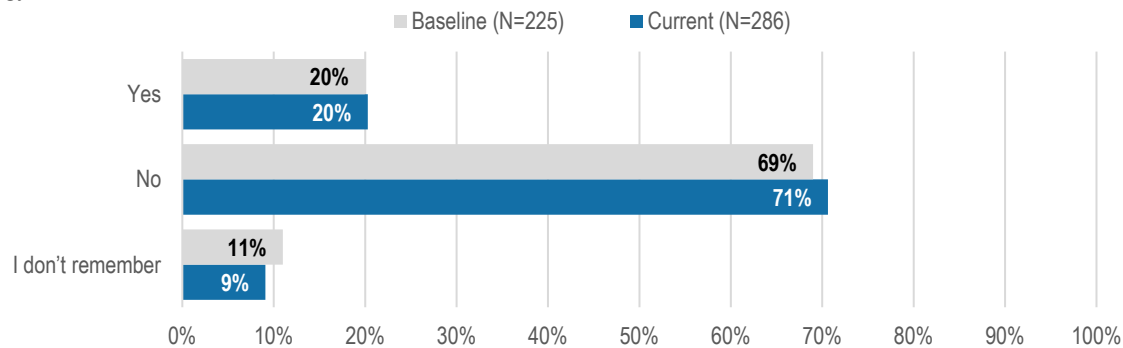
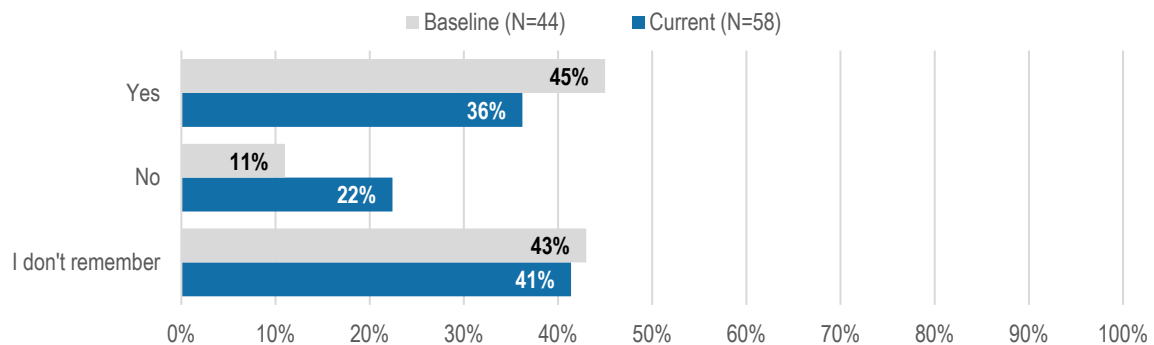


Figure 12. DAC consumer respondents receiving an energy audit

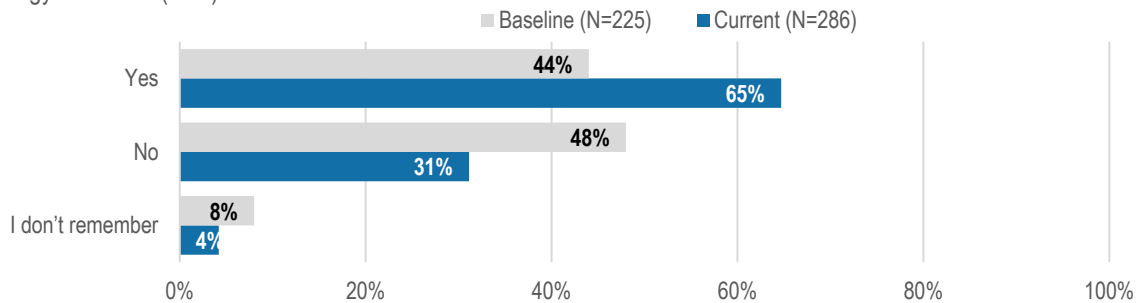
In the current study, of those who had an audit, 36% received an energy audit through a NYSEDA program, while 41% could not recall the source of the energy audit.



Regardless of whether they had participated in a free energy audit, all survey respondents were asked whether they had ever used energy efficient products or installed clean energy upgrades to their homes. More than half of the survey respondents (65%) indicated that they had installed clean energy or energy efficiency measures in their homes (N=286, **Figure 11**). This represents a 21% increase compared to the baseline, where only 44% of survey respondents indicated they installed these measures in their homes (N=225).

Figure 13. Survey respondents installing clean energy measures in their homes

In the current study, more than half of survey respondents indicated that they have installed clean energy measures (65%).

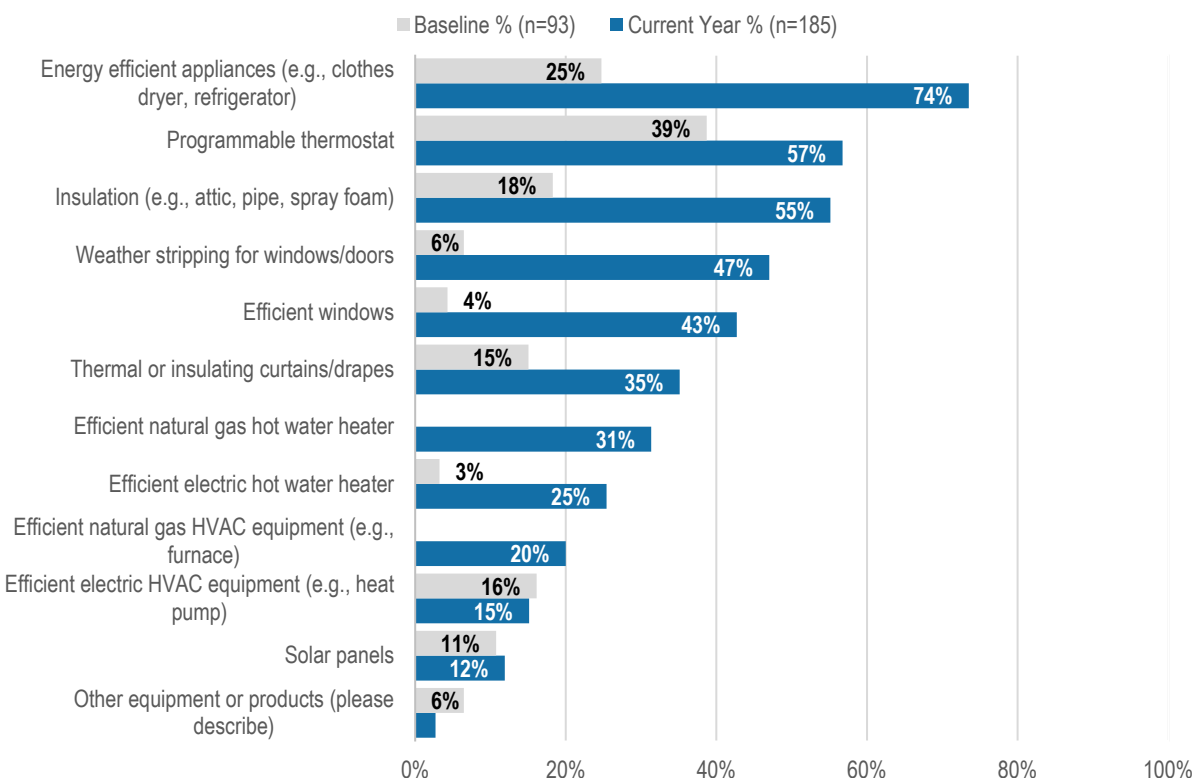


Survey respondents most frequently reported installing energy efficient products such as energy efficient appliances (74%), programmable thermostats (57%), and insulation (55%, N=185, Figure 14). Baseline survey respondents also most frequently reported installing the same three energy efficient products, however installation was reported at lower frequencies: programmable thermostats (39%), energy efficient/ENERGY STAR® appliances (25%), and insulation (18%, N=93).⁴⁸ “Other” energy efficiency items that survey participants have installed include lightbulbs (n=3) and a new exterior door (n=1). Of those who installed clean energy or energy efficiency measures, 67% reported minimal to no savings, 18% observed moderate savings, and only 10% reported seeing substantial or noticeable savings on their energy bills (N=183).⁴⁹

⁴⁸ In a slight difference from the baseline study, 2025 survey respondents saw “select all that apply” options, rather than an open text field. Survey responses from the baseline were used to populate the options to reduce respondent burden in the 2025 update. For this reason, the 2025 survey is not directly comparable to the baseline survey in a statistical way.

⁴⁹ In the baseline study, only 43% of survey participants reported seeing savings on their energy bills (N=98). This question was framed as a multiple-choice question (Yes/No/I’m not sure) in the baseline study.

Figure 14. Baseline and current year comparison of consumer EE products installed at home



Focus group participants were also asked to indicate what types of clean energy upgrades or products they have in their residence: a total of 56% of participants (N=50) indicated that they purchased or installed energy efficiency products or equipment in their residence. Specific products mentioned included solar panels, smart thermostats, insulation (e.g., windows, curtains, attic), heat pumps, air conditioners, tankless hot water heaters, energy efficient washers/dryers, and EnergySTAR® appliances (generally).

During the consumer focus groups, 10 participants discussed how they observed reductions to their energy usage and utility bills after installing energy efficient products (N=50). These 10 participants spoke positively about the savings they saw, such as seeing their bills decrease with the installation of their solar panels, electric water heaters, and energy efficient furnaces. The participants were satisfied with how the products mitigate temperature swings, promote proper ventilation, and can be programmed to turn on/off at different times of day.

2.2.3 What services/programs were the most used among DAC participants?

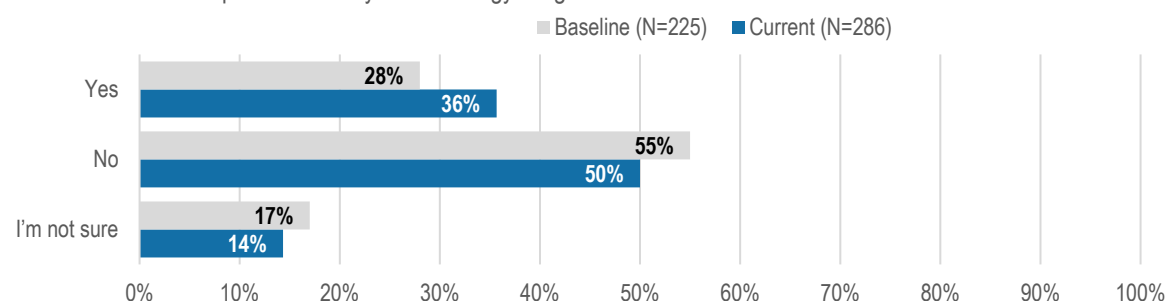
Consistent with the baseline findings, interviews and focus group discussions with Hub leaders and subcontractors indicated that EmPower+ (a NYSERDA program) and HEAP (offered by the NYS Office of Temporary and Disability Assistance) are the programs with most frequent referrals for

income-qualifying individuals. EmPower+ and HEAP have complementary requirements and applications, where eligibility for one program can function as proof of eligibility to participate in the other. They can also both provide support for families in need of emergency heating assistance. Interviews and focus group discussions with Hub leaders and subcontractors indicated that after EmPower+, Clean Heat and Comfort Home were among the top NYSERDA programs that Hub teams recommended for income-qualifying individuals. After HEAP, the other non-NYSERDA programs with most frequent referrals included the Weatherization Assistance Program (offered by the by New York State Homes), and Community Renewal (offered by NYS Homes and Community Renewal).

DAC consumer survey respondents had mixed awareness of NYSERDA, and most had not participated in NYSERDA programs. Half of the survey respondents (50%) were familiar with clean energy and energy assistance programs offered by NYSERDA (N=286, **Figure 16**), while This finding is consistent with baseline study results.⁵⁰

Figure 15. Survey respondent familiarity with NYSERDA programs

In the current study, half of respondents (50%) were unfamiliar with the New York State Energy Research and Development Authority Clean Energy Programs.

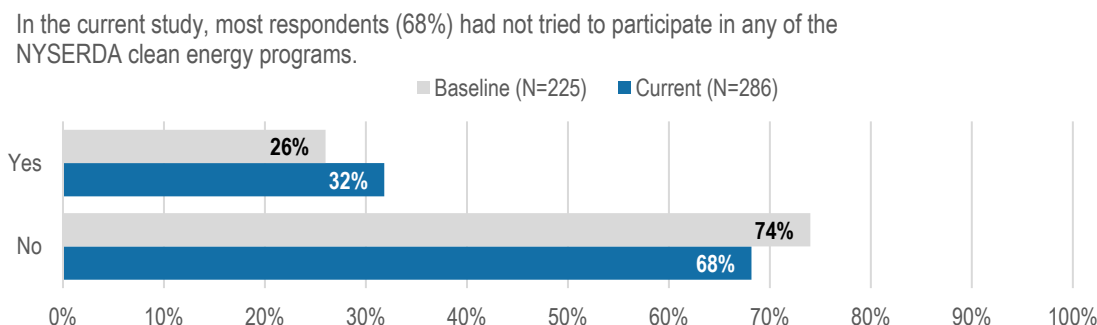


Approximately one third (32%) of DAC consumers who took the survey indicated that they had tried to participate in a clean energy program before (N=286, **Figure 15**).⁵¹ Of those respondents who tried to participate in a clean energy program (N=91), 59% found accessing the NYSERDA program somewhat easy or very easy, consistent with baseline study results.

⁵⁰ A chi-square test for independence similarly indicates no significant difference in mean response among participants across years.

⁵¹ A chi-square test for independence did not indicate a significant difference in mean response among participants across years.

Figure 16. Survey respondent participation in NYSERDA clean energy programs



Aligned with program referral patterns reported by Hub staff, HEAP and EmPower+ were also among the top programs in which consumer survey respondents have participated.⁵² Among DAC consumer survey respondents, HEAP had the highest rate of *participation* compared to other energy-related programs (28%, N=283).⁵³ HEAP had the second highest rate of name recognition compared to other energy-related programs (55%, N=283), after utility bill programs.

In the survey, EmPower+ was positioned in relation to two past programs (now combined): “EmPower New York (now part of EmPower+)” and “Assisted Home Performance with ENERGY STAR® (now part of EmPower+).” A combined 13% of respondents reported participation in the EmPower+ program; however, the combined name recognition for these programs was higher than any other energy-related program (a combined 59% of respondents had heard of the program or its predecessors, but had not participated), including HEAP.

Thirteen consumer focus group participants indicated that they had participated in a clean energy or energy assistance program (N=50). Programs reported by participants included HEAP, NYS Rehabilitation and Historic Homes, NYSERDA (broadly), and programs with utility/energy providers. Despite this reported participation in clean energy programs, five consumer focus group participants expressed confusion regarding the income-eligible programs for which they qualify. Refer back to **Section 2.1.7** for the deeper discussion on the role of Hubs networks in providing program guidance.

Workforce development programs had low reported rates of participation and familiarity among survey participants. Most survey respondents indicated that they had *not* taken part in a workforce

⁵² The question about specific program participation was introduced separately from the question about NYSERDA program participation, because participants may be aware of program names, rather than program sponsors. I.e., all participants saw this question (N=283), rather than a subset of respondents who reported that they had participated in a NYSERDA program.

⁵³ The survey listed 24 different state and utility-sponsored programs, and one “other” response option where participants were asked to provide a program name.

development program hosted by NYSERDA or the Hubs (88%, N=286), while an additional 6% had participated, and a further 6% of respondents were unsure. Similarly, most survey respondents did not know anyone else who had taken advantage of these workforce development opportunities (62%, N=281).

When asked about their familiarity with Hub organizations that conduct workforce development-related activities (e.g., career fairs and training) in the clean energy sector, 60% of respondents reported that they were not familiar with any of the organizations listed.⁵⁴ A total of 34% of respondents were familiar with NYSERDA's workforce development activities, but only 12% of survey respondents were familiar with specific Hub activities in energy sector workforce development (N=277).

2.2.4 What are the key barriers to clean energy adoption in DACs?

Other higher priorities for household spending and additional information needs were the two most frequently reported barriers to consumer adoption of clean energy products, programs, and services. Survey respondents reported that the most common barriers to pursuing clean energy products, programs, and services were that they had “more pressing needs that take priority when [they] have available funds,” which is consistent with consumer response from the baseline study (55%, compared to 50% in the baseline). The RABA reports similarly highlighted how customers have competing priorities or more immediate needs to address before considering pursuing an energy-efficiency project.⁵⁵

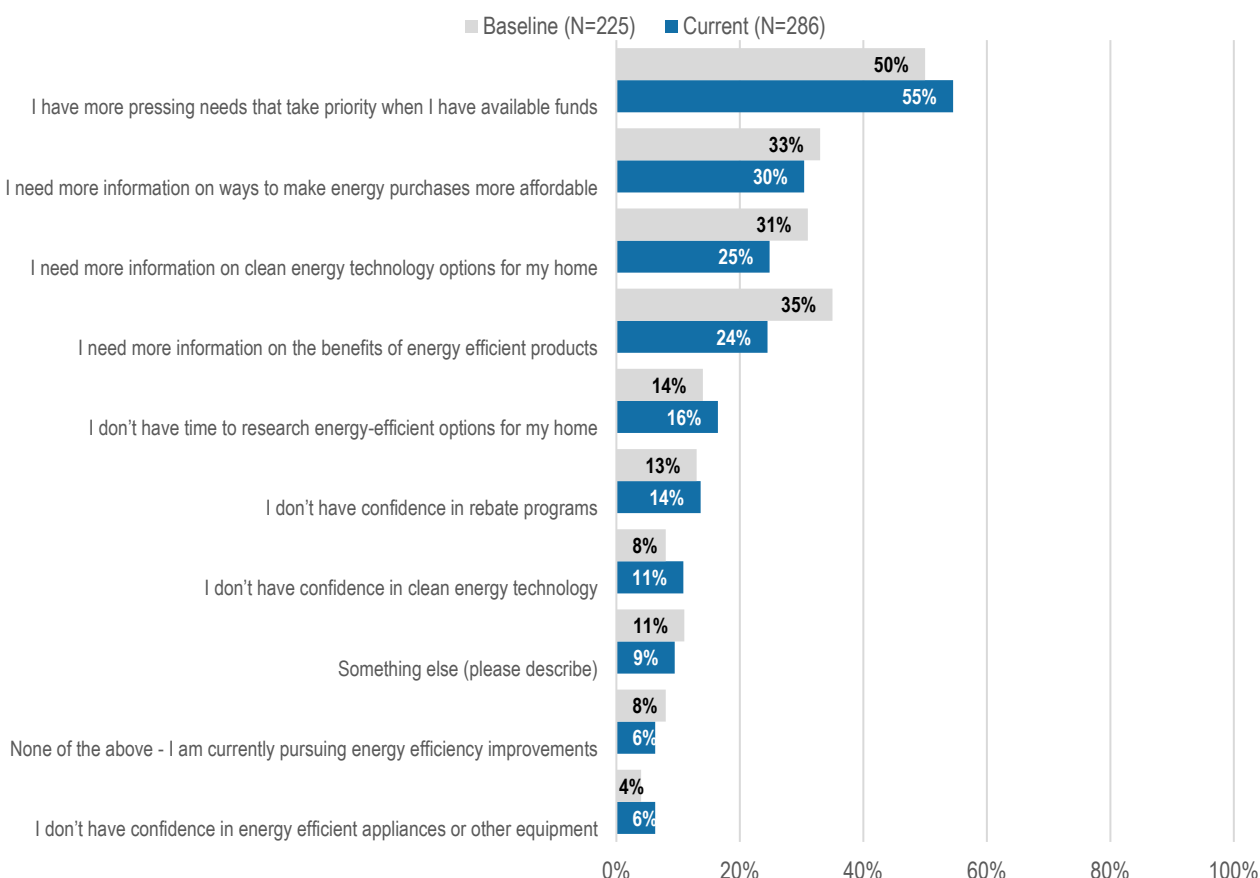
Other barriers indicated by survey respondents included needing “more information on ways to make energy purchases more affordable” (30%, compared to 33% in the baseline), needing “more information on clean energy technology options for [their] home” (25%, compared to 31% in the baseline), and needing “more information about the benefits of energy efficient products” (24%, N=286; compared to 35% in the baseline) (**Figure 14**). Approximately a quarter of survey respondents (24%) indicated that they have plans to participate in clean energy programs in the future, while about half were unsure (50%, N=286).

⁵⁴ Organizations listed in the survey included: NYSERDA, Capital Region Hub, EnergySmart CNY, AMPED Project, Long Island Smart Energy Choices, Mid-Hudson Energy Choices Hotline, Mohawk Valley Energy Smart Choices, Bronx & Brooklyn Hub, Manhattan Clean Energy Hub, Queens and Staten Island Hub, North Country Clean Energy Hub, Southern Tier Smart Energy Choices Hotline, and PUSH Green Hub.

⁵⁵ Michael, Leigh and Andie Gemme, *New York State Clean Energy Hubs Regional Barriers and Assessment Analysis - Crosscutting Barriers and Opportunities*. ILLUME Advising, LLC, April 2025, 30-31.

Figure 17. Barriers to pursuing clean energy or energy efficiency products and services

Consumers frequently have more pressing needs that take priority when they have available funds, or need more information before pursuing clean energy upgrades to their homes.



Note: Respondents who selected “something else” indicated that they had concerns about scams or spam (n=2); they already had items that were energy efficient, are enrolled in a program, live in a new energy efficient home, or will wait to replace items with more efficient ones (n=4); their renter status, landlord, local code, or co-op was preventing them from making changes (n=10); the increasing cost of electricity/utility bills was a concern (n=2); they do not have the income or financial means to pay for these upgrades (n=2); or they were not eligible to participate because they participated in a program with their previous home, told to wait before applying because they participated in another program in the past, or their rebate was not approved (n=4). Further, one person responded that pursuing these improvements “seems complicated,” another indicated that they would like to see a presentation at their senior community to learn more, and another did not elaborate further.

Consumers expressed uncertainty and skepticism about whether the benefits related to clean energy products outweigh the high upfront cost of installation (even with incentives). Consumer focus group participants expressed dismay about the expense of installing or purchasing clean energy or energy efficiency products in their homes (n=14). Six consumers described how either a) total project costs were unclear to them upon purchase of clean energy equipment or energy efficiency measures, or b) savings were less than expected. This result is consistent with findings from ILLUME Advising’s RABA report summary, which similarly highlighted how customers can have overly high expectations for energy

savings and may feel misled by the expected benefits they will receive when it comes to clean energy projects.^{56, 57}

Two consumer focus group participants expressed an interest in knowing what their return on investment (ROI) would be after purchasing a clean energy product or energy efficiency upgrade. One partner focus group participant, an installation contractor, explained that this is consistent with feedback they receive from their own customers, who still express some skepticism about the savings and general reliability of clean energy technology. The same Hub partner explained that it takes considerable time and effort to estimate the ROI of a clean energy technology for any given household, due to the number of unique factors of each residential property that impact energy usage.⁵⁸ The rising cost of electricity was a related, complicating factor noted by Hub leaders (n=3), partners (n=5), consumer focus group participants (n=18), and survey respondents alike (refer to the discussion in **Section 2.2.1**).

Consistent with the baseline study, consumer focus group participants also indicated that they want to see more evidence about the benefits and savings they will receive over time (n=5). In particular, consumer focus group participants reported that critical repair issues usually take priority over energy improvements. This observation was shared by both subcontractors (n=4) and partners (n=2). A study published by researchers from Lawrence Berkely National Laboratory hypothesizes that in communication of energy options for homeowners, additional emphasis on non-energy benefits such as health (from improved indoor air quality), net cost of ownership, affordability, and maintenance responsibilities can both supplement and contextualize homeowners' considerations of the upfront financial investment required to pursue a home energy project.⁵⁹ The study further suggests that financial benefits can be unconvincing (particularly where ROI is minimal) and a metric like payback period is not enough to offset the high initial cost of a home energy upgrade.

Beyond information about ancillary benefits to justify the purchase of clean energy products, findings from the Statewide Tracking Study (conducted annually by NYSERDA) and the Information Access Survey suggest that operation and maintenance costs can also deter homeowners from making investments in clean energy equipment. Homeowners are faced with uncertainty over maintenance and

⁵⁶ Michael, Leigh and Andie Gemme, *New York State Clean Energy Hubs Regional Barriers and Assessment Analysis - Crosscutting Barriers and Opportunities*. ILLUME Advising, LLC, April 2025.

⁵⁷ Electricity prices have been rising in NYS as well, so customer frustration may also reflect the erosion of savings due to higher utility bills.

⁵⁸ The time and effort correspond to collecting information for key variables, like physical structure attributes and operational parameters (when the heating system is typically in use, etc.).

⁵⁹ Walker, I., Less, B., & Casquero-Modrego, N. (2023). Emerging Pathways to Upgrade the US Housing Stock: A Review of the Home Energy Upgrade Literature. *Lawrence Berkeley National Laboratory*. OSTI ID: 1777979. Retrieved from <https://escholarship.org/uc/item/5rs2t6zs>

fuel costs for new technologies, and these additional challenges are among their top concerns when making purchasing decisions.⁶⁰ Though homeowners may have more freedom to pursue energy efficient projects within their residence, they are also directly responsible for bearing the costs of installing and maintaining these products in their home. As noted in Section 2.2.1, DAC consumer survey respondents were split on the issue of whether energy efficiency products are low maintenance.

Another barrier to participation was NYSERDA delays in processing customer applications, and a lack of transparency into real-time process data hinder Hubs’ ability to address customer needs.

Hub teams reported limitations in their ability to efficiently and effectively address customer inquiries about their program application status. Changing requirements, such as those affecting EmPower+ applicants, stranded customers in the application pipeline (discussed in **Section 2.1.7**), which affected consumer confidence in applying to NYSERDA programs. Two Hub leaders indicated that NYSERDA programs tend not to follow up with customers after application submittal. Customers’ touchpoints with NYSERDA are limited until the application is reviewed, which can complicate the “customer service handoff” between Hubs and NYSERDA. Hub staff report that they tend to fill this role for some customers, as a key point of contact during the application process.⁶¹ Feedback from Hub leaders included how easy it is for people to get “lost in the shuffle” due to the number of applications submitted, long program waitlists and oversubscription (particularly for EmPower+), and challenges in manually tracking customer applications after submittal without access to real-time process data.

Supporting Hubs’ feedback on communication challenges with NYSERDA around participation timelines and status, five consumer focus group participants reported that they never heard back from NYSERDA after participating in an energy audit. Other participants had signed up for an audit but they never received one, or signed up for an incentive program only to be told after a long delay that the program was now “tapped out.” Two DAC consumers expressed frustration with the community solar enrollment process, stating that it takes a long time to get off the waitlist and assigned to a community solar project.

Beyond customer tracking, the lack of real-time process data prevents Hubs from accurately reporting up-to-date performance metrics (e.g., increased rates of NYSERDA-funded project completion). One Hub leader expressed frustration that they cannot report accurate “completed opportunity” numbers to NYSERDA because they do not have insights into NYSERDA program application process tracking, and

⁶⁰ NYSERDA, *Statewide Tracking Study & Information Access Survey, LMI Research Findings*, February 2024.

⁶¹ Some programs, such as EmPower+, direct customers to their Regional Hub directly for inquiries about their application. See for more information: <https://www.nyserda.ny.gov/All-Programs/EmPower-New-York-Program/EmPower-FAQs#contact>

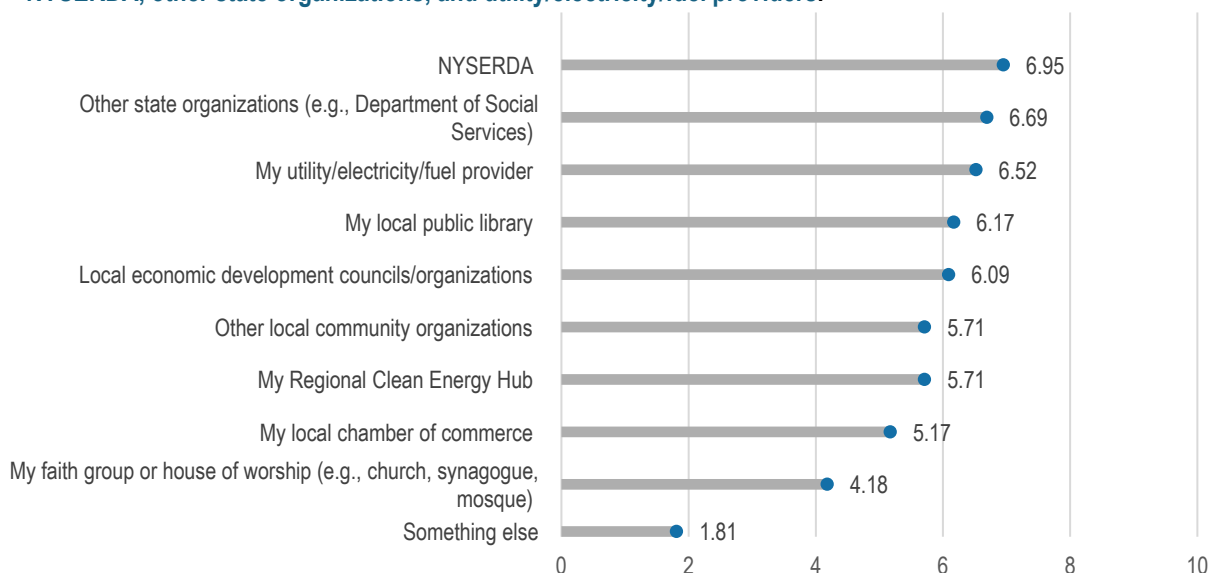
some of the customers they refer to NYSERDA do not tell them if they have moved forward with a clean energy project.

2.2.5 What sources do customers trust for information about clean energy opportunities?

Consumers identified NYSERDA as an important and trusted source of information about clean energy programs. Results from the consumer survey indicate that not only did NYSERDA rank as the most trusted source, but also NYSERDA had the highest weighted average ranked score of any trusted organization, as a source of information. NYSERDA was followed by other state organizations, and then utilities/fuel providers (**Figure 15**).⁶² This aligns with findings from the baseline, where participants similarly reported that their most trusted sources of information were NYSERDA (45%) and their utility/electricity/fuel provider (32%, N=224).

Figure 18. Weighted Averages for Trusted Sources of Information (N=272)

After weighing the average of ranked survey responses, top choices for trusted sources of information included **NYSERDA, other state organizations, and utility/electricity/fuel providers.**



Note: Of those who specified in the “Something else” question, respondents indicated that they trusted the radio or local news (n=5), online or personal searches (n=2), through friends/family or through “informed citizens” (n=4), or that they did not know (n=3). Eight participants indicated “none” or that they did not trust any of these sources, with one indicating that they “don’t have faith in [the] NY clean energy agenda.” One indicated “Community solar,” one just wrote “New York State,” while another wrote that they “Only know about NYSERDA.”

⁶² This question asked respondents to rank the sources of information in terms of who they trust to provide information about clean energy programs. Weighted average scores take into account both the *rank* of the organization, as well as the number of respondents selecting the option. The selection with the highest weighted average score is the most trusted or preferred source of information and the selection with the lowest score is the least preferred.

NYSERDA was also among the top-reported trusted sources of information from consumer focus groups. Fourteen participants described their trusted sources of information related to clean energy opportunities, including utilities (n=6), NYSERDA (n=5), and installation contractors (e.g., electrician, HVAC) (n=1). Two participants also noted that they conducted their own research to learn more about clean energy opportunities (sources unknown). While some participants agreed with the idea of self-directed research, eleven participants reported distress at the amount of information they have to navigate related to clean energy opportunities. One participant specified that while they do trust NYSERDA for information related to clean energy opportunities, they find it hard to navigate NYSERDA program webpages to find the information they need. Four participants expressed their desire to see either a “neutral resource” or one general website to function as a “centralized, web-based repository” for information about eligibility and availability of clean energy or savings programs in their area. To note, the Hubs were designed by NYSERDA to act as a “one-stop-shop” in this way, to integrate project support services and financing for consumers and provide region-specific resources for consumers interested in clean energy programs or opportunities. However, NYSERDA’s website lacks a similar consolidated digital landing page or screening tool to support self-service customers.⁶³

Concerns about scams and organizational bias affect consumer confidence in information provided by organizations perceived to have an agenda. Seven consumer focus group participants voiced concern about scams and explained their suspicions towards advertisements for clean energy opportunities. One consumer expressed frustration with finding a source of reliable information that was not being pushed by a contractor or manufacturer that prioritizes profit or that has consumer cost savings in mind. This result is consistent with findings from the RABA report summary, which describes how customers were more hesitant to engage if they felt energy audit recommendations were framed as a “sales pitch.”⁶⁴ Consumer skepticism appears to extend to government organizations as well. One consumer focus group participant described a personal anecdote wherein their first Google search result was “Is NYSERDA a scam?” Another consumer claimed that they would feel more comfortable if their utility was more active in sharing information on clean energy programs or opportunities. The RABA report summary similarly described the lack of trust some customers have in government programs or in the marketing materials received where organizations are perceived to have an agenda.⁶⁵

⁶³ For more information about Hubs: <https://www.nyserra.ny.gov/all-programs/regional-clean-energy-hubs>.

⁶⁴ Michael, Leigh and Andie Gemme, *New York State Clean Energy Hubs Regional Barriers and Assessment Analysis - Crosscutting Barriers and Opportunities*. ILLUME Advising, LLC, April 2025, 24.

⁶⁶ There is no single database at NYSERDA for documenting how customers enter into NYSERDA programs (e.g., intake or source tracking).

3 Findings and Recommendations

Section 3 builds on the results and discusses findings and recommendations for the RCEH program.

Finding 1. Though the Hubs’ network is extensive, growing, and successfully supporting a wide range of activities as intended, Hub teams report a persistent tension between their responsibilities to balance the “depth” versus “breadth” of services offered in their efforts to meet customer needs.

The RCEH is advertised, and is functioning, as a concierge-style program, where Hub staff serve as a first point of contact for NYSERDA and other clean energy programs. Hubs also serve as a resource to triage customer needs, and help determine how to get customers support. Increasingly, Hub staff are seeing their role evolve and expand to include customer advocacy in conversations with contractors, leveraging their cross-program knowledge of the market for local contractors, and providing deeper support for high-need customers. High-need customer support from Hub staff demands considerable time and strains Hub staff capacity to address the range of customers seeking engagement and support. Their position as first point of contact also makes Hub staff the main touchpoint for many customers seeking status updates after submitting applications to NYSERDA programs. While Hub staff can follow up with relevant NYSERDA program staff manually (e.g., via email or phone call) they do not have transparency into program review of applications, or project timelines.⁶⁶ Some Hub staff commented that this type of work is not properly accounted for in the program design, but would benefit their ability to serve customer needs.

Recommendation 1. NYSERDA should create additional self-service resources on NYSERDA’s website, and develop/fund a small residential homeowner representative program, analogous to the existing multi-family building owner representative program, to support customers directly in navigating discussions with contractors and planning engineers. Improved education resources for self-service customers through NYSERDA’s website could include an infographic-style program flowchart to help customers visually navigate program options, or a standardized set of screening questions to direct self-service customers through channels that will be most beneficial to their situation.⁶⁷ This type of support can reduce the burden on Hub staff, and improve self-service customers’ experiences. Beyond this, a single-family homeowner representative services program would complement the new (as of 2025) multifamily building owner representative services program, and serve single-family

⁶⁶ There is no single database at NYSERDA for documenting how customers enter into NYSERDA programs (e.g., intake or source tracking).

⁶⁷ This screening tool could be designed on a set of customer information/inputs (e.g., income range, geographical region, homeownership status), similar to a tax software self-service interview. NYERDA could work with a contractor to identify pathways based on a set of data-driven customer “personas” illustrating specific needs that can be used to guide referrals or help train energy advisors.

customers seeking support for navigating expensive home energy retrofits (e.g., one- to four-family residential in addition to multifamily residential). This change would still leverage the Hubs' critical role as point of entry for customers to NYSERDA programs while capitalizing on the Hubs' contacts/network of contractors/installers, and positioning Hubs as critical to the customer project handoff to homeowner representative services. Formalizing a program for single-family homeowner representative services would remove the additional burden on Hub staff to serve as an intermediary between the customer and contractor, allowing Hub staff to focus efforts (and valuable bandwidth) on helping customers with application submission or finding wraparound services and funding.

NYSERDA Response to Recommendation 1: Pending

A key component of the Hubs program is project application management, coordination assistance and developing partnerships. Per the Hubs statement of work, *“As needed, the Contractor shall conduct ongoing project management and partner with NYSERDA Participating Contractors and other energy professionals to help coordinate implementation of a clean energy project.”* That coordination includes serving as an intermediary between the customer and contractor as well as providing wraparound service assistance.

NYSERDA is in the process of developing the MyEnergy platform, which is met to be a self-service portal for customers to identify, based on their priorities and interest, what programs they are eligible for and get information on who to reach out to at NYSERDA for assistance. The request to develop a single-family homeowner representative services program can be elevated to the Energy Equity Collaborative; a space that allows for deeper, more coordinated engagement and collaboration with historically marginalized communities around program planning and policy development.

Finding 2. Hubs are responsive to NYSERDA's mid-stream changes to highly used programs, such as EmPower+, but communicating program changes is a challenge for Hub staff as they work to build trust within their networks and communities. NYSERDA intentionally leverages the trust built by community-based organizations across NYS to implement not only the RCEH program but also several other programs (e.g., Clean Energy Communities). Mid-stream changes to well-used programs like EmPower+ cause disruption to thoughtfully-crafted relationships and systems particularly when Hubs do not have sufficient time to disseminate new guidance to their extensive networks of subcontractors and partners. While NYSERDA has made efforts to consolidate guidance updates and clarifications in a small residential programs summary email for contractors, vendors, and other interested parties, Hubs are still burdened with communicating these changes to their networks and their customers, and handling any negative feedback or additional customer support needs generated by these changes. A sudden change in

program requirements can disrupt approval for customer applications and program activities for partners, and can be perceived as a lack of transparency on NYSERDA's part, exacerbating the Hubs' challenges in maintaining customer pipelines into NYSERDA programs. Not only can mid-course changes to NYSERDA programs affect the ability for Hub staff to facilitate referrals, but also such changes can affect the trust built by Hub organizations in their communities, affecting consumer confidence in engaging with NYSERDA more broadly.

Recommendation 2. NYSERDA programs that affect Hub operations should notify Hubs in advance, and directly inform affected customers already in NYSERDA's pipeline who are expecting to meet certain eligibility requirements or see certain outcomes. Coupled with the NYSERDA small residential listserv, program webpage banners or trackers for funding availability (as with the NY-Sun community solar adder) can reach a broader set of NYSERDA audiences in ways that resonate more directly with the full range of network partners. Beyond an initial written notification, relevant NYSERDA program staff could also consider holding "office hours" for customer questions regarding program changes, or some other similar Q&A opportunity for potential applicants. NYSERDA RCEH program staff can also work with Hubs to get their partners signed up for NYSERDA's small residential program updates email listserv. This action will ensure that the strong trust built by Hubs does not weaken, and places more responsibility for communicating program changes onto the NYSERDA programs administering the change. Aligned with Recommendation 1, Recommendation 2 will reduce the administrative burden on Hubs to follow up with individual customers regarding program changes, allowing Hubs and their networks to focus on their relationship-centered work of educating consumers about clean energy technologies and assistance programs, so while they will likely still field questions from confused or frustrated customers, receiving initial messaging directly from NYSERDA programs with some lead time will address a substantial administrative burden, and the information NYSERDA programs provide to affected customers can support Hubs in responding to customer questions.

NYSERDA Response to Recommendation 2: Pending

NYSERDA has the primary responsibility to communicate programs changes, allowing Hubs to maintain their role as trusted clean energy program navigators rather than bearers of unexpected programmatic changes. There are times when funders such as the Department of Energy require programmatic changes on short timelines that require programs to adapt quickly. When program changes are necessary, NYSERDA makes every effort to issue notices to both contractors and Hubs at least 60 days in advance. These changes are disseminated in monthly Home Modernization update webinars which have been ongoing for at least five years, as well as a consolidated monthly email to stakeholders outlining upcoming changes. Additionally, to communicate program changes, NYSERDA's Home Modernization

Team (HMT) participates in Office Hours with the Hubs. These HMT Office Hours provide a space for Hubs to share program feedback, receive responses on HMT programs and program updates. While Hubs will still provide localized support for applicants, they are provided with NYSERDA messaging to streamline their response efforts and customer support information to specific programs. NYSERDA will consider the feedback and recommendation presented in this report in improving these coordination activities.

Finding 3. DAC consumers are broadly aware of energy efficiency and renewable energy concepts, and consider NYSERDA a trusted source of information; however, awareness of Hub activities remains low, and consumers reported feeling both overwhelmed by the amount of information on clean energy opportunities and skeptical about the expected benefits, particularly given the context of rising electricity prices. NYSERDA provides a wealth of useful information on its various program webpages, but specific resources may be difficult to find unless the user already knows where to locate the information. While Hub landing pages are generally easy to navigate and do provide accessible information for customers, the NYSERDA RCEH webpage could play a bigger role in general education for customers. If NYSERDA published more user-friendly, infographic-heavy or video format educational materials on a central website, the RCEH landing page could better direct customers to educational resources across NYSERDA programs. Coupled with the program flowchart described in Recommendation 1, this could help customers determine which programs to explore more deeply.

Recommendation 3. NYSERDA should allocate resources to develop better introduction-level messaging about clean energy concepts and key programs on the RCEH landing page, along with case studies highlighting non-energy benefits. This could include publishing informational videos (e.g., NY-Sun’s [“What is Community Solar? How Do You Sign Up In New York?”](#)) and a selection of customized case studies showcasing real incentives, costs, and the non-energy benefits of various clean energy technologies, energy efficient appliances, or other energy updates can support self-service customers with own research on program options. As with the Clean Energy Communities program, NYSERDA could develop a residential “menu” of high impact actions for home energy savings, with an indicator of total energy savings, *cost savings*, and other benefits accrued over the lifetime of an appliance or other energy upgrade, and discussion of the impact of electricity prices. Case studies, a recommendation from the baseline study, can be a helpful way to communicate the range of more nuanced benefits from clean energy upgrades. In particular, these resources can address some of the key concerns DAC customers highlighted during focus groups, including which types of incentives might be

used together, ROI, how to spot fraud, customer testimonials, and some non-energy benefits such as mitigation of health hazards (e.g., improved air quality or reduced particle emissions).⁶⁸

NYSERDA Response to Recommendation 3: Pending

Developing introductory-level multimedia, transparent cost-benefit matrices, and localized case studies is critical to empowering self-service consumers, building market confidence, and mitigating key barriers within Disadvantaged Communities (DACs). NYSERDA will provide this recommendation to the NYSERDA Marketing and Communications Team for further exploration, and engage with them to provide support on the development of such resources if approved. Providing these central, self-service digital assets relieves Hub network partners of the burden of constructing foundational educational materials from scratch. It standardizes essential messaging across all regions, allowing Hub staff to focus their high-touch interactions on custom technical guidance and direct enrollment assistance for vulnerable applicants.

⁶⁸ See for more information: Walker, I., Less, B., & Casquero-Modrego, N. (2023). Emerging Pathways to Upgrade the US Housing Stock: A Review of the Home Energy Upgrade Literature. Lawrence Berkeley National Laboratory. OSTI ID: 1777979. Retrieved from <https://escholarship.org/uc/item/5rs2t6zs>

4 Additional Methods Summary

This section describes the methodologies used for data collection and the analytical approaches used for the update to the baseline study. Data collection activities are summarized in the table below. A more extended discussion of methodology can be found in **Appendix A** and **Appendix B**.

Table 4. Data Sources, Participants, and Activity Type

Data Source	No. Activities	No. Participants	Activity Type
Interviews with RCEH Hub Leadership	12	28	Primary Data Collection
Hub List of Project Partners, Prime Contractors and Subcontractors	NA	NA	Secondary Data Review
Virtual Focus Groups with Subcontractors	3	24	Primary Data Collection
Virtual Focus Groups with Partners	4	29	Primary Data Collection
Virtual Focus Groups with Consumers in DACs	5	50	Primary Data Collection
Online Survey of Consumers in DACs	1	286	Primary Data Collection
Hub Opportunities Data	NA	NA	Secondary Data Review
Hub Monthly Engagement Report Data	NA	NA	Secondary Data Review
RABAs and OEEPs	NA	NA	Secondary Data Review
USEER Data	NA	NA	Secondary Data Review

Note: NA = not applicable

Primary data were collected using a series of approaches, including **interviews with Hub Leadership teams** (N=12 teams), which focused on activities at the time of evaluation, planned activities, barriers to clean energy adoption, and Hub subcontractors and/or community partners. Data collection also included a series of **focus groups with Hub subcontractors** (three focus groups, N=24), and **Hub partner organizations** (four focus groups, N=29). These discussions included similar questions as the Hub Leadership interviews to validate the data and provide another “organizer” perspective about RCEH implementation. Finally, this update to the baseline included a **DAC consumer survey** (N=286) and series of virtual **focus groups targeting DAC consumers** (5 focus groups, N=50 participants), which together aimed to systematically characterize barriers to clean energy adoption from a DAC consumer perspective and assess consumer awareness of clean energy technologies, energy efficiency concepts, and assistance programs.

For the qualitative data analysis, interviews and focus group responses were categorized (“coded”) using NVivo qualitative data analysis software to tag units of the text that illustrate a pattern or key topics. Codes were based on a pre-defined list, relevant to the evaluation, which are detailed in the Appendix.

Emergent codes supplemented the pre-defined list. Topical tags or “codes” were used to run queries across data sources to parse the data by topic, theme, source, and other variables.

The Evaluation Contractor also conducted **survey data cleaning and analysis** in Excel. One duplicate respondent was removed from the final dataset, and data were “cleaned” by adding “SKIP” and “No Response” (“NR”) notes where relevant. Where branch or skip logic prevented a respondent from seeing a question, “SKIP” was included in the cell to indicate that the respondent skipped the question, and the skip should be subtracted from the total count of responses for the particular question. The Evaluation Contractor coded cells as “NR” where a response was required for the question as a whole, but by virtue of the programming (e.g., matrix-style question), the respondent managed to avoid providing a response to a part of a question. Survey data were analyzed using descriptive statistics (e.g., response distribution and frequency). The Evaluation Contractor also conducted statistical comparisons using ANOVA and two-tailed t-tests to determine whether there were any statistically significant differences in mean Likert response between suburban, urban, and rural strata.

Finally, this update to the baseline included a **modified social network analysis (SNA)**, wherein the Evaluation Contractor mapped subcontractors and partners to Hub prime contractors and NYSERDA to illustrate the breadth and scope of connections developed in response to the RCEH program.