

NYSERDA Residential Market Advisory Group (RMAG) Quarterly Meeting

Virtual Meeting: Wednesday, June 26, 2024

Meeting Summary

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NYSERDA RMAG Quarterly Meeting

Meeting Summary, Wednesday, June 26, 2024, at 10:00am ET

Meeting Overview

Background

On June 26, 2024, the New York State Energy Research and Development Authority (NYSERDA) hosted its Q2 2024 Residential Market Advisory Group (RMAG) meeting to discuss key priorities and updates in the 1–4-unit residential market.

The agenda included updates on the IRA Home Energy Rebate Programs, cold-climate air source heat pump (ccASHP) selection, and an introduction to the Quality Home Contractor designation.

The meeting was held virtually via WebEx Webinar. Stakeholders participated by providing written feedback via polling, Question & Answer, and chat. For written comments, edits have been made for clarity and to correct spelling.

In total, 72 individuals attended the meeting, including 10 NYSERDA staff.

Meeting Agenda

- Welcome and Introductions
- RMAG Progress Updates
- Home Energy Rebate Programs Update
- Cold Climate Air Source Heat Pumps Stakeholder Engagement Update
- Quality Home Contractor Designation
- Closing Remarks

Meeting Summary

Group Introductions and Opening Remarks

Trevor Reddick, Facilitator, Kearns & West, opened the meeting and reviewed the agenda.

Laura Geel, Assistant Director, Single Family Residential at NYSERDA, welcomed attendees and introduced the speakers for the event, Max Ciovacco, Project Manager for Single Family Residential, and Amy Kasson-Muzio, Program Manager, Standards & Quality Assurance, at NYSERDA.

RMAG Progress Update

2024 Priority Survey Review and Next Steps

Membership heard updates on progress made on priority efforts and had the opportunity to provide input to inform new priorities. Priorities guide the activities taken by the RMAG, and are regularly

updated via membership input, garnered from polling during quarterly meetings, membership surveys between events, and always via comments submitted to <u>resmarket@nyserda.ny.gov</u>.

Trevor reviewed activities undertaken by the Residential Market Advisory Group (RMAG) in 2023 and 2024 to address previously identified priority issue areas. Highlights included the publication of a Stacked Efficiency and Electrification Program (SEEP) <u>Framework</u>, developed based on the input of a cross-sector expert working group, and the convening of contractor and community group meetings to inform New York's successful application and forthcoming implementation of Home Energy Rebates funded by the federal Inflation Reduction Act.

After reviewing examples of earlier activities, Trevor discussed outcomes of a recent membership survey, where participants were asked to rate individual themes based on their significance for advancing residential clean energy and energy efficiency technology market development. Three priority areas were identified from the survey, including several example actions that could support their achievement. The priorities are shown here, including one example action for illustrative purposes.

- 1. **Support Market Insights to Policymakers and Decision Makers**: This involves providing residential market data and analysis to policymakers, program managers, and decision-makers to align solutions better with market needs.
 - Example Action: Expert insights to support the development and implementation of electricity rates that support beneficial electrification.
- 2. **Clean Energy Program Performance**: Stakeholders expressed interest in advancing the understanding of how residential clean energy programs perform and the standards of evaluation used.
 - Example Action: Expert exploration of impactful program design considerations, including funding and financing, for scalable retrofit solutions.
- 3. **Disadvantaged Community (DAC) Access Barrier Identification and Remediation**: This focuses on improving consumer access for those living in New York State-designated disadvantaged communities through barrier identification and remediation efforts, including potential financing solutions for DAC renters and homeowners.
 - Example Action: Cross-sector informed engagement materials and activities to engage building owners in disadvantaged communities about the importance of enabling efficiency and electrification improvements for renters.

Ranking Priorities Polls

To help inform the refinement of priority areas and identify potential actions the RMAG can take to support priority achievement, participants provided responses to poll questions. All responses are listed here.

Question 1: "What Topics or Activities should be considered for the 'Support Market Insights to Policymakers and Decisionmakers' priority?" (19 Responses)

Table 1: Support Market Insights to Policymakers and Decision Makers' Priority Responses

Answer

Ability to identify DAC and LMI customers, draft a message/approach that provides a call to action for customers that fall into this category.

Average utility bills versus expected utility savings & and the need for load demand management and energy conservation as a part of the clean energy transition puzzle

Better coordination of issues that cross PSC Matters

Better understanding of inflationary impacts on material costs/labor, electricity pricing metrics to ensure affordability in energy transition

Customer awareness

Effect of incentives on project cost

Feasibility study on reasons for successful projects vs unsuccessful. i.e., costs and existing condition factors

Flexibility

How many homes are heated with what fuels? How many homes have air conditioning?

HP sizing

If there's any way to collect data on energy assessments and compare that to the number of retrofits undertaken (envelope upgrades, heat pump installed, etc.) then I think that helps the efficacy of the funding.

Make it easier for the contractors to take part in the programs and educate them more on how they can make a difference with homeowners.

NEEP data on current issues with equipment selection

Not sure about the data that motivates people to act but sometimes it seems you have to lay out the solution that can be acted on and make it as easy as possible for the decision makers to sign off. It seems a bit backwards, but people want easy.

Provide space for NYSERDA and utility coordination on program offerings.

PSC needs to get utility data, unbiased and non-manipulated, to consider when making decisions. Also, do NOT rely on reporting from Codes departments across NYS...historically inaccurate, and upstate codes are woefully understaffed and unable to do their basic duties, let alone get correct prompt reporting to Department of State and codes...

Regional Clean Energy Hubs RABA reports

Studies on the effect of all electric systems on the grid versus hybrid gas/heat pump systems. How much fossil fuel can be displaced by heat pumps with gas back up.... What would happen to fossil fuel usage if an added tax was placed on the use of fossil fuels? Need clearer market study results

The list looks good; suggest that there be a concerted effort to decide strategies to get these subtopics to (and used by) policy/makers and decision makers.

Understanding the real availability of labor resources and material resources to achieve the goals being set.

Utility bill apportionment-the process for having tenants pay for individual heat pumps when converting from central fossil fuel systems where heat must be included in rent is lengthy and a barrier to individual unit heat pump installs in Multifamily housing.

Question 2: "What Topics or Activities Should be considered for the 'Clean Energy Program Performance Priority?" (13 Responses)

Table 2: Clean Energy Program Performance Priority Responses

Answer

Contractor training tops, then heat pump impacts to grid (beyond EER ratings)

Cost savings, emissions reductions, contractors added/licensed month by month, "grading" of

contractors to ensure better work done

Energy Code

Failures of heat pump installation. Quality control issues.

Focus on weatherization. Housing stock is old in NY. And if you read some of the RABAs coming from HUBs, you see they all have Nat Gas too...

Heat pump education for contractors. navigating existing rebate programs. selling and marketing the technology / technologies

Infrastructure needs and costs associated for an LMI household to be insulated and heated Less rigid

Specific targets for GSHP and ASHP installed numbers for different segments of the built environment Success stories of successful projects and the successful reduction of fossil fuel usage.

Suggest connecting this to data and reporting

Understanding of importance of air-sealing, insulation-load reduction

Work Force Development Opportunities, hands on workshops, webinars, learning sessions, town halls, community engagement.

Question 3: "What Topics or Activities should be considered for the 'DAC Access Barrier Identification and Remediation' priority?" (16 Responses)

Table 3: Clean Energy Program Performance Priority Responses

Answer Better support to manage the programs. There are added management and administrative costs to run these programs **in** low-income areas. Need added investment from the state to support this.

Boots on ground approach supported by demographic information

Building trust in DACs. Rolling out SIMPLE programs with massively reduced administrative burdens. Automatic geo eligibility.

CEC and CSC programs are not focusing on load reduction. Local hub's attention to walking residents/households through the process with focus on load reduction

First, things need to be written at a reading level that is easily interpreted in and out of our industry. This is easily college level language and above and therefore not inclusive of the population we are trying to include. We really need to consider where and how to recruit from these areas so we can name the barriers. They can be different from location to location.

Gap funding...roofs, windows, K&T wiring, ALM, Lead Paint...

GSHP operating costs compared to ASHP operating costs, make GSHP an attractive choice for housing serving LMI households and/or DAC.

Health and safety, clarity around incentive structures and how they're calculated. Making it easier to apply multiple incentives to a project to make it more cost affordable. landlord-tenant relations, energy bill literacy

Help the disadvantaged communities remediate the problems they are having that are barriers to electrification. If they have a hole in their roof, we need to find ways to help them repair it so they can insulate and move towards replacing oil furnaces with heat pumps.

Language barriers are still an issue, especially with increased immigration

Make programs more aware to the DAC communities so they can take advantage of these can be used.

Need to learn more, but the energy democracy idea feels important

Offer low-cost financing for households in DACs

Same as #2

Super important. will need grass roots genesis for this

Understand breath of work needed and ability to make the broader scope.

Question 4: "What's missing? Why is it important" (9 Responses)

Table 4: Missing Priority Responses

Working with NEEP to help ASHP installers to find the right equipment for the Northeast.

Question 5: "Which location is preferable for a Fall 2024 In-Person RMAG Meeting?"

Table 5: Fall RMAG	Meeting Responses

Location	Votes/Total Votes	Percentage of Votes
Albany	8	25%
New York City	11	34%
Syracuse	8	25%
Total	32	100%

RMAG Priorities Q&A

Question Asked

Can you better define what you	The example activities provided earlier highlight several types of
mean by "topics or activities?"	engagement efforts, such as forums to identify challenges, design
For example, is stronger data	solutions, and determine key considerations. We aim to create
collection an activity that can be undertaken?	materials that can be shared externally by helping to understand needs and find the right parties within the residential market to undertake them. When we ask for topics or activities, we are seeking areas of highest need and potential collaborations to address them. What collaborative efforts might be useful, and how might we approach them?

Progress on New York's Implementation of Home Energy Rebate Programs

IRA Home Energy Rebates Background

Laura presented an update on the IRA Home Energy Rebate Program, highlighting progress made since the last quarterly meeting.

She began by providing a brief overview of the Home Energy Rebate Programs under the IRA, emphasizing the two key provisions: Section 50121, the Home Efficiency Rebate Program (HER), which allocates \$159 million to New York State, and Section 50122, the Home Electrification and Appliance Rebate Grant (HEAR), which allocates \$150.4 million. Together, these programs make up a total funding value of \$317.4 million.

Laura reminded the participants about the structure and goals of the HER program, which is based on achieving energy savings through measured and modeled calculations. The incentive amounts are decided by the percentage of energy savings achieved on a per-unit basis. In contrast, the HEAR program is measure-based with each discrete measure receiving a predetermined funding amount, further influenced by income levels. This program supports households with incomes up to 150% of the Area Median Income (AMI), with a maximum funding cap of \$14,000 per home or dwelling unit.

Implementation Considerations

Key considerations for New York's implementation include using existing programs and processes to accelerate market entry and minimize market confusion by avoiding competing offers. NYSERDA aims to create a seamless experience for customers and contractors, ensuring that multiple applications for different programs are not needed to access these funds. Additionally, NYSERDA is developing resources and tools for contractors, participants, and regional clean energy hubs to provide clear and concise information about current and future offerings.

A customized platform is being developed to offer decision-quality information, enabling customers to understand their home needs and the available funding opportunities. Furthermore, NYSERDA is committed to ensuring equitable distribution of funding across various eligible housing types, including single-family homes, small multi-unit buildings (two to four units), and larger multifamily buildings.

NYSERDA's application to the Department of Energy (DOE) proposes using existing programs such as the EmPower+ program, which serves one to four-family homes up to 80% of the AMI, and the Comfort

Home program, typically serving households above 80% AMI. Additionally, NYSERDA proposes new programs for the multifamily sector (residential properties with five or more units) and a Retail Point of Sale program for certain appliances through HEAR.

Collectively, HEAR and HER are expected to be active for approximately three years, serving an estimated 50,000 to 60,000 households across various sectors. This estimate depends on market demand, the specific measures adopted, and the energy savings achie ved. Approximately 15-20% of the rebates are anticipated to support heat pump and heat pump water heater technologies.

NYSERDA has already begun the rollout of the Home Energy Rebate Program. HEAR funding was released through the EmPower+ Program at the end of May, making New York the first state in the nation to offer IRA funds to residents, initially focusing on low-income customers with plans to expand in the coming months.

NYSERDA is currently developing implementation blueprints and working closely with the DOE to review and approve applications. Although a specific timeline for funding approval is not yet available, NYSERDA is well along in the process. In the coming quarters, implementation planning, stakeholder outreach, contractor training, and customer outreach will continue, leading to a phased rollout of added offerings.

Stakeholder Engagement Informing IRA Implementation

The RMAG has provided stakeholder engagement opportunities for New York's implementation of Home Energy Rebates since an October 2023 in-person meeting held in Albany, New York.

Through RMAG meetings, public input webinars, working groups, public comment, and more, stakeholders are providing input to various components of Home Energy Rebate applications, including Retail Point-of-Sale, Multifamily Programs, and more.

Participants can send questions and comments via email to <u>residential.ira@nyserda.ny.gov</u> at any time. Information is regularly updated on NYSERDA's website, and all information received is considered as part of New York's implementation.

To give context to how participants can stay involved, and refresh participants on the feedback NYSERDA has heard, Trevor discussed a recent Focus Group for IRA Home Energy Rebate implementation for the Comfort Home Program.

Stakeholder Engagement Highlight: Comfort Home Program Focus Group

In June 2024, the Comfort Home program team met with over one hundred attendees to discuss how the Comfort Home program can leverage IRA funds to deliver more and better air sealing packages to consumers. Key sectors engaged during the Focus Group were:

• *Participating Contractors*: Feedback was gathered from contractors already involved in the Comfort Home program to create a shared understanding of evolving program requirements and ask for input on program design and implementation considerations.

- Non-Participating Contractors: Participants explored what they knew and wanted to know about NYSERDA programs, what reasons the contractors had yet to join the Comfort Home program, and how NYSERDA programs can help meet those needs.
- Interested Stakeholders: Input was asked for from a broader range of stakeholders, including community-based organizations (CBOs) serving disadvantaged communities, to discuss what equitable implementation looks like and how those supporting program implementation can be empowered.

Trevor reviewed feedback heard throughout the meeting, centered around the themes of *Program Design*, *Equity and Access*, and *Collaboration and Messaging*.

Proposed Program Design

- Participants appreciated the clear and concise messaging of the Comfort Home program, which makes it easy for consumers to understand the value each package can deliver.
- Proposed program design updates, like income verification processes, and their impact on implementation were highlighted as important questions to address.
- Aligning outcomes of Comfort Home projects with a pathway to electrification employing other incentive programs is a key design consideration to further expand access to electrification, especially as NYSERDA looks to serve more disadvantaged and low-to-moderate-income households.

Equity and Access

- Comfort Home air sealing projects are unique opportunities to stimulate local workforce development, particularly for new market entrants and workers from disadvantaged communities. The program was noted as a potential catalyst for creating transition opportunities for workers and enhancing the delivery of benefits within these communities.
- Participants also discussed how to enhance small business accessibility by supporting application and proposal development.

Collaboration and Messaging

- Resources to better connect contractors with new consumers found in disadvantaged communities, ensuring re-use of existing resources to meet needs, and enabling Regional Clean Energy Hubs to facilitate these efforts were emphasized.
- Messaging should highlight immediate benefits of air sealing, such as improved resilience and comfort.
- Clear and concise communications about program eligibility and access were noted as essential to dispel concerns about program complexity and enhance project uptake.

Cold Climate Air Source Heat Pump (ccASHP) Performance and Selection Forum

Trevor introduced Max Ciovacco, Project Manager, Single Family Residential, who presented on outcomes from the ccASHP Performance and Selection Forum.

The purpose of this forum was to address the challenges associated with properly sizing and selecting cold climate air source heat pumps for the various climate zones across New York. The forum aimed to enhance the selection process to ensure that installed ccASHPs operate effectively and efficiently in all

weather conditions. The forum was conducted over two multi-hour sessions that included presentations and discussions on field data from installations and modeled performance data from a wide range of industry professionals. Approximately 35 participants attended, representing government agencies, heat pump manufacturers, energy efficiency nonprofits, consulting firms, private entities, and utilities.

On the first day, the forum set the ground rules, reviewed the problem statement, and engaged in presentations and discussions. The second day continued with presentations and discussions, followed by exploring solutions and planning. Key findings from the Forum named several underlying causes of heating load overestimation, which results in heat pumps that are too large for the space they are installed. That oversizing often results in short cycling, particularly during shoulder seasons. Short cycling, defined as the frequent cycling of the unit on and off, reduces the Coefficient of Performance (COP), leading to inefficiency. Short cycling can occur due to the unit's inability to function effectively in specific climates or design spaces, despite what is shown on specification sheets. This results in high electric bills and customer dissatisfaction and can perpetuate misconceptions about the effectiveness of heat pumps in cold climates.

Proper sizing and selection are crucial for the electrification of buildings, which helps reduce carbon emissions and lowers living costs. Accurate heat load calculations using Manual J are essential for proper unit selection. Detailed home data, such as information on air sealing, insulation, wall heights, windows, ductwork, and doors, is critical for accurate heating load determination. Manual S is necessary to ensure selected heat pumps operate as designed in all weather conditions. Possible solutions include implementing guidance around the use of Manual J and Manual S load calculation models for accurate heat pump selection. Additionally, guidance on proper installation and unit placement from NYSERDA, Northeast Energy Efficiency Partnerships (NEEP), and many more can be more effectively used to provide guidance on ways to minimize short cycling. Given the challenges in performance occur across seasons, multi-temperature analyses, including evaluation of shoulder season COP seem meaningful to drive overall performance improvements and should always be part of equipment testing, selection, and installation.

The Forum's focus was on immediate actions, but several potential long-term implications were raised. For instance, the Heating Seasonal Performance Factor (HSPF2) was discussed, including the value of supplementing with other metrics and scores to help contractors and design professionals better select the ccASHPs for specific climates. Tools are being developed to simplify the selection process for contractors and reduce reliance on existing metrics, which may be worthwhile exploring further.

Next steps involve seeking added feedback and discussions with industry partners to further define actions that will be taken.

Upon conclusion of the presentation, Max posed poll questions to the group whose responses are summarized in Table 6.

Question	Response
What heat pump selection tool or resources are you using?	For HP Selection, we typically use HVAC ST from NEEA or Conduit Tech or Amply for the load calcs. We then use the NRCAN resource guide or Man S as guidance, then use the Advanced Sizing Tool in the NEEP Database to aid in selection and provide data visualization.

Table 6: Discussion

	Elephant Energy has great tools in MA and CO
	For Geothermal we are using the Climate Master GeoDesigner program.
	We are playing around with the RMI Green Upgrades Tool to help explain potential upfront costs and lifetime savings. Admittedly, the tool isn't perfect, but it's more encompassing than most other non-region-specific tools.
	We haven't played with it yet, but Duckling as a tool for contractors helping to develop electrification roadmaps sounds great and the company is very engaging.
What relevant data or analysis do you have that can contribute to the discussion?	We at CEE may have some research on sizing, but still need to get client approval to share our reports.
Are your customers experiencing higher than expected operating costs?	Seeing customers in Westchester that are experiencing higher operating costs. These can be attributed to installation mistakes as well as design mistakes. Please check in with Sustainable Westchester for a list of customers with issues. On a related note, the contractor customer service has been a source of frustration to these customers. Maybe because the contractors don't fully understand the issues they have created.
	All the above needs to know more!
Who needs to know more about this topic? (homeowners, installers, designers, distributors, etc.)	Need to add the policy makers/decision makers. (like the RMAG priority). We may need some changes to how things are designed/specified to support proper sizing and selection.
	Educating the installers and designers. Also need to close the loop once a unit is installed to decide if there were issues with the install so the contractor/designer can be educated further. Potentially a reward program for meeting decreased energy consumption.

Standards & Quality Assurance: Overview of Quality Home Contractor Designation

Amy Kasson-Muzio, Program Manager, Standards & Quality Assurance (SQA) at NYSERDA, introduced a new designation under the EmPower+ program called the Quality Home Contractor (QHC) designation. This initiative is part of NYSERDA's efforts to recognize and reward residential contractors who consistently meet ambitious standards of quality in their work.

The Quality Home Contractor designation builds on NYSERDA's long-standing quality assurance activities in the Residential Single Family Program, which dates to before 2017. With 196 companies currently approved to take part, the SQA team and the single-family residential team sought to find a way to reward contractors who consistently install quality systems. The result was the Quality Home Contractor designation.

This designation is awarded to high-quality residential contractors who consistently exceed the annual quality assurance criteria in the Residential Single-Family Program or the EmPower+ program.

Contractors must meet several criteria within a calendar year (January 1 to December 31) to qualify they must be active and have full status, complete at least 12 projects marked as complete within NYSERDA systems and achieve an average QA field inspection score of 4.0 or better on a 1 to 5 scale. It is important to note that the score must be a true 4.0 without rounding up; a score of 3.98, for instance, would not qualify.

The motivation for obtaining this designation includes its use as a third-party validation of the quality of the contractor's work. Contractors who earn the designation will be recognized on the NYSERDA single-family residential website and the EmPower+ website. They will also receive a distinctive NYSERDA Quality Home Contractor installer logo to use in their marketing materials.

Using 2023 data to illustrate the impact, the number of active participating contractors was 177, an increase from the previous year. Of these, 73.4% would qualify for the QHC designation, and these contractors install 92.9% of all projects. This shows that top-quality contractors are installing most of the projects in New York State.

Amy compared this new designation with the Quality Solar Installer (QSI) designation from the New York Sun program, which launched in 2019. The QSI designation has similar criteria and has been successful in rewarding builders who consistently install quality systems. In 2021, NYSERDA introduced a gold status for builders who achieved the QSI designation for three consecutive years and a platinum status in January 2023 for those who achieved it for six consecutive years.

Comparatively, in 2023, QSI builders installed 63% of all projects, while the hypothetical QHC builders would have installed 92.3%. Additionally, 20% of all projects were installed by gold or platinum builders under the QSI program.

The QSI program also showed that contractors could recover from disciplinary statuses. Of the active New York Sun builders, 25% hold the QSI designation, and many of these were once on probation or suspended. This highlights the program's emphasis on supporting contractors to improve their performance rather than focusing solely on punitive measures.

Amy concluded with plans for the launch of the Quality Home Contractor designation in January 2025, using data from the calendar year 2024. She provided examples of how contractors in the New York Sun program have used the QSI logos in their work, reinforcing the potential benefits of the new QHC designation for contractors and the market.

Closing Remarks

In closing, links to key resources where RMAG membership and others can learn more and stay engaged were shared with participants.

- More Information on the Inflation Reduction Act: <u>https://www.nyserda.ny.gov/All-</u> <u>Programs/Inflation-Reduction-Act</u>
- DOE Guidance on Home Energy Rebate Programs: <u>https://www.energy.gov/scep/home-energy-rebates-programs-guidance</u>
- IRS Guidance on Energy-related Tax Credits and Deductions: <u>https://www.irs.gov/credits-and-deductions-under-the-inflation-reduction-act-of-2022</u>

- State-Based Home Efficiency Contractor Training Grants: <u>https://www.energy.gov/scep/state-based-home-energy-efficiency-contractor-training-grants</u>
- Stay engaged by following NYSERDA's Residential Market Advisory Group: https://www.nyserda.ny.gov/Residential-Market-Advisory-Group

Attendees were encouraged to submit their input to <u>residential.ira@nyserda.ny.gov</u> with questions or feedback regarding IRA programs, and to await further outreach from the Residential Market Advisory Group regarding additional opportunities to join workgroups and other engagement activities.