

Residential Market Advisory Group

Q2 2023 Meeting

Single Family Residential

Wednesday 06/28/2023

01:30 pm – 03:00 pm ET



NYSERDA

Housekeeping and Meeting Rules



This meeting will be recorded. Recording may be distributed, and if so, any participation will not be attributed.



To participate please use the Q&A function on the right side of your screen



If you are having technical difficulties, please chat Collin Buchanan (K&W) or email at cbuchanan@kearnswest.com



Notes will be taken, and a meeting summary will be published on the RMAG website.

Meeting Agenda

- **Welcome, Agenda Review, and Introductions**
- **RMAG Priority Survey Review**
- **Presentations and Q&A on the Priority Theme: “Improving Market Awareness and Urgency for Residential Clean Energy and Energy Efficiency”**
 - Presentation 1: Building Performance Institute’s Total Building Performance Certificate
 - Presentation 2: NYSERDA Comfort Home Program
 - Presentation 3: NYSERDA Experience Clean Heat Program
- **Closing and Next Steps**

RMAG Quarterly Meeting Purpose

- To 'close the loop' with the residential market on how your survey feedback is informing NYSERDA single family residential programming and activities.
- To provide participants with up-to-date information on their most pressing priorities, starting with expert presentations on the topic of "Improving Market Awareness and Urgency for Residential Clean Energy and Energy Efficiency."
- Based on information shared in this meeting create the space for membership to offer feedback and identify potential topics / speakers for the RMAG to feature in a to-be-planned in-person RMAG quarterly meeting this year!

The RMAG is a forum for stakeholder engagement on the residential market's highest priority issues

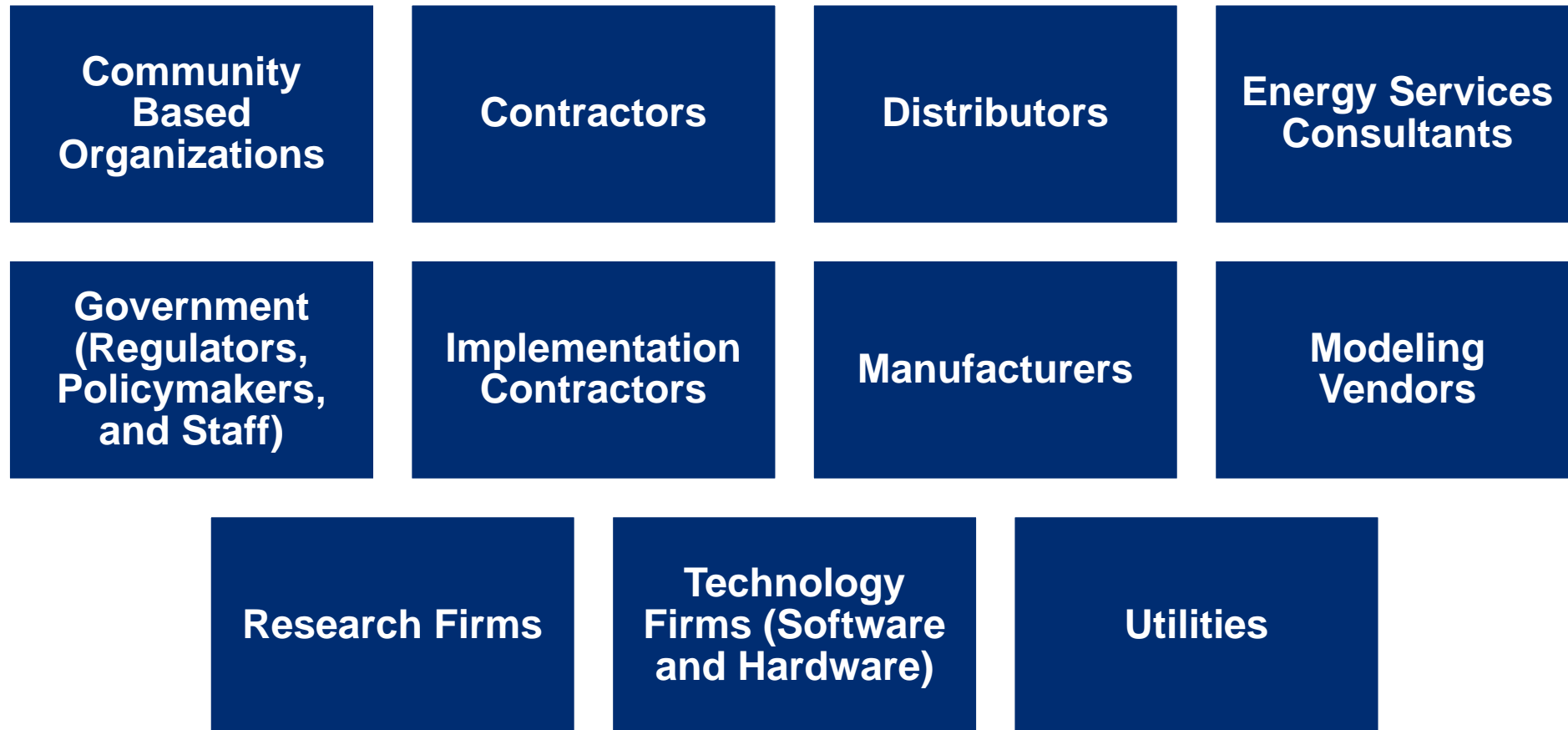
Events

- Quarterly Meetings (In-Person and Virtual)
- Working Groups
- Expert Panels
- Listening Sessions

Functions

- Advance residential clean energy and efficiency market development and innovation
- Iterate on programmatic design and implementation with stakeholder feedback
- Provide policy updates and relevant knowledge sharing for residential actors
- Foster NYSERDA clean energy and energy efficiency thought leadership

Attendees on today's webinar represent a variety of sub-sectors across the clean energy market



Review of RMAG Priority Survey Outcomes

Laura Geel - Assistant Director, Single Family Residential

2023 Residential Market Advisory Group Priorities

1. Improving market awareness and urgency for residential clean energy and energy efficiency
2. Improving the customer experience with Air Source Heat Pumps
3. Ensuring meaningful stakeholder engagement opportunities and clear communications about the Inflation Reduction Act for NYS residents and contractors



Improving market awareness and urgency for residential clean energy and energy efficiency

1. Understanding the purpose of air sealing and insulating PRIOR to installing heat pumps
2. Case studies and cost/benefit examples from New Yorkers

Other ideas and/or areas to focus? Add to the chat!

Improving the customer experience with Air Source Heat Pumps

1. Enhancing the attention on quality installations of Air Source Heat Pumps as adoption rates rise
2. Finding ways to decrease the cost of implementing heat pumps and deep-energy retrofits while ensuring quality installations.
3. Providing positive examples and experiences with heat pumps.

Other ideas and/or areas to focus? Add to the chat!

Ensuring meaningful stakeholder engagement opportunities and clear communications about the IRA

1. Considerations for integrating existing programs with federal and other financing opportunities
2. Program designed focusing on both end-users and contractors.
 - Helping customers through the decision-making process
 - Rewarding/incentivizing contractors for high performance
3. Developing clear, easy to understand language for both customers and contractors

Other ideas and/or areas to focus? Add to the chat!

IRA's Residential Rebate Programs Overview

Sec. 50121, HOMES

\$159 Million to NYS (incentives + admin)

Open to all incomes

Performance-based

Targets whole house energy savings (MMBtu)

Sec. 50122, HEEHRA

\$158 Million to NYS (incentives + admin)

Targets <150% AMI customers

Prescriptive

Targets energy efficiency and electrification

Limited list of eligible measures

Estimated impact: The two programs combined will enable serving 50,000-60,000 homes with electrification and electrification-ready services, approximately 50% within NY's traditional LMI definition (<80% AMI)

Notes: rebates can be combined per home but not per measure, federal money may not be used to displace or reduce existing funding, federal funding creates an opportunity to fill gaps that are not covered by existing funding sources (e.g. market rate homes, electric appliances, electrical wiring and service upgrades)

Preliminary HOMES and HEEHRA Timeline

Spring 2023

- Early planning stages
- RFI answers to DOE

Summer 2023

- Preliminary planning/admin funding from DOE
- Rules from DOE released
- Stakeholder Engagement
- NYSERDA makes plan and submits to DOE

Fall 2023

- DOE approves NYSERDA plan and releases funds
- NYSERDA updates programs, processes and rules per approved plan
- Continued stakeholder engagement
- Training and outreach to program partners

Winter 2023-2024

- Begin deploying rebates to consumers

Questions or Comments on HOMES or HEEHRA?

We will plan to have in-depth discussions at our next RMAG meeting, tentatively scheduled for September.

All questions and comments should be submitted to:
residential.ira@nyserda.ny.gov

Building Performance Institute's Total Building Performance Certificate

John Jones, National Technical Director, Building Performance Institute

Gabrielle Stebbins, Managing Consultant, Energy Futures Group

Andy Winslow, Senior Associate, State and Community Solutions, Northeast Energy
Efficiency Partnerships

John Balfe, Senior Manager, State and Community Solutions, Northeast Energy Efficiency
Partnerships



ENERGY FUTURES GROUP

energyfuturesgroup.com

Total Building Performance Certificate of Knowledge

BPI'S CERTIFICATION AND STANDARDS UPDATE

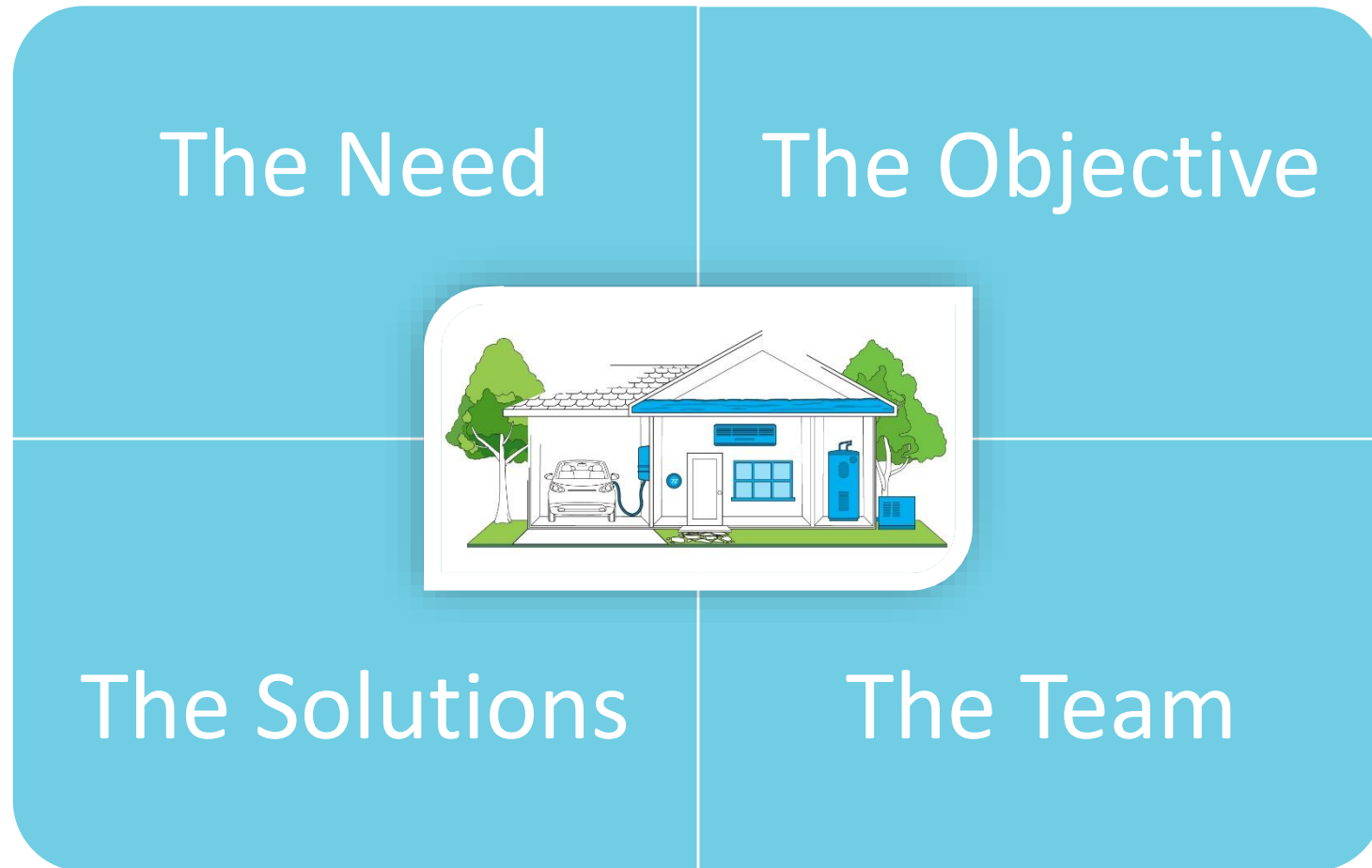
PRESENTATION TO: NYSDA RESIDENTIAL MARKET ADVISORY GROUP QUARTERLY MEETING

Gabrielle Stebbins, Energy Futures Group; John Jones, Building Performance Institute; Andy Winslow, NEEP

June 28, 2023

Project Overview

Scaling-up comprehensive retrofit projects by growing and diversifying the workforce.



Project Team



U.S. DEPARTMENT OF
ENERGY



Northeast Energy Efficiency Partnerships



SM

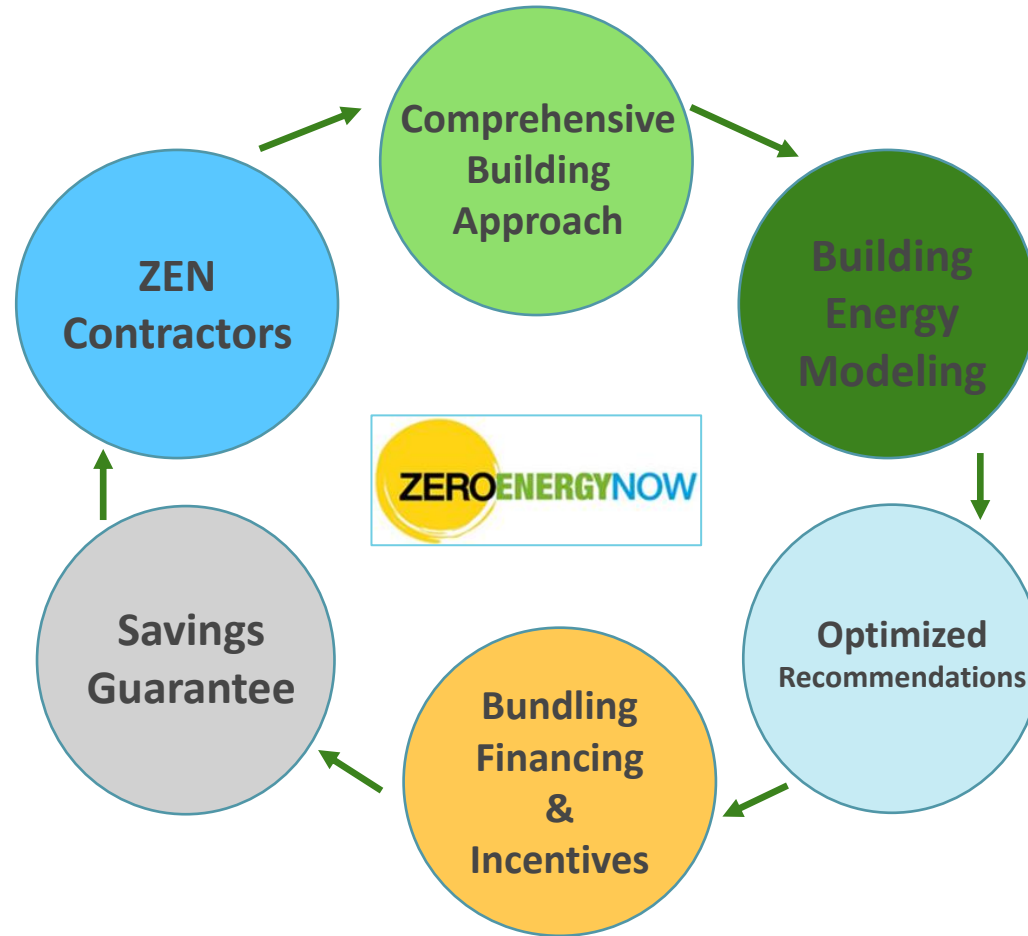


**BUILDING
PERFORMANCE**
ASSOCIATION



TBP origins... the “when” and “why” of Zero Energy Now

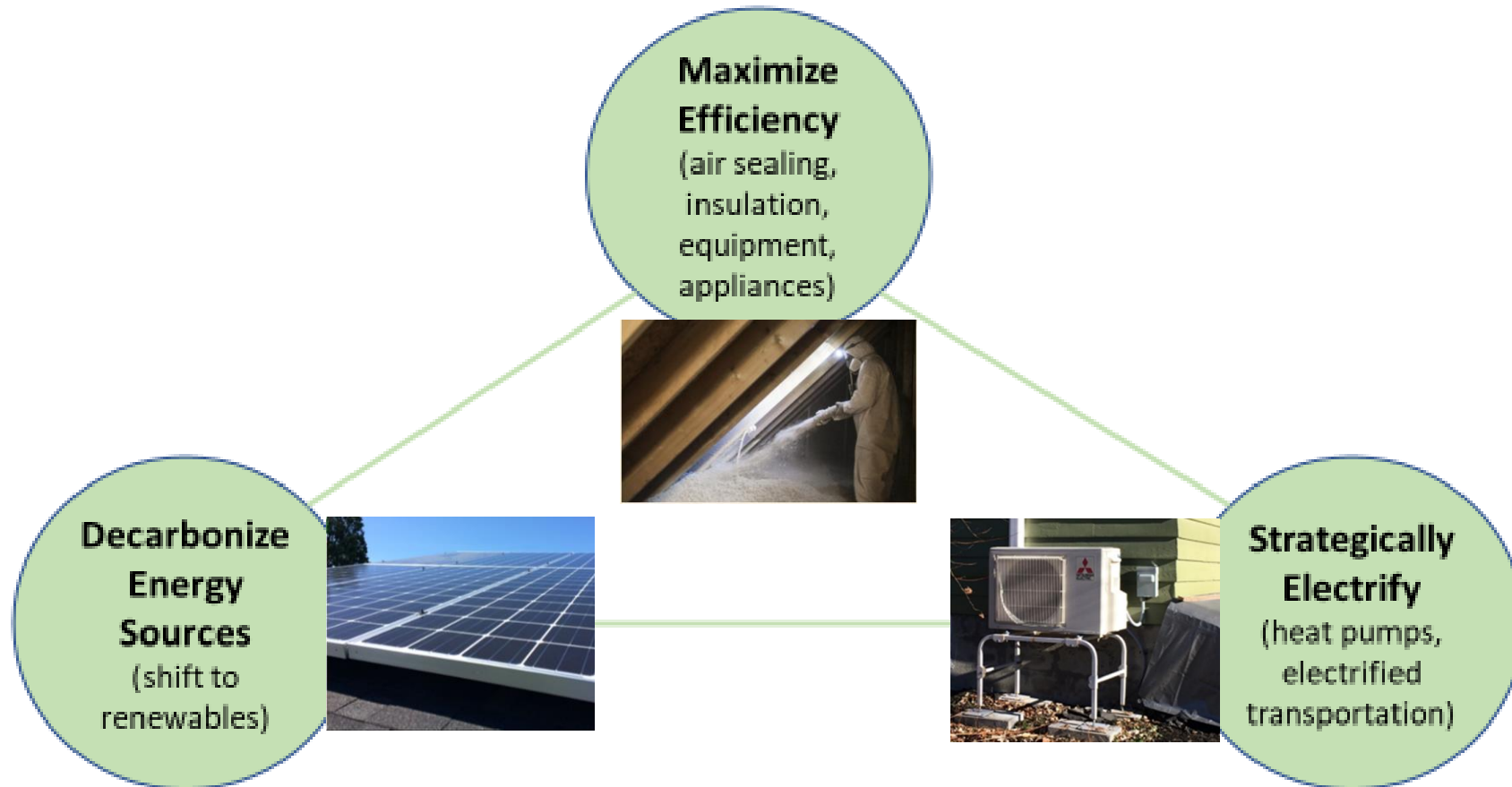
In 2015...



Program Elements Address Market Failures



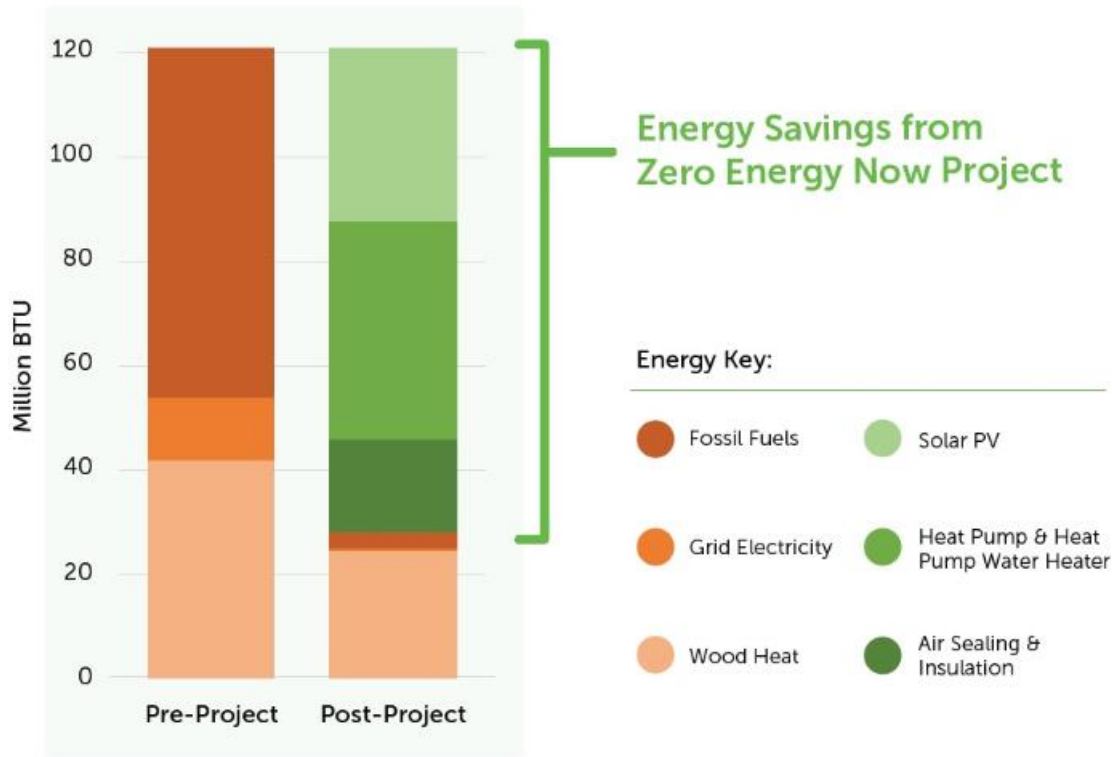
50% - 100% Total Energy Savings in Existing Buildings



Enablers: demand management, storage, controls, efficiency, rate design

Zero Energy Now Program As a Model for TBP

Savings



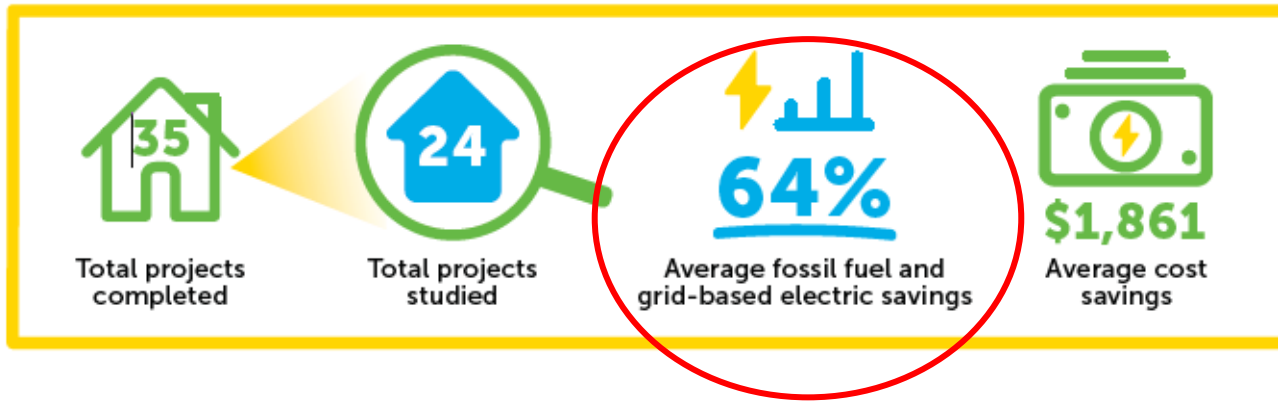
“
We’re able to hit the zero energy target; and we’re warmer now because we can afford to keep the house warmer.”
- ZEN Homeowner

“
People would seek us out; work seemed to find us. The projects were bigger so the profit margin for time put into it was better.”
- ZEN Contractor



Zero Energy Now – Lots of Potential Savings

Zero Energy Now 2016-2017 Pilot Program at a Glance



2020-2022 30 Homes	Envelope Improvement Consumption MMBtus*	Equipment Improvement Consumption MMBtus	Renewable Energy Offset Post Efficiency MMBtus	Total Fossil & Grid Energy Savings MMBtus	Total Energy Cost Savings Dollars	Total Carbon Savings lbs CO2
Average	32	40	56	107	\$3,011	14,103
Average Pctg	28%	42%	85%	90%	68%	94%

ZEN Projects Saved Twice the Carbon at Half the Cost

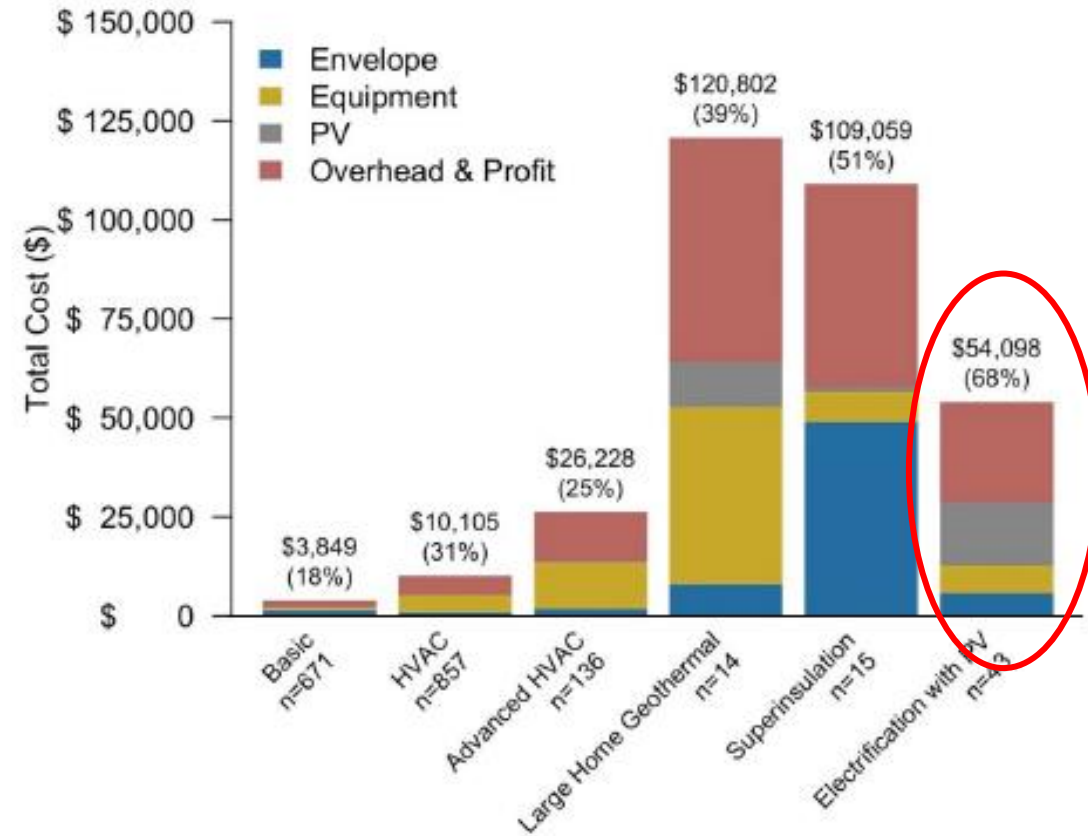
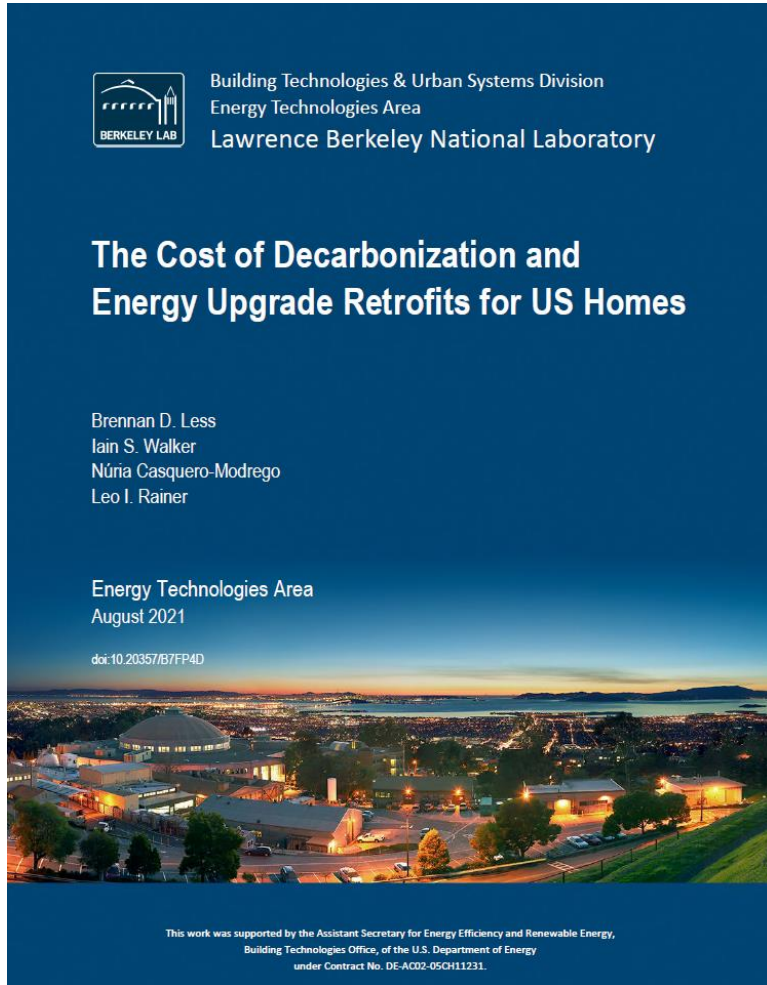


Figure 24. Cluster cost stacks with gross margins (47%) and reduced cost categories (envelope, equipment and PV). Median values of total gross project cost and percent carbon reductions.

What is the Total Building Performance (TBP) Certificate?



- *BPI's Total Building Performance (TBP) Certificate is designed to prepare individuals with the holistic knowledge to communicate directly with building owners, assist in the design and develop a pathway for whole-building retrofits that center customer satisfaction and maximize residential energy and emissions savings.*
- [tbp_certificate_employer_resource_0](#)

Total Building Performance Subject Matter Expert Team



SM Northeast Energy Efficiency Partnerships



Domains/Responsibilities for the TBP Certificate

- DOMAIN 1:** *Demonstrating Proficiency in Designing a Total Building Performance Project*
- DOMAIN 2:** *Understanding Project Financial Analysis for a Total Building Performance Project*
- DOMAIN 3:** *Demonstrating Proficiency in Communication to Clients*
- DOMAIN 4:** *Understanding of Energy Modeling, Load Calculations and Measure Analysis of a Total Building Performance Project*
- DOMAIN 5:** *Understanding of Building Science and Whole-building Concepts*
- DOMAIN 6:** *Understanding Project Carbon Impacts*
- DOMAIN 7:** *Identifying Electrification/Decarbonization Technologies*
- DOMAIN 8:** *Understanding the Post Retrofit Process*

What does a TBP Certificate holder offer?

Once an individual has completed TBP Certificate coursework and passed the exam, they will be able to:



Assisting in Designing a Building Deep Energy Efficiency and Decarbonization Project

Project design and planning, including developing and overseeing scope of work, timeline, budget, and documentation

Understand Project Financial Analysis for a Building Decarbonization Project

Project finance, including sharing resources such as tax incentives, rebates, and loans with clients



Demonstrate Proficiency in Communication to Clients

Communication for accessibility and collaboration in goal setting and carbon literacy throughout a project's lifespan

Understand Energy Modeling, Load Calculations and Measure Analysis of a Building Decarbonization Project

Energy modeling, demand, and load in order to meet project needs, including considerations of climate and renewables, as well as effective sequencing of tasks



What does a TBP Certificate holder offer?



Understand Building Science and Whole-Building Concepts

Project impacts beyond standalone tasks, including projected conditions, building systems, and energy efficiency implications

Understand Project Carbon Impacts

Carbon literacy, including utility-related greenhouse gas (GHG) emissions, governmental regulations and goals, and embodied as well as operational impacts



Identify Electrification/Decarbonization Technologies

Available and emerging technologies, including home appliances to help clients reach their savings goals

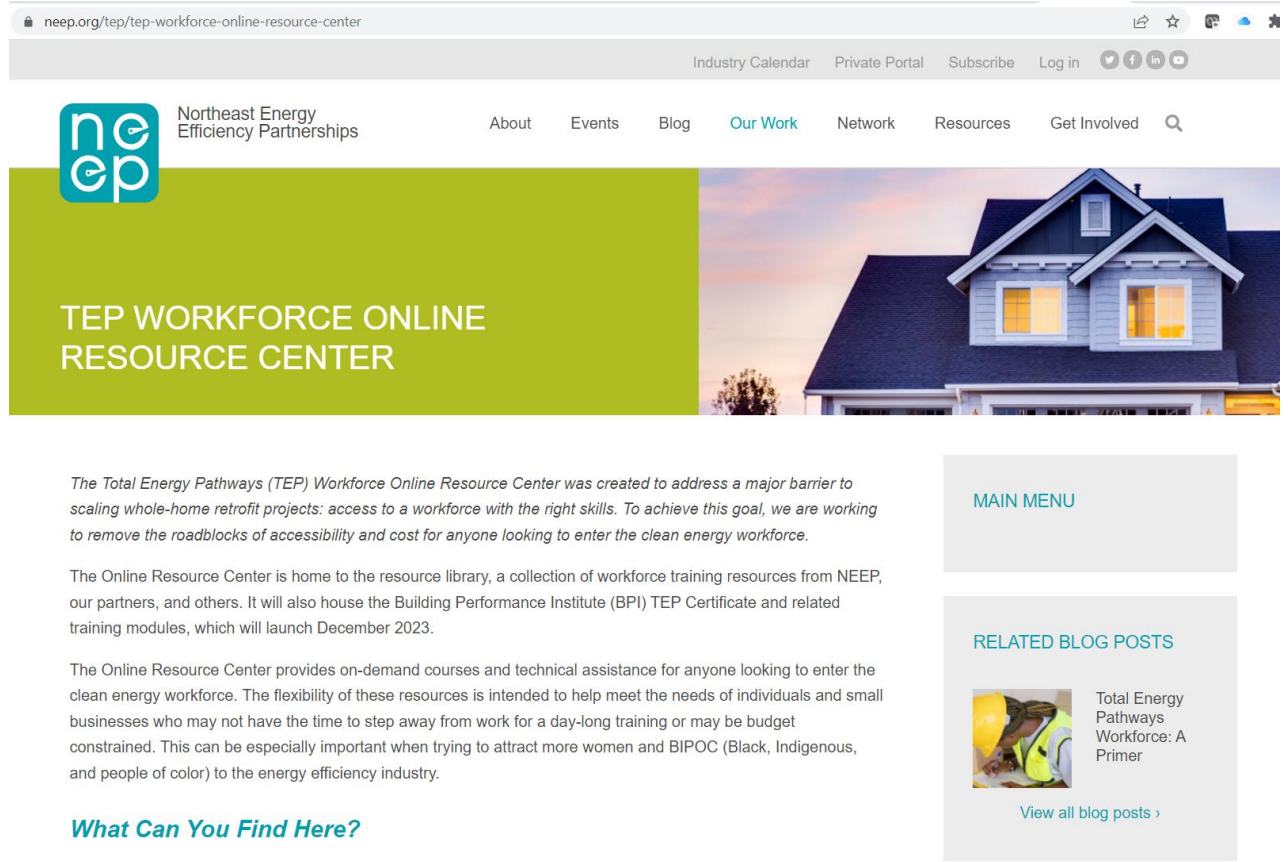
Understand the Post Retrofit Process

Close-out and post-occupancy procedures, including ensuring client understanding of and benefit from equipment upgrades, rebates, and other incentives



Pursue Your New BPI TBP Credential!

Pilot Test the Total Building Performance Certificate of Knowledge



<https://neep.org/solutions-low-carbon-states-and-communities/total-energy-pathways-tep>



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BPI Total Building Performance Certificate Q&A (~15 minutes)

Comfort Home Pilot Program Update

RMAG June 2023

Keith Bohling, Senior Project Manager, NYSERDA



NYSERDA

Agenda

- 1. Comfort Home Overview**
- 2. By the Numbers**
- 3. Contractor Profile**
- 4. Opportunity to Join Comfort Home**

Comfort Home Introduction

Background of “Heat Pump Ready”

- Pilot Program testing the effectiveness of selling and installing building shell measure packages and educating market-rate homeowners on heat pumps
- Launched in late 2019, now available statewide in SBC territories
- Prepare homes with building shell work in preparation for electrification with heat pumps
 - Single family homes including manufactured, mobile homes and townhomes
 - Two- to four-unit residential buildings
 - Tenants with owner permission to make improvements
 - The building does not need to be owner occupied

Standard Packages

Package	Requirements	Homeowner Incentives
Package A	<ol style="list-style-type: none">1. Air Seal Attic2. Insulate Attic3. Air Seal/Insulate Rim Joists	\$1,000
Package B	<ol style="list-style-type: none">1. Air Seal Attic2. Insulate Attic3. Air Seal/Insulate Rim Joists4. Insulate Above Grade Walls5. Insulate Floors Above Unconditioned Spaces	\$2,500
Package C	<ol style="list-style-type: none">1. Air Seal Attic2. Insulate Attic3. Air Seal/Insulate Rim Joists4. Insulate Above Grade Walls5. Insulate Floors Above Unconditioned Spaces6. Upgrade Windows to ENERGY STAR	\$4,000

Standard Package Requirements

Standard Package Improvements	Minimum	Standard Package*		
		Good	Better	Best
Knee Walls	R-15	x	x	x
Gable End Walls	R-14	x	x	x
Attic Insulation	R-38	x	x	x
Attic Hatch Sealing and Insulation	R-20	x	x	x
Attic Pull-down Stair Sealing and Insulation	R-13	x	x	x
Rim Joist Sealing and Insulation	R-14	x	x	x
Wall Insulation	R-14		x	x
Floor Insulation	R-19/30		x	x
Windows	ENERGY STAR or equivalent			x
Storm Windows or Insulated Panels	ENERGY STAR or equivalent			x
Load Reduction Incentives		\$1,000	\$2,500	\$4,000

Previous standard package improvements must be installed, or the home's existing condition must already meet program requirements to be eligible for next package and to receive incentives.

Incremental incentives are allowed for upgrades "over time" where a contractor returns to do additional work in the future.

Heat Pump Referral Incentives

Requirements/Rules:

- A Load Reduction Package must be installed to be eligible for a Heat Pump Referral Incentive
- Incentive goes directly to the Comfort Home contractor and is up to the discretion of the contractor of how to use it
- The Comfort Home contractor does not have to be the heat pump installer
- Heat pumps must be installed with 24 months of Load Reduction work
- Heat Pump Installer must be an approved NYS Clean Heat Contractor
- Heat Pump Referrals are not required by encouraged

Package	Contractor Incentive
Package A	\$1,000
Package B	\$1,500
Package C	\$2,000

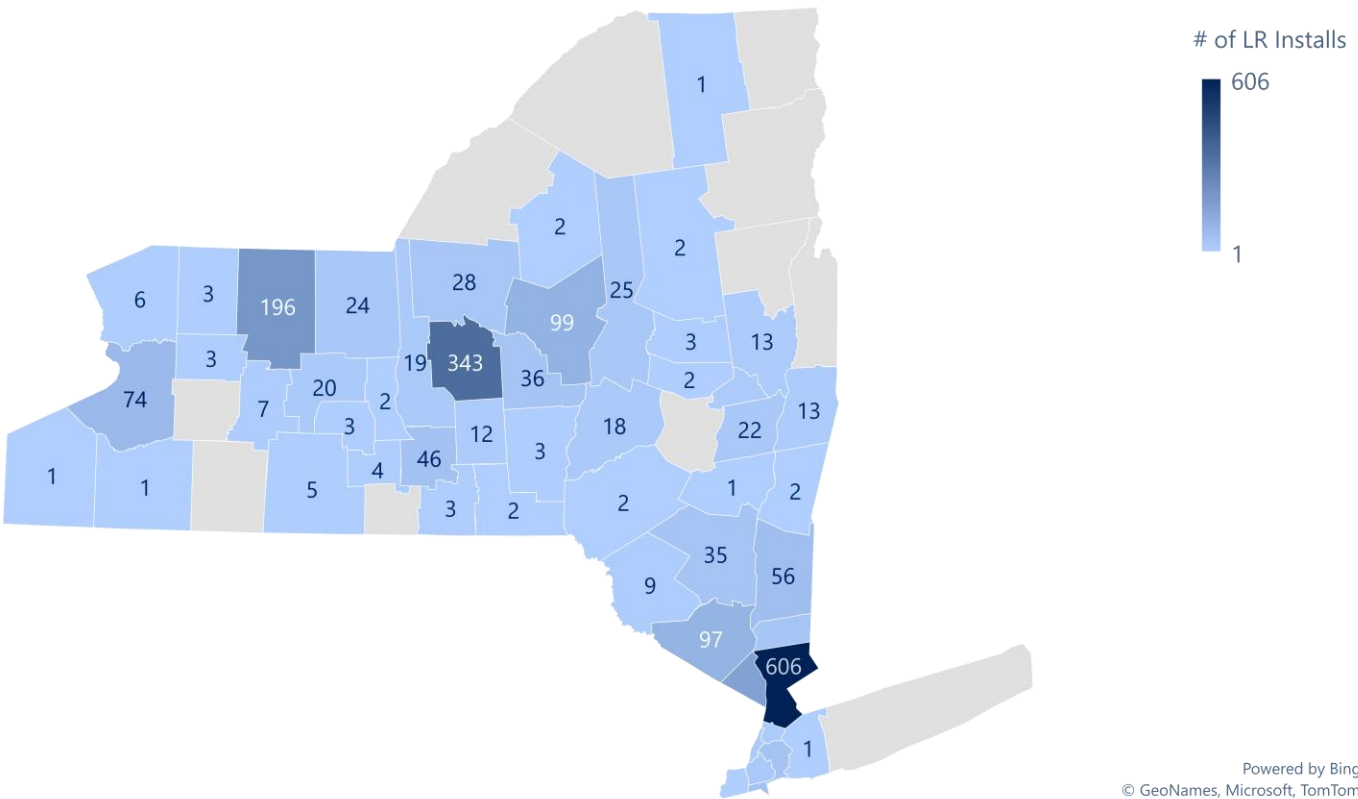
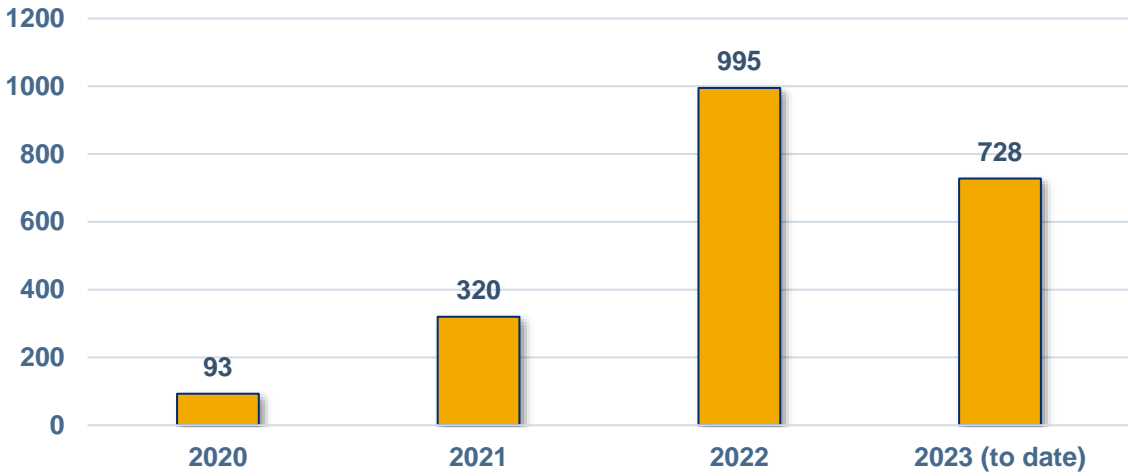
Utility Stacked Incentives

- If a utility has a weatherization program, NYSERDA can and does coordinate efforts.
- Today we have a coordination process in place with one utility where contractors can submit to the utility for incentives on top of the NYSERDA Comfort Home package incentive.
- We work to ensure that contractors are aware of projects that participate in one program may be eligible for the other program as well.

Comfort Home Results

Load Reduction Installations

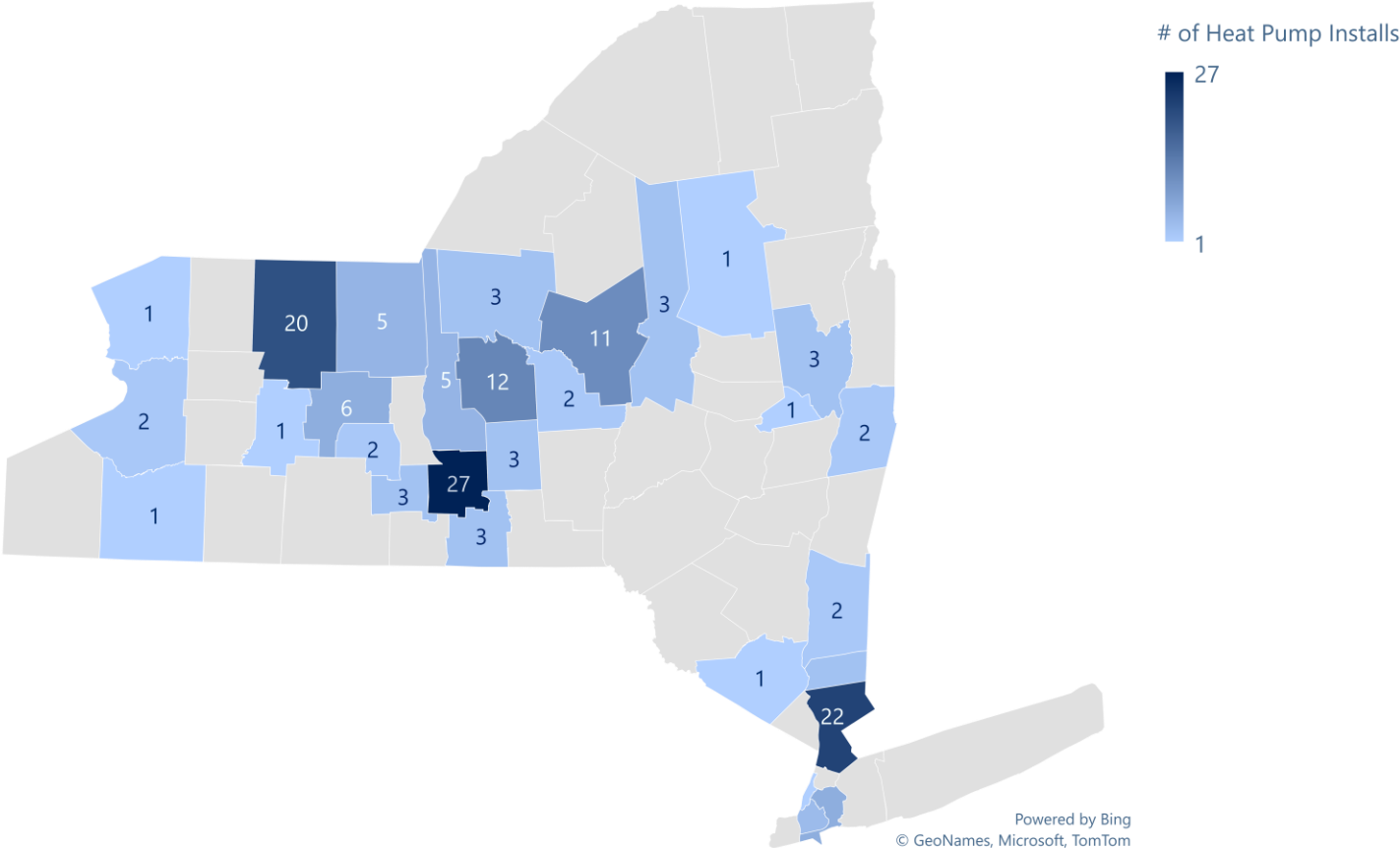
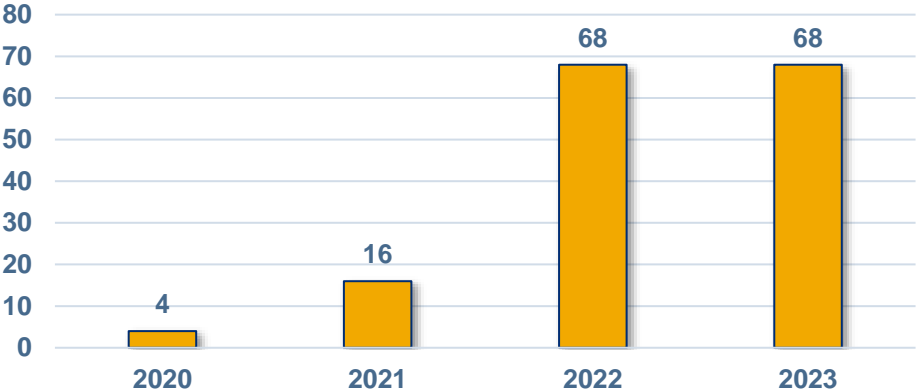
2136 total



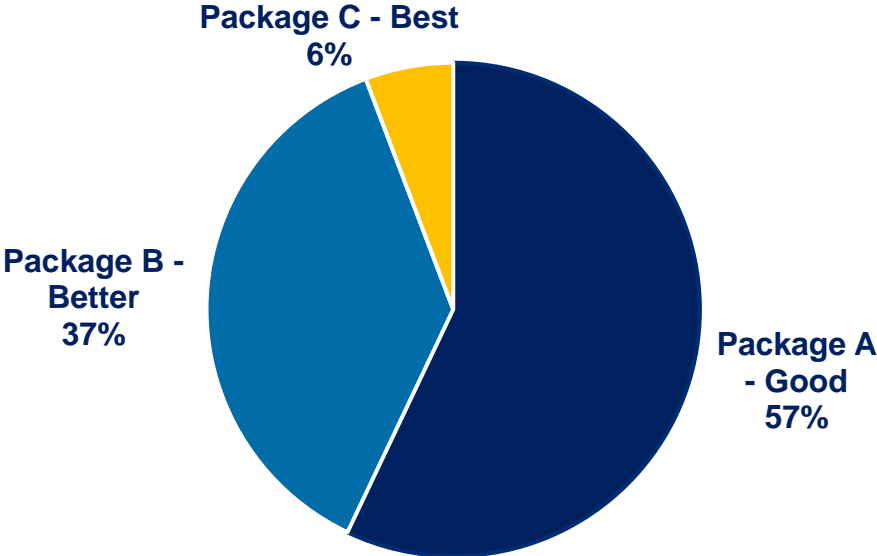
Heat Pump Installations

156 total

7% of homeowners having load reduction work completed also have heat pumps installed



Distribution of Load Reduction Installation Packages

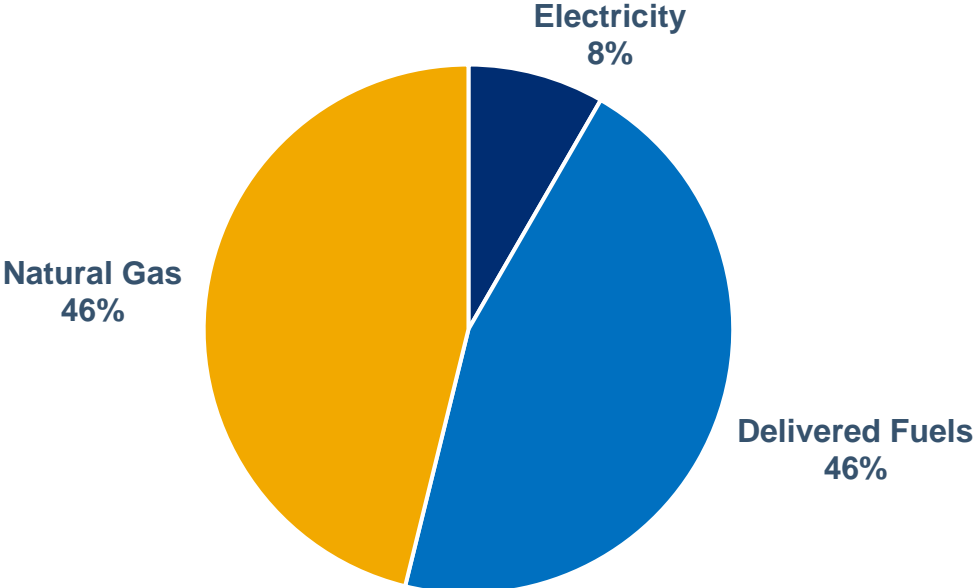
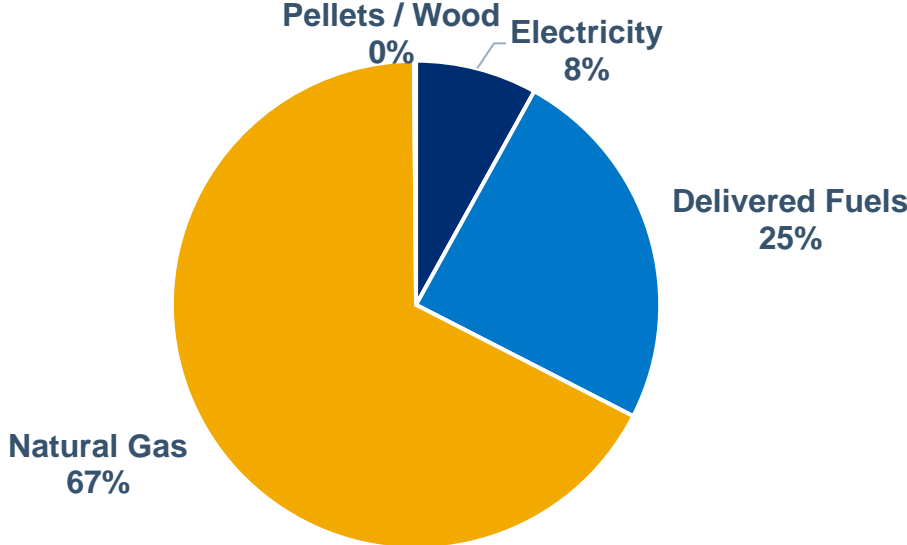


	Average Project Cost	NYSERDA incentive	Average Customer Investment
Package A - Good	\$ 8,501	\$ 1,000	\$ 7,501
Package B - Better	\$ 12,846	\$ 2,500	\$ 10,346
Package C - Best	\$ 12,421	\$ 4,000	\$ 8,421

28% of projects have additional utility incentives

Distribution of **Load Reduction** Installations by Heating Fuel Type

Distribution of **Heat Pump** Installations by Heating Fuel Type



Program Modeled Savings

	Modeled Program Savings (MMBtu)
Package A - Good	20,492.7
Package B - Better	23,533.7
Package C - Best	3,650.6
Total	47,677.0

3,528 tons of CO₂ emissions avoided

Household Modeled Savings

	Modeled Average Household Savings (MMBTU)
Package A - Good	16.9
Package B - Better	35.5
Package C - Best	15.9

Contractor Profile

Contractor “H”

One approach



Evolution Of Vision and Presence

No longer an insulation and air-sealing company

They are a **home performance and energy consulting** company.

Offerings include insulation, air-sealing, air-source heat pumps, HRVs, consulting and third-party certification

If you call an insulation company, they can quote insulation.

Calling a home performance company starts a **process....**

Process

Phone leads are qualified for good fit for approach, pivot from estimate to **evaluation**.

Those calling for comparison quotes are told that we won't be the lowest, but we'd be happy to evaluate their whole home and provide a comprehensive solution recommendation

We speak to what the home needs, not for what we sell

Process

Perform a whole home advanced evaluation, comprehensive to all systems, ventilation, moisture management, blower door test to quantify leakage (and prove it to homeowners)

Goal: Achieve an **invested** homeowner



House as a System

The engagement process:

- Results in a comprehensive solution recommendation that documents the existing conditions (photos and text) and how to improve them
- Educates homeowner
- Educates homeowner some more
- Builds credibility
- Provides a holistic solution to the homeowners' concerns and observed conditions
- Projects empathy and understanding for customer concerns

Building Internal Capacity and Systems

- Participate in peer group with non-competing businesses
- Focus hiring on those new to the industry to provide a clean slate for training on modern approach and technology
- Training
- Internal support, buy-in throughout the company
- Expand slowly into new service areas. Sometimes work on our own houses first.
- Now offer air-source heat pumps, ducted and ductless, which are new since the company was founded.
- Take advantage of funding opportunities

Comfort Home Expanding

Growth

Comfort Home is funded to grow to serve more homes

Once DOE issues implementation guidance for IRA funding, especially HOMES, NYSERDA expects to adapt Comfort Home to facilitate HOMES upgrades in New York

Comfort Home is expected to **grow**

We are looking to accelerate the rate of load reduction and electrification work.

We're eager to serve more customers and work with great partners

Opportunities

We'd like to connect with:

- **Contractors doing air-sealing and insulation work (plus heat pumps!)**
- **Organizations decarbonizing their communities**
- **Utilities looking for a load reduction partner**

Q & A (5 Minutes)

Keith Bohling

(518) 862-1090 x3491

Keith.Bohling@nyserda.ny.gov

nyserda.ny.gov/ComfortHome



NYSERDA

NYSERDA Experience Clean Heat Program

Jackie Albanese - Project Manager III, TRC



NYSERDA Experience Clean Heat

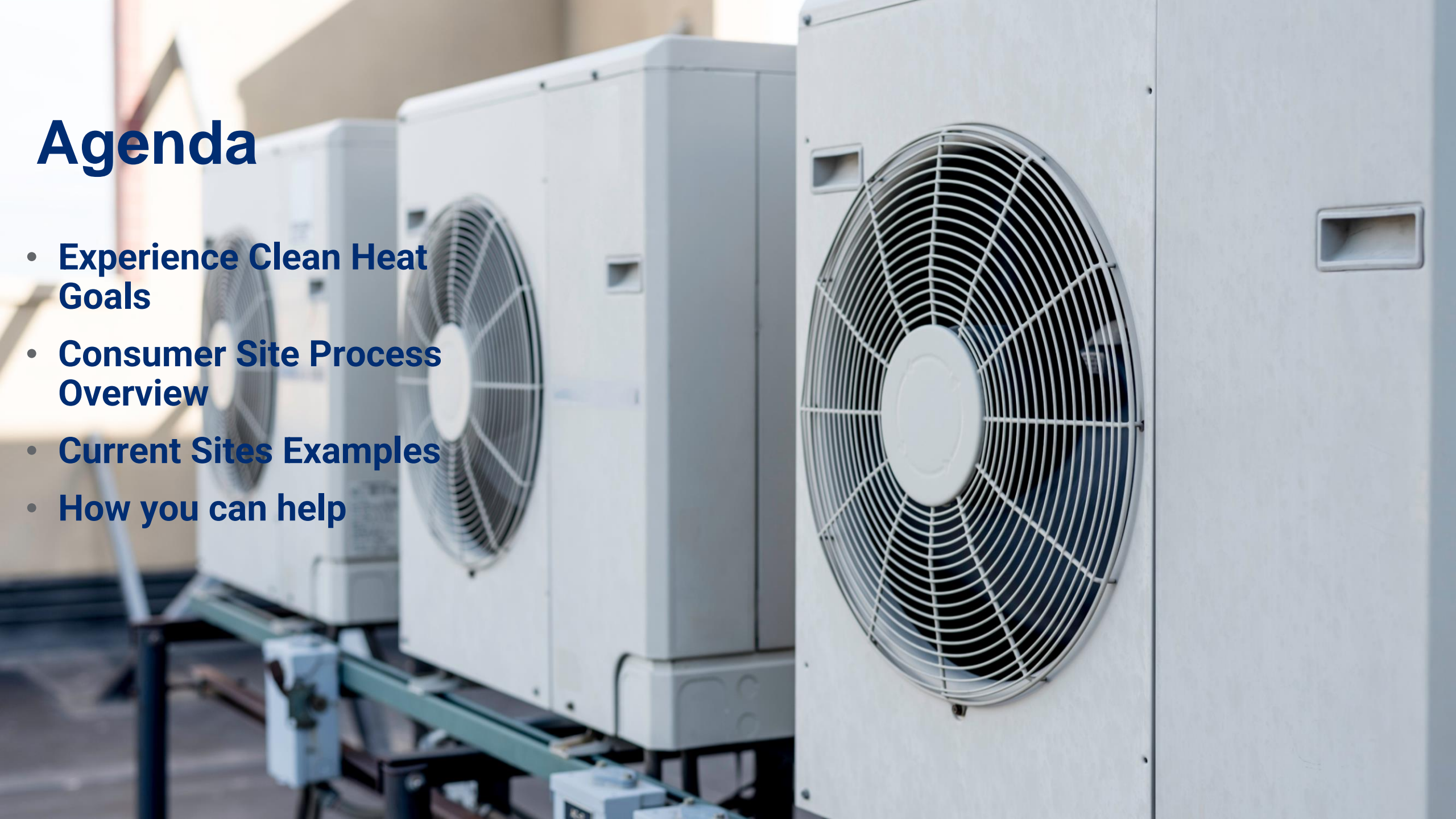
June 28, 2023



NYS Clean Heat

Agenda

- **Experience Clean Heat Goals**
- **Consumer Site Process Overview**
- **Current Sites Examples**
- **How you can help**





Experience Clean Heat Goals

- **Raise awareness, overcome misinformation, garner confidence, and cultivate viral enthusiasm** for heat pumps as a solution for whole building heating and cooling needs.
- Create opportunities for consumers and HVAC workers to **directly experience working, living, and going about their day-to-day business** in buildings heated and cooled with heat pumps.
- Magnify the **impact of these experiences** through sharing on social media (consumers) and peer-to-peer sharing (contractors).

Consumer Site Process Overview



Site Selection

Sites are selected based three main criteria:

- Technical – Does the site have a properly functioning heat pump?
- Business – Could the business be a good site based on its appearance, business type, associations?
- Staff – Due to the nature of the business, can the staff promote Experience Clean Heat campaigns?



Site Staff Training



Training topics include:

- How heat pumps work
- Myth busting
- Where consumers can find more information

Communication Toolkit Deployment

Communication Toolkit will be given to the sites the same day as the training.

Toolkit includes:

- Signage hung on walls
- Other potential collateral including coasters, framed standing signs, etc. as appropriate
- Social media posts and other electronic material for sites to use on their platforms

Artisanal Brew Works

> Speech bubble sign and separate poster



A graphic design featuring a white speech bubble on a light grey background. The text inside the bubble reads: "My full-time job is to keep you comfortable all year long. Who else can say the same?". To the right is a dark blue poster with the NYS Clean Heat logo at the top. The main text on the poster says: "Looking to make your space more COMFORTABLE?". At the bottom, it says: "We were, too! That's why Artisanal heats and cools with cold-climate heat pumps." and includes a QR code and the text "LEARN MORE HERE:".

> Coasters



Tree Huggers Children's Apparel



Mockup



This execution will utilize a longer speech bubble "tail" to fit the tight corner space.

Tree Huggers Children's Apparel



Fossil fuel related benefit messaging

 NYS Clean Heat

How do you heat your home?
Chances are, there's a greener way.

Heating with fossil fuels such as oil, propane, or natural gas can cause health risks for you and your family.

Learn more about cold-climate heat pumps. 

Sustainability related messaging

 NYS Clean Heat

We applaud our customers for shopping **sustainably and eco-consciously.**

Did you know there are also sustainable solutions to heating and cooling your home?

Learn more about cold-climate heat pumps. 

Experience related messaging

 NYS Clean Heat

You're enjoying the **greenest way** to heat and cool, right now.

Learn more about cold-climate heat pumps. 

Campaign Start

Experience Clean Heat will work with individual sites on other promotion tactics including:

- One-off events at the site (trivia, sponsor children's book readings, etc.)
- Driving consumers to the site via NYSERDA social media channels
- Encourage consumers to share information via social media through
 - raffles
 - quizzes
 - other gamification
 - augmented reality

Start-Up Pilot Phase

- > Targeting 15 sites throughout the state currently focused on
 - Mid-Hudson
 - Capital Region
 - Buffalo
- > Sites will be listed on cleanheat.ny.gov/experience-clean-heat

Experiences Near You

Click on a region below to find businesses and public spaces in your area that have heat pumps for you to experience.

▼ **Capital Region**

▼ **Mid-Hudson**

▼ **Western NY**

How you can help

- > Do you know of a good heat pump site?
 - Visit cleanheat.ny.gov/experience-clean-heat for detailed information
- > Send them over to jalbanese@trccompanies.com

**NYSERDA Experience Clean Heat
Program Q&A (~10 minutes)**

Closing and Next Steps

- Please complete a short post-meeting survey to help us set topics and presenters for an upcoming in-person RMAG meeting.
- We want to hear from you! Please reach out to the NYSERDA Single Family Residential Team at resmarket@nyserda.ny.gov with your recommendations for topics and presenters for an upcoming in-person RMAG meeting.
- Go to <https://www.nyserda.ny.gov/Partners-and-Investors/Partner-With-NYSERDA/Residential-Market-Advisory-Group> to learn more about the RMAG!
- Interested in being a pilot test taker for the TBP certificate or know someone who might be? Click this link to sign up for more information.
<https://forms.office.com/r/MYahMxvve2>

END OF PRESENTATION