NEW YORK STATE | Public Service Commission

Regional Residential Weatherization Program Technical Conference

Cases: 25-M-0248/18-M-0084

June 26, 2025: NYC

Hybrid Meeting Guidelines

- Virtual participants are muted automatically upon entry and will be unable to unmute themselves
- Virtual participants should use:
  - The **raise hand function** to ask a question
  - The **Q&A function** to submit questions for the panelists, to be answered live during Q&A portion of the presentation

Agenda

9:30–9:40	Welcome from DPS Staff	Marc Carpenter, NYS DPS
9:40-10:10	Building Science Primer	Francis Rodriguez, Association for Energy Affordability
10:10-10:40	NYSERDA presentations on Downstate Multifamily Weatherization & Comfort Home experience, evolution, lessons learned	Michael Reed, Keith Bohling & Courtney Moriarta, NYSERDA
10:40-11:00	Questions/comments from utilities, other participants regarding NYSERDA experience	All
11:00-11:15	Break	
11:15-11:35	Presentations on downstate experience from Con Edison & National Grid; focus on MF experience	Caroline Kopp (MF) & Kelly Ziegler, Con Edison; Alexa Ruscitto, National Grid
11:35-12:15	Facilitated Discussion among NYSERDA, utility program managers	
12:15-1:00	Lunch Break	

Agenda

1:00-1:45	Presentations on leading Weatherization programs in other jurisdictions: Includes time for Questions from participants	Kate Peters, Eversource (remote) Jennifer Amann, ACEEE (remote)
1:45-2:15	Facilitated panel of implementation contractors What they learned today: key points from other jurisdictions relevant to, challenges for, NY?	Jeff Perlman, Bright Power Ariel Sosa, Stratco Property Solutions Lazer Sternhell, Cignature Energy Jason Scher, Energy Mgt Solutions
2:15-3:00	Facilitated discussion with program administrators	
3:00-3:30	Questions and brief comments from other attendees	
3:30-3:40	NY Utility Program Managers: share what they learned today; key areas needing more info/research before proposal submissions	
3:40-3:45	Wrap up	Marc Carpenter, NYS DPS

Summary of Order

- Directs the formation of Regional Residential Weatherization Programs for the Upstate and Downstate Regions
- Gas utilities must allocate a minimum of 50% of their portfolio program budgets towards residential weatherization programs and electric utilities must allocate a minimum of 25%
- **Upstate Region**: Central Hudson, NFG, NMPC, NYSEG, O&R, and RG&E
  - Non-LMI residential customers (1-4 family)
- **Downstate Region**: Con Edison, KEDNY, and KEDLI
  - Non-LMI residential customers (1-4 family)
  - Non-LMI multifamily buildings
- Weatherization programs for commercial buildings (both regions) and Non-LMI multifamily buildings (Upstate only) will continue in 2026-2030 through **utility-specific programs**

Technical Conferences

- Gather input from stakeholders on **best practices** from regional or statewide weatherization programs in other jurisdictions and the **strengths and weaknesses** of existing New York state weatherization programs in order to inform utility proposals
- Review Commission Order requirements regarding Regional Residential Weatherization program proposals
- All presentation materials from today's discussion will be filed in DMM

Francis Rodriguez:
Association for Energy Affordability

File was too large to include in this PowerPoint slide deck. Please use the link to the conference recording provided in the cover letter to access these PowerPoint slides.

WEATHERIZATION TECHNICAL CONFERENCE

NYSERDA: Multifamily Weatherization

June 26, 2025

Michael Reed

Multifamily
New York State Energy Research and Development Authority

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New York State Energy Research and Development Authority

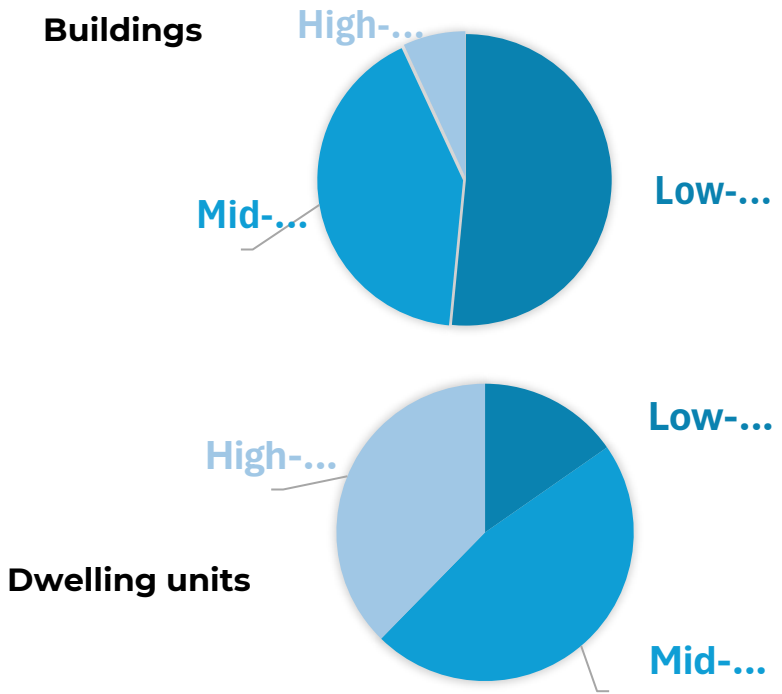
50 YEARS 1975-2025

AGENDA

- Multifamily Buildings in New York State
- Multifamily Weatherization Overview
- NYSERDA Program Experience
- Concluding Thoughts

Multifamily Buildings in New York State

- New York State's multifamily building stock is comprised of ~**130,000 buildings** containing ~**2.6 million dwelling units**
- Statewide, **67,000 bldgs** are low-rise, **54,000** are mid-rise, and **9,000** are high-rise buildings
- Buildings built **before 1940** are the most prevalent
- Approx. **78%** of buildings have centralized heating; only **10%** have centralized cooling



Source: NYSERDA 2022 Multifamily Building Stock Assessment

Weatherization in Multifamily Buildings

Overview

Weatherization makes a building more energy efficient by protecting it from the natural elements, including cold air, hot air, and moisture

Benefits

- Reduced heating and cooling loads and utility bills
- Greater comfort – reduces draftiness and dampens outside noise
- Improved air quality

Challenges

- Accessing individual apartments
- Weatherization measures may trigger costly health and safety issues
- Cost savings for weatherization measures vary
- Split incentives – benefits may not accrue to the project investor/sponsor (building owner)

Weatherization in Multifamily Buildings

Overview

Three flavors of weatherization:

- **Low-hanging fruit**: pipe insulation, weatherstripping, and air sealing
- **More advanced**: roof and wall insulation, ventilation improvements, and window replacements
- **Deep efficiency**: building over-cladding systems, like exterior insulation and finish systems (EIFS) and panelized systems

Weatherization in Multifamily Buildings

Measures and Typical Cost Ranges

- **Roof/attic insulation*** **$0.75 - $26/sq ft** dependent on scope (roof repair, insultation type, etc.)
- **Above Grade Wall Insulation** **$2 - $19/sq ft**
- **Below Grade Wall Insulation** **$4 - 14/sq ft**
- **Exterior Doors** **$600 - $5,000 each**
- **Windows** **$750 - $1,550 each** Common area and in-unit
- **Air Sealing** **$0.30 - $8/sq ft**
- **Pipe insulation** **$1.20 -$35/linear ft** Domestic Hot Water and Heating pipes

Data sourced from MPP V7-V9 completed projects ~2020-2025

Weatherization in Multifamily Buildings

Prevalence in NYSERDA Projects

Summary statistics on Wx in Multifamily Performance Program (MPP)

- **193 project applications** (V7-V9; 982 buildings, 36,882 units)
- **75% of MPP projects had at least one Wx measure in scope**
- **Most frequently scoped Wx measures (most to least frequent):** Windows, Roof/Attic Insulation, Pipe Insulation, Air Sealing, Wall Insulation, Exterior Doors

Summary statistics on Wx in Low Carbon Pathways (LCP)

- **82 active project applications** (234 buildings serving 9,351 households)
- **61% of LCP Projects have at least one Wx measure in scope**
- **Most frequently scoped Wx measures (most to least frequent):** Roof/Attic Insulation, Window Replacement, Wall Insulation, Air Sealing

MPP data sourced from 2016-25, LCP data sourced for 2022-25

Program Insights to Date

Program Insights from MPP

- **Savings to Investment Ratio of 1.1** – From analysis of Wx measures across affordable housing program versions
- **64 - 70% of projected savings derived from Wx measures** – In analysis of affordable + market rate housing program versions, Wx measures represented on average 64 – 70% of projected savings of overall project
- **81% realization rate** – realization rate for MPP projects indicating projected savings are achieved

Program Insights from LCP to Date

- Large interest in window replacement and roof insulation as standalone measures

Weatherization in Larger Buildings

Key insights from NYSERDA Demo Programs

- Managing air infiltration is key to addressing ***stack effect***.
- 11 out of 13 Empire Building Challenge (EBC) multifamily demos include weatherization measures.
- Weatherization is key part of phased decarbonization. Measures range from air sealing to deep weatherization. EBC demos include:
  - Window replacements, roof/pipe/wall insultation, air sealing
  - Overcladding, including EIFS, and HVAC integrated façade systems
  - More projects at www.retrofitplaybook.org
- Envelope upgrades reduce heating/cooling loads and can lead to more cost-effective HVAC system upgrades. Such upgrades are more feasible at certain points within the capital/refinancing cycle.

Deep Efficiency Weatherization

Case Study: Casa Pasiva

Scope highlights:

- Insulative overcladding with EIFS
- Energy-efficient windows
- Advanced air sealing and new air barrier
- Energy recovery ventilator (ERV)

Benefits:

- Overheating and inadequate ventilation eliminated
- Indoor air quality improved
- Comfort and safety maintained during utility outages
- Designed to reduce heating load by 80+%

EIFS Façade with solar shading

Weatherization Assistance Program (WAP)

Multifamily Sector, Administered by NYS Homes and Community Renewal

- **Funded with DOE WAP and LIHEAP funding, an average of $70m/year**
  - NYS HCR has an additional contract under IIJA with DOE for an additional $289m to be fully spent by 2029
- **Serves on average, 3,500 Multifamily dwelling units/year**
- **$8k - Average cost per dwelling unit**
- **Strongly encourages collaboration with utility/NYSERDA programs**
- **WAP serves MF buildings where at least 50% of the units are at/or below 60% AMI**
- **WAP requires a DOE approved audit performed by a Weatherization Subgrantees and scopes of work are confirmed by an SIR over 1.0**

For more information, please email weatherization@hcr.ny.gov **or visit the website at** https://hcr.ny.gov/weatherization

Takeaways and Concluding Thoughts

- **Efficiency first –** lead with weatherization upgrades to reduce heating/cooling loads
- **Heat pump ready –** envelope upgrades will prepare building for electrification of heating/cooling systems
- **Operational cost savings –** envelope upgrades can yield utility bill savings for tenants and owners
- **Putting tenants first** – Wx upgrades will improve tenant comfort by reducing air infiltration and dampening outside noise
- **Realized benefits** – Relatively strong realization rate from MPP program evaluation shows savings from Wx measures
- **Deeper weatherization** measures deliver significant benefits but are complex projects that require significant upfront capital

WEATHERIZATION TECH CONFERENCE

NYSERDA: Comfort Home

June 26, 2025

Courtney Moriarta
Keith Bohling

Home Modernization
New York State Energy Research and Development Authority

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New York State Energy Research and Development Authority

50 YEARS 1975-2025

AGENDA

- **Background, design**
- **Volume, savings,**
- **Success factors**

COMFORT HOME: WHAT IS IT?

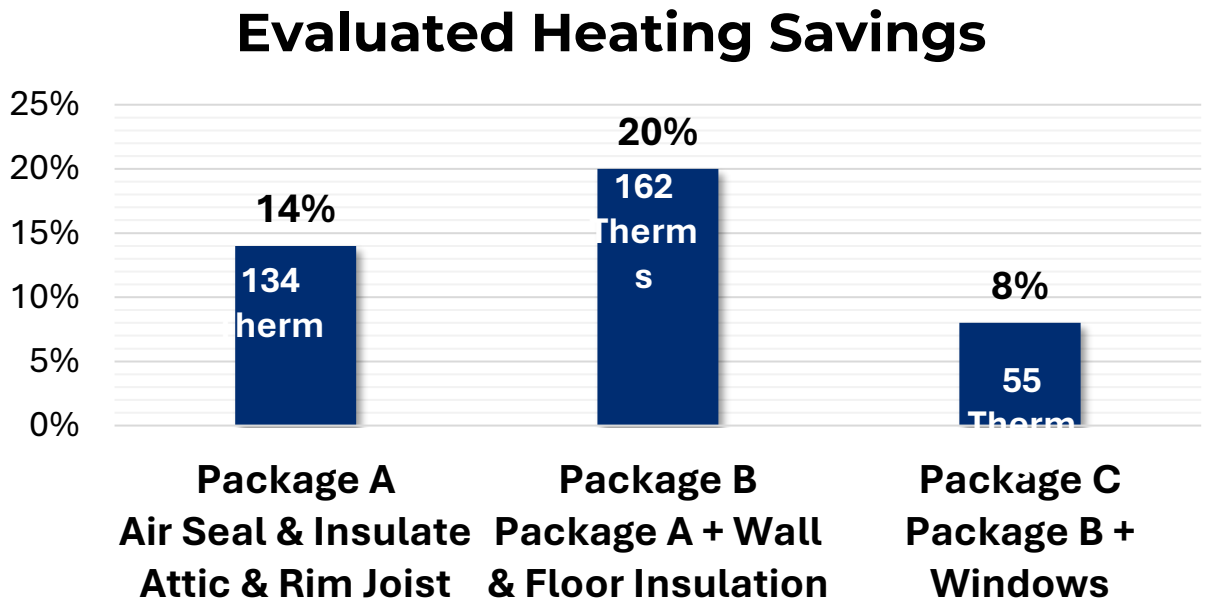
- A state-wide market-rate ~~weatherization~~ **load reduction** pilot program designed to test a hypothesis
- **Theory of change: Can a simplified program, with streamlined inputs and modeling of standard measure packages, increase adoption of building shell improvements to get homes heat pump ready, reduce heat pump costs, AND help mitigate future winter peak demand?**
- A network of BPI-certified contractors delivers services

- **Simple packages, standardized incentives**
- **Streamlined data capture / input**
- **Modeling by Energy Plus using a "semi-custom" approach**
  - TRM custom measure category 5 (and 6) developed, approved and adopted
- **Strike a balance between minimizing process and burden to implement while still maintaining good outcomes overall**
  - more of our program funding going to incentives
  - less to administrative processes
  - test how far we can go in streamlining our processes without sacrificing program level performance
  - understanding that we will not have full visibility to detail of every individual project
  - focus on program level energy savings, not project level

COMFORT HOME PACKAGE OVERVIEW

	Select an Insulation Package		Windows Add-On
	Good	Better	
Upgrades	Seal and insulate attic and rim joist	Good Package plus insulate walls and floors	After air-sealing and insulating, upgrade windows to ENERGY STAR
Value	The average home saves 14% on their heating and cooling consumption after installing this package.	The average home saves 20% on their heating and cooling consumption after installing this package.	For homes with upgraded air-sealing and insulation, upgrading the windows saves an average of an additional 8% on heating and cooling consumption.
NYSERDA Incentive	$2,500 per heating plant	$3,000 per heating plant	$2,000 per heating plant
Multiple Comfort Home Projects Over Time	Customers who received Comfort Home incentives for a package within the past year are eligible for a total of $1,000 toward another package. Customers who received Comfort Home incentives for a package more than a year ago are eligible for total of $2,000 toward another package.		

Overall program average evaluated savings = 16% of baseline heating energy consumption.



10-15% of projects were 1-4 unit MF.

If small MF building has one heating plan, it's one Comfort Home project.

If small MF building has a heating plant for each unit, then each unit is a Comfort Home project.

Most Package B projects included some elements of Package A.

Most Package C projects didn't include elements of Packages A/B.

COMFORT HOME EVALUATION STUDY

- Overall realization rate = 66%
  - Package A = 80%
  - Package B = 53%
  - Package C = 56%

Takeaways from this analysis:

- The elements of Package A are fairly consistent and the physics model is fairly simple leading to higher RR
- Package B elements are widely variable, the baseline conditions are widely variable, and the physics can be very complex, leading to lower RR for this group, noting that these measures are seldom addressed outside of programs and extremely important for comfort, moisture management, and air leakage control
- Analysis results are used to tune up EnergyPlus modeling assumptions to improve modeling accuracy over time.

Homes with the most opportunity have higher realization rates:

- **Homes with higher consumption had higher RRs.**
- **Homes with higher EUI had higher RRs.**

COMFORT HOME SUCCESS FACTORS

Program success factors as heard from our contractor network:

- Assessment incentive ($200)
- No customer application – esp. w/ MF
- No pre-approval needed
- Simple packages – Easy for contractor and customer to understand
- Easy workflow w/ limited inputs (as little as 20 minutes)
- Blower door test required for installation, not for assessment (important in tight neighborhoods w/ limited parking)
- Simple paperwork
- Short payment lag (5-14 days after installation)
- ACH payments

Participating contractors value stability, predictability, consistency.

Contractors will only adapt their business model to a program that appears to be stable.

When programs pull back, contractors have to lay off people. This is very hard for the market to recover from.

FINDINGS

Can simplified measure package incentives and a streamlined workflow reduce program overhead, contractor soft costs, and project cycle times?

Program overhead:

- **Comfort Home evaluated cost to deliver savings (LMMBtu-e) is $8.86**
- For comparison, in 2024 NYS Clean Heat averaged $7.74 statewide, Mass Save RCD averaged $11.00 (based on gas savings), Non-LMI EE/BE Order $7.22 statewide.*
- **Using the Comfort Home evaluated total program cost rate to achieve savings estimated in May 15 Order for market rate weatherization programs ~ $222M per year**

Contractor soft costs:

- **Decreased by limited data capture, no requirement for blower door test at time of assessment, no pre-approval allows quicker turnaround, no customer application**

Project cycle times:

- **Average of 54 days between assessment and installation**

* Represents program only minimum budgets, not inclusive of EM&V, non-labor administrative and labor costs, as well as estimated energy savings targets to be refined as part of the Utility Joint Proposals

FINDINGS

Will a simplified energy model that neither requires measure-by-measure TRM calculations nor a fully customized whole house energy simulation deliver sufficiently accurate results?

We compared realization rates across a sample of Comfort Home projects using BPI-2400 calibration methods and NYS TRM Custom Measure Category 5 modeling.

Attrition due to lack of acceptable quality metered data reduced our sample set from 1,227 to just 22 projects

Package	Category 5 RR	BPI 2400 Simple RR	BPI 2400 Detailed RR
A	112%	102%	128%
B	34%	45%	82%
C	81%	74%	93%
Total	73%	78%	111%

Package B is most difficult to model across all methods.

CH simulation tool can be tuned to improve Package B predictions.

Can we “save a ton” with weatherization measures?

YES!

It depends on project conditions, but we have found Package A can often save a half a ton of heating load and Package B can save a ton or more.

This allows for smaller heat pumps to be installed saving homeowners on both first costs and operating costs.

1 ton of heating load roughly equates to 1.75 KW of electricity demand at 5°F

LESSONS LEARNED

We can save a ton or more with weatherization work, particularly for homes the do not have wall insulation

Accuracy of the semi-custom simulation can be tuned up over time using ex ante energy consumption data analysis as a guide

Kicker incentive for Heat Pump installation following Wx work did not help drive cross-trade coordination

The standard packages, and simplified modeling and workflows make the program very attractive to contractors and indicators are promising for scalability

Incentive levels higher than 50% of project costs to not appear to be necessary to drive uptake

Added program rules and process increase complexity, eroding the benefits of the measure package approach.

We should be valuing weatherization work primarily as permanent load reduction (reducing costs to the homeowner) and as a mitigation strategy to reduce future winter peak electricity when heat pumps are installed.

Energy savings can also be captured as a side benefit.

Thank you

Courtney.Moriarta@nyserda.ny.gov

Keith.Bohling@nyserda.ny.gov

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Con Edison's Residential and Multifamily Weatherization Programs

Downstate Regional Residential Weatherization Program Technical Conference

June 26, 2025

Weather Ready (1-4 family homes)

Current Con Edison Weather Ready Offering

Program Eligibility

- Single Family Residential or Small Multifamily (2-4 Units) Residential Buildings
  - Using Con Edison gas for heating
  - Using Con Edison electric for heating (resistance or heat pump)
  - Using a delivered fuel (*e.g.*, fuel oil, propane, etc) for heating and Con Edison for electricity
- New Construction and major rehabilitation projects are not eligible
- Customers must work with a registered participating contractor
  - Contractors required to be BPI certified

Measure Requirements

- Mandatory Measure: Air Sealing
  - Whole home w/ blower door test
  - Blower door test exemption w/ the presence of health hazards
- Opaque Shell Insulation (Must select one or more)
  - Attic
  - Roof slope
  - Knee-wall
  - Exterior wall
  - Ceiling and overhang
  - Crawl space ceiling or wall
  - Rim Joist
  - Attic ventilation
- Optional: Duct Sealing and Insulation

Customer Incentives: Based on Heating Fuel

	Gas, Delivered Fuel or Electric Resistance		Geothermal or Air Source Heat Pump	
	Incentives	DAC Enhanced Incentives*	Incentives	DAC Enhanced Incentives*
Single Family	$2,000	$2,500	$1,000	$1,250
Two Family	$2,500	$3,000	$1,250	$1,500
Three Family	$3,000	$3,500	$1,500	$1,750
Four Family	$3,500	$4,000	$1,750	$2,000

Contractors awarded an additional $1,000 for a completed project

Incentives are capped at 70% of project cost

*Disadvantaged Communities are defined by the New York State Climate Justice Working Group. For more information and to confirm customer eligibility, visit nyserda.ny.gov/ny/Disadvantaged-Communities

Performance to Date

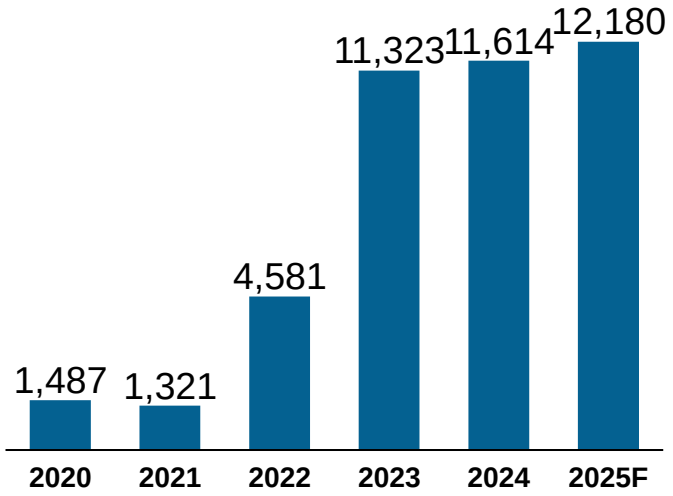
Pilot Program (2017-2019)

- Completed ~100 projects
- Completed M&V Study

Weather Ready Program (2020-2025)

- More than doubled number of participating contractors from 2020-2025
- ~90% of projects in Westchester
- Completed a program evaluation

Weather Ready Savings (Post-VGS Annual MMBtu)



	2020	2021	2022	2023	2024	2025F
# of Projects	119	107	182	607	674	860

Takeaways

Lessons Learned

- Increased incentive offering is needed to drive further growth
- Multiple programs in the same service territory creates additional administrative burden and complexity
- Simple, easy to understand program design works
- Requirements are important to ensuring higher quality
  - Blower Door Test
  - Photo evidence of insulation depth installed
- Consistency of program offering allows for easier navigation of the program

Goals for the 2026 - 2030 Program

- Determining the right measures and incentive levels to drive participation responsibly
- Increasing participation in New York City
- Designing offerings and tiers so they are easy to understand for customers and contractors
- Growing the contractor network to meet the level of activity ordered in NENY
- Maintain a consistent program offering

Non-LMI Multifamily Program

Current Con Edison Multifamily Weatherization Offering

Program Eligibility

- Existing multifamily buildings with 5 or more units
  - Use Con Edison gas for heating
  - Use Con Edison electric for heating (resistance or heat pump)
  - Use a delivered fuel (*e.g.*, fuel oil, propane, etc) for heating and Con Edison for electricity

Eligible Measures and Current Incentives*

- Attic Insulation - $3 per roof square foot
  - LTO offered at $5 per roof square foot
- Above roof-deck insulation - $3 per roof square foot
  - LTO offered at $8 per roof square foot
- Wall Insulation - $180 per MMBtu
- Window Replacement - $180 per MMBtu
- Air sealing - $3 per therm

** Incentives capped at 70% of project cost*

Performance to Date

Attic Insulation

- Increased incentive in 2023 to drive activity
- Developing contractor allocation structure to provide more certainty and encourage contractors to invest in growing capacity

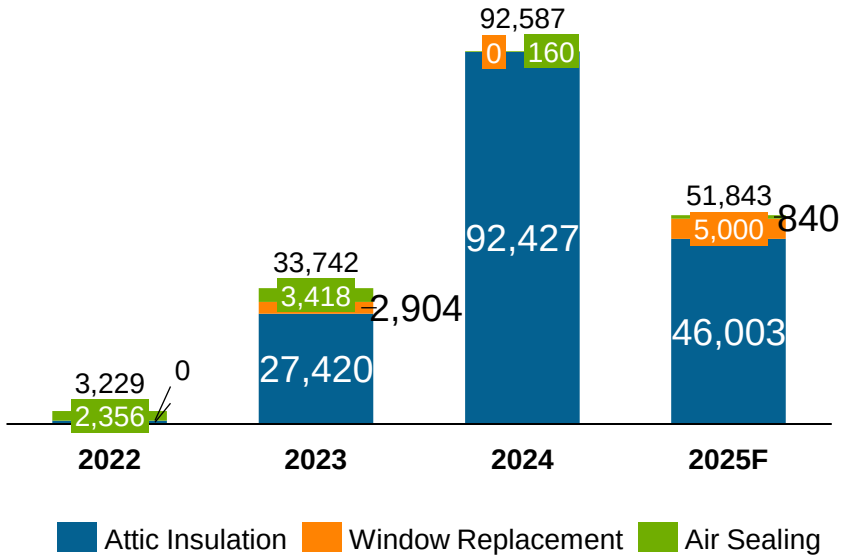
Wall Insulation

- 40 Injection Foam LMI projects accepted to date
- Developing plan to train and onboard contractors participating in the program to grow participation in both LMI and non-LMI

Windows

- Expensive and incentives are more complex to estimate
- Right sizing incentives and developing easier savings calculation methodology

Multifamily Weatherization Savings (Post-VGS Annual MMBtu)



Takeaways

Lessons Learned

- Building owners and contractors are price sensitive
- Ease of installation and reduction in tenant disruption is important for adoption
- Opportunities in both non-LMI and LMI multifamily buildings
- Simpler incentive structures are better (*e.g.*, $/SF rather than $/MMBtu)

Goals for the 2026–2030 Program

- Grow contractor capacity to meet the level of activity ordered
- Maintain a consistent program offering to provide certainty that allows contractors to invest in their businesses
- Develop simpler incentive structures for window and wall insulation to drive activity

2026-2030 Non-Low- to Moderate-Income Energy Efficiency and Building Electrification Portfolios

Technical Conference

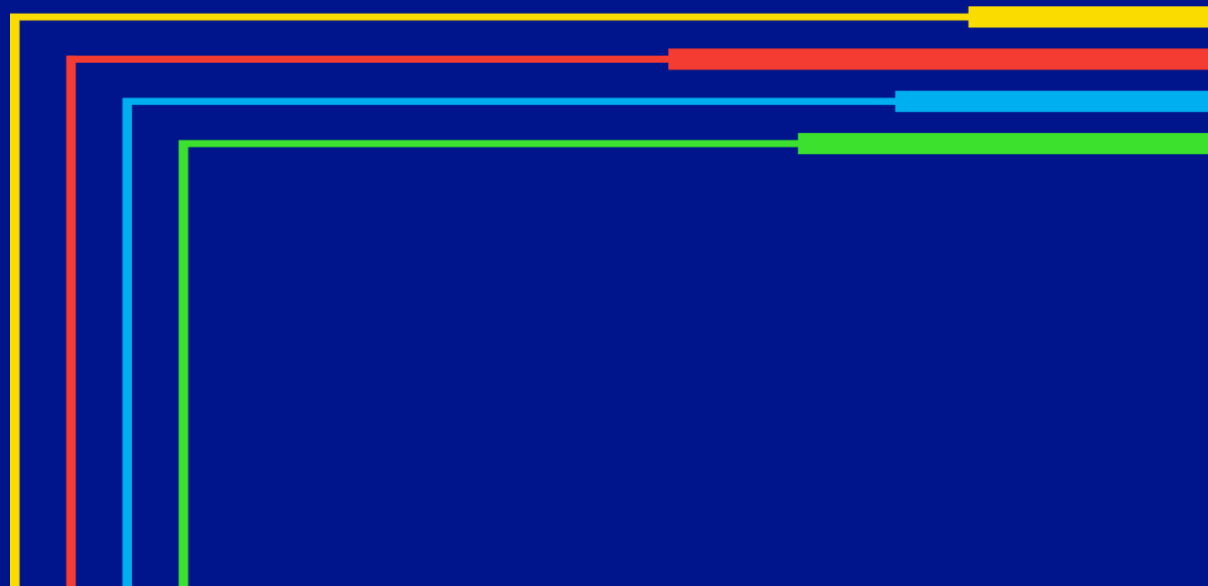
June 2025

nationalgrid

Agenda

- Introduction
- Overview of the Residential Weatherization Program
- Residential Weatherization Program Lessons Learned and Future Considerations
- Multifamily Weatherization Program Overview
- Multifamily Weatherization Program Lessons Learned

Residential Weatherization Program



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Program Overview: Total Home Comfort

In market from September 2021 to August 2023

Program Purpose:

Designed to maximize participation and demand reduction through the installation of building shell measures as part of broader company efforts to mitigate gas capacity constraints and avoid a moratorium in DNY.

Service Territory:

Offered in National Grid's Gas service territories in New York City (KEDNY) and Long Island (KEDLI).

Target Market:

Non-LMI residential gas heating customers in 1-4 unit buildings.

Program Pause:

Paused in August 2023 due to customer and contractor demand exceeding available funding.

Program Design and Performance

Incentives & Eligible Measures

- Incentives up to $20/therm of energy savings
- Air Sealing
- Attic/Ceiling Insulation
- Floor Insulation
- Pipe Insulation
- Storm and Window Replacement
- Wall Insulation

Contractor Network

- 129 participating contractors from 2021-2023
- ~80% of contractors active in NYC and LI
- Majority of contractors participated in Instant Rebates to reduce customer out-of-pocket costs

Projects & Energy Savings

- 7,603 total projects from 2021-2023
- 20% of projects had post-inspections
- ~5 million gross annual therms saved from 2021-2023
- ~1.4m verified gross annual therms saved from 2021-2023
- 28% VGS realization rate from an impact evaluation study

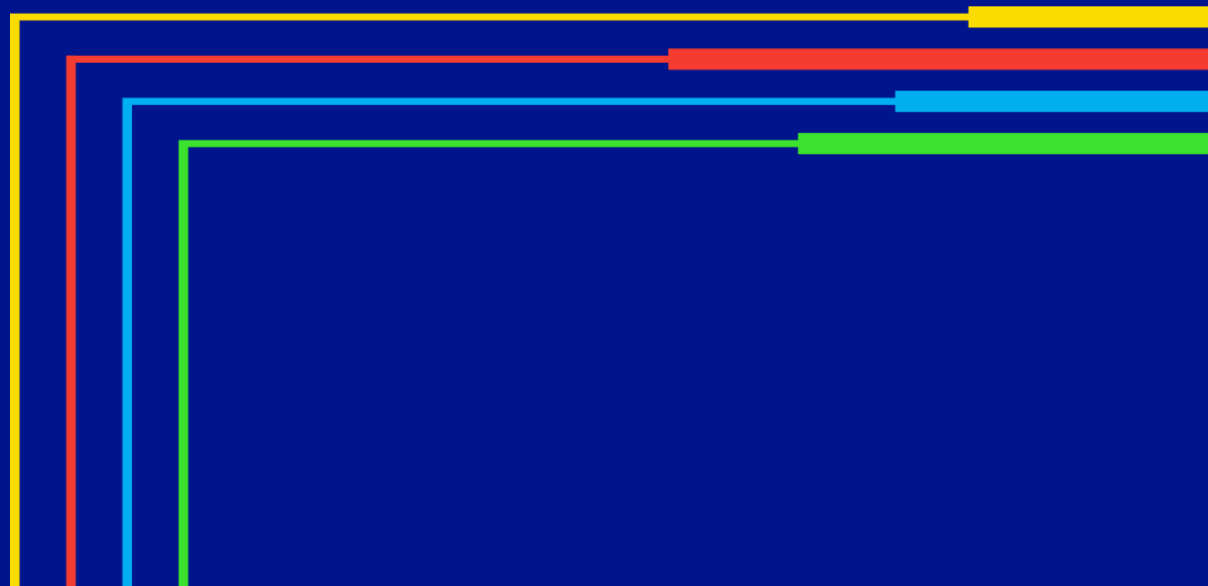
Lessons Learned

Contracts & Agreements	Improve participating contractor and customer agreements with more explicit terms and conditions.
Implementation Vendor	Utilize pay-for-performance contracts to hold vendors accountable and drive outcomes.
Program Manual	Develop and maintain a program manual for participating contractors with detailed guidance of program offerings and requirements.

Future Considerations

Incentives	Continuously adjust and review incentive levels to manage participation.
Equity	Increase engagement and participation for customers in Disadvantaged Communities.
Preapproval Process	Projects require preapproval prior to construction with clear expiration dates.
Project Documentation	Require more detailed documentation (pre/post-photos, install specs, etc.).
Contractor & Inspection Requirements	Contractors must provide proof of industry experience and complete trial periods.

Multifamily Weatherization Program



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Program Overview:
Multifamily Weatherization Program

In market from November 2021 to present.

Program Purpose:

Supports active DNY gas heating customers in enhancing building efficiency, boosting energy grade scores, avoiding potential fines, and reducing energy consumption and utility costs.

Service Territory:

Offered in National Grid's Gas service territories in New York City (KEDNY) and Long Island (KEDLI).

Target Market:

Market rate gas heating customers in multifamily buildings with 5 units and above.

Program Design and Performance

Incentives & Eligible Measures

- Tested Incentives from $11-19/therm
- AC Covers
- Air Curtains
- Air Sealing
- Opaque Shell
- Pipe Insulation
- Roof Insulation
- Wall Insulation
- Window Glazing and Film

Contractor Network

- 26 participating contractors from 2021-2025

Projects & Energy Savings

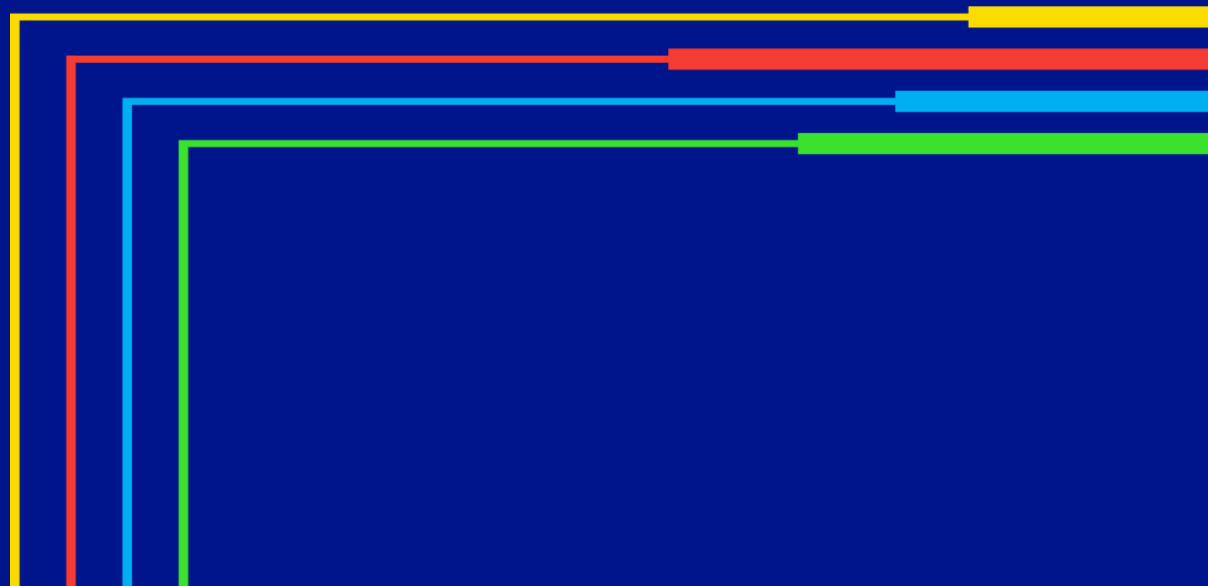
- 458 total projects since 2021
- Post-inspections requirements:
  - 100% third-party incentives
  - 10% customer incentives
- Achieved ~135k gross annual therms from 2021-2025
- VGS realization rate 83%

Lessons Learned

Incentive Structure	Incentives have been updated from a per-therm basis to metrics based on square feet, linear feet, and per unit. Using these standardized measurement units makes it easier to estimate the incentives that will be received.
Measure Enhancements	Introducing new measures to enhance energy efficiency: stand-alone air sealing, radiator radiant barriers, air curtains, and AC covers.

Thank you!

Alexa Ruscitto
Alexa.Ruscitto@nationalgrid.com



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New Hampshire and
Connecticut Programs

EVERSOURCE

Weatherization Program Design Models

Market Rate Customers

Steward of Energy Efficiency Funds

These programs and services are **managed and delivered jointly by electric and gas utilities** (including Eversource) and Energy Efficiency Service Providers within each state.

Common goal of helping residents and businesses across each state save money and energy through various program offerings, rebates, incentives and tips

Programs are state regulated, and the funding is supported from a charge on customers' energy bills.

Multiple Program Elements

There are a range of choices when designing weatherization programs, ranging from more market driven to more heavily managed approaches.

Each program element has multiple choices:

- Policy Objective
- Incentive Levels
- Incentive Delivery
- Project Delivery and Contractor Networks
- Pricing
- Energy Savings and Data Tracking
- Customer Acquisition

Policy Objectives

Capture Lower Cost Savings for More Customers

- Shorter visits focused on the most cost - effective measures such as air sealing and basic insulation
- Reach more customers with available budget
- Leaves savings on the table for later

Maximize Cost-effective Opportunity

- Full home recommendations screened for cost effectiveness at home and program level
- Do as much work as possible in the project while maintaining >1 cost benefit

Deep Retrofit

- More significant and costly measures for deepest possible savings
- Fewer projects or higher customer co-pays
- Most comprehensive for long term

Incentive Levels

Dollar amounts for eligible measures

Similar to tax credits or appliance rebates

Usually a percent of total project cost with a cap

Can also be paired with set program pricing to control costs

Ties incentive to performance

Harder for customer to understand upfront

Needs accurate modeling, post checks

Incentive Delivery

Rebate Back to Customer

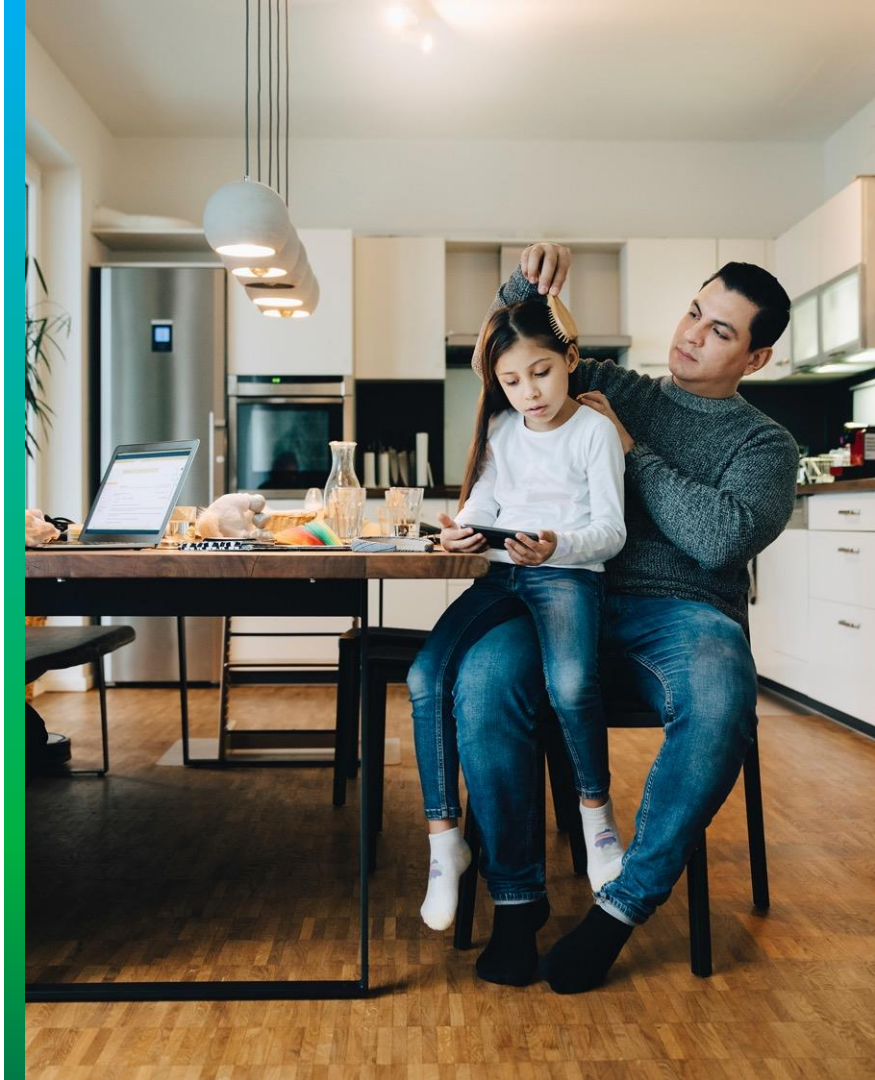
- Customer applies for and receives rebate after eligible project completion
- Direct payment to customer
- Customer covers full initial cost, or contractor waits for rebate payment

Two-party Checks to Customer and Contractor

- Program provides two party checks, allows customer to pay contractor during and after project
- Often used with loans

Paid Directly to Contractor

- Program pays incentives directly to contractor, reducing customer’s project cost
- Minimizes upfront cost for customer
- Provides accountability between contractor and program



Project Delivery and Contractor Networks

Open Market

Customer chooses a contractor to do eligible work

Often paired with rebate approach

Similar to tax credits or appliance rebates

Eligible Contractor List

Customer chooses contractor from list of approved vendors

More quality control for program

Customer managing their own project

Program Facilitated Delivery

Program contracts with approved vendors

Can be list or Lead Vendor with subcontracts

More project management support for customer

Project Pricing

Open Market

- Customer gets quotes from contractors who set their own pricing
- More for customer to manage
- Contractors compete for customers

Program Set Pricing

- Program determines pricing for eligible measures
- Through procurement or pricing index or other process
- Often paired with Program facilitated delivery
- Removes burden from customer
- Cost control for program

Energy Savings and Data Tracking

Deemed Savings

- Eligible measures assigned a deemed savings amount based on research and studies
- Requires the least field data and software
- Less accurate for individual customers

Modeled Savings with Baseline Assumptions

- Modeling software applies savings values per measure based on home analysis
- More accurate than deemed savings
- Requires studies to keep up with baseline assumptions

Fully Modeled and Trued-up Calculations

- Modeling software generates savings based on full input of existing conditions and usage
- Requires more information and time from customer
- Expertise in software

Customer Acquisition

Contractors bring in customers

Customer seek out projects

Requires high awareness of program

Contractors motivated by profit margins

Programs do broad outreach and awareness

Contractors bring in projects

Significant outreach

Community and vendor partnerships

Higher marketing costs

Program pays contractors and others for leads

New Hampshire

Policy Objectives

- Electric Savings Driven
- Fuel Neutral Weatherization allowed
- Maximize Cost Effective Opportunities

Incentive Levels

- **75% of project cost, up to $6,000**
- Air Sealing at 100%
- Some Health and Safety Measures required

Incentive Delivery

- Paid Directly to Contractor
- Customer gets quote for all recommended measures, incentives and customer co-pay amount after audit
- Utility pays incentive to contractor at completion

New Hampshire

Project Delivery and Contractors

- Program Facilitated
- Qualified Contractors, can be assigned or chosen
- Customer contracts with contractor directly
- Contractor provides Audit and installation per program rules

Project Pricing

- Program Sets Pricing
- Pricing set by the program at Measure level
- Program review of price list each year
- Customers do not need multiple quotes

New Hampshire

Energy Savings and Data Tracking

- Modeled Savings with Baseline assumptions
- PSD Compass Software for modeling and project tracking
- Recommended measures are specific to home conditions but savings are not adjusted for existing energy use.

Customer Acquisition

- Program and Market Driven
- Statewide program marketing efforts and targeted customer marketing
- Contractors bring in many of their own jobs

Connecticut

Policy Objectives

- Electric and MMBtu Savings Driven
- Fuel Neutral Weatherization allowed
- Capture low-cost Opportunities, allow for deeper savings

Incentive Levels

- Split in two program pieces
- **Core Service** - $75 co-pay, 100% air sealing, duct sealing, conservation measures
- **Additional Service** – insulation at $1.70/sq ft up to $10,000

Incentive Delivery

- Approach split similar to incentive
- Core Service – Paid Directly to Contractor
- Additional Service – Rebate after install, to customer (can be designated to contractor)

Project Delivery and Contractors

- Core Service - Program Facilitated
- Qualified Contractors, can be assigned or chosen
- Additional Service - Customer chooses contractor

Project Pricing

- Combination Set Pricing and Market Pricing
- Core Service – pricing set and established by bid process
- Additional Service – Market based, contractor provides a quote to customer
- Customers encouraged to obtain multiple quotes for Additional Service measures

Connecticut

Energy Savings and Data Tracking

- Modeled Savings with Baseline assumptions
- Audit tool provides projected savings, DOE Home Energy Score
- Recommended measures are specific to home conditions but savings are not adjusted for existing energy use.

Customer Acquisition

- Program and Market Driven
- Statewide program marketing efforts and targeted customer marketing
- Contractors are encouraged to generate their own leads

Connecticut

Program Size and Scale

Program Year 2025
Single Family Market Rate Weatherization

New Hampshire

Incentives: $9.3 Million

Homes: 1,535

Connecticut

Incentives: $38.9 Million

Homes: 22,441

*Due to program design, Connecticut program includes higher numbers of “Core Service” only homes, leading to a lower cost/home

Massachusetts

Incentives: $159 Million

Homes: 37,528

Meeting Customers Where They Are: Program Designs for Better Outcomes

Jennifer Amann, ACEEE

Downstate Regional Weatherization Approach Tech Conference
June 26, 2025

ACEEE
Smart Energy. Clean Planet. Better Lives.

About ACEEE:

The American Council for an Energy-Efficient Economy (ACEEE), is a nonprofit research organization that develops policies to reduce energy waste and combat climate change. Its independent analysis advances investments, programs, and behaviors that use energy more effectively and help build an equitable clean energy future.

Learn more at aceee.org

ACEEE

Smart Energy. Clean Planet. Better Lives.

Comprehensive retrofits

- Complex
- Expensive
- Disruptive
- Intimidating
- Unfamiliar
- Not why the customer called

What program approaches can better engage customers and help transform the retrofit market?

Program support for retrofits

Measure packages with bonus incentives

Staged retrofit plans/roadmaps

Enhanced customer engagement with trusted advisors

Mid-/upstream incentives

Partnering support and peer exchange networks

Training and support for equipment purchases

Loaner HVAC and WH systems

Measure packages with bonus incentives

- Simplify the program for contractors and customers
- Ensure the most critical upgrades are done while encouraging multiple packages
- Reduce lost opportunities and avoid lock-in effects

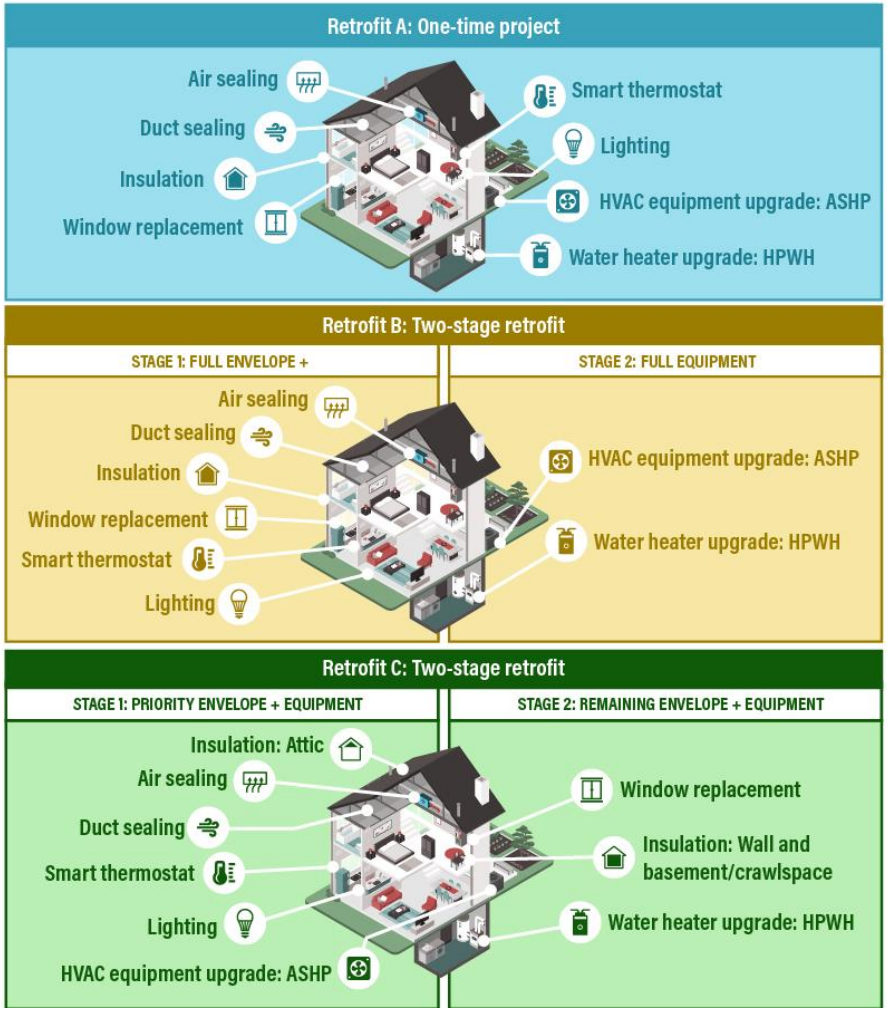
	NY Comfort Home			NY Clean Heat**	
Package	Measures	Incentive*	Contractor incentive	Contractor reward	Customer incentive
A. Good	Seal and insulate attic + seal and insulate rim joists	$2,500	Site visit and home assessment report (free to customer): ○ $300 w/blower door ○ $200 w/out blower door	Space conditioning HP: $300 - $1,000 HPWH: $50 to contractor; $50 to distributor	ccASHP: $500 - $1,600 per 10,000 Btu/hr max heating capacity
B. Better	Good package + insulate walls and floors	$3,000			
C. Windows Add-On	Better package + install ENERGY STAR windows or storm windows/insulated panels	$2,000			

**Incentive paid to contractor and must be passed on to the customer. Bonus incentives are offered for multiple packages: Package A customers who install Package B or C and Package B customers who install Package C are eligible for $1,000 toward the additional package if installed within one year of original package or $2,000 if more than one year after original package.*

***Contractor reward and customer incentive varies depending on 1) electric utility, 2) type of heat pump, 3) housing type, 4) household income, and 5) retention or removal of existing fossil fuel heating system*

Staged retrofits

- Use a sequenced retrofit plan/roadmap to
  - Align projects with equipment and appliance replacement cycles
  - Consider other home maintenance or remodeling work
  - Track progress toward their overall objectives (lower bills, reduced carbon footprint, resilience improvements)
- Incorporate existing tools
  - Home Energy Score
  - Pearl Certification
- Increase program flexibility
- Make the cost of decarbonization more manageable



Enhanced customer engagement: trusted advisors (e.g., concierge, energy coach)

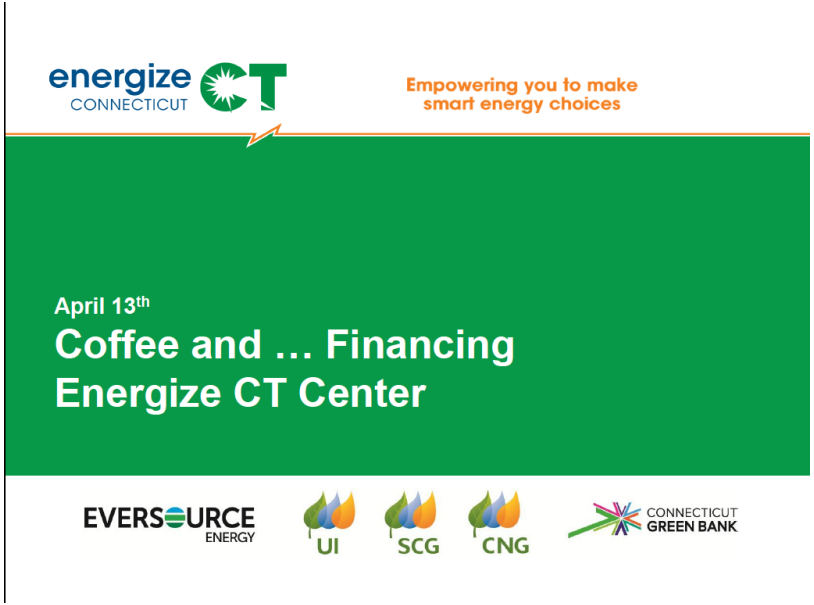
- Simplify the process for customers
- Keep customers engaged with check-ins and reminders
- Provide ongoing education and support
- Advisor may be:
  - Program staff or implementation contractor
  - Independent energy auditor
  - Member of contractor team
  - Non-profit or other third party

Platte River Power Authority Efficiency Works Homes

- $60 efficiency assessment (free to rental customers)
- Advisor recommends efficiency upgrades, helps review project bids, and plan for future projects
- Good, better, best project options customized to customer needs and budget; remaining upgrades incorporated into customer roadmap
- Efficiency Works rebates cover measures in customer's package
- $500 bonus incentive for completing envelope measure and heat pump installation within 6 months

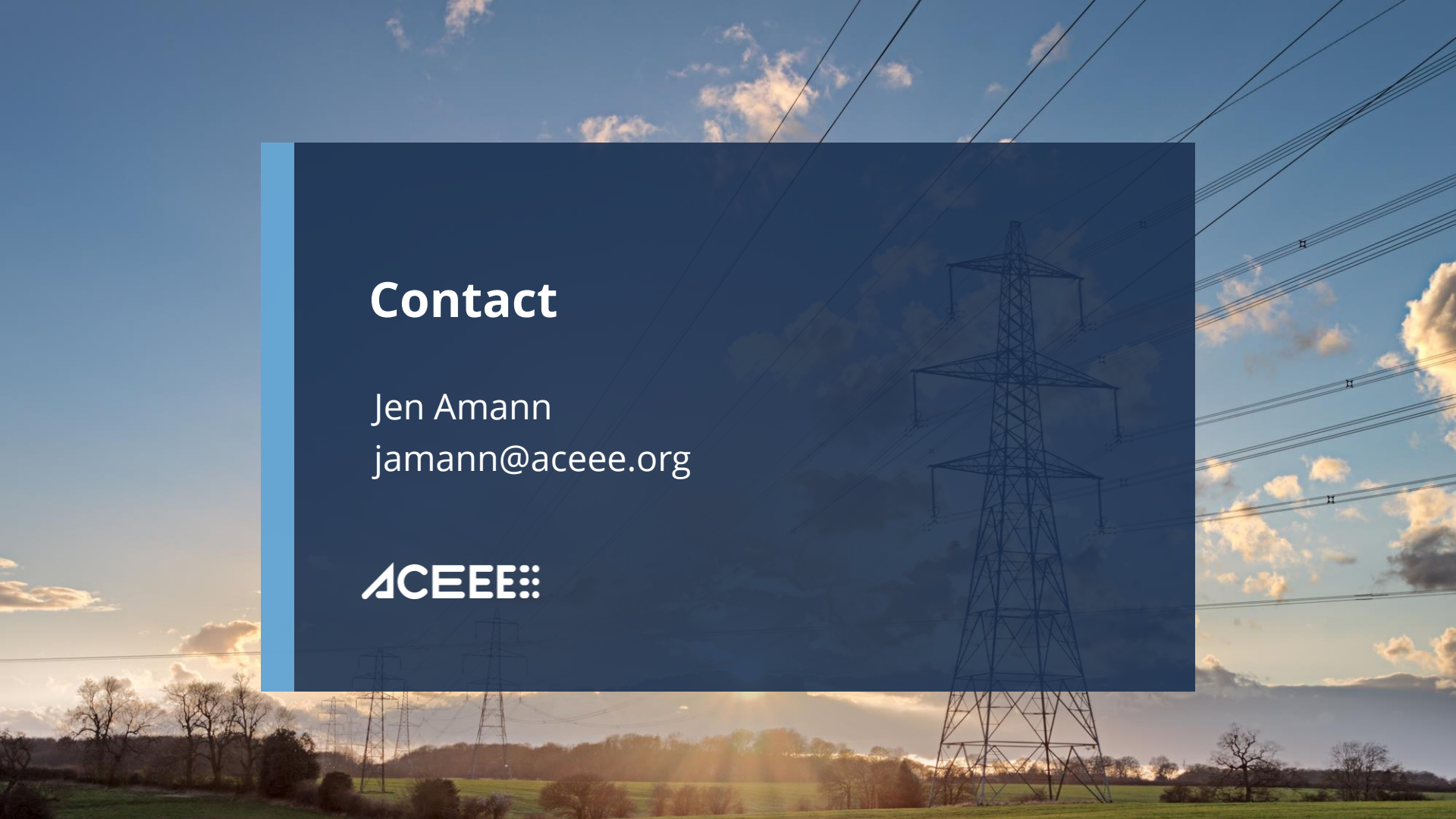
Additional program supports

- Mid- and upstream incentives
- Partnering support and peer networks for contractors
- Training on technical and soft skills
- Support for contractor equipment purchases
- Loaner HVAC and WH systems for customers



Program links and resources

- New York Comfort Home and Clean Heat program manuals
- Platte River Valley Authority Efficiency Works Homes: program website and case study for Fort Collins Utilities pilot program
- Home Energy Labels in Oregon: case study with program links
- Duquesne Light Company Home Concierge: blog post introducing program
- Concierge program approaches: report prepared for CT Energy Efficiency Board
- Pearl Certification and the Pearl App: https://pearlcertification.com
- European Union building renovation passports:
  - https://www.euki.de/en/effectively-implementing-building-renovation-passports/
  - https://www.dena.de/en/projects/individual-refurbishment-roadmap/
  - https://www.igbc.ie/wp-content/uploads/2020/09/Introducing-BRP-In-Ireland-Feasibility-Study.pdf



Contact

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NEW YORK STATE | Public Service Commission

Regional Residential Weatherization Program Technical Conference

Cases: 25-M-0248/18-M-0084

June 26, 2025: NYC

Guidelines for Proposals

- Adopt a regional approach based on building stock, with statewide consistency where possible
- Consolidated approach to procurement of program administration and implementation functions
- Streamlined shared services model for program activities at the regional or statewide level
- Identify which program functions are procured individually or shared, and justify individual procurement

Guidelines for Proposals

- Plan for ensuring that incentives for Non-LMI program are not greater than incentives for the LMI program for similar measures
- Approach to coordinating with the NYS Clean Heat Program
- Administrative structure used to enable collaboration among utilities to implement the Program and with NYSERDA
- Defined graduated tiers of weatherization levels for differentiated incentive levels
- Annual and total budgets and projected energy savings
- Proposals due August 13, 2025 (90 days post-Order)

Comments or Questions?

- Contact: Marc Carpenter (marc.carpenter@dps.ny.gov)