



Energy Efficiency & Electrification Programs

Multifamily buildings

City of Newton

January 19, 2023

WE ARE MASS SAVE®:



Agenda



- 2022-2024 Three-Year Plan: Overview & Priorities
- Energy Efficiency Offerings – Multifamily Buildings

2022-2024 Three Year Plan: Overview and Priorities



Chris Lavalley
Senior Analyst, Residential Strategy & Planning
Customer Energy Management - Massachusetts
National Grid

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2022-2024 Plan Overview



- Plan reflects specific changes and direction resulting from passage of Climate Act:
 - Achievement of Greenhouse Gas (GHG) reduction targets mandated by Climate Act, set by EEA
 - Incorporation of Social Cost of Carbon in benefit-cost testing
 - Ongoing commitment to equitable outcomes
- Programs also still operating under Green Communities Act mandate to achieve “All Cost Effective” energy efficiency
- Final Plan a product of extensive feedback from MA EEAC Councilors, DOER, and other stakeholders

The 2022 – 2024 Plan represents a major expansion of the Mass Save programs, with a GHG focus added to nation-leading efficiency offerings

Energy Efficiency Program Evolution



- Shift in focus away from lighting, but still some significant upgrade opportunities
- Increasing program focus on comprehensive projects including:
 - Weatherization
 - HVAC system optimization
 - Process Improvements
 - HVAC controls
- Introduction of “deep energy retrofit” pathways for multifamily and commercial buildings
- Phase out of natural gas combined heat and power (“CHP”) incentives - no new natural gas CHP projects incentivized in 2022-2024
- Active demand response remains an important piece of the portfolio; reduces overall grid costs and helps create the “flexible” grid of the future

Plan Priorities



Statewide Targets (Combined Natural Gas & Electric)		Plan Priorities
Total Benefits	\$7.4 billion	ELECTRIFICATION <ul style="list-style-type: none">• Driving key pathway to decarbonizing building sector• Increased emphasis on fuel conversion, with continued attention to complementary measures, such as weatherization, to promote right-sizing EQUITY <ul style="list-style-type: none">• Ensuring that programs are accessible to, utilized by and delivered through a representative cross-section of the Commonwealth WORKFORCE DEVELOPMENT <ul style="list-style-type: none">• Training & maintaining a robust and diverse workforce critical to achieving all desired outcomes• Partnership with MassCEC
Net Annual All-Fuel MMBtu Savings	20.7 million	
Annual GHG Emissions Reductions (Metric Tons CO₂e)	0.95 million	
Total Statewide Budget	\$2.9 billion	

Building on EE programs' foundational role in supporting Commonwealth's energy and climate goals through equitably delivering energy efficiency, demand response, and electrification

Multifamily Program



Marge Kelly
Senior Energy Efficiency Consultant
Energy Efficiency
Eversource

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Multifamily Buildings are Part of Residential Coordinated Delivery



Residential Coordinated Delivery

- Single Family
- Low Rise (individual HVAC, 2+ units)
- High Rise (Central HVAC and/or 5+ stories)

Income Eligible Coordinated Delivery

- Single Family (1-4 units)
- Multifamily (5+ units)

Residential Coordinated Delivery Energy Efficiency Services



- **Education** to help you understand your energy use
- **Incentives and Financing** for balance of the selected measures
- **Ease of Use** with a turnkey approach with qualified contractors or bring your own contractor



The Program Administrators are committed to addressing the needs of the building owner/decision maker.

Who is the Customer?

Multifamily Customer Segments



Energy Saving Measures



Building Envelope



Aerators & Showerheads



Boiler Clean & Tune



HVAC



Efficient Thermostats



Steam Traps



Water Heaters



Variable Frequency Drive



Heat Pumps/VRF



Direct Install Lighting



Lighting & Controls



Energy Savings Packages

Others as evaluated and deemed cost effective

Heating Ventilation Air Conditioning



- Heating – Boilers, furnaces and steam traps
- Motors and Drives for pumps and fans
- Chillers
- New! - Building Management Systems (BMS)
 - Supports installation of new BMS, adding new sequences to existing BMS, and replacement of existing BMS
- Wi-Fi and Programmable Thermostats



Savings and rebate opportunities are available for all you HVAC needs.

Water Heating



- New! - Electric Heat Pump Water Heater
 - \$1,000/unit up to 80 gallons
 - \$2,200/unit for 81-120 gallons
- Domestic Water Heaters
- Pool Heaters
- High-Speed Clothes Washers



There are many opportunities to save on efficient water heating equipment.

Mixed Income Properties



Market Rate

- <50% of units are affordable
- Works with Mass Save

LEAN Multifamily Program

- At least 50% of units are affordable
- Works with LEAN

<https://leanmultifamily.org/>

Apartment Buildings



- 1. No-cost assessment by an Energy Specialist
 - - Identify or confirm opportunities for insulation, air-sealing, thermostats, occupancy sensors, and HVAC and mechanical upgrades
 - - If warranted, a sampling of individual units
- 2. Property Manager/Owner chooses scope of work - chooses/assigned a contractor - lead vendor who serves as single point of contact
- 3. Incentives - Incentives from MassSave are applied to project (**100% air sealing and insulation**) The building owner is eligible for in unit/tenant paid utility meter incentives/rebates - could be prescriptive rebates or custom project based on savings potential and scope of work

- Condos low rise buildings are eligible for **up to 100%** weatherization coverage if all condo owners agree to participate. For high rise buildings incentive **up to 75%**, if all condo owners agree to participate.
- Heat Pumps –
 - Prescriptive incentives/rebates for individual condo owners
 - Owners eligible for the MassSave Heat Loan
 - <https://www.masssave.com/residential/rebates-and-incentives/heat-loan-program>
- Condo/Co-op Associations – decision maker for common area measures especially weatherization. Typically, the decision maker for in-unit measures is the condo owner.

How to participate



Schedule a time to connect with an energy efficiency expert via phone or video



During your assessment, we'll identify energy-saving opportunities and answer any questions



We'll schedule an in-person audit when you're ready. Afterwards you'll get a detailed report of all the ways you can save your business money and energy

<https://www.masssave.com/en/multi-family>

Once you receive your report, you can decide how you would like to participate and at a time that is convenient for you.



Electrification Offerings

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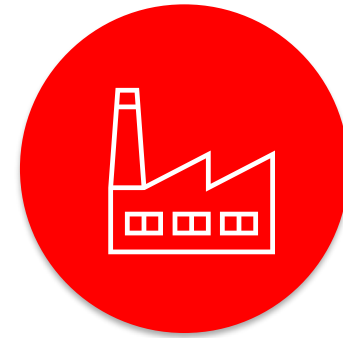
Electrification: What and Why?



**Conversion
from fossil
fuel to
electricity**



Aligned with a
shift toward a
cleaner
electrical grid



Path to
reducing GHG
emissions

Electrification encompasses more than just the energy efficiency programs, but electrifying Massachusetts' built environment is a significant step in achieving the Commonwealth's goals.

Electrification: How?



- Primary focus on space heating
 - Heat Pumps
 - Partial or full electrification
- Other areas include:
 - Lawn equipment
 - [MassSave.com/CILawnEquipment](https://www.masssave.com/CILawnEquipment)
 - Domestic hot water (heat pump)
 - Dehumidifiers + Room ACs
 - Induction cooktops
 - Clothes Dryer



Electrification: Heat Pumps



Prescriptive

- Projects with capacity up to 150 tons (based on AHRI rated cooling capacity)
- Equipment must be used for at least some heating and some cooling
- Must use integrated control module (ICM) if partially electrifying
- Equipment and ICMs be listed on qualified products list:
www.MassSave.com/cihpqpl
- Eligible equipment
 - Air source (air-to-air) heat pumps
 - Variable refrigerant flow air source heat pumps
 - Ground source heat pumps

Custom

- Projects with total capacity over 150 tons
- Projects involving equipment not covered by the prescriptive offer
- Projects in which equipment is used for only cooling (e.g., data centers, cannabis) or only heating
- Project incentive eligibility criteria
 - Must produce net MMBtu reductions
 - Must NOT increase GHG (i.e., CO₂) emissions
 - Must meet cost-effectiveness criteria

For more information about heat pumps, please visit www.MassSave.com/ciheatpump

Prescriptive Heat Pump Incentives



Air Source (air-to-air) Heat Pumps

Includes single- and multi-head split systems, as well as unitary equipment

\$1,250/ton or \$2,500/ton

Air Source Variable Refrigerant Flow Heat Pumps (VRF)

Includes systems larger than 5.4 tons that meet AHRI Standard 1230

\$3,500/ton

Ground Source Heat Pumps

Includes both closed and open loop systems

\$4,500/ton

Excludes projects participating in the Mass Save New Buildings/Major Renovation program; for more information visit: www.MassSave.com/cincmr

Weatherization and Electrification



- Effective weatherization can help enable and bolster electrification efforts
 - Reduce heating and cooling loads
 - Improved building shell
 - Reduced ventilation loads
 - Smaller HVAC equipment
 - Cost and energy savings
 - Maximize decarbonization
- Weatherization may be required for certain incentives



Thank you!

Mass Save® information:
www.masssave.com/multi-family

For questions or for help reaching your energy efficiency solutions representative:

Lori Timmermann
Lori.Timmermann@NationalGrid.com
781-605-4365

Mark Rooney
Mark.Rooney@Eversource.com
339-987-7826