

AEE - ASHRAE Boston Chapter Meeting
March 20, 2024



Commercial Electrification

WE ARE MASS SAVE®:





Together, we make good happen for Massachusetts.

Your local electric and natural gas utilities and energy efficiency service provider are taking strides in energy efficiency: Berkshire Gas, Cape Light Compact, Eversource, Liberty, National Grid and Unitil.

As one, we form Mass Save[®], with the common goal of helping residents and businesses across Massachusetts save money and energy, leading our state to a clean and energy efficient future.

WE ARE MASS SAVE[®]:

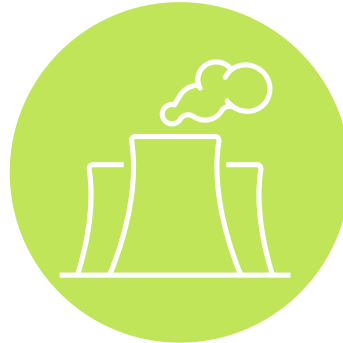


We Are Mass Save[®]

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; 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:
 - Battery-Powered Lawn equipment
 - Battery-powered forklifts & chargers
 - Domestic hot water (HPWH)
 - Induction cooktops
 - Process loads

2023
Existing Buildings

mass save

Commercial Heat Pump Rebates

2023

mass save

WE ARE MASS SAVE:
BERKSHIRE GAS EVERSOURCE Liberty

Commercial Battery-Powered Lawn Equipment

WE ARE MASS SAVE:
BERKSHIRE GAS EVERSOURCE Liberty nationalgrid Unilil



Heat Pump Offerings

New Construction and Major Renovations

New Construction & Major Renovation Program Overview



Per-ton heat pump incentives



Focus on low Energy Use Intensity (EUI)



New buildings and additions **MUST** be all electric to participate (very limited exceptions)



Air-Source Heat Pumps
\$800/ton






VRF Heat Pumps
\$1,200/ton



Ground-Source Heat Pumps
\$4,500/ton

New Construction & Major Renovation Participation Pathways

Path 1	Path 2	Path 3
Net Zero & Low EUI Buildings	Whole Building EUI Reduction	High Performance Buildings
		



Low EUI Pathways

For more information about New Construction, please visit: www.MassSave.com/cinclr

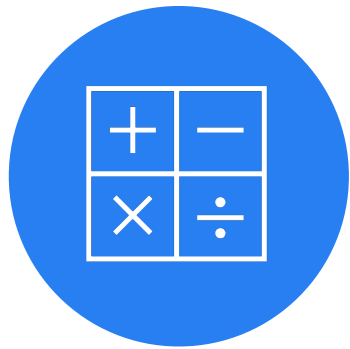


Heat Pump Offerings

Existing Buildings

Electrification: Heat Pumps

Prescriptive Rebates



ELIGIBLE EQUIPMENT (MUST BE ON QPL)

- Air source (air-to-air) heat pumps
- Variable refrigerant flow air source heat pumps
- Ground source heat pumps (geothermal)

ELIGIBLE PROJECTS

- < 150 tons, partial or full displacement
- Used for space heating and cooling
- Existing buildings only

Custom Path



USE CUSTOM FOR...

- Projects >150 tons
- Equipment not covered by prescriptive offer
- Process heating

ELIGIBILITY CRITERIA

- Must produce net MMBTU reduction
- Must NOT increase GHG emissions
- Must meet cost-effectiveness criteria

**Fuel Displaced
Determines
Mass Save
Sponsor**

If displacing natural gas: **Gas Sponsor**

If displacing oil, propane, or electric resistance (HP-to-HP not through this path): **Electric Sponsor**

Prescriptive Heat Pump Rebates

Air Source (air-to-air) Heat Pumps [ASHP]

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

\$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 [GSHP]

Includes both closed and open loop systems

\$4,500/ton

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

Custom Heat Pump incentives



ASHP, VRF, GSHP

Projects larger than 150 tons

**Up to prescriptive rates
(\$2,500 - \$4,500 per ton)**

**Subject to approval (budget
and installed cost)**



Other Equipment and Process Applications

i.e., Air to water heat pumps, heat pump chillers, water source heat pumps, industrial heat pumps

**Custom incentive rate
relative to net MMBTU
savings**

Technical Assistance

Electrification Scoping / Feasibility Studies

- High-level site assessment
- Present viable electrification opportunities
- Electrical service capacity

PAs provide full support

- Contracted vendors only
- Eversource and National Grid

Focused study may be required

- Customer cost share
- Custom incentive offer



Customer Directed Studies

Electrification Scoping / Decarbonization / BERDO compliance studies

- Deliverables must meet minimum requirements
- Prequalification required (sample studies, relevant experience, etc.)
- Future work not guaranteed

Eversource and National Grid co-fund with customer

- PAs pay up to \$5,000, up to 50%

Focused study may be required

- Customer cost share
- Custom incentive offer



Customer Directed Studies Requirements

Minimum requirements

ASHRAE level I style report

- EUI Data
- CO2 savings

Energy Efficiency

- Must look at all energy efficiency measures that are cost-effective in a decarbonized future, which were not reviewed due to cost effectiveness under EE BCR

Electrification

- Determination of viable electrified solutions to building
- Determination of any existing infrastructure that can be repurposed for electrification
- Review of Electric capacity

Full requirements are available from Program Sponsor



Large C&I Electrification

Existing Buildings

Multifamily ATWHP

- Partial electrification of a Multifamily site with WSHP
- Installed a Heat Pump Chiller (A2W) displacing gas fired boilers for when the OA temps are above 10F.
- Boilers will remain.
- No service upgrade needed
- 41,195 therms saved annually
- 389,416 kWh increase annually
- Project Cost 1M
- Incentive 895K



Hospital Sterilizer

- Conversion of steam sterilizer to electric resistance sterilizer in conjunction with converting the high-pressure steam system to low pressure for entire hospital
- “Entire” was classified as electrification by the derivative classification
- 33,331 therms saved annually
- 310,873 kWh increase annually

Project Cost: \$2.2M

Incentive: \$1.1M



Grocery Store Heat Recovery

- Installation of a heat recovery chiller in conjunction with the refrigeration equipment. With the installation of the HP they will no longer need a gas boiler.
- 29,187 therms saved annually
- 232,883 kWh increase annually

Project Cost: \$773k

Incentive: \$600k



Mass Save Contacts

*The customer's sales executive is their main point of contact,
but if not known, or for general inquiries*



New Construction / Major Renovations

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To identify Sponsor, please visit

www.MassSave.com/en/find-your-sponsor

Questions?

WE ARE MASS SAVE®:





Thank you.

We look forward to working together to meet the goals of our mutual customers

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