

Action Implementation Blueprints



ACTION NAME

Increase electrification and improve energy efficiency of residential buildings.

DESCRIPTION OF ACTION

Residential buildings contribute 30% of GHG emissions in Concord. Reducing emissions by improving energy efficiency and electrifying heating and cooling in homes will be critical to achieving GHG goals. Efficient homes are also more resilient to extreme weather and a changing climate.

Programs, financial incentives, and education campaigns will enable residents to improve the energy efficiency in their homes and transition to electric heat pumps for heating and cooling.

CHAMPION

Concord Municipal Light Plant (CMLP) and Sustainability Division

IMPLEMENTATION STEPS

PLANNING CONSIDERATIONS

TIME FRAME

KEY PARTNERS

1. Explore and provide streamlined pathways for residents to go from audit to action, such as:

- a. Providing and following up on home energy assessments
- b. Heating/Cooling Coaching services
- c. Energy advisor services to assist residents in following through on home energy assessments
- d. Lists of participating contractors familiar with Concord programs and incentives
- e. Facilitating creative financing mechanisms such as on-bill financing, revolving loan funds, third-party financing, zero-interest loans, etc.

2021-2025

- Comprehensive Sustainability and Energy Committee (CSEC)
- CMLP
- CAAB
- Residents
- Multifamily property owners
- Financial institutions
- Built environment professionals
- Energy New England
- Mass Save
- HeatSmart Alliance

2. Promote and provide education on home energy assessments, home energy efficiency improvements, and electrification through activities, such as:

- a. "Your Sustainable Home Now!" materials designed by CSEC for residents
- b. Materials designed for new residents
- c. Up-to-date and interactive resources on the Town website
- d. Mailed materials
- e. Video testimonials, interviews, and presentations
- f. Tabling at local events
- g. Hosting events designed for homeowners, multifamily property residents or owners, and/or energy professionals
- h. Partnering with schools

2021-2025

- CSEC
- Sustainability Division
- CMLP
- CAAB
- Residents
- Multifamily property owners
- Built environment professionals
- Community organizations (congregations, schools, grassroots)
- Schools

3. Explore potential for time of sale energy assessment requirement and report out on pros/cons, costs/benefits, and recommendation to implement in Concord.

- a. Understand experiences of communities piloting policies
- b. Engage with external stakeholder groups on pros/cons and costs to implement
- c. Engage with state to evaluate potential for state-wide policy

2022-2025

- CAAB
- Sustainability Division
- CMLP
- Residents

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FINANCING RESOURCES AND MECHANISMS

Residential incentives and rebates:

- [Mass Save](#)
- [CMLP Rebates](#)
- [MassCEC](#)
- [Mass Solar Loan](#)
- [Performance Contracting](#) with an Energy Services Company (ESCO) – [performance contracting](#) will be a viable option for multifamily properties and can be configured for both owner- and tenant-paid utility models.
- [Database of State Incentives for Renewables & Efficiency \(DSIRE\)](#)

TRADEOFFS (CHALLENGES/BARRIERS)

- Upfront technology costs may be significant, even after incentives.
- Homeowners may not be incentivized to make upgrades if the payback is longer than their intended ownership timeline.
- Technology knowledge, particularly with air source heat pumps and advanced building envelope improvements may be limited.
- The process of selecting among multiple heat pump equipment, envelop improvement, and installer options can be confusing and complex.

EQUITY CONSIDERATIONS

- Continue to provide enhanced incentives for low- and moderate-income residents.
- Ensure that educational materials and programs are designed to not only include homeowners, but also renters, multifamily dwelling residents, etc.
- Split incentive issues may arise where commercial and multifamily property owners are not incentivized to upgrade buildings where tenants pay utilities.

TRACKING SUCCESS

Outputs:

- Increase in local knowledge of building energy efficiency and electric heating and cooling technologies, reduction in energy use intensity of existing buildings.
- Increased adoption of heat pumps and building envelope improvements.

Outcomes:

- Reduced GHG emissions from residential buildings
- Reduced energy use intensity (EUI) in buildings
- Improved indoor environmental quality
- Enhanced energy resilience

ENGAGING THE COMMUNITY

- Success in this action will depend on a broad and effective community engagement approach. This will involve multiple stakeholders including town departments, schools, community groups, and volunteers. It will require reaching new audiences. Community engagement should also be coordinated with engagement on other climate and sustainability topics.
- The Comprehensive Sustainability and Energy Committee (CSEC)'s charge is to engage the community on sustainability initiatives. They have had great success in promoting heat pumps, sustainable landscaping, weatherization, and other sustainability measures. They will be an important stakeholder in engaging the community.