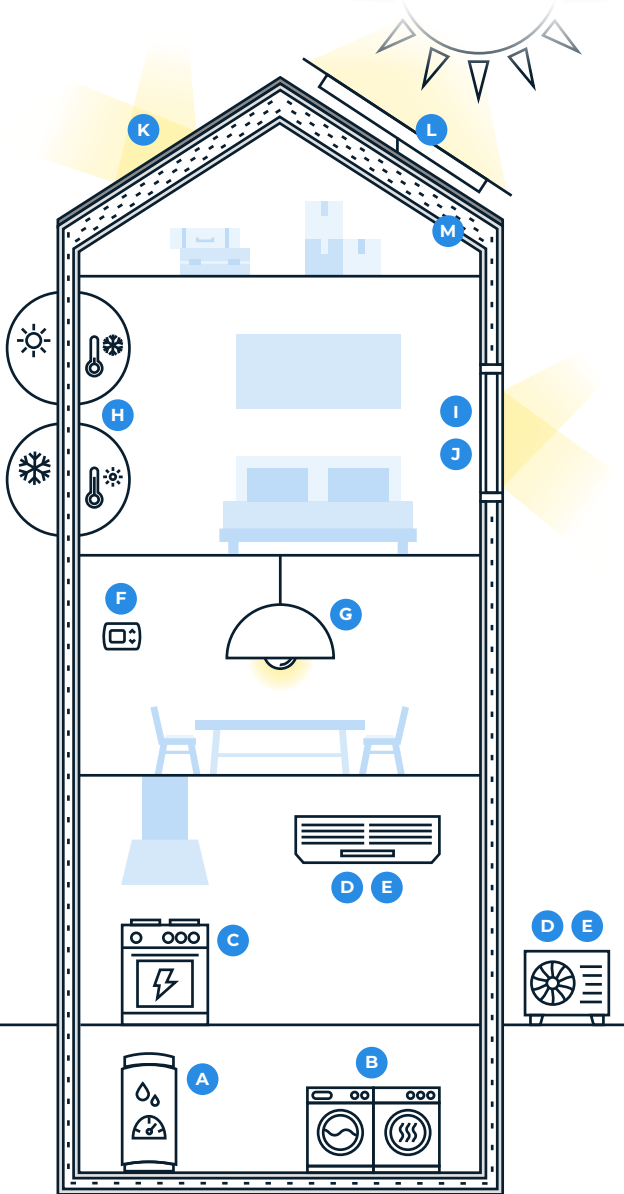


BUILDING DECARBONIZATION

HOW TO MAKE HEALTHY, LOW-CARBON BUILDING IMPROVEMENTS



These measures have been shown to reduce energy use, greenhouse gas emissions, and maintain overall comfort in buildings. For more ideas, visit our [Retrofit Resource Hub](#), or visit [Mass Save](#).



A. HOT WATER

Heating water uses a lot of energy. Consider upgrading to a more efficient electric hot water heater.

B. INSTALL ENERGY STAR APPLIANCES

Plan to replace appliances with ENERGY STAR¹ certified electric appliances at the end of their useful life. Check [Mass Save](#) to see if new equipment is eligible for rebates.

C. INSTALL INDUCTION STOVES

Induction stoves are highly efficient electric stoves. Switching away from gas stoves can improve indoor air quality and provide a healthier cooking experience.

D. SWITCH TO HEAT PUMPS

Heat pumps are an alternative to fossil fuel² heating systems. Cold climate heat pumps can provide efficient heating in the winter and cooling in the summer.

E. EFFICIENT HVAC UPGRADES

A building's Heating, Ventilation, and Air Conditioning (HVAC) system generally consumes the most energy, with less efficient systems accounting for over 40% of a building's emissions.

F. TEMPERATURE CONTROLS

ENERGY STAR certified smart and programmable thermostats can save users an average of 8% on their utility bills. For accurate readings, locate your thermostat in a room you use a lot, on a clear wall inside your home.

G. INSTALL LED BULBS

LEDs provide the same brightness as traditional light bulbs but use 90% less energy and last up to 15 times longer.

H. WEATHER STRIP AND SEAL

Weather stripping along windows and doors can help improve a building envelope³ and prevent conditioned air from leaking outside.

I. WINDOW UPGRADES

Replace single pane windows with more efficient ENERGY STAR rated windows.

J. WINDOW TREATMENTS

Blinds with reflective finishes, honeycomb shades, or well-hung draperies can stabilize room temperatures in south-facing windows with more sun exposure, reducing the need for cooling in hot months.

K. ROOF UPGRADES

Sealing cracks with roof sealer, and adding insulation can prevent conditioned air from escaping. Roofs coated with light colors like white paint can reflect heat from the sun during summer months, reducing the need for air conditioning.

L. SOLAR ENERGY

Installing solar panels or joining a community solar project are some ways to obtain local renewable energy.

M. IMPROVE INSULATION

Insulation helps keep a building warm in the winter and cool in the summer by reducing the amount of conditioned air that can escape through a building envelope.

1 An ENERGY STAR rating is an EPA certification given to energy-efficient products that use less energy and help reduce utility bills and greenhouse gas emissions.

2 Fossil fuels include natural gas, fuel oil, diesel, propane, and kerosene.

3 A building's envelope includes all the building components that separate the indoors from the outdoors including exterior walls, foundations, roof, windows, and doors.

GET STARTED WITH MASS SAVE

Energy Audits

[Commercial and Industrial Facilities](#)

[Residential](#)

[Eligible Income Based Assistance](#)

Rebates, Incentives, and Loans

[Residential](#)

[Commercial](#)

RESOURCES

About BERDO: boston.gov/berdo

Pathways for Emission Reduction:
boston.gov/retrofit-hub

Massachusetts Clean Energy Center:
goclean.masscec.com

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