Weatherization Checklist

WHAT YOU'LL GET FROM WEATHERIZATION

- ☑ Save money on heating and cooling costs
- ☑ Increase comfort by reducing drafts and uneven temperatures
- ☑ Reduce your home energy consumption
- ☑ Reduce your home's greenhouse gas emissions
- ☑ Buy a smaller heating or cooling system the next time you need to replace it

A home energy assessment is the first step in learning about your home's weatherization strengths and weaknesses. Mass Save® offers no-cost energy assessments. An energy professional will evaluate your home virtually or in-person and recommend weatherization upgrades. Mass Save® pays for 75% (or higher for income-eligible homeowners) of insulation and air sealing work. If Mass Save® doesn't service your town, check with your local electric provider about their energy assessment offerings.

Weatherization solutions that fall outside of the incentives from Mass Save® or your electric provider may not be proactively suggested during a professional home energy assessment. However, all the items on this checklist are still important to investigate when tightening your home's envelope, especially if you are considering electrifying your home's heating. **Use this checklist to get the most out of your meeting with a home energy assessment professional.**

ATTIC AIR SEALING AND INSULATION

☐ **Is your attic accessible to home energy contractors? If so, should you air seal and add insulation?**

Since heat rises, it's important to reduce air leaks between your living space and your attic.

Fast Fact: Air sealing must be done before adding insulation. An insulating material's resistance to conductive heat flow is measured or rated in terms of its thermal resistance or R-value. The Mass Save® standard insulation level for attics is R-49. Achieving this level of insulation requires at least 15 inches of thickness of fiberglass or cellulose, or a combination of the two.

KNEE WALL INSULATION

☐ **If your home has knee walls (short walls that support roof rafters under a pitched roof) should you insulate them?**

Insulating a knee wall can prevent air from leaking out of your living space into the roof area.

Fast Fact: Add insulation between the studs of a knee wall and put rigid foam board insulation on the exterior-facing side of the knee wall. Make sure your contractor pays attention to the connection points where the knee wall meets the floor joists and roof rafters to minimize air leakage.

Clean Energy Lives Here | Massachusetts Clean Energy Center

Weatherization Checklist

WALL INSULATION

☐ **Does your home have wall areas that are uninsulated or do not have sufficient insulation?**

Even if there is some existing insulation in the walls, you may be able to add more.

Fast Fact: “Dense-pack” cellulose insulation is a common, environmentally sustainable type of insulation that can be blown into your wall.

BASEMENT AIR SEALING AND INSULATION

☐ **Are there places in your basement that are inadequately insulated or let in air? Is your basement unfinished?**

Whether or not your basement is a living space, it is important to air seal and insulate any leaks that might let in outside air and cool your home in the winter.

Fast Fact: If your basement is unfinished, review whether the rim joists (the area between the top of the foundation and the floor above) can be sealed and insulated. If you have any electrical and plumbing penetrations in the basement, seal leaks with foam or caulk. If your basement has a bulkhead or walk-out door, consider adding weather stripping to reduce air leaks. Finally, if the basement is unheated and you don't plan to use it as a living space, consider either isolating the basement from the rest of the home by adding insulation between the floor joists or improve the insulation of your basement walls with spray foam insulation; talk to your home energy assessor about which approach is right for you, although be aware that Mass Save® may not offer incentives for either approach. You may also want to upgrade your basement windows, as discussed below.

WINDOWS

☐ **Does air leak through your windows? How many panes do your windows have?**

It is important to air seal any leaks between your house and your windows. If you have single-pane or older double-pane windows, replacing your windows or adding storm windows will reduce heat loss through the windows.

Fast Fact: Interior or exterior storm windows, double-pane windows, and triple-pane windows are good options to consider when making a window upgrade. If you replace single pane windows with double pane windows that are ENERGY STAR® certified for Climate Zone 5, you can finance up to $10,000 of the expense using Mass Save's® 0% HEAT Loan. When purchasing replacement windows, check that they include a low-emissivity (low-E, which refers to a surface condition that emits low levels of heat energy) coating on inside of the innermost plane rather than the inside of the outermost pane. A low-E coating on the innermost pane is more effective in reducing heat loss in our cold climate and will save more money than a low-E coating on the outermost pane, which reduces heat gained from the outside in the summer.

Weatherization Checklist

DOORS

☐ **Does air leak through your doors? Can you add weather stripping around the top, sides & bottom?**

It is important to seal any leaks that might let in outside air and make your home cold and drafty in the winter. Adding weather stripping will close off any leaks and reduce air flow from the outside.

Fast Fact: Often doors that lead to basements or attics are not as insulated as your front or back door, letting air from your basement or attic into your home.

DUCTWORK

☐ **Does your home have ductwork? Can you air seal and insulate your existing ductwork?**

If you have ductwork in your home, air sealing or insulation will prevent air from leaking out of your ducts, thus improving the efficiency of your heating and/or cooling system.

Fast Fact: Older ductwork is often leaky, letting hot air out in winter or cold air out in summer before it reaches your vents. ENERGY STAR® estimates that in typical houses, 20% of the air that moves through the duct system is lost due to leaks, holes and poorly connected ducts.

RENOVATIONS AND ADDITIONS

☐ **Are you planning to add on to your home or renovate it?**

If you upgrade the energy efficiency of the renovated or added space, you can qualify for incentives from Mass Save's® Renovations and Additions program.

Fast Fact: It's easier and more economical to make tightly-sealed, well-insulated rooms part of your construction plan rather than backtracking to do it after the walls are closed up. Be sure to air seal the intersection of the old and new attic spaces if the top floor is part of your project.

Weatherization Checklist

The following home areas are not covered by the Mass Save® home energy assessment, but should be considered when tightening your home's envelope.

FIREPLACES

☐ **Does your home have a fireplace? If so, does your fireplace have a damper and/or glass doors?**

If you have an open fireplace, air can leak between your home and the outdoors. If your fireplace has a damper, keep it closed whenever you are not using the fireplace. If your fireplace has glass doors, then keep them closed except when adding new firewood.

Fast Fact: A fireplace with no doors or open doors will will continuously pull heated air out of your home in winter, even when there's a fire in the fireplace.

RECESSED LIGHTS

☐ **Do you have recessed lights in any of the ceilings of your home?**

If you have recessed (sometimes called "can" or "down") lights, they often leak warm air and moisture through the ceiling into the space above. You can replace the recessed light bulbs with disk light retrofit kits that fit snugly into the circular space and use the existing light socket. No extra wiring required. Look for disk light retrofit kits in Mass Save's® Marketplace or at a home improvement store.

Fast Fact: During the winter, warm air escaping through recessed light cylinders on the top floor condenses in the attic and can encourage mold growth.

DID YOU KNOW...

If you are considering a renovation or taking aggressive measures toward weatherization, you should think about the number of air changes per hour (ACH) that your home receives. Homes that have 3 or less ACH are typically considered very well air sealed, and a ventilation system may be needed to ensure that fresh air is coming in regularly. Ventilation systems are also a great way to improve the air quality inside your home. One way to test the number of ACH in your home is through a Blower Door Test. During this test, an energy professional will install a special fan in a doorway to measure the rate of "air infiltration" to your home in ACH or cubic feet per minute (CFM). The results will indicate whether the home could benefit from additional air sealing or needs more ventilation. Blower door tests are not included with a typical home energy assessment but may be worth the $300 - $600 cost to identify additional opportunities for weatherization.

Clean Energy Lives Here | Massachusetts Clean Energy Center®