

# UPGRADE YOUR BUILDING ENVELOPE



## MORE WAYS TO SAVE

Some state-level income-qualified programs provide air sealing and insulation if you have combustion appliances like a gas furnace or water heater. Certain programs even cover up to 80% of the median area income and provide these improvements at no cost to the homeowner and in many cases renters as well.

**FIND MORE WAYS TO SAVE**  
[WWW.SLVREC.COM/ELECTRIFY-AND-SAVE](http://WWW.SLVREC.COM/ELECTRIFY-AND-SAVE)

## MAXIMIZE YOUR HOME'S EFFICIENCY AND REDUCE YOUR ENERGY BILLS

Your home is made of many layers that create one building envelope, or shell. The envelope begins with the foundation in the ground and ends with the roof, and includes everything in between such as walls, windows and doors. To save energy and maintain comfort, an envelope should limit the transfer of heat in or out of the building. Improve your building envelope by applying weatherization best practices.

### + AIR SEAL CRACKS AND HOLES

Caulking and weatherstripping are cost-efficient air-sealing techniques that help maintain a comfortable temperature in your space. Air-seal gaps around windows, doors, electrical outlets, and other wall or ceiling penetrations to reduce drafts. Weatherstripping around the interior of door frames and window sashes will also limit drafts in these areas and improve the energy efficiency of your home.

### + ENSURE ADEQUATE INSULATION

One of the best ways to reduce your energy bills and increase the comfort of your home is by ensuring adequate and effective insulation in your home. The Department of Energy recommends that a home have 12 to 16 inches of attic insulation. However, not all insulation has the same effectiveness for energy efficiency, and as insulation ages that effectiveness declines.

There are also several methods for insulation depending on where you live and the part of your home you are insulating (walls, crawlspace, attic, etc.) so it's best to contact a local certified contractor. Check your local building codes for requirements.

## **BUILDING ENVELOPE: WINDOWS & DOORS**



### **5 TIPS FOR WINDOW EFFICIENCY**

- 1** Tighten and weatherstrip your old windows and then add storm windows. Adding interior storm windows is a low-cost option that can be done yourself. There are several options available from online retailers.
- 2** In colder climates “low-e” coatings on glass can help reduce heat loss through windows.
- 3** In warmer climates, consider adding solar screening to west-facing windows that catch a lot of heating late in the day.
- 4** On warm days, close curtains and blinds on windows receiving direct sunlight to prevent heat gain. Do the same on cold days to prevent heat loss.
- 5** Lock windows. It tightens the seal to stop heat leaks.

#### DID YOU KNOW

**UPGRADING TO ENERGY STAR CERTIFIED WINDOWS LOWERS HOUSEHOLD ENERGY BILLS BY AN AVERAGE OF 12%**

#### WINDOWS AND DOORS

Your home’s openings, (windows, doors and skylights) transfer a considerable amount of heat if they’re not upgraded or installed correctly. They’re also arguably the most exciting home upgrade when it comes to energy efficiency. Not only do they add aesthetic appeal to the interior and exterior of the home, they also improve your home’s comfort and increase the value.

If you’re ready to invest in new doors and windows, consider the following<sup>1</sup>:

- + Look for the ENERGY STAR® and NFRC labels.
- + In colder climates, consider selecting gas-filled windows with low-e coatings to reduce heat loss. In warmer climates, select windows with coatings to reduce heat gain.
- + Choose a low U-factor for better thermal resistance in colder climates; the U-factor is the rate at which a window conducts non-solar heat flow.
- + Look for a low solar heat gain coefficient (SHGC). SHGC is a measure of solar radiation admitted through a window. Low SHGCs reduce heat gain in warm climates.
- + Select windows with both low U-factors and low SHGCs to maximize energy savings in temperate climates with both cold and hot seasons.
- + Look for whole-unit U-factors and SHGCs, rather than center-of-glass U-factors and SHGCs. Whole-unit numbers more accurately reflect the energy performance of the entire product.