

FACT SHEET

Home Insulation and Air Sealing

Why Insulate and air seal?

- Heating and cooling account for 75% of the energy used by homes in upstate NY. In some cases, up to 30% of this energy is wasted in unnecessary heat loss due to poor insulation. This is expensive and can be prevented.

- Air leakage, or infiltration, occurs when outside air enters the home or inside air exits a home uncontrollably through cracks and holes. These processes reinforce each other leading to the 'stack effect' (see figure lower right) where cold air enters the lower floors and warm air is lost from upper walls, attics and roof.

- Sealing and insulating a home's "envelope" or "shell" (i.e. its outer walls, ceiling, windows, doors, and floors), can be the most cost-effective way to reduce bills and improve comfort.

Start with air sealing if needed

- The performance of insulation is measured by R-value. The higher the R-value, the greater the insulating effectiveness of the material.

- Insulation only achieves expected R values when air is not moving through or around it, so it is important to seal air leaks before installing insulation.

Components: Types of Insulation and Air Sealing Products

- Insulation is made from several different materials. Common types include cellulose (recycled newspaper), urethane foams, recycled cotton fibers, and fiberglass.

- Insulation also comes in different forms to fit specific applications. Loose-fill, spray foam, rigid sheets, and batts/blankets may be recommended by contractors in application to attics, walls, floors, basements, rim joists, band joists and the home's foundation.

Cost: Financing for Insulation and Air Sealing

- Start with a home energy assessment by a contractor accredited by the Building Performance Institute (BPI). NYSERDA then offers a range of programs designed to help New York State residents with home energy improvement: Home Performance, Assisted Home Performance, & EmPower NY.

- Experienced installers will facilitate access to these programs and help determine what steps are appropriate for your home.

Insulation improvements positively affect your entire home!



What are all the benefits?

- We've already talked about saving money and improving comfort with fewer cold spots and drafts in winter and a cooler interior in Summer.

- Insulation also improves the home's moisture barrier, preventing water from condensing on cold surfaces in attics, crawl spaces, or inside wall cavities, which prevents long-term deterioration, such as rotted roof sheathing, rotted framing members, wet insulation, mold growth, buckled siding, cracked bricks, and stained ceilings.

- Insulating a home is a fairly permanent measure as it is generally applied once, be it updating insulation in an older home or during the construction of a new one.

For more resources see www.HeatSmartTompkins.org

