



Insulation and Air Sealing



Why insulate and air seal?

- **Energy Efficiency** - 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.
- **Improve Comfort** - Stop drafts and stay warmer in winter and cooler 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
- **Save Money** - Sealing and insulating a home's "shell" or "envelope" (i.e. its outer walls, ceiling, windows, doors, and floors), can be the most cost-effective way to reduce bills.
- **Lasting Investment** - insulating a home is generally done once, be it updating an older home or during new construction. Done correctly, this investment will pay you back for as long as you live in your home.

Start with air sealing if needed

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) when warm air moves upward in a building, most pronounced in winter.

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. The higher the R-value of insulation, the greater the insulating effectiveness of the material.

Insulation Products:

Insulation is made from several different materials: cellulose (recycled newspaper), urethane foams, recycled cotton fibers, mineral fiber and fiberglass.

Different forms fit specific applications. Loose-fill, spray foam, rigid sheets, and batts/blankets may be recommended in application to attics, walls, floors, basements, rim joists, band joists, and the foundation.

Our installer partners only use so-called 4th generation or HFO spray foam with a greenhouse warming potential of <10.

Cost and Financing

- NYSERDA offers incentives designed to help income qualified New York State residents with home energy improvement such as Assisted Home Performance & EmPower NY
- Additional grants for income qualified households available through our partners at Sustainable Tompkins

Our experienced installer partners will help determine appropriate steps and will facilitate access to these programs and for your home.



HeatSmartTompkins.Org

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