

HOME ENERGY GUIDE

ATTIC INSULATION

Insulation slows the heat flow through a building's envelope. It works year-round to make your home more comfortable and energy efficient. In the winter it slows heat loss and in the summer reduces heat gain and helps keep your home cool.

Start in the attic

Your home can lose a significant amount of heat through the top, so the best place to start insulating is the attic. Compared to other parts of the house, access to the attic is relatively easy, therefore the cost of attic insulation projects is considerably lower. It is also the easiest place for “do-it-yourselfers” to begin. You can install loose-fill, batt or blanket insulation over existing insulation. If you choose to use a blown-in insulation (such as fiberglass or cellulose) or a sprayed-on insulation (such as polyurethane or polyisocyanurate), you’ll probably need to have it professionally installed.

Many home attics in Minnesota have some insulation; most can benefit by adding more attic insulation. Increasing attic insulation to an R-60 can provide a good barrier to heat loss (the code minimum for new buildings is R49). To determine the present R-value of your attic insulation, have an energy assessment; you can also measure the height of the insulation and multiply times the R-value per inch of the material that is in place (2.5 to 4.0 per inch, on average). Roughly 12 to 20 inches (depending on the material used) will provide an R-50 rating. Although it generally won’t hurt to add more, the return on the investment decreases as the R-value increases above R-50.

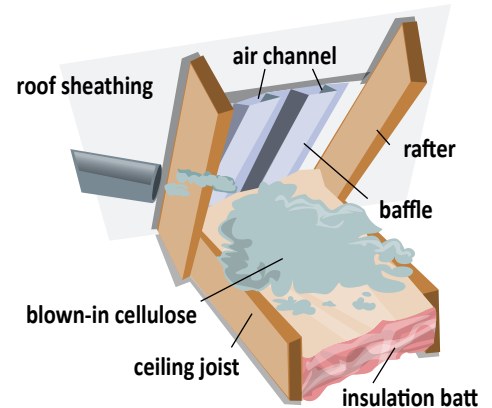
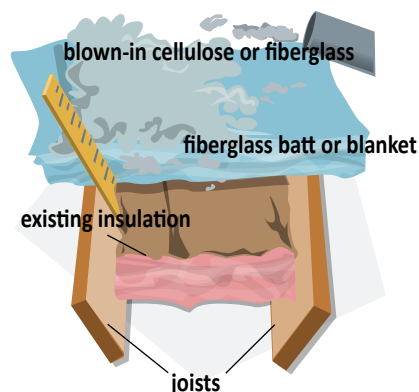
Things to look for if you do it yourself

If you are insulating your own attic, there are several things to check out to ensure the best possible results:

- Check for attic air leaks around pipes, wires, and chimneys and seal them up.
- Make sure baffles are installed at eaves to allow ventilation and prevent “wind-wash” of insulation.
- Inspect wires and fixture and junction boxes before covering with insulation.

What about open ceilings or flat roofs?

Insulating a cathedral ceiling, A-frame house or flat roof is an especially difficult job, because there is little or no space between the ceiling and roof. One option is professional installation of spray-in insulation materials; alternatively, building out of roof rafters to allow additional insulation is also possible. A third option is to have foam insulation applied beneath the roof deck during a re-roofing project. All options must also provide ventilation to current code.



Attic insulation options

There are several good options for installing additional insulation to an attic. Unless wet from roof leaks or excess moisture from the building below, there is no need to remove existing insulation. Your choices include:

Batts or blankets. Fiberglass is available in a variety of thicknesses and widths, and can be laid on top of existing insulation. If the top of the existing insulation is below the top of the ceiling joists, fill the spaces between the joists first. Then lay batts or blankets perpendicular to the joists to provide the best coverage. Carefully cut around pipes and truss pieces, and don’t bunch or fold the fiberglass.

Blown-in. Generally composed of cellulose (made from recycled newspaper) or fiberglass fibers, blown-in insulation does a much better job of filling around framing and providing a consistent layer of insulation. Blown-in insulation can be applied directly over existing insulation. Proper application requires a special machine and moderate skill.

Regardless of which insulation material is selected, plastic baffles must be inserted between rafters extending past the wall plate to keep insulation from falling into soffits and to provide ventilation. And every attic insulation project must also include sealing of air leaks!