

Insulation - saving energy and money

Energy efficient cooling and heating

Insulation can be the most effective item you can add to your home to improve its energy efficiency.

Insulation works by creating a barrier to heat transfer through the ceiling and walls. In summer it helps keep your home cooler by reducing the amount of heat entering your home. In winter it helps keep your home warmer by trapping the warm air inside. For best results, all ceilings, walls and raised walls should be insulated.

Save up to 45 percent on heating and cooling energy with roof and ceiling insulation.

Insulate to help cut air conditioning and heating running costs

Ceiling insulation can make a significant difference to the cost of running your air conditioner.

When your home is insulated, it will be more comfortable regardless of the season, and less reliant on climate-controlled appliances, such as air conditioners and heaters. As you reduce the amount of energy you use to stay comfortable, you will save money on appliance running costs and reduce the amount of greenhouse gases emitted.

When you do turn on your air conditioner or heater, it will use less energy and cost you less to run. There will also be less wear and tear on your heating and cooling appliances as they don't have to work as hard.

Types of insulation available

There is a variety of insulation products available and it is important to assess the type of insulation that will best suit your energy needs. There are three main types of ceiling insulation – loose fill, bulk fill (commonly referred to as “batts”) and reflective foil. The right type for your home will depend on the type of ceiling cavity, access available to the ceiling and personal choice.

The most important thing to consider when choosing insulation is the **R value**. An R value is a measure of the insulation's resistance to heat flow and therefore, its performance.



The higher the R value, the greater the resistance to heat transfer. The climate where you live and the design of your home will influence the R value and type of insulation suitable for your home, and potential for energy savings.

Enhancing home insulation

You may already have adequate roof insulation, however, **roof ventilators** are recommended when you install bulk fill insulation. Ventilation removes excess heat in summer preventing overheating and removes moisture in winter. **Eave vents**, usually small rectangular grids located under your eaves, are required when a roof ventilator is installed. The roof ventilator extracts air from the roof and the eave vents replenish the ceiling cavity with fresh air from outside.

West-facing **windows should be shaded or tinted** to maximise the benefit of insulation. This can be achieved with awnings, blinds or specialised products such as solar window tinting.

For more information

For more information on the types of insulation available and installation, visit the Australian Greenhouse Office Your Home sustainable building guide at <http://www.greenhouse.gov.au/yourhome/technical/index.htm>

For more energy saving tips visit our website at www.energywise.qld.gov.au