



roof insulation

A well insulated home will provide year-round comfort, cutting cooling and heating bills by up to half and reducing your greenhouse gas emissions. A large proportion of heat is lost or gained through the ceiling and roof of your home. By installing or upgrading existing insulation you can improve the comfort of your house and significantly reduce your heating and cooling costs.

WHAT CAN I DO?

Install or upgrade insulation to create a comfortable home and reduce your energy bill and greenhouse gas emissions.

HOW DO I DO IT?

There are a wide variety of insulating products on the market. There are two main types of insulation:

1. Bulk insulation traps small pockets air within the insulating material. This is very effective in reducing heat transfer between the outside and your home (and vice versa).
2. Reflective insulation bounces light and heat preventing it from entering or leaving your home.

The type of insulation you choose will depend on a range of factors including the materials your home is constructed of, the way you heat and cool your home and



TANYA HA, an expert in environmental living and the author of *Greenology* and *The Australian Green Consumer Guide* provides advice on energy saving in your home.

Insulate your roof and save (each year)



Government of **Western Australia**
Department for **Planning and Infrastructure**



your budget. Some of the most important things to consider before buying your insulation are:

- Check the information supplied on the product, including the R-value, the price per square meter and whether it must be installed professionally or can be DIY.
- The R-value measures the products resistance to heat flow and the higher the R-value the higher the level of insulation. For example insulation with an R-value of 3.5 is more effective than insulation with an R-value of 1.0.
- Compare the environmental benefits of different products. Ask about recycled content and how easily the product can be recycled after use. Currently some brands of polyester insulation contain up to 80 percent recycled PET (the plastic commonly used in drink bottles). Some brands contain 100 percent recycled paper. Glass fibre insulation contains between 25 to 60 percent recycled glass.

- First fix other sources of heat gain and loss from your home by shading windows from the summer sun and blocking draughts around windows and doors. Insulating a home with windows that are not shaded from the summer sun can trap in unwanted heat creating an “oven” effect and increasing cooling costs. See the leaflet on “How to shade your windows from the summer sun” for more information.

Some things to remember if you are going to “DIY”

- When handling insulation products such as fibre glass wool and rock wool, be sure to wear protective clothing. This should include coveralls, gloves, eye protection and a facemask.
- Cellulose fibre must be treated with fire retardant during manufacture and no other type of insulating material (such as expanded polystyrene beads) should be combined with it.



- Eye protection should be worn when installing reflective foil materials externally as they can cause dangerous glare.
- Make sure that the insulation is made to Australian Standards and complies with the fire safety requirements as set out in AS1530-3.
- Have a qualified electrician check the house wiring before insulation is installed, particularly in older homes.
- Remember not to place insulation over or around appliances (like halogen down lights) that need ventilation to prevent heat build-up.
- If you lay batts make sure they have a tight fit between the rafters and do not compress them.
- Take care on ladders and if you are getting into the roof put boards down to walk on to minimise the risk of putting your foot through the ceiling.

Where can I find an insulation supplier?

Insulation batts (pre cut insulation designed to fit in between the rafters of a standard roof) are available from major DIY stores.

Use a van or trailer to transport them as they take up a lot of space.

Alternatively a list of insulation suppliers is available in the Yellow Pages or on the Yellow Pages website at:

<http://www.yellowpages.com.au/>

How much does it cost?

Insulation costs are affected by the type of insulation you choose, whether you install it yourself and the size of the area that requires insulating (see the table on the back page for estimates of the cost). By contacting an insulation supplier you can arrange a quote for your property.

WHY?

Installing roof insulation will make your home much more comfortable to live in. It can reduce your heating and cooling costs by around 30% and reduces the emission of greenhouse gas. You can also reduce the size of any cooling or heating units that you have to buy - saving you even more money.



With roof insulation providing between \$50 and \$100 a year in savings on energy bills it can pay for itself in around 10 to 20 years. More importantly insulation will make your home much more comfortable.

INSULATION COST FOR 100m² OF ROOF SPACE

TYPE OF INSULATION	DO IT YOURSELF	INSTALLED
POLYESTER BATTS	\$50 per bag (5.8m ² per bag)	\$900-\$1700 per 100m ²
BLOW-IN PAPER BASED INSULATION	N/A	\$1,200 per 100m ²
UNDER-ROOF REFLECTIVE INSULATION	\$20 per m ²	\$950-\$1800 per 100m ²

REBATES FOR INSULATION

A federal rebate of up to \$1,600 is available for the professional installation of insulation for uninsulated homes as part of the Energy Efficient Homes Package. Landlords or tenants of rental properties may claim up to \$1,000.

The program will run from 1 July 2009 to 31 December 2011.

The guidelines and application forms for the Energy Efficient Homes Package rebates are available from www.environment.gov.au/energyefficiency or by calling 1800 808 571.