

How to make your home GREEN

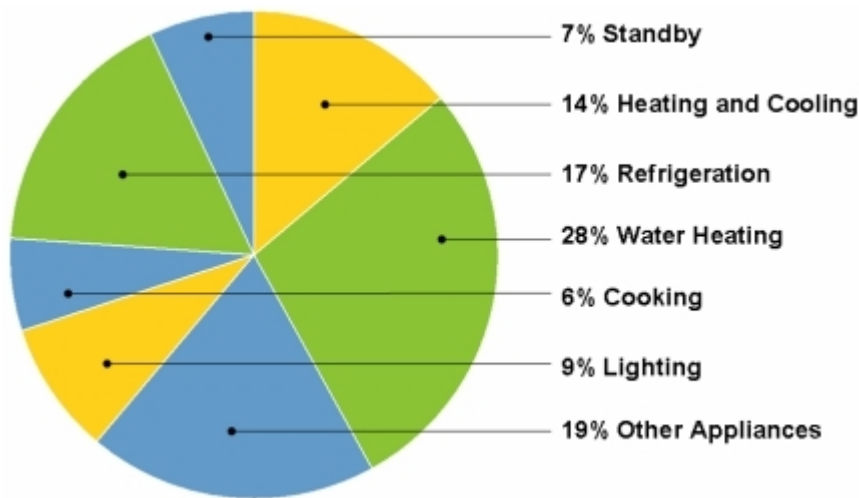
- Federal Govt looking at mandatory disclosure of energy rating for homes - ACT energy efficiency rating – the buyer reimburses the seller for the cost of the audit once purchased.

<http://www.makeyourhomegreen.vic.gov.au> is for residential homes

On 1 May 2011, all new homes, home renovations, alterations and additions will need to comply with a 6 Star Standard.

- The 6 Standard applies to the thermal performance of a home, renovation or addition; plus the installation of either a solar hot water system or a rainwater tank for toilet flushing. 6 Star requirements include efficiency standards for lighting but not plug in appliances.
- 6 Star homes are projected to use 24 per cent less energy through heating and cooling compared to 5 Star homes. This will see Victorians saving a further \$100 off their energy bills each year. This is only an average saving. Residents who use their energy features in their home wisely will save even more.

HOW TO REDUCE



ENERGY

There are many ways that we can save energy (and money) in our homes.

Evaluate your current energy usage by asking yourself the following questions:

- Is your water too hot? If so, check your thermostat.
- Do you turn off the lights when you leave a room?
- Do you turn off your appliances at the socket? How often do you leave something on recharge unnecessarily?
- When you boil the kettle, do you only boil what you need?
- Have you converted your lightbulbs to energy saving lightbulbs?

A good start is to calculate how much energy you are already using and set yourself a goal of reducing that energy use by at least 15 per cent.

Get an Energy Audit.

Passive Solar Design Principles

- House positioned on south side of block to maximise exposure to north sun.
- Main living areas on north side, with infrequently used rooms, on south side.
- Zoning of living areas, including door at bottom of stairs.
- Entry way airlock.

- Thermal mass inside to help maintain stable temperatures (slab and internal brick walls).
- Lightweight HEBEL outside walls minimises summer heat.
- Windows for natural lighting and heat, maximised on north side, minimised on west and south sides. Double glazing throughout.
- Eaves designed to keep out summer sun.
- Carefully installed insulation minimises thermal leakage ('r' factor: 2.5 batts in walls, 1.5 batts plus concertina foil in ceilings). Window frames also sealed with foam.
- Dark floor tiles, in main living areas, absorb the winter sun's warmth during the day.
- Garden: Plants and positioning carefully chosen.

Harmony 9 -

Mirvac's architects have created a **9.2 Star sustainable prototype home**, on show at Waverley Park, which is the first zero carbon house of its kind built by a commercial developer. The Harmony 9 home is open to view at the **Waverley Park Display Village, Goodison Court, Mulgrave from 12-5pm daily**

9star energy rating - \$1,200 savings per year on energy bills - 125,000l savings per year in mains water usage

Energy efficient fittings

LED (Light Emitting Diodes) or compact fluorescent light fittings

Natural light and ventilation

North facing living zones and skylights maximise natural light internally

User behaviour changing systems

electronic smart metering system indicates water, electricity and gas usage providing occupants with feedback.

Water saving fittings

High Water Efficiency Labelling and Standard (WELS) rated fittings – Taps 6 Star, Shower heads 3 Star, Toilet 4 Star.

Internal thermal mass A spine of Bluestone wall acts as a thermal battery. During summer it is protected from direct sunlight and helps maintain a comfortable house temperature. In winter the same thermal mass can store the heat from the sun or heating to release it at night helping the home stay warm.

Superior insulation Highly insulated external walls using R 5.0 batts and R 8.0 Glass wool in the roof space. Internal walls consist of R 2.5 Glass wool insulation.

Shading

Active shading devices provide solar protection and passively regulate temperature so that almost no additional heating or cooling is required. Solar panels on the street face also placed strategically allowing full sunlight penetration from 26 May to 19 July and no sunlight penetration from 17 October to 26 February.

Rain garden

Cleans and collects driveway water run-off. Landscape design has also focused on producing a high quality lush landscaped garden to maximise the cooling effect of the micro climate around the house.

Reverse brick veneer wall construction

The brickwork is the inside skin of an otherwise conventional stud framed construction, taking advantage of the thermal mass properties of clay brickwork which can result in lower than average energy demands for both heating and cooling.