

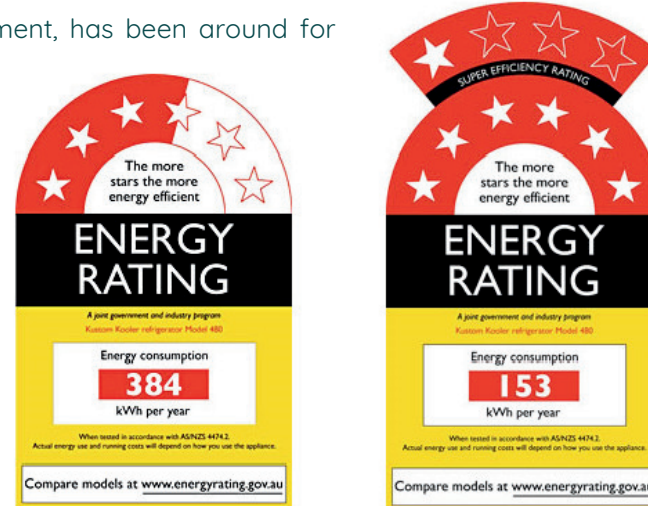
Energy Rating Labels

The Energy Rating Label, regulated by the Australian government, has been around for over 30 years.

The label shows not only the star rating, but it also provides information on how much energy the appliance will consume per year.

More stars mean more efficiency compared to other models of similar size and features.

Most products are given between 1 and 6 stars. Technology keeps getting better, as does energy efficiency! This is why you'll see some super-efficient models with an extra row for stars that go up to 10.



HELPFUL TIPS

Make sure you compare similar products. For example, a 10 kg washing machine with a five-star rating will use more energy than a 6 kg washing machine with a five-star rating.

How to use the Energy Rating Label

Let's say you're looking to buy a new dishwasher. Below are the energy ratings of two similar products.

Dishwasher A has two stars for energy efficiency and an energy consumption of 542 kWh.

Dishwasher B has four stars, and an energy consumption of 318 kWh.

Your electricity tariff is \$0.307 per kWh.

- Dishwasher A estimated annual running cost = \$166.39 (542 kWh × \$0.307)
- Dishwasher B estimated annual running cost = \$97.63 (318 kWh × \$0.307)

By choosing Dishwasher B, you could save \$68.76 per year - the difference between the estimated annual running costs. If you keep Dishwasher B for ten years, that is an estimated overall saving of \$687.60!

Compare the energy efficiency of appliances and learn more about Energy Rating Labels at energyrating.gov.au

Useful Links & Additional Reading

- Your Home Guide - yourhome.gov.au
- Department of Climate, Energy, the Environment and Water - energy.gov.au
- Renew - renew.org.au

Visit the Catalina Sustainable Home to see these energy-saving features in situ.

& explore free resources to help you design your own energy-efficient home.

www.catalinasustainablehome.com.au



ENERGY EFFICIENCY AND CARBON-POSITIVE HOME DESIGN

Home appliances and equipment use an average of 25% of household energy.

Connected Home/Smart Home

Connected home (or smart home) devices can be controlled remotely or programmed to work when you're not home. They can save you money, assist people with limited mobility, and provide extra security.



Casambi System

At the Catalina Sustainable Home, Casambi controls the lighting and curtains from either a mobile phone or tablet.

These can be set to open and close the curtains or turn lights on and off at specific times. This not only provides security, giving the impression that someone is home, but it can also maximise energy efficiency by opening curtains to allow the winter sun in and closing them to block heat transfer in summer.

Intelligent Home

Intelligent Home technology has also been installed to control security and CCTV, and provides the option to install cabling that allows you to control all home technology from your mobile devices.

Assistive technology can be set up to improve the quality of life for people living with a disability.

- Limited movement or coordination
Tasks such as turning the lights on, opening blinds or adjusting the temperature of an airconditioner can be automated or triggered with voice control.
- Sensory impairment
Intercom systems can assist with identification of visitors before allowing access and remotely opening doors. Audio systems and text notifications installed in key areas of the house can be linked to doorbells and phones allowing a visual alert in place of the traditional sounds.
- Cognitive impairment
Families and caregivers can discretely monitor their loved one's safety while home automation systems assist with carrying out day-to-day tasks.

www.catalinasustainablehome.com.au

Heating & Cooling

Heating and cooling combined use the largest amount of energy in the average Australian home, accounting for around 40% of household energy use. Using passive solar design principles during the design stage is the most cost-effective way to minimise mechanical heating and cooling. See our Shelter fact sheet for more information.

Fan

Big Ass Fans Haiku [indoor](#) & [outdoor](#) fans

Ceiling fans with energy-efficient DC motors are installed in the main living area, bedrooms, and alfresco. Fans are by far the most economical way to feel cooler. Rather than cooling the air and reducing humidity like a ducted air conditioning system, they create air movement that instantly makes the body feel cooler.



HELPFUL TIPS

Fans with DC motors use roughly half the energy of a traditional fan and are generally quieter.

Air conditioner

Air conditioners can use a lot of electricity; designing your home to work with the environment will reduce the amount of mechanical heating and cooling required.

Installing insulation, external shading and curtains will help to reduce the amount of heat transfer through the roof, walls and windows.

HELPFUL TIPS

Always set air conditioners at 24°C for optimal energy efficiency.

Why we installed an air conditioner
As passive solar design principles require homeowners to maintain an even temperature (by closing curtains and blinds to block summer sun and opening windows to allow cooling breezes to flow through at nighttime), a ducted air conditioning unit has been installed while the home is used as the Satterley Sales Office.

Lighting

Brightgreen TruColour® & DayShift

To reduce the need for mechanical lighting during the day, windows and sliding doors have been positioned to allow natural light to flood into task-orientated spaces such as the kitchen and bathrooms.

Brightgreen TruColour® LEDs have been installed throughout, providing the closest Colour Rendering Index (CRI) score to natural light. These work together with DayShift’s system to automatically adjust the warmth of colours based on the time of day to match your natural circadian rhythm. For example, blue light is useful when you wake up in the morning, but too much blue light at night can disrupt sleep patterns. DayShift makes these subtle lighting changes automatically.

What is a Colour Rendering Index (CRI) score?

Lighting manufacturers use the Colour Rendering Index (CRI) to measure how accurately a light can reproduce colours, with a light score of 100 creating a perfect reproduction of natural light. Brightgreen’s TruColour® lights score 98, meaning the colours produced are incredibly accurate. In fact, all TruColour® lights sport the best CRI score of any LED light on the market.

HELPFUL TIPS

When choosing recessed lights, look for the IC or IC-F ratings. These ratings allow non-flammable ceiling insulation (rated stable at 90°C) to cover the downlights, reducing gaps in your ceiling insulation.

Appliances & Technology

In the average Australian home, appliances and technology consume a significant amount of energy when you add them all together. Fridges and freezers account for roughly 7% of household energy use, clothes dryers up to 10% (for heavy users), and TVs and home entertainment equipment around 5%. In homes with a pool, energy-hungry pool pumps can consume up to 18% of energy use.

Oven

[Siemens iq700 Pyrolytic Oven \(with Pulse Steam & Microwave\)](#)

Unlike other household appliances, cooking appliances don’t have official energy star ratings. Fan-forced ovens (like the Siemens iq700) circulate hot air evenly, which keeps the temperature constant, cooks faster, and uses less energy.

HELPFUL TIPS

Look for ovens with triple-glazed doors to reduce heat loss.

Cooktop

[Siemens iq700 Induction Cooktop](#)

Gas and electric cooktops heat up a burner and then transfer heat to a pot/pan. Induction cooktops use less energy by producing an electromagnetic field that heats cookware directly. This heats food quickly and efficiently, while the cooktop stays relatively cool to the touch.

HELPFUL TIPS

Most modern cookware is suitable for induction cooktops. However, if you have pots and pans that are not compatible, you can purchase converter/adaptor disks, although they are not as efficient.

Dishwasher

[Siemens iq700 Dishwasher](#) (energy rating 4.5 stars & water rating 5 stars)

Dishwashers use less energy and water than hand washing over their 10- to 15-year lifespan. This also means less drinking water going down the drain.

HELPFUL TIPS

To reduce energy use, go to [energyrating.com](#) to compare models.

Washing Machine

[Bosch Series 8 washing machine](#) (energy rating 5 stars & water rating 5 stars)

Use cold wash programs where possible. Washing in warm or hot water uses approximately 50% (front loader) to 85% (top loader) more energy than cold water. Choose eco-friendly washing detergents with low or no phosphorus to help reduce the harmful impact of these chemicals on our waterways.

HELPFUL TIPS

To ensure the washing machine uses less energy always run a full load as opposed to many small loads.

