

How to make sure your new home meets official energy efficiency standards



If you're building a new home (or renovating your existing one) it is important to be aware of changes to the Building Code of Australia (BCA) introduced recently.

The BCA requirements specify that every new home or renovation must now achieve a minimum 6-star energy rating. If you don't achieve the minimum rating, your home will not be BCA compliant and building approvals may be rejected by council. If you are dealing with a reputable builder, they should be familiar with the BCA and able to advise you accordingly.

The world's energy demands are forecast to double by 2050, yet we need to halve carbon emissions at the same time in order to avoid dramatic climate changes. Energy generation supply is important, however our demand behaviour is crucial to reducing our dependency on energy. We can achieve this through improving the energy efficiency of our homes and buildings.

The BCA is part of the National Construction Code, and the aim of the new BCA is to achieve consistent minimum building standards in every state and territory. The code is broad and covers many areas including structure, fire resistance and access, along with electrical installations and energy efficiency. The underlying goal of the energy efficiency provisions is to reduce greenhouse gas emissions.

To help you gain a basic understanding of the requirements for electrical works specified in the BCA, we have provided information about some of the energy efficient solutions, which can help you achieve your minimum 6-star energy rating or better.



LED downlights



Weathershield™
sunset switch



Motion sensor with
integrated flood light



Ceiling-mounted
sweep fans



Ceiling exhaust fan
draftstopper

Lighting

Lighting plays an important role in home design. The new BCA has set strict allowances and specifications for illumination power density (IPD) of artificial lighting, with limitations on the wattage per square metre allowed. This applies to both interior and exterior lighting.

The IPD must not exceed 5W/m² in the interior of a house, 4W/m² on a verandah or balcony of a house, and 3W/m² in the interior of a garage. These values can be exceeded if control devices are used.

Traditional light sources are also being phased out with the implementation of the new lumens per watt(lm/W) BCA requirements. The code states that new lighting needs to be at least 40lm/W. Lumens per watt is the measure of how well a light source converts energy into visible light.

The Clipsal range of LED downlights are rated at 46lm/W, while traditional halogen downlight efficiency is rated at 12.

Lighting controls

The BCA allows greater flexibility in lighting design and permits the use of higher lighting power densities when lighting control products such as dimmers, timers, sunset switches and motion sensors are used to manage lighting inside and outside the home.

The combination of implementing energy efficient lighting products and lighting controls, leads to additional benefits of saving energy and reducing energy costs.

Perimeter lighting

The BCA specifies that all artificial lighting located on the perimeter of a building must be controlled by a daylight sensor, or have an average light source greater than 40lm/W. Clipsal Sunset Switches and Infrascan® Motion Sensors are the ideal lighting controls for all perimeter artificial lighting.

Pool and spa controls

The BCA also specifies that circulation pumps and heaters on pools and spas be controlled by timer switches. Clipsal offers an extensive range of reliable and weatherproof pool and spa timer switches, featuring seasonal

timer programs and programmable timer delays. Timer switches ensure that pool and spa pumps and heaters are only used when required, reducing excess energy consumption and associated costs.

Ceiling sweep fans

Ceiling sweep fans are an ideal, low-cost method of cooling your home in summer and circulating warm air in the cooler months. They are perfect for bedrooms, living areas and even outdoor applications, such as under verandahs. Ceiling fans must be permanently fixed, have a speed controller and only serve the area specified for its diameter to comply with BCA regulations.

Exhaust fans

To prevent excess thermal transfer, the BCA specifies that any exhaust fan must include a sealing device such as a self-closing damper, filter or the like. Clipsal has a range of wall, window and ceiling-mounted exhaust fans, with most of the range fitted with a self-closing draftstopper, reducing thermal transfer and improving heating and cooling performance.

The information provided in this document is based on the energy efficiency requirements for residential buildings contained in Volume Two of BCA 2010. This is a guide only. Any separate State Laws should be complied with. Always consult your project manager, builder or architect.

For more information on ensuring your home is BCA compliant, contact your local Clipsal Powerhouse Display & Selection Centre and speak to a Clipspec™ Consultant.

CLIPSAL POWERHOUSES		DISPLAY CENTRES <small>Located in HIA Home Ideas Centres*</small>	
Adelaide 6/69 Sir Donald Bradman Drive Hilton SA 5033 ph: (08) 8161 0751	Perth 55 Salvado Road Subiaco WA 6008 ph: (08) 9347 3570 <small>Located in Home Base Expo†</small>	Brisbane 66 Merrivale Street South Brisbane QLD 4101 ph: (07) 3635 7486	Melbourne 1686 Princess Highway Oakleigh East VIC 3166 ph: (03) 9207 3200
Melbourne † Building B, Ferntree Business Park 296-310 Ferntree Gully Road Notting Hill VIC 3168 ph: (03) 9207 3200	Sydney 78 Waterloo Road Macquarie Park NSW 2113 ph: (02) 9125 9450	Canberra 28 Collie Street Fyshwick ACT 2609 ph: (02) 6285 7300	<small>* The Home Base Expo and HIA Home Ideas Centres are open on weekends.</small>

† We have recently relocated. Please call or visit clipsal.com/powerhouse for latest details.

Clipsal Powerhouses and Display Centres are open 9am–5pm Monday to Friday.

Or call one of the following Selection Centres if you are located nearby:

Albury
 303 North Street
 Albury NSW 2640
ph: (02) 6051 2377

Gold Coast
 Unit 7, 82-86 Minnie Street
 Southport QLD 4215
ph: (07) 3635 7486

Launceston
 U23/34 Innocent Street
 Kings Meadows TAS 7249
ph: (03) 6335 8800