

energy efficient lighting

Lighting technology has come a long way in the past ten years. Incandescent globes (a typical light bulb) were the main option in homes for many years, but since November 2009, minimum energy performance standards (MEPS) have been introduced to ensure that only energy efficient globes are available in the shops.

With less efficient globes being phased out, Compact Fluorescent Lamps (CFLs) have replaced them. CFLs consume less than a quarter of the energy (and cost) of incandescent globes, they last a lot longer, and are just as bright. They can directly replace most standard globes as they are available in a variety of shapes and are suitable for bayonet or screw in fittings. CFLs are available in a range of light hues including warm white, natural mid-tones and cool white, depending on your lighting needs (the light hue is measured in kelvins



TANYA'S TIP:

Select the CFL light colour that suits your preference and each lighting task: 'daylight' (6000k) for the home office, 'cool' (4000k) for living areas, 'warm' (2700k) for bedrooms.

with higher values for more blue colour and lower values for more yellow).

WHAT CAN I DO?

Replace a 60 watt incandescent globe with a 14 watt CFL and it will save money and last eight times longer. Although CFLs are initially more expensive to buy than old incandescent globes, they quickly pay for themselves through energy savings.

Fewer Emissions

As all WA households replace their five most used 75 watt incandescent globes (used for four hours each day) with 18 watt CFLs, greenhouse gas emissions will be reduced by over 250,000 tonnes each year – the equivalent of taking over 60,000 cars off the road!

Change ten old incandescent globes to Compact Fluorescent Lamps and each year:



Government of **Western Australia**
Department of **Transport**

HOW DO I DO IT?

- CFLs are available at most local hardware stores and supermarkets.
- Consider paying a little more to get a better quality lamp (prices vary from \$3-8 per lamp).
- Curly styles assist with light distribution.
- Use compact fluorescent lighting in rooms where light is required for long periods to get the greatest energy and cost savings.
- A CFL shouldn't buzz – if it does, take it back.
- Some CFLs can now be used with dimmers, ranging from \$10–30. Check your local hardware store and specialist environment shops.
- All CFLs contain some mercury (the amount is about the size of the ink on the tip of a ballpoint pen, less than that contained in your watch battery), and this is decreasing with new technology.
- Care does need to be taken when handling and disposing of these lamps. If one breaks, open the window and let the room ventilate

for 15 minutes. With gloves and a damp disposable cloth, pick up globe pieces. Do not use a vacuum cleaner. Wrap pieces and cleaning gear in a sealable container and place in your rubbish bin.



CFLs are now available in a range of styles and fittings



BUYING TIPS

1. BUY QUALITY MAJOR BRANDS

New standards are taking inefficient globes off store shelves so there are fewer low quality globes on the market. Mostly you get what you paid for in:

- a. energy efficiency;
- b. reliability

2. WHICH WATTAGE?

Replace old incandescent globes with CFLs according to:

INCANDESCENT	CFL REPLACEMENT
40 W	9–13 W
60 W	13–15 W
100 W	23–30 W

3. STYLE

Choose the lamp style to suit your light fittings:

- CFLs come in standard or small versions of screw or bayonet fittings
- Choose ultra compact lamps to fit in enclosed light fittings such as glass globes or ceiling fan lights
- Choose curly lamps for reading lights (to get more light from the end)

- Choose candle or traditional shaped CFLs to replace globes in fancy fittings
- Don't forget to replace your energy hungry outdoor spotlights with CFL equivalents

4. LIGHT COLOUR

Choose the light colour that suits your preference and the lighting you need in each situation:

DESCRIPTION	TECHNICAL MEASURE	LIGHTING DESIGN
Warm white (similar 'yellow' light to old incandescent globes)	≤ 3000K	<ul style="list-style-type: none"> • Bedrooms • Standard lamps • Lounge room
Mid tones (bright natural light)	3500K	<ul style="list-style-type: none"> • Dining Room • Hallway • Kitchen
Cool daylight (bright white light with a hint of blue)	4000K	<ul style="list-style-type: none"> • Lighting art works • Outdoor security lights



Globe recycling

Synergy is piloting a globe recycling initiative to encourage households to recycle Compact Fluorescent Lamps (CFLs) rather than disposing of them in general waste. The project ensures that 100% of the globe is recycled. The recycled lamps are transformed into by-products.

- Check www.recyclingnearyou.com.au and www.synergy.net.au/at_home/globe_recycling.xhtml for globe recycling drop-off points.
- All councils in Perth's eastern region collect used CFLs at council offices.
- CFLs should last five years or more, so recycling will be in place by the time you need it.
- IKEA accept used CFLs for recycling at their store.

HINT – For further information on alternatives to halogen downlights, see our brochure *How to Convert Downlights to a more Energy Efficient Option*

During 2010/11, Living Smart will be offered to around 10,000 households in Perth's eastern region as part of the Perth Solar City program. For more information on this Australian Government initiative, please call 1300 993 268 or visit perthsolarcity.com.au. The Living Smart Ambassadors are Tanya Ha (expert in environmental living and the author of *Greenology* and *Green Stuff for Kids*) and Josh Byrne (sustainability specialist, presenter on ABC TV's *Gardening Australia* program and author of *The Green Gardener*). The information in this brochure is provided in good faith. However the accuracy or appropriateness of the information is not guaranteed. The Living Smart brand has been developed by The Meeting Place Community Centre, the City of Fremantle, Murdoch University and Southern Metropolitan Regional Council to support a suite of programs developing capacity in community sustainability.