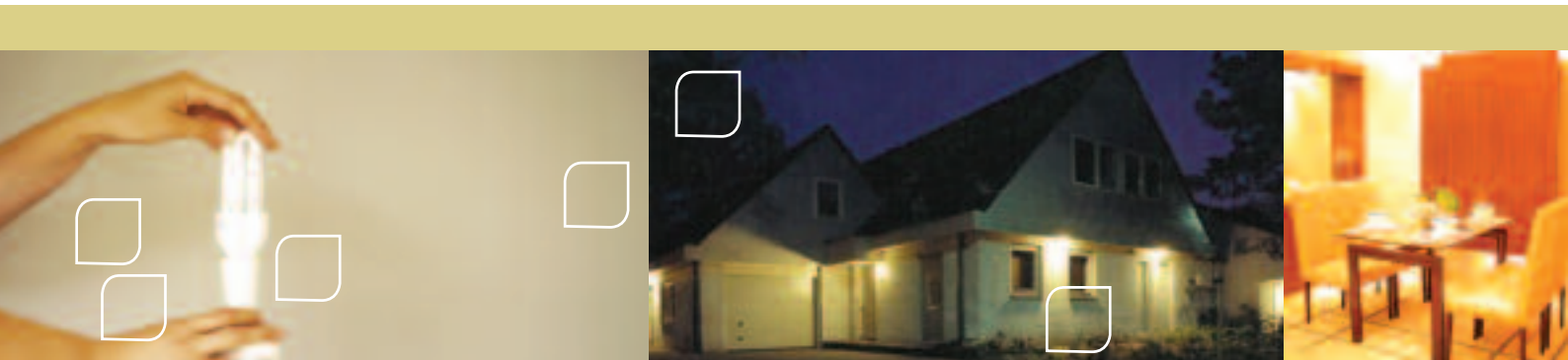


Lighting your home



Lighting costs the average New South Wales household up to \$100 each year. Careful selection of lamps and fittings can cut your energy costs for lighting by more than half.

LIGHTING TYPES

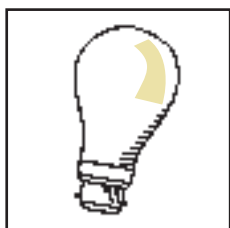
There are three main types of household lamps or lights to choose from:

- **Incandescent** – inexpensive to buy, but running costs are high compared to other lamps. Bulbs only last up to 1000 hours. Recommended for infrequently used rooms.
- **Halogen** – twice as energy efficient as incandescent globes. They are more expensive to buy, and last up to 2000 hours. Ideal for highlighting features, such as a painting on a wall. Halogen lamps are low voltage lights and require a transformer, which uses more energy. Because halogen globes emit a beam of light, many more fittings are required in a room than for conventional lighting.

- **Fluorescent** – these are the most energy efficient form of lighting. Bulbs are cheap to run and last up to 8000-16000 hours. There are two main types of fluorescent lamps:
 - **Compact fluorescent lamps** - fit into conventional light sockets. They use around one fifth of the power of incandescent globes to provide the same amount of light. These are ideal for rooms where lighting is required for long periods of time, such as in the living room and kitchen. Frequently switching fluorescent lights on and off can reduce their life so they are not recommended for pantries and toilets.
 - **Tubular fluorescent lamps** - also known as tube lights, are available as straight or circular tubes. Tube lights are ideal for kitchens, bathrooms, rumpus rooms, garages and workshops.

SOLAR LIGHTING

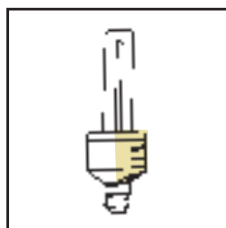
Where lighting is required at a great distance from electrical circuits, such as in the garden or along driveways, solar lights may be suitable. Available from solar equipment retailers and specialised lighting stores, solar powered lights can be a practical and cost-effective alternative to conventional electrical lighting.



incandescent bulb



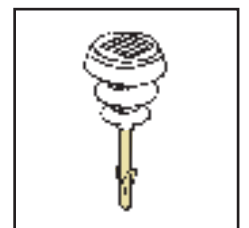
halogen lamp



compact fluorescent lamp



tubular fluorescent lamp



solar light

LIGHT FITTINGS AND ROOM SURFACES

Besides choosing the right globe for your needs, it is important to make sure that the fitting you choose will maximise light output. There are many types of light fittings available for different purposes:

- **Pendant fittings** – hang from the ceiling and provide maximum light from a single globe. They are recommended for general illumination.
- **Downlights (or recessed lights)** – provide bright pools of light, suited to special purpose lighting such as highlighting a picture. They are not recommended for general illumination, as many more fittings are required.
- **Fittings with multiple globes** – are an inefficient form of lighting. Around six 25 watt globes are required to produce the equivalent light output of a single 100 watt globe.

The design and colour scheme of a room will also influence the amount of illumination. A light-coloured room will appear brighter and better lit than a room with dark surfaces. Similarly dark-coloured or heavily tinted lampshades and diffusers reduce illumination considerably.

HOW MUCH LIGHT?

The amount of light required in each room of a home varies. The following table is a guide to the maximum amount of light required per square metre of floor area in a room.

	Fluorescent (W/m ²)*	Incandescent (W/m ²)*
General purpose lighting	3 – 5	15 – 25
Specific task lighting	9 – 15	30 – 50

* Watts per square metre

THE COST OF LIGHTING

The cost of running a light is directly related to the wattage of the globe. Higher wattage means higher running costs. Fluorescent and quartz halogen lights use extra energy in the light fitting.

The table below shows variations in running costs for lighting systems using different globes to produce the same amount of light.

	Equivalent luminaire		
	20 watt compact fluorescent	65 watt* quartz halogen	100 watt incandescent
Running costs ** (8000 hours)	\$16	\$52	\$80
Purchase cost ***	\$10-15	\$5	\$1
Average life	8000 hours	2000 hours	1000 hours
Total costs (Over 8000 hours usage)	\$26-31	\$72	\$88

* includes power consumed by the transformer ** based on the general tariff as at December 2001 *** approximate retail cost.

Please note that several quartz halogen lights may be required to adequately light a room.

HANDY LIGHTING HINTS

- Turn off lights when not required!
- Use two-way switches and place them at the main exits of each room to encourage people to switch off lights when leaving rooms.
- Avoid having several lights activated by one switch – use separate switches for each light.
- Do not leave outdoor lights on all night or during the day – consider using timers or sensors.
- Use the lowest wattage light needed to adequately light an area.
- Use task or special purpose lighting to supplement general lighting wherever possible.
- Keep lights and fittings clean. Dusty or dirty globes and fittings can reduce light output by up to 50%.

FURTHER INFORMATION

Telephone the Energy Smart Information Centre: 1300 138 638
or 02 8281 7777 (callers outside NSW)
Monday to Friday 9am-5pm
Visit www.energysmart.com.au

The Energy Smart Information Centre is a free advisory service provided by the NSW Government. Energy experts can provide information on a wide range of topics.