

# 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 four 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. To be phased out in Australia because of their high energy use.
- **Halogen** - 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 but require a transformer, which uses more energy. Not an energy efficient choice for general room lighting.
- **Fluorescent** - these are the most energy efficient form of lighting. Bulbs are cheap to run and last 8000 to 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.
  - 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.
- **LED Lighting** - Very efficient lighting systems with extremely long life. Not effective for general room lighting but excellent for desk and feature lighting applications.

## 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.

## Light Fittings And Room Surfaces

Besides choosing the right globe for your needs, it is important to make sure that the fitting you place it in 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 and large banks of recessed lights should be avoided.
- 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?

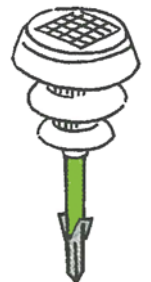
The amount of light required in each room of a home varies. The following table is a guide to the maximum amount of light required per square metre of floor area in a room.

	Fluorescent (W/m <sup>2</sup> )*	Incandescent (W/m <sup>2</sup> )*
General Purpose Lighting	3 - 5	15 - 25
Specific Task Lighting	9 - 15	30 - 50

\* Watts per square metre



incandescent bulb



solar light



halogen lamp



compact fluorescent lamp



tubular fluorescent lamp

## The Cost Of Lighting

The cost of running a light is directly related to the wattage of the globe. The higher the wattage the higher the running cost. The table below shows variations in running costs for lighting systems using different globes to produce the same amount of light.

	20 Watt Compact Fluorescent	65 Watt* Quartz Halogen	100 Watt Incandescent
Running Costs ** (8000 Hours)	\$16	\$52	\$80
Purchase cost***	\$5 - \$10	\$5	\$1
Average Life	8000 Hours	2000 Hours	1000 Hours
Total Costs (Over 8000 hours usage)	\$21 - \$26	\$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 up an area.
- Use task or special purpose lighting to supplement general lighting where ever possible.
- Keep lights and fittings clean. Dusty or dirty globes and fittings can reduce light output by up to 50%.

## Further Information

Port Macquarie-Hastings Council on 6581 8111 or visit [www.pmhc.nsw.gov.au](http://www.pmhc.nsw.gov.au).

Federal Government Greenhouse Office on 1300 130 606 or visit [www.greenhouse.gov.au](http://www.greenhouse.gov.au)

The information on this brochure is from the NSW Government's 'Live Energy Smart' project.



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