

ENERGY EFFICIENT LIGHTING

COMPACT FLUORESCENT LAMPS

Lighting is one of the most obvious uses of energy in the home. We use it not only to see what we are doing, but also for appearance, through feature lighting, and for security.

Lighting accounts for around 6% of energy use and 16% of greenhouse gas emissions in the average household, so using more efficient lighting will save you money as well as helping the environment.

Compact fluorescent lamps are the most energy efficient form of lighting commonly available. They fit in the same lamp sockets as ordinary incandescent globes but use only about one fifth of the energy to produce the same amount of light.

Compact fluorescent lamps also last much longer – most are rated for 8 000 hours of use, compared with 1 000 hours for ordinary light globes.

Although they cost more to buy, compact fluorescent lamps cost less to run, so they are best used to light areas where they will be on for long periods. In most households this will be the kitchen, family and living rooms, and in some households, children's bedrooms, too. Rooms and passages where lights are left on for added security are also good places for compact fluorescent lights.

Choice magazine reported on compact fluorescent lamps in the April 2000 issue. The report shows that the higher cost of these lamps is paid back in 1.5 to 2.5 years, depending on the size (wattage) of the lamp and how much it is used.

Compact fluorescent lamps come in different styles and sizes – check that the lamp you intend to install will fit within the space available in the light fitting. Some lamps are also available in 'warm white' models as well as 'daylight' models. Warm white models give the same sort of light as incandescent globes.

Some compact fluorescent lamps come in two parts: the tube is separate from the lamp base that contains the electrical controls. This means the tube can be replaced at a lower cost than fixed lamps where the entire unit (tube and base) must be replaced when the tube fails.



Note: compact fluorescent lamps are not suitable for use with dimmers. The lamps will fail if dimmed.

Because they use less electricity, compact fluorescent lamps also result in lower greenhouse gas emissions. If half of South Australia's households replaced one 75 W incandescent globe used for five hours each day with a 15 W compact fluorescent lamp, they would reduce greenhouse gas emissions by around 36 000 tonnes each year. This represents savings of about 30 000 tonnes of Leigh Creek coal

Comparison of lamp sizes giving a very similar light output

Incandescent lamp	40W	60W	75W	100W
Compact Fluorescent Lamp	9W	11-13W	15-18W	20-25W



Government of South Australia

Department for Transport, Energy and Infrastructure

FAQ's

Save money and cool global warming!

It is important that we all contribute to minimising Greenhouse Gas Emissions. Each of us can take the lead in reducing our own household's use of energy through:

- Energy efficient housing design.
- Selection of the most appropriate energy fuel source.
- Selection of energy efficient appliances and technology.
- Minimising our need for energy use.



Q Can I put a compact fluorescent lamp into my existing light fitting?

A Yes, provided that the fitting is not controlled by an analogue dimmer switch. Compact fluorescent lamps come with bayonet or Edison screw bases, so they can be used instead of incandescent light globes in existing light fittings. Note that the higher wattage compact fluorescent light bulbs are often larger than equivalent incandescent globes, so this may also be a factor. You may find that some lamps have a restricted light globe wattage, meaning a Compact fluorescent lamp can give you a brighter light safely.

Q How long does a compact fluorescent lamp last compared with an incandescent globe?

A Most compact fluorescent lamp models are rated at 8 000 hours of use. Incandescent globes are usually rated at 1 000 hours of use. The ratings are the average time the lamps last. Individual lamps of both types may last longer than their rated life, or may fail earlier.

Q How much energy does a compact fluorescent lamp save, compared with an incandescent globe?

A Compact fluorescent lamps use about 20% of the energy to produce the same light output, so they save 80% of the energy used by an incandescent globe.

Q Can I use a compact fluorescent lamp with a dimming switch?

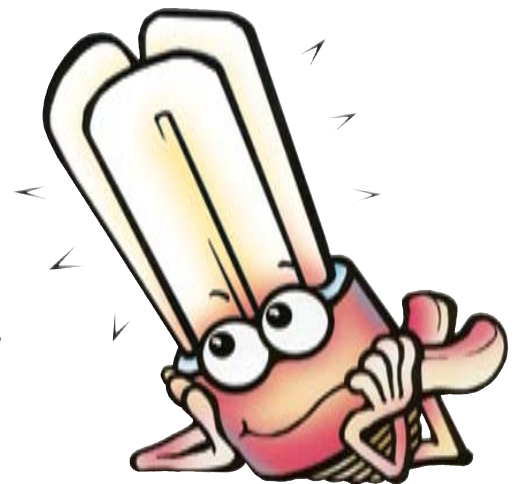
A No. This type of lamp is not suitable as dimming will cause lamp failure. If you use the dimmer most of the time, you could replace the lamps with lower wattage ones and save more money and energy that way.

Q Do low voltage lights cost less to run?

A No. You pay for electricity by the wattage of the lamp not its voltage. It will therefore cost the same amount to run a 50W low voltage lamp as it does to run a 50W normal voltage lamp.

Q Is it more expensive to turn a fluorescent lamp off than leave it on?

A It costs more to start a fluorescent lamp than it does to run it. However, this increased start-up current is only microseconds long and therefore the first second the lamp is off will more than pay for the start-up. Frequent switching on and off of a fluorescent light will reduce its lifetime and therefore should be avoided.



Where can I get further energy efficiency advice?

Log on to the *Energy Division* website - for information and advice through the 'Advisory - Residential' links @ www.energy.sa.gov.au

Call our **Advisory Service** on 8204 1888 (Freecall™ for country callers 1800 671 907)

email us at energy.sa@saugov.sa.gov.au



Government of South Australia

Department for Transport, Energy and Infrastructure