

Fact Sheet 7

Lighting improvements



Residential Efficiency Scorecard

The Scorecard is a home energy rating program.

An accredited assessor visits your home and looks at the building and fixed appliances. You receive a certificate with your home's energy star rating, comfort and appliance efficiency ratings.

Your Scorecard assessor gives you advice on making your home more comfortable. They make your next steps simple, so you don't miss out on energy bill savings.

To find out more about the Scorecard or to find an assessor, visit www.victorianenergysaver.vic.gov.au/scorecard

Why lighting is important

The lighting in your home can use a lot of energy. It can also be the hidden problem in some homes causing draughts and weakness in the insulation.

The good news is that lighting is often one of the easiest and cheapest things to upgrade.

Using Scorecard ratings

Look at the second page of your Scorecard certificate. The lighting bar chart shows how efficient your lighting is compared to the most efficient in the market. The more bars the better.



The bigger the pie slice the more important to upgrade. The pie chart percentage shows how much your lighting contributes to the overall star rating for your home. Beside this are recommendations on how you can improve this rating.

The Scorecard assessment also considers if your lighting is causing other issues. If there are gaps in your light fittings, this can create draughts. Downlight fittings may have gaps you can't easily see. Downlights, or recessed lighting, also can require gaps in your insulation.

In both cases this can have a big impact on your comfort and energy cost. Because of these issues, you may also see a recommendation to upgrade your lighting fitting under the cold weather comfort rating.

Taking action

Your Scorecard assessor will show you where the issues are and how you can fix them. An easy action is to replace light bulbs with LED light lights. LED lights are widely available through supermarkets, hardware and lighting stores. They will give you an instant reduction in energy consumption.

Check to see if there are any government funded schemes that will change your light bulbs to more efficient ones.

Simple actions

Ways to cut lighting power bills:

- Turn lights off in rooms when not in use.
- Use task lighting (reading lamps) and turn off the main lights in the room.
- If night lights are required for children or in stairwells, use low wattage sensor lamps, rather than leaving a room light on.
- Light coloured surfaces reflect more light so choose a lighter colour for ceilings and walls.
- If you are renovating, consider placing lighting circuits that allow you to choose which lights you have on in a room. Then you can easily turn lights off and lower your energy costs



Options

Light Emitting Diode (LED)

LEDs are a good choice, they are highly efficient and have a long life. They also come in many shapes and colours and are available for most fittings including downlights.

Fluorescent

Fluorescent lamps are quite efficient, although LEDs are more efficient. Fluorescents can be tubes, circles or more compact forms for use in general purpose fittings.

Compact fluorescent lamps (CFLs) can be used as replacements in general-purpose lighting fixtures, although there may be limits on the style and brightness available.

Incandescent

Replace incandescent globes. Incandescent lamps are not efficient, they typically use more than 6 times the energy of an LED. Incandescent globes are now rarely found but may be used in specialised fixtures such as chandeliers or outdoor floodlights.

Halogen

Replace halogen globes. Halogen lamps are most often found in recessed downlights or track lighting, but they can be used in general light fixtures. Halogens typically use more than 6 times the energy of an LED.

Colour temperature

Modern lighting options means there is now no need to have harsh lighting. Lamps can provide lighting colours such as “warm white” like the colour of the older style incandescent light. If you need more clarity for fine work or definition of objects, you may wish to use “cool white” coloured lamps.

The colour is measured in degrees Kelvin (shown by the letter K). All LED and CFL lamps have their colour written on the packaging so you can check before purchasing.

Typical ranges for each colour temperature:

- Warm white – 2000K to 3000K
- Cool white – 3100K to 4500K
- Daylight – 4600K to 6500K

Options for light fittings

Don't forget the light fittings. Ask your Scorecard assessor for options. Light fitting upgrades should be done by an electrician.

Downlights can use many halogen lamps, which are big energy users and generate a lot of heat. So much heat that the lighting can make your home hotter on hot days.

For recessed halogen lamps insulation must be kept well clear of the light fitting in the roof space. This means that the ceiling insulation in rooms with many lights can perform poorly. Even small gaps in insulation can lead to a large drop in efficiency.

Look out for gimbaled downlight fittings (where you can move the direction of the light) and the larger style of recessed light common in the 1970s and 1980s. These fittings often have big gaps to allow lamp heat to escape. These gaps also allow air leakage between the room and roof space.

Some options:

- Replace recessed fittings with non-recessed fittings such as track lighting, pendant lighting, ceiling-mounted or wall-mounted lighting.
- Replace the whole fitting with a sealed LED unit. New fittings have ratings that allow insulation to be placed against the sides (CA90 rated) or over the top of the fitting (IC4 rated).

Other options, but insulation gaps and air leakage may still be an issue:

- Replace the lamp in the existing fitting. For replacing low-voltage halogen lamps (known as MR16 or 12-volt lamps) with LEDs the existing transformer and the LED need to be compatible. Otherwise there will be poor performance or flickering.
- Replace the transformer and the lamp.

For more information

Lighting <https://www.energyrating.gov.au/apps>

Scorecard

Find out more about Scorecard and take look at the other fact sheets in this series

www.victorianenergysaver.vic.gov.au/scorecard