ACER Achieving Carbon Emissions Reduction

EMRC

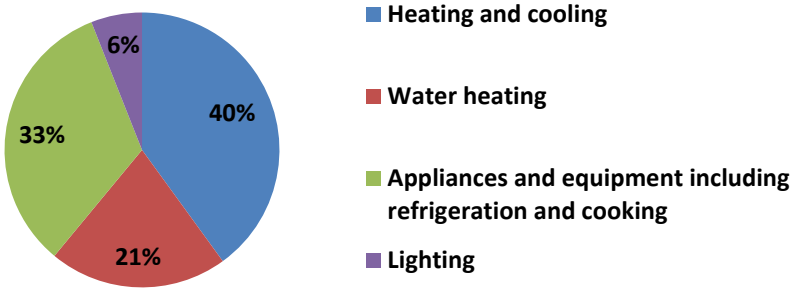
Energy Efficiency Tips for Residents

What should be done first?

A quick energy audit of your home can find ways to reduce energy use and become more efficient. This is particularly important when considering installing solar panels, because improving your home's energy efficiency can reduce the size of solar panel system needed and reduce the cost.

The average home

The average WA home consumes approximately 17 units (kWh) of electricity per day (Synergy 2016). The chart below is a general guide to which appliances use the most electricity in an average Australian home (DEWHA 2008).



Changes in efficiency and an increase in the number of electrical goods in homes over the past few years mean that this ratio is changing here in WA, with more electricity used for appliances and less for heating and cooling. Refrigeration makes up nearly half of the energy used by appliances. Refer to Synergy for more information: www.synergy.net.au/Your-home/Save-energy/Energy-saving-tips.

What can you do now that is low cost to implement?

❖ Heating and cooling

On a warmer winter's day, or cooler summer's day, open windows and blinds to let in warmth or cool breezes. Cover glass windows and doors with curtains and pelmet or blinds to prevent heat transfer.

Program all air conditioning systems so that they are only used when rooms are occupied. Put up signs to remind others to turn the system off when they leave to avoid wasted energy. Set timers.

Set the temperature on your system heating to18°C - 21°C in winter and cooling to 23°C - 25°C in summer at the start of each season and avoid changing the set temperature. Every 1°C higher in winter or lower in summer can add 10% to the running costs of your heating and cooling system.

Maintain heating and cooling systems to ensure efficient operation. Systems should be serviced in line with the manufacturer's maintenance instructions.

❖ Fridges and freezers

Turn off additional fridges and freezers when not needed, for example a bar or drinks fridge should be emptied and turned off when you're not entertaining. If goods in the fridge won't go off (e.g. cans of drink), consider using a timer to switch the fridge on only when needed (such as weekends).

Eastern Metropolitan Regional Council

• 226 Great Eastern Highway, Belmont WA 6104 • PO Box 234, Belmont WA 6984 • Tel: 08 9424 2222 • Fax: 08 9277 7598 • Email mail@emrc.org.au • Web www.emrc.org.au

BASSENDEAN

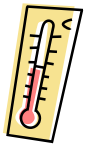
BELMONT • CITY OF OPPORTUNITY •

Shire of MUNDARING

❖ Fridge and freezers (continued)

Ensure fridges and freezers are located in a cool, ventilated area out of direct sunlight. Ensure air can circulate around all sides of the unit.

Replace the seals on your fridge and freezer to reduce the stress on the appliance and make it easier to maintain its temperature.



Use a thermometer to check the **fridge temperature is set to 4°C** and the **freezer temperature is set between -15°C to -18°C**. If too cold, more energy is used, while temperatures that are too high allow food poisoning bacteria to grow. Adjust your fridge and freezer to the optimum temperature.

❖ Water heating

Encourage all members of the household to **take shorter showers** (less than 4 minutes) to reduce the energy required to heat the water and to save water.

❖ Standby power

Install a “master/slave” powerboard or timer for computers, equipment and appliances so they switch off completely when not in use, and put up signs to remind others to switch things like TVs, game machines and phone chargers off at the power point when they’re not being used.

What can you do soon that may require some cost to implement?

❖ Shading

Use trees, pergolas, blinds and awnings externally to shade hot easterly, northern and western areas in summer. Remove shading in winter where possible to allow for passive heating.

❖ Lighting

Modern fluorescent tube (T5), CFL and especially LED lighting is much more energy efficient than older incandescent, halogen and some HID lighting (e.g. metal halide and mercury vapour). Install energy efficient lighting in all high use areas.

❖ Electrical appliances (eg. TV, dishwashers, washing machines, etc)

Consider replacing appliances that are over 10 years old as modern appliances are more energy efficient. Look for a high star-rating and the smallest size to meet requirements. Regularly service appliances to maintain their efficiency.

❖ Building Insulation

Check that insulation is installed in the ceiling (and walls, if applicable). If there is insulation, ask a licensed insulation installer to check its effectiveness and upgrade your insulation to a higher R-value if required (R-value is a unit of thermal resistance for a particular material or assembly of materials).

What can you do later that may require significant cost to implement?

❖ Solar hot water systems

Convert an electric storage system to solar with a gas booster; gas instantaneous (6 star); or heat pump system to save hot water heating energy. Consult an accredited professional to find the right system to meet your needs.

❖ Solar PV panels

The installation of solar photovoltaic (PV) panels can provide clean energy during daylight hours. Consider the energy which is used during the day and consult an accredited professional to find the right system to meet your needs. **See *Solar Panel PV Panel Tips for Residents* fact sheet for more information.**