

# Summer cooling guide 2017–18

## How to stay cool and comfortable in your home this summer

Cooling and heating account for about 40% of the energy used in a typical Australian home. There are many ways to keep cool in summer that can reduce your need for cooling appliances and lower your energy costs.

### Keep the heat out with shading and insulation

Shading the north and west sides of your home, by using adjustable external blinds, deciduous trees, or simply closing curtains and blinds, will keep your home cooler in summer, without blocking out warming winter sun.

Installing insulation in your ceiling and walls can significantly reduce the amount of heat transferred into your home. If you rent, ask the landlord if they will install insulation, or top it up if it's no longer effective.

If you insulate your home without shading it as well, it can get very hot and the insulation will trap the heat inside. Always shade your home, particularly the windows, if you insulate.



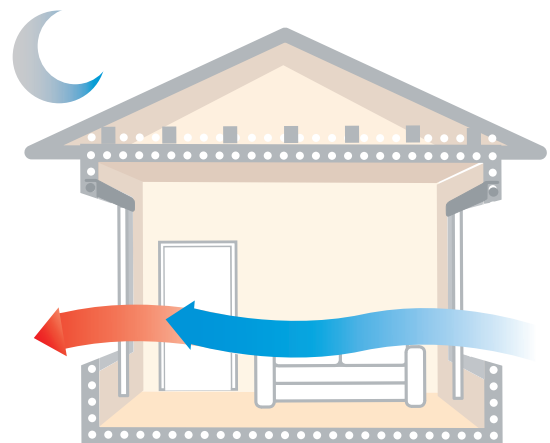
Leafy trees and external blinds can help prevent summer sun from shining directly through your windows and heating up your home.

### Make your cooling more effective

When using a refrigerative air conditioner, only cool the areas you need by closing internal doors, or using the zone controls on a whole-of-house system. Sealing gaps around doors and windows and using draught excluders under doors will reduce wasted energy, as will properly insulating your home.

Evaporative coolers work differently. Opening some doors or windows will increase air flow and improve the effectiveness of the system.

If it is cooler outside, e.g. at night, save energy by turning your cooling system off and opening windows and doors to allow breezes into your home. If possible, use window and screen door locks to keep your home secure.



Using cross ventilation is an effective way to cool your home.

## Why are insulation and shading so important?

This diagram shows where a typical uninsulated home gains heat. Most heat is gained through your ceiling, walls and windows.

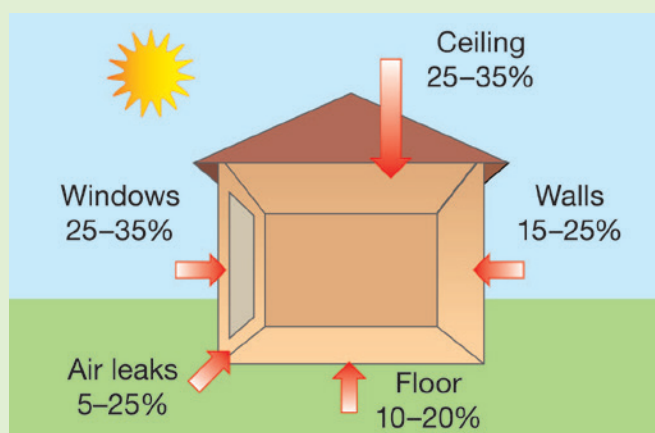
Insulation, and shading walls and windows, are important because they are very effective ways of limiting the amount of heat entering your home.

Insulation can deteriorate over time, so ensure it is replaced or topped up when it is no longer effective.

When choosing an insulation installer, make sure they have a South Australian builder's licence that permits them to install insulation.

Insulation is measured by its R-value. Ask a licensed insulation installer about the best R-value for your home and needs.

Visit [sa.gov.au/energy](http://sa.gov.au/energy) for more information.



Typical heat gain in summer of an uninsulated home.

## Choose the best cooling appliance for your needs

Choose a cooling appliance that is the right size for the area you want to cool. Knowing how much your appliance costs to run will help you keep track of your energy costs.

The table on the right can help you select the best cooling appliance for your needs.

Always take care of your health and the health of those around you. Older people, babies, and people with ongoing health conditions tend to be most vulnerable in hot weather.

### Fans

Ceiling and portable fans (e.g. desk and pedestal) are the cheapest types of cooling appliance to run.

While they do not cool the air, they create air movement that helps carry heat away from you and can help you feel cooler.

You can use fans at the same time as other cooling appliances to help move cool air around your home.

### Evaporative coolers

Evaporative coolers use water and a fan to blow cool, humidified air into your home, and have very low running costs. They work well in dry weather but can be less effective when it's humid.

Evaporative coolers need good ventilation (open windows or doors) so the cooled air can push the warm internal air outside.

Portable evaporative coolers also need air flow to operate effectively, so position them near an open window or door.

### Refrigerative air conditioners

Refrigerative air conditioners cool air to a set temperature by removing heat from the room. Reverse cycle systems can also heat in cold weather.

Refrigerative systems cost a lot more to run than evaporative coolers. You need to shut windows and doors for them to work effectively.

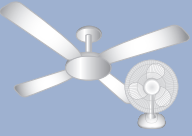

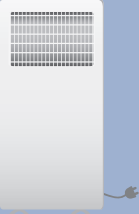
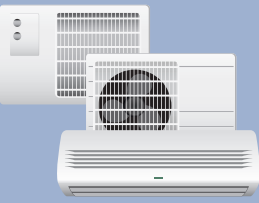
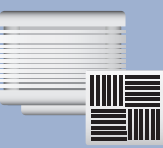

The bigger the space you cool, the more energy you use and the higher your running costs will be. Closing doors to rooms you're not using and using the zoning control on a whole-of-house system (if you have one) can reduce your cooling costs. For example, if no one is sleeping in bedrooms during the day, don't cool those rooms until bedtime, and turn off cooling in living spaces at night.

If you have solar panels, using your free solar energy during the day to help pre-cool your home may be more cost effective than buying electricity at night.

### Ducting

If you have a ducted system and the ducting is poor quality or has deteriorated, it may be wasting energy and losing a lot of cool air. When purchasing a system or replacing ducting, look for an R-value of at least 1.5 for the ducting, and 0.6 for the fittings.

## Cooling appliance indicative running costs and operating tips

Cooling appliance	Hourly running costs	Works best in	Operating tips
<b>Ceiling and portable fans</b> 	2–5¢ depending on size	Models available for all room sizes and spaces	<ul style="list-style-type: none"> <li>• Can be used on their own or with other cooling appliances.</li> <li>• Can help move cool natural breezes through your home.</li> <li>• Reversible ceiling fans can also help with winter heating.</li> </ul>
<b>Portable evaporative</b> 	7¢ energy 1–2¢ water	Rooms up to 20m <sup>2</sup>	<ul style="list-style-type: none"> <li>• Needs good air flow to operate effectively, so place near an open window or door.</li> </ul>
<b>Portable refrigerative</b> 	40–60¢	Rooms up to 20m <sup>2</sup>	<ul style="list-style-type: none"> <li>• Not as energy efficient as split systems but more effective in well-insulated homes.</li> <li>• Includes indoor and outdoor components connected by a hose passed through a partially open window.</li> <li>• Setting the thermostat to 24–27°C, or as high as is comfortable for you, will reduce running costs.</li> <li>• Direct louvres at the ceiling, as cold air falls.</li> </ul>
<b>Window and split refrigerative systems</b> 	23–39¢ (room up to 20m <sup>2</sup> ) 48–70¢ (36m <sup>2</sup> room) 76–97¢ (50m <sup>2</sup> room)	Window systems – rooms up to 36m <sup>2</sup> Split systems – rooms up to 75m <sup>2</sup>	<ul style="list-style-type: none"> <li>• Work best in well-insulated and draught-proofed homes.</li> <li>• The outdoor compressor should be in a well ventilated and preferably shaded area.</li> <li>• Setting the thermostat to 24–27°C, or as high as is comfortable for you, will reduce running costs.</li> <li>• Direct louvres at the ceiling, as cold air falls.</li> <li>• Systems more than 10 years old typically use more energy and cost more to run.</li> </ul>
<b>Ducted evaporative systems</b> 	47–62¢ energy 8–9¢ water	Whole-of-house (200m <sup>2</sup> home with 125m <sup>2</sup> cooled)	<ul style="list-style-type: none"> <li>• Effective in South Australia's dry climate. Can also be used as a large fan.</li> <li>• Systems need good air flow to operate effectively; opening some windows or doors will help.</li> </ul>
<b>Ducted refrigerative systems</b> 	\$2.37–\$3.39	Whole-of-house (200m <sup>2</sup> home with 125m <sup>2</sup> cooled)	<ul style="list-style-type: none"> <li>• Work best in well-insulated and draught-proofed homes, and with good quality ductwork.</li> <li>• The outdoor compressor should be in a well ventilated and preferably shaded area.</li> <li>• Systems with zoning can reduce the size of the area being cooled, using less energy.</li> <li>• Setting the thermostat to 24–27°C, or as high as is comfortable for you, will reduce running costs.</li> <li>• Systems more than 10 years old typically use more energy and cost more to run.</li> </ul>

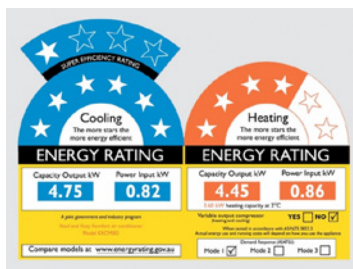
Running costs are a guide only. Calculations are based on AGL's standing retail contract electricity rates, which are generally high and have no discounts. Customers with smart meters on time-of-use plans or demand tariffs may be able to shift their electricity use to cheaper rate periods.

Methodology is available from the Government of South Australia's Energy Advisory Service – email [energyadvice@sa.gov.au](mailto:energyadvice@sa.gov.au)

## Buying a new air conditioner

Refrigerative air conditioners often have an energy rating label, like the one pictured.

The more stars a product has, the more efficient it is. You need to use the numbers to make sure you are comparing the energy efficiency of similar sized appliances.



Visit [energyrating.gov.au](http://energyrating.gov.au) to compare new refrigerative air conditioners.

When shopping for a new cooling appliance, consider how you want to use it, as well as its purchase price.

While some cooling appliances may be cheaper to buy and run on an hourly basis, the cooling they can provide and the area they can cool may be limited.

For example, a portable refrigerative unit is reasonably cheap to purchase but can only cool a small room, whereas a ducted evaporative system can cool a whole home and has a similar hourly running cost.

## Smart meters

Smart meters are advanced digital meters that can record your electricity use every 30 minutes, which means you can see both how much electricity you are using and when you are using it. Using this information to make energy-saving changes can help lower your electricity costs.

Energy retailers may offer flexible pricing deals to customers with smart meters, where you are charged different rates for using electricity at different times of day. Shifting some of your electricity use to cheaper rate periods could help reduce your bills.

From 1 December 2017, new and replacement meters installed in South Australian homes and small business will be smart meters. If you would like a smart meter, contact your energy retailer.

For more information about smart meters, visit [sa.gov.au/energy/smartmeters](http://sa.gov.au/energy/smartmeters)

## Keeping safe in the heat

It's easy to become dehydrated or for your body to overheat in very hot weather, especially for babies and older people. To help keep cool:

- keep your windows covered with curtains, blinds and external shading to keep the sun out
- stay out of the sun and limit your exercise
- wear light coloured clothing made of natural fibres
- keep jugs of drinking water cool and readily available
- place wet towels on your face and body
- spend time at air conditioned public places, such as shopping centres or libraries
- at night, if it's cooler outside, open doors and windows to let cooler air inside. Use window and screen door locks to keep your home secure.

SA Health's *Extreme Heat* guide is full of information about heat related conditions, tips for managing extreme heat, and treatment for people affected by heat. Get a copy of the guide from your local library or medical service, visit the [sahealth.sa.gov.au](http://sahealth.sa.gov.au) website, or call 8226 7115 and ask to have one posted to you.

## Red Cross Telecross REDI

The Telecross REDI service calls people during extreme heat events, when the predicted average daily temperature is above 32°C for three or more days in a row, to check they are ok.

The service is for people who are elderly, frail, housebound, socially isolated, recovering from an illness or hospitalisation, or who have a disability.

Trained volunteers call pre-registered people to check on their wellbeing and remind them what to do to stay well in extreme heat. If a call goes unanswered or if someone is in distress, the volunteers activate an emergency procedure to check the person is safe.

To register, visit [redcross.org.au/telecross](http://redcross.org.au/telecross) or call 1300 885 698.

## Contact the Energy Advisory Service for free energy saving advice

Online: [sa.gov.au/energy](http://sa.gov.au/energy)

Email: [energyadvice@sa.gov.au](mailto:energyadvice@sa.gov.au)

Phone: 8204 1888 or 1800 671 907 (free call from fixed lines)



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South Australia