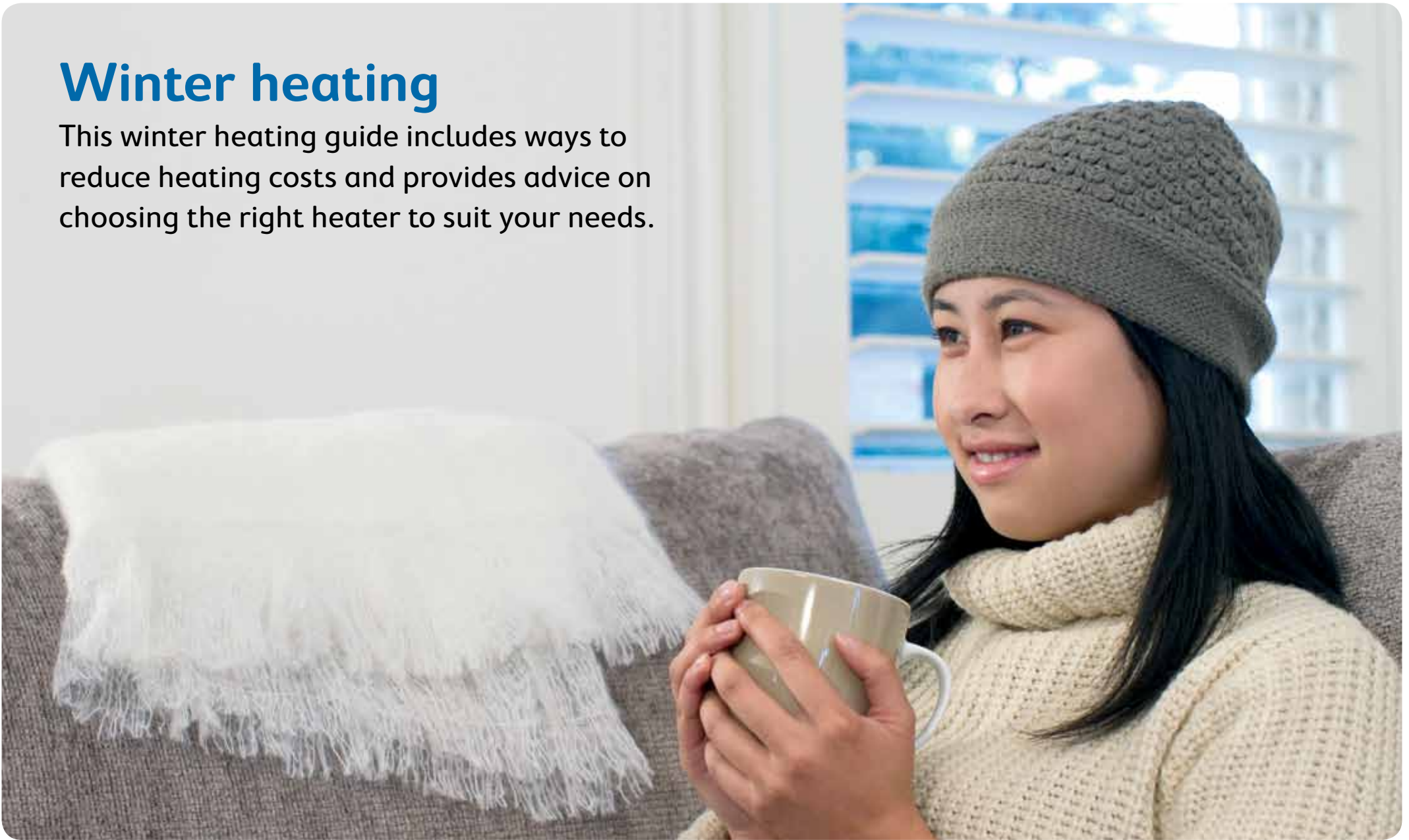


# Winter heating

This winter heating guide includes ways to reduce heating costs and provides advice on choosing the right heater to suit your needs.



# Fuel for thought – Choosing the right heating system for you



## Did you know?

A simple way to reduce your heating costs is to ensure that you are not overheating your home.

Use a room thermometer to keep your room heated to 18 to 21 degrees in winter. In summer, keep the room temperature at around 23 to 26 degrees.

## How big a space?

Do you want enough heat for one person, a large room, or the whole house?

Portable electric heaters like bar radiators or fan heaters are cheap to buy but costly to run. They're best for personal heating or small rooms like a home office.

Heating larger living areas requires more energy, so it's important to choose an efficient

option such as a high star rated gas heater or reverse cycle air conditioner. It's a good idea to get expert advice on choosing the right size heater for the area you want to heat.

If you choose central (or ducted) heating for your whole house, make sure the system can be zoned so you heat only the rooms you are using rather than the entire house.

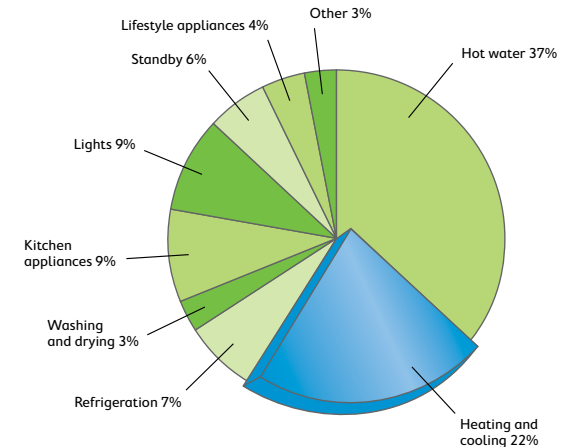
## How often will you run it?

If you'll be using it regularly, it's probably best to spend more initially on a gas heater or a reverse cycle air conditioner and take advantage of the lower running costs.

Portable electric heaters have the lowest purchase price, however they cost more to run. If you plan to leave a heater running unattended, such as in kids' bedrooms, oil-filled column heaters are a safer option.

## Average household energy use\*

Heating and cooling costs account for around a quarter of the average household's energy use, so it makes sense to carefully consider heating options. Efficient heating saves energy, money, and the environment by reducing greenhouse gas emissions.



\* Average household energy usage is based on a typical 3-person household in Sydney with all electric appliances, a 500 litre fridge, reverse cycle air conditioning, clothes dryer, dishwasher and halogen lamps. Hot water usage is based on a 7 minute shower per person per day with a standard showerhead on an off peak tariff. Actual energy consumption will vary depending on appliance usage, model and type.

## What type of fuel



### Natural Gas

Very efficient for heating and emits around a third of the greenhouse gas of electricity from coal.



### Electricity

The most expensive and greenhouse intensive option and therefore requires careful consideration to ensure efficient use.



### Solid Fuel

Firewood is an efficient option when used in slow-combustion heaters, however open fires lose up to 90 per cent of their heat straight up the chimney.

# A guide to heating options

## Electric heating

### Portable heaters

Types: Radiant, fan, convection and oil-filled column heaters.

Portable heaters, although cheap to buy when compared with permanent or fixed heaters, can be relatively expensive to run.



If chosen for the right purpose and used carefully, portable heaters can be a useful solution for your home. They work most efficiently when used to heat a person or a small area for short periods of time.

### Underfloor or in-slab heating

Underfloor heating can be costly to run and has high greenhouse emissions for the amount of heat produced. Consider installing a timer and thermostat to reduce running costs.

It may be possible to pre-heat the floor in lower priced shoulder or off peak periods if you are on time-based pricing.

This heating is usually most appropriate for new homes or extensions because it may need to be installed before the concrete slab or flooring is laid.

### Air conditioners

Types: Window/wall, split system and ducted (central) air conditioning.

Reverse cycle air conditioning is one of the most efficient ways of heating rooms. They can be sized for a small room, a large living area or a whole home and generally include a programmable thermostat and timer.

While the upfront cost may be high, if the system is zoned, you can heat the space you require efficiently and quickly. They are energy star rated so it's easy to choose an efficient model.

## Gas heating

Types: Unflued radiant and convection heaters and flued convection and ducted heating.

Gas heating emits around one-third of the greenhouse gas emissions of portable electric heaters. Although the upfront cost of gas heaters is higher than portable electric heaters, the running costs are significantly cheaper, saving you money in the long run.

Unflued gas heaters are less expensive than flued gas heaters but they require room ventilation. They cannot be used in bedrooms or bathrooms and may cause respiratory irritation for some people.

## Firewood

Types: Open fires and slow combustion wood heaters.

Open fires look great but they are inefficient with up to 90 per cent of heat being lost up the chimney.

With open fire air pollution problems and safety issues, it might be worth considering a slow combustion wood heater, especially in a city area. It's up to six times more efficient than an open fireplace and can be used to heat large living areas.

## Reaching for the stars

By choosing an energy efficient heater, you can save money and reduce greenhouse gas emissions. Gas heaters and reverse cycle air conditioners have energy rating labels. Use the labels to compare products and then choose the most efficient model you can afford.



# The dollars and sense of heat

Overheating your home in winter can increase electricity and gas bills. You can keep your heating costs lower by following the HEAT approach.

## The heat code

**H** Hold in the heat

**E** Evaluate

**A** Action

**T** Temperature and timers

### Hold in the heat

A lot of heat can be lost through windows so it is important when heating to cover windows by closing blinds or curtains.

Draught-proofing under doors and around windows is a cheap and easy way to improve the insulation of your home. Check your local hardware store for draught stoppers, door snakes and window sealing tape.



Insulating a home can be an easy way to keep warm in winter.

Installing ceiling insulation can slash average heating costs by up to a quarter. An insulated house is warmer in winter and cooler in summer.

Heaters and air conditioners run more efficiently in an insulated home, reducing greenhouse gas emissions and energy bills.

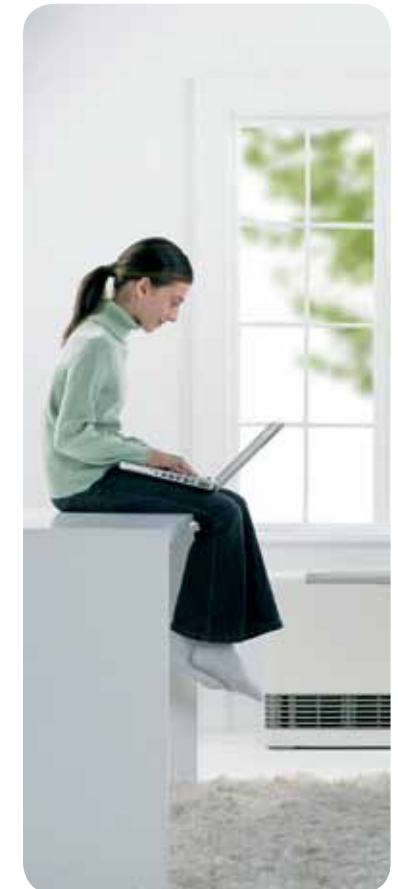
### Evaluate heating options for your home

Choosing the right heater is all about being comfortable in your home at minimum cost. You want it to be the right size, the most economical fuel, and the most efficient type of heater for your budget.

If natural gas is available, this is a cheap heating option with lower greenhouse gas emissions. Gas heaters can give out more heat than portable electric heaters, and they are good for larger rooms and getting to a comfortable temperature more quickly. Look for the highest star rating on gas heaters.

Electric heaters (like radiators or fan heaters) are the cheapest to buy but the most expensive to run. They work best if you sit in front of them for immediate personal warmth. They're not the most effective type of heating for a whole room or living area.

A reverse cycle air conditioner is one of the most efficient options for heating houses without gas, and is well suited for heating larger rooms.





# The dollars and sense of heat

## Action to become more energy efficient

Central heating can be a good option, however it costs more to heat large areas or a whole house. It will always be cheaper to heat only the rooms you are using (such as the living areas) than to heat an entire house.

Wearing warmer clothes or throwing an extra blanket on the bed can keep heating costs down.

Dressing warmly even when inside during the cooler months is an easy way to slash heating costs and is cheaper than running an electric heater all day during winter.



Keeping windows and doors closed, drawing curtains at night and turning heaters off when you go out or to bed will cut heating costs.

Close the doors to bathrooms with exhaust fans, as these can let cold air into a heated home and make heaters work harder than they have to.

## Temperature checks and timers

Using a simple timer to heat a home only when you are there is one of the simplest and most cost-effective ways to cut heating bills. Leaving heaters running overnight or when you're out is a fast way to a high winter energy bill.

Programming a timer to turn on the lounge room heater 20 minutes before you get up each morning and turning it off 20 minutes before you walk out the door will save money and keep you warm. Timers cost less than \$20 and can be bought at any hardware store or consider a heater with a built-in timer.



The temperature of a heated room in winter should remain between 18 and 21 degrees. If the room is at this temperature and you are still cold put on another jumper. For every degree above 21 degrees that you program a heater, it adds roughly 10 per cent extra to your heating costs.






## Other heating tips

- Electric blankets use much less energy than room heaters. Pre-warm your bed and then switch the blanket off when you go to sleep.
- Closing doors in the rooms you want to heat is one of the easiest ways to cut heating costs.
- Hot air rises so running slow-moving ceiling fans in reverse can be a great way to push the warmth back down to where it is needed, especially if you have high ceilings.







# Use this table to compare heating options and choose the best heater for the space you want to heat

Heater Types	<b>Gas</b> Flued gas heater 	<b>Gas</b> Unflued gas heater* 	<b>Electric</b> Radiant heater 
<b>Pros</b>	<p>Cheaper to run than electric heaters. Gas heating has one-third of the greenhouse gas emissions of electric heaters.</p> <p>Can be sized for small rooms, large living areas, or an entire home.</p> <p>Choosing an efficient model is easy because they are energy star rated.</p>	<p>Cheaper to run than electric heaters. Delivers more heat than electric heaters, so warms a room faster.</p> <p>They are energy star rated so it's easy to choose an efficient model.</p> <p>Gas heating emits around a third of greenhouse gas of electric heaters.</p>	<p>Good for giving instant heat. Cheaper to buy.</p> <p>Good for spot heating over short periods of time.</p>
<b>Cons</b>	<p>Higher upfront cost than portable electric heaters.</p> <p>Flued gas heaters are more expensive than unflued gas heaters.</p>	<p>Unflued models require some room ventilation, and may cause irritation for some people.</p> <p>Not suitable for bedrooms or bathrooms.</p>	<p>Expensive if used for heating a large room. Generally not built with a thermostat, making them more costly to run.</p> <p>Hot to touch, so children must be supervised. Fire safety can be an issue.</p>
<b>Purchase price</b>	Medium to high	Medium to high	Low
<b>Estimated heating energy costs**</b>	Hourly 21 cents Weekly \$12 Monthly \$50 Yearly \$150	Hourly 19 cents Weekly \$10 Monthly \$45 Yearly \$135	Hourly 54 cents Weekly \$30 Monthly \$132 Yearly \$396
<b>Best area to heat</b>	Small to large living room or a whole house	Small to medium living room	One person
<b>Time it takes to heat up</b>	Fast	Fast	Fast

Heater images kindly provided by Rinnai, De'Longhi and Kambrook.

This brochure is correct at the time of printing and contains general information. You may need to seek professional advice to apply information in the brochure to your particular circumstances.

# Comparison of heating systems

<b>Electric</b> Fan heater 	<b>Electric</b> Oil-filled column heater 	<b>Electric</b> Convection heater 	<b>Electric</b> Reverse cycle air conditioner 																																
<p>Portable and easy to move around.</p> <p>Cheaper to buy than gas heaters.</p> <p>Good for personal heating or small areas like a home office.</p>	<p>Portable models can be moved from room to room.</p> <p>Safer than fan and radiant heaters.</p> <p>Good to heat kids' bedrooms.</p> <p>Many models include timers and thermostats.</p>	<p>Cheap upfront cost.</p> <p>Can be moved from room to room.</p> <p>Fan-assisted models help distribute the warm air.</p> <p>Many models include timers.</p>	<p>Can be sized or zoned for optimal efficiency.</p> <p>Generally include a programmable thermostat and timer.</p> <p>They are energy star rated so it's easy to choose an efficient model.</p> <p>Can also cool in summer.</p>																																
<p>Expensive to run and can be noisy.</p> <p>Safety concerns if the fan is covered.</p>	<p>Takes a long time to heat a room.</p> <p>Not suited to large living areas.</p> <p>Expensive to buy models with thermostats.</p> <p>Costly to run, especially if left on overnight or when not at home.</p>	<p>Expensive to run.</p> <p>Can take a long time to heat a room.</p> <p>Not suited to large living areas.</p>	<p>High upfront cost.</p> <p>If the system is not zoned, you may heat more space than is needed.</p> <p>Window/wall type units can be noisy.</p>																																
<p>Low</p>	<p>Low to medium</p>	<p>Low to medium</p>	<p>High</p>																																
<table border="0"> <tr><td>Hourly</td><td>38 cents</td></tr> <tr><td>Weekly</td><td>\$21</td></tr> <tr><td>Monthly</td><td>\$92</td></tr> <tr><td>Yearly</td><td>\$276</td></tr> </table>	Hourly	38 cents	Weekly	\$21	Monthly	\$92	Yearly	\$276	<table border="0"> <tr><td>Hourly</td><td>38 cents</td></tr> <tr><td>Weekly</td><td>\$21</td></tr> <tr><td>Monthly</td><td>\$92</td></tr> <tr><td>Yearly</td><td>\$276</td></tr> </table>	Hourly	38 cents	Weekly	\$21	Monthly	\$92	Yearly	\$276	<table border="0"> <tr><td>Hourly</td><td>38 cents</td></tr> <tr><td>Weekly</td><td>\$21</td></tr> <tr><td>Monthly</td><td>\$92</td></tr> <tr><td>Yearly</td><td>\$276</td></tr> </table>	Hourly	38 cents	Weekly	\$21	Monthly	\$92	Yearly	\$276	<table border="0"> <tr><td>Hourly</td><td>13 cents</td></tr> <tr><td>Weekly</td><td>\$7</td></tr> <tr><td>Monthly</td><td>\$31</td></tr> <tr><td>Yearly</td><td>\$93</td></tr> </table>	Hourly	13 cents	Weekly	\$7	Monthly	\$31	Yearly	\$93
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<p>One person or a small room</p>	<p>Bedroom</p>	<p>Small room</p>	<p>Small to large room</p>																																
<p>Medium</p>	<p>Slow</p>	<p>Medium</p>	<p>Fast</p>																																

Note: There is an annual charge of around \$173 for having gas connected to your property.

\*Room should be ventilated when using unflued gas heaters. Not suitable for bedrooms or bathrooms.

\*\*Estimated energy costs are rounded and based on an average of 8 hours usage per day for 3 months per year, with a heat output of 2.4kW and a duty cycle of 70 per cent for thermostat type heaters (all but radiant).

If you use the heater more or less than 8 hours per day the cost will change. Energy costs are based on the 2011/12 regulated retail prices for the Ausgrid network area and NSW Jemena gas network area (22.66c/kWh for electricity and 2.7401c/MJ for gas).



## Heating 2011

For more information on how to save on your energy bills, visit our website at [www.ausgrid.com.au/save](http://www.ausgrid.com.au/save) or call 13 15 25.

