be energy smart

SOUTH AUSTRALIA

Government of South Australia

Do your own home energy audit

Find out how your home uses energy and what you can do to save money

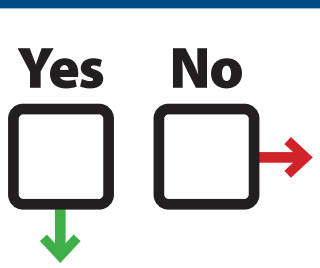
How to complete and energy audit for your home

Completing the audit is easy!

Read the questions column and mark your answers in the 'Yes' or 'No' boxes.

If you answer 'Yes' to a question, continue to the next one.

If you answer 'No', read the right-hand column for advice on how you can improve that area of your energy use.



Follow the advice in the 'How to improve if you answered 'No'' column.

Continue to the next question.

"Saving energy includes the actions of everyone who lives in your home — you may want to involve others when you complete your audit."

What uses energy in the home?

When saving energy, start by focusing on the largest energy users.

Figure 1 shows the average energy use in an Australian home[1].

Swimming pool energy use

A pool is likely to be one of the largest single users of energy in a home.

Figure 1 does not include homes with a swimming pool, as only about 10% of homes in Australia have them.

A swimming pool may use around 3000 kWh per year depending on:

- the type and size of the pump
- how long and how often the pump is run
- if the pool is heated.

Running costs could be in excess of $1,000 a year.

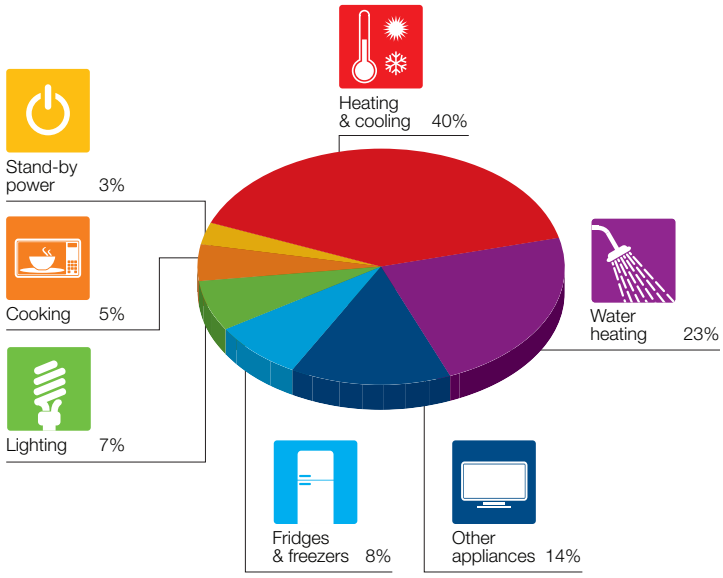
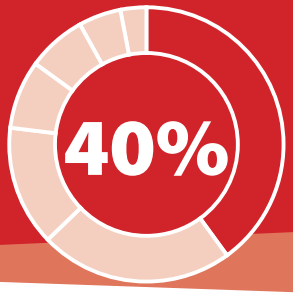


Figure 1 - The average energy use in an Australian home

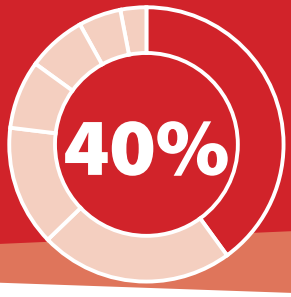
1. Data sourced from the Residential Energy Baseline Study, 2015.

Heating and cooling



Questions	Yes / No	How to improve if you answered 'No'
Do you only heat and cool rooms that are being used?	Yes / No	Consider closing doors to unused rooms so you only heat or cool the smallest possible area. If you have a ducted system, it may already be divided into zones, for example, living areas and bedrooms. Make use of zones to only heat or cool occupied areas.
In winter, do you open curtains, blinds and external shades so the sun can heat your home?	Yes / No	Use the sun as free heating in cooler months, particularly through north facing windows. Direct sun can generate as much heat as a single bar radiant heater over each square metre of a surface. Use a compass, refer to your street directory or online maps to determine which direction your windows face. North is normally the top of the page or screen.
When heating, do you set the temperature as low as you feel comfortable with?	Yes / No	Most people will find a temperature between 18°C and 21°C comfortable for heating. Every 1°C cooler may lower the running cost of your heating appliance by up to 10%.
In summer, do you shade windows to keep your home cool?	Yes / No	In summer, close curtains and shade windows (particularly those facing north, east and west) to minimise heat entering your home. Direct sun can generate as much heat as a single bar radiant heater over each square metre of a surface. Use a compass, refer to your street directory or online maps to determine which direction your windows face. North is normally the top of the page or screen.
When cooling, do you set the temperature as high as you feel comfortable with?	Yes / No	Most people will find a temperature between 24°C and 27°C comfortable for cooling. Every 1°C warmer may lower the running cost of your cooling appliance by up to 10%.
Does your home have good insulation?	Yes / No	Consider installing insulation in your ceiling and walls if you don't already have it. If you already have insulation, ask a licensed installer to check its effectiveness as this can decrease over time.
Have you sealed up gaps around doors and windows that let draughts in?	Yes / No	Use draught-excluders, door and window seals or gap filler to prevent draughts. See "How to test your home" on page 9 for how to check for draughts. Important: when using a gas appliance, you must ensure you have adequate ventilation to avoid creating a serious health hazard.
Do you use ceiling fans to assist your heating and cooling appliances?	Yes / No	Ceiling fans create cool breezes in summer and can redirect warm air downwards in winter.

Heating and cooling

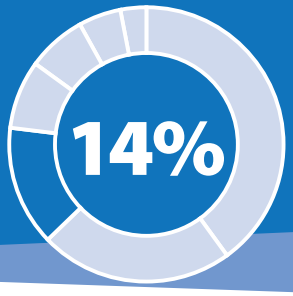


Questions	Yes	No	How to improve if you answered 'No'
When choosing a heating or cooling appliance, do you think about the: • most appropriate type of appliance • size of the appliance • running cost or energy star rating of the appliance?	☐	☐	The most appropriate type and size of heating or cooling appliance will depend on the number of people you're trying to heat or cool, and whether you're heating or cooling a small space, a whole room, or a whole home. Generally, the larger the heating or cooling requirement, the higher the running cost. Contact the Energy Advisory Service on 8204 1888 for advice specific to your situation. See the back cover of this booklet for more contact details.
Do you maintain your heating and cooling appliances to ensure they operate efficiently?	☐	☐	Follow the manufacturer's maintenance instructions and have your appliances serviced regularly.

Water heating

Questions	Yes	No	How to improve if you answered 'No'
Do you shower for less than four minutes?	☐	☐	Taking shorter showers will not only save water, it will reduce the energy needed to heat the water.
Is your shower flow rate nine litres per minute or less?	☐	☐	If the flow rate is more than nine litres per minute, consider installing a three star rated water saving shower head. To find out how to check your shower flow rate, see "How to test your home" on page 9.
Is there insulation on external water heater pipes?	☐	☐	Insulate pipes with foam tubing, known as lagging, to prevent heat loss. See "How to test your home" on page 9 for instructions on how to insulate hot water pipes.
Do you have a solar, electric heat pump, or a five star energy rated gas water heater?	☐	☐	Choose an energy efficient water heater when your current water heater needs replacing. Visit **sa.gov.au/energy/waterheaters** for advice on choosing a water heater.
Do you make sure that taps don't drip in your home?	☐	☐	Have dripping taps fixed as soon as possible. Not only do they waste water, leaking hot water taps waste energy too.

Other appliances



Questions	Yes	No	How to improve if you answered 'No'
Do you know how much power your appliances use?	☐	☐	If you know the input power of an appliance (for example, 1500 watts or 1.5 kW), you can work out how much it will cost to run — see "Calculate your running costs" on page 10 for instructions. You can also borrow a power meter from the Home Energy Toolkit - see page 9 for details.
Do you usually run your dishwasher and washing machine with a full load?	☐	☐	Washing full loads means fewer washes overall, therefore reducing the amount of energy and water used.
Do you usually use the 'cold' or lowest temperature setting on your washing machine and dishwasher?	☐	☐	Generally, most of the energy used by a washing machine or dishwasher is for heating water. Modern washing detergents can produce good results with cool or cold water, saving you more energy. Running these appliances on the 'economy' cycle can also save energy.
Do you hang your clothes out to dry instead of using a clothes dryer?	☐	☐	Dry clothes on a washing line or clothes airer when possible. Outside is better than inside as it keeps moisture out of your home. Clothes dryers can use a lot of energy. If you do use one, make sure to clean the lint filter often to ensure it operates efficiently.
Do you use the energy and water rating labels to compare running costs when you purchase appliances?	☐	☐	Consider the ongoing running costs when choosing an appliance. Energy and water efficient models may cost you more up front, but will cost less to run over the life of the appliance. See page 10 for a guide to calculating appliance running costs.

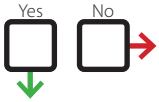
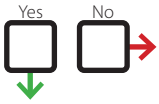
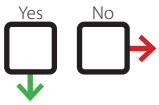
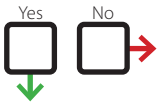
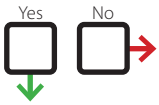
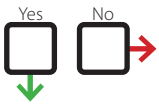
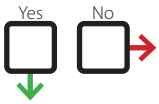
Make sure you're getting the best energy deal

Use the Australian Government's free energy price comparison website

Visit **energymadeeasy.gov.au** or call 1300 585 165 to check you are getting the best deal for energy.

To get the best results, use information from your last four energy bills to make sure all seasons are included.

Fridges and freezers

Questions	Yes / No	How to improve if you answered 'No'
Do you only run one fridge and freezer?		Only run additional fridges and freezers when necessary, for example, a bar fridge could be turned off when not required. The energy efficiency levels of fridges have improved significantly in the last decade. If you have an old fridge, consider replacing it, or, if it's used as a second fridge, only run it when necessary.
When you purchase a new fridge and freezer, will you choose an energy efficient model that is the right size for your needs?		When you replace your old fridge or freezer, choose an energy efficient one. Choose the right size fridge or freezer first, then select a model with a high star rating on the energy rating label.
Is your fridge temperature set between 3°C and 5°C?		Adjust your fridge temperature to between 3°C and 5°C. If it's set colder, more energy is used. If it's set warmer, more food-poisoning bacteria is able to grow. See"How to test your home" on page 9 for instructions on how to check the temperature of your fridge.
Is your freezer temperature set between -15°C and -18°C?		Set your freezer temperature to between -15°C and -18°C. See"How to test your home" on page 9 for instructions on how to check the temperature of your freezer.
Are your fridges and freezers located in a cool, well ventilated area and out of direct sunlight		The hotter the location of the fridge, the harder it will have to work (and the more energy it will use) to keep things cold. If you have a fridge or freezer outside, in a shed or in a garage, consider moving it to somewhere cooler. Move indoor fridges away from stoves or sunny windows if possible. Shade windows to stop direct sunlight. Ensure air can circulate around all sides.
Do your fridge and freezer doors seal properly?		Replace door seals if ineffective. See "How to test your home" on page 9 for a guide to checking your door seals.
Is there less than 5 mm of frost build-up in your freezer?		Defrost your freezer regularly. Most modern freezers will do this automatically.

Lighting

Questions	Yes / No	How to improve if you answered 'No'
Do you turn off lights when you leave a room?	Yes / No	Leaving lights on in an empty room wastes energy and adds to your bills. Make a habit of turning off lights.
Do you make use of natural light, for example, sitting near a window when reading?	Yes / No	Make the most of natural light — not only are there lots of health benefits, it's free!
Do you use only the lights you need, for example turning off the lights in unused areas of large or open-plan rooms?	Yes / No	Many modern houses have large open spaces with several lights circuits (different groups of lights in different areas of the room). Where possible, switch lights off in the unused areas of a room.
Do you have energy efficient lights?	Yes / No	LED, fluorescent and compact fluorescent lights are significantly more energy efficient than traditional incandescent or halogen lights. Consider replacing inefficient lights with energy efficient lights, particularly when you have large groups (for example, halogen downlights).
If you have outdoor lighting, is it operated by motion sensors?	Yes / No	If you regularly leave your outdoor lights on, consider installing sensor lights so they only turn on with movement and turn off after a short period.

Building, buying or renovating?

These websites can help you make your home more energy efficient, and help you understand and manage your energy use and costs

yourhome.gov.au

The Australian Government's Your Home website is a comprehensive guide to building, buying or renovating.

Find out how you can create a comfortable home that has a lower impact on the environment, is economical to run, is healthier to live in and is adaptable as your needs change.

sa.gov.au/energy

The Government of South Australia's website contains information to help you understand and reduce your home's energy use. There are sections on saving energy at home, choosing energy efficient appliances, solar power for your home, concessions, and electrical, gas and plumbing safety advice.

Cooking

Questions	Yes / No	How to improve if you answered 'No'
Does your oven door seal properly?	Yes / No	Replace door seals if ineffective. See "How to test your home" on page 9 for information on checking door seals
Do you use small kitchen appliances instead of the oven, for example, microwaves and electric fry pans?	Yes / No	Smaller appliances generally use less energy so are often better for cooking small amounts of food. Try to restrict oven use to when you need to cook multiple things or larger quantities.
Do you use lids on pots and pans when cooking?	Yes / No	Lids help keep the heat in, making cooking more efficient and therefore reducing energy use.
Do you use appropriately sized elements or burners when using a stove?	Yes / No	Using an element which is too large will waste energy.
Do you only boil the amount of water needed — for example, only the amount you'll use when making a single cup of tea?	Yes / No	The more water you have in a kettle, pot or pan, the more energy it will take to heat it. Instead of boiling lots of water and only using a small amount, boil less water — it will also heat up faster!

Stand-by power

Questions	Yes / No	How to improve if you answered 'No'
Do you turn your appliances off at the wall or use a stand-by power controller instead of leaving them on stand-by? For example TVs, computers, stereos?	Yes / No	Turn off appliances to prevent stand-by power use. Consider using stand-by power controllers or Wi-Fi enabled plugs with smartphone apps to make this easier. You can use the power meter in the Home Energy Toolkit to measure stand-by power use — see page 9 for details.

How to test your home

The following methods will help you accurately measure the way your home uses energy

Draughts

You can check for draughts by:

- looking for daylight around the edges of doors and windows
- looking for gaps around skirting boards
- feeling for draughts with a wet finger
- holding a candle, an incense stick, or a single ply of a tissue near the suspected draught and watching if it gets blown around
- using an infrared thermometer
- having a blower door test performed by a professional.

Insulate hot water pipes

You can purchase foam tubing from hardware and plumbing stores. Look for one that has been cut along its length (commonly called 'split insulation') and has a self-sealing adhesive strip.

To install

- Slide the foam tubing onto the external heater pipes.
- Peel off the adhesive strip and join the sides together.

Check your fridge or freezer temperature

You will need

- a thermometer.

To test

- Place the thermometer in the appropriate test location — anywhere in a freezer, or below the top shelf, towards the front of a fridge.
- Keep the fridge/freezer door(s) closed for about 30 minutes, then check the temperature.
- If needed, adjust the thermostat.
- Wait 24 hours before testing again (fridges and freezers take a long time to change).

Shower flow rate

You will need

- a bucket with a scale (or another way to measure a volume of water such as a large measuring jug)
- a stopwatch or clock.

To test

- Turn the water on at full strength.
- Catch the water with the bucket for precisely 10 seconds.
- Turn the water off.
- Measure how much water was captured in Litres (L).
- Multiply the amount captured by 6 to determine the flow rate in litres per minute (L/m).
- Recycle the water (for example, by using it to water the garden).

Example:

Water captured in 10 seconds = 1.5 Litres

Flow rate = 1.5 Litres × 6 = 9 L/m

Door seals on fridges, freezers and ovens

To check if a door seals properly, close the door on a strip of paper. The door seal should be strong enough to firmly grip the paper. Check in several places around the edge of the door — if the paper slides out easily, consider replacing the seal.

Look for sections that are cracked, brittle or pressed out of shape. If the seal is damaged, it may need replacing.

Want to do an even more detailed energy audit?

Borrow a Home Energy Toolkit for free from a South Australian public library.

The kit comes with a comprehensive home energy auditing manual, which lets you explore your home energy use in much more detail.

Call or visit your library to check if they have a Home Energy Toolkit available.

Each toolkit contains:

- a thermometer
- a compass
- a stopwatch
- a power meter that can measure appliance energy use, running costs and greenhouse gasses.

Go to **sa.gov.au/energy/toolkit** or call the Energy Advisory Service on 8204 1888 for a list of participating libraries.

Calculate your running costs

Knowing the running cost of an appliance will help you keep track of how much you're spending on energy.

The most accurate way to find an appliance's running cost is to use an appliance power meter. A power meter is included in the Home Energy Toolkit, which you can borrow for free from public libraries in South Australia — see page 9 for details.

For a list of average running costs of household appliances and an online calculator, visit **sa.gov.au/energy/runningcosts**

Calculating the maximum running cost of an appliance

1. **Find the appliance's input power in watts (W) or megajoules (MJ).**

   This can usually be found on a label on the appliance, in the owner's manual, or on the manufacturer's website.

   Some small appliances may list volts (V) and amps (A). To calculate the power, multiply the voltage by the amps, for example:

   240 V x 2.3 A = 552 W

2. **Convert input power to kilowatts (kW) or megajoules (MJ) if necessary.**

   If the power is listed in watts, divide it by 1000 to convert to kW, for example:

   1,250 W ÷ 1000 = 1.25 kW.

   If the gas use is listed in joules (J), divide by 1,000,000 to convert to megajoules, for example:

   800,000 J ÷ 1,000,000 = 0.8 MJ.

3. **Check your bill for your energy tariff (the amount you pay per unit of energy or gas).**

   For most appliances, use the peak rate — most appliances will be charged at this rate. See page 12 for advice on understanding your energy bill.

   If you're unsure, you can use an average tariff of 42 cents per kWh (c/kWh) for electricity, or 4 cents per megajoule (c/MJ) for gas.

4. **Work out maximum hourly running costs in cents per hour.**

   Multiply the input power by the energy tariff, for example:

   1.25 kW x 42 c/kWh = 52.5 cents per hour

   or *3.2 MJ x 4 c/MJ = 12.8 cents per hour.*

5. **Work out the daily running cost.**

   Multiply the hourly running cost by the number of hours the appliance runs each day, for example:

   52.5 cents per hour x 8 hours = 420 cents per day = $4.20 per day.

Example

A portable electric heater with a label showing '2000 W', used for 10 hours per day.

Convert the input power to kW:
2,000 W ÷ 1,000 = 2 kW

Check energy tariff on bill (if unsure, use 42 c/kWh for electricity).

Multiply the input power by the tariff:
2kW x 42 c/kWh = 84 cents per hour

Multiply by the hourly cost by the daily runtime:
84 cents per hour x 10 hours = 840 cents per day
= $8.40 per day.

Note that if the heater was controlled by a thermostat, the energy use would be lower than if it ran constantly at full power (see below).

Appliances with thermostats or high/low settings.

The maximum running costs are calculated as if the appliance was running at full power for the specified time. In reality, not all appliances run at full power the entire time they are turned on.

Appliances with high/low settings or with thermostats can use less energy. For example, an electric frypan or clothes iron will automatically cycle on and off to maintain the temperature set by the user.

You can use the power meter from the Home Energy Toolkit to measure the actual power usage of plug-in appliances. For larger hard-wired appliances such as air-conditioners, track the energy usage with a meter diary — see page 15 for instructions. For water heaters, more information is available at sa.gov.au/energy/waterheaters

Managing your energy bills

If you're having trouble with your energy bills, help is available.

Are you eligible for concessions?

Make sure you're not missing out on any concessions you may be eligible for — call the Concessions Hotline on 1800 307 758 or go to **sa.gov.au/concessions**

Ask your retailer for assistance

If your energy bills are getting on top of you, don't ignore them. Contact your energy retailer to see how they can help. It's important to tell your retailer if you're having trouble paying because, by law, they're required to assist you. This could include:

- offering you a payment plan
- joining their hardship program
- suggesting energy saving activities
- directing you to other services that can help.

Spread your bill payments

If you find paying a quarterly bill difficult to budget for, ask your energy retailer if you can pay monthly, fortnightly or even weekly. Most energy retailers in South Australia offer payment options.

Get the best energy deal

Use the Australian Government's free energy price comparison website, **energymadeeasy.gov.au** or call 1300 585 165 to check you are getting the best deal for energy. To get the best results, use information from your last four energy bills to make sure all seasons are included.

Dispute with your energy retailer?

The Energy and Water Ombudsman South Australia (EWOSA) can investigate and resolve disputes between customers and retailers. If your retailer does not give you the help you need, or if you have a dispute you can't resolve, contact EWOSA on 1800 665 565 or visit their website at **ewosa.com.au**

Staying connected to energy, water and communications

The ConnectEd program offers community education and financial counselling assistance. Home energy assessments are also available for eligible clients. See the back cover of this book for further information and contact details.

Get help from a financial counsellor

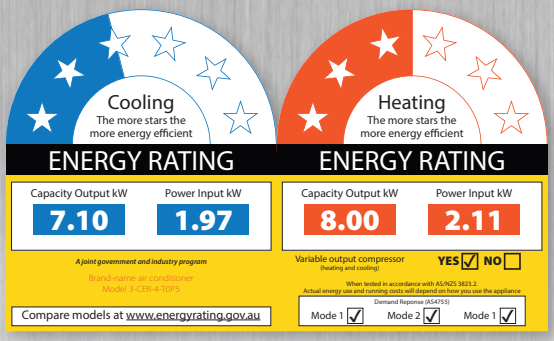
You can get free advice from a financial counsellor by calling 1800 007 007.

Energy rating labels

Some appliances will have an energy rating label like the ones pictured.

You can use these to compare the energy use and efficiency of similar sized appliances — the more stars the better. Knowing how much your appliance costs to run will help you keep track of your energy costs.

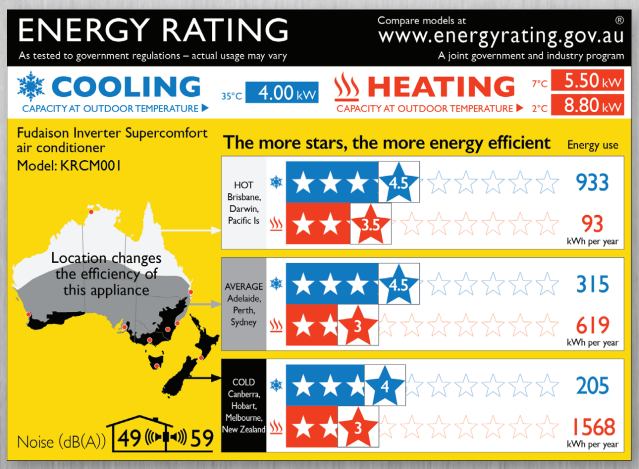
Find out more about running costs online at **sa.gov.au/energy/runningcosts** or call the Government of South Australia's Energy Advisory Service on 8204 1888.



Zoned energy rating labels

From April 2020, energy rating labels for air conditioners will change. Zoned energy rating labels will feature different energy efficiency ratings, depending on which of the three climate zones (hot, average or cold) an air conditioner is used in.

The labels will help consumers make meaningful energy efficiency comparisons and enable retailers to promote air conditioners better suited to different regions.



You can find out more about energy rating labels at **energyrating.gov.au**

Understanding electricity bills

Your bills contain a lot of information to help you understand how much electricity you use in your home.

This bill is an example of what to look for. Your bill may look different and contain different information — for example, if your home has a solar PV system, there will also be information about the kWh exported.

For an example gas bill, visit **sa.gov.au/energy/bills**

1 Average usage per day

Measured in kilowatt-hours (kWh) over the last billing period.

2 Usage graph

This graph shows the trends of your electricity use — the changes in consumption between past billing periods and seasons, and the prices you are paying per kWh.

3 NMI – National Meter Identifier

The unique meter serial number for the property's address.

4 Billing period

This area shows the billing period for the current bill.

5 Read type

Retailers can estimate how much electricity has been used and bill accordingly. This may be noted by 'e' or 'estimate'. By law, retailers must do an actual read at least once every 12 months, which may be noted by 'a' or 'actual'.

6 Meter readings

Many homes have more than one electricity meter, for example one for peak and the other for off-peak. Refer to the meter number when checking the related reading. A digital meter can record peak and off-peak, so the same meter number may appear twice.

7 Billing days

The number of days this bill covers. For households that are billed quarterly, this will be around 91 days.

8 Consumption (usage)

The total number of electricity units (kWh) used per electricity meter.

9 Tariff

The prices (per kWh) paid for electricity. Tariffs vary by retailer and energy plan, and can reflect peak or off-peak prices, stepped charges (as in this example), time of use, or demand pricing.

10 Total due

Amount of money owed for electricity supply and usage charges for the billing period and any other charges e.g. unpaid amounts from a previous bill.

Your overall use

Usage

Average usage per day **1**

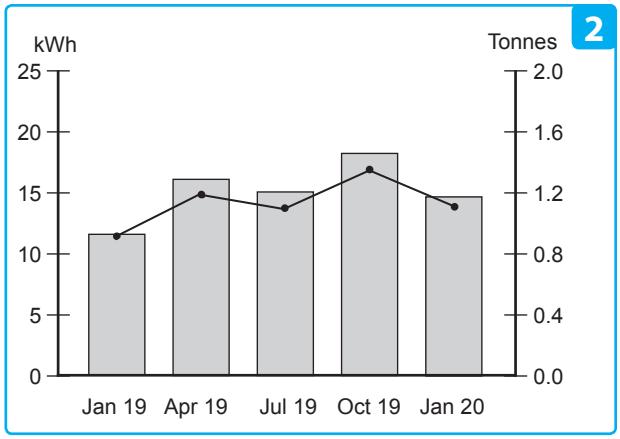
14.70 kWh

Same time last year

12.00 kWh

Average cost per day

$6.21



2

Greenhouse gas emissions

Total for this bill

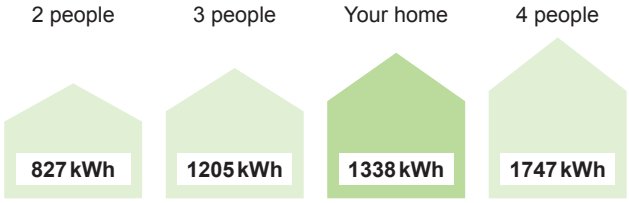
0.90 tonnes

from 1338kWh

Average daily electrical usage (kWh)

Greenhouse gas emissions (Tonnes)

Compare with other homes in your area



Average usage data supplied by the Australian Energy Regulator based on homes with no gas and no pool during summer. Visit www.energymadeeasy.gov.au for more information.

Your energy use in detail

Supply address	1 Green Street, Greenvale SA 5555
NMI	12345678910 **3**
Supply period	25 Oct 2019 to 23 Jan 2020 **4**
Reading type	Actual read on 23 Jan 2020 **5**
Tariff description	Domestic light and power

Meter no.	Days billed	Previous reading	Current reading	Usage kWh **8**
1039011	91	01945	02975	1030
1160235	91 **7**	02436	02744 **6**	308

Usage and supply charges	Charge
Peak 25 Oct 2019 to 23 Jan 2020 91 days	
First 997 kWh @ $0.3675 **9**	$366.40
Next 33 kWh @ $0.3923	$12.95
Supply charge @ $0.8295	$75.16
Controlled Load rate 25 Oct 2019 to 23 Jan 2020 91 days	
Usage 308 kWh @ $0.1925	$59.29
GST	$51.38
Total usage and supply charges	$565.18 **10**

Your next meter read is due between 23 Apr 2020 and 30 Apr 2020.
Please ensure easy access to your meter on these days.

Payment assistance 1300 555 987
If you're having difficulty paying this bill, please call us to find out if you qualify for any payment plans, relief schemes or government funded concessions.

Correspondence
GPO Box 1, Adelaide, SA 5001
or email correspondence@acme.com.au

Please call ACME Energy Customer Service on 12 13 15 if you do not wish to receive marketing information on our products and services.

Payment options

If you choose to pay using the credit card option, a 1% (GST inclusive) payment processing fee may apply.

Save time by having your account paid automatically on the due date.

Apply online at www.acme.com.au or phone 1300 111 333 for an application form.

Billpay Code: 1234
Ref: 1234 5678 9012 3456 78
Pay in person at any post office, phone 13 18 16 or go to **www.postbillpay.com.au**

Biller Code: 123456
Ref: 1234 5678 9012 3456 78

BPAY® – Make this payment via internet or phone banking.
BPAY View® – Receive, view and pay this bill using internet banking.
BPAY View® Registration No – Please use your 8 digit account number located on the front of your remittance slip.
BPAY View® Name – The name on your ACME account must match the name on your bank account

Send this portion with your cheque made payable to:
ACME Energy South Australia Pty Ltd
Locked Bay 100, Adelaide 5000

Visit www.acme.com.au/payments or phone 1300 555 425 to pay your bill by Visa or Mastercard.
Ref: 1258 6574 9685 7413 25

Reading electricity and gas meters

Electricity and gas meters are used by energy providers to measure the energy you use.

Knowing how to read a meter allows you to:

- keep track of your home energy use in a meter diary
- provide interim readings to your energy supplier
- check the meter reading on your bill is close to the actual reading.

Digital meters

Digital meters may be mechanical (such as the gas meter shown in Figure 2) or have an electronic display (such as the electricity meter shown in Figure 3).

Mechanical digital meters

Read the numbers from left to right. The black and white numbers are the numbers that provide the reading. The red numbers are for testing.

Electronic digital meters

On electronic digital meters, you may need to scroll through other screens (like date and time) to get to the reading. Look for numbers starting with:

03 or 003 for the peak electricity meter reading

07 or 007 for the off-peak electricity meter reading

Homes with solar panels will have an import/export meter. Refer to the manufacturer's instruction manual or contact SA Power Networks to find out how to read this type of meter.

Dial or clock face meters

Each dial revolves in a different direction from the one next to it e.g. anti-clockwise, then clockwise. Read the dials from left to right — ignore dials marked with fractions (such as 1/10) as these are only for testing.

Always note the number the pointer has just passed, for example, if it is between 7 and 8, write down 7.

If the pointer is directly over a number, underline that number when writing it down.

If any of the underlined numbers are followed by an 8 or 9, reduce the underlined number by one.

The below example provides a reading of 73,958.

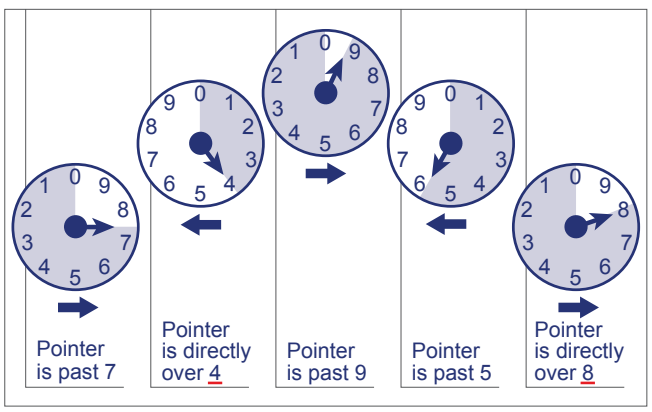


Figure 2 - A digital (also known as 'metric') gas meter

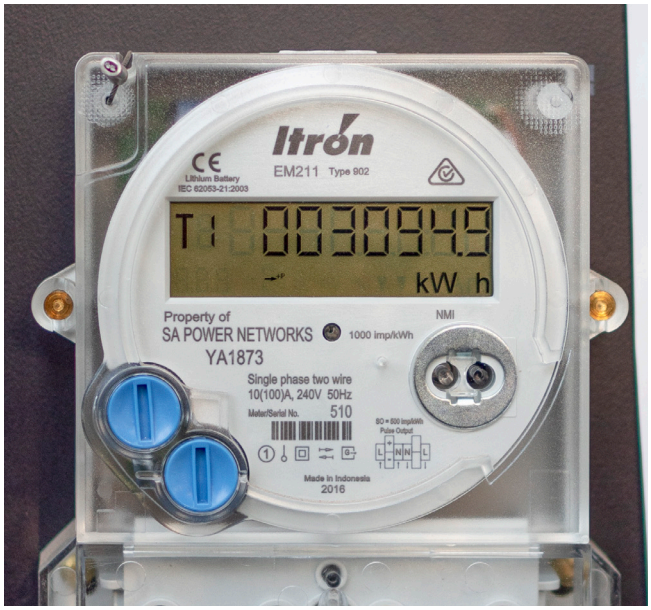


Figure 3 - An electronic digital electricity meter

Smart meters

Some homes may have an advanced digital meter or 'smart meter' installed. Smart meters 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.

Smart meters can also measure the quality of the power at your property, and let the electricity distributor know if there is a power outage.

The readings and descriptions for these meters may be different to this guide. Contact your energy retailer for help reading this type of meter and tracking your energy use.

Using meter readings to monitor your energy use

Electricity and gas meters record the total amount of electricity or gas consumed over the life of the meter (similar to the odometer in a car).

To find out how much electricity or gas you have used during a period of time, you can subtract the earlier reading from the later reading.

Keeping a meter diary

You can use regular meter readings to keep track of how much energy you're using, and see how much of a difference your energy saving changes are making. By regularly recording readings in a meter diary, you can see the weekly (or even daily) impact of your changes.

Changing the way you use high-energy consuming appliances, for example a reverse-cycle air conditioner, will make the most obvious differences to your average daily energy consumption.

Changes to lower consumption appliances, for example using a cold clothes washing cycle, will take longer to show a difference (possibly a few weeks or more).

If your household is connected to gas, use a gas meter diary to see how much impact changes you make (such as keeping doors closed when using the heater) have on your gas use.

Calculating average daily use

$$\frac{\textit{Use since last reading}}{\textit{Days between readings}} = \textit{Average daily use}$$

For example:

13 kWh ÷ 2 days = 6.5 kWh/day

Comparing apples with apples

The amount of energy within the gas you're supplied changes over time. It's important to compare the MJ values of your readings to ensure a fair comparison.

Gas meters record volumes of gas (in ft^3 or m^3), but you're billed in megajoules (MJ) — see below for details on how to convert the measurements.

Converting gas meter readings to megajoules

$$\textit{Megajoules} = \textit{Volume} \times \textit{Pressure factor} \times \textit{Heating value}$$

where:

- **Volume** is the number of cubic feed (ft^3) or cubic metres (m^3) you wish to convert — for example, the current meter reading minus the previous meter reading.
- **Pressure Factor** and **Heating Value** are values listed on your bill (may be different for different periods).

Example 1:
$14\ m^3 \times 1.0139 \times 38.61\ MJ/m^3 = 548.05\ MJ$ of gas used

Example 2:
$320\ ft^3 \times 1.0139 \times 1.09\ MJ/m^3 = 353.65\ MJ$ of gas used

It is important to note that the heating value on the bill will vary with time and based on whether the meter measures ft^3 or m^3 — check that you use the value from a bill associated with the meter in use.

Measurements		Calculations			Notes
Date	Meter Reading	Days between readings	Use since last reading	Average daily use	Notes
1-Feb	24,318	—	—	—	First reading
3-Feb	24,331	2	13	6.5	Decent weather. Cooked dinner on stove both nights. No heater or air-con needed.
4-Feb	24,339	1	8	8	Extremely hot day, ran air-con for approx 6 hours after work
6-Feb	24,353	2	14	7	More hot weather — similar AC use. Increased thermostat by 2°C.
8-Feb	24,362	2	9	4.5	Cool day spent cleaning. Pressure-washed car and did 3 loads of clothes washing.

Figure 4 - Example of a meter diary

More energy information

Energy Saving Advice

The Energy Advisory Service offers free independent information about saving energy in your home.

See below for contact details.

Staying connected to energy, water and communications

The ConnectEd program offers community education and financial counselling assistance. Home energy assessments are also available for eligible clients. ConnectEd is funded by SA Government and delivered by community organisations. To gain assistance call the phone number for your local service.

- Adelaide Metro (inner north, west, and inner south) – 08 8245 7100
- Adelaide CBD, outer north, outer south and southern country SA – 1800 615 677
- Northern country SA – 1300 067 777

Visit **connected.org.au** for more information.

Environmentally sustainable building, buying or renovating homes

Your Home offers guidance for building, buying or renovating a home. It shows how to create a comfortable home with low impact on the environment – economical to run, healthier to live in and adaptable to your changing needs.

Visit the website at **yourhome.gov.au**

Are you eligible for a concession?

Call the Concessions Hotline on 1800 307 758 or visit **sa.gov.au/concessions** to find out if you can get financial help with your energy bills.

Help to resolve a dispute with your energy retailer

Energy and Water Ombudsman South Australia offers a free independent service to all South Australian domestic and business customers, and can help resolve disputes with gas and electricity retailers.

Call 1800 665 565 or visit **ewosa.com.au**

Get your organisation involved to help others save energy

The Energy Partners Program works with organisations across the state to help South Australians manage their energy use and costs, and improve energy efficiency.

Visit the website at **sa.gov.au/energypartners**

Contact the Energy Advisory Service for free energy saving advice

Online: sa.gov.au/energy
Email: energyadvice@sa.gov.au
Phone: 8204 1888 or 1800 671 907 (free call from fixed lines)
Interpreting or translation assistance is available on request.

Government of South Australia

June 2019