

The background is a solid orange color with white line-art illustrations of various energy-related items. In the top left is a house with a balcony. To its right is a long, horizontal air conditioning unit. Below the house is a floor lamp with a conical shade. In the center is a cylindrical water heater with a pressure gauge. To the right of the water heater is a front-loading washing machine. Below the water heater is a gas stove with a frying pan on it, containing a fried egg and some vegetables. To the left of the stove is a video game controller. To the right of the stove is a light bulb and a compact fluorescent bulb (CFL).

Energy efficiency

Everything you need to know to start saving
on your energy bills

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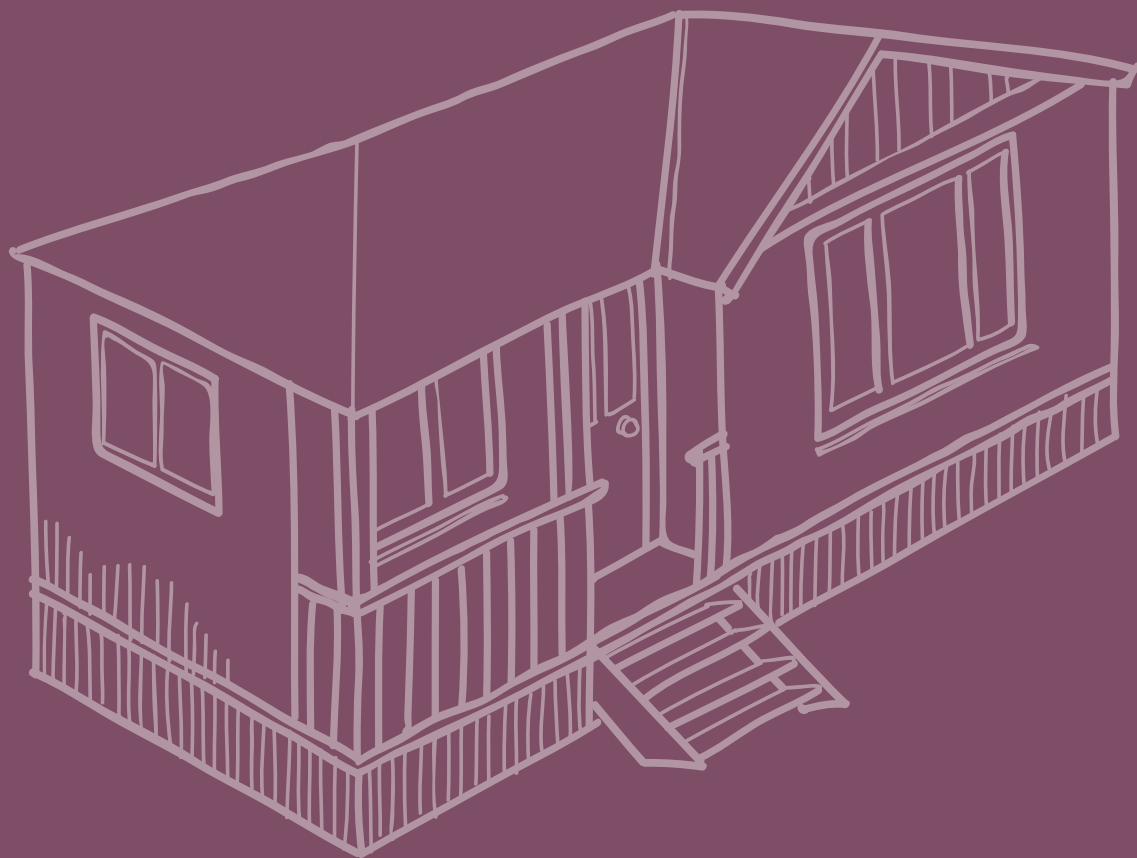
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Saving energy around the home

Saving energy in the home is easy when you know how – it's all about choices.

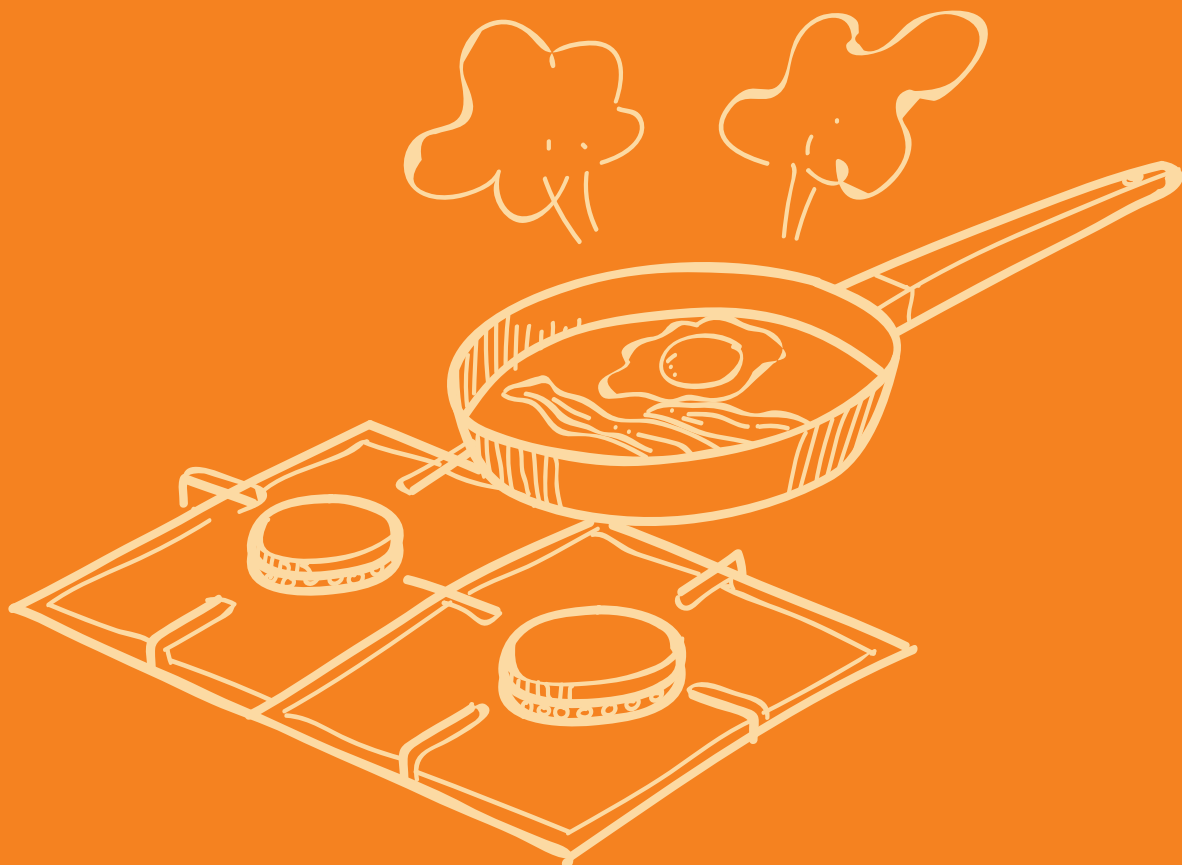
Making smart choices about which appliances to use and using them efficiently will help cut your energy spending.

This guide is full of practical information and tips to help you make energy saving choices in your home.

Using less energy means less pollution and reduced greenhouse gas emissions so not only will you save money on your energy bills, you'll be helping to save the environment too.

Lowering your energy usage also reduces the need for more infrastructure development which will help put downward pressure on electricity costs for all Queenslanders over the long term.

The Queensland Government is committed to finding ways to help Queensland customers to make savings on their electricity bills. For more information, visit **www.dews.qld.gov.au**.



In the kitchen

To make the biggest savings, focus your efforts on the biggest energy hog in the house – the refrigerator. Because it cycles on and off all day, every day, the refrigerator consumes more electricity than nearly every appliance in the home.

With occasional maintenance and good habits, you can greatly improve the energy efficiency of your large kitchen appliances without sacrificing convenience.

- Place refrigerators and freezers in a cool, well-ventilated space out of direct sunlight and not adjacent to a heat source such as an oven.
- Avoid leaving the fridge or freezer door open.
- Keep fridge and freezer seals clean, and replace damaged seals.
- Think before opening the fridge – the more time you keep the door open, the warmer the fridge becomes.
- If you have a second fridge, turn it off when it's not needed.
- If you buy a new fridge, ensure it is the right size for your needs.
- Where possible, use lids on pots and saucepans to reduce cooking time. Defrost frozen food in the fridge ahead of time.
- When using a dishwasher, completely fill the racks to optimise water and energy use, but allow proper water circulation for adequate cleaning.
- Consider using the dishwasher at night and use the dishwasher's 'economy' setting to wash lightly soiled dishes and to save water.
- Where practical, switch off appliances at the wall when not in use.



In the living room

Family room fun — video game consoles, TV, DVR, DVD, and stereo system — comes at a cost reflected in your energy bill. But you could save in energy costs by recharging, reducing and replacing energy-sapping electronics.

- The biggest energy hogs in the family room are the television, DVR, digital cable box and video gaming system. Where possible, buy energy star rated electronics.
 - Turn off electronics rather than let them idle and plug them into power strips to switch multiple devices off rather than unplugging. Some electronics such as set-top boxes and downloading devices can't be turned off because that would disrupt the digital data-gathering you've programmed them to do. But with a smart power strip, you can turn off your TV while leaving the DVR plugged in.
 - Use power management features to lower the energy use if the device is not completely powered off.
 - Change your computer settings to standby/sleep mode. In standby mode, your computer uses 95% less energy than when idle. Better still, turn it off at the wall when not in use.
 - Install energy efficient bulbs in rooms you use regularly — they consume 80% less energy than a comparable incandescent bulb and can last 5 to 10 times longer.
- Install ceiling insulation and seal gaps to prevent draughts. This will make it warmer in cooler months and prevent heat infiltration during warmer months.
 - Close all windows and doors to a room when heating or cooling. It is more energy efficient to heat/cool a small space than a large open-plan living area.
 - Consider using ceiling fans for cooling instead of air conditioning as they are significantly cheaper to run.
 - Turn off lights, fans, air conditioners and appliances when you leave the room.
 - If you have one, set your air conditioner at 24°C to 25°C for maximum efficiency when cooling, or 18°C to 20°C in heat mode to heat your home efficiently. You can save up to 10% off cooling costs for every one degree that you raise the temperature.





In the bathroom

The best way to ensure energy efficiency in the bathroom is to reduce your water use.

Your bathroom water usage can be reduced by almost half by making quick switches with some simple hardware. Some of these have an upfront cost but like most home energy efficiency measures, they pay for themselves quickly.

- Install a water-efficient showerhead. A 3-star WELS Scheme showerhead will use no more than nine litres of water per minute.
- Take shorter showers instead of a bath. Limit yourself to a four minute shower to save water and also help reduce the amount of electricity/gas needed for heating the water. If you are having trouble cutting back, think about purchasing a shower timer.
- Renew seals and washers on dripping taps. A hot water tap dripping once a second for a day can waste enough hot water for an extra person.
- Install a greenhouse-efficient hot water system. Solar hot water systems use up to four times less electricity than a regular electric storage hot water system.
- Switch off exhaust fans, heaters, heated lights and any appliances plugged into the wall when you're not using them.
- If you have a regular exhaust fan, consider replacing it with an Energy Star model.
- Swapping out the bulbs in your bathroom for LEDs will cut your energy usage drastically. LEDs often allow you to leave some of the lights off too.



In the laundry

Knowing how to save energy while doing laundry is a good start to help you trim energy costs in your home. Most laundry expenses come from heating water for washing and heating air for drying. But these costs aren't set in stone, and you can save money by following these energy-reducing tips.

- Choose an energy efficient washing machine and clothes dryer by comparing the water and energy star ratings. The more stars the better!
- Wash clothes in cold water to save energy from heating water. Use laundry powder suitable for washing in cold water to get the best results.
- Load your washer fully each wash. If you do not have a full load, adjust the water level of your machine to save on water and power.
- Use the sun to dry clothes when possible. An outdoor clothes line or an airer near a sunny window will do the job and also leave your clothes smelling fresh and less damaged by over-heating.
- If using a clothes dryer, use the medium heat setting and don't overload the machine or over-dry your clothes.
- Dry only full loads and try not to mix fast and slow-drying clothes — a practice that wastes energy by continuing to dry clothes that are no longer wet.
- Clean the lint filters in your clothes dryer after every load, and clean ducts annually. Your clothes will dry faster, using less energy.
- Iron low temperature fabrics first to reduce the warm up time and switch the iron off before finishing the last garment.
- Iron batches of clothing at the same time to avoid wasting energy in reheating.



In the bedrooms

Your bedroom might not consume as much energy as your living room or kitchen, but there are some energy wasters which could be causing your energy bill to go up each month. While the savings may be smaller than other areas of your home, many small savings add up over time.

- If you find yourself complaining of drafts during the winter, then it may be time to double-check the seals around all of your bedroom doors and windows.
- During colder months close your curtains well before bedtime, but open them to let in the warming sun during the day.
- Instead of running a heater overnight, try an under blanket or extra bedding layer on top. If you can't bear getting out of bed in the cold, use a timer to turn the heating on half an hour before you get up.
- During warmer months, use fans to move air around to reduce humidity and temperature to a comfortable level. Most ceiling fans have a switch to reverse rotation for cooler months where it pulls warmer air down from the ceiling, keeping your bedroom comfortable without the need for a heater.
- If your bedroom gets too hot in warmer months put up some reflective blinds or awnings outside the windows.
- When using air conditioning, close your closet doors so you don't waste energy cooling an area that doesn't need it. The larger your bedroom is, the harder your air conditioner has to work to keep you cool.
- Unplug your devices before you fall asleep so you don't waste electricity and avoid wearing down your device's battery throughout the night.
- Use a power strip to make it easy to turn off electronics when you're not using them.
- Bedside lamps mean you only light the room where it's needed. Use energy efficient bulbs whenever possible rather than standard incandescent bulbs.
- Switch off all lights as you leave each room and clean lamp shades and bulbs regularly to ensure maximum light output.

In outdoor areas

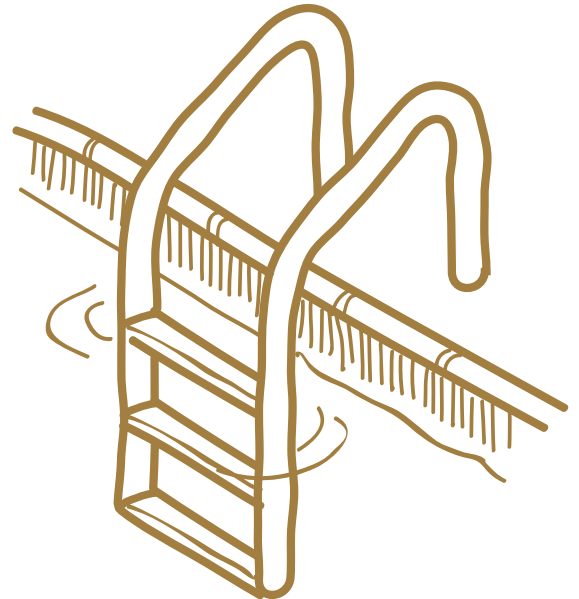
When most people focus on ways to reduce their energy use, they typically focus on things they can do inside their home; but there's plenty of things you can do to reduce energy use outside the home too.

- Install motion sensors and light sensing controls on security lighting to enable activation of lights only between dusk and dawn or use solar garden lights.
- Use CFL spotlights or LED lamps in your outdoor lights.
- Clean light fixtures regularly and keep vegetation away from light fixtures.
- Consider installing a solar PV system. Solar has become more efficient and less costly than it once was, and for most consumers, going solar actually offers substantial overall savings especially if you take advantage of rebates and incentives.
- Planting shade trees can dramatically improve the temperature control in your home. By blocking the sunlight entering your windows, shade trees make your home more energy efficient and reduce the energy needed to cool your home.

Pools and spas

Backyard swimming pools and spas don't just use water, they also use significant amounts of energy and contribute significantly to your electricity bill.

- For greatest efficiency, use an energy efficient pool pump and timer. An energy efficient pump could save you up to 80% on your future pool running costs.
- Regularly clear the water inlet to the pool pump to remove leaves and other objects which can impact water flow and require the pump to work harder.
- Use pool and spa covers to reduce evaporation, keep leaves and other debris out, reduce filtration and minimise the energy needed to clean your pool.
- Connect your pool and spa pumps to an off-peak tariff (Tariff 33). Doing so could cut your future running costs by around 19%.



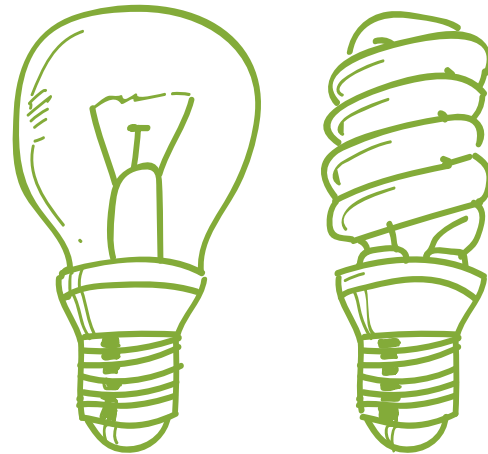


Lighting

Replacing your existing lights with more efficient options can help reduce your bill. Some good lighting ideas for you to consider:

- Use natural lighting during the day.
- Use LED or CFL light bulbs. They use significantly less energy, last 5-10 times longer and can save \$71 - \$91 each year per household.
- Use dimmers to adjust artificial lighting as natural light levels fluctuate.
- Install task lighting in areas like near reading chairs, over kitchen benches, dining table and the bathroom vanity so you don't waste general space lighting.
- Turn off lights in areas of your home when the rooms are not in use.

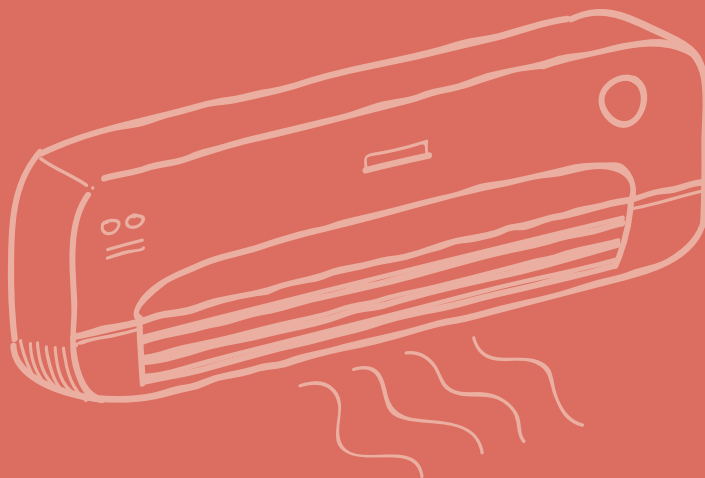
- Fit timers and motion sensors in areas that are used rarely so your lights are only on when they need to be.
- Install a skylight to allow natural light inside and reduce the need for artificial lighting during the day.
- Download the lightbulb saver app (<http://www.energyrating.gov.au/apps>) which provides handy tips about choosing the right lighting for each room in your house.



Cooling

Air conditioners use a lot of energy. Keep your cool without breaking the bank.

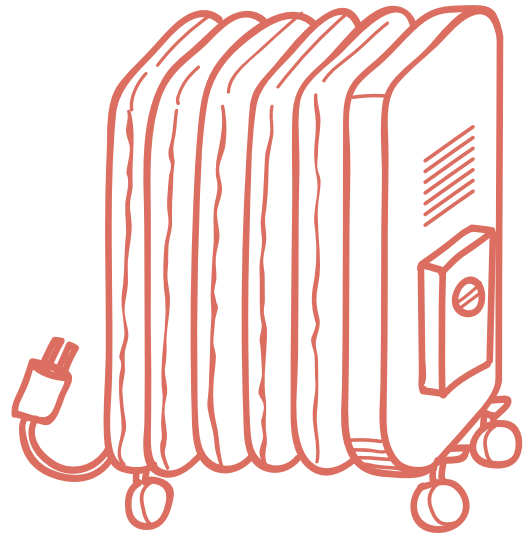
- Open your home to create cross breezes and use ceiling fans to circulate air to keep you cool.
- Install the right sized air conditioner for your space – consider how big the room is, what direction the windows in the room face, and whether you have insulation in the ceiling.
- For best efficiency, set your air conditioner to 24°C to 25°C.
- Close doors and windows in areas you want to air condition, to ensure the cool air stays inside. Don't waste electricity usage and money cooling areas not being used.
- Turn off your air conditioner when you leave the house.
- Clean the filter pads and coils on your air conditioner regularly to ensure it runs as efficiently as possible.

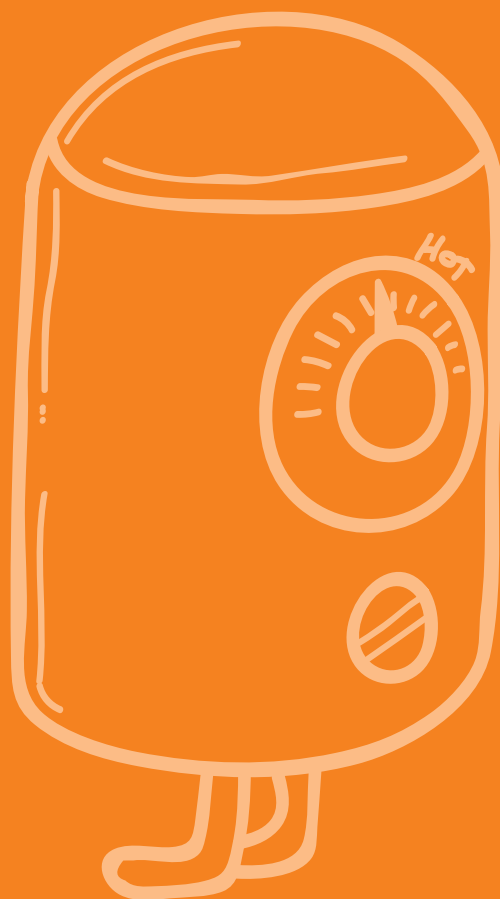


Heating

Space heating, although not required for long periods, still represents up to 10% of energy bills.

- When possible, wear warm clothes to keep warm and reduce the need to use heaters.
- Choose the right size heater to suit your room and conditions and keep it in good operating order.
- Seal gaps around doors and windows to keep draughts out. Unsealed draughts can account for up to 25% of the heat lost from your home.
- If you use a heater, use it for short periods of time and use a timer to turn it on and off automatically.
- Decide which rooms require frequent heating and cooling. Make sure they are well insulated and can be closed off from the rest of the house.
- If you have a reverse-cycle air-conditioner, setting it to 18°C to 20°C in heat mode is the most efficient way to heat your home.





Hot water systems

The energy used to heat your water (e.g. for hot showers, in the kitchen and in the laundry) can make up a significant amount of the power used in your household. A wise choice about which hot water system you buy can make a substantial difference to your energy bill.

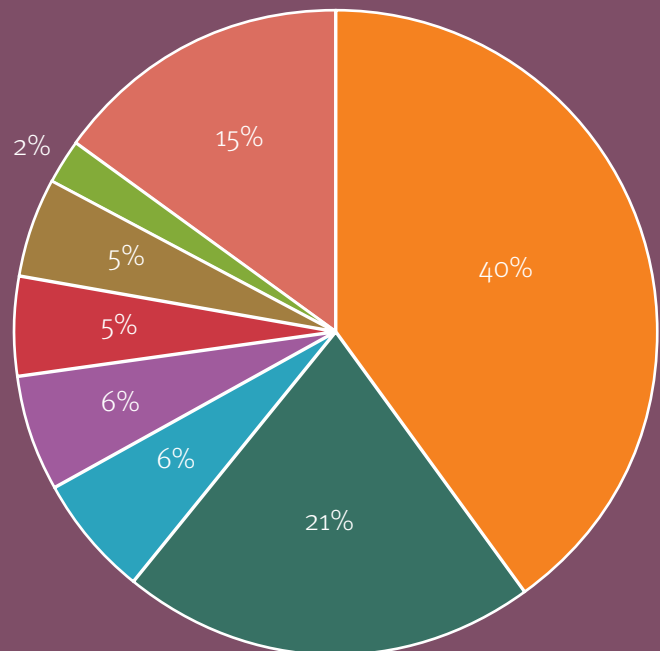
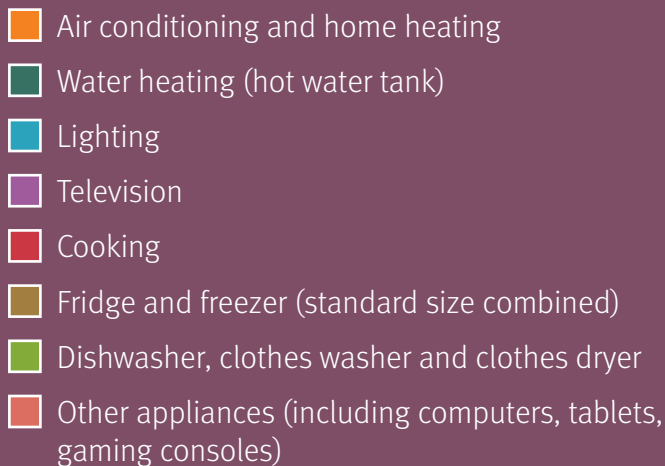
- Ask your electrician to connect your hot water system to Tariff 33 to save on your water heating costs.
- Position your hot water system near where you use hot water the most, which may be your bathroom, kitchen or laundry. This can help to save water and reduce heat loss from pipes.
- Insulate the hot water pipes running between the tank and your taps to further reduce heat loss from pipes.
- Ensure you have the right sized system for the number of people in your home. If it's too small, you could run short of hot water. Ask your local hot water specialist for help to get the right sized system for your needs.
- Upgrade your old hot water system to a new energy efficient model with a high energy star rating, a heat pump or a solar hot water system.
- Solar hot water systems can reduce your hot water bill significantly and they're environmentally friendly.
- Turn off your hot water system when going away for more than a few days.

Understanding your energy use

Reducing your energy bill can be as quick and easy as replacing products with a more energy efficient model. The average household has around 70 different appliances and some of them have a significant impact on your bills. Every appliance you have costs money to run – some even continue to use electricity when they're plugged in and turned off at the wall.

In the average home air-conditioners, hot water systems and refrigerators are the biggest energy consuming appliances. By choosing energy efficient appliances and using a few energy saving strategies, you'd be surprised how much more control you can have over your energy use and cost.

Knowing the real costs of running your household appliances can help you manage your energy use.



Source: Ergon Energy

Kitchen	Input watts	Cost/hour*	Cost/use*	Cost/day*
Refrigerators				
60-85L Bar Fridge	125			\$0.34
140-220L Single Door (manual defrost)	150			\$0.51
320-440L 2 Door Automatic (cyclic defrost)	320			\$1.09
320-440L 2 Door (frost free)	400			\$1.37
510-610L 2 Door (frost free)	519			\$1.77
Bottle Water Dispenser	120			\$0.48
Freezers				
140-220L Chest	160			\$0.44
250-340L Chest	250			\$0.68
220L Upright	160			\$0.55
300L Upright	250			\$0.81
Cooking appliances				
Oven	1800	\$0.31		
Grilling Element	1800	\$0.31		
Hot Plate – Small	1200	\$0.14		
Hot Plate – Large	1500	\$0.17		
Rangehood/Exhaust Fan	60	\$0.02		
Microwave Oven – 800W	1200	\$0.40		
Microwave/Convection – 2400W	2400	\$0.41		
Frypan	2000	\$0.23		
Deep Fryer	2000	\$0.23		
Crock Pot	320	\$0.04		
Breadmaker	550	\$0.03		
Toaster – 4 slice	1800	\$0.03		
Toaster – 2 slice	1200	\$0.02		
Sandwich Maker	1450	\$0.03		
Other kitchen appliances				
Electric Kettle	2400		\$0.04	
Electric Jug	2400		\$0.04	
Food Blender	300		\$0.05	
Food Processor	600		\$0.02	
Coffee Maker	1070		\$0.03	
Dishwasher – Hot water	800		\$0.23	
Dishwasher – Cold water	2400		\$0.27	
Garbage Disposal	450		\$0.02	

Entertainment	Input watts	Cost/hour*	Cost/use*	Cost/day*
Television – Large Colour	100	\$0.03		
Television – Plasma	420	\$0.12		
Television – LCD	312	\$0.09		
Television – LED	110	\$0.03		
Pay TV Receiver Box	130	\$0.04		
Set Top Box – SD/HD	20	\$0.01		
Video Player/Recorder	80	\$0.02		
DVD Player	80	\$0.02		
Xbox 360	430	\$0.12		
PlayStation 3 – Original	830	\$0.24		
Xbox One	110	\$0.03		
Nintendo Game Cube	780	\$0.22		
Nintendo Wii	60	\$0.02		
Stereo – Mini System	60	\$0.02		
Stereo – Modular Unit	120	\$0.03		

Bathroom	Input watts	Cost/hour*	Cost/use*	Cost/day*
Exhaust Fan	75	\$0.02		
Bathroom Light/Heater – 4 lamps	640	\$0.18		
Heated Towel Rail	200	\$0.02		
Hair Dryer	1200	\$0.27		
Hair Curler	600	\$0.14		
Electric Razor	40	\$0.01		
Spa Bath – Pump	1860	\$0.53		
Spa Bath – Heater	6000	\$1.37		

Laundry	Input watts	Cost/hour*	Cost/use*	Cost/day*
Twin Tub	350	\$0.10		
Small Top Load Automatic	500	\$0.14		
Large Top Load Automatic	600	\$0.17		
Front Load	600	\$0.17		
Clothes Dryer – 5kg	2400	\$0.68		
Iron	1400	\$0.24		

Home office	Input watts	Cost/hour*	Cost/use*	Cost/day*
PC & Monitor	500	\$0.18		
Laptop Computer	168	\$0.05		
Modem	16			\$0.11
Photocopier	800	\$0.18		
Phone Charger	48	\$0.01		
Laser Printer	572	\$0.07		

Bedroom	Input watts	Cost/hour*	Cost/use*	Cost/day*
Water Bed – Queen	80	\$0.02		
Electric Blanket	60	\$0.02		

General appliances	Input watts	Cost/hour*	Cost/use*	Cost/day*
Vacuum Cleaner	1500	\$0.43		
Clock Radio	5	\$0.03		
Aquarium Pump	12			\$0.08
Aquarium Heater	50			\$0.17
Bottled Water Dispenser	120			\$0.41
Sewing Machine	60	\$0.01		

Summer air conditioner	Input watts	Cost/hour*	Cost/use*	Cost/day*
1750W (6000 BTU)	700	\$0.14		
2000W (6800 BTU)	800	\$0.16		
2500W (8500 BTU)	1000	\$0.20		
3500W (12000 BTU)	1400	\$0.28		
4300W (14700 BTU)	1720	\$0.34		
5000W (17000 BTU)	2000	\$0.40		
6100W (21000 BTU)	2440	\$0.49		
6880W (23500 BTU)	2760	\$0.55		
15,600W (53300 BTU)	6000	\$1.20		

Other cooling appliances	Input watts	Cost/hour*	Cost/use*	Cost/day*
Evaporative Cooler – Portable	150	\$0.04		
Evaporative Cooler – Ducted House	1500	\$0.43		
Ceiling Fan	75	\$0.02		
Pedestal Fan	60	\$0.02		

Domestic sewerage treatment plant	Input watts	Cost/hour*	Cost/use*	Cost/day*
Average Domestic Plant	\$0.07	\$1.62		

Reverse cycle heating	Input watts	Cost/hour*	Cost/use*	Cost/day*
1750W (6000 BTU)	700	\$0.10		
2500W (8500 BTU)	1000	\$0.14		
3800W (13000 BTU)	1520	\$0.22		
4700W (16000 BTU)	1880	\$0.27		
6300W (21500 BTU)	2520	\$0.36		
14300W (48800 BTU)	5500	\$0.78		

Other heating appliances	Input watts	Cost/hour*	Cost/use*	Cost/day*
Radiator Heater – 2000W	2000	\$0.57		
Radiator Heater – 2400W	2400	\$0.68		
Portable Fan Heater – 2400W	2400	\$0.68		
Oil Filled Heater – 1200W	1200	\$0.34		
Oil Filled Heater – 2400W	2400	\$0.68		

Lighting	Input watts	Cost/hour*	Cost/use*	Cost/day*
Motion Detector		\$0.01		
Incandescent Light – 60W	60	\$0.02		
Incandescent Light – 75W	75	\$0.02		
Incandescent Light – 100W	100	\$0.03		
Compact Fluorescent Light – 18W	18	\$0.01		
Fluorescent Light – 36W	36	\$0.01		
Led Light Recessed – 9W	9	\$0.002		
Outdoor Spotlights – 150W	150	\$0.04		
Outdoor Sensor Light	60	\$0.02		

Pool equipment	Input watts	Cost/hour*	Cost/use*	Cost/day*
Pool Filter – Tariff 11	1000	\$0.28		
Pool Filter – Tariff 33	1000	\$0.22		
Salt Chlorinator with Pool Filter	2000	\$0.57		
Outdoor Spa Heating	6000	\$1.20		
Outdoor Spa Pump	1860	\$0.53		
Sauna	4800	\$1.37		

Other equipment	Input watts	Cost/hour*	Cost/use*	Cost/day*
Avg. Residential Security System	45			\$0.31
Garage Roller Door	200	\$0.06		

Garden appliances	Input watts	Cost/hour*	Cost/use*	Cost/day*
Electric Lawn Mower	2000	\$0.57		
Electric Whipper Snipper	200	\$0.06		
Electric Blower	200	\$0.06		
Pond Pump	30	\$0.01		
Pump/Bore	746	\$0.21		
Pressure Pump	375	\$0.11		

Domestic sewerage treatment plant	Input watts	Cost/hour*	Cost/use*	Cost/day*
Average Domestic Plant	\$0.07	\$1.62		

*Approximate costs calculated using Tariff 11 pricing as at 1 July 2017. Excludes supply charges and meter services charges.

Look for the stars

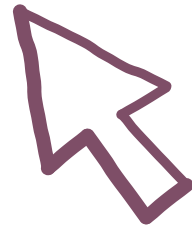
Choosing appliances that provide the best value for money is important – the cheaper option upfront isn't always the cheapest in the long run. Buying appliances that are energy efficient may cost a little more initially, but they will save you money on running costs in the longer term.

When shopping for appliances, look for the Energy Rating label. The label provides appliances a star rating depending on how much energy they use – the higher the star rating, the more efficient the appliance is. This makes it easy to see which products are most energy efficient and cheapest to run.

For more information, visit www.energyrating.gov.au.



Useful links



For more energy efficient information and tips, check out:

- Ergon Energy
<https://www.ergon.com.au/retail/residential/home-energy-tips>
- Energex
<https://www.energex.com.au/home/control-your-energy/save-money-And-electricity>
- QCOSS
<https://www.qcoss.org.au/energy-factsheets>

Rebates/concessions

To further ease cost of living pressures for Queensland households, a range of electricity rebates and concessions are available:

- Electricity rebate
- Energy efficient appliance rebate
- Reticulated natural gas rebate
- Home energy emergency assistance scheme
- Electricity life support concession scheme
- Drought relief arrangements

To find out more about eligibility and how to apply, visit: <https://www.dews.qld.gov.au/electricity/rebates>



Queensland
Government