



**QEnergy**  
Quality energy, your way

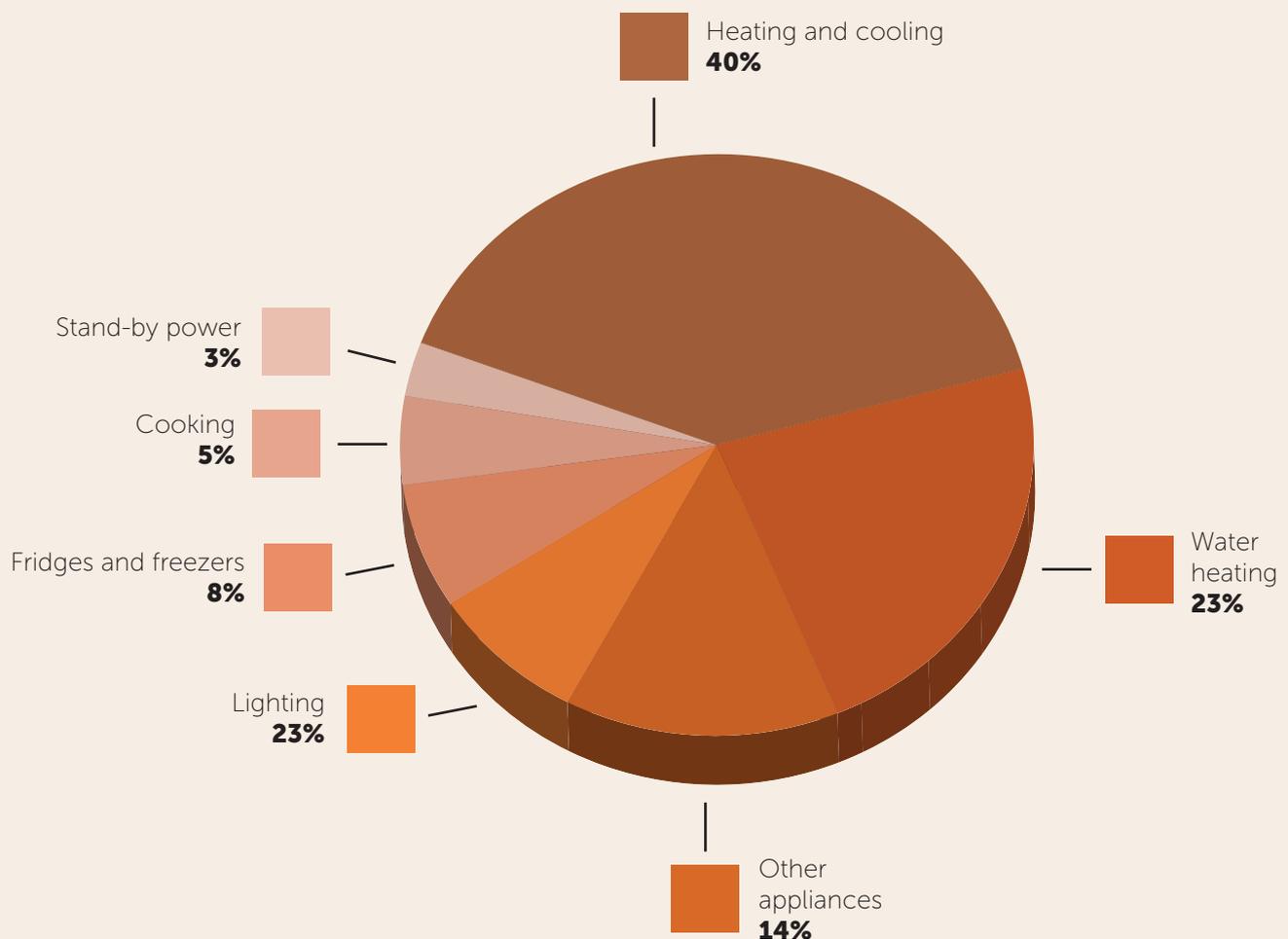
# easy ways to save energy

Tips to reduce your energy use

# why save energy

Saving energy can be as simple as turning off a switch rather than leaving an appliance on stand-by. The less energy you use, the less you have to pay for. You'll also be helping the environment by reducing the greenhouse gas emissions associated with energy use.

To use less energy - start by looking at where and how you use it now.

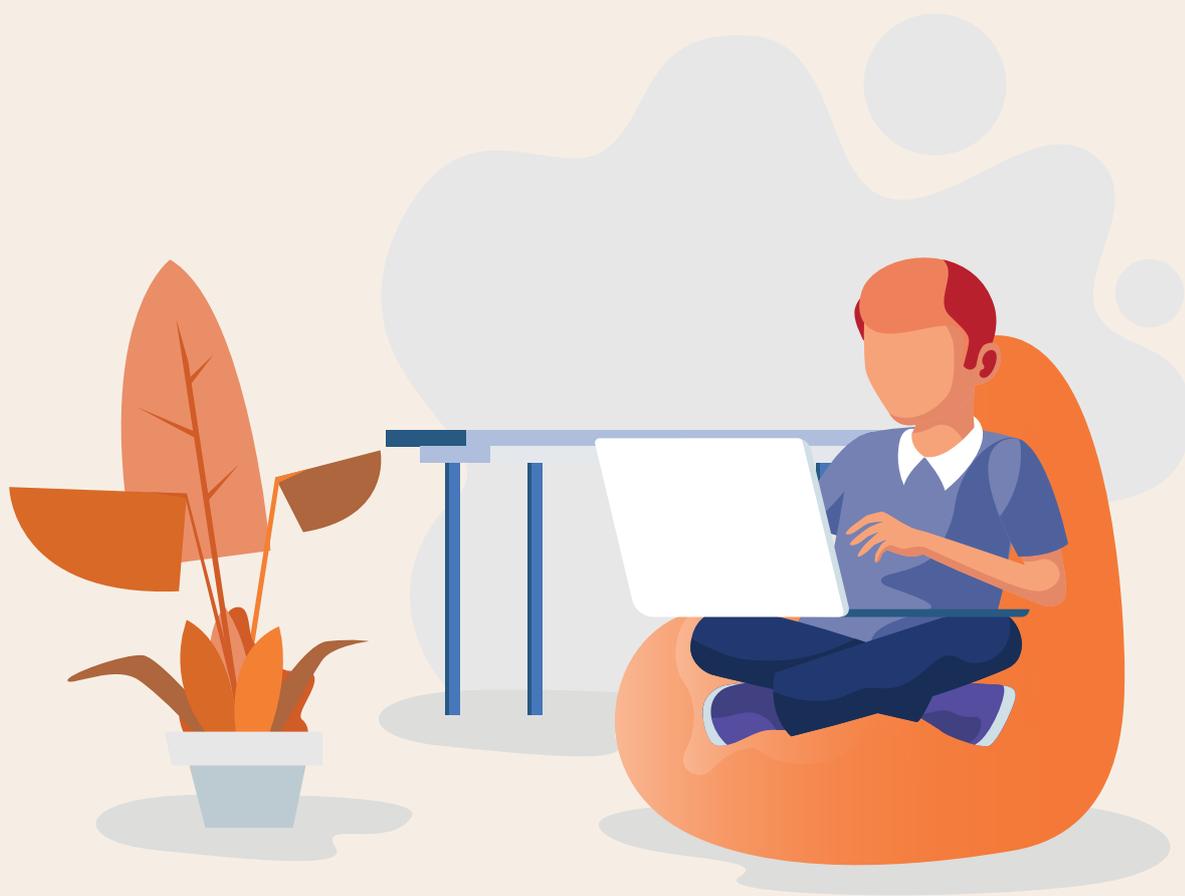


**Did you know?** Everyday, Australians use enough electricity to power eight billion TVs or to charge over 110 billion mobile phones. That's about ten million households and businesses chewing through over half a million mega-watt hours of electricity every single day. We also use enough natural gas to boil water for 36 billion cups of tea.

\*TVs calculated based on average consumption of 40-inch screen LED TVs 10 h/day test standard from [energyrating.gov.au](http://energyrating.gov.au). Light bulbs calculated based on use of 60 W bulbs. Mobile phones calculated based on Electric Power Research Institute report.

# energy saving tips for your home

The following practical tips can help you save on your energy bill.



## any time

Turn off appliances at the powerpoint when you are not using them.

Use less hot water and have shorter showers.

Upgrade your home insulation, windows, and blinds to heat-proof your house.

Take advantage of the sun and rely on natural light as much as you can each day, rather than automatically turning on the lights.

Check the star rating when buying appliances to compare energy efficiency.

More stars mean fewer running costs.



## autumn and winter

Insulate the roof, walls and floor, seal off draughts.

Let in winter sun and draw curtains at night.

Dress for the temperature by putting on a jumper and warm socks.

Zone your home and only heat the rooms you are using.

Use doors to prevent heat escaping into unused rooms.



## draught-proofing

**Reduce the costs of winter heating and summer cooling by making sure your house is well insulated and draught proofed.**

Fit draught stoppers and weather sealing tape to external doors and doors to high ventilation areas.

Fit weather sealing tape to windows.

Avoid vented, recessed downlights, which can increase air leakage.

Seal any cracks or gaps in floors, walls, and ceiling with a filler.

Install exhaust fans.

Use a chimney damper when the fireplace is not in use.



## summer & spring

Fans should be the first choice for cooling.

For efficient air conditioning, the house or room should be sealed and highly insulated with bulk and reflective insulation.

Windows must also be shaded from the summer sun.

Zone your home by cooling one part of your house and cut down on cooling in other areas.

Close up your house during the heat of the day and open it up at night to cool it down naturally.



## outside the home

Consider planting trees or bushes outside to increase shading and reduce the direct sunlight entering your home.

Install motion sensors on security lights and solar lights for garden pathways.

Pool owners should reduce daily pumping time – it's enough to filter the entire water volume once per day.

Consider whether you need power tools and electric mowers, blowers and trimmers– manual versions are available and save you money, whilst giving you a good workout.

Use the BBQ. It will save you money and it's the Aussie way!



### be bushfire ready

Keep in mind that the peak fire season varies depending on where you live in Australia. Check with the Bureau of Meteorology to find out when the fire risk is highest in your area.

Install fine metal mesh screens on windows and doors.

Fit seals around doors and windows to eliminate gaps.

Enclose the areas under the house.

Keep lawns short and gardens well maintained.

Cut back trees and shrubs overhanging buildings.

Clean up fallen leaves, twigs and debris around the property.



### heating and cooling

Keep temps between 18–20°C in winter and 24–25°C in summer.

Only heat and cool the rooms that you are using and close doors and windows in those areas.

Reverse-cycle conditioners (ACs) are cheaper to run in winter than standard electric heaters.

Install the right sized ACs for the space you need to cool or heat.

Regularly maintained ACs operate more efficiently (e.g. cleaning air filters and coils).

In bedrooms, consider using hot water bottles, electric blankets & dress warm.

The most effective way to keep your home cool during the day is to prevent the sun's rays from hitting windows and walls. Blinds, curtains and reflective window tints all help.

At night, place a fan near an open window - it will blow hot air out of the room, replacing it with cold air from outside.

Open another window elsewhere to encourage a cross breeze.



### in the bathroom and laundry

Consider using warm or cold water settings rather than hot.

Drying clothes costs nothing if you use the sun.

If using your clothes dryer, leave about a quarter of your dryer's barrel empty so heat can circulate more freely to help your clothes dry faster.

Dry washing in quick, consecutive loads to benefit from the warmth from the previous load.

Add a small dry towel to your load to reduce drying time by up to 25%.

Clean your dryer's lint filter after each load.

A clotheshorse can be used in a spare room or near a heater.

Encourage household members to take shorter showers.

Always wash full loads in washing machines and try to use the fastest cycle.



## hot water

Switch to a water efficient shower head and make shorter showers a habit. Reduce the temperature setting of your hot water system to 60°C (instead of 70 - 80°C) and if you have an instantaneous system, check that your thermostat is set no higher than 50°C.

Make regular checks to ensure there are no leaks in your hot water system and fix any leaking taps quickly.

Insulate hot water tanks and pipes to limit heat loss.

If your hot water system is 10 or more years old you may want to consider a more efficient replacement like a hot water heat pump.

Ensure that you get the right system for the number of people in your home and position it near where you use hot water the most.



## in the kitchen

When cooking, do not overfill pots with water. Use the minimum quantity of water needed and keep the lid on.

Depending on use, cooking equipment should be serviced twice a year to ensure it is always working at peak efficiency. Also, regularly checking seals and hinges will alert you if equipment needs repair to ensure maximum efficiency.

Keep dishwasher and dryer filters clean.

Smaller appliances like kettles, coffee machines, crockpots and toasters are more efficient than using the stove.

Keep the fridge out of direct sunlight and away from heat sources and leave a gap around it to let the air circulate.

Keep doors closed and try to limit the number of times you open the fridge door.

Fridge/freezer - check the temperature settings are not too low.

Fridges should be between 3 -5°C and freezers between minus 15 - 8°C.

Make sure you're not making your appliances work harder than they need to. For example, defrost food in the fridge overnight rather than in the microwave.

Use a microwave when possible to cook food.

When simmering on a stove top, put pot lids on and use appropriately-sized pots with flat bottoms and tight fitting lids.

Make sure oven doors close tightly and seals are in good condition.



## in living areas

Switch off TVs and home entertainment systems at the wall.

Turn off lights when you leave a room.



## lighting

Switch to energy efficient lighting like compact fluorescent or LED bulbs as an alternative to incandescent or halogen lighting.

Turn lights off in areas of your home that are not being used.

Use light coloured paint on interior walls, ceilings and other surfaces in your home.

Locate windows and skylights to allow natural light inside.



## buy lumens, not watts

**Lumens let you buy the amount of light you want. So when buying your new bulbs, think lumens, not watts. The brightness, or lumen levels, of the lights in your home may vary widely, so here's a rule of thumb:**

- To replace a 100 watt (W) incandescent bulb, look for a bulb that gives you about 1600 lumens. If you want something dimmer, go for less lumens; if you prefer brighter light, look for more lumens
- Replace a 75W bulb with bulb that gives 1100 lumens
- Replace a 60W bulb with bulb that gives 800 lumens
- Replace a 40W bulb with bulb that gives 450 lumens

# energy saving tips for your businesses

The following practical tips can help you save on your energy bill.

## office

Encourage employees to turn off all office equipment after office hours and for weekends

Turning equipment off at the power point will reduce electricity usage to zero

Conduct regular maintenance on all office equipment to keep them running efficiently

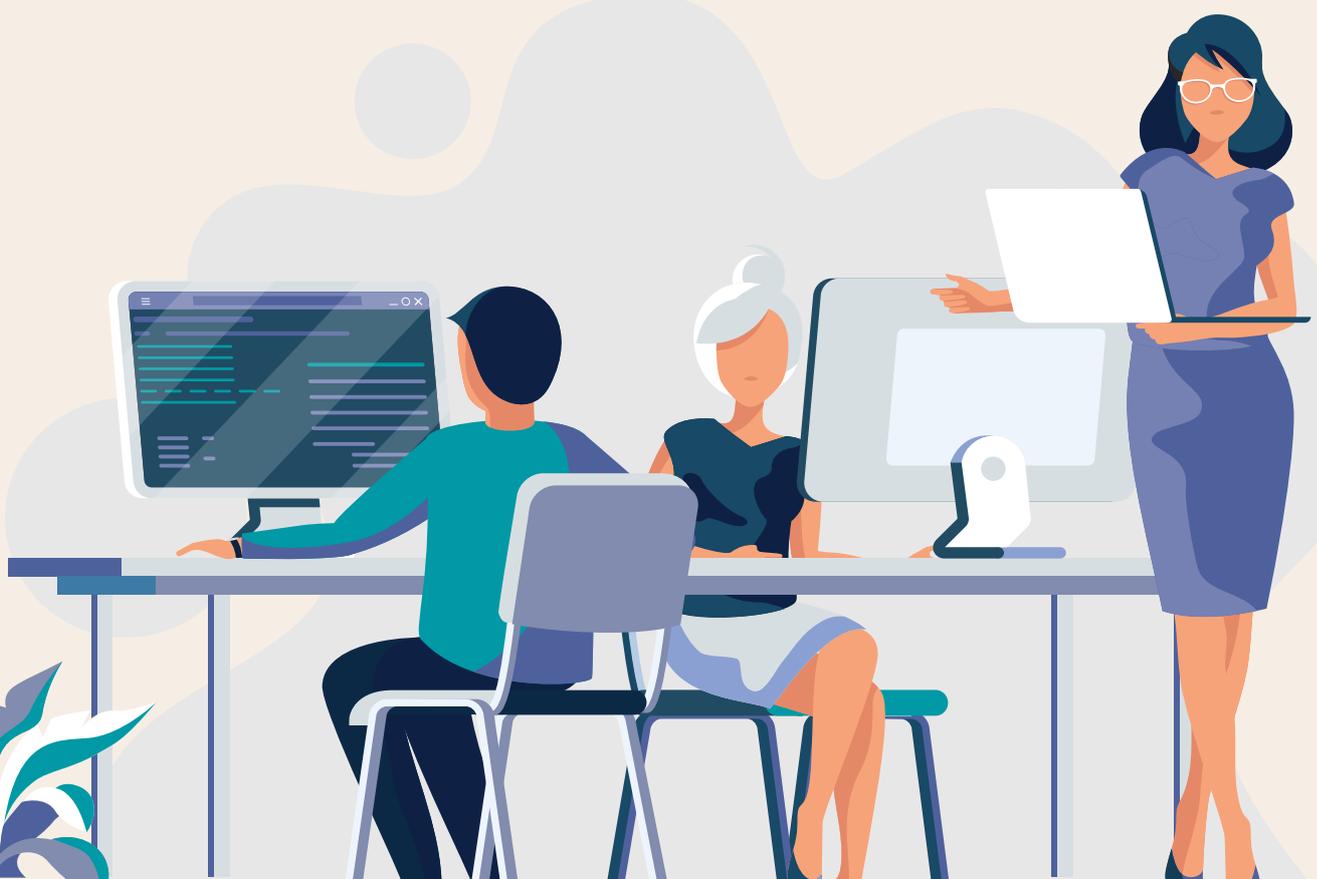
Have computers set to go to sleep automatically after 30 minutes of inactivity

Laptops typically consume less than half the energy of a desktop computer

Upgrade computer monitors to LCD as they have a greater efficiency than older tube monitors

The smaller the monitor screen, the greater the energy efficiency

Photocopiers use more energy each time you start, so run all your print jobs at once





## air conditioning and heating

Ensure you are using the right size system for the area you are cooling/heating

Encourage employees to close doors and windows and draw blinds

Switch off heating/cooling when the office is empty

All systems should be serviced on a regular basis to maximise efficiency

Insulate windows, walls, pipes and boilers

Position thermostats away from sunlight, draughts or machinery that emits heat



## in the kitchen and refrigerators

When cooking, do not overfill pots with water and keep the lid on

Depending on use, cooking equipment should be serviced twice a year

Regularly checking seals and hinges will alert you if equipment needs repair to ensure maximum efficiency

Keep dishwasher and dryer filters clean

Always wash full loads in both dishwashers and washing machines and try to use the fastest cycle

Smaller appliances like kettles, coffee machines, crockpots and toasters are more efficient than using the stove



## hot water

Check the thermostat on your hot water system is set at a temperature that is appropriate for its use

If your business does not rely on hot water, turn the system off



## lighting

Encourage employees to turn off all lights, including show room and signs, after business hours

Install motion sensor lights in areas not regularly used, such as store rooms and bathrooms

Remove tubes from fluorescent fittings if there is more light than needed

Replace light fittings with low energy bulbs, particularly in areas where the lights are on for long periods

Clean light fittings regularly to ensure they are used to the optimum



## heating, ventilation and air conditioning (HVAC)

HVAC optimisation looks for the best ways of using existing systems, rather than opting for large-scale equipment upgrades and replacements. Optimisation can be done by:

- changing algorithms
- altering control schedules and set points
- carrying out minor mechanical repairs and alterations

### HVAC optimisation will reduce your energy bills

By taking action you could save up to 50% of your total HVAC energy use, or up to 80% of energy use in individual HVAC systems. In many instances, optimisation can provide immediate reductions in energy usage and costs. Other benefits can include:

- more comfort for a building's occupants
- improved reliability of systems
- reduced maintenance costs
- improved building performance, as recognised in rating schemes such as National Australian Built Environment Rating System (NABERS) and Green Star.



## energy efficient lighting

Upgrading your lighting system can help your business save money on energy use. Some businesses use up to 50% of their overall energy use on lighting. Switching to a more efficient lighting system can:

- reduce your electricity bill
- reduce the need for costly maintenance
- improve safety and conditions at your premises.

### what is best practice energy efficient lighting?

It is important to review the lighting operations of your facility in a holistic manner. Some steps are to:

- assess the natural light available and the potential to make more use of it in open spaces such as warehouses through devices such as skylights
- link artificial light use to natural light levels (daylight linking), using sensors and smart control systems to minimise energy use
- assess options for zoning, de-lamping, dimming or multilevel switching to reduce energy consumption
- identify low activity areas and assess the use of occupancy sensors
- review the areas (i.e. the zones) in your business with discrete lighting controls, and increase the number of zones (if appropriate) to allow lights to be turned off when areas are not used

- identify lights that could be upgraded to more energy efficient options
- assess energy efficient lighting options available to you and the potential savings for your business



### **battery storage**

Businesses can reduce their running costs by using battery storage:

- to get maximum benefit from a solar photovoltaic (PV) system
- to optimise usage in relation to time-of-use tariffs
- to reduce capacity charges

Businesses can also use battery storage to provide back-up power, to avoid paying for an expensive upgrade to grid infrastructure, to trade energy on the wholesale market or as part of an off-grid power supply system



# measure your **office energy use**

An energy assessment can reduce your businesses' energy use, save money, improve productivity and provide opportunities to innovate. You may be able to conduct your energy assessment in house. If you don't have the skills within the business to run your own assessment, many external experts or energy services companies will do all or part of it for you.



## d-i-y

- Gather the last 12 months of billing data. If this information isn't detailed enough, give us a call: we may be able to provide more specifics. While billing data may not answer all your questions, it should uncover gaps or identify some of your company's higher-energy use processes. Consider hiring a temporary meter (for short-term use), or installing your own meters to capture specific operating periods. Don't forget to factor in daily, monthly or seasonal variations when you are analysing the results.
- Analyse your energy baseline. This baseline will clarify the relationship between energy costs to business output. Common analysis techniques include:
  - o track energy use over time to determine energy use patterns (consider seasonal, monthly, weekly, daily or hourly usage)
  - o X-Y plotting energy use versus production or other parameters, and
  - o benchmarking energy performance to reveal whether a process, facility or business unit is operating at optimum performance level, or to draw comparisons between sites
- Track your results. Make sure you close the loop by tracking your progress and any improvements in your company's energy use over time you'll have great data to share across your business (success stories are an excellent way to build support for continual energy savings)



## get an audit

There are benefits to getting an audit done by an energy expert.

- It is a good option if you want an accurate real-time reading for all plug-in and hard-wired appliances
- It is recommended for businesses with annual electricity bills of over \$5000
- Most consultants will give you an action plan with details on how to cut your energy use

**Need help?** Please contact one of our Energy Specialists from Monday to Friday, 9am to 6pm on **1300 QENERGY** or visit **[www.qenergy.com.au](http://www.qenergy.com.au)**.