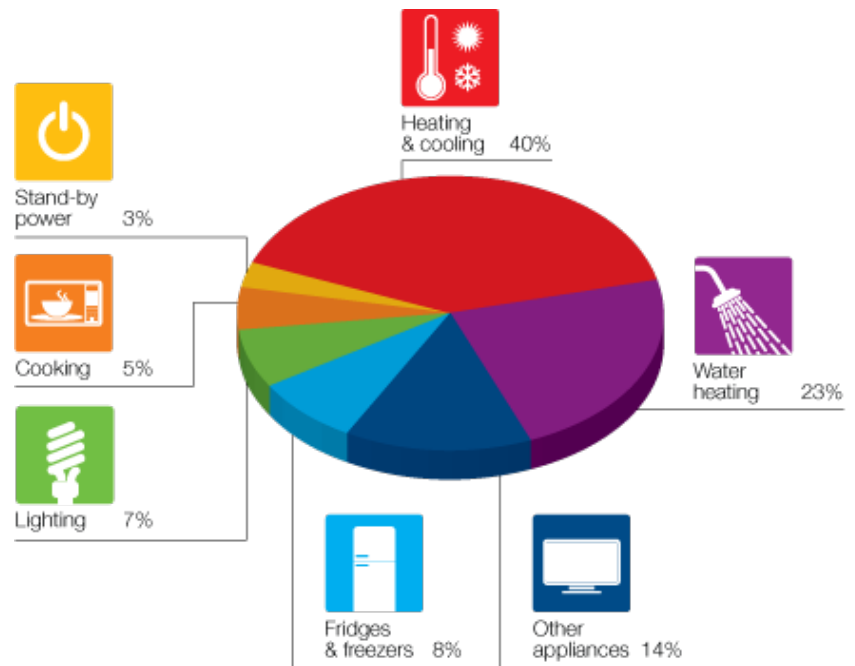


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Energy Smart Actions: Home Energy

Households use about 11.5% of all energy in Australia: about 4% for transport and 7.5% in our homes. Heating, cooling and water heating are the largest users of energy. For heating, insulation is important but simpler and more important is stopping draughts. For cooling, consider ceiling fans and improving cross ventilation instead of aircon. For water heating, heat pump heaters are 3x more efficient than traditional electric.



The following check-list will be useful in our discussions this week and for you into the future. Put a check (✓) in the box if you are already doing the action; put a * in the box for the actions you intend to start doing. There are blanks at the end for you to add your own ideas or actions.

Tips for heating/Cooling

- Consider replacing aging gas heaters with reverse cycle air conditioners (<https://renew.org.au/renew-magazine/buyers-guides/electric-heating-options/>)
- Set thermostat as low (winter) or as high (summer) as comfortable; use timers to pre-heat/cool for times you are at home
- Localise heating (ie an efficient space heater, heated throw rug or electric blanket) rather than heating a large area
- Use passive cooling options such as shading and ventilation as much as possible; a ceiling fan is the next simplest and energy efficient before turning on the aircon (<https://renew.org.au/renew-magazine/buyers-guides/cooling-buyers-guide/>)
- Use insulating window treatments (ie lined curtains or blinds such as honeycomb): open to sunlight in winter; close to summer sun and to reduce heat loss in winter

Tips for hot water and appliances

- Use less hot water:
 - Wash clothes in cold water
 - Avoid running water when brushing teeth, washing hands, rinsing dishes, etc
 - Shorten shower times
- Replace your aging gas or electric HWS with a solar or heat pump system (<https://renew.org.au/renew-magazine/buyers-guides/hot-water-buyers-guide/>)

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- For solar HWS, make sure the booster has a manual switch or can be put on a timer.
- Run full loads in washing machine and dishwasher
- Use electric appliances (rather than gas) where possible and if sourced through renewable electricity
- Use smaller appliances (eg kettle, toaster, microwave, electric frypan, bench-top convection oven, etc) rather than stove top, grill or electric oven
- Defrost foods in refrigerator prior to cooking, rather than defrosting in microwave
- Set power saving options on laptops and computers so that screens and hard drives power down, rather than revert to screen saving mode

Tips for home improvement

- Seal gaps between walls, floors, ceilings, cornices & skirting using gap sealer or silicone. (<https://renew.org.au/renew-magazine/buyers-guides/draught-sealing-guide/>)
- Ceiling insulation: add to existing or replace to a minimum of R5 (5cm approx. = R1); don't forget to cover the manhole and around ceiling penetrations
- Consider double glazed windows as a step beyond window treatments (above).
- Replace down-lights with LED fixtures or fit covers to reduce heat escape during winter, heat entry during summer and fire hazard associated with down-lights and insulation
- Look into latest technologies: induction cook-tops, inverter refrigerators and microwaves, heat-pump dryers
- Purchase high WELS (Water Efficiency Labelling and Standards) rated appliances (shower-heads, washing machines, dishwashers) and tapware

Tips for solar PV

- Consider installing solar photo-voltaic (PV) panels if roof not completely shaded. (Check e.g. <https://www.originenergy.com.au/solar/savings-calculator> to see how big a system you would need to meet your demand)
- Run appliances mostly through the day (consider timers) to maximize use of “free” electricity (unless on an early gross export tariff, when off peak consumption is cheaper)
- Consider installing a battery to allow use of generated electricity outside of daylight hours rather than purchasing from the utility at peak rates
- Charge your electric vehicle during daylight if possible; use as a battery on days when not driving
- If you have a non-solar electric hot water system, consult with a plumber about using excess solar energy to heat your hot water during the day (thermal bank).
- _____
- _____
- _____

Other resources:

<https://www.energy.gov.au/publications/australian-energy-update-2019>

https://apps.epa.vic.gov.au/AGC/r_emissions.html#!

<https://renew.org.au/renew-magazine/efficient-homes/gas-versus-electricity/>

<https://renew.org.au/renew-magazine/efficient-homes/appliance-considerations/>