

# Top 10 Energy Saving Tips

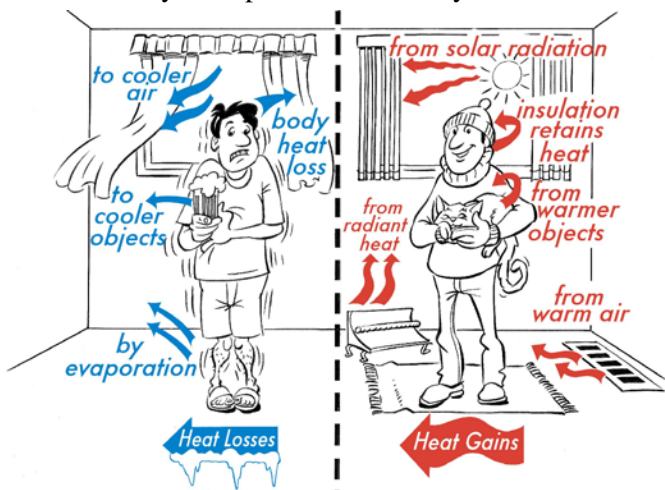
Choosing what to do to improve the energy efficiency of your house can be a bit daunting. The following tips give you some idea of the cost involved as well as the likely savings.

Remember, the numbers quoted are for an 'average' house. Many different factors will affect the savings possible and the priorities for your home. If you are unsure, please contact our consultant for more information (contact details at end of factsheet) or you can also arrange to have an ACT Energy Wise home audit, (conditions apply).

## Tip 1: Seal cracks and gaps.

Simple and cheap, these measures can save 10% of your heating bill or even more if you are using electric heating.

Cracks and gaps in houses account for 10-15% of heat loss and the drafts created make you 'feel' cold. Installing draught excluders under doors, soft rubber weatherstrips around windows and sealing around skirtings and architraves is often the most cost effective way to improve how warm your home feels.



- The smoke from an incense stick held near your doors, windows and ceiling penetrations on a windy day can quickly show up any gaps that need filling
- Double brick homes in Canberra commonly have large gaps between the skirting boards and the floor. This gap is much more noticeable on polished floors. It creates a draft at floor level making the floor 'feel' cold.
- Replace any open exhaust fans with the self-closing type.
- Seal up any unnecessary permanent vents (often found in the walls and ceilings of old homes).

## Tip 2: Insulate yourself from the cold.

Insulation is the next most cost-effective measure to save energy and improve comfort

- Good insulation in your roof, walls and floors keeps you warmer in winter and cooler in summer, permanently saving you money, whilst also improving your home's resale value.
- In a Canberra uninsulated home, 30-40% of all heat lost is through the ceiling, with 20-30% through the walls and around 10% through the floor. So always insulate your ceiling first then your walls, then floor

Insulate your ceiling to R4, walls and floors to R2.

- Cavity wall insulation can be retrofitted to most wall types. Brick veneer is generally the easiest and most effective. See our "Cavity Wall Insulation" fact-sheet for more details
- When building or renovating, avoid penetrations through your insulation layer. Recessed downlights, extraction fans and skylights are all 'holes cut in the doona' of your ceiling insulation.
- It's not the type of insulation you use that matters, it's the 'R-value' that really counts.



### **Tip 3: Windows**

Once you have sealed up the cracks and insulated your ceiling and walls, windows are the next priority.

#### 1. Lined curtains with pelmets, or well-fitted, airtight blinds.

These can more than halve your heat loss, saving 10% on your heating bills

- Ensure your curtains go all the way to the floor and wrap to the wall on either side of your window.
- Install box pelmets to reduce the air circulation around your windows if you have curtains.
- Pelmets don't need to be 'boxed' they can be "internal"; anything placed on top of the curtain track that stops air circulating between the curtains and the glass is sufficient (eg Pelmate).
- Line your curtains with 'blockout' backing to prevent radiant loss (and reduce summer gain).
- Use tightly woven materials, trapping air in as many layers as possible.
- To be effective, blinds must be airtight. Vertical and Venetian blinds do not prevent heat loss. Instead consider blinds with built-in air cavities or Roman or Holland blinds and ensure blinds fit snugly to the window frame (within the reveal)
- And, if you have some northerly windows, open your curtains as wide as possible during the day on cold days in winter to let in the warming sunshine.
- Don't forget to close all windows and coverings on hot summer days and open them when it cools off outside.

#### 2. Double or secondary glazing

- This also reduces heat losses through windows by 50%
- Secondary glazing is a second layer of glazing added to the frame of your single glazed window with an air gap in between. Examples are, removable clear Perspex (eg Magnetite) or a fixed clear membrane (eg Clear Comfort). Both are cheaper than double glazing, but are not as durable. Clear Comfort works well on timber frames and can be installed as a DIY product. Magnetite is normally fitted by the company and can be easily removed to open windows in summer.

Good curtains with pelmets or blinds in combination with double-glazing will give you an even greater benefit.

### **Tip 4: Reduce your hot water consumption.**

This is one of the simplest energy saving measures. It can be achieved by changing to water saving appliances and being more water aware.

- Change to WELS three star showerheads (9 Litres compared with traditional shower head of 20L. (Note: a small number of older instantaneous hot water systems cannot use three star showerheads – check with the retailer before you buy one.)
- Take shorter showers, use a timer. Treat yourself to a massage with the money you save, a much more environmentally friendly option
- Use cold water in the washing machine with a suitable detergent. To save water and energy only wash full loads.
- Buy WELS 4 or 5 star appliances when updating



- Stop the drip: Dripping taps waste huge amounts of water and if your hot water tap is the one that is dripping, it will have a big impact on your bill. New washers generally cost \$4-5.

More water-saving tips at the ACT Government's website <http://www.thinkwater.act.gov.au/>

### **Tip 5: In the summer, don't let the sun strike the glass.**

Before you think of turning on the air conditioner this summer, **turn off the sun!** Block the sun before it strikes your glass. Once the radiant energy from the sun has entered your house it heats up the things it strikes. Heated objects pass on heat to the air around them. Warm air doesn't shed heat through your window as quickly as the radiant heat comes in, so the room gets hotter and hotter. So stop the radiant heat from hitting the glass in the first place.



In Canberra, it is the East and West glazing that needs most attention (vertical opaque awnings are essential). To the north horizontal sails, covered pergolas (make sure they are ventilated to avoid excessive heat build up), or climbing plants will radically reduce the heat gain to your house – less sun through the shade means a cooler house. But make sure the shade can be removed or retracted for access to winter sun.

**Tip 6: Reduce your heating bill – thermostat control and efficient zoning.**

- Heat less space -Why heat rooms you're not using?
- Choose a 5 or 6 star rated heater -It is much more energy efficient and cheaper to run.
- Create separate zones for areas such as formal living, family rooms, bedrooms, guest rooms and studies (using separate smaller heaters or a controllable ducted system).
- Insist on well-insulated ducts (R1.0) on new central heating systems it's a BCA requirement.
- Improve the efficiency of your ducted system by using vent deflectors on floor vents to redirect heated air into the centre of your room and out from under furniture.
- Install a reversible ceiling fan to keep the heat where you need it in winter; it will also assist you in low cost cooling in the summer.

*Keep your thermostat down whilst staying warm:*

- Every degree you lower your thermostat, can save you up to 10% of your heating cost. It is much cheaper to put on a jumper and keep the heating low than to have a huge heating bill!!

**Tip 7: Lighting.**

- Using compact fluorescent light bulbs requires a small initial investment but pays for itself in only a few months.
- Turn off lights when you leave the room, even if it's only for 10 minutes.
- Consider installing a motion sensor for outdoor lights.
- Do not install Low voltage downlights – they are high wattage and leak a lot of warm air to the ceiling (see lighting factsheet)



**Tip 8: Replace your electric hot water Service**

- Electricity is expensive and has very high greenhouse gas emissions. Replacing your electric hot water system with a solar unit, instantaneous gas, or heat pump will radically lower costs and emissions. With later model hot water services, it is often possible to retrofit a solar system rather than having to install a whole new system.
- See our *Solar Hot Water Fact Sheet* for more details about solar hot water systems


## Other Hot Water Tips

- Lagging (insulating) hot water pipes reduces heat loss and stops frost damage.
- Where appropriate, reduce the thermostat on your hot water tank and for electric storage hot water systems only, insulate with a “Storage Tank Blanket”.

## **Tip 9: Human Comfort**

Air temperature is only one of the factors that affect our comfort. Before you turn up the thermostat consider: your level of clothing, the amount of radiant heat available, and air movement. Minimising air movement, dressing more warmly, and making use of a radiant heat source, including the sun, can all make you feel warmer while using less energy.

## **Tip 10: Buy Green Power**

**Price:** Buy green power for a premium of approx \$180/year   
**Saving:** reduce your greenhouse gas emissions by up to 3.2 tonnes of CO<sub>2</sub> /year

Finally, for those who want to make a personal contribution to a cleaner future, buying green power from your energy retailer will radically reduce your greenhouse gas emissions while not breaking the bank. Green Power is independently audited and guaranteed to come from approved, renewable energy sources such as wind, solar, micro-hydro and biomass.

- Even when paying the premium for green power you will still be paying less per kWh than consumers in places such as rural South Australia, Japan, and Denmark.

For more information on Green Power, visit: <http://www.greenpower.com.au/>

## **More information**

This fact sheet is produced by the Home Energy Advice Team (HEAT) to provide you with some basic information on making your household more energy efficiency. If after reading it you'd like more free information about this or any other topic to do with saving energy in your home, don't hesitate to contact us:

**A range of other fact sheets on saving energy and money in your home are available from HEAT**



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