



## Home Sweet Home - Energy Efficiency 101

Winter is nearly upon us, and we are definitely starting to feel the chill. In our upcoming Landcare Learnings, we will be discussing how to build new homes to be solar passive and heat efficient. Topics included will be underfloor heating with hot water, insulation, and the aspect of your new home to capitalise on solar radiation.

What can you do to however if you have an old home and the cold nights and mornings are starting to seep in for another winter. If renovating or building new is not an option, there are still things we can do to make our houses more efficient and keep out the winter chills.

Australian homes are notoriously 'leaky' by international standards. This means warm air is leaking out, and chilly air is coming in. These unintentional draughts make our houses cold to live in. They can also add up to 20 per cent to our energy bills according to research by Kate Cranney from the CSIRO.

Data from our [Australian Housing Data Portal](#) shows the average existing house is rated 2.2 stars for energy efficiency (the most energy efficient houses are 10 stars). This means they're likely to be very cold to live in during winter.

Most of the problems in homes occur because they're leaky," says [Michael Ambrose](#), former architect and CSIRO Senior Experimental Scientist.

"Leaky houses tend to go with age. The older the home, the leakier it is. Old weatherboard houses from the 1950s are very leaky, especially if they are on stumps. You do not get leakage through concrete slabs," he says.

Following are a list of things you can do with your old home to help keep the chill out and the warmth in;

## Cover your windows.

- Uncovered windows account for up to 40 per cent of heat loss in the winter.
- Use heavy, lined curtains that fall below the window to keep warmth in.
- Check your windows for cracks.
- Consider sealing gaps with insulation strips or caulk (a waterproof filler).
- Install pelmets above your windows/curtains to stop warm air escaping!
- You can also hang a heavy blanket or towel off the curtain rod.
- Replace windows with double-glazing, use window films, or install insulating window coverings.
- Window coverings can help reduce heat loss by 40%.



## Seal gaps around your doors.

- If you feel a draught, make a 'door snake' for internal doors.
- For external doors, use a plastic or metal door seal with wipers.
- For draughts around the edges of the door, use adhesive weather stripping.

- Adhesive weather stripping helps reduce draughty door gaps.



### Old heaters, fireplaces and hot water systems.

- Sometimes when services are removed the hole is not sealed, seal these up!
- Look for gaps around built-in appliances, behind cupboards and under the kitchen sink.
- You can fill gaps with expanding foam.
- If you have an old fireplace, use fireplace dampers to block airflow.

Old fireplaces and chimneys need to be sealed.

## Fixed vents and exhaust fans.

- Some old brick homes have fixed ceiling and wall vents, block these to stop air leakage.
- For old exhaust fans, use a ventilation cover to block the vents over winter.



## Evaporative cooling units.

- These should have winter covers or dampers, but they are not always effective.
- Draught-proof them by using magnetic strips around the vent receiver in your ceiling.
- Clip the covers on in winter and peel them off in summer.

- Cover air-conditioning units when not in use.



### Sealing other gaps.

- Listen for rattles or whistling and feel for moving air.
- Look for gaps around the pipes and joints in cabinets, especially kitchen.
- Fill small gaps with silicone sealant.
- Fill bigger gaps with expanding spray foam.
- Be careful around internal gas appliances as they need fixed ventilation.
- Replace vented downlights with Insulated cover rated LED downlights. These can be covered with ceiling insulation, so they do not leave an uninsulated gap.
- Other areas include where skirting meets the wall, and where bricks meet the wood trim.



## Rugs and carpets.

- Cold air can roar up through gaps in the floorboards, especially in timber homes raised above the ground.
- Use rugs and carpets to function as a layer of insulation.
- Carpets and rugs cover gaps in floorboards and stop draughts



## Let the sunshine in

- Keep blinds or curtains open during the day to warm your home, especially north and west-facing rooms.
- Remove furniture from in front of north and west facing windows



For homeowners with older houses looking to reduce cold, improve heating, and lower energy costs, several practical measures can be taken. Enhance insulation by using heavy, lined curtains, installing pelmets, and sealing gaps in windows and doors with insulation strips or caulk. Address drafts around doors with door snakes and weather stripping. Seal unused fireplaces, old heaters, and fixed vents to prevent heat loss. Cover evaporative cooling units and use magnetic strips to seal them in winter. Fill gaps around pipes and joints with silicone sealant or expanding foam. Use rugs and carpets to insulate floors, and open blinds during the day to let in sunlight. Implementing these steps can significantly enhance warmth and energy efficiency in older homes.