



Building & Renovating for an Efficient Home (November 2025)

Construction & Design

House Orientation

- The orientation of your home can have a big impact on your energy efficiency. Consider potential changes to let more sun in winter or keep it out in summer. This can cost nothing more than taking some extra care in design.

Insulation

- If you're adding, removing or altering walls, you have a rare opportunity to maximise your insulation, as access allows easy and cheap insulation installation.
- Install minimum R5 ceiling insulation and R2.5 underfloor insulation.
- Request thick lagging from plumbers on hot water system pipes.

Ventilation

- Make sure your windows are placed to take advantage of cooling breezes and are WERS rated to keep you warm in winter and cool in summer.

Thermal Mass

- Heavyweight materials like concrete slab and brick can help to even out internal temperatures, but may also make it harder to cool or heat your house due to their high thermal mass. A good designer or energy rater will be able to help you decide whether they're right for your house design and climate.

Windows

- Install thermally backed curtains, blinds and pelmets on windows.
- Install external awnings on all western and eastern windows.
- Consider double- or triple-glazing.

Thanks to CSIRO & Southcoast Health & Sustainability Alliance (SHASA)



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Renovation & Upgrades

Heating and cooling

- The cheapest and most energy efficient way to heat and cool a house is a reverse cycle air conditioner (heat pump). Install one in the living room, and consider installing one in the bedrooms.

Water Heating and cooling

- Install hot water heat pump and/or a Catchpower device if you have a rooftop solar system.

Appliances

- Install an energy efficient fridge (they run 24/7), and don't buy a bigger one than you need as it will use more energy.
- Install a 4 star (or better) front-loading washing machine (they can be twice as efficient as top loaders).
- Install a 4 star (or better) dishwasher.
- Consider switching to an induction cooktop: they are more energy efficient and safer than gas and traditional electric cooktops.

Draught proofing

- Ensure good seals around and under all doors - especially external ones. Plastic draught-stoppers and door-snakes can make a big difference.
- Install weather seals around windows where there are air gaps.

Lighting

- Install warm white LED lighting to replace incandescent or halogen bulbs.

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