

## Your DIY home energy checklist.

Assessing your 'building envelope' (the structure and everything outside your home).

Your 'building envelope' covers the structural elements and everything on the outside of your home that can affect energy consumption on the inside. Running through this checklist could give you some ideas of how you can save energy in your home.

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# Window check



They connect your home to the outside. And the type and quality of your windows can influence energy consumption inside your home.



	Take a look at	Why?
<input type="checkbox"/> (tick box ✓)	<b>The glass on your windows</b> – Do they have a tint or coating? Is there a thin film installed over the glass? If not you could look into the glazing and insulating film options that are available. A window company may be able to provide a free quote to help you assess this option for your home.	An investment in window glazing could save you money. Why? High quality glass and glazing restricts the temperature outside your home getting in and vice versa, reducing the energy you use inside your home on heating and cooling.
<input type="checkbox"/>	<b>Your window frames</b> – What type of material are they made out of? Different frames have different insulation properties. A window company may be able to provide a quote and advice on new frames to suit your home and energy needs.	Having the right frames for your climate can help you reduce the energy used on appliances that control your inside temperature, such as heaters and air conditioners. Materials that conduct less heat, like timber, suit warmer climates <sup>^</sup> . Materials that conduct more heat, like aluminium, suit cooler climates <sup>^</sup> .
<input type="checkbox"/>	<b>The colour of your blinds</b> – Are your blinds white or near white? Do they have a reflective surface on the outside? If not you could be letting excess solar heat into your home.	Lighter colours can reflect solar heat, whereas darker colours attract it. Consider changing your blinds to a different colour with a reflective surface on the back, which could help reduce the energy you use to cool your home.
<input type="checkbox"/>	<b>The pelmet above your blinds</b> – Check for gaps or excess space in and around your blinds and pelmet (the fixture that covers where your blinds are connected).	Fit your blinds and pelmet tightly so there's no room for air to be trapped. This helps reduce any build-up of hot and cold air pockets around your blinds, meaning potentially less energy is used levelling out your home's temperature.
<input type="checkbox"/>	<b>Your curtains and drapes</b> – How thick are the curtains or drapes around your windows? Is there more than one layer of fabric?	Heavy fabrics or layers of curtain can increase insulation in your home, and therefore reduce heat loss. This means your heater doesn't have to work as hard making up for this loss of heat.
<input type="checkbox"/>	<b>Your windows ventilation</b> – Do you have a ventilation opening on your window to allow heat to escape? If not you could be adding to your reliance on air conditioning.	Heat gets trapped between your window and blinds, increasing your home's inside temperature. A ventilation opening allows this heat to escape, so your air conditioner doesn't have to work as hard to cool this air.

## The little changes count when it comes to energy efficiency

Here are two energy efficiency facts you might not know about your windows and furnishings.

1. **Did you know?** If you can't get your windows re-glazed, window films are a cost effective-option. They could decrease your home's temperature meaning less energy is required to cool your home.
2. **Did you know?** As well as cutting the cost of your energy bill, an investment in window re-glazing could add to your home's value.

<sup>^</sup>SOURCE: [www.yourhome.gov.au](http://www.yourhome.gov.au)

# Shading check



The shading around the outside of your home, whether it's natural (plants) or manmade (coverings and other external fixtures), can reduce the amount of heat that enters your home. This reduces your inside temperature so you may require less cooling.

	<h3>Take a look at</h3>	<h3>Why?</h3>
<input type="checkbox"/> (tick box ✓)	<p><b>The colour of your external shading</b> – Is it light in colour? Is the outside of the shading reflective? If not, you could be letting excess heat into your home.</p>	<p>Light colours reflect solar heat better than darker colours<sup>^</sup>. Your shading will more effectively stop heat entering your home if it's reflective.</p>
<input type="checkbox"/>	<p><b>The positioning of your external shading</b> – Make a list of all the external shading positioned around your home. What direction do your shading structures face? How big are they? You might like to contact a builder or carpenter to find out if your set-up is the best for your home.</p>	<p>A builder or carpenter can evaluate whether your set-up matches the level of sun you receive. They will then be able to advise you of changes you can make (like installing horizontal shading on any north-facing openings) that may help you save energy.</p>
<input type="checkbox"/>	<p><b>The types of plants that shade your home</b> – Make a list of the plants that shade your home, and find out if they're evergreen (foliage all year round) or deciduous (shedding foliage in winter). If you're not sure, taking a sample to your local nursery is one way to check.</p>	<p>Plants that provide your home with shade in summer protect your home from heat. Evergreen plants suit humid climates, and are ideally positioned to the east and west. For all other climates, deciduous plants are suitable, and ideally placed to the north. This positioning will help to reduce heat absorption from the summer sun, but allow sun to filter through during winter.</p>
<input type="checkbox"/>	<p><b>The landscaping around your home</b> – Do you have a lot of hard landscaping materials (such as pavers or concrete) around the outside of your home? If so, these materials could be retaining heat which can then be absorbed by your home.</p>	<p>Hard materials such as pavers attract and hold heat. Because of this, replacing it with ground cover plants that are drought tolerant can help reduce the overall heat attracted, and possibly reduce unwanted heat entering your home. The result, less work for your air conditioner in summer, and potentially less energy consumption.</p>
<input type="checkbox"/>	<p><b>Skylights and light tubes</b> – Do you have skylights or light tubes allowing natural light into your home? Are they covered by external blinds or louvers? If not you could be letting unwanted heat into your home.</p>	<p>Because skylights and light tubes conduct sunlight into your home, they can also conduct heat, affecting your home's temperature and increasing the cooling you require.</p>
<input type="checkbox"/>	<p><b>Your pergola or outdoor area</b> – Is your pergola or outdoor area in direct sunlight? Do you have, or have you considered planting deciduous vines on the walls?</p>	<p>Plant deciduous vines to grow on pergolas for summer shade. They will then shed foliage in winter allowing the sun in.</p>

## The little changes count when it comes to energy efficiency

Here are four energy efficiency facts you might not know about exterior shading.

- Did you know?** Adding shading around your home can block up to 90% of heat generated by the sun<sup>^</sup>.
- Did you know?** East and west facing verandahs, pergolas and balconies can receive a lot of unwanted early and evening sunlight. Placing plants around the structure can help shade unwanted sun.
- Did you know?** Shading over windows is critical to reducing unwanted heat within your home, especially if your windows receive direct sunlight.
- Did you know?** Vines on north and east facing walls can also provide summer insulation. For the best results, make sure there's a 500mm gap between the wall and the planted screens for ventilation and cooling purposes<sup>^</sup>.

<sup>^</sup>SOURCE: [www.yourhome.gov.au](http://www.yourhome.gov.au)

# Insulation check



Acting as a barrier to protect your home from hot and cold conditions outside, insulation helps maintain a comfortable temperature inside your home. The more effective the insulation, the more effectively appliances like heaters and air conditioners can operate, reducing your energy consumption.

	Take a look at	Why?
<input type="checkbox"/> (tick box ✓)	<b>What your house is made of</b> – Check what your home is constructed of (such as bricks, timber or cladding) as different materials have different insulation properties.	Aerated concrete blocks, hollow expanded polystyrene blocks, rendered extruded polystyrene sheets, and even straw bales are all more modern building materials that provide good insulation. Each of these materials can help to trap the hot or cold air in your home, reducing your use of heating and cooling appliances.
<input type="checkbox"/>	<b>Your ceiling and roof insulation</b> – Do you have insulation in your roof and ceiling? Check your home's building documentation to find out.	Roof insulation is installed under the roofing material and above the ceiling. It reduces the heat gain from the roofing material passing into your home by stopping heat transfer between the roof space and rooms below. Consider installing or topping up insulation to the correct thickness in the ceiling to help reduce the heat transfer. You might like to consult an insulation expert for advice.
<input type="checkbox"/>	<b>Your wall insulation</b> – Do you have insulation in your external walls? Check your home's building documentation to find out. Without insulation, your home may be more susceptible to heat transfer between the outside and inside, affecting the inside temperature.	Installing insulation in wall cavities, around stud frames and within solid walls can help you save up to 20% of the energy normally used for heating and cooling <sup>^</sup> .
<input type="checkbox"/>	<b>Your floor insulation</b> – Do you have insulation under your floor? In certain climates floor insulation can help you manage your inside temperature by preventing the transfer of heat or cold from the ground into your home. Check your home's building documentation to find out.	Floor insulation in cooler climates can help retain warmth and reduce the effort required from your heater. In warmer climates floor insulation helps retain cool air.
<input type="checkbox"/>	<b>Any recessed downlights in your ceiling</b> – Check if your downlights have protectors installed in your ceiling. An insulation professional should be able to install this for you.	Installing downlight protectors reduces heat loss from your home by sealing any gaps around your lights. This can help you maintain a more comfortable temperature inside.
<input type="checkbox"/>	<b>Whether your exterior shading suits your insulation</b> – Check if you have the right amount of exterior shading for your insulation. Contact an insulation expert, builder or carpenter to find out.	Insulation works best in conjunction with exterior shading. Without it, built up heat can be stored by insulation creating an 'oven effect', warming your home. Your air conditioner then has to work harder to try to reduce the temperature of your home.

## The little changes count when it comes to energy efficiency

Here are three energy efficiency facts you might not know about insulation.

1. **Did you know?** In warmer climates, insulation should also be installed in verandah roofs. Any heat build up under your verandah can affect your home's temperature as well.
2. **Did you know?** Insulating your entire home properly could help reduce your heating or cooling energy consumption by 50%<sup>^</sup>.
3. **Did you know?** Installing roof and ceiling insulation could save up to 45% of the energy you use on heating and cooling<sup>^</sup>.

<sup>^</sup>SOURCE: [www.yourhome.gov.au](http://www.yourhome.gov.au)

# Draught proofing and weather sealing check

The air flow in and out of your home can affect the inside temperature. That's why draught proofing and weather sealing are important. Proper draught proofing and weather sealing can reduce the effects of outside conditions on your home, helping to maintain a comfortable temperature inside.



	Take a look at	Why?
<input type="checkbox"/> (tick box ✓)	<p><b>Your interior wall joints</b> – Are there any cracks or gaps? If so, heat or cold from the outside might be able to enter your home, meaning your heating and cooling need to work harder to keep the temperature constant.</p>	<p>Caulking and other expandable sealers that can be bought from your local hardware can be used to fill these spaces.</p>
<input type="checkbox"/>	<p><b>The seals on your doors and window frames</b> – Check all the windows within your house for gaps and look for excess space between doors and their frames. Caulk any gaps or spaces, or install weather stripping to seal.</p>	<p>Doors and windows can become warped over time from use and weather exposure. From this, they are prone to small gaps forming. Sealing with caulk and weather stripping can minimise any outside air entering your home, and altering the temperature.</p>
<input type="checkbox"/>	<p><b>The bottom edge of your doors</b> – Do they have a door sweep installed? A door sweep is a thin rubber strip that brushes along the floor as your door opens. You can buy these from your local hardware store.</p>	<p>By adding a door sweep strip you can help prevent air getting through the gap underneath your door, affecting your inside temperature.</p>
<input type="checkbox"/>	<p><b>Your air conditioner</b> – If you have an air conditioner, check the edges where they enter your home. Are there any gaps forming? If so fill the gaps with caulk or gap sealer.</p>	<p>Because air conditioners connect to the outside of your home, they could be allowing outside air to enter, altering the inside temperature.</p>
<input type="checkbox"/>	<p><b>Your electrical points</b> – Have draught proofing gaskets installed by an electrician. Draught proofing gaskets can be purchased from your hardware store, and sit behind the cover plates of electrical points to seal gaps.</p>	<p>Behind your electrical points, the gap in the wall where the wiring is fed through could be letting air from the outside into your home. This outside air could be affecting the temperature inside your home.</p>
<input type="checkbox"/>	<p><b>Any exposed piping, electrical or telephone lines</b> – Don't forget to check places where electrical or telephone wiring enters your home. If there are any gaps, no matter how small they are, they could be allowing air to enter, affecting the inside temperature. You should engage a professional (such as an electrician) to seal these gaps with caulking.</p>	<p>Check both the external walls and internal walls where these utility pipes and wires enter your home. Minimising the gaps around these entry points can make a difference to the energy used on heating and cooling your home.</p>

## The little changes count when it comes to energy efficiency

Here are three energy efficiency facts you might not know about draught proofing and weather sealing.

- 1. Did you know?** Draughts can be good for cooling in warmer climates, but not where energy is consistently being used for heating and cooling.
- 2. Did you know?** Air draughts in and out of your home can account for a heat loss of up to 25%<sup>^</sup>.
- 3. Did you know?** Draught proofing can help maintain a comfortable inside temperature, particularly for older homes. If you are not confident about sealing draughts yourself, talk to a carpenter to get some estimates.

<sup>^</sup>SOURCE: [www.yourhome.gov.au](http://www.yourhome.gov.au)