



Safety issues: For climate-friendly households.

This is an advisory note, highlighting a number of safety concerns that we have observed.

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## 1. Insulation:

**Warnings:** \* Whenever insulating ceilings, walls or underfloors, it is prudent to always turn off the power to that area first. Use a head torch or battery lighting to see what you are doing.\* Always take care not to over-insulate around electrical wiring because (in older houses especially) these wires may overheat. It is prudent to leave a gap around wiring by inserting a wooden or plastic strip.

## 2. Foil insulation

Recent publicity has highlighted the inherent danger in exposing building foil to exposed wires or in damp conditions.

These deaths have occurred in warm climates where foil insulation is commonly used in ceilings. This is not normally a safety issue in cool

Tasmania where soft insulation is much more effective in ceilings.

**However, foil insulation is used extensively in Tasmania as underfloor insulation and can pose a significant risk if precautions are not taken.** (We issued warnings about this problem 3 years ago when two installers died in New Zealand when stapling foil under flooring.) This can be particularly hazardous because the operator is often in direct contact with the earth and an inadvertent staple through electric wiring can cause INSTANT DEATH.

**Warnings:** \* Again, always turn off the power to the area before working.  
\* Avoid using metal staples if fixing foil, chicken wire support or even soft insulation to underfloor areas.

### 3. Halogen lighting

Those popular halogen downlights, when inset into ceilings, pose a fire risk that has caused the incineration of many Australian homes. Halogen lights are notoriously inefficient and get so hot that insulation must not be placed over them directly.

**Warnings:** \* When insulating in ceiling spaces never insulate directly over inset halogen lights. (There are devices on the market that can partly overcome this problem, so ask at a lighting shop.) \*If installing new lights, it is best to avoid halogen downlights altogether, they may look smart but they are now old technology and hopelessly inefficient.

### 4. LED lighting

Super-efficient LED light bulbs are now just coming on the market. They are so efficient they completely overcome the problems associated with halogen lights, and almost no heat is emitted from them. These super efficient lights can be inserted into the same sockets as halogen lights and

can be top-insulated.

**Warning:** \* This can cause a serious fire risk in the event that an older style halogen light is subsequently put into that socket. If replacing a halogen light with an LED light, do not top-insulate over it. Or, if you do, fix a prominent warning label not to insert a halogen light.

## 5. Hot water cylinder

Tasmanians are sensibly advised that one of the best ways to reduce hot water energy is to drop the thermostat setting on their hot water cylinder to approximately 60 degrees. Many are set far too high.

This procedure is normally a straightforward 5-minute job. However, live wires are exposed when removing the thermostat cover and this can pose a risk of electrocution if care is not taken.

**Warnings:**\* Unless you have training in electrical safety, ask an electrician or experienced person to make this adjustment. \* Always turn off the hot water power at the switchboard when adjusting the thermostat.

## 6. Solar power

Hundreds of solar hot water and solar PV systems are now being installed on Tasmanian homes – thanks largely to community bulk purchasing initiatives. These are normally installed by plumbers and trained installers, so safety is not generally a problem for the householder. However, many hundreds of people around the world have been maimed and killed by falls from roofs when measuring up roofs and installing solar systems.

**Warnings:** \* Always check that any ladders or ropes are securely placed. \* Never work on a wet roof or if it is particularly windy. \* If you are not good with heights, don't venture up there. Ask for a helping hand.

**Safety concerns should not deter householders from the tremendous work they are doing to improve the energy performance of their homes. Most such work can be undertaken with complete safety provided essential precautions are taken. If in doubt, always ask first. Any specialist work should be undertaken by a qualified tradesperson.**

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