



## New energy efficiency requirements for hot water heaters

From 31 January 2010, certain water heaters must comply with minimum greenhouse intensity and/or energy efficiency standards.

The ACT Legislative Assembly has passed amendments to the Water and Sewerage Act 2000 and associated Regulations restricting the types of water heaters that can be installed in Class 1 buildings which have not been occupied or sold as a place of residence. Class 1 buildings are defined in the Building Code of Australia and include houses and townhouses.

The restrictions are intended to reduce the greenhouse emissions produced from the operation of water heaters in the ACT.

This fact sheet outlines how the legislation will be applied by the ACT Planning and Land Authority (ACTPLA) and its plumbing inspectors.

Certain solar, heat pump and gas storage and gas instantaneous water heaters can be installed in a hot water system. Electric resistance water heaters are no longer permitted. However, an electric-boosted heat pump or solar water heater can be installed if it meets the minimum standard.

Criteria for compliance of solar and heat pump water heaters is based on the number of bedrooms in the dwelling and the number of Renewable Energy Certificates (RECS) the water heater is eligible for in the relevant climate zone. The standard for gas storage and gas instantaneous systems is the same for all dwellings.

A list of water heaters eligible for RECS and the number of RECS applicable to each appliance in all climate zones is located at <http://www.orer.gov.au/publications/swh-register.html>

The following is a guide to the minimum requirements:

| Water Heater Type   | Number of bedrooms in dwelling  |  |  |
|---------------------|---|--|--|
|                     | 1-2 bedrooms  | 1-2 bedrooms   | 1-2 bedrooms   |
| Solar*              | 14 RECS in climate zone 3 <sup>#</sup> and 40% energy saving for a small system | 22 RECS in climate zone 3 <sup>#</sup> and 60% energy saving for a medium system | 28 RECS in climate zone 3 <sup>#</sup> and 60% energy saving for a medium system |
| Heat Pump*          | 14 RECS in climate zone 3 <sup>#</sup> and 40% energy saving for a small system | 22 RECS in climate zone 3 <sup>#</sup> and 60% energy saving for a medium system | 28 RECS in climate zone 3 <sup>#</sup> and 60% energy saving for a medium system |
| Gas+                | 5 star efficiency   | 5 star efficiency  | 5 star efficiency  |
| Electric resistance | Not permitted   | Not permitted  | Not permitted  |

\* Ratings in accordance with AS/NZS 4234

+ Rated in accordance with AS 4552

# As defined in AS 4234.



## Climate zones

In Australian Standard 4234, the ACT is within climate zone 3 for the purposes of calculating performance for solar hot water systems and air-source heat pump water heaters. Climate zone 3 is based on parameters such as levels of solar radiation, which are more appropriate to the operation of solar water heaters than air-source heat pumps, which utilise heat energy from outside air.

People installing air-source heat pumps are therefore encouraged to consider a heat pump that achieves a similar level of performance in both energy use and number of RECS in climate zone 4.

Both solar and heat pump installations must also be suitable for the ACT's climate and have adequate frost protection.

## Siting, orientation and design

Siting, orientation and configuration of a hot water system will also impact on its performance and efficiency. To maximise the achievable energy savings, it is useful for builders and plumbers to consider the type and placement of the water heater at the building design stage.

## Transition and exemptions

The requirements will not apply to:

- Class 1 buildings where plans were approved under section 28 of the Building Act 2004 before 31 January 2010
- Replacement water heaters in houses built prior to the introduction of this legislation
- Hot water systems being replaced under warranty, and
- Hot-water systems containing solid fuel-burning equipment being installed in a class 1 building located in an area of non-urban land.

All other class 1 buildings will need to comply with the requirements. Note that many industry members already install water heaters to the new standard.

A full copy of the legislation is available at <http://www.legislation.act.gov.au/a/2009-26/>

If you require any further information please email [actplaenergy@act.gov.au](mailto:actplaenergy@act.gov.au)