



# Solar Hot Water

Solar hot water systems on roofs are a common sight, with about half the homes in Alice Springs having already having made the switch. On average, Alice Springs has more sunny days per year than most towns in Australia. Considering that water heating accounts for about 29% of average household energy use, it makes a lot of sense to go solar.

## Why install a solar hot water system?

Put simply, a solar hot water system is the **most efficient way to provide hot water for the typical Alice Springs home**, with an average system providing 75% or more of a household's hot water free from the sun, rather than by purchasing energy as gas or grid electricity.

Although it is more expensive to purchase and install a solar hot water system than an electric or gas hot water system, the long term savings can more than make up for the cost. In Alice Springs, the annual running costs for a correctly sized and operated solar hot water system for an average family ranges from \$50-\$100. This compares to \$300- \$600 for an electric storage system or \$500-1000 for a gas storage system using LPG. These savings mean the solar hot water system can pay for itself in as little as 5 years, and provide ongoing savings over many more years. Using a solar hot water system also benefits the environment, as less greenhouse gases are emitted than from other types of water heater.



## System components

Solar hot water systems recommended by Alice Solar City have four main components:

- The solar collectors - heat from the sun is absorbed by panels or tubes installed on a sunny part of your roof;
- Hot water storage tank – the heated water is stored in the tank ready for use; and
- One shot booster switch. **Correct use of the solar hot water booster is critical to ensure low running costs and a longer life for the solar hot water system.** Most systems in Alice Springs use an electric booster controlled by a thermostat. This means that as hot water is used, the electric booster may kick in before the sun has a chance to do the job - unless the householder turns the booster off at the circuit breaker. A one-shot booster switch installed in a convenient location provides a simple means of preventing the booster from operating unless requested to do so by the press of a button. **(all electric boost systems installed under the Alice Solar City project must include a one-shot booster switch).** See our FAQ's for more information on the booster.





- A recent improvement to Solahart's solar hot water technology is an over temperature protection system, otherwise known as OTP. **All Solahart systems installed under the Alice Solar City project must have the OTP system fitted.** See our FAQ's for more about OTP.

## What if my roof is not suitable for a solar hot water system?

If the roof on your home is not suited to installing a solar hot water system, or the cost of installation on your roof is prohibitive, then a heat pump hot water system is a good alternative.

A heat pump can be thought of as a fridge operating in reverse. It uses heat from the air (and its own waste heat) to heat the water contained in the tank. Typically, it consumes around one third of the electricity used by an electric water heater to deliver the same amount of hot water. It can heat water even when the outside temperature drops below zero and the sun isn't shining, and while not as efficient as a solar hot water system it is a good option if your roof is too shady or otherwise unsuitable for solar.

## What funding is available?

### STCs

Solar Hot Water system installations may be eligible to receive a rebate through the Small-scale Renewable Energy Scheme, by selling the Small-scale Technology Certificates (STCs) that are created by the installation of a solar hot water system. The value of this rebate varies according to the market price for STCs. The value of the STC's as at 1 July 2012 is \$1,054 for a typical 2 panel 300 litre solar hot water system (ie the 302JOTP) or \$782 for a 340 litre domestic heat pump. It should be kept in mind that STC's cannot be sold until the hot water system has been installed, and because the STC price is determined by market forces it can vary considerably over time.

### Further Information

You can find more information on solar hot water at the following websites.

- [www.alicesolarcity.com.au/water-heating](http://www.alicesolarcity.com.au/water-heating)
- [www.livinggreener.gov.au/energy/hot-water-systems/install-solar-hot-water](http://www.livinggreener.gov.au/energy/hot-water-systems/install-solar-hot-water)
- [www.yourhome.gov.au/technical/fs65.html#solar](http://www.yourhome.gov.au/technical/fs65.html#solar)

Visit the website of the Clean Energy Regulator for more information about the Small Scale Technology Certificates:

[ret.cleanenergyregulator.gov.au/](http://ret.cleanenergyregulator.gov.au/)

See our FAQ's sheet for answers to some of the most frequently asked questions about solar hot water.

