

# **SOLAR HOT WATER**

## **EARTH FIRST**

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October is Energy Awareness Month. This is a global initiative celebrated each year to promote energy-saving practices around the home and workplace. With the costs of electricity rapidly increasing throughout Australia, and conventional energy sources diminishing, there are many incentives for turning to renewable energy sources, such as solar energy.

### **Solar hot water**

Using the sun's energy to heat water is one of the best ways to reduce electricity use. Connecting a solar hot water system will lower your hot water bills, place less demand on coal-produced electricity, and reduce greenhouse pollution. Harnessing the sun's energy to heat water can reduce your household hot water bills by more than 60% each year.

Solar water heaters are generally equipped with gas or electric boosters to ensure you are never without hot water. Indirect systems use an anti-freeze liquid in the collectors and pump it via a closed circuit pipe system to heat water in the storage tank. An auxiliary heater boosts water temperature on cloudy days when solar energy may be insufficient. To work efficiently in the Orange region, collectors should be positioned on a north-facing roof at an angle elevation of 45-50 degrees, however easterly and westerly facing roofs may also be suitable in some circumstances.

### **A good investment!**

In terms of environmental benefits and reduction of greenhouse gas pollution, solar hot water is an excellent investment. However, to determine whether a solar hot water is a good financial investment for you home or workplace, you need to consider water usage, system performance, the type and cost of your system, and the type of auxiliary heating used.

However, the costs of installing a solar hot water system will usually be repaid within 4 to 10 years depending on your circumstances. Government rebates are also available as an added incentive. Importantly, solar hot water systems are friendly to the environment and produce 30% less emissions than gas hot water systems.

### **Important considerations.**

- Make sure your roof is assessed for structural strength and it can support the weight of a hot water system.
- Ensure solar collectors are in direct sun and not shaded by trees or nearby buildings.
- Place the storage tank and solar collectors close together to reduce the length of connecting pipes.
- Ensure all pipes are well insulated.
- Make sure all work is done by a licensed tradesmen.

### **Tips for best performance.**

To maximize efficient use of your solar hot water system:

- Do activities requiring hot water early in the day. This allows the water remaining in the tank to be reheated by the sun and reduces auxiliary heating.
- Set the booster thermostat to 60 degrees Celsius. The lower the thermostat setting, the lower the energy used to supplement solar heating.
- Install your system as close as possible to the kitchen, bathroom and laundry, which are the main hot water draw-off points around the home.
- Fit a low flow showerhead.

#### **Further information**

To find out more information about government subsidies, solar hot water systems and renewable energy certificates, visit the following websites:

<http://www.environment.gov.au/rebates/index.html>

[www.environment.gov.au/energyefficiency/solarhotwater](http://www.environment.gov.au/energyefficiency/solarhotwater)

[www.orer.gov.au/swh/index.html](http://www.orer.gov.au/swh/index.html)

#### **Green dates for the calendar**

National ride to work day (Wednesday October 14)