SOLAR HOT WATER – FREQUENTLY ASKED QUESTIONS

Are there any rebates for Solar Hot Water Systems?

YES. But the NSW and Australian Government rebates are only for replacing an electric hot water system on an existing home. If you are building or renovating you may be eligible for the REC's rebate.

* The NSW Government is offering between $800 and $1200 towards a new solar hot water system installed on an existing home between 1 October 2007 and 30 June 2011. Full eligibility criteria is available at www.environment.nsw.gov.au/rebates or by calling 1300 361 967

* The Australian Government is offering up to $1600 towards a new solar hot water system (or ceiling insulation – see below) installed after 3 February 2009. Full eligibility criteria is available at www.environment.gov.au/rebates or by calling 1800 808 571.

* A third rebate of approximately $1000 is also available through the Renewable Energy Certificate scheme. Ask about REC's when obtaining a quote or go to www.orer.gov.au for more information.

What are the components of a solar water heater?

Traditional solar water heaters include a tank to store the water, solar collectors to heat the water up and a booster system in case of a cloudy day.

What types of solar water heaters are available?

Three general types of systems are available:

Thermosiphon system: the solar collectors and tank are both stored on the roof. The water doesn't need to travel far in this system, and as hot water rises (similarly to hot air), this provides the circulation from panels to tank, so a pump is not needed. These systems are generally lower in price but may have higher installation costs if a crane is needed to lift it onto the roof. If you are interested in a thermosiphon system you need to ensure the roof is strong enough to support its weight. Ask suppliers for information on this issue when seeking quotes.

Split system: the solar collectors are located on the roof and the tank is on the ground. A pump is required to circulate the water in this system. Split systems are generally more expensive than thermosiphon systems, however installation costs may be lower because the panels can often be lifted onto the roof by hand. Some people also think that split systems look more attractive. This may be a deciding factor if you are bound by a body corporate or estate covenants.

Evacuated tubes system: the solar collectors are tubular in shape which provides increased efficiency compared to flat panel systems. Its roof profile is similar to split systems.

Instead of a solar water heater, you may choose to install a solar heat pump. Solar heat pumps work similarly to a refrigerator (but in reverse), by taking the latent heat from the air and converting it to useable energy. Solar heat pumps are very efficient and are eligible for government rebates and Renewable Energy Certificates (RECs).
If you do choose a solar heat pump, ensure the fan is located in a spot that won't cause a noise nuisance to you or your neighbours.

What size tank will I need?

Most people use about 50 to 60 litres of hot water per day, but the number of bedrooms in your home also needs to be considered when choosing a tank size. A 300 litre tank with 2 solar collector panels will meet the hot water needs of most three to four bedroom homes. Ask suppliers to advise you when they visit your home to quote.

How many collectors will I need?

Suppliers will advise when they visit your home to quote. Most homes will need 2 or 3 collectors. Each collector is about $2m_2$. The number depends on the amount of hot water required and whether the collectors can be positioned facing north. The collectors are flat plate collectors and have a glass-covered box with a network of pipes inside and a black absorber plate on the bottom. As the sun heats the absorber plate, it in turn heats the water in the pipes.

What type of booster will I need?

Boosters can be either electric or gas. Electric boosted systems are more common in the Tweed due, in part to the limited availability of piped gas. If your existing electric hot water system is on an 'off peak tariff' you can choose to have the booster wired to this meter. Suppliers will be able to advise you on this when they visit your home to quote.

Will I need frost protection where I live?

If you live in a frost prone area you should ask about frost protected systems when seeking quotes from suppliers.

How long will my system last?

If you choose the right system for your area and it is correctly installed by a plumber trained to fit solar water heaters, your system should last for about 15 years.

Will solar collectors work where I live?

Solar water heaters can be installed almost anywhere in Australia. To make the most of the system, the collectors need to be placed on a north facing unshaded roof, at a slope of at least 15 degrees. Flat plate collectors are effective up to 20 degrees either side of north. Collectors can be mounted on stands if they need to be located at different orientations or sloped roofs. If the roof is heavily shaded, it may not be suitable for solar water heaters. In this case, the next most environmentally friendly option is the heat pump, then instant gas water heaters.

How much energy and greenhouse gas emissions will I save?

Hot water uses approximately 40% of the energy consumed in a household. By using a solar water heater, you can cut your household CO_2 emissions by 3-4 tonnes each year and can cut your hot water bills by up to 90%.

Can I convert my existing system?

If your hot water tank is fairly new and is in good repair, you might be able to switch your system to solar. Retrofit kits cost about half the price of a new system. Government rebates are not available for conversions.

Do I need Council approval to install a solar hot water system?

In most cases no. You only need Council approval if you intend to remove a tree greater than 5 metres in height for solar access or if your home is heritage listed.

Can I install a solar hot water system if I am renting?

You will need to discuss this with your landlord or rental agency.

I live in a duplex/villa. Can I install a solar water heater?

If your property is part of a strata plan, you will need to get consent from the body corporate and lodge a Development Application with Council.

I am building a new house or doing major additions/alterations. Can I install a solar water heater and get a rebate?

All new dwellings and major alterations/additions (valued over $50,000 from July 1, 2007) are required to meet NSW Government BASIX energy targets of 40% reduction in greenhouse gas emissions. New homes or installations required for BASIX compliance are not eligible for solar water heater rebates, but are eligible for RECs. For more information see www.environment.gov.au/rebates and www.environment.nsw.gov.au/rebates