

Frequently Asked Questions on Solar Power

What is the difference between a solar hot water system and a solar power system?

A solar hot water system uses the **visible and infrared radiation** from the sun to directly heat water. A solar power system uses the **visible radiation** from the sun, and converts it into electricity for use in the home or to be fed into the electricity grid.

Should I get both?

Solar water heating is normally the first step. Getting your hot water free from the sun will dramatically reduce your energy needs. Once you have reduced your energy usage, the next step is to install solar power. The less energy you need, the less power you will need to produce from your solar modules.

How does a solar power system work?

Solar power systems use photovoltaic (PV) cells to produce electricity. When sunlight hits a solar power system, direct current (DC) electricity is produced. This is converted into 240V alternating current (AC) using an inverter. This electricity can be used immediately within the home or fed into the National Electricity Grid (grid).

What is the National Electricity Grid?

The National Electricity Grid is the network of wires that delivers electricity from generators to homes and businesses around Australia. When you install a solar power system you become a generator of clean renewable energy.

What is an inverter?

An inverter is an electronic device that converts the DC power generated by the modules into AC power at the correct voltage for supply to the grid. It also provides equipment protection and safety features.

What are the benefits of using a solar power system?

Electricity generated by a solar power system is used to offset or replace the power that would normally be purchased from your electricity supplier - thereby reducing your power bills and saving money. This solar generated energy also avoids the harmful pollution caused by generating electricity from the burning of fossil fuels.

How much can I save on my bills?

The savings on offer are very attractive and will go on for years. The amount you save will depend on your household's current electricity usage, the size of the solar system being installed, orientation and inclination of the modules and the feed-in tariff offered by your electricity supplier.

Your local Solahart consultant will assess these factors and give you an estimate of your savings.

Will I still need mains electricity?

Yes, because the inverter will only produce power when it is connected to the grid supply.

Will my solar power system store energy for later use?

A grid connected solar power system does not store energy. When you generate more power than you need, you supply the extra power into the grid. At times when you need more energy than you are producing, you draw the extra you need from the grid.

How much roof space will I need?

Our smallest system requires a roof area of around 11 square metres. This will generate around **30%** of the average family's energy needs each year. Our system sizes go up to approximately 5kW. The more powerful the system, the more solar modules and roof space are needed.

Is the position on the roof important?

Solar power systems work best on an unshaded north-facing roof. It is also possible to install a solar power system on an east or west facing roof, however this will reduce the performance of the system.

Can I increase the size of my system in the future?

This depends on your roof space and the size of the inverter. If you have sufficient roof space and additional capacity in the inverter you could increase the size of your system. If room permits you could add a second system to your roof.

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What happens at night or on cloudy days?

Solar power systems only produce electricity when they are exposed to sunlight, they do not produce electricity at night. At night you will not generate electricity from your solar modules – you will use electricity from the electricity grid. The performance of the solar power system is affected by cloud. When there is not enough light to produce electricity, you will use electricity from the grid, as you do now.

What happens during a blackout?

In the event of a blackout, your solar power system will stop producing electricity. This safety measure is mandatory and has been put in place to protect anyone working on the blacked-out grid system. As soon as the grid is back online, your solar system will restart automatically.

What are the Government incentives to switch to solar?

What are Small-scale Technology Certificates (STCs)?

STCs are part of the government's commitment to renewable energy.

STCs are created when you install and commission qualifying solar hot water, solar/wind power systems or residential solar power systems.

Each STC represents 1 MWh (Megawatt hour) of energy produced. The number of STCs you are eligible for varies depending on the size of the system you install and your location.

STCs have a market value (which may vary over time) and are tradable; they can be sold, or used to get a discount or cash. Solahart offers an up front discount on the price of a solar power system in return for the STCs.

Why do STCs vary across the country?

The number of STCs created for a system will depend on the amount of renewable energy the system generates.

In areas with higher solar radiation there is greater opportunity to generate electrical power and so the number of STCs is greater.

What are Solar Credits?

Solar Credits are another financial incentive that boosts the support to households that install small-scale solar power systems.

Solar Credits multiply the number of STCs created for the

first 1.5 kilowatts (kW) of capacity of the system installed (for eligible installations).

The current Solar Credits scheme is planned to phase out in 2013.

Are there any other financial incentives?

The electricity providers may offer feed-in tariffs for the electricity your solar power system generates and feeds back into the grid.

What is a feed-in tariff?

A feed-in tariff is the rate paid by the electrical utility for each kilowatt-hour of electricity your solar power system feeds into the grid.

Gross versus Net feed-in tariffs

The feed-in tariff schemes are set by the state governments and vary between the states (either Gross or Net).

A **gross** feed-in tariff pays for all of the electricity generated by the solar power system. The owner then buys back the electricity that is needed.

A **net** feed-in tariff pays the owner only for surplus electricity produced by the solar power system.

What is the payback period?

Payback periods may vary depending on the applicable feed-in tariff, householder electricity usage profile and size and cost of the PV system installed.

Your Solahart dealer will be able to provide an estimate of payback period for your system.

What sort of maintenance is required?

Solahart modules are manufactured to high quality standards and will require minimal maintenance for many years, other than keeping the surface of the modules clean.

How reliable are solar power modules?

Solar modules are one of the most reliable energy conversion systems.

What warranty does Solahart offer?

Solahart offers a conditional 10 year warranty on the Solahart Premium inverters and a 5 year warranty on the solar modules and the Solahart system inverters. The balance of the system carries a 1 year warranty. For full warranty details refer to the Owners Guide and Installation Instructions.

