

Small scale solar PV generators

This fact sheet is to help customers and installers understand the benefits of small scale solar PV energy generators, including how these generators can help customers manage their electricity bills.

In NSW customers can still connect solar PV systems to the electricity grid even if they are not eligible for payments under the Solar Bonus Scheme¹.

Check with your distributor and determine their connection and application requirements before you proceed.

General issues to consider when installing a solar system

NSW Fair Trading provides information including solar panel installation safety and choosing an installer.

www.fairtrading.nsw.gov.au/Tenants_and_home_owners/Home_building_and_renovating/The_building_process/Solar_panels.html

What are the benefits of installing a solar renewable scale generator?

Aside from the environmental benefits, there are a number of financial benefits from installing a small scale solar PV system, including:

- reductions in your electricity bill (when used with “net” electricity meters);
- payments from your electricity retailer for energy you generate and send out to the electricity grid (these vary between retailers, so customers should shop around to find the best deal); and
- up front subsidies through the Commonwealth Small-scale Renewable Energy Scheme.

How can solar PV generation reduce my electricity bills?

A typical household consumes about 6,500 kilowatt hours (kWh) of electricity per year. Instead of purchasing all this electricity from your retailer, you can use the energy you generate from your own solar PV system and only purchase any extra

electricity required from your retailer. To implement this arrangement requires “net” metering (see detailed discussion below).

According to estimates from the Clean Energy Council, an average 2 kilowatt (kW) system installed in Sydney will generate around 7.8 kWh per day², which is around 2,847 kWh per annum. This is around 40% of the average household consumption, and could represent a substantial saving on your electricity bill.

Retailer financial incentives

Some (but not all) retailers offer payments to customers for the electricity they export from small scale solar PV systems. Those retailers currently offer about 6 or 8c per kWh, so you should shop around for the best deal available. The value of these payments will generally be credited to your bill, reducing your total electricity bill.

If you were to connect your system with gross metering, the full amount of electricity generated by your system would be paid at the rate you have shopped around for. This will generally be less financially beneficial than net metering. Under net metering, energy generated is firstly used to reduce the energy drawn from the grid. Energy from the grid costs about 22 to 29c per kWh in day time, which compares with about 6 to 8c per kWh you will be paid for sending energy to the grid. With net metering you only pay for electricity which you haven't generated yourself. Under gross metering you pay the full retail market rate for all the energy you use.

The Independent Pricing and Regulatory Tribunal (IPART) is investigating options for a fair price for electricity that is generated by small scale solar photovoltaic systems and fed into the grid. To find out more visit www.ipart.nsw.gov.au.

What is net and gross metering?

Net and gross meters both measure the amount of solar electricity you export to the grid. There are two types of meters in recognition that different types of measurement are required depending on

² www.cleanenergycouncil.org.au/cec/resourcecentre/Consumer-Info/solarPV-guide.html

¹ The Solar Bonus Scheme closed for new applicants in April 2011

whether or not you use the electricity that your system has generated.

Under net metering, generated electricity is used to supply your own energy requirements first and any excess energy generated that is not used in the premises is exported to the grid. Net meters are electronic meters which separately record the amount of energy drawn from the grid and the amount of energy exported to the grid. In some instances you may be required to have time of use pricing. All Distributors support net metering.

Under gross metering, all generated electricity is exported directly to the grid rather than initially used on site.

It is important to be sure which metering arrangement will suit your needs. Changing from gross metering to net metering, or visa versa from net metering to gross metering, may not be straightforward and may incur charges from your distributor as the meter will likely need to be changed or at least reprogrammed. Check metering arrangements with your distributor.

Commonwealth Government – Small-scale Renewable Energy Scheme

In addition to benefits from reduced electricity bills and retailer payments, there are also payments available under the Commonwealth Government Small-scale Renewable Energy Scheme. These can help to reduce the upfront purchase cost of purchasing and installing solar panels or other small scale generators.

More information about how much this could reduce the cost of a system is available at the Office of the Renewable Energy Regulator website www.orer.gov.au/publications/faq.html. You should discuss this incentive with your installer when obtaining quotes, and be sure you understand the value and terms of the benefit they are offering.

Examples - How much will this reduce my electricity bill?

How much of a saving this will mean for your bill will depend on many things, including the size, quality and site of your system, your electricity usage patterns, the weather, and the incentive paid by your retailer.

Your installer can advise you on the expected output of a particular model and size of system installed at your house or business. Having a typical electricity account on hand and knowing the time of day you typically use your electricity, will help your installer match the system to your needs.

The following calculations are provided as examples only. Individual circumstances could vary considerably. The Government cannot guarantee levels of bill savings or energy payments from retailers.

Example 1 – Net Metering:

Assumptions:

2 kW solar PV system

Generating 2,847 kWh per annum (Clean Energy Council estimates)

2011-12 regulated electricity prices of 21.85 to 28.85 c/kWh

Retailer export payments of 6 to 8 c/kWh

2/3 of generation used on site, 1/3 exported³

Potential Savings:

Electricity bill reductions = \$415 to \$548 per annum

Retailer payments = \$57 to \$76 per annum

Total Savings = \$472 to \$624 per annum

(Note: Over the 15 to 25 year life of a system, this can add up to substantial savings, which will continue to rise over time as electricity charges increase)

Example 2 – Gross Metering

Assumptions:

As above except all energy generated is exported

Potential Savings:

Retailer export payments = \$170 to \$230 per annum (but no reduction in electricity bill).

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Disclaimer: This fact sheet provides general information about small scale solar systems based on assumptions and information obtained from external bodies and is current at the time of writing (September 2011). The Department of Trade and Investment, Regional Infrastructure and Services cannot provide advice on the individual circumstances of interested parties. Users are reminded of the need to ensure that information upon which they rely is up to date, accurate and appropriate to their individual circumstances, and should where appropriate seek further advice from an independent source before proceeding.

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³ http://www.dtiris.nsw.gov.au/__data/assets/pdf_file/0016/360142/AECOM-REPORT-for-Solar-Bonus-Scheme-Review.pdf pg. C-3