



# Sun power information

Version 2 July 2008

# Domestic sun power connection information

The purpose of this customer information sheet is to provide a brief explanation of Integral Energy's requirements and processes for the grid connection of small solar powered generation systems to domestic residences. These connections are known as Sun Power connections and have a maximum capacity of 10kW single phase and must use an approved inverter and be installed in conjunction with a domestic load. Conditions for connection of solar powered generator systems not covered by this document are determined on a case by case basis following the submission of a detailed written application and supporting documentation.

## Information

The following Government Departments have a range of information regarding the installation of solar powered generating systems and can be accessed by the Internet:

- Clean Energy Council [www.cleanenergycouncil.org.au](http://www.cleanenergycouncil.org.au)
- Business Council for Sustainable Energy [www.bcse.org.au](http://www.bcse.org.au)
- Department of Environment, Water, Heritage and the Arts [www.environment.gov.au](http://www.environment.gov.au)
- Department of Climate Change [www.climatechange.gov.au](http://www.climatechange.gov.au)
- NSW Department of Water and Energy [www.dwe.nsw.gov.au](http://www.dwe.nsw.gov.au)
- NSW Department of Environment and Climate Change [www.environment.nsw.gov.au](http://www.environment.nsw.gov.au)

Customers wishing to connect sun power systems to the Integral Energy network may obtain additional advice regarding connection requirements from:

Mr Kevin Nuner – Project Manager, Strategic Projects  
Network Connections,  
Integral Energy  
PO Box 6366  
BLACKTOWN NSW 2148  
Phone: 131 081

## Rebates

The Department of the Environment, Water, Heritage and the Arts offers and administers rebates of up to \$8000 under the Solar Homes and Communities Plan.

To be eligible for a rebate, the sun power system must be installed by an approved installer. A list of approved installers is available from the Business Council for Sustainable Energy website.

## Application and approval documentation

An Integral Energy Sun Power Interconnection Agreement must be completed and submitted prior to the connection of the sun power system. A permission to connect letter will be issued upon receipt of the agreement as approval for the connection and will include a single line diagram of the expected connection arrangement.

Integral Energy does not charge any application or administration fee for processing sun power applications.

## Technical requirements

The installation of the sun power system must comply with Integral Energy requirements and relevant standards including:

- Service and Installation Rules of NSW including Section 8.6 – Small Scale Parallel Customer Generation (Via Inverters),
- AS/NZS 3000, Wiring Rules ,
- AS 4777 Parts 1,2 and 3 Grid Connection of Energy Systems via Inverters and
- Technical requirements included in the Sun Power Interconnection Agreement.

## Metering requirements

An additional single phase basic watt-hour meter must be installed in the main switch board to measure the amount of generation energy produced by the sun power system. This meter is provided at no cost by Integral Energy, however the customer must arrange for the meter to be installed by an Accredited level 2 Service Provider (ASP) at the customer's expense. Should the accredited installer elect the customer to engage their own level 2 ASP then a listing can be found on the Office of Fair Trading web site [www.offt.nsw.gov.au](http://www.offt.nsw.gov.au)

## Protection equipment

Generation systems must not be allowed to export electricity if the grid is de-energised because this can cause serious safety issues to electricity workers and the public. The grid may become de-energised during planned maintenance or faults on the network.

Integral Energy will strictly enforce the protection requirements of the Service and Installation Rules of NSW and AS4777, particularly in relation to active anti-islanding protection.

## Connection

When the photovoltaic panels, inverter and other equipment have been installed an electrical contractor will complete any wiring for direct current voltages greater than 120 Volts or any alternating current voltage greater than 50 Volts as well as installation of any additional switches or protection devices, provide labelling, test and inspect their own work and prepare a Certificate of Compliance of Electrical Works (CCEW).

Following this a level 2 Accredited Service Provider will install the additional meter and connect, test and commission the sun power system and prepare a Notification of Service Work (NOSW). The level 2 ASP will submit to Integral Energy copies of the CCEW, NOSW and the Permission to Connect form for processing.

Following connection and commissioning of the sun power system and submission of the appropriate documentation an Integral Energy Customer Safety Officer will audit the installation for compliance to technical requirements and relevant standards.

## Buy back tariffs

For the customer to benefit from the Integral Energy Sun Power Buy Back Scheme the following conditions must be met:-

- The installation must be connected to the Integral Energy network,
- The Retailer must be Integral Energy Retail,
- The Domestic Pricing Option for the electricity account must be the standard default Inclined Block Tariff and
- The generation system must be single phase with a peak output less than 10kW.

We will credit the customer's electricity account with the value of the energy generated by the sun power system. The price we pay for this energy will be equivalent to the first block of the domestic

Inclined Block Tariff which is the first 1,750 kWhrs per quarter (excluding GST). This price will be in accordance with the rates and conditions set out in our most recent Energy Price Guide at the time the meter reading was taken. Copies of the current Energy Price Guide are available on the Integral Energy website or by calling 131 002.

Where the customer's account is in credit, the credit amount will accumulate each billing period and will be paid out at the customer's request.

Integral Energy does not purchase Renewable Energy Certificates (REC's) as part of the Sun Power Buy Back Scheme.

There is competition in the Electricity Retail Sector and Retailers other than Integral Energy may offer alternate Buy Back Schemes. The customer may elect to pursue alternate arrangements with a Retailer of their choice. The Business Council for Sustainable Energy publishes survey results of retailers that offer Buy Back Schemes in NSW.

### Network Use of system charges

The network connection will attract Network Use of System (NUOS) Charges at the appropriate schedule rate for all energy used (imported) by the customer. There are no additional NUOS charges for the exported energy.

### Interrupting your supply to our network

Integral Energy may require you to interrupt or reduce output of energy to the network:

- To construct, install, maintain, repair, remove, investigate or inspect our network equipment or any part of the system or
- If we believe it is necessary because of emergencies, forced outages, compliance with prudent electrical practice or because of other dangerous or unexpected events.

Whenever possible, Integral Energy will give you reasonable notice if an interruption or reduction of output is required. We will endeavour to keep any interruptions as short as is reasonably possible.

Integral Energy is not obliged to pay you any compensation for these interruptions.

### Disconnecting your supply to our network

Integral Energy can disconnect your generating equipment from our network if we determine that:

- Your equipment is dangerous to our staff, representatives or other parties or
- The continued operation of your equipment is dangerous to the integrity of the electrical network.

We will not reconnect your equipment to the network until we are satisfied that you have corrected any problems.

### Access to your premises

As permitted by the Electricity Supply Act and the Standard Form Customer Connection Contract, Integral Energy staff or authorised representatives may enter your premises to:

- Inspect protective devices on your equipment;
- Read or test meters;
- Disconnect the generation facilities, without notice, in an emergency situation.

**Please Note:** The conditions outlined in this Customer Information Sheet are subject to variation without notice by Integral Energy.