

PHOTOVOLTAIC (SOLAR) GENERATOR CONNECTION OBLIGATIONS

The Photovoltaic (Solar) Generator Connection Obligations set out below are the minimum requirements of United Energy Distribution ABN 70 064 651 029 (UED) for the connection of Photovoltaic Embedded Generators to UED's electricity grid. The Installer, Registered Electrical Contractor and the Customer are required to sign the Photovoltaic Generator Connection Form ("the Form"). By signing the Form:

- The generator owner acknowledges that they understand and agree to the obligations contained in this document, which contain UED's minimum standards for the connection of Photovoltaic Generators to UED's electricity grid;
- The installer warrants that the information provided in Section 1 of the Form is true and correct; and
- The registered electrical contractor acknowledges and represents that the Photovoltaic Embedded Generator at the supply address contained in Section 3 of the Form is installed in accordance with all the relevant Acts, regulations, industry standards, guidelines and all other requirements listed in Section 2 of the Form.

Capitalised terms not defined in this document are defined on the Form.

Installation of Embedded Generation Metering and Tariffs

An embedded generator meter must be installed at the Supply Address before the Photovoltaic Embedded Generator is connected to UED's electricity grid. UED has a regulatory obligation to install an embedded generator meter where customers have chosen to install a Photovoltaic Embedded Generator. An embedded generator meter is necessary to measure energy exported to the electricity grid. UED recommends that the Photovoltaic Embedded Generator remain locked off until the correct energy meter is installed to avoid potential metering and billing issues. Before UED will install an embedded generator meter at the Supply Address:

- UED must receive a copy of the Photovoltaic (Solar) Generator Connection Form that has been signed and dated by all relevant parties;
- The generator owner must contact their electricity retailer (**Retailer**) and request the installation of an embedded generator meter and if necessary a change of network tariff to one that is available to owners of embedded generators. The Retailer will provide UED with a service order to change the meter at the Supply Address;
- A Registered Electrical Contract (**REC**) must provide UED with an Electrical Works Request (EWR); and
- The REC must provide UED with a Prescribed Certificate of Electrical Safety (CES), which indicates that the Photovoltaic Embedded Generator is compliant with the *Electricity Safety Act 1998* (Vic) and associated Safety Regulations.

The installation of a new meter will require a short interruption to the electricity supply at the Supply Address.

The installation of embedded generation metering may result in a change of network tariff, and potential Time of Use network tariff with peak, shoulder and off-peak energy rates. The installation of embedded generation metering may affect the electricity tariff charged by Retailers. Generator owners should discuss changes to electricity prices directly with their Retailer.

The meters installed for Photovoltaic Embedded Generation will not control the operating hours of dedicated off peak appliances such as electric off peak hot water or off peak heating systems. It is recommended that customers with dedicated off peak appliances install their own time clock to control the operating hours of any such appliances. By controlling these appliances with your own time switch you will be able to set the operating times and take advantage of any off-peak rates offered from your electricity retailer. An REC must perform this work.

Operation and Maintenance of Photovoltaic Embedded Generators

Every owner of a Photovoltaic Embedded Generator must understand how to operate and maintain their generator so as not to:

- cause, or be likely to cause any damage or loss to UED's electricity distribution network or any third party;
- compromise the safe operation of the UED electricity distribution network under normal or abnormal conditions; or
- interfere with the continuity or quality of the electricity supply provided by the UED electricity distribution network.

Generator owners must ensure that their embedded generator is maintained in a safe condition and must only permit appropriately qualified people to perform work on their generator.

Compliance with Laws

The generator owner must ensure that the generator installation and connection to the electricity network complies, and continues to comply with, all relevant Acts, regulations, standards and guidelines, and in particular:

- The *Electricity Safety Act 1998* (Vic) and associated Safety Regulations;
- The Electricity Distribution Code;
- The Victorian Service & Installation Rules 2005; and
- AS3000 (Wiring Rules) and AS4777 (Grid Connection of Energy Systems via Inverters).

UED's approval of the connection of the Photovoltaic Embedded Generator to the electricity network is contingent upon the generator owner's continued compliance with these laws, code, standards and guidelines.

Modifications of the Photovoltaic Embedded Generator

The generator owner may only modify the Photovoltaic Embedded Generator, without approval from Jemena, in the following instances:

- A like for like replacement of the inverter (same model, capacity and made by the same manufacturer);
- A like for like replacement of a solar modules (there must be no increase in the rating of the modules); and
- A replacement of an isolator/switch with an equivalent isolator/switch.

For all other modifications the generator owner must obtain UED's prior approval. This includes the installation of additional solar modules or replacement of the inverter with a different size or type. UED may refuse to approve any proposed modification if these modifications would breach any standard.

At all times, the Total Installed Capacity of the embedded generator must not exceed 10kVA per phase without written approval from UED.

Distributor's Right to Disconnect

UED may disconnect any Photovoltaic Embedded Generator from the electricity network, or instruct the generator owner to do so, in any circumstance in which UED is entitled, or obliged, to interrupt the supply of electricity. The generator owner must promptly comply with any instruction given by UED or its authorised representative.

United Energy Distribution (UED) Contact Information

Jemena Asset Management Pty Ltd is the prime contractor for the electricity network owned by United Energy Distribution. The Photovoltaic (Solar) Generator Network Connection Form must be returned to Jemena Asset Management Pty Ltd using the address below. Jemena Asset Management Pty Ltd can also be contacted for general enquiries in relation to the installation of Photovoltaic Embedded Generators to the UED electricity grid or associated metering.

New Connections
Jemena Asset Management Pty Ltd
Locked Bag 7000
Mount Waverley Vic 3149

Ph: 1300 131 871
Fax: 03 9351 2223
Email: new.connections@jemena.com.au

Privacy:

The personal information provided in the Photovoltaic (Solar) Generator Network Connection Form will be collected and used by UED for the purpose of installing an embedded generator meter at the Supply Address and connecting the Photovoltaic Embedded Generator to the UED electricity grid. UED may disclose this information to the generator owner's Retailer, to personnel of related companies of UED, or to third party contractors which are responsible for carrying out any works associated with the installation and connection of the Photovoltaic Embedded Generator to the generator owner's premise, or where disclosure is required by law. If the generator owner does not provide the information requested, UED will not be able to approve and complete the installation and connection of Photovoltaic Embedded Generator to the UED electricity grid. Further information about UED and UED's privacy can be obtained from UED's website at www.ue.com.au.

Definitions

VICTORIAN ELECTRICITY NETWORK	The electricity networks of United Energy Distribution, Jemena Electricity Network, SP AusNet, CitiPower and Powercor
INVERTER	An electronic device that converts direct current (d.c.) into alternating current (a.c.). Inverters compliant with AS4777 are specifically designed to convert energy produced from a d.c. source (such as a photovoltaic array) into a.c. and to inject this power into the distribution network.
kVA	KiloVolt Amperes
kW	KiloWatts
TOTAL INSTALLED CAPACITY	Solar photovoltaic array total combined nominal nameplate capacity based on standard test conditions of 1000W/m ² solar irradiance and a cell temperature of 25°C
NMI	National Meter Identifier – it is a unique premise identification number located on the back of your retail bill.
NETT INTERVAL METERING	An energy metering configuration that measures the energy flow between the distribution network and the customer's installation every 30 minutes of every day. Energy produced by the generator and consumed by customer load is combined. It is not possible to measure generator output independently. Measures energy imported from the UED network and exported from the UED network but reports the net value of both.
GROSS INTERVAL METERING	An energy metering configuration that measures the energy flow between the distribution network and the customer load and between the distribution network and the customer's generator independently every 30 minutes of every day. Measures and reports energy imported from the UED network and exported from the UED network separately.
THIRD PARTY	Persons other than the applicable Distribution Network Company or the Customer.
CES	Certificate of Electrical Safety
REC	Registered Electrical Contractor
PV	Photovoltaic

Photovoltaic (Solar) Generator Connection Form

Distribution Network (Please tick applicable Distributor)	SP AusNet <input type="checkbox"/>	United Energy Distribution <input type="checkbox"/>	Jemena Electricity Networks (Vic) Ltd <input type="checkbox"/>	CitiPower Pty <input type="checkbox"/>	Powercor Australia Ltd <input type="checkbox"/>
System Size Limit	Up to 4.5kW (Per Site)	Up to 10kW (Per Phase)	Up to 10kW (Per Phase)	Up to 10kW (Per Site)	Up to 10kW (Per Site)
Solar Inverters above the specified size limits will be permitted in certain circumstances. If your Solar Inverter is greater than the above size limits, or for further information, please contact your Distributor.					

SECTION 1: INSTALLATION DETAILS (to be completed and signed by the installer)

Installer Company Name				Installer Phone Number	
Installer Company Address					
Total Installed Capacity (Total rating of all solar panels)	___ . ___ kW		Solar Inverter Power Rating (1 hour or continuous rating)	___ . ___ kW	
Solar Inverter Manufacturer			Solar Inverter Model Name		
Operating Manual Provided to Customer	<input type="checkbox"/> Yes	Instructed Customer in Operation of system			<input type="checkbox"/> Yes

By signing this form, you acknowledge and represent that the information provided is true and correct.

Installer Name: _____ Installer Accreditation No*: _____

Installer Signature: _____ Date: _____

SECTION 2: INSTALLATION COMPLIANCE (to be completed and signed by the Registered Electrical Contractor)

Wired for Net Metering	<input type="checkbox"/> Yes <input type="checkbox"/> No Please Specify _____			
Inverter Number of Phases	<input type="checkbox"/> Single phase 230V	<input type="checkbox"/> Three phase 400V	Access to Meter, Switchboard and Inverter	<input type="checkbox"/> Yes <input type="checkbox"/> No
	<input type="checkbox"/> Two phase 230/400V	<input type="checkbox"/> Two phase 230/460V		
Load Number of Phases	<input type="checkbox"/> Single phase 230V	<input type="checkbox"/> Three phase 400V		
	<input type="checkbox"/> Two phase 230/400V	<input type="checkbox"/> Two phase 230/460V		

By signing this form, you acknowledge and represent that:

- the PV (Solar) Generator complies with the *Electricity Safety Act 1998* (Vic) and associated Safety Regulations, the Electricity Distribution Code, the Victorian Service & Installation Rules, AS/NZS3000 (Wiring Rules) and AS4777 (Grid Connection of Energy Systems via Inverters), and any other relevant Acts, regulations, standards or guidelines;
- the PV (Solar) Generator is connected to a dedicated circuit complete with lockable isolating switch at the switchboard;
- the main switchboard, isolating fuse/switch/circuit breaker are labelled correctly;
- commissioning tests as specified in the Service & Installation Rules have been completed and passed. It is recommended that the solar inverter is left in the off position;
- alternative supply signage has been installed;
- a Prescribed Certificate of Electrical Safety (CES) has been obtained; and copies of the Electrical Works Request and the CES will be sent to the generator owner's Retailer; and
- the generator owner has been advised that the PV (Solar) Generator should remain switched off until any metering upgrades are complete to avoid potential metering and billing issues.

REC Name: _____ REC Licence No*: _____

REC Signature: _____ Date: _____

SECTION 3: GENERATOR OWNER DETAILS (to be completed and signed by the generator owner)

Customer Name*			Customer NMI* (Refer to your electricity bill)	
Supply Address*			Mailing Address*	
Phone Number*	Business Hours:			After Hours:
Email Address*				

CUSTOMER ACKNOWLEDGEMENT, INDEMNITY AND RELEASE

By signing this form, you acknowledge and represent that you have read, understand and agree to comply with the connection obligations, and that you:

- are the owner of the PV (Solar) System listed under the Supply Address in section 3 above;
- have received a Photovoltaic Embedded Generator operating manual from, and been instructed on the operation of the Photovoltaic Embedded Generator by, the Installation Company detailed in section 1;
- accept that approval will only be granted for the Photovoltaic Embedded Generator detailed in this form, and that you must obtain further prior approval from your Distributor to alter your Photovoltaic Embedded Generator in any way;
- release and indemnify and agree to keep indemnified your Distributor, its officers, employees and agents against all actions, proceedings, claims and demands whatsoever which may be brought, including any indirect or consequential loss or any other form of pure economic loss, made or prosecuted against them or any of them by any person in respect of the installation of your Photovoltaic Embedded Generator, particularly in relation to works completed by the Installation Company detailed in section 1 or the compliance certification provided by the registered electrical contractor in section 2, or in respect of connection of your Photovoltaic Embedded Generator to the Victorian electricity grid.

Customer Name: _____ Customer Signature: _____ Date: _____

* PRIVACY STATEMENT: The personal information you provide in this form will be collected by your Distributor for the purpose of connecting your Photovoltaic Embedded Generator to the Victorian electricity grid. This information will be used and disclosed by your Distributor in accordance with its privacy processes. You can find more information on your Distributor's privacy processes on their website.