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# **INSTALLER GUIDELINES FOR GRID CONNECTION OF INVERTER POWER SOURCES UP TO 10 KW**

Document Administrator: Colin Jenkins	Nominated Approver: Colin Jenkins
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**Summary of charges**

**Project Fee**

On receipt of the customer signed small inverter connection agreement, a project fee of \$160.60 will apply. An invoice for the project fee will be sent to the customer's Retailer.

**Connection**

Citipower/Powercor will invoice the customer's retailer the approved standard service prices as approved by the ESC for any metering that requires upgrading and any other applicable fee for other work requested additional to the metering change.

<b>Works</b>	<b>Price</b>
Service Truck Visit	\$170.20

Notes:

1. All prices include GST.
2. For new installations an electricity supply connection - new premises fee applies. Refer to the standard fees for new connections on the Citipower/Powercor website.

**Step 1 – System preliminary design**

- Determine type of generation system such as solar photovoltaic or wind etc.
- Obtain preliminary information from the Sustainable Energy Authority of Victoria (SEAV).
- Obtain information from the Citipower/Powercor website: "Customer Guidelines for Grid Connection of Inverted Power Sources Up to 10 kW"  
[http://www.powercor.com.au/Electricity\\_Networks/Powercor\\_Network/Connections/Connecting\\_Generators/](http://www.powercor.com.au/Electricity_Networks/Powercor_Network/Connections/Connecting_Generators/)
- Obtain information from Retailers on tariffs available.
- Determine approximate power output in kW.
- Determine if the generator output will be single phase or multi phase.
- Contact system installer(s) and confirm scope and supply arrangements. Negotiate installation service with system installer.

**Step 2 & 3 – Customer to contact electricity retailer(s) and negotiate suitable tariff**

- Obtain information from retailers on the electricity tariffs available for the sale of electricity generated and for the purchase of energy consumed.
- Select a retailer and tariff.
- Retailer to send customer agreement to sign.
- Note only Net metering is provided to the inverter installations.

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#### Step 4 – Obtain distributor reasonable technical requirements

The technical standards and connection agreement to be made between the customer and the Network are available, from the Citipower/Powercor website: [http://www.powercor.com.au/Electricity\\_Networks/Powercor\\_Network/Connections/Connecting\\_Generators/](http://www.powercor.com.au/Electricity_Networks/Powercor_Network/Connections/Connecting_Generators/)

- Refer to Clause 6.8 of the 2005 Victorian Service and Installation Rules (SIR) which can be viewed at the following website: [www.victoriansir.org.au](http://www.victoriansir.org.au). Hard copies are commonly available from electrical wholesalers.
- Additionally you can call the customer enquirers number 132 206 and speak to a customer projects officer.
- The installation must be compliant with the applicable Wiring Rules, Acts and Regulations, including, these standards prior to connection.

#### Step 5 – Complete Application for Network Connection of an Inverter Energy System

- Obtain the Application for Network Connection from the Citipower/Powercor web:
- The agreement contains the information that the network needs as part of the process in connecting the inverter to the grid.
- Complete all details on the application. You may need the help of your installer and Retailer to provide some of the necessary information.

Send completed and signed connection agreement to **Powercor New Connections PO Box 185 Geelong 3220**.

#### Step 6 & 7 – Powercor assess application

- On receipt of the application Citipower/Powercor will:
- Confirm the inverter is of the approved type.
- Assess the installation and its impact on the distribution network
- Invoice the Retailer the customer the project fee of \$160.60

#### Step 8 – Construction

- The system shall be installed and preliminary testing undertaken.
- A registered electrical contractor (REC) will be required to do all fixed wiring.
- The inverter main isolating switch should be left in the off position

#### Step 9 – REC to submit an EWR to upgrade metering and REC to obtain CES

- Citipower/Powercor will be advised by the retailer that bi directional metering is required. Following installation of the generator system the installation will need to be inspected by an 'S' class licensed electrical inspector who must sign a CES.

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- If the generating system is to be connected to an existing installation, then a metering upgrade shall be required and the registered electrical contractor (REC) shall submit an electrical works request (EWR) to the Retailer. If any part of the installation, including the meter panel does not satisfy the SIR's, the installation shall be modified to meet current standards. If the meter panel needs to be upgraded then the REC should request a truck appointment and co-ordinated the upgrade of the panel with the meter change. Note the supply of photos of the meter board may assist in determining if the meter panel needs replacing. A truck appointment can be booked following submission of the EWR which is in advance of the work being completed.
- Submit the Electrical Works Request (EWR) and CES to the Retailer who will contact Citipower/Powercor and arrange for the meter upgrade and connection of the inverter. Normally an appointment is not required for the connection if the meter panel is OK.

**Step 10 – Retailer to request work**

- The Retailer requests the connection and meter change using the industry B to B process. The Retailer also provides the EWR and CES to Citipower/Powercor.

**Step 11 – Meter change**

- Citipower/Powercor will complete the metering change.

**Step 12 – System switch on and final tests**

- Once the new electricity meter is installed and network connection is restored the generating system can be switched on and final testing completed. Access to the inverter main switch is required to complete the tests.
- Citipower/Powercor will complete a fail safe test. If the installation passes all tests the inverter main switch is left in the on position.

**Step 13 – Turn on the Inverter main switch**

- The customer (system owner) can turn on the Inverter main switch to allow any excess generation to be exported to the grid.

**Step 13 &14 – Inverter fails test**

- Citipower/Powercor will complete a fail safe test. If the installation fails the tests or is not compliant to any SIR requirements covering the installation, the inverter main switch is left locked in the off position.
- Citipower/Powercor will notify the Retailer of the defect and await advice that the faults have been rectified. Upon this advice the installation will be checked and if OK unlocked.

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