

Solar Photovoltaic (PV) Electricity Generating System

Anti-Islanding Test

Regular maintenance of your solar PV generating system is important to ensure that it is safe and operating correctly. The following information will assist you to undertake an anti-islanding test that should be performed annually to ensure your inverter operates correctly in the event of an electricity outage.

If you are in any doubt, United Energy recommends that anti-islanding tests are carried out by a Registered Electrical Contractor or the accredited company that installed your solar PV system.

Firstly, you will need to locate your main switch board and your inverter installation which could be in two separate locations, so you may require two people to complete the test. Be aware this test will temporarily cut the electricity supply to your premise, so ensure any sensitive equipment is turned off prior to commencing the test. The tests must be conducted at a time of day when the prevailing weather conditions allow the PV system to be producing a minimum power output.

Auto Disconnect Timing Test:

1. Disconnect the main electricity supply to your premise by turning “OFF” the “Normal Supply Main Switch”. (This will disconnect mains power from the grid).
2. The inverter must automatically disconnect itself within 2 seconds of the main switch being turned off. (Check this by monitoring the indicating screen and/or lights on the inverter). Time how long the unit takes to disconnect.
3. If the inverter fails to automatically disconnect within 2 seconds then the solar PV system must be isolated from the premise. Additionally the ‘Solar Supply Main Isolator Switch’ should also be turned off until the system can be serviced by an appropriately qualified and licenced electrical worker. If your Auto Disconnect Timing Test is successful then start the Reconnection Timing Test.

Reconnection Timing Test

1. Connect the main electricity supply to your premise by turning “ON” the “Normal Supply Main Switch”. (This will connect mains power to the grid).
2. The inverter must not reconnect within 60 seconds of the main switch being turned on. (Check this by monitoring the indicating screen and/or lights on the inverter). Time how long the unit takes to connect.
3. If the inverter reconnects within 60 seconds then the test has failed and the solar PV system must be isolated from the premise. Additionally the ‘Solar Supply Main Isolator Switch’ should also be turned off until the system can be serviced or repaired by an appropriately qualified and licenced electrical worker. If the inverter fails either test, mains power supply can be reconnected after the inverter is no longer connected to the main supply circuit (ie. the AC and DC switches are off).

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