

# Annual Anti-Islanding Test

## *Solar Photovoltaic (PV) Electricity Generating System*

The anti-islanding test described below should only be undertaken for simple single inverter systems and only if you have been trained by the company or person that installed your solar system. Many newer solar PV systems are more complex incorporating micro inverters, batteries and limited export.

If you are uncertain on how to perform the anti-islanding test, you should contact a Clean Energy Council accredited installer or a qualified and licensed professional.

### Simple Anti-Islanding Test

These anti-islanding tests check that the inverter for your solar PV system connects and disconnects to the broader electricity grid safely. The inverter needs to disconnect from the network grid within 2 seconds of a power failure (Auto Disconnect Timing Test). Further, the inverter must not connect within 60 seconds of the grid re-establishing power supply after a power failure (Reconnection Timing Test).

You will need to locate your main power 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 power to your premise so ensure any sensitive equipment is turned off prior to commencing the test.

### Auto Disconnect Timing Test

1. Disconnect the main power supply to your premise by turning off the "Normal Supply Main Switch" (see figure 1 overleaf). 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 in figure 2 overleaf). 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 (see figure 1 overleaf) until the system can be serviced by a certified electrical worker.

If your Auto Disconnect Timing Test is successful then start the Reconnection Timing Test. (see overleaf)



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# Reconnection Timing Test

1. Connect the main power supply to your premise by turning on the "Normal Supply Main Switch" (see figure 1). This will reconnect the mains power from the grid.
2. The inverter must not reconnect within 60 seconds of the mains switch being turned on. (Check this by monitoring the indicating screen and/or lights on the inverter in figure 2 below). 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' (see figure 2 below) should also be turned off until the system can be serviced or repaired by a licensed 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).

It is important that you keep maintenance records with details of the company or person performing the test, the date and the test results.



Figure 1 – Powerboard



Figure 2 – Solar PV System