



Safety Advice 10-2012 (Jan)(NZ)

Inverter Anti-Island Test Performance Issues

The following Advice is supplied courtesy of Energy Networks Association Australia.

Any further information will be advised by the EEA as this becomes available.

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9 August 2012

NOTE - AS4777 INVERTER –NON COMPLIANCE WITH ANTI ISLAND TEST

DESCRIPTION OF EVENT

Recently, a work crew was to undertake maintenance works on a section of open wire lv network. Prior to undertaking the maintenance works they were undertaking the “test and bond” procedure when they identified that the lv conductors were energised, although the lv tester indicated that the voltage present was below the normal 230v level as indicated by a neon tester.

They investigated the situation and it appeared that the source was a newly installed solar installation. They removed the customer’s service fuse to permit the works to continue. The premise was left off supply pending attendance by an electrical inspector. Subsequent testing could not repeat the failure of the inverter anti island function.

The inverter is listed by the Clean Energy Council as an approved inverter to AS4777.

Subsequent to this incident a further incident has occurred whilst conducting the anti-island test at a residential customer’s installation, the following results were obtained from six islanding tests conducted;

2 operated between 5-10 seconds

2 operated at approximately 90 seconds

1 operated after 5 minutes

1 operated after 10 minutes

It was noted that on removal of main supply an arcing/chattering noise was coming from the inverter while it was trying to shut down.

The weather conditions at the time were a clear sky, cool conditions and the inverter output approximately 4 kW.

The inverter was removed from service by the customer’s installer.

The inverter is listed by the Clean Energy Council as an approved inverter to AS4777.

Each anti-island test involved removing the service fuse so that the customers load and the inverter are connected together.

INVESTIGATION

The installation company has advised that they have tested the inverter from the second site and have not been able to replicate any non-conformance of the anti-island protection functionality.

FURTHER INFORMATION

If you have any questions or would like any further information please contact Max Rankin on telephone 03 5760 2480.

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