

Conditions for Connection of Distributed Generation to our Network

1. Technical Standards and Guidelines

All distributed generation plant connected to NTL's distribution network must comply with:

- » Network Tasman's Distribution Code (available www.networktasman.co.nz)
- » Network Tasman's Conditions for Connection of Distributed Generation (this document)

Generation installations must also comply with the following technical standards where relevant:

- » AS/NZS 5033 2015 Installation and Safety requirements for Photovoltaic (PV) arrays
- » AS 4777.1 Grid connection of energy systems via inverters – Installation requirements
- » AS 4777.2 Grid connection of energy systems via inverters – Inverter requirements
- » AS 4777.3 Grid connection of energy systems via inverters – Grid protection requirements
- » AS/NZS 3000 Electrical Installations (known as the Australian/New Zealand Wiring Rules)

You can purchase and download from www.standards.co.nz. or view for free at your public library. While these standards have been created with solar powered systems in mind, they can be applied to other systems.

We also strongly recommend that all generation installations comply with requirements of:

- » EEANZ "Guide for Connection of Generating Plant".

This document is available from www.eea.co.nz

2. Industry Regulations

All distributed generation plant connected to the Network Tasman Limited distribution network must comply with the relevant requirements of the Electricity Industry Participation Code 2010. These codes specify a number of matters such as the time period within which Network Tasman Limited must process your application, the maximum fees that Network Tasman Limited can charge for processing your application and inspecting your generation, as well as other terms and conditions.

These documents are available at: www.ea.govt.nz

3. Agreement with Electricity Retailer for Purchase & Sale of Export Electricity

Before any distributed generation plant can be connected to Network Tasman Limited's distribution network an agreement for the metering, sale and reconciliation of all export electricity must be put in place with one of the electricity retailers operating on the Network Tasman Limited network.

4. NTL Switching Activity Remains Unrestricted

The connection of the distribution plant to Network Tasman Limited's network shall in no way interfere with or restrict the routine or emergency switching practices already employed on NTL's distribution network.

5. Adequate Protection

As a condition of connection to NTL's distribution network the distributed generator must put in place and continuously maintain adequate protection systems.

For most systems these will normally include:

- » Disconnection/isolation switch
- » Generation circuit breaker
- » Over/under voltage protection
- » Over/under frequency protection
- » Earth fault protection
- » Mains loss protection and protection for auto recloser operation
- » Synchronisation of system with the distribution network
- » Neutral Voltage displacement protection

Safety is fundamentally important; all generators must:

- » automatically and fully isolate itself from the network in the event of an outage, and
- » not reconnect to the network until such time as the network is fully back to normal function.

6. Metering

All distributed generation installations connected to NTL's distribution network must have in place appropriate metering arrangements prior to connection. The metering must reflect the metering category applicable to the type of connection concerned and must be certified and compliant with the metering standards set out in Part 10 of the Electricity Industry Participation Code 2010. Metering can be arranged by the generator, a specialist service provider or, more commonly, by the electricity retailer contracted to purchase the exported electricity.

Network Tasman has no involvement in metering services and will not connect up a distributed generation facility until such time as it has in place metering arrangements that comply with the requirements the Electricity Industry Participation Code 2010.

7. Suitable Signage

Suitable signage shall be attached to all switchboards that are capable of being supplied from any distributed generation plant. The signage shall be in accordance with AS/NZ 3000 and AS/NZ 5033 2015.

8. Application

The distributed generator must submit a written application, using the Network Tasman Limited:

- » Application for Connection of Distributed Generation with Capacity of $\leq 10\text{kW}$ – Under Part 1 A
- » Application for connection of Distributed Generation with Capacity of $\leq 10\text{kW}$ – Under Part 1, or
- » Application for Connection of Distributed Generation with Capacity of $>10\text{kW}$

Network Tasman Limited will, no later than 2 business days after receiving an application from a distributed generator, acknowledge receipt of the application.

NTL will respond with written approval or will specify any changes and or conditions that need to be made before the proposal can be approved.

Once the application has been approved the distributed generation facility can be built/installed, but cannot be connected to the network until:

- » An Electrical Certificate of Compliance has been issued
- » Inspection and testing has been undertaken
- » A Declaration and Confirmation Form has been submitted to and accepted by Network Tasman Limited (for applications under Part 1)
- » Appropriate metering has been fitted

Application forms are available from NTL's website.

9. Electrical Testing, Certification and Inspection

All new distributed generation installations must be tested and certified by a registered electrician and inspected by a registered electrical inspector. Inspection and testing is necessary in order to:

- » obtain an Electrical Certificate of Compliance
- » demonstrate compliance with the technical requirements specified in Section (1) above
- » demonstrate compliance with the protection requirements specified in Section (5) above

NTL may wish to be present to inspect the facility and to observe or undertake its own tests; so please provide us with adequate notice.

10. Contractual Agreements

The distributed generator and Network Tasman must have agreed to the contractual terms for connection before the generation installation can be permanently connected to Network Tasman's network. At a minimum the parties must agree to be bound by the default contractual terms specified in the Electricity Industry Participation Code 2010 Part 6 Schedule 6.2 Regulated terms for distributed generation. Otherwise they must mutually agree to alternative contractual terms of connection.