

# Application for Connection – Under Part 1A

## o Distributed generation with capacity of ≤ 10kW

You must obtain our written agreement before you can connect distributed generation to our network. Exporting must not commence before distributed generation metering and final electrical inspection has been completed.

| Details of person/organisation intending to supply/install distributed generation at consumers property | Details of consumer's at premises where distributed generation is to be connected |
|---------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|
| Name: _____                                                                                             | Name: _____                                                                       |
| Company: _____                                                                                          | Company: _____                                                                    |
| Address: _____<br>_____                                                                                 | Address: _____<br>_____                                                           |
| Phone: _____                                                                                            | Phone: _____                                                                      |
| Email: _____                                                                                            | Email: _____                                                                      |

ICP number (from your power account): 

|   |   |   |   |   |  |  |  |  |  |  |   |   |  |  |
|---|---|---|---|---|--|--|--|--|--|--|---|---|--|--|
| 0 | 0 | 0 | 0 | 0 |  |  |  |  |  |  | N | T |  |  |
|---|---|---|---|---|--|--|--|--|--|--|---|---|--|--|

**Intended Energy Retailer for export metering:** \_\_\_\_\_  
 (If this Energy Retailer is not your current retailer, please initiate the switch as soon as you are able to minimise metering delays)  
 (Network Tasman do not arrange metering beyond advising your Energy Retailer that it is required)

**Intended physical location at the address at which the distributed generation is or will be connected:**

\_\_\_\_\_

NTL administration fee to be invoiced to: \_\_\_\_\_ \$100.00 + GST

[Application fee as per Part 6 Electricity Industry Participation Code 2010 - Schedule 6.1 Part 1A clause 9B\(2\)\(C\)](#)

### Details of your proposed distributed generation

**Electricity Connection:** Existing  New

**Inverter Installation:** New  Upgrade (adding further export capacity)

For all existing electricity connections or when applying for a new electricity connection, we will evaluate the total export capability of your proposed distributed generation (i.e. the maximum amount of electricity that your generation is able to inject into our network) to assess whether your proposed generation will operate within the capacity of your electricity connection. To complete this evaluation, we will need evidence of your generation capacity – normally a kilowatt (kW) rating. Please attach a copy of the manufacturer’s specifications and/or a photograph of the ‘name plates’ for your proposed generation to your application as evidence of its capacity. Additional information may be required if the manufacturer’s specifications are not clear and comprehensive.

**Total nameplate output capacity of all proposed and/or existing inverters at this site:**

kW \_\_\_\_\_ Amps \_\_\_\_\_ AC (inverter output)

**Exported over:** One  Two  Three  phase/s

**Made up of:**

N° of inverters \_\_\_\_\_ @ kW \_\_\_\_\_ Amps \_\_\_\_\_ each

Make \_\_\_\_\_ Model \_\_\_\_\_

N° of inverters \_\_\_\_\_ @ kW \_\_\_\_\_ Amps \_\_\_\_\_ each

Make \_\_\_\_\_ Model \_\_\_\_\_

N° of inverters \_\_\_\_\_ @ kW \_\_\_\_\_ Amps \_\_\_\_\_ each

Make \_\_\_\_\_ Model \_\_\_\_\_

Is the inverter included on NTL's list of approved inverters: Yes  No

Does the inverter conform to the protection settings specified in NTL's connection standards: Yes  No

**Type:** Solar PV  Gas turbine  Wind turbine   
Micro hydro  Fuel cell  Other (specify) \_\_\_\_\_

**Details of any battery storage:**

\_\_\_\_\_  
\_\_\_\_\_

**Name of electrical contractor installing inverter:** \_\_\_\_\_

**Email address of electrical contractor:** \_\_\_\_\_

**Distributed generation system will comply with:**

AS 4777 series (where appropriate): Yes  No   
NTL's Distribution Code Yes  No   
NTL's Conditions for Connection of Distributed Generation Yes  No   
AS/NZ 5033 Yes  No

*When submitting this application please attach:*

- *The technical specifications of your equipment to show that your proposed distributed generation would automatically disconnect from our network during a power outage (it is important that distributed generation systems isolate from the network to avoid injury to line workers).*
- *A copy of the AS 4777.2 Declaration of Conformity certificate for the inverter if the inverter is not included on the NTL's list of approved inverters.*
- *The application fee - \$115 GST Inc. This fee must be paid before the application will be processed.*

**If you do not complete all sections of this form and supply all of the attachments and fee above, your application may be delayed.**

I/we, the applicant (being the power account holder) apply to connect a distributed generator to Network Tasman Limited's electricity network and confirm that the above information is correct.

I/we, the applicant (being the power account holder) agree that the Electricity Participation Code 2010 Part 6, schedule 6.2 Regulated Terms of Distributed Generation govern the contractual basis for connection of this plant to Network Tasman's distribution system, now and into the future, unless both parties agree otherwise.

**Name:** \_\_\_\_\_

**Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Network Tasman’s Approval

Network Tasman Limited agrees to the connection of the distributed generator described above to its electricity network. This approval however remains conditional on the fitting of appropriate import/export metering and final electrical inspection before the generation plant is connected to the distribution network.

Name: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Conditions: 1. The overvoltage shutdown limit in all inverters is to be set to 246V with 2 minute time delay to operate.

As an alternative to the above overvoltage shutdown condition for inverters that are 2015 AS4777.2 compliant, the Volt-VAr and Volt-W responses may be enabled with the Green Grid operating values set (see below). With these modes enabled, the overvoltage shutdown limit can be set to 248V for a ten minute average voltage.

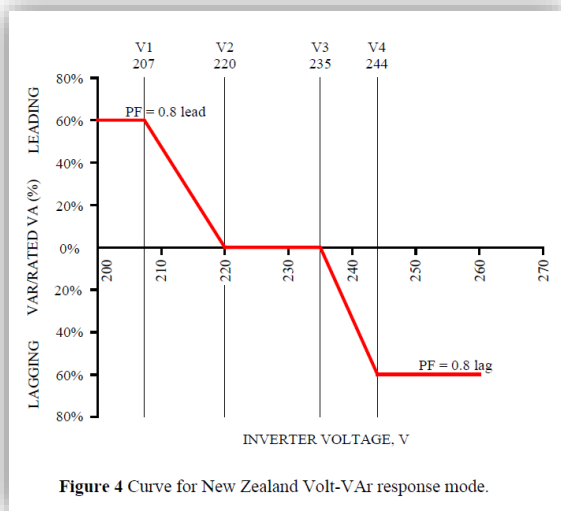


Figure 4 Curve for New Zealand Volt-VAr response mode.

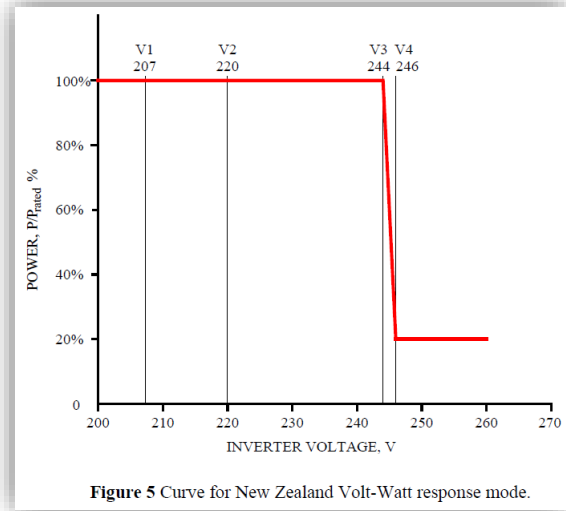


Figure 5 Curve for New Zealand Volt-Watt response mode.

| Reference      | AS/NZS 4777.2<br>NZ Default Values | GREEN Grid NAG<br>NZ Default Values |                    | Range                    |
|----------------|------------------------------------|-------------------------------------|--------------------|--------------------------|
|                |                                    | Volt-VAr Response                   | Volt-Watt Response |                          |
| V <sub>1</sub> | 207                                | 207                                 | 207                | Not Applicable           |
| V <sub>2</sub> | 220                                | 220                                 | 220                | 216 to 230               |
| V <sub>3</sub> | 244                                | 235                                 | 244                | 235 to 255               |
| V <sub>4</sub> | 255                                | 244                                 | 246                | 244 to 265<br>240 to 265 |

| Parameter                                               | Limit                                                                                                                                                        | Minimum trip delay time | Maximum disconnection (trip) time |
|---------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|-----------------------------------|
| V <sub>nom-max</sub> (10 minute average)                | 248 V                                                                                                                                                        |                         |                                   |
| Overvoltage 1*                                          | 260 V                                                                                                                                                        | 1 second                | 2 seconds                         |
| Overvoltage 2*                                          | 265 V                                                                                                                                                        | -                       | 0.2 seconds                       |
| Undervoltage*                                           | 180 V                                                                                                                                                        | 1 second                | 2 seconds                         |
| Under-frequency* *                                      | 45 Hz                                                                                                                                                        | 1 second                | 2 seconds                         |
| Over-frequency*                                         | 52 Hz                                                                                                                                                        | -                       | 0.2 seconds                       |
| Minimum reconnection time                               | 60 Seconds                                                                                                                                                   |                         |                                   |
| Volt response modes: Volt-VAr, Q(V) and Volt-Watt, P(V) | Applicability determined according to GREEN Grid traffic light system, Figure 3.<br>GREEN Grid designed Volt-response curves shown in Figure 4 and Figure 5. |                         |                                   |

2. \_\_\_\_\_

3. . \_\_\_\_\_