

Distributed Generation Policy

Kaupapahere Whakahiko Tohatoha

Purpose

This policy outlines our approach to connection and management of Distributed Generation on our Network.

Our Policy

We recognise the importance of Distributed Generation to our region's energy future. Our Network is an essential part of ensuring our Customers have the benefit of a reliable electricity supply. It is also a key enabler in allowing our customers to take advantage of the benefits that Distributed Generation may bring to them, including reducing New Zealand's carbon footprint through the generation of energy for their own consumption or sale back to their Electricity Retailer.

We will support and facilitate a process that:

- Ensures the safety of our team, our customers, and the public at sites where Distributed Generation is installed
- Makes it easy for our Customers to connect Distributed Generation
- Will maintain the efficient operation of our Network as the use of Distributed Generation increases and customer usage requirements change over time
- Clearly defines the technical and commercial requirements for connection and operation of Distributed Generation
- Complies with all legislative requirements.

Background

Distributed Generation (DG) is any generation equipment used to generate electricity that is connected to our Distribution Network either directly, or via a Customer's installation. This includes fixed generation such as solar panels, wind turbines, hydro generation and diesel generators, that may be connected to supply homes and businesses.

Our Network has primarily been designed to allow the flow of electricity in one direction, from Transpower's National Grid to our Customers. The connection and operation of DG to our Network brings benefit to our customers, however it also introduces safety risk and operational complexity.

The connection of DG to our Network is governed by [Part 6](#) of the Electricity Industry Participation Code.

Customer Responsibilities

- Follow the application process as detailed in this document and on our website and have the DG approved by us prior to connection;
- Ensure all DG connected to our Network meets all legislative requirements (please note additional information on legislation/regulation in this policy);
- Ensure DG connected to our Network meets the requirements of this policy;

- Operate and maintain DG to a standard that does not compromise the safety of people, livestock or property, and in a manner that does not adversely affect our Network;
- Meet the cost of a changes to the Network, in line with our Capital Contribution Policy and Pricing Methodology where this is required to enable connection or ongoing supply of their requested Distributed Generation.
- Curtail or cease generation when and as requested by us;
- Follow and comply with our [Standard Terms](#) and [Network Code](#).

Our Responsibilities

- Process DG applications in line with the costs and timelines detailed on the relevant application form and in Part 6 of the EIPC;
- Provide you with our technical standards and information to allow compliant connection of DG. This may include specific settings or equipment requirements for your DG;
- Ensure any costs to you of connection, reflect the marginal cost of connection and are in line with the pricing principles defined in Part 6 of the EIPC and our Pricing Methodology;
- Advise you of any additional costs due to Network upgrades that may be incurred as a result of your application;
- Identify reasons why we may curtail or interrupt DG from time to time;
- Publish locations on our Network that may be subject to Export Congestion;
- Ensure the information required under EIPC Part 6 Clause 3 is available on our website and on request from our offices;
- Notify you when we require curtailment or cessation of generation to carry out maintenance or other operational activities.

Approval to Connect and Operate

The approval process to connect DG to our Network is governed by Part 6 of the EIPC. This sets out timelines and costs associated with the approval process based on the type and size of DG to be connected.

The approval timeline and costs, and our default technical requirements for each type of DG are shown on the relevant application forms.

Where approval is given to connect DG, we will outline any additional technical requirements required to ensure safe and reliable operation of the DG and our Network.

Inverter based generation must use an inverter approved by us, other otherwise provided for in Part 6 of the EIPC. Our list of approved inverters can be found [here](#).

Where modifications to our Network are required to ensure the safe and reliable operation of our Network after connection of the DG, these will be at the cost of the Customer wishing to connect the DG, in line with our Capital Contribution Policy.

A TLC approved import/export meter must be installed before any DG is commissioned. This meter may also be used by your Electricity Retailer for billing purposes (at their discretion).

Where DG has been connected without approval from us, we may disconnect it until the relevant applications have been completed and approval has been given.

Application Forms are on our [website](#)

- Non-Inverter based DG 10kW or less (*A Part 1 application under Part 6 of the EIPC*)

- Inverter based DG 10kW or less (*A Part 1A application under Part 6 of the EIPC*)
- DG more than 10kW (*A Part 2 application under Part 6 of the EIPC*)

Any technical requirements identified in this policy and the associated forms are our Connection and Operation Standards for the purposes of DG, as defined in Part 6 of the EIPC.

Operation & Congestion Management

We operate our Network in compliance with the Regulations and in a manner that ensures a safe, reliable supply of electricity to our Customers. The load profile on our Network varies materially during operation and as such we may need to curtail the output of a Customer's DG or disconnect it from the Network from time to time. Scenarios where this may apply include, but are not limited to:

- Emergency disconnection to ensure the safety of people, livestock or property
- Unplanned outages on the Network interrupting supply to a Customer's Installation
- Planned isolation of areas of the Network to allow repair, maintenance, connection or upgrade work
- At the request of Transpower (as the System Operator of the National Grid)
- Under instruction of Civil Defence during a state of emergency
- Where required to maintain the safety, stability or integrity of our Network
- Where required as a condition of approval of DG to allow us to manage congestion on our Network
- As otherwise allowed for in our Terms of Service or Connection Agreement with the Customer

Inverter based DG 10kW or less in residential installations, made under Part 1A of the EIPC are subject to a maximum export limit of 6kW per phase. This limit is determined based on the After Diversity Maximum Demand (ADMD) design criteria of our low voltage distribution network.

As at the date of approval of this policy, no areas in our Network are subject to export congestion or are expected to become subject to export congestion in the next 12 months.

This section is our Congestion Management Policy for the purposes of Part 6 of the EIPC.

Additional Information on Legislation/Regulations

Part 6 of the EIPC governs the approval and operation of DG and requires that inverter based DG 10kW or less (Part 1A applications) must:

- Be designed and installed to comply with AS/NZS 4777.1:2016,
- Use an inverter that has been *tested and issued a Declaration of Conformity with AS/NZS 4777.2:2015* and be capable of operating using *volt-watt response and the volt-var response modes*.

The Electricity (Safety) Regulations 2010 govern the installation of DG from and requires that the installation of DG systems using inverters complies with AS 4777.1:2005 (among other requirements)

It is the responsibility of the customer (usually via their chosen supplier and/or installer) to ensure all legislative requirements are met.

Further guidance from Energy Safety may be found [here](#).

Modification of DG

Where modifications are made to DG, (e.g. increase or decrease of capacity, change of equipment to a different model or brand) a new DG application must be completed, and approval given by us prior to connection of the new equipment.

Decommissioning

If DG is no longer required at an installation, the Customer must let us know to enable update of our records.

Commercial Requirements

All existing Customers who connect to our Network operate under our Terms of Service or a Connection Agreement (“Existing Contract”).

When DG is connected to a Customer’s Installation, the Regulated Terms as defined in Part 6 of the EIPC will also apply. Where the Regulated terms impose rights or obligations on either party that are additional to, or in conflict with the Existing Contract, the Regulated Terms will apply, but only to the Distributed Generation portion of the Installation.

A Customer receiving approval for DG under Part 1 or Part 2 of Schedule 6.1 of the EIPC may request negotiation of an agreement outside of regulated terms. If an agreement between the parties is executed, the Regulated Terms will not apply.

Definitions

Capital Contribution Policy: Our policy, as published on our website, that defines the contribution a Customer must make to fund their connection to our Network;

Connection Agreement: A contract between us and a Customer that supersedes our Terms of Service and defines both parties’ obligations;

Customer: A purchaser or seller of electricity (from or to an Electricity Retailer) that is connected to our Network;

Distributed Generation: Generating plant that is connected, or is proposed to be connected connect, our Network;

EIPC: The Electricity Industry Participation Code

Installation: As defined in the Network Code

Electricity Retailer: The party selling or intending to sell electricity to the Customer

Network: Our system for the conveyance of electricity including all fittings comprising that system and which terminates at the Customer’s POS;

Pricing Methodology: Our methodology for determining pricing for our customers, as published on our [website](#);

Regulated Terms: The terms set out in Schedule 6.2 of the EIPC;

Regulations: The Electricity (Safety) Regulations 2010;

Terms of Service: Our Terms of Service as published on our website.

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