



DISTRIBUTED GENERATION (DG)

CONNECTION APPLICATION FORM FOR GENERATORS GREATER THAN 10kW

Please fully complete the entire form, sign and forward to:

Bob Collins
Network Manager
Scanpower Ltd
PO Box 157
Dannevirke

Details of person applying to connect DG

Name	
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Address	
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Phone	
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Fax	
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Email	
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Energy Retailer	
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ICP Number	
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Contact details (if different from above)

Name	
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Address	
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Phone	
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Fax	
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Email	
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TECHNICAL INFORMATION	
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Generator Manufacturer	
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Generator Model	
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Generator Supplier	
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Type (solar,wind,gas,etc)	
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Inverter Manufacturer	
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Inverter Model	
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Inverter Supplier	
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Mains failure protection type	
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Max rated power output (kW)	
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Rated AC voltage output (kV)	
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Proposed point of connection to Scanpower network	
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No. of phases	
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Name of Electrical Contractor	
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Proposed Connection date	
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Please attach a copy of the technical specifications of the generator and associated equipment together with the supplier contact details for the equipment you propose to install.

Please attach a copy of 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 Scanpower staff)

If you do not complete all sections of this form your application may be delayed

Signed:

Name:

Date:

DATA REQUIRED FOR EACH DISTRIBUTED GENERATION SYSTEM

Data required for range of power output	10-100kVA	100-750kVA	>750kVA
Type of generator unit-synchronous, asynchronous, etc	√	√	√
Type of prime mover	√	√	√
Rated terminal voltage (kV)	√	√	√
Rated generation capacity (kVA)	√	√	√
Rated min power factors (both over & under excited) at rated kVA		√	√
Max continuous active power generated (kW)	√	√	√
Max short term active power generated (kW)		√	√
For asynchronous generators, reactive power requirements (kVAr)	√	√	√
Anticipated operating regime, eg continuous, intermittent, peaklopping	√	√	√
Method of voltage control	√	√	√
Generation transformer details, if applicable			√

INTERFACE ARRANGEMENTS

Data required for range of power output	10-100kVA	100-750kVA	>750kVA
The means of connection and disconnection	√	√	√
The means of synchronisation between the distribution network and the distributed generation	√	√	√
Generation neutral earthing arrangements			√
Single line diagram for installation detailing circuit breakers, base loads and generation capabilities	√	√	√

TECHNICAL DATA

Data required for range of power output	10-100kVA	100-750kVA	>750kVA
Lowest frequency at which thr distributed generation can run			√
Actual low fequency trip setting & time delay	√	√	√
Actual over frequency trip setting & time delay	√	√	√
Minimum operator power			√

Generation kW/kVAr capability charts (at lower voltage terminals at nominal and $\pm 10\%$ of nominal voltage) at:

(a) maximum short term power			√
(b) maximum continuous power		√	√
(c) 75% output			√
(d) 50% output			√
(e) minimum power			√

Auxilliary power requirements at:

(a) rated power output			√
(b) minimum power output			√
(c) start up			√

Start up times to minimum operating power:

(a) from cold			√
(b) from warm			√
(c) from hot			√
Normal ramp rate			√
Time for cold strat to full rated output		√	√
Inertia constant (seconds) (whole machine)			√
Stator resistance			√
Direct axis synchronous reactance			√
Quadrature axis synchronous reactance			√
Direct axis transient reactance			√
Quadrature axis transient reactance			√

Direct axis sub transient reactance			√
Quadrature axis sub transient reactance			√
Leakage (positive sequence) reactance			√
Negative sequence reactance			√
Zero sequence reactance			√
Earthing resistance/reactance			√

Time constants:

(a) direct axis transient open circuit			√
(b) quadrature axis transient open circuit			√
(c) direct axis sub transient open circuit			√
(d) quadrature axis sub transient open circuit			√
Generation transformer details (impedance, tap changer, vector group, earthing, maximum overvoltage capability at rated frequency etc)			√
Type of excitation system (block diagram/specifications, forward/feedback gains/time constants and limits)		√	√
Speed governor and prime mover data (detailed functional description of governing system with all subsystems including system control and turbine time)		√	√

Protection requirements	10-100kVA	100-750kVA	>750kVA
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Generation circuit breaker	√	√	√
Dedicated transformer			√
Disconnect/isolate switch	√	√	√
Over-voltage protection	√	√	√
Under-voltage protection	√	√	√
Over-frequency protection	√	√	√
Under-frequency protection	√	√	√
Earth fault protection		√	√
Over-current voltage restraint protection			√
Neutral voltage displacement protection	√	√	√
Synchronisation	√	√	√
Loss of network supply (see Islanding notes)	√	√	√
Power factor or voltage regulation equipment		√	√