

# **Technical Specifications for Distributed Generation Less Than 10kW**

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<b>Related Documents</b>	Connection and Operation of DG Less than 10kW.doc DGApplicationDetails(Lessthan10kW).doc DGRegulatedTerms(Connection Agreement).doc

# Technical Specifications for Distributed Generation Less Than 10kW

The information provided below is required to allow MainPower to make an informed assessment about whether to approve or decline your application for connection of distributed generation.

**(1) Maximum Power Output (must be less than 10kW)**

Nominal continuous rating \_\_\_\_\_

Peak rating (less than 1 minute) \_\_\_\_\_

**(2) Minimum power ramping rate** \_\_\_\_\_

**(3) Synchronising Requirements (rotating plant only)**

Synchronising requirement \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Drop out upon failure \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**(4) Protection requirements**

Over voltage \_\_\_\_\_

\_\_\_\_\_

Over frequency \_\_\_\_\_

\_\_\_\_\_

Under voltage \_\_\_\_\_

\_\_\_\_\_

Under frequency \_\_\_\_\_

\_\_\_\_\_

Export power \_\_\_\_\_  
 \_\_\_\_\_  
 Mains failure \_\_\_\_\_  
 \_\_\_\_\_

**(5) Maximum voltage at point of connection to our Network**

Nominal continuous voltage \_\_\_\_\_  
 Maximum voltage (1 minute) \_\_\_\_\_

**(6) Minimum voltage ramping rate**

Not currently required however MainPower reserves the right to obtain this information upon request.

**(7) Voltage waveform/Harmonics**

No person shall use or continue to use any fittings or electrical appliance that unduly interferes with the satisfactory supply of electricity to any other person, or that impairs the safety of, or unduly interferes with the operation of, any electrical appliance or fittings.

Any harmonic content introduced by your generating installation must comply with the following tolerances:

DC offset	less than 2% of fundamental.
Even harmonics	no individual harmonic greater than 2% of fundamental.
Third harmonic	no greater than 30% of fundamental.
Fifth harmonic	no greater than 15% of fundamental.
Seventh harmonic	no greater than 10% of fundamental.
Ninth harmonic	no greater than 6% of fundamental.
Eleventh harmonic	no greater than 4% of fundamental
Thirteenth harmonic and higher	no single harmonic greater than 1% of fundamental

**(8) Interference with Load Control Frequency**

MainPower operates a ripple signal at 283 HZ for load control purposes.

MainPower utilizes Orion's ripple signal at 317 HZ for load control purpose in the Wigram embedded network.

No distributed generation or its control devices shall interfere with, or cause a short circuit of the ripple control signal or cause noise interference with the load control frequency used by MainPower within its distribution areas.

Please indicate any operational or filtering frequencies applicable to your distributed generation. Refer BS EN 50160 for additional information.

HZ \_\_\_\_\_

**(9) Power factor limits**

Leading \_\_\_\_\_

Lagging \_\_\_\_\_

**(10) Over and under speed limits (rotating plant only)**

Not currently required however MainPower reserves the right to obtain this information upon request.

**(11) Over and under frequency limits (rotating plant only)**

Not currently required however MainPower reserves the right to obtain this information upon request.

**(11) Amendments**

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