Initial Application Form for
Connection of Distributed Generation (>10kW)

***Please complete the following information and forward to EA Networks* (****generation@eanetworks.co.nz****)**

This form is available as an editable Microsoft Word document upon request from **generation@eanetworks.co.nz**. You can then print it to physically sign it
and then scan it or, insert your scanned signature into the Word document and then print it to a pdf to secure it from alteration.

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| **Contact Details**  |
| **Primary Contact** (who we should contact for additional information)  |
| **Contact person**  |                      |
| **Company name**  |                      |
| **Contact numbers**  | **Daytime:**                     **Fax:**                      | **Cell phone:**                      |
| **Email address**  |                      |
| **Postal address**  |                      |
| **Secondary Contact**  |
| **Contact person**  |                      |
| **Company name**  |                      |
| **Contact numbers**  | **Daytime:**                     **Fax:**                      | **Cell phone:**                      |
| **Email address**  |                      |
| **Postal address**  |                      |

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| **Site Details**  |
| **Electricity Retailer**  |                      |
| **Customer ICP number**  |                      |
| **Site address of  proposed generator**  |                      |

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| **Proposed Installation Dates**  |
| **Proposed key dates for** **connection to EA Networks’ electricity network**  |                      |

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| **System Specifications** (for all generation >10kW) ALL = All generation types. ROT = Rotating generators. |
| **Generating Plant Data**  |
| Terminal volts (kV)  | ALL                      |
| Rated kVA  | ALL                      |
| Rated kW  | ALL                      |
| Maximum active power sent out (kW max)  | ALL                      |
| Reactive power requirements (kVAr), if any  | ALL                      |
| Power Factor at maximum kW  | ALL                      |
| Type of generating plant (e.g. synchronous, asynchronous)  | ALL                      |
| Type of prime mover  | ALL                      |
| Anticipated operating regime of generation e.g. continuous, intermittent, peak lopping  | ALL                      |
| Fault level contribution (for large machines this may be covered in the detailed specifications below)  | ALL                      |
| Method of voltage control  | ALL                      |
| Generator transformer details, as applicable  | ALL Attached [ ]  |
| Fuel type  | ALL                      |
| Requirements for top-up supplies and/or standby supplies  | ALL                      |
| **Interface Arrangements**  |
| The interconnection voltage between the Distribution Network and the complete Generator installation | ALL                      |
| The means of synchronisation between the Distribution Network and the Generator  | ALL                      |
| Details of arrangements for connecting with earth that part of the Generator’s system directly connected to the distribution system  | ALL Attached [ ]  |
| The means of connection and disconnection which are to be employed  | ALL Attached [ ]  |
| Ability of plant to backfeed the external system  | ALL                      |
| Protection equipment, protection schemes and protection settings  | ALL Attached [ ]  |
| Precautions to be taken to ensure the continuance of safe conditions should any earthed neutral point of the Generator’s system operated at HV become disconnected from earth  | ALL Attached [ ]  |

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| **Detailed Specifications** For distributed generators connected at voltages equal to or greater than 11 kV or of capacity 1MW or greater, please also complete the following information:  |
| **Technical Data**  |
| Generating plant information (impedances p.u. on rating) | ALL Attached [ ]  |
| Type of prime mover  | ALL                      |
| Rated MVA  | ALL                      |
| Rated MW  | ALL                      |
| Generator MW/MVAr capability chart (at terminals)  | ALL                      |
| Type of excitation system  | ROT                      |
| Inertia constant MW secs/MVA (whole machine)  | ROT                      |
| Stator resistance  | ROT                      |
| Direct axis reactances  | *- Sub-Transient*  | ROT                      |
| *- Transient*  | ROT                      |
| *- Synchronous*  | ROT                      |
| Quadrature axis reactances  | *- Sub-Transient*  | ROT                      |
| *- Synchronous*  | ROT                      |
| Time constants  | *- Direct axis Transient*  | ROT                      |
| *- Direct axis Sub-Transient*  | ROT                      |
| *- Quadrature Axis Transient*  | ROT                      |
| *- Quadrature Axis Sub- Transient*  | ROT                      |
| Open or short  | *Sub-Transient* *(stating either circuit time constant)*  | ROT                      |
| Zero sequence  | *- Resistance*  | ROT                      |
| *- Reactance*  | ROT                      |
| Negative sequence  | *- Resistance*  | ROT                      |
| *- Reactance*  | ROT                      |
| Generator transformer  | *- Resistance (RI, Rø)*  | ALL                      |
| *- Reactance (XI, Xø)*  | ALL                      |
| *- MVA Rating*  | ALL                      |
| *- Tap arrangement*  | ALL                      |
| *- Earthing*  | ALL                      |
| Automatic voltage regulator make/model  | ALL                      |
| A block diagram for the model of the AVR system including the data on the forward and feedback gains, time constants and voltage control limits  | ALL Attached [ ]  |
| Speed governor and prime mover data  | ROT Attached [ ]  |
| A block diagram for the model of the generating plant governor detailing the governor flyball, if applicable, and system control and turbine time constants, together with the turbine rating and maximum power  | ROT Attached [ ]  |
| The means of synchronisation between the Distribution Network and the Generator  | ALL                      |
| Details of arrangements for connecting with earth that part of the Generator’s system directly connected to the distribution system  | ALL Attached [ ]  |
| The means of connection and disconnection which are to be employed  | ALL                      |
| Ability of plant to back-feed external system  | ALL                      |
| Protection equipment and protection settings  | ALL Attached [ ]  |
| Precautions to be taken to ensure the continuanceof safe conditions should any earthed neutral pointof the Generator’s system operated at HV become disconnected from earth | ALL Attached [ ]  |
| **Capacity and standby requirements**  |
| Registered capacity and minimum generation of each generating unit and power station in MW | ALL                      |
| Generating unit and power station auxiliary demand(active power and reactive power) in MW and MVAr, **at registered capacity conditions**.For Users with own generation, this should include top-up requirements. | ALL                      |
| Generating unit and power station auxiliary demand(active power and reactive power) in MW and MVAr, **under minimum generation conditions**.For Users with own generation, this should include top-up and standby requirements. | ALL                      |

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| **Further information required by Transpower** |
| Generators with large machines may be subject to the Transpower Connection Code (part C of the Electricity Governance Rules) and central dispatch. Where this applies, any information supplied to EA Networks and any further information requested by Transpower will be forwarded to Transpower. It will be the responsibility of the Generator to provide the required information to EA Networks. EA Networks will pass the information on to [Transpower](https://www.transpower.co.nz/connections/connecting-generation-through-local-network).There may also be information required under the terms of any Transpower contract in respect of the transfer of energy from the Generator to the Generator’s Customer. |  |

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| **Applicant Signature**  |
| **Name**  |                      |
| **Signature**  |  |
| **Date**  |                      |