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DISTRIBUTED GENERATION

Preferred Terms & Conditions for Connection & Operation of Distributed Generation above 10kW in total

To be read in conjunction with the following:

***Connection & Operation of Distributed Generation
above 10kW in total***

Basis of Charges for Connecting Distributed Generation

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Table of Contents

Background to this agreement	4
Parties to this agreement.....	4
Definitions	4
Terms of agreement.....	5
(1) Contents of this Schedule	5
(2) Interpretation.....	5
(3) General obligations	5
(4) Installation of meters and access to metering information	6
(5) Right of access.....	6
(6) Process for right of access.....	7
(7) We must not interfere with your equipment	7
(8) You must not interfere with, and must protect, our equipment	8
(9) Obligation to notify if interference with our equipment or theft of electricity is discovered.....	8
(10) General obligations relating to interruptions	8
(11) Circumstances allowing us to temporarily disconnect your generation	8
(12) Our obligations if your generation is temporarily disconnected	9
(13) Adverse operating effects	9
(14) Interruptions by distributed generator.....	9
(15) Permanent disconnections.....	10
(16) General obligations relating to confidentiality	10
(17) When confidential information can be disclosed	11
(18) Disclosure by employees, agents etc.	11
(19) Pricing principles	11
(20) General obligations relating to liability.....	12
(21) Exceptions to obligations relating to liability.....	12
(22) Limits on liability	12
(23) Liability clauses do not apply to fraud, willful breach, and breach of confidentiality... ..	12
(24) Indemnity for damage claimed by third parties	12
(25) Force Majeure	13
(26) Insurance	13
(27) Distributors connection and operation standards and conditions.....	14
(28) Inspection and testing	14
(29) Connection authorisation	15
(30) Disputes.....	15
(31) Duration of Agreement	16
(32) Review of Agreement.....	16
(33) Purchase of generated energy	17
(34) Metering installation requirements for exporting electricity.....	17
Execution	19
Schedule 1 – Connection Assets	20

(1) Connection Assets owned by us.....	20
(2) Connection assets owned by you.....	20
(3) Point of demarcation	20
Schedule 2 – Technical specifications.....	21
(1) Maximum power output (must be above 10kW in total).....	21
(2) Minimum power ramping rate.....	21
(3) Synchronising requirements (rotating plant only).....	21
(4) Protection requirements.....	21
(5) Maximum voltage at point of connection to our Network.....	22
(6) Minimum voltage ramping rate	22
(7) Voltage waveform	22
(9) Power factor limits	22
(10) Over and under speed limits (rotating plant only).....	22
(11) Over and under frequency limits (rotating plant only).....	22
Schedule 3 – Connection charges.....	23

Background to this agreement

Clause 6.6 of Part 6 of the [Electricity Industry Participation Code 2010](#) (Code) provides for the connection of your distributed generation under regulated terms if we do not enter into a connection contract by the expiry period for negotiating a connection contract. These are set out in Schedule 6.2 of Part 6. Despite this, Clause 6.6 also provides that we may at any time, by mutual agreement, enter into a connection contract that will apply instead of the regulated terms.

This document sets out our preferred terms & conditions for connection and operation of generation rated above 10kW in total. The format and clause numbering of this Agreement reflects Schedule 6.2 as much as possible to facilitate comparison.

The other documents on the respective pages of our website must be read and understood in conjunction with this Agreement although they do not form part of this Agreement.

Parties to this agreement

- (1) Electra Limited, a limited liability company having its registered office at the Corner of Bristol & Exeter Sts, Levin.
- (2) Generator owner _____

Definitions

Act	Means the Electricity Industry Act 2010
Code	Means the Electricity Industry Participation Code 2010, Part 6, Connection of Distributed Generation or any regulation passed in substitution thereof.
Connection Assets	Means assets such as (but not limited to) lines, poles, cables, fuses, transformers, reclosers and circuit breakers necessary to connect your generation to our Network. The Connection Assets owned by us and by you are described in Schedule 1 to this Agreement.
Distributed generator	For the purposes of the Code, means a person who owns or operates, or intends to own or operate, distributed generation.
EA	Means Electricity Authority
Network	Means the assets such as (but not limited to) lines, poles, transformers, cables, fuses, reclosers or circuit breakers owned by us that are used to supply our customers.
Requirements	Means the various requirements referred to in Sections 2.1 to 2.5 of the document entitled "Connection and operation of distributed generation above 10kW in total".

We, us, our, ours and similar words Means Electra Ltd.

You, your, yours and similar words Means the party wishing to connect distributed generation to our network.

Terms of agreement

(1) Contents of this Schedule

Not used.

(2) Interpretation

Not used.

(3) General obligations

- (1) We will comply with all reasonable, prudent and accepted New Zealand power generation and distribution practices in meeting our obligations under this Agreement. You must do likewise.
- (2) We will construct, test, operate and maintain all Connection Assets owned by us in accordance with prudent and accepted New Zealand power distribution practice. You must construct, test, operate and maintain all your Connection Assets to equivalent standards.
- (3) You must construct, operate, test and maintain your distributed generation and any associated equipment such as inverters in accordance with the makers' instructions unless those instructions would conflict with prudent and accepted New Zealand power distribution practice or electricity sector regulations. If the makers' instructions do conflict, prudent and accepted New Zealand power distribution practice or sector regulations will prevail.
- (4) We will ensure that our Network and any Connection Assets owned by us do not endanger your plant, property, staff, contractors or the public at large. You must ensure that your distributed generation or any Connection Assets owned by you do not endanger our property, staff, contractors, the public at large, or the Network or Connection Assets owned by us.
- (5) In particular your distributed generation must comply with the technical specifications set out in Schedule 2 to this Agreement as well as any conditions that we specified as part of your initial or final application.
- (6) You must comply with all electricity sector governance rules and regulations.
- (7) You must cooperate with Transpower in their role as system operator in order to maintain operating standards at Transpower's grid exit substations. In particular you must acknowledge Transpower's overriding need to keep the national grid working properly.

- (8) You must advise us of any change of ownership of your generation within 10 business days of any change of ownership becoming binding on you.

(4) Installation of meters and access to metering information

- (1) You must:
- (a) Install a meter or meters that:
 - (i) Can separately record flows of electricity both into our Network and from our Network.
 - (ii) Complies with Part 10 of the Electricity Industry Participation Code 2010, *Metering arrangements*.
 - (iii) Meets the requirements of your energy retailer.
 - (b) Allow our staff or authorised contractor to:
 - (i) Have reasonable access to your generation, metering installation and Connection Assets.
 - (ii) Inspect any of the above for compliance with safety requirements or with our connection and operating standards.
- (2) You must provide us with any meter data in a recognised and unencrypted format such as an Excel spreadsheet within 5 business days of being requested at your own cost. Such requests may also arise from our obligations to Transpower in regard to demand at their grid exit substations.
- (3) We may require you to install reactive power metering if we believe that your generator may operate with a power factor outside of 0.95 leading or lagging.
- (4) We will not impose metering requirements that are inconsistent with any Electricity Governance rules.
- (5) You must reimburse us for the costs of any inspection under (b)(ii) above up to a maximum of \$1,200 per inspection.
- (6) If you wish to receive a rebate from us for helping us avoid Transpower peak charges you will need to install and maintain a communications link capable of real-time operation between your metering and our control room in Bristol St, Levin. This link will be installed and maintained at your expense and shall comply with our technical and operating standards.
- (7) We will calculate a generation loss factor for your generation. The energy you inject into our network will be deemed to be the metered amount multiplied by this loss factor. We may revise this loss factor annually, but will definitely revise it every 5 years.

(5) Right of access

- (1) You must provide us or our authorised contractor with safe and unobstructed access into your premises at all reasonable times:
- (a) for the purpose of installing, testing, inspecting, maintaining, repairing, replacing, operating, reading, or removing any of our equipment and for any other purposes relating to this contract;

- (b) for the purpose of verifying meter information;
 - (c) for the purpose of ascertaining the cause of any interference to the quality of delivery services being provided by us to you;
 - (d) for the purpose of protecting, or preventing danger or damage to, persons or property; and
 - (e) for the purpose of reconnecting or disconnecting your distributed generation;
 - (f) for any other purpose relevant to either or both of:
 - (i) the connection your distributed generation in accordance with our connection and operation standards; and
 - (ii) the maintenance of the integrity of our distribution network.
- (2) The rights of access conferred by this contract are in addition to any right of access we might have under a statute or regulation or contract.

(6) Process for right of access

- (1) In order to exercise our right under Clause (5):
- (a) Wherever practicable, we or our authorised contractor will give you at least 2 business day's notice of the intention and purpose of the visit;
 - (b) We will cause as little inconvenience as practicable to you in carrying out this work;
 - (c) Reasonable and prudent operating practice will be observed at all times;
 - (d) Any reasonable security or site safety requirements that you make known to us will be observed;
- (2) In case of operational emergencies or hazardous situations, you must make provision for us to enter your premises at any time including such provisions as providing keys, PIN numbers or swipe cards, and notifying your security people. If we cannot gain ready access to your premises we reserve the right to disconnect your generation at the point of connection to our Network even if that means disconnecting your entire premises.

(7) We must not interfere with your equipment

- (1) We will not interfere with your equipment without prior written consent.
- (2) However, we may be compelled to disconnect your generation without prior written notice in the following circumstances:
- (a) If an emergency or undesirable operational situation arises;
 - (b) If your generator creates an unsafe condition as provided for in Section (13)(1) of this Agreement;
 - (c) If your generation is interfering with our other customers and you have not followed our instructions to cease interfering as provided for in Section (13)(2) of this Agreement;

- (d) If any part of an undisputed invoice remains unpaid as provided for in Section (20)(5) of this Agreement.
- (3) We will inform you as soon as practicable of the occurrence and circumstances of any action taken under subclause (2).

(8) *You must not interfere with, and must protect, our equipment*

- (1) Other than disconnecting your generation at the point of connection to our Network, you must not interfere with our equipment in any way.
- (2) You must protect our equipment against interference and damage.

(9) *Obligation to notify if interference with our equipment or theft of electricity is discovered*

- (1) If we or you discover evidence of interference with our equipment or evidence of theft of electricity, the party discovering the interference or evidence must advise the other party within 24 hours.
- (2) If interference to our equipment at your premises is suspected, we may carry out an investigation ourselves and present our findings to you within a reasonable period.
- (3) The cost of this investigation
 - (a) must be borne by you if it is discovered that interference by you, your subcontractors, agents, or invitees, has occurred, or if the interference has been by a third party, and you have failed to provide reasonable protection against interference to our equipment; and
 - (b) must be borne by us in any other case.

(10) *General obligations relating to interruptions*

We will make reasonable efforts to ensure that the connection to your distributed generation is not interrupted.

(11) *Circumstances allowing us to temporarily disconnect your generation*

Despite Clause 10,

- (1) We may require you to reduce or temporarily disconnect your generation under certain operating circumstances such as our Network becoming congested or constrained. The practical reality is that we may not be able to provide much notice of such a requirement.
- (2) We may require you to reduce or disconnect your generation from our Network so we can work on our Network. If it is planned work, we will provide you with the same notice period as our other customers. If it is unplanned work we may not be able to provide you with any notice.

- (3) You must cooperate with us when we are trying to restore our Network after a fault, including complying with instructions to increase generation, reduce generation or disconnect. You must also cooperate with Transpower if they are trying to restore their grid after a fault. Note that, in a fault situation, we may need to give priority to restoring wider areas of our Network with individual customers (including generators) taking a lesser priority.
- (4) We may disconnect you to protect or prevent danger or damage to persons or property;
- (5) We may disconnect you if you fail to:
 - (i) allow access as required by Clause 5; or
 - (ii) comply with our connection and operation standards; or
 - (iii) comply with our safety requirements.

(12) Our obligations if your generation is temporarily disconnected

- (1) We will make reasonable efforts to
 - (i) advise you beforehand of any circumstances listed in Clause (11) that may require your generation to be interrupted;
 - (ii) co-ordinate with you to minimize the impact of the interruption.
- (2) If we disconnect your generation for operational reasons, we will make reasonable efforts to advise you of the reason why within 24 hours.
- (3) In the case of a forced outage and subject to our other fault restoration priorities, we will make reasonable efforts to
 - (i) reconnect your generation; and
 - (ii) advise you of the expected duration of the outage.

(13) Adverse operating effects

- (1) If your generator causes an unsafe or hazardous condition to arise, we may require you to immediately disconnect your generation from our Network.
- (2) If your generator adversely effects the operation of our Network or adversely affects the quality of supply to our other customers (through, but not limited to, such effects as voltage, frequency, harmonics, spikes, sags or surges) we reserve the right to provide you with a written requirement to correct the offending performance aspect within 5 business days. If you fail to correct the offending aspect within those 5 business days we reserve the right to disconnect your generation from our Network. Such disconnection will not relieve you or us from any other obligations under this Agreement.

(14) Interruptions by distributed generator

- (1) You must give us at least 5 business days notice of any planned disconnection of your generation.

- (2) If your planned disconnection means that you cannot provide any agreed power injection, reactive support, voltage support or other service the following may apply:
 - (i) we may charge you for the cost of obtaining these services elsewhere;
 - (ii) we may pass on any losses, penalties or fines we incur;
 - (iii) we will withhold payment for services not provided.

(15) Permanent disconnections

- (1) Notwithstanding any other provisions for disconnections in this Agreement, we may permanently disconnect your generation in the following circumstances:
 - (i) on receipt of a request from you;
 - (ii) if your distributed generation has been temporarily disconnected under Clause (11)(5) and:
 - (a) you have failed to remedy the non-compliance within a reasonable period of time; and
 - (b) there is an on-going risk to persons or property.
 - (iii) Without notice if the trader recorded in the registry as being responsible for the ICP to which your distributed generation is connected has de-energised the ICP and advised the registry that the ICP has a status of "inactive" with the reason of "de-energised – ready for decommissioning";
 - (iv) On at least 10 business day's notice of intention to disconnect if:
 - (a) Your distributed generation has not injected electricity into our network at any time within the preceding 12 months; and
 - (b) We have not been notified of your reasons for the non-generation; and
 - (c) We believe you have ceased to operate your distributed generation
- (2) If the point of connection is to be disestablished in its entirety, we will remove all electrical connections to our network and advise you within 2 business days of the work having being completed.
- (3) You must make all necessary arrangements with your energy retailer to bring your contract with them to an orderly close.
- (4) You must settle up your account with us including any un-recovered capital costs as provided for in Section (32)(3) of this Agreement.
- (5) If you wish for your installation to remain connected to our Network as a load you must enter into a new standard network connection agreement with us.

(16) General obligations relating to confidentiality

Neither you nor shall we directly or indirectly reveal, report, publish, transfer or disclose confidential information except as set out in Clause (17).

(17) When confidential information can be disclosed

- (1) We will keep all information you provide us with confidential except as follows:
 - (i) If we mutually agree in writing to the disclosure of the information;
 - (ii) Any metering data that must be provided to your energy retailer within the terms of your agreement with them.
 - (iii) Any details that we need to share with any of our contractors as part of working on our Network.
 - (iv) Any information that we need to share with Transpower in order to keep our Network and their grid working properly.
 - (v) Any information that we have a statutory obligation to disclose as a matter of routine, such as annual returns.
 - (vi) Any information that we may be lawfully requested to divulge to a statutory authority. In such a specific case we would attempt to notify you of such a request as soon as possible.
- (2) You must keep all information we provide you with confidential except when you are lawfully requested to divulge information to a statutory authority. You must notify us within 2 business days of receiving any such request. In particular you must not divulge any information about our Network's physical or operational characteristics to any other parties.
- (3) Confidential information may be released to a bona fide potential purchaser of your business or any part of your business provided the bona fide potential purchaser has signed a confidentiality agreement enforceable by us in a form approved by us. Subject to this, approval may not be unreasonably withheld.

(18) Disclosure by employees, agents etc.

Not used.

(19) Pricing principles

- (1) The charges payable by you to us and by us to you are set out in Schedule 3 to this Agreement.
 - (i) In addition to the charges set out in Schedule 3 we may, from time to time, need to charge you for activities such as network switching, engineering design or technical studies. We will advise you of the likely charges in advance.
 - (ii) If connecting your generation requires us to forego connecting a customer that we could derive a higher revenue from, we may require you to fund the difference in addition to any other charges.
 - (iii) If connecting your generation requires us to configure our network in sub-optimal way (for instance so that line losses are higher than they otherwise might be) we may require you to pay for these costs in addition to any other charges.

- (iv) You must also pay any and all Transpower system operator charges and Electricity Commission levies. We will pay these charges on your behalf and recover that amount from you.
- (2) We will send you a tax invoice itemising all the charges and rebates set out in Schedule 3 which you will receive by the 5th business day following month end. You must pay us (less any amounts in dispute) by the 20th of the month in which you receive our invoice.
- (3) If our invoice does not reach you by the 5th business day following month end, you shall be entitled to delay paying us by one day for every day after the 5th business day you receive our invoice.
- (4) Any undisputed amounts not paid by the required date shall incur interest on a compounded daily basis. The interest rate shall be the call account rate as shown on the National Bank's website on each day that payment is outstanding. Similarly we will pay you interest on any undisputed rebates that we have not paid you.
- (5) If any undisputed amount remains unpaid by you for more than 1 calendar month after the due date of payment, we may give you 10 business days notice that we will disconnect your generation at the point of connection to our Network. If we do not receive full payment cleared in our bank account on the 11th business day after giving you notice we will disconnect you with no further notice. Such disconnection will not relieve you or us of any other obligations under this Agreement.

(20) General obligations relating to liability

If we breach any of the terms of this Agreement either by acting or failing to act we will be liable to you. Similarly, if you breach any of the terms of this Agreement either by acting or failing to act you will be liable to us.

(21) Exceptions to obligations relating to liability

Not used.

(22) Limits on liability

If either we or you breach our obligations under this Agreement our liability to you and your liability to us will extend firstly to direct losses and secondly to indirect or consequential losses to a total value no greater than \$2,000,000 for any single event.

(23) Liability clauses do not apply to fraud, willful breach, and breach of confidentiality

Not used.

(24) Indemnity for damage claimed by third parties

- (1) We will indemnify you for any claims against you by a third party that arise from any act or failure to act reasonably attributable to us.
- (2) Similarly, you must indemnify us for any claims against us by a third party that arise from any act or failure to act reasonably attributable to you. By way of example, such an event might be if your generator causes a voltage spike that damages our other customers' equipment.

(25) Force Majeure

- (1) If a force majeure event occurs and prevents you fulfilling your obligations under this Agreement, you will be relieved of that obligation for as long as the force majeure event reasonably prevents you from doing so. Similarly, we will be relieved of our obligations for as long as we are reasonably prevented from fulfilling them.
- (2) For this Agreement, a force majeure event can be considered:
 - (i) Any event beyond either your or our reasonable control that prevents either you, or us, fulfilling our obligations under this Agreement.
 - (ii) Any of the following events without limitation:
 - (a) Fire, flood, storm, earthquake, landslide (unless reasonably foreseeable), volcanic eruption or similar event;
 - (b) Explosion or nuclear, biological or chemical contamination;
 - (c) Sabotage, terrorism or act of war (whether war has been declared or not);
 - (d) The binding order or requirement of a Court, government, local authority, the Rulings Panel, or the EA, and the failure is not within the reasonable control of the affected party.
 - (iii) A force majeure event shall not include:
 - (a) An unwillingness or inability by either you or us to pay an amount of money necessary to fulfill obligations under this Agreement.
 - (b) An inability of either you or us to pay a debt arising from this Agreement.
 - (c) Either you or we calling a meeting for the purpose of reaching a compromise with creditors as set out in Part 14 of the Companies Act 1993.
 - (d) Either you or we being adjudged bankrupt.
 - (e) Either you or we being placed in receivership or similar circumstances.
 - (f) Either you or we are put into liquidation.
 - (iv) A force majeure event shall not include an event that either you or we could have prevented by acting with reasonable care and foresight.

(26) Insurance

- (1) You must take out and maintain general liability insurance with no exclusions for the entire duration of this Agreement for any liabilities that could arise under this Agreement. Similarly we will ensure that our general liability insurance includes cover for all liabilities that could arise under this Agreement.
- (2) Your insurance cover must be for no less than \$2,000,000 for any single event.
- (3) We will require you to provide written proof of your insurance cover prior to executing this Agreement. Similarly we will provide you with proof of our insurance cover.
- (4) If you are of sufficient size and credit-worthiness we may waive the insurance requirements set out in (1), (2) and (3) above and allow you to self-insure.

(27) Distributors connection and operation standards and conditions

- (1) At all times you must comply with:
 - (i) Our reasonable connection and operating standards and policies;
 - (ii) All the conditions that your connection is subject to;
 - (iii) Occasional instructions from our staff to increase or decrease real or reactive power generation, or voltage, or to disconnect from our Network when operating conditions require such actions.
- (2) We will advise you of any automatic under frequency load shedding (AUFLS) devices upstream of your generation. You must operate your plant in accordance with any requirements dictated by the presence of AUFLS.
- (3) If your generation is large enough to cause our Network to inject energy into (rather than draw energy from) a Transpower grid exit substation, then we will need to enter into a special contract with Transpower. We will act as your agent in any aspect of this matter that affects you.
- (4) If it emerges that our Network cannot accept the intended maximum injection of your generation in either steady-state or transient situations we may require you to do one or more of the following activities:
 - (i) Limit the maximum generation of your plant, including the possibility of physically constraining its maximum output.
 - (ii) Connect your generation to a different point on our Network.
 - (iii) Augment our network as much as may be necessary in accordance with our technical standards.
 - (iv) Abandon your attempt to connect generation.

You will bear all the costs associated with the above activities unless it is proven by an independent engineer that our design calculations are incorrect.

(28) Inspection and testing

You must:

- (1) Inspect and test your generation in situ (ie. not in another location such as your workshop or the makers factory) before you connect it, or any associated Connection Assets owned by you, to our Network.
- (2) Give us 3 business days notice of your intention to test and inspect so that we can witness the inspection and testing.
- (3) Provide reasonable and safe access for us to witness the inspection and testing.
- (4) Provide us with a written test report within 5 business days of the inspection and testing.
- (5) Reimburse us for the costs of witnessing up to a maximum of \$1,200 per time. For the avoidance of doubt the following will apply:
 - (i) Any additional witnessing will incur a charge up to a maximum of \$1,200 per time.
 - (ii) Any unreasonable delay in witnessing will entitle us to leave your site and treat any return visit as a separate time.

(29) Connection authorisation

- (1) You must not connect your generation, meters or Connection Assets without our written consent.
- (2) We will provide that written consent once we are satisfied that you have met all relevant standards.
- (3) We will provide you with reasonable assistance to make connection, and we will not unreasonably prevent or impede you from connecting.
- (4) Once we approve you generator, meters and Connection Assets for connection you must not modify them in any way that could materially alter their performance without our written approval. We will not withhold our approval unreasonably.
- (5) If you do modify your generator, meters or Connection Assets in such a way that could materially alter their performance without our approval we reserve the right to physically disconnect your generation from our Network until:
 - (i) You restore it to the performance levels that you were granted approval for, or
 - (ii) We are satisfied that it will not cause any operational problems or damage to our Network or to our other customers.

(30) Disputes

- (1) If you dispute any aspect of this Agreement, you must notify us in writing setting out the precise nature of your dispute – you must not simply abandon your obligations to us. Similarly we will advise you in writing if we dispute any aspect of this Agreement.
- (2) When such a dispute arises we will work with you in the utmost good faith to resolve the dispute together. In particular neither you nor we will unreasonably stall any process of dispute resolution.

- (3) If neither you nor we can resolve the dispute it will be referred to an independent mediator appointed by the president of the nearest District Law Society. If the president is not independent in this matter, an independent mediator will be appointed by the president of the next nearest District Law Society.
- (4) If mediation does not resolve the dispute, the dispute shall be referred to an arbitrator appointed by the president of the nearest District Law Society. If the president is not independent in this matter, an independent mediator will be appointed by the president of the next nearest District Law Society. The arbitrators' decision shall be binding on you and us.
- (5) The costs of settling the dispute (including any legal or other costs) will be met by whoever is judged to have been in the wrong.
- (6) Disputing any aspect of this Agreement shall not relieve either your or us of any other obligations under this Agreement.

(31) Duration of Agreement

- (1) This Agreement shall commence on the date that you and us execute the Agreement.
- (2) Subject to both you and us fulfilling our respective obligations and not doing anything that allows for this Agreement to be terminated, this Agreement shall terminate on [insert date].
- (3) You can terminate this Agreement prior to the above date by giving us six months notice. We may require you to reimburse us for any costs (such as, but not limited to, Connection Assets) that we expected to recover over the agreed duration of the Agreement but will not be able to do so because of termination.
- (4) Similarly we can terminate this Agreement prior to the above date by giving you six months notice.

(32) Review of Agreement

- (1) Either you or we can request a review of any term or terms of this Agreement other than the terms that are subject to regular review.
- (2) The review shall be initiated by a written request which shall be acknowledged within 5 business days.
- (3) You and us shall use the utmost good faith to reach agree on the terms under review.
- (4) If you and us cannot reach agreement on the term to be reviewed within 30 business days, the matter shall lapse and shall not be considered grounds for dispute under the dispute resolution procedures in this Agreement.
- (5) None of the above clauses limit our right to initiate a review of the technical and operational aspects of your connection at any time in response to the needs of our Network or to regulatory requirements. In such a case you must accept any reasonable changes to your connection standards that we direct.

(33) Purchase of generated energy

- (1) Because we are prohibited from trading energy by the Act, you must have an agreement in place with an energy retailer for the purchase of all the energy you will generate. This must be a retailer that has a *Use of System Agreement* with us.
- (2) If you wish to trade your surplus electricity exported into our network, you can either:
 - (i) enter into an agreement with a trader trading on our network;
 - (ii) sell the electricity directly to the clearing manager; or
 - (iii) gift the electricity to the electricity market
- (3) You may consider negotiating selling your export quantities to the trader that retails electricity to the premises your distributed generation is located. If it declines to enter into an arrangement for this purpose, you will need to
 - (i) seek an arrangement with another trader
 - (ii) persuade the current trader to gift your surplus electricity to the electricity market
 - (iii) become the trader for the ICP the distributed generation is connected to and sell the electricity to the clearing manager; or
 - (iv) modify the distributed generation so that it does not export electricity (e.g. by controlling the distributed generation or introducing storage batteries)
- (4) The Code requires distributed generators to notify the reconciliation manager if they will not receive payment for any electricity they export to the distribution network. As an example, you might choose not to be paid for any electricity generated if the costs of metering charges outweigh your profits from exporting electricity.
- (5) If you opt to sell electricity to the clearing manager, you come within the definition of "trader" in the Code. Traders must
 - (i) register and be certified as reconciliation participants
 - (ii) comply with the relevant parts of the Code, including those for switching, metering, trading and reconciliation¹
 - (iii) ensure that there is a metering installation at the ICP to measure all electricity conveyed

(34) Metering installation requirements for exporting electricity

- (1) If you wish to export the electricity from your distributed generation into our network, you will need a metering installation that meets the following requirements.
- (2) The metering installation at the point of connection between your premises and our network must have import/export and active/reactive metering if it:

¹ Parts 10 (Metering, 11 (Registry), 13 (Trading), and 15 (Reconciliation) of the Code

- (i) is a category 2 (or higher category) half-hour metering installation²
 - (ii) was certified after 29 August 2013
 - (iii) is to be used for measuring and recording consumption and generation
- (3) Although it is not required in the Code, we may still, in our connection and operation standards, require you to have a category 1 metering installation if you are gifting the electricity
- (4) The Code requires a category 2 (or higher category) metering installation to have export reactive metering in addition to the other metering requirements under the Code if:
- (i) A distributed generator with a category 2 (or higher category) metering installation intends to gift its surplus electricity
 - (ii) The category 2 (or higher category) metering installation was certified after 29 August 2013

² Table 1 of Schedule 10.1 of Part 10 of the Code details metering installation characteristics and associated requirements

Execution

Signed for and on behalf of Electra Ltd

Signature _____

Name _____

Designation _____

Date _____

Signed for and on behalf of Generator

Signature _____

Name _____

Designation _____

Date _____

Witnessed by

Signature _____

Name _____

Designation _____

Date _____

Schedule 1 – Connection Assets

(1) Connection Assets owned by us

(2) Connection assets owned by you

(3) Point of demarcation

The point of demarcation between your assets and our assets shall be [insert unique identifier such as fuses on pole ###]

Schedule 2 – Technical specifications

(1) Maximum power output (must be above 10kW in total)

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

(7) Voltage waveform

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.

Our load control frequency (270 Hz): no greater than 5% of the mains voltage

(9) Power factor limits

Leading: _____

Lagging: _____

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

Over speed limit: _____

Under speed limit: _____

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

Over frequency limit: _____

Under frequency limit: _____

Schedule 3 – Connection charges

Please ensure you have read the document "Basis of charges for connecting generation".

All charges and rebates are deemed to be exclusive of GST and prior to any prompt payment discount.

Price component	Charge	Charging unit
Our connection charge.		\$/month
Our connection assets charge.		\$/month
Our location charge.		\$/month
Our power factor charge (for all kVAr over and above 0.95 leading or lagging).		\$/month
Our inability to reclose charge.		\$/month
Additional charges for activities such as network switching, engineering design or technical studies.		Total
Additional charges to compensate for any sub-optimal network configuration.		\$/month
Transpower connection charge.		\$/month
Transpower interconnection charge.		\$/month
Transpower system operator charge.		\$/month
Electricity Commission levies		\$/month