

[GV\_AUTH\_OFFICER]  
[GV\_NAME\_LINE]  
[GV\_ADDRESS\_LINE1]  
[GV\_ADDRESS\_LINE2]  
[GV\_ADDRESS\_LINE3]  
[GV\_ADDRESS\_LINE4]  
[GV\_ADDRESS\_LINE5]

Date: [GV\_ISSUE\_DATE]  
Job No: [GV\_NOTIFNUM2]

**Re: Connection to the Electricity Distribution System at [GV\_SINGLE\_LINE\_ADDR PREM]**

Dear Sir/Madam,

Following recent correspondence regarding connection to the Electricity Distribution System, I enclose a Standard Connection Agreement No.XXXXXXXX (the "Connection Agreement") (two copies) for your consideration. Also enclosed is a copy of ESB Networks Ltd 'General Conditions for Industrial and Commercial Customers and Generators to the Distribution System' (the "General Conditions") which also apply.

The Connection Agreement is standard with a small number of site-specific details. These are highlighted in the explanatory notes below. It is important that these satisfy the Customers requirements.

**ESB Networks Ltd. cannot schedule work until a signed Connection Agreement is returned and contribution is paid as detailed below.**

Confirming the Site Specific Details:

*Company*

*Address* -Please confirm that the Registered Office Address given below is correct.

*Schedule 1* -Please check that the *Maximum Import Capacity* and/or *Maximum Export Capacity* levels are satisfactory to the Customer.

*Schedule 1* -Please confirm the contact name and telephone number.

*Schedule 2* -Please provide the name and position the people to whom the Customer wishes us to send any notices.

*Signature* -The signature of the director representing the Customer is required.

The **Maximum Import Capacity (MIC)** is the maximum capacity that the Customer can import from the Distribution System. Secondly (where relevant), it forms the basis of capacity charges in the Customer's electricity bill,. The **Maximum Export Capacity (MEC)** is the maximum capacity that the Customer can export to the Distribution System. MIC and MEC are measured in kilo Volt Amperes (kVA). Where relevant the MIC and MEC are subject to use of system charges.

I would encourage the Customer to read the enclosed Agreement and if the Customer is satisfied with it, return an executed copy and payment, to the details attached.

This Agreement is made between **ESB Networks Ltd.**, having its registered offices at Clanwilliam House, Clanwilliam Place, Dublin 2 (hereinafter called the “Company”); and **[GV\_NAME\_LINE]** whose registered office is at **[GV\_SINGLE\_LINE\_ADDR]**, (hereinafter called the “Customer”).

Based on the information and load schedule submitted with the Customer’s Application and the Assumptions set out in Clause 12, the Company is pleased to offer the Customer a connection with a Maximum Import Capacity of **[GV\_MIC\_KVA]**kVA and/or Maximum Export Capacity of **[GV\_MEC\_KVA]**kVA subject to the following conditions

**1.0 Principle Components of the Offer:**

- 1.1 Maximum capacity at this location does not exceed the MIC and/or MEC as specified in Schedule 1 of the Connection Agreement.
- 1.2 This offer lapses on the date specified in Clause 3.0 below. The offer is in current money. Any outstanding balance on the Capital Contribution shall be adjusted on the first business day of each calendar year from the year of offer issue and in accordance with **Consumer Price Index**.

The Customer is required to:

- 1.3 Provide full payment of a Capital Contribution of € **[GV\_CC\_TOT]** inclusive of € **[GV\_CC\_VAT]** VAT at the time or times set out in clause 5.0 of this Quotation Letter.
- 1.4 Pay the Operation and Maintenance Charges (O&MC) as specified in Clause 5.2 of this Quotation Letter on a yearly basis from Connection Agreement Effective Date.<sup>1</sup>
- 1.5 Return a signed copy of the attached Connection Agreement and the Interface Undertaking together with Capital Contribution as outlined in Clause 5.0 of this Quotation Letter
- 1.6 Post a capacity bond at the Third Stage Payment as set out in Clause 5.1 of this Quotation Letter,
- 1.7 provide evidence of a current TUoS Agreement<sup>2</sup> with the TSO where the MEC (as defined in schedule 1 of the Connection Agreement) is 5000kVA or greater,
- 1.8 *(If applicable)* provide a Terminal Sub-Station to ESB specification and transfer to ESB for a nominal fee of €1.00 together with good title to the sub-station and the sub-station site, together with all necessary Consents in respect thereof without limitation including easements for cable/duct routes as detailed in Undertaking and Indemnity (see Appendix 1, Connection Agreement), in advance of the Connection Agreement Effective Date.
- 1.9 Submit an **Electro Technical Council of Ireland** wiring certificate or declaration of fitness (where applicable) prior to the Connection Agreement Effective Date (as defined in the General Conditions).

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<sup>1</sup> O+M charges are typically invoiced at the start of the year. However where energisation is effected during the year a pro-rata charge of the annual charge will apply

<sup>2</sup> This Agreement sets out the terms and conditions upon which the TSO and the User have agreed in relation to the use by the User of the Transmission System.

Please note by signing and returning the Connection Agreement, the Customer also agrees to be bound by the Undertaking and Indemnity Clauses (see Appendix 1, Connection Agreement).

## **2.0 The Company's Offer:**

This Quotation Letter together with the Connection Agreement between the Company. and the Customer form the Company's offer for connection to the Electricity Distribution System. However, in the event of any inconsistency between this Quotation Letter and the Connection Agreement or the Distribution Code, insofar as any inconsistency exists, the Connection Agreement or the Distribution Code, as appropriate, prevails except insofar as payment rights of the Company are concerned.

## **3.0 Acceptance of Offer:**

This offer is valid until [[GV\\_Q\\_VALID\\_TO](#)]<sup>3</sup>. After this date, this offer including the Agreement, if not so accepted by the Customer, will lapse unless otherwise agreed in writing between the Parties. This offer may be accepted by returning the following Acceptance Requirements to the Company:

- 3.1 The Connection Agreement duly executed and made effective by compliance with the conditions precedents to the Connection Agreement listed in Part 1 of Schedule 3 of the Connection Agreement.
- 3.2 Payment of the First Stage Payment (including all applicable VAT) in accordance with Clause 5.0.
- 3.3 (where applicable) Power Quality Data, (see clause 18.0).
- 3.4 (where applicable) Declaration of Independence from Contiguous Wind Farms (see clause 20.0).
- 3.5 Where the MEC is 5MW or greater evidence of a current TUoS Agreement with the TSO .

(hereinafter referred to as 'the Acceptance Requirements')

The Company's Connection Works **cannot** be scheduled until the above acceptance requirements are completed. Where the applicant is being processed as part of a group and some or all of the connection assets are shared with other applicants the Company's Connection Works **cannot** be scheduled until acceptance requirements are complete for all parties sharing the assets, or offers issued to these parties have lapsed.

## **4.0 The Method of Connection and Works programme:**

- 4.1 Notwithstanding anything in the Agreement to the contrary and without limiting any other obligations of the Customer, the provisions which refer to the carrying out of the Connection Works are in all respects conditional on and subject to the Company being satisfied that:-
  - 4.1.1 The Acceptance Requirements set out in Clause 3.0 above have been met;
  - 4.1.2 The Customer has furnished evidence that the necessary planning permissions for the relevant Connection Works have been obtained;
- 4.2 The Customer has paid any outstanding Charges due to the Company.

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<sup>3</sup> In the event that the connection is subject to transmission deep reinforcements (see Statement of Transmission Works and Firm Access Quantities) then the offer is valid as per the date above, or 50 business days after the constraint information is issued by the TSO.

**[Z008]**

The 'Planning Permission Date' is the date on which the planning permissions necessary for the Connection Works have been achieved, scope of work designs have been completed and invoice for second stage payment has been issued.

'Scheduled Planning Permission Date' is the Company's estimate of the date that the 'Planning Permission Date' may be achieved. .

The "Shallow Works Completion Period" is the time period from the date of receipt of the Second Stage Payment from all group members to when shallow construction works are expected to be complete. Please note this time period is indicative only

The "Deep Works Completion Period" is the time period from the date of receipt of Second Stage Payment from all group members to when deep Transmission works are expected to be complete. Please note this time period is indicative only

The timescales and periods provided are expected amounts provided for the Customer's benefit in financial planning for their generation facility and for Company Termination rights (see Clause 19.0) and in no way form a firm commitment by the Company to commit to these as part of the Connection Works.

The Company reserves the right at any time to change the method of connection as outlined in Clause 4.0 of the Quotation Letter for any reason and assuming the Company is acting in accordance with Good Industry Practice where there are no adverse changes in the Connection Charges.

Where there is a resulting reduction in cost attributable to the Customer, the Company's refund policy, as set out in the Joint TSO/DSO Group Processing Approach Pricing Principles Guidelines (as may be amended from time to time), will apply.

The TSO deep reinforcements associated with this project, if any, are as outlined in the published Statement of Transmission Works and Firm Access Quantities, which can be found on the TSO website at [www.eirgrid.com](http://www.eirgrid.com). Please note that these works – which are subject to change from time to time - are required to be completed before the Customer's Facility has firm access to the Transmission System.

**[Z008A]**

**5.0 Connection Charges:**

The list of Connection Charges<sup>4</sup> are specified below.  
Explanation of these charges is detailed in Schedule 1 of the General Conditions.

**Bonds / Ongoing Charges**

Type of Charge	Amount before VAT €	VAT €	Total €
Operation and Maintenance Charge (O&MC) <sup>5</sup>		]	

<sup>4</sup> For a breakdown of charges please refer to the current approved version of the Standard Pricing Approach for Connecting Renewable Generators to the Distribution Network or where applicable, Charges for Connection to the Distribution System.

<sup>5</sup> The O&MC charge includes the rates element of [RATES\_ELEM]€ excl VAT

Distribution Assets	[GV_OGSC_NET]	[GV_OGSC_VAT]	[OGSC TL]
Transmission Assets <sup>6</sup>			
Capacity Bond	N/A	N/A	[CAP BOND]

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**Capital Contribution (as set out in Appendix 2).**

Type of Charge	Amount before VAT €	VAT €	Total €
Identified connection costs	[GV_CC_NET]	[GV_CC_VAT]	[GV_CC_TOT]
Pass Through Costs identified to date	To be advised	To be advised	To be advised
<b>Total Capital Contribution</b>	<b>[GV_Q_TOTEXCL]</b>	<b>[GV_Q_VATAMT]</b>	<b>[GV_Q_TOTINCL]</b>

The payment schedule is as follows:

1. **First Stage Payment:** In accordance with CER/09/138 an initial non-refundable payment on acceptance of the Connection Agreement being the greater of (a) or (b) below:

- (a) 10% of the Capital Contribution (including any estimated pass through costs at date of offer issue), or
- (b) the lesser of €10,000 per MW of MEC or 50% of Capital Contribution (including any estimated pass through costs at date of offer issue).

("the First Stage Payment")

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**2. Second Stage Payment:** A second payment such that together with the first stage payment the combined payments total 65% of the required Capital Contribution including any known estimated Pass Through Costs. This payment is due within thirty business days of request for payment and must be made before construction of the Company's Connection Works begins. ("the Second Stage Payment")

**3. Third Stage Payment:** A third payment such that 90% of the required Capital Contribution (including any identified Pass Through Costs) has been recorded post third stage payment. This payment is due within thirty business days of request for payment and one calendar month before the Connection Agreement Effective Date ("the Third Stage Payment")

**4. Final Stage Payment** the balance of the Total Capital Contribution (including any outstanding Pass Through Costs, any refunds due to other developers, the Distribution Use of System (DUoS) Customer or the Grid Upgrade Development Programme (GUDP) fund) when applying for data validation and before export data is sent by the Company to Single Electricity Market Operator (SEMO) for payment. ("Final Stage Payment")

For a full breakdown of Capital Contribution, please see Appendix 2 of this Quotation Letter. For First Stage Payment required please see the attached Payment Request.

**5.1 Bond(s)** (where applicable):

In accordance with CER/09/138, in addition to the Capital Contribution set out above, the Customer with an MEC greater than 5MW is required to provide a Capacity Bond (see Appendix 2 herein for amount) at the Third Stage Payment before Commissioning and Energisation or two [2] years from the start of the construction of the Shallow Connection Works whichever is the earlier provided always that the Customer who does not post the necessary bond will not be Energised. Subject to section 5.7.8 of CER/09/138, the format of the bond will be as prescribed by the Company based on the agreed MEC (reference Schedule 1, Connection Agreement and Clause 8 of the General Conditions). The Capacity

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<sup>6</sup> The Facility is also liable for O&M charges on any transmission assets which are part of the Connection Charges.

Bond will be returned in full provided the Customer reaches a minimum of 95% of agreed MEC within one year of its Connection Agreement Effective Date and achieves an Operational Certificate within 12 months of its Connection Agreement Effective Date.

In the event that the Customer:

- (a) fails to export at least 95% of its contracted MEC within one year of its Connection Agreement Effective Date, or
- (b) fails to achieve an Operational Certificate within 12 months of its Connection Agreement Effective Date,

Then:

- (i) A portion of the bond will be drawn down as outlined in CER/09/138 (and as may be amended from time to time), and
- (ii) The MEC will be reset to the level achieved in the Capacity Test.

## 5.2 Operation and Maintenance Charge

**An Operation and Maintenance Charge (O&MC)** is applied to this Connection and payable from the Connection Agreement Effective Date. This charge incorporates maintenance, rates, operations and indirect overheads attributable to maintaining the Facility.

This is an annual charge which is revised annually and approved by the Commission. It covers the average annual operation and maintenance cost the Company will incur over the Term of the Connection Agreement. The Customer and/or any legal successors in title will be responsible for payment in full for the period of connection.

The **O&MC** charge may be recalculated if another Facility is either connected to or disconnected from the connection assets at any time in the future over the Term of this Connection Agreement. A revised **O&MC** charge will apply then and the Company will advise the Customer accordingly.

## 5.3 Pass Through Costs

The Customer is advised that certain costs are pass-through ("Pass Through Costs") from the Company to the Customer who will be responsible for payment in full. The majority of these costs will be determined at the detailed design and construction phases of the Company's Connection Works and will be advised to the Customer at that point. However where feasible an estimate of these costs or information which may allow the Customer estimate the costs, will be provided at offer stage on the basis such estimates or information is not an obligation by the Company to commit to these estimates or information.

Full payment of actual/incurred Pass Through Costs in addition to the balance of the cost of the Company's Connection Works must be provided at the Final Stage Payment. These additional charges include all costs associated with:

- Consents – e.g. costs associated with serving and enforcement of Consents including without limitation costs associated with planning permissions, changes to routes, lock-outs etc.
- Volume changes – where the detailed design gives rise to a longer (or shorter) line route than originally envisaged the associated charge will be adjusted accordingly. In addition any change in the ratio of overhead line to cable will lead to an adjustment

- Forestry – costs associated with forestry compensation.
- Access for material delivery – costs associated with exceptional access requirements for material delivery e.g. use of ATVs, helicopters
- Civil Works – civil works costs of Terminal substations and cable where appropriate.
- Cost of road opening licenses where cable works are undertaken by the Company
- Site Purchase – all costs associated with the purchase of sites required for connection assets
- 110kV cable – all costs associated with 110kV cabling where more than 1km of cable is required
- TSO Pass Through costs – i.e charges imposed by the TSO on the Company which cannot be recovered by the Transmission Asset Owner (TAO). These costs are project specific and are passed directly to the Customer .e.g. the costs of consents, planning permission and wayleaving for the transmission element of the project.

The above list is not exhaustive.

The Company shall, during the course of constructing the Company's Connection Works, use all reasonable endeavours to achieve the solution as specified which is deemed technically acceptable by the Company in the circumstances pertaining at the time using its Planning Guidelines.

On completion of construction but prior to Final Stage Payment:

- if the actual Pass Through Costs incurred by the Company exceed the prepaid estimated costs as aforementioned then the Customer shall reimburse, on a full indemnity basis, the Company for the balance between the prepaid estimated Costs and the costs actually incurred; or
- if the actual Pass Through Costs incurred by the Company are less than the prepaid costs as aforementioned then the Company shall reimburse, on a full indemnity basis, the Customer for the balance between the Pass Through Costs actually incurred and the prepaid estimated costs.

The Company shall as soon as reasonably practical inform the Customer of any variations to the original estimated Pass Through Costs. Once the Final Stage Payment has been invoiced to the Customer and assuming this is paid by the due date, there will be no further charge or rebate to the Customer with respect to these costs.<sup>7</sup> The Company shall use reasonable endeavors to mitigate any increase to the original estimated Pass Through Costs

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<sup>7</sup> Except where due from other Customers as per normal rebating policy

**6.0 Connection Point**

[Z001]

**7.0 Nature of Connection:**

See Schedule 1, Site Specific Details, in the Connection Agreement.

**8.0 Provision of Terminal Sub-Station:**

*[If applicable]* The Customer is required to provide the Terminal Substation.

The location, orientation and facilities assumed for the Terminal Substation Site are as described in Clauses 6.0 and 9.0 of this quotation letter.

**9.0 Customer Site Works:**

[Z003]

**10.0 Metering Facilities:**

[Z004]

**11.0 Relationship between kW and KVA:**

Where relevant kW and KVA values in the Connection Agreement are related to each other by an assumed power factor of 0.95. Please refer to the Distribution Code for variable operational values applicable to the Customer's installation type. This document is available on our website, [www.esb.ie/esbnetworks](http://www.esb.ie/esbnetworks).

**12.0 Assumptions:**

Any change in the Assumptions set out to referred to in the Quotation Letter may lead to a change in

- (1) the Charges,
- (2) the cost of Consents,
- (3) the timing of the connection and/or
- (4) the method of connection.

In the event of such a change an amended Quotation Letter will be issued to the Customer. The effects of such change will be to the account of the Customer.

The Assumptions upon which this Quotation Letter is based are as follows:

**12.1 Information provided by the Customer:**

The provision of the connection and alterations to the Distribution System are based on information as provided by the Customer in the Application, and associated correspondence with the Company, its servants or agents as set out in Appendix 4

Please note that where the application is as per a shortened form NC5A, (reference [www.esb.ie/esbnetworks](http://www.esb.ie/esbnetworks) for where this is allowable) then offer will be based on the form, and data as assumed by System Operators.

Full technical details (in the form of a completed NC5 Form) to be provided to the Company a minimum of one year prior to Energisation. This Connection Agreement is subject to the results of the completed analysis using this data. If a modification agreement based on the outcome of studies carried out using the full application form data is required, it must be accepted at least 6 months prior to first energisation, otherwise first energisation may be delayed. All risks associated with any changes required due to the results of analysis carried out using the submitted data and any associated financial implications are the Customer's responsibility;

**12.2 Maximum Import Capacity and Maximum Export Capacity are not exceeded:** As specified in the Connection Agreement in Schedule 1.

**12.3 Method of Connection:** The Method of Connection is as detailed in Clause 4.0 of the Quotation Letter

**12.4 Conditions of Connection:** Clause 2.0 in the Connection Agreement specifies the conditions required prior to Energisation.

**12.5 Influencing Connections:** The offer made to the Customer by the Company may be one of a number of offers that have been issued to applicants for connection to the Network. The Assumptions in this Quotation Letter may be based on a number of Influencing Connections and amended Quotation Letters may, from time to time, need to be developed and issued by the Company to deal with any changes which may arise from a failure of the Assumptions.

The assumption upon which this Quotation Letter is based is that the Influencing Connections accept their respective connection offers and proceed with the design, construction, completion and commissioning of their projects in accordance with the terms of their respective connection agreements;

[Z004B]

In cases where Connection Works are required, the following Assumptions shall also apply:

**12.6 Network Connection Route:** This Quotation Letter is based on line and/or cable designs, routes and lengths as assumed by the Company, or as advised by TSO. This lengths and routes are not based on a detailed design and as such can change. As set out in clause 5.3 any increase in costs as a consequence of these changes is a pass through cost.

This Quotation Letter is based upon the Terminal Substation site location as set out in the Customer's Application or as amended (see Appendix 4).

**12.7 Consents:** The provision of the connection is contingent upon acquisition of all necessary Consents and the full compliance by the landowners with the terms of such Consents,

[Z005]

**12.8 Commencement of Works:** It is assumed that the Company's Connection Works will be carried out during normal working hours

**12.9 Connection Works:** the installation of all Company and Customer Distribution and Transmission System plant will be in accordance with the Company's and TSO's standard designs.

**12.10 Line or Cable Route and Ground Conditions:** reasonable line or cable routes and ground conditions and no unreasonable restrictions placed on the Company for working hours or other restrictions by third parties. For the avoidance of doubt, reasonable ground conditions excludes ground conditions that require explosives or specialised equipment for their removal, stabilisation or draining and /or involve the re-routing of other services. Please note that this list of conditions deemed to be unreasonable is not exhaustive.

**12.12 Delivery Dates:** The Company will endeavour to carry out the Companies Connection Works as expeditiously as possible and in accordance with the timelines provided in Clause 4.0. Major material requirements will be ordered in accordance with supplier lead times for delivery in line with the programme. However, the actual time taken to execute the Connection Works could be affected by any delays associated with the procurement of plant and equipment, which are outside the Company's control.

**12.13 Alteration to the Network:** No alterations to the Network will be necessary for the connection of this project other than those set out in this Quotation Letter

**12.14 Special Requirements:** Please refer to Appendix 3 of this Quotation Letter

**12.15 Soft start:** Each generator is equipped with a 'soft start' mechanism to limit the inrush current to one times the full load rating.

**12.16 Distribution and Grid Codes:** The Distribution and Grid Codes, in their most up-to-date forms, apply to all Parties connected to or in the process of connecting to the Distribution System. The testing and verification of Distribution Code compliance will be carried out by the Company, prior to the project's scheduled Operational Date. Grid Code compliance testing will be carried out by the TSO or their agents

**12.17 Dynamic Model:** Dynamic simulations have not been carried out prior to offers issuing in Gate 3. The terms of this offer and timescales indicated are subject to the Customer providing the Company with the most up to date dynamic model available to them, representing the wind turbines specified in the Application, no later than 120 business days prior to the Customer's advised date of commencement of Commissioning. The dynamic model must be in compliance with the Planning Code Appendix (PCA.4.10.1) of the Grid Code. All risks associated with any changes necessary to this Connection Agreement, arising from the results of the TSOs dynamic simulation studies are to be borne by the Customer. The Customer also accepts that any associated financial implications, arising from the results of the TSO's dynamic simulation studies are at the Customer's risk. For the avoidance of doubt, the Facility will not be Energised until the required dynamic simulation studies with the "compliant" dynamic model have been completed by the TSO and the appropriate remedies required to address any stability issues arising from the connection of the Facility have been implemented;

**12.18 Firm/Non Firm Access:** The Company's offer is for firm access to the Electricity Distribution System. However prior to Energisation the following works must be complete :

- Distribution shallow connection works
- Distribution deep reinforcement works
- Transmission shallow connection works and

- Transmission deep reinforcement works required for short circuit level reasons (please refer to Clause 4.0)

In addition before the customer can avail of firm transmission access, Transmission deep reinforcement works (as set out in the Statement of Transmission Works and Firm Access Quantities) must be complete.

In the event that the project for which this offer is being issued is a renewable plant, it is assumed that the Facility is not subject to the Firm/Non-Firm Direction<sup>8</sup>. It is however assumed that the Facility is subject to the Non-Firm Renewables Direction.<sup>9</sup> In the event that the development for which this offer is being issued is a peaking plant, it is assumed that the Facility is subject to the Peaking Plant Direction<sup>10</sup>.

[Z019B]

### 13.0 Single Electricity Market Operator (SEMO):

In accordance with the Trading and Settlement Code an entity has to be both registered as a 'party' and a 'participant' before they can effectively trade in the wholesale market. These registration processes can take up to 60 business days. The Customer must submit a completed party accession and fully complete a participant notification pack at least 60 business days prior to Energisation should the Customer wish to trade in the wholesale market. For the avoidance of doubt, in the event that the Customer plans to trade in the wholesale market, the Facility can not be Energised until the Trading and Settlement Code registration processes have been fully completed and an Connection Agreement Effective Date for trading is issued by SEMO.

Generators with either, an MEC less than 10 MW or who have entered into an intermediary agreement in accordance with the Trading and Settlement Code, may also trade outside of the wholesale market through a power purchase agreement. To avail of this option, the Customer must submit a completed registration form to the Meter Registration System Operator at least 20 business days prior to Energisation.

### 14.0 Transmission Deep Reinforcement Works:

#### 14.1 Varying levels of reduced output:

Should the Customer wish to avail of non-firm access to the Transmission System (prior to completion of transmission deep reinforcement works as set out in the Statement of Transmission Works and Firm Access Quantities) then they may do so under the following conditions:

1. the Customer must indicate this to the Company at time of acceptance. The Customer can indicate this in the space provided in the Connection Agreement when signing.
2. all shallow works to be completed prior to export,
3. Distribution System deep reinforcements works to be completed

<sup>8</sup> Firm/Non Firm Direction means the Commission's Direction 01/72 on "Firm and Non-Firm Access to the Transmission System dated 19 June 2001 as may be amended from time to time.

<sup>9</sup> Non-Firm Renewables Direction means the Commission Direction 05/107 on "Renewable Connection Offers and Transmission Reinforcement Works dated 8 July 2005 and as may be amended from time to time.

<sup>10</sup> Peaking Plant Direction means the Commission Direction on "Short-term Peaking Generation Connection Offers" dated 17 October 2005 and as may be amended from time to time.

4. short circuit driven deep Transmission works to be completed,
5. all necessary constraint and dispatch equipment is installed and paid for as specified by the relevant System Operator in accordance with the relevant Grid Code Clause . Such equipment to be designed and operated in accordance with requirements of the Company or the TSO such that output is controllable by the relevant System Operator.
6. the Customer accepts that the Facility may be subject to varying levels of reduced output without compensation
7. the Customer agrees to operate their Facility during this period in accordance with whatever constraints are imposed by the relevant System Operator and to waive any claim cost or expense howsoever arising for compensation or loss of output due to such curtailment.
8. An estimate of the levels of reduction will be as set out in Constraints Reports.

#### **15.0 Payment of Charges:**

**15.1** Any costs and expenses arising under this Quotation Letter are governed by the terms of the General Conditions, and will be payable by the Customer on receipt of the Company's invoice for the same in accordance with Clause 3.0 of the General Conditions, where not already provided for herein.

**15.2** In issuing any amended Quotation Letter in the circumstances outlined in 12.0 above, the Company will advise the Customer of revised Connection Charges. The Customer's obligation to pay on the basis of an amended Quotation Letter includes an obligation to top-up the Connection Charges then extant within fourteen (14) Business Days of receipt of an amended Quotation Letter.

#### **16.0 Facility Requirements**

Notwithstanding anything in the Agreement to the contrary and without limiting any other obligations of the Customer, the provisions which refer to the Customer's connection shall be in all respect conditional on and subject to, inter alia, to the Company being satisfied the Facility meets the following:

**16.1 General Requirements:** The conditions set out in the following documents must be met:

- Conditions Governing Connection to the Distribution System (applicable to Connections at MV and 38kV and Embedded Generators at LV, MV and 38kV)
- Distribution Code ([www.esb.ie/esbnetworks](http://www.esb.ie/esbnetworks))
- Grid Code ([www.eirgrid.com](http://www.eirgrid.com))
- General Conditions for Connection of Industrial and Commercial Customers and Generators to the Distribution System

#### **16.2 Metering, Supply Monitor and SCADA Telecommunications' Requirements:**

- Metering: To facilitate metering of the Facility, the Customer will be required to provide a dedicated dial-up telephone line to ESB's metering point in the event that the equivalent GSM (Global System Mobile) solution is not feasible, due to GSM coverage deficiencies.

- Power Quality Monitor: To monitor and record real-time data associated with power flows, power quality and event status. For remote interrogation purposes, the Customer will be required to provide a dial-up telephone line to this monitor. This telephone line must have a minimum baud rate of 28 kbits/second.

Please note that it is the Customer's responsibility to provide, install and maintain these telephone links throughout the term of this agreement (including all line isolation equipment necessary for the connection). Eircom specification 'TS04.1' details the line isolation equipment and procedures required.

### 16.3 SCADA Requirements:

Both the Company and the TSO may have SCADA requirements. For more detailed information, please see Appendix 1 of this Quotation Letter.

### 16.4 [Z019A]

### 17.0 Distribution Loss Adjustment Factors

The distribution loss adjustment factors that are applicable to your site at time of quotation, based on the connection method detailed in Clause 4.0 above are:

Day-time	Night-time
[GV_DLF_DAY ]	[GV_DLF_NIGHT]

General Distribution Loss Adjustment Factors that form a component of these site-specific values change on a yearly basis as approved by CER. Modified site-specific loss adjustment factors will also arise in the event of situations such as the following arising:

- 17.1 Expansion in generation capacity at this site (assuming this is feasible)
- 17.2 Another generator Facility utilising a common part of the local Electricity Distribution System.

### 18.0 Power Quality Data

**The X, Y and Z values for this connection method are:**

[Not Applicable for this Quotation]

OR

[z019c]

X – [GV\_PQ\_X] ohms

Y – [GV\_PQ\_Y] ohms

Z – [GV\_PQ\_Z] kV

As set out in clause 3.0 herein, the Customer is required to provide:

18.1 Calculations sheet showing the flicker contribution ( $P_{st}$  and  $P_{10}$ ) from the generator at system impedance of  $\mathbf{X} + j\mathbf{Y}$  ohms (referred to  $\mathbf{Z}$  kV).

18.2 Calculations sheet demonstrating the level of harmonics for individual harmonic orders (2-50) from the proposed generator at system impedance of  $\mathbf{X} + j\mathbf{Y}$  ohms (referred to  $\mathbf{Z}$  kV).

### 19.0 Additional termination rights and longstop dates

- 19.1** In addition to the termination rights set out in Clause 16.0 and 17.0 of the General Conditions for Connection, the Company shall be entitled to drawdown the balance of the Bond referred to in Clause 5.1 and to terminate the Agreement and De-Energise the Customer by giving 7 days prior written notice of termination to the Customer upon the occurrence of any of the circumstances set out below (19.2, 19.3, 19.4 and 19.5) unless the delay was caused solely and directly by the Company's acts or omissions. Upon expiry of such notice the Agreement shall have no further effect and the Customer shall have no entitlement to any compensation whatsoever for such termination,
- 19.2** If Connection Agreement Effective Date has not been achieved and all of the Consents (including without limiting the generality of the foregoing, satisfactory and effective access), have not been obtained by the Company or the Customer within 18 months of the Scheduled Connection Agreement Effective Date
- 19.3** If post-energisation a dispute arises in relation to Consents which had not been obtained
- 19.3** if the Connection Agreement Effective Date cannot be achieved within 18 months of the Scheduled Connection Agreement Effective Date
- 19.4** If Planning Permission Date has not been obtained by the Scheduled Planning Permission Longstop Date. The Scheduled Planning Permission Longstop Date will be 36 months after the Scheduled Planning Permission Date.
- 19.5** If the Customer fails to achieve its Operational Certificate within 48 months of the Connection Agreement Effective Date

In the event of a dispute the dates above may be revised as directed by the Commission.

**20.0 Independence of Contiguous Facilities (applicable to wind-based generator facilities)**

A Wind Farm Power Station ("Wind Farm") will be deemed to be unrelated to and independent of the other Wind Farms already present in a Contiguous Wind Farm Site (as defined in the Distribution Code) ("Independent Wind Farm") if:

- 20.1** The Customer, where a body corporate, is not a related undertaking of another Wind Farm already present in the Contiguous Wind Farm Site or in respect of which an application for a Connection Agreement has been made to the Company or the TSO;
- 20.2** No person or body corporate holding 50% or more of the equity or voting rights in the Customer is a person connected with any person or body corporate holding 50% or more of the equity or voting rights in another Wind Farm present in the Contiguous Wind Farm Site ("Connected Person").

**21.0 Ongoing Obligation.**

Any change to the ownership of the Wind Farm or to the voting rights in respect of it, which would have the effect of changing the independent status of this generator (as stated in declaration of Independence from Contiguous Wind Farms) must be notified to the Company.

Should it be established to the satisfaction of the Company that a Wind Farm who have previously declared themselves independent from contiguous Wind Farms is no longer an Independent Wind Farm, the Company may at its sole discretion, require the Customer to undertake or pay the Company for such works or such measures for the benefit of the

Distribution and/or Transmission system as would have been required in respect of the combined Wind Farms present on the relevant Contiguous Wind Farm Site if the relationship of the Customer or its shareholders to any other Wind Farm or its shareholders present on that Contiguous Wind Farm Site had been declared prior to the construction of the relevant connection works, and the Company may de-energise the Customer until such time as these works are complete.

If you have any queries in relation to the details of the connection, please contact ESB Networks Ltd (for contact details see below). Payment should be made by PO/Draft/Cheque only, payable to "ESB Networks Ltd". On receipt of your acceptance (including signed Agreement and full payment of Capital Contribution) the necessary works will be authorised and passed to the relevant Project Leader. Should you wish to discuss the work programme, they can arrange to meet you or your representative on site. For contact details see below.

**[Z013]**

Please return all documents, specified in clause 3.0 above, to *ESB Network Ltd, c/o PO Box 29, Garrycastle, Athlone, Co. Westmeath*. ESB Networks Ltd. can be contacted by telephone at (lo-call) 1850-372-757, or by email [dsogenerators@esb.ie](mailto:dsogenerators@esb.ie).

If you are not satisfied with the terms offered and an agreement with ESB Networks Ltd. cannot be reached within a reasonable period either party may request determination of any of the terms or conditions by referring the matter to the Commission of Energy Regulation.

We look forward to hearing from you.

**Yours faithfully,**

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For ESB Networks Ltd.

Enclosures:                      Connection Agreement (and Interface Undertaking)  
    General Conditions relating to Connection  
    Payment Request  
    Declaration of Independence from Contiguous Windfarm sites  
    Constraints Report (if available at time of offer issue)

## **APPENDIX 1 – SCADA REQUIREMENTS**

**[Z011]**

## **APPENDIX 2 – CAPITAL CONTRIBUTION BREAKDOWN**

**[Z012]**

**APPENDIX 3 - SPECIAL REQUIREMENTS –  
[Z006]**

Statement of Deep Transmission Works

#### **APPENDIX 4 – LIST OF APPLICATION DOCUMENTS AND CORRESPONDENCE**

- Application Form dated.....
- Terminal Sub-Station Site Location details.....
- Other relevant correspondence
  - Letter/email dated....
  - Letter/email dated....

**APPENDIX 5 – ASSUMED DATA (Where applicable)**  
**[Z021]**