Appendix 3.4

ESB Networks Feasibility Study (D/47/6043/1064)

3.2 ESB Networks Feasibility Study

Claire Downey

4th Floor,

Block 1,

West Peir Business Campus,

Old Dunleary rd,

Dun Laoghaire,

Co. Dublin.

11/05/2015 Reference: D/47/6043/1064

Re. Proposed new 21MW generator at Ringaskiddy Co. Cork

Dear Claire,

As requested a study was undertaken by ESB Networks to investigate the feasibility of installing a new waste to energy generator at Ringaskiddy Co. Cork. The following connection method has been studied for the proposed generator at 179071E 064239N.

1. The Maximum Export Capacity (MEC) of 21MW can be accommodated via a connection at 38kV. This connection would consist of a full ESB Networks 38kV compound at the generator site and 0.25km of 630XLPE underground cable. This would be a tee into the existing Loughbeg 38kV ex Barnahely 110kV circuit.

   Annual Operation and Maintenance (O&M) charges will apply to operate and maintain the connection.

   Import/Export metering is required for this arrangement together with additional protection and power quality metering both to be installed in the generator substation building. EGIP will apply at the ESBN-Customer interface.

Estimated cost for 21MW connection

Cer Description	Unit Gross Cost	Qty.	Gross Charge
38kV cable (630XLPE) (Aluminium)	127,740	0.25	31,935.00
38kV meter and Power Quality	58,060	1	58,060.00
Embedded Generation Interface Protection (EGIP) for 38kV connection.	44,870	1	44,870.00
ESB Networks compound with over the fence connection to developer – underground connection	323,430	1	323,430.00
38kV cable end mast	46,450	1	46,450.00
Sub-Total			504,745.00

Notes

Please note that this feasibility study is not a binding connection offer. This means, the connection method as well as the connection costs can change in a subsequent grid connection application. Also, a feasibility study does not "reserve" a position in the grid application queue. This means that other generators that apply for a grid connection in the meantime might use up the network capacity which was assigned to the generator in the feasibility study.

Proposed connections will also have to be assessed for transmission implications by Eirgrid. The capacity levels stated above may not be available without transmission system reinforcements.

The proposed connection may also be subject to, inter alia, your Generator Scheme meeting the conditions in the following documents, which are available on request.

(i) Distribution Code
(ii) Grid Code
(iii) Conditions Governing Connection to the Distribution System.
(iv) General Specification for MV Substation & Metering Switchroom Buildings (Spec 13320)

At the site, two adjoining 38kV compounds will be constructed. One compound shall comprise, a Control Room, 38kV Distribution System line disconnects, 38kV revenue metering CT-VT's, protection CT-VT's, 38kV Circuit Breaker and Customer interface disconnects. Where these assets are built contestably, upon satisfactory completion, these assets may be transferred to the ownership of the ESB (as the DAO), and be operated by the Company.

The second compound shall contain the Customer's equipment. The connection to the facility shall terminate on either the customer's transformer 38kV terminals or if present, the Customer's own

38kV Circuit Breaker, located in the said second compound. The Customer's compound and any 38kV connected plant therein must conform to specifications 'Conditions Governing Connection to the Distribution System: Connections at MV and 38kV Embedded Generators at LV, MV and 38kV'.

The Distribution System 38kV bay shall include a 38kV circuit breaker. Whilst it is the Company's recommendation and preference that the Customer install their own 38kV circuit breaker, in the event that the Customer elects not to do so, the facility for the Customer to access a galvanically separated means of operating a trip coil of the Distribution System 38kV circuit breaker can be made available. Where this facility is availed of by the Customer, it is done at the Customer's own risk. The Company shall not be liable, to the full extent allowed by law, for any damages or loss howsoever arising from the Customer's access or use of the circuit breaker or failure of the circuit breaker to trip or operate.

ESB's network will not always be available to accept the output of the Generator Scheme. Unscheduled network outages may occur due to faults and circumstances deemed dangerous by ESB. Scheduled outages will also be necessary to facilitate network maintenance, network improvements and diversions, connection of new customers, clearance of hazards etc.

Please note that the above response is for your information only and implies no contractual relationship whatsoever. This is not a formal Connection Offer.

If you wish to seek a formal Connection Offer complete and submit an application form. This can be downloaded from the ESB Networks webpage:

http://www.esb.ie/esbnetworks/en/commercial-downloads/NC5.pdf

Please do not hesitate to contact me if you require any clarification on the above.

Yours sincerely,

Conor Molloy
Renewable Planning
Leopardstown Road
Dublin.