

Application for Non-Standard BM Units for Seagreen Offshore Windfarm

Imbalance Settlement Group

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Summary **Seagreen Wind Energy Limited have applied for five non-standard BM Units for the Seagreen Offshore Windfarm. We invite the ISG to approve the application.**

1. Background

- 1.1 Seagreen Wind Energy Limited is developing the Seagreen Offshore Wind Farm. The Wind Farm has three Power Park Modules (PPMs) each consisting of thirty-eight 10MW turbines.
- 1.2 The Measurement Transformers that feed the Meters are fitted to each Power Park String (PPS).
- 1.3 Active power from and to the Windfarm can be controlled at either the Offshore Grid Entry Point (OGEP) for each of the PPMs or at the BM Unit level. Seagreen Wind Energy Limited have stated that the Windfarm is normally expected to be controlled at the three OGEPs (Attachment C).
- 1.4 Seagreen Wind Energy Limited has three Contracts for Difference (CfDs) agreements with the Low Carbon Contracts Company (LCCC) for part of the Wind Farm. The design of the Wind Farm and the arrangement of these CfDs leads to a need for five BM Units which are not complete Power Park Modules. The Wind Farm also has one standard PPM BM Unit and one Standard Demand BM Unit.
- 1.5 The CfD and non-CfD phase split is as follows:

CfD Contract	Phase 1	Phase 2	Phase 3	Non-CfD
BSC Registration	Blue and Amber Stings of PPM2 – BM Unit 4	Gold and Indigo Strings of PPM2 – BM Unit 3	Maroon String of PPM2 – BM Unit 5 Navy String of PPM3 – BM Unit 2	Cyan, Olive, Pink and Lime Strings of PPM 3 – BM Unit 1 PPM1 – BM Unit 6 (Standard) Demand BM Unit (Standard)

2. Non-Standard BM Unit application

- 2.1 Seagreen Wind Energy Limited is applying for five non-standard BM Units: BM Units T_SGRWO-1, T_SGRWO-2, T_SGRWO-3, T_SGRWO-4, T_SGRWO-5 (Attachment A) for Seagreen Offshore Wind Farm. The Wind Farm will also have two standard BM Units (T_SGRWO-6 and T_SGRWD-1).

2.2 The BSC K3.1.8 states that;

“A BM Unit comprised of CFD Assets shall be comprised solely of the CFD Assets specified in the Contract for Difference relating to that BM Unit and shall not include any other Plant or Apparatus”

This means that PPMs 2 and 3 must be split into separate BM Units to align with each CfD.

2.3 The BSC classifies a PPM¹ as a standard BM Unit (Section K3.1.4). PPMs 2 and 3 will be split across five BM Units, which means that these BM Units do not meet the definition of a standard PPM BM Unit. PPM 1 will be contained within a single BM Unit and so will be standard as it is a complete PPM. All of the Wind Farm’s onshore and Offshore Demand will be contained in one standard BM Unit.

3. The NETSO and Elexon comments

3.1 We circulated the non-standard BMU application to the NETSO for comments on 7 April 2022. The NETSO stated that:

‘Assuming that each non-standard BMU will still be independently visible, controllable and instructible (Bid Offer Acceptance (BOA)-able) – like it would under a standard BM Unit configuration - then we have no concerns on the application’

3.2 Elexon notes that in order for PPMs 2 and 3 to comply with BSC Section K3.1.8, BM Units 1, 2, 3, 4 and 5 cannot be registered as standard BM Units unless they are split up so that each PPS is metered and registered as an individual BM Unit.

3.3 Elexon recommends that the ISG agree this non-standard BM Unit application on the basis that:

- the responsibility for the flows of electricity associated with each proposed non-standard BM Unit lie with one Party (Section K 3.1.2 (a));
- The Plant and Apparatus associated with each proposed non-standard BM Unit are capable of independent control from any other Plant and Apparatus not in the proposed BM Unit (Section K3.1.2 (b));
- all volumes flowing from and to the BM Units will be captured by compliant Metering Equipment/Systems and these volumes will be determined separately from volumes to and from other BM Units as the Meters are on each PPS (Section K 3.1.2 (c));
- the BM Unit does not comprise Central Volume Allocation (CVA) and Supplier Volume Allocation (SVA) Metering Systems that measure the same Imports or Exports at any one time (Section K 3.1.2 (d)); and
- Although there are smaller aggregations of the Plant and Apparatus that satisfies K3.1.2 (a)-(c) (i.e. registering each PPS as an individual BM Unit, registering PPMs 1 and 2 as five BM Units is the most practical solution that also satisfies K3.1.8 (Section K 3.1.2 (e)).

3.4 Elexon also notes that the ISG has approved a similar non-standard BM Unit configuration at the Beatrice Offshore Wind Farm (ISG Paper 194/03).

4. Recommendation

4.1 We invite the ISG to:

- a) **APPROVE** five non-standard BM Units for BM Units 1, 2, 3, 4 and 5 at Seagreen Offshore Wind Farm.

Appendices

Appendix 1 – BM Unit Configurations

Attachments

Attachment A (CONFIDENTIAL) – BSCP15/4.13 Application for non-standard Primary BM Unit

Attachment B (CONFIDENTIAL) – LF000009-ELEC-SK-0009 Generation Metering Diagram

¹ Offshore PPM is defined in the Grid Code as “A collection of one or more Offshore Power Park Strings...[which] connect to the same busbar that cannot be electrically split”

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Appendix 1 – BM Unit Configurations

The BSC states that a BM Unit shall comprise Plant and/or Apparatus for who's Exports and / or Imports a Party is responsible (Section K3.1.1).

A BM Unit must satisfy the following conditions (K3.1.2):

- responsibility for the BM Unit would lie with one Party;
- it would be capable of independent control;
- it would be visible to the Settlement Administration Agent (SAA) as a metered quantity separately from anything that is not included in the BM Unit;
- the BM Unit does not comprise of CVA and SVA Metering Systems that measure the same Imports or Exports, except where the SVA connection is for backup purposes and less than 415V; and
- for Plant and Apparatus greater than the size of a Small Power Station² it would be the smallest aggregation of Plant and Apparatus that satisfies the first three bullet points above. Smaller Plant and Aggregation can be aggregated up to the size of a Small Power Station.

The BSC also sets out a number of standard configurations of BM Units (Section K3.1.4), including:

- Combined Cycle Gas Turbine (CCGT) Module;
- Power Park Module (PPM);
- Power Station Transformers (Station Transformers);
- Directly Connected Demand at a single Boundary Point;
- Combined Offshore BM Unit (COBMU)³;
- Directly connected demand at more than one Boundary Point provided that the total Imports are less than 50MW in England and Wales, 30MW in South Scotland and 10MW in North Scotland;
- Supplier (Base or Additional) Primary BM Unit;
- Interconnector Primary BM Unit;
- Any BM Units that were determined as part of the transitional arrangements for the implementation of the British Electricity Trading and Transmission Arrangements (BETTA);
- An Offshore PPM or COBMU³ and its associated Low Voltage Assets;
- Combination of Generating Units connected to the Total System provided that the total Exports are less than 50MW in England and Wales, 30MW in South Scotland and 10MW in North Scotland;
- Electricity Storage Module provided that the total Exports are less than 50MW in England and Wales, 30MW in South Scotland and 10MW in North Scotland; and
- Hybrid plant – PPM or combination of Generating Units plus Storage Module provided that the total Exports are less than 50MW in England and Wales, 30MW in South Scotland and 10MW in North Scotland.

The BSC states that a Registrant and/or Central Data Collection Agent (CDCA) / Central Registration Agent (CRA) can apply to the Panel for a non-standard BM Unit configuration in the following circumstances (K3.1.5):

² Small Power Station is defined in the Grid Code as less than 50MW in England and Wales, less than 30MW in South Scotland and less than 10MW in North Scotland.

³ The NETSO must agree that two or more PPMs can be combined into a COBMU.

- the Plant / Apparatus does not fall into a category listed in section K3.1.4 or the CDCA / CRA considers that there is reasonable doubt that this is the case;
- the Plant / Apparatus does fall into a category listed in K3.1.4 but the responsible Party considers that a different configuration would satisfy the requirements set out in K3.1.2; or
- there is more than one set of Exports / Imports at a CVA boundary Point and more than one Party is responsible for these.