

METERING DISPENSATION D/500 – GORDONBUSH EXTENSION WIND FARM

MEETING NAME	ISG
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Date of meeting	3 March 2020
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Paper number	227/01
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Owner/author	Mike Smith
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Purpose of paper	Decision
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Classification	Public
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Summary	<p>SSE Generation Ltd has applied for a lifetime Metering Dispensation (D/500) from Code of Practice 1 (CoP1) for the Metering Equipment associated with the Gordonbush extension wind farm. SSE Generation Ltd wish to install Metering Equipment for the Gordonbush extension wind farm below the Defined Metering Point (and the Gordonbush wind farm Boundary Point Settlement Meters) and use CoP2 Metering Equipment to measure the flows for the Gordonbush extension wind farm. We invite the ISG to approve Metering Dispensation D/500 on a lifetime basis.</p>
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1. BSC requirements

1.1 [Section L](#) 'Metering' of the Balancing and Settlement Code (BSC) requires all Metering Equipment to either:

- comply with the requirements set out in the relevant Code of Practice (CoP) at the time the Metering System is first registered for Settlement; or
- be the subject of, and comply with, a Metering Dispensation.

1.2 Section L allows the Registrant of a Metering System to apply for a Metering Dispensation if, for financial or practical reasons, Metering Equipment will not or does not comply with some or all the requirements of a CoP.

1.3 The process for applying for a Metering Dispensation is set out in [BSC Procedure \(BSCP\) 32](#) 'Metering Dispositions'.

2. Background to Metering Dispensation application D/500

2.1 Gordonbush wind farm (GBW) is located North West of Brora, in Sutherland. GBW consists of 35 x 2.05MW Repower (now called Senvion) turbines and has an output capacity of 70MW. GBW has been fully operational since June 2012 and is currently metered to [CoP2](#) 'Code of Practice for the metering of circuits with a rated capacity not exceeding 100MVA for Settlement purposes' standards at the Defined Metering Point (DMP). The DMP is the point of connection (PoC) to Scottish and Southern Electricity Networks' (SSEN) transmission network at the Gordonbush 132kV substation.

2.2 GBW is being extended by 11 x 4.3MW turbines giving a maximum extension capacity of 47.3MW. There is currently 38MW spare capacity on the existing super grid transformer, and single grid connection agreement, which will accommodate the extension wind farm (Gordonbush extension wind farm (GBX)), giving a maximum overall capacity of 108MW. GBX would only be able to generate above 38MW when there is enough headroom available.

2.3 For the existing grid connection assets to be able to accommodate generation from GBX, modifications are required on the 33kV main substation switchboard. Part of these modifications include changing the existing GBW Metering System to meet [CoP1](#) 'Code of Practice for the metering of circuits with a rated capacity exceeding 100MVA for Settlement purposes' requirements at the DMP.

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- 2.4 GBX will have the same PoC (and DMP) as GBW meaning that the existing and new turbines would operate as one Power Park Module (PPM). The GBX wind turbines however, will be a separate Balancing Mechanism Unit (BMU) from the existing turbines.
- 2.5 SSE Generation Ltd wish to meter GBX by metering the two of the wind farm feeders of the extension individually with two CoP2 Meters. The total output from GBX (BMU 2) will be calculated from the aggregation of the two Meters. The output of the GBW (BMU 1) will be calculated by subtracting the GBX Meters from the GBW CoP1 Meter at the PoC.
- 2.6 The two wind farms need to be metered separately for the following technical and commercial reasons:
- requirement for separate measurement inputs for different power park controllers (Senvion grid controller and SGRE PMU);
 - requirement to achieve grid code compliance of each wind farm separately;
 - requirement to measure and control output of both wind farms independently;
 - only the existing Gordonbush wind farm is OFGEM Renewables Obligation (RO) accredited;
 - possible different Power Purchase Agreement (PPA) providers; and
 - both wind farms are to participate in the Balancing Mechanism as two separate sites.
- 2.7 Considering the above reasons, National Grid Electricity System Operator and SSEN have both agreed to the proposed metering arrangement at Gordonbush wind farm.

3. Metering Dispensation application D/500 – Gordonbush Extension Wind Farm

- 3.1 SSE Generation Ltd has applied for a lifetime Metering Dispensation (D/500) from CoP1 for the Metering Equipment associated with the Gordonbush extension wind farm (GBX) (Attachment A).
- 3.2 SSE Generation Ltd wish to install Metering Equipment for GBX below the DMP (and the GBW Boundary Point Settlement Meters) and use CoP2 Metering Equipment to measure the flows for GBX, due to the circuit capacities of the two metered GBX feeders (less than 100MVA each).

4. MDRG comments

- 4.1 We circulated the Metering Dispensation application to the Metering Dispensation Review Group (MDRG) for comments.
- 4.2 All four MDRG members responded. All four MDRG members support the Metering Dispensation application as there is negligible impact on the overall accuracy of the Metering Systems.

5. NETSO comments

- 5.1 We circulated the Metering Dispensation application to the National Electricity Transmission System Operator (NETSO) for comments.
- 5.2 The NETSO confirmed it supports the application for the following reasons:
- it has no concerns from a system operability perspective for the proposed connections for Gordonbush extension;
 - it believes there wouldn't be any issues from a Balancing Services Use of System (BSUoS) charging perspective as each of the metering points will be registered as a separate BMU so data for each will be transparent thus causing no issues from a billing perspective; and
 - it also has no concerns from a Transmission Network Use of System (TNUoS) charging point of view.

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6. ELEXON's view

6.1 ELEXON supports this lifetime Metering Dispensation application as:

- overall accuracy of the GBX Metering System will be maintained within CoP2 error limits at the DMP;
- the electrical losses between the GBX AMP and the shared DMP, over six metres of copper busbar, will be negligible (16.2 Watts); and
- not compensating the GBX Metering System for these electrical losses will not have a material impact on Settlement.

7. Recommendations

7.1 We invite you to:

- a) **APPROVE** Metering Dispensation D/500 for the Gordonbush extension wind farm on a lifetime basis.

Attachments

Attachment A – Metering Dispensation application D/500

Attachment B (CONFIDENTIAL) – Electrical single line diagram (before)

Attachment C (CONFIDENTIAL) – Electrical single line diagram (after)

Attachment D (CONFIDENTIAL) – Electrical losses from AMP to DMP for GBX

For more information, please contact:

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