ELEXON

# Metering Dispensation D/548 – Harestanes BESS

**Imbalance Settlement Group (ISG)**

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| Date of meeting | **6 September 2022** | Paper number | **257/12** |
| Owner/author | **Lee Walker** | Purpose of paper | **Decision** |
| Classification | **Public** | Document version | **v1.0** |


Summary

**ScottishPower Renewables UK Ltd has applied for a lifetime Metering Dispensation (D/548) from Code of Practice (CoP) 2. The application is for the location of the Metering Equipment for the new Harestanes Battery Energy Storage System (BESS). The Harestanes BESS Metering Equipment will be located at the BESS incomer panels (BESS-I1 and BESS-I2), off the existing Harestanes WF Power Park Module busbars, and not at the Defined Metering Point (the point of connection to the Transmission System). We invite the ISG to approve Metering Dispensation D/548 on a lifetime basis.**


## 1. BSC requirements

1.1 Section L[1] 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 under the BSC (L3.2.2); or
- be the subject of, and comply with, a Metering Dispensation (L3.4).

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 BSCP32[2].

## 2. Background to Metering Dispensation D/548

2.1 Harestanes Wind Farm (WF) is a located in the Forest of Ae, Dumfries & Galloway, Scotland. It was connected to SP Energy Network's (SPEN's) Transmission System in 2013 and comprises an installation of 68 x 2.0MW Gamesa Wind Turbine Generators (WTGs), split across two Power Park Modules (PPMs) with a total of 136MW installed net capacity.

2.1.1 Although the Harestanes WF will be capable of producing 136MW, there is a 125MW Technical Entry Capacity (TEC) limit on the overall Export. The existing Harestanes WF is a single, non-standard Balancing Mechanism (BM) Unit. The ISG approved a non-standard BM Unit for Harestanes WF on 25 January 2013 (ISG146/01).

2.2 ScottishPower Renewables UK Ltd (SPR) is proposing to install a new Battery Energy Storage System (BESS) at Harestanes WF (Harestanes BESS) (BM Unit ID: T_HRSTWB-1).

2.2.1 The new BESS equipment will comprise a 50MW system and will be located on a newly created compound, located adjacent to the existing Harestanes WF substation building and will be connected to the existing two WF PPMs:

[1] 'Metering'
[2] 'Metering Dispensations'

- BESS Module 1 – 25 MW (connected to Harestanes WF PPM1)
- BESS Module 2 – 25 MW (connected to Harestanes WF PPM2)

2.3 Harestanes BESS and Harestanes WF will have the same point of connection (PoC) to the Transmission System (and Defined Metering Point (DMP)), which is the 33kV metering circuit breakers (CBs) in the SP Energy Networks (SPEN) 132/33kV substation.

2.4 SPR is proposing to install Settlement Metering Equipment for the new Harestanes BESS on the BESS incomer panels (BESS-I1 and BESS-I2) (the Actual Metering Points (AMPs)), off the existing Harestanes WF PPM busbars, and not at the DMP.

## 3. Metering Dispensation D/548 – Harestanes BESS

3.1 SPR has applied for a lifetime Metering Dispensation (D/548) from CoP2[3] (Attachment A). This is for the location of the new Harestanes BESS Metering Equipment.

3.2 The new BESS facility will be connected behind the existing WF Settlement Meter in accordance with the Ofgem published guidance.

3.3 The connection arrangement and control system has been designed and developed around two BM Units, one for the existing WF and a second separate BM Unit for the BESS Import/Export in accordance with the Ofgem guidance. The metering scheme has also been designed and developed around two BM Units, one for the existing WF and a second separate BM Unit for the BESS Import/Export, in accordance with the Ofgem guidance.

3.4 SPR wish to meter Harestanes BESS by metering the two BESS incomers (T_BESS-I1 and T_BESS-I2) with individual CoP2 Meters.

3.5 The AMP and DMP are separated by only a short section of copper busbar and cable, so overall accuracy will be maintained at the DMP.

3.6 The total output from Harestanes BESS (BM Unit 2 (T_HRSTWB-1)) will be calculated from the aggregation of the two Meters. The output of the Harestanes WF (BM Unit 1 (T_HRSTW-1)) will be calculated by subtracting the BESS Meters from the Harestanes WF CoP1 Meters at the point of connection (the DMP).

3.7 The two technologies need to be metered separately for the following technical and commercial reasons:

- Requirement for separate measurement for different power park controllers (Gamesa Park Controller and Ingeteam BESS controller);
- Requirement to achieve GB Grid Code compliance for each technology;
- Requirement to measure and control the output of both technologies independently;
- Only the existing Harestanes windfarm will be eligible and accredited by OFGEM for Renewables Obligation Certificates (ROCs);
- It is possible that the two technologies will have different Power Purchase Agreement (PPA) providers; and
- Both technologies will participate in the BM independently.

3.8 Considering the above reasons, National Grid Electricity System Operator (NGESO) and SPEN have both agreed to the proposed metering arrangement at Harestanes WF.

## 4. MDRG comments

4.1 We circulated the Metering Dispensation application and its supporting documentation to the Metering Dispensation Review Group (MDRG) for comments (Attachments A - C).

4.2 Two responses received support the Metering Dispensation application.

## 5. NETSO comments

5.1 We circulated Metering Dispensation application and its supporting documentation to the National Electricity Transmission System Operator (NETSO) for comments (Attachments A - C).

5.2 The NETSO supports the Metering Dispensation.

[3] 'Code of Practice for the metering of circuits with a rated capacity not exceeding 100MVA for Settlements purposes'

## 6. Elexon's view

6.1 Elexon supports this lifetime Metering Dispensation application as CoP2 overall accuracy limits will be maintained at the DMP and will have no impact on Settlement.

## 7. Recommendation

7.1 We invite the ISG to:

a) **APPROVE** Metering Dispensation D/548, from CoP2, for the Harestanes BESS Metering Equipment, on a lifetime basis.

## Attachments

Attachment A – Metering Dispensation application D/548 – Harestanes BESS

Attachment B – Single line diagram for Harestanes BESS

Attachment C – Cable parameters

## For more information, please contact:

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