

SCP32/4.1 Application for a Metering Dispensation**Part A – Applicant Details**

To: BSCCo		Date Sent: 21/10/2020
From: Requesting Applicant Details		
Name of Sender: ScottishPower Renewables (UK) Limited		
Contact email address:		
Contact Tel. No.	Contact Fax. No. _____	
Name of Applicant Company: ScottishPower Renewables (UK) Limited		
Address: 320 St Vincent Street, Glasgow		
Post Code: G2 5AD	Our Ref: _____	
Name of Authorised Signatory:		

Authorised Signature:	Password:	

Confidentiality:

Does any part of this application form contain confidential information?

Request for Confidentiality ~~YES~~/NO*

**Delete as applicable*

If 'YES', please state the parts of the application form that are considered confidential, including justification below. Information that is considered confidential:

Reasons for requesting confidentiality:

.....

number, site name, expiry date (if any) and BSC Panel determinations will routinely be made available in the public domain unless the applicant informs BSCCo otherwise at the time of application

BSCP32/4.1 Application for a Metering Dispensation (Cont.)**Part B - Affected Party Details**

Number of Affected parties___2___¹

Contact Name at Affected party:	
Contact email address:	
Contact Tel. No.	Contact Tel. No.
Company Name of Affected party: ScottishPower Renewables (UK) Limited	
Address: 320 St Vincent Street, Glasgow	
Post Code: G2 5AD	

Contact Name at Affected party:	
Contact email address:	
Contact Tel. No:	Contact Tel. No.
Company Name of Affected party: SP Energy Networks	
Address: 320 St Vincent Street, Glasgow	
Post Code: G2 5AD	

¹ For more than one Affected party, Part B should be completed for each, using additional copies of Part B as required.

Contact Name at Affected party:	
Contact email address:	
Contact Tel. No.	Contact Tel. No.
Company Name of Affected party: National Grid Electricity System Operator	
Address:	
Faraday House	
Warwick Technology Park, Gallows Hill, Warwick,	
Post Code: CV34 6DA	

BSCP32/4.1 Application for a Metering Dispensation (Cont.)

Part C – Reason for Application

If the application is an extension or update for an existing Metering Dispensation, enter existing ref: D/.....

Site Specific / ~~Generic~~* **Delete as applicable.*

Describe why you require a Metering Dispensation. Include any steps you propose to limit the impact on Settlement and other Registrants:

Whitelee 1 BESS (WHLWB-1) is a Battery Energy Storage System located close to East Kilbride in South West of Scotland and is a Transmission connected scheme.

The new BESS equipment will comprise a 50MW system and shall be located on a newly created compound, located adjacent to the existing Whitelee 1 Windfarm substation building and will be connected to the existing 3 Power Park Modules as follows:

BESS Module 1 - 13MW (connected to Whitelee 1 Windfarm PPM1)
 BESS Module 2 - 16MW (connected to Whitelee 1 Windfarm PPM2)
 BESS Module 3 - 21MW (connected to Whitelee 1 Windfarm PPM3)

Whitelee 1 windfarm was connected in 2007 and comprises an installation of 140 x 2.3MW Siemens Wind Turbine Generators (WTG's) split across 3 Power Park Modules with a total of 322MW installed net capacity. Although the WF will be capable of producing 322 MW, there is a 305MW TEC limit on the overall export. The existing Whitelee Windfarm is a single, non-standard BMU (WHILW-1). Whitelee 1 Windfarm was approved as a non-standard BMU on 23rd Oct 2007 (ISG Paper 81-03)

Whitelee 1 BESS and Whitelee 1 windfarm will have the same Point of Connection (PoC) to the transmission system (and DMP), which is the 33kV metering Circuit Breakers (CB's) in the SP Energy Networks 275/33kV substation as shown on the SLD as follows:

PPM	SPEN CB's (PoC/DMP)	SPR PPM CB's	BESS CB's (AMP)
PPM1	SG1A & SG1B	G1A & G1B	EXT-1
PPM2	SG2A & SG2B	G2A & G2B	EXT-2
PPM3	SG3A & SG3B	G3A & G3B	EXT-3

Operationally this shall entail the new BESS and existing WTG's operating as three Power Park Modules (PPM's). The BESS however will be a separate Balancing Mechanism Unit (BMU) from the existing windfarm and wind turbines.

The new BESS facility shall be connected behind the existing settlement meter in accordance with the Ofgem published guidance.

The connection arrangement and control system has been designed and developed around two BMUs, one for the existing windfarm and a 2nd separate BMU for the BESS import/export in accordance with the Ofgem guidance. The metering scheme has been designed and developed around two BMUs, one for the existing windfarm and a 2nd separate BMU for the BESS import/export in accordance with the Ofgem guidance.

ScottishPower Renewables wish to meter Whitelee BESS by metering the three BESS feeders (EXT-1, EXT-2 and EXT-3) with individual CoP2 Meters. The total output from Whitelee BESS (BMU 2 (WHLWB-1)) will be calculated from the aggregation of the three Meters. The output of the Whitelee 1 Windfarm (BMU 1 (WHILW-1)) will be calculated by subtracting the BESS Meters from the Whitelee 1 CoP1 Meters at the PoC.

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

- Requirement for separate measurement for different power park controllers (SGRE Park Pilot 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 Whitelee 1 windfarm will be eligible and accredited by OFGEM for Renewables Obligation Certificates (ROC's)
- It is possible that the 2 technologies will have different Power Purchase Agreement (PPA) providers
- Both technologies will participate in the Balancing Mechanism independently

Considering the above reasons, National Grid Electricity System Operator and SPEN have both agreed to the proposed metering arrangement at Whitelee 1 wind farm.

Period of Metering Dispensation required

Lifetime / *

*Delete as applicable.

If temporary, indicate for how long the Metering Dispensation is required.	N/A
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Provide justified reasoning for the period of Metering Dispensation requested in the box below:

Rationale for duration of Metering Dispensation:

A Metering Dispensation is sought to meter the Whitelee BESS at the Whitelee BESS Ext feeder panels (EXT-1, EXT-2 & EXT-3) and not at the DMP (PoC/Boundary Point) for the operational lifetime of the BESS for the following reasons:

- Whitelee BESS and Whitelee 1 windfarm share the same PoC (Boundary Point) where it is only possible to meter the total export and import for both technologies and therefore required for the lifetime and not on a temporary basis as the installed metering system will be the permanent solution;

Part D1 - Loss Adjustments for Power Transformer and/or Cable/Line Losses

Where loss adjustments are proposed and applied (or are to be applied) to the Metering System for power transformer and/or cable/line losses, provide the following information:

Describe how do you propose to correct the Metering System to account for the losses of this power transformer?

N/A – Actual Metering Points (AMPs) and Defined Metering Points (DMPs) are separated by only a short section of copper busbar and cable so overall accuracy will be maintained.

In order to validate the loss adjustments applied (or to be applied) to the Metering System please provide the following information together with supporting data (e.g. power transformer test certificates):

What are the iron losses for this power transformer?

What are the copper losses for this power transformer?

Are there any other losses that have been taken into account? No*. If Yes what are they?

Demonstrate how these elements of loss have been used in the corrections to the Metering System.

*Delete as applicable.

Describe how do you propose to correct the Metering System to account for the losses of the power cable/line?

N/A – Actual Metering Points (AMPs) and Defined Metering Points (DMPs) are separated by only a short section of copper busbar and cable so overall accuracy will be maintained.

In order to validate the loss adjustments applied (or to be applied) to the Metering System please provide the following information together with supporting data (e.g. cable/line manufacturer's data sheet):

What is the type of power cable/line?

What is the length of this power cable/line?

What is the DC resistance of this power cable/line?

What is the impedance of this power cable/line?

What is the capacitance of this power cable/line?

Are there any other losses that have been taken into account? No*. If Yes what are they?

Demonstrate how these elements of loss have been used in the corrections to the Metering System.

*Delete as applicable.

Materiality

Please complete the following:

What is the cost of providing compliant Metering Equipment?	What does this cost entail?
In excess of £500k if even possible to facilitate due to spatial constraints in Transmission System Owner (TO) compound	A new connection including TO. and User connection apparatus would be required with tee connection into existing 33kV apparatus
What is the cost of the proposed solution?	What does this cost entail?
Less than £40k	Installation, commissioning and testing of 3 x CoP2 Meters.
What is the impact to Settlement of your proposed solution?	Why?
No impact	Due to the proposed location there would be no notable losses in the short section of busbar. Whitelee BESS metered data will be deducted from the Whitelee 1 metered data to ensure that accuracy will be maintained for the Whitelee 1 windfarm metered data
What is the impact to other Registrants of your proposed solution?	Why?
No impact	No other Registrants are affected as there is only one Registrant for the Metering Systems plus, accuracy is maintained for both Whitelee BESS and Whitelee 1 Windfarm Metering Systems.

Site Details (for Site Specific Metering Dispensation)

Site Name:	Whitelee BESS
Site Address:	Whitelee BESS Ardochrig East Kilbride

	G75 0QN
MSID(s):	8373 (For Info: Whitelee Windfarm (WHILW-1) 8181)
Registered in: CMRS / SMRS*: *Delete as applicable.	CMRS
For SMRS, please advise of SMRA in space provided.	

Manufacturer Details (for Generic Metering Dispensation)

Manufacturer Name:	N/A
Metering Equipment Details:	N/A

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Part D - Technical Details

Code of Practice details

Metering Dispensation against Code of Practice*	COP1
Issue of Code of Practice*:	Issue 2 (v13)
Capacity of Metering Circuits/Site Maximum Demand (MW/MVA):	PPM1 (EXT 1) – 13MW PPM2 (EXT 2) – 16MW PPM3 (EXT 3) – 21MW
(Proposed) Commissioning Date of Metering:	20/12/20
Accuracy at Defined Metering Point:	As per CoP2 Issue 4 (v14)
Accuracy of Proposed Solution (including loss adjustments):	Within CoP2 accuracy limits (no loss adjustments used) The accuracy will be maintained within CoP2 as there are no notable losses in the short section of busbar
Outstanding non-compliances on Metering Systems:	None
Deviations from the Code of Practice (reference to appropriate clause):	All clauses of CoP1. Metering Equipment to be provided to meet all CoP2 clauses except the Actual Metering Point is not at the Defined Metering Point (Appendix A 'Defined Metering Points' bullet 5 (i) – see clause 4.3.3 'Compensation for Power Transformer and Line Losses'). Whitelee BESS metering shall be located at BESS extension feeder panels (EXT-1, EXT-2 and EXT-3) (AMP) and not at the Boundary Point which is where Whitelee 1 (WHILW-1) metering is located (SG1A & SG1B, SG2A & SG2B, SG3A & SG3B).

* insert Code of Practice number and issue

Any Other Technical Information

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Declaration

We declare that other than as set out above we are in all other respects, in compliance with the requirements of the relevant Code of Practice and the BSC. A schematic is attached to this application for clarification of the metering points involved.

Signature:

Date:13/10/2020

Password:

Duly authorised for and on behalf of Applicant Company

Confirmation of Receipt and Reference

BSCCo acknowledges receipt of this document and has assigned the reference number as indicated on the first page.

Signature: *Date:22 October 2020*

Duly authorised for and on behalf of BSCCo