

**BSCP32/4.1 Application for a Metering Dispensation**

## Part A – Applicant Details

<b>To: BSCCo</b>	<b>Date Sent:</b> 01/08/2022
<b>From: Requesting Applicant Details</b>	
Name of Sender:	
Contact email address:	
Contact Tel. No.	Contact Fax. No. N/A
Name of Applicant Company: Vattenfall Wind Power Ltd (New BESS Registrant)	
Address: 5 <sup>th</sup> Floor	
70, St Mary Axe	
London	
United Kingdom	
Post Code: EC3A 8BE	Our Ref: _____
<b>Name of Authorised Signatory:</b>	
_____	
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 3<sup>1</sup>

Does this Metering Dispensation affect the metering arrangements for a generator that has applied for/obtained a CFD Agreement? ☐ Yes ☒ No

If Yes, you must contact the Low Carbon Contracts Company and advise them of your Metering Dispensation application and include them as an Affected Party.

Have you notified all Affected Parties? ☒ Yes ☐ No

Contact Name at Affected party:	
Contact email address:	
Contact Tel. No.	Contact Tel. No.
Company Name of Affected party: Vattenfall Wind Power Limited (New BESS Registrant)	
Address: 5th Floor	
70, St Mary Axe	
London	
United Kingdom	
Post Code: EC3A 8BE	

Contact Name at Affected party:	
Contact email address:	
Contact Tel. No:	Contact Tel. No.
Company Name of Affected party: Ray Wind Farm Limited	
Address: 5 <sup>th</sup> Floor	
70, St Mary Axe	
London	
United Kingdom	
Post Code: EC3A 8BE	

<sup>1</sup> 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: Northern Powergrid Limited	
Address: Lloyds Court	
78 Grey Street	
Newcastle Upon Tyne	
United Kingdom	
Post Code: NE1 6AF	

## 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:

Ray Wind Farm is owned by Ray Windfarm Limited, a subsidiary of Vattenfall Wind Power Ltd. Ray Wind Farm was constructed in 2017 and is connected, via an approximately 25km 33kV underground cable, to Northern Powergrid's 33kV network at Fourstones substation. The windfarm has an installed capacity of 54.4MW. Vattenfall Wind Power Limited is in the process of installing a new Battery Energy Storage System (BESS) adjacent to the existing wind farm. The BESS will have an installed capacity of 20MW.

The Metering Dispensation application relates to the new Battery Energy Storage System (BESS). The Metering Dispensation is only being requested for the BESS facility, as Ray Windfarm will still have a complaint Code of Practice (CoP) 2 Metering System at the Boundary Point (i.e. the Actual Metering Point (AMP) is at the Defined Metering Point (DMP)).

The Metering Dispensation is required as the two assets will be traded and settled independently of each other. The AMP for the embedded BESS is not at the DMP and therefore requires a Metering Dispensation. The BESS Metering Equipment will also be to CoP2 standards.

A fully compliant solution for the new BESS facility at the DMP could be accomplished by replacing the existing Northern Powergrid switchgear at Ray Wind Farm with a switchgear unit able to take two inputs. The switchgear replacement costs would be on top of the costs of installing the new metering for the BESS. This is predicted to cost in excess of £110,000.

The materiality section below highlights savings in excess of £80,000 to the project when compared with a compliant Metering System, with its own separate connection.

Such infrastructure would be detrimental to the environment, due to manufacturer of materials, transport of additional switchgear, (potential) scrapping of existing switchgear unit that isn't at end of life and lost renewable generation due to increased wind farm outage during switchgear replacement.

**Period of Metering Dispensation required**Lifetime / ~~Temporary~~\* \*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 required for the lifetime of the assets as there is no intention for the connection arrangement to change through the project lifetime.

## 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 or Asset Metering System for power transformer and/or cable/line losses, provide the following information:

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

N/A

In order to validate the loss adjustments applied (or to be applied) to the Metering System, or Asset 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?

N/A - no transformer between compliant and proposed metering point

What are the copper losses for this power transformer?

N/A - no transformer between compliant and proposed metering point

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

Cable losses have been accounted for.

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

The cable losses have been calculated to be so low as to be within the overall accuracy limits of the BESS Metering System to be installed. As such no compensation factor will be applied to the BESS Metering System.

\*Delete as applicable.

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

Loss adjustment will not be applied. The only source of losses between the DMP and AMP is a short 40m section of cable and the cable losses have been calculated to be so low as to be within the accuracy limits of the BESS Metering System to be installed. Full workings are in the attached spreadsheet.

Total Active Losses: 0.002311254MW (or 0.003% of Meter Rated Current)

Total Reactive Losses: 0.005677762MW (or 0.004% of Meter Rated Current)  
at maximum power transfer

This is within the accuracy limits of CoP2.

In order to validate the loss adjustments applied (or to be applied) to the Metering System, or Asset 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?

2 x 630mm<sup>2</sup> Cu XLPE cable

What is the length of this power cable/line?

0.04km

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

0.014 Ohms/km

What is the impedance of this power cable/line?

R<sub>dc</sub> at 20 Deg C = 0.014 Ohms/km

R<sub>ac</sub> at operating Temp = 0.02 Ohms/km

Reactance XL = 0.05 Ohms/km

What is the capacitance of this power cable/line?

0.704MicroF/km

Are there any other losses that have been taken into account? Yes \*. If Yes what are they?

Total Active Losses have been calculated with the inclusion of Dielectric and Metallic Screen losses

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

N/A

\*Delete as applicable.

## Materiality

Please complete the following:

What is the cost of providing compliant Metering Equipment or Asset Metering Equipment?	What does this cost entail?
In excess of £110,000	New 33kV switching capable of taking two inputs Supply, installation, testing and commissioning of Metering System including metering panels, comms, CTs and VTs
What is the cost of the proposed solution?	What does this cost entail?
£30,000	Supply, installation, testing and commissioning of Metering System including metering panels, comms, CTs and VTs
What is the impact to Settlement of your proposed solution?	Why?
None	None While there are some losses between the DMP and AMP, the losses have been calculated to be so low as to be within the accuracy limits of the BESS Metering System. As such, no compensation will be applied.
What is the impact to other Registrants of your proposed solution?	Why?
None	Considering losses are so low as to be within the tolerance of the meters there should be no further implications.

## Site Details (for Site Specific Metering Dispensation)

Site Name:	Battery@Ray
Site Address:	Ray Estate Wind Farm, Off A696, Kirkwhelpington, Northumberland, NE19 2RJ
MSID(s) / <del>AMSID(s)</del> : *Delete as applicable.	NA
Registered in: <del>CMRS</del> / SMRS / <del>AMRS</del> : *Delete as applicable.	SMRS – MPANs TBC by DNO



For SMRS, please advise of SMRA in space provided.	Northern Powergrid
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**Manufacturer Details (for Generic Metering Dispensation)**

Manufacturer Name:	N/A
Metering Equipment / Asset Metering Equipment Details*: *Delete as applicable	N/A

**BSCP32/4.1 Application for a Metering Dispensation (Cont.)****Part D - Technical Details****Code of Practice details**

Metering Dispensation against Code of Practice*	CoP2 (at DMP)
Issue of Code of Practice*:	Issue 5 (version 16.0)
If against Code of Practice 11 against which Asset Metering Type	N/A
Capacity of Metering Circuits/Site Maximum Demand (MW/MVA):	Maximum export capacity at the existing metered Point of Supply: 55.7MW (combined Wind Farm and BESS) BESS capacity: 20MW Wind Farm capacity: 54.4MW
(Proposed) Commissioning Date of Metering:	September 2022
Accuracy at Defined Metering Point:	+/- 1% @120% to 10% incl. @pf=1.0 Active Energy.
Accuracy of Proposed Solution (including loss adjustments):	+/- 0.5% @120% to 10% incl. @pf=1.0 Active Energy.
Outstanding non-compliances on Metering Systems or Asset Metering Systems*:	No
*Delete as applicable	
Deviations from the Code of Practice (reference to appropriate clause):	APPENDIX A DEFINED METERING POINTS 6. For transfers between a Distribution System operated by a Licensed Distribution System Operator and Generating Plant, the DMP shall be at the point(s) of connection of the generating station to the Distribution System operated by a Licensed Distribution System Operator. AMP2 is not at the DMP.

\* 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:* 25/08/2022

*Password:* .....

Duly authorised for and on behalf of Applicant Company

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**Confirmation of Receipt and Reference**

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

*Signature: M Smith* *Date: 26 August 2022*

Duly authorised for and on behalf of BSCCo