

BSCP32/4.1 Application for a Metering Dispensation

Part A – Applicant Details

To: BSCCo	Date Sent: 13 January 2023
From: Requesting Applicant Details	
Name of Sender:	
Contact email address:	
Contact Tel. No.	Contact Fax. No.
Name of Applicant Company: Elexon Ltd	
Address: 350 Euston Road	
London	
Post Code: NW1 3AW	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 _____¹Does 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:	
Address:	
Post Code:	

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

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/534

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:

Issue:

Low Voltage (LV) Direct Current (DC) metering is required for some Offshore wind farms to measure flows of electricity across some Boundary Points (BPs) between Offshore Transmission User Assets (OTSUA)/Offshore Transmission Systems (OTS) and generator's assets.

The current suite of eleven Settlement metering [Codes of Practice](#) (CoPs 1 - 11) only cover Metering Equipment designed for Alternating Current (AC) circuits. Therefore, no Direct Current (DC) Meters have been compliance-tested under [BSCP601](#) 'Metering Protocol Approval and Compliance Testing' against any Half Hourly CoP requirements. In addition, no DC Meters have been approved under the Electricity Act 1989, which would apply if a DC Meter was to be used for customer billing purposes.

Proposed solution:

Existing lifetime Metering Dispensation D/534 covers the use of the following options for a DC metering solution against all the relevant clauses in CoP5 Issue 6 and CoP4 Issue 6 as CoP5 and CoP4 are specific to the metering of energy transfers on AC circuits.

D/534 covers the use of:

Powertek Hall Effect transducers (accuracy within $\pm 0.5\%$):

- Powertek CTH/20A/4- 20/TH/9-36Vdc type 2;
- Powertek CTH/50A/4-20/TH/9-36Vdc type 2;
- Powertek CTH/100A/4-20/TH/9-36Vdc type 2;
- Powertek CTH/200A/4-20/TH/9-36Vdc type 2; or

Any suitable shunts (accuracy within $\pm 0.5\%$); and

ACCUENERGY DC Meter types (accuracy within $\pm 0.5\%$):

- AcuDC243-300V-A1-P1-X4-NC-ND (non-communicating meter type (NC) for use with a shunt (A1))

- AcuDC243-300V-A1-P1-X4-C-ND (communicating meter type (C) for use with a shunt (A1))
- AcuDC243-300V-A2-P1-X4-NC-ND (non-communicating meter type (NC) for use with a Hall Effect transducer (A2))
- AcuDC243-300V-A2-P1-X4-C-ND (communicating meter type (C) for use with a Hall Effect transducer (A2)); and

Outstation (receiving pulses from any of the above DC Meter types):

- Any CoP5 compliance tested and protocol approved Outstation dialled by the Central Data Collection Agent (CDCA) for use in Settlement.

Calibration and Commissioning:

- All Metering Equipment shall be calibrated (initially and periodically), and commissioned, in accordance with the principles set out in CoP4 to confirm the stated accuracy limits for each item of the Metering System are met over the stated range of measurement outputs (transducers or shunts) and inputs (DC Meter) and the Outstation correctly records the amount (and direction) of energy flows in the primary system conductor(s).

A condition of the Metering Dispensation is that the DC metering solution is not used for measuring DC supplies to customers for billing purposes.

Update:

On 30 June 2022, Elexon implemented [CP1527](#) and it changed the Issue numbers of CoPs 1, 2, 3, 5 and 10, by one, as it introduced new Outstation requirements. Outstations now need to store up to 90 days' worth of Half Hourly data per Outstation channel, up from the minimum requirement of 10 days for CoPs 1 and 2 Outstations and 20 days for CoPs 3, 5 and 10 Outstations.

- Elexon raised a generic Metering Dispensation, D/535, to continue to allow Outstations that comply with previous Issues of CoP 1, 2, 3, 5 and 10 to be registered for Settlement purposes until 30 December 2023.

Elexon also implemented [CP1553](#) on 30 June 2022 and CoPs 3, 5 and 10 now require class 0.5s current transformers (CTs), instead of class 0.5 CTs. CP1553 also changed CoP5 to require class 1 or B Meters, instead of class 2 or A Meters.

- Elexon raised a generic Metering Dispensation, D/544, which allows existing stock of class 0.5 CTs and class 2 or A Meters to be registered for Settlement purposes until 30 December 2023.

D/534 needs to be updated to cover CoP5 Issue 7 to allow this DC metering solution to continue to be used for DC Metering Systems registered on or after 30 June 2022. Outstations will need to comply with CoP5 Issue 7 and be protocol approved under BSCP601. The Statement of Generic Metering Dispensations will be updated to this effect.

Elxon recommends that the Hall Effect transducers (or shunts) used with the DC Meter types need not be equivalent to class 0.5s CTs (which are tested down to 1% rated primary current) but remain equivalent to class 0.5 CTs (which are tested down to 5% rated primary current), under this updated Metering Dispensation. This is because of the low materiality associated with circuits to be metered with this DC solution (300V @ 200A = 60kW).

Also, the DC Meter types specified have an accuracy equivalent to a class 0.5 Meter and this exceeds the minimum requirement in CoP5 Issue 7 (class 1 or B) so, this aspect does not need to be updated.

Period of Metering Dispensation required

Lifetime / ~~Temporary~~* *Delete as applicable.

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

Rationale for duration of Metering Dispensation:

This update to Metering Dispensation D/534, to include CoP5 Issue 7, is required because LVDC supplies need to be metered at some Boundary Points between OTSUA / OTS and Generator assets, and LVDC metering is not allowed for as standard in the BSC. This is based on the design of the site which will not change, therefore the Metering Dispensation will be required for the lifetime of the Metering Equipment registered for a site.

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):

N/A

What are the iron losses for this power transformer?

N/A

What are the copper losses for this power transformer?

N/A

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

N/A

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

N/A

*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?

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. cable/line manufacturer's data sheet):

What is the type of power cable/line?

N/A

What is the length of this power cable/line?

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

N/A

What is the impedance of this power cable/line?

N/A

What is the capacitance of this power cable/line?

N/A

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

N/A

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?
N/A	N/A
What is the cost of the proposed solution?	What does this cost entail?
N/A	N/A
What is the impact to Settlement of your proposed solution?	Why?
None.	The accuracy of the proposed solution will be within CoP5 overall accuracy limits
What is the impact to other Registrants of your proposed solution?	Why?
None.	The accuracy of the proposed solution will be within CoP5 overall accuracy limits

Site Details (for Site Specific Metering Dispensation)

Site Name:	N/A
Site Address:	N/A
MSID(s) / AMSID(s): *Delete as applicable.	N/A
Registered in: CMRS / SMRS / AMRS*: *Delete as applicable.	N/A
For SMRS, please advise of SMRA in space provided.	N/A

Manufacturer Details (for Generic Metering Dispensation)

Manufacturer Name:	As detailed in the proposed solutions in Part C – Reason for Application
Metering Equipment / Asset Metering Equipment Details*: *Delete as applicable	As detailed in the proposed solutions in Part C – Reason for Application

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

Metering Dispensation against Code of Practice*	CoP5 & CoP4
Issue of Code of Practice*:	(CoP5) Issue 6/7 & (CoP4) Issue 6
If against Code of Practice 11 against which Asset Metering Type	N/A
Capacity of Metering Circuits/Site Maximum Demand (MW/MVA):	60kW (300V DC @ 200A current)
(Proposed) Commissioning Date of Metering:	N/A
Accuracy at Defined Metering Point:	As per CoP5 overall accuracy limits at unity power factor (Active Energy only)
Accuracy of Proposed Solution (including loss adjustments):	As per CoP5 overall accuracy limits at unity power factor (Active Energy only)
Outstanding non-compliances on Metering Systems or Asset Metering Systems*:	N/A
*Delete as applicable	
Deviations from the Code of Practice (reference to appropriate clause):	All relevant clauses of CoP5 Issue 6 for registrations prior to 30 June 2022 and CoP5 Issue 7 from 30 June 2022.
	All relevant clauses of CoP4 Issue 6

* 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:*

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: M Smith *Date:* 6 February 2023

Duly authorised for and on behalf of BSCCo