BSCP32/4.1 Application for a Metering Dispensation

Part A – Applicant Details

To: BSCCo	**Date Sent:** 04/10/2023
From: Requesting Applicant Details Name of Sender: Contact email address: Contact Tel. No.	Contact Fax. No.
Name of Applicant Company: Dogger Bank Offshore Wind Farm Project 2 Projco Limited	
Address: No1 Forbury Place, 43 Forbury Road, Reading. RG1 3JH	
Post Code: RG1 3JH	Our Ref: DBBW - CoP5 AC Metering Dispensation Offshore Auxiliaries
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

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Part B - Affected Party Details

Number of Affected parties__3___[1]
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: Doggerbank Offshore Wind Farm Project 2 Projco Limited	
Address: 1 Kingdom Street	
London	
Post Code: W2 6BD	

Contact Name at Affected party:	
Contact email address:	
Contact Tel. No:	Contact Tel. No.
Company Name of Affected party: Low Carbon Contracts Company	
10 South Colonnade, Canary Wharf, London	
Post Code: E14 4PU	

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

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

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Part C – Reason for Application

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

Site Specific * **Delete as applicable.*

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

Background:

Elexon implemented CP1553 'Tightening the requirements for the minimum accuracy classes for Meters and Current Transformers in the CoPs' on 30 June 2022. It changed Code of Practice (CoP) 5 to require class 0.5s current transformers (CTs) instead of class 0.5 CTs.

Elexon raised a generic Metering Dispensation (D/544) to allow class 0.5 CTs to be installed and registered for Settlement until 30 December 2023.

The project requires a lifetime Metering Dispensation to use class 0.5 CTs for these LVAC supplies at Dogger Bank B. Please see below some rationale behind usage of class 0.5 CTs:

1. The affected CTs were procured well in advance of release of CoP5 (v17.0) and were already installed in relevant equipment in November 2021 considering the grace period for non-compliant CTs be available till 30 December 2023 for Metering System registration. Further, relevant feeders for CTs were installed on the Offshore platform on 12 December 2022 and 12 January 2023.
2. Meters associated with the CTs were installed on the Offshore platform in Thailand on 12 May 2022.
3. Considering CTs have been installed and mechanical completion of equipment finalised, replacement at this stage would have a programme and cost implications for the project and require changes to documentation.
4. Typical operating loads for the CTs in question are very low:
    - CT1 = 8.11kW (3 phase load) → CT Ratio (80/1A) → Iprimary = 14.45 A based on 231V line to ground voltage, which is 18.1% of rated primary current
    - CT2 = 1.18kW (3 phase load) → CT Ratio (100/1A) → Iprimary = 1.7A based on 231V line to ground voltage, which is 1.7% of rated primary current.
    - CT3 = 8.29kW (3 phase load) → CT Ratio (100/1A) → Iprimary = 11.96A based on 231V line to ground voltage, which is 12% of rated primary current

For CT1 and CT3, operational primary current is < 20% of rated primary current and IEC 61869-2 tolerances for ratio errors and phase displacement at values < 20% are different for accuracy class 0.5 and 0.5s CTs.

For CT2, operational primary current is <20% but loads connected are heaters on the GIS which will only be in-service if there is an outage of power on the Offshore platform and controlled environment is not maintained from the main systems. This means that under normal operation there are no loads associated with this CT and the probability of when these loads are connected under outage conditions are low over the lifetime of the project.

5. The materiality impact should be considered as insignificant, considering the connected loads are very small, i.e., <2.8kW per phase for each CT.

   To elaborate, in the worst-case scenario (constant load for all CTs and full duration of the wind farm's lifetime of 25 years) the impact of all combined CTs could add up to:

	P (kW)	%-loading	delta_error acc. to IEC 61869-2	delta_P (kW)
CT1	8.11	18.1%	0.25%	0.020275
CT2	1.18	1.7%	0.75%	0.00885
CT3	8.29	12.0%	0.25%	0.020725

   This would result in a worst-case error in measurement of 0.05kW * 25 years = 10.95MWh. The resulting financial impact would thus be limited to

   - £574 at a cost of 52.41£/MWh (based on the CfD price for DBB as of 2023 and assuming static offtake price increasing with inflation),
   - or to £1095 considering a currently above-market cost of £100/MWh.

   The previously described potential cost and schedule impacts would exceed these worst-case errors by a factor of >10.

6. Metering Equipment will not be registered in Settlement until May 2024 so D/544 cannot be used to cover this non-compliance with CoP5 as it expires on 30 December 2023 and the Metering Systems won't be registered by that point in time.

Period of Metering Dispensation required

Lifetime* *Delete as applicable.

If temporary, indicate for how long the Metering Dispensation is required.	N/A

Provide justified reasoning for the period of Metering Dispensation requested in the box below:

Rationale for duration of Metering Dispensation: The Offshore platform is expected to be at its final location Offshore in May 2024 and the Metering System for the affected CTs for CoP5 Metering equipment can be registered after this time, which is beyond the grace period of 30 December 2023. Doggerbank Offshore Wind Farm Project 2 Projco Limited believe that the impact due to difference in accuracy class of the CTs is insignificant due to the reasons provided in the section above and would appreciate consideration of a Metering Dispensation over the lifetime of the project. Further, Metering Equipment will not be registered in Settlement until May 2024 so D/544 cannot be used to cover this non-compliance with relevant CoP5 CTs as it expires on 30 December 2023 and the Metering System won't be registered by that point in time.

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. We are not proposing to apply loss adjustments for any power transformers losses. The Actual Metering Points (AMPs) for the CoP5 LVAC Metering Equipment are located at the Defined Metering Points (DMPs) (point(s) of connection to the Transmission System)

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

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. We are not proposing to apply loss adjustments for any power cable/line losses. The AMPs for the CoP5 LVAC Metering Equipment are located at the DMPs (point(s) of connection to the Transmission System).

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): N/A

What is the type of power cable/line? N/A

What is the length of this power cable/line? N/A

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?
Considering CT's and meters have been installed and mechanical completion finalised, replacement at this stage would have programme and cost implications for the project. The CTs are installed on the Offshore platform, currently still at port. While a detailed cost assessment would need to be performed by the Contractor, costs would be expected to entail procurement of the new CTs, cost of delays due to equipment lead times, manhours related to replacement of the CTs and performing mechanical completion and associated Site Acceptance Tests, together with changes to documentation. Cost/Schedule impact for compliant solution: • Equipment cost = Euro 1000 x 2 • Lead time of equipment = 3 to 6 weeks • Associated works = circa Euro 16,000 • Impact on commissioning: All commissioning will need to be finalised by mid-December 2023 (due to holiday season) as load-out is planned mid-January 2024. Any works required beyond this date may have a significant impact on programme for the project. Further, several stakeholders will need to coordinate commissioning activities in a relatively short period of time, from the decision of the metering dispensation application up to mid-January 2023 (Offshore platform load-out).	
What is the cost of the proposed solution?	What does this cost entail?
The proposed solution is to retain the currently installed Class 0.5 CTs for the metering of AC auxiliary loads in Dogger Bank B. If this solution is accepted, no cost or programme impact would take place. (Cost breakdown not available at this point but has been requested by the supplier).	
What is the impact to Settlement of your proposed solution?	Why?
Negligible as loads connected to CTs are very low for all 3 CTs. Further, loads on CT2 are only connected as a back-up solution and although it would operate at a load where the permissible errors for a class 0.5 CT are wider than for a class 0.5s CT, the materiality of and difference in measured current would be very, very small. Similarly, for CT3, 1.17kW of the 8.29kW 3phase load is only to be used as a back-up solution.	
What is the impact to other Registrants of your proposed solution?	Why?

Negligible as loads connected to CTs are very low.

Site Details (for Site Specific Metering Dispensation)

Site Name:	Dogger Bank Project 4 Offshore substation
Site Address:	Offshore
MSID(s) / ~~AMSID(s)~~: *Delete as applicable.	TBC
Registered in: CMRS / ~~SMRS / AMRS*~~: *Delete as applicable.	CMRS
For SMRS, please advise of SMRA in space provided.	N/A

Manufacturer Details (for Generic Metering Dispensation)

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

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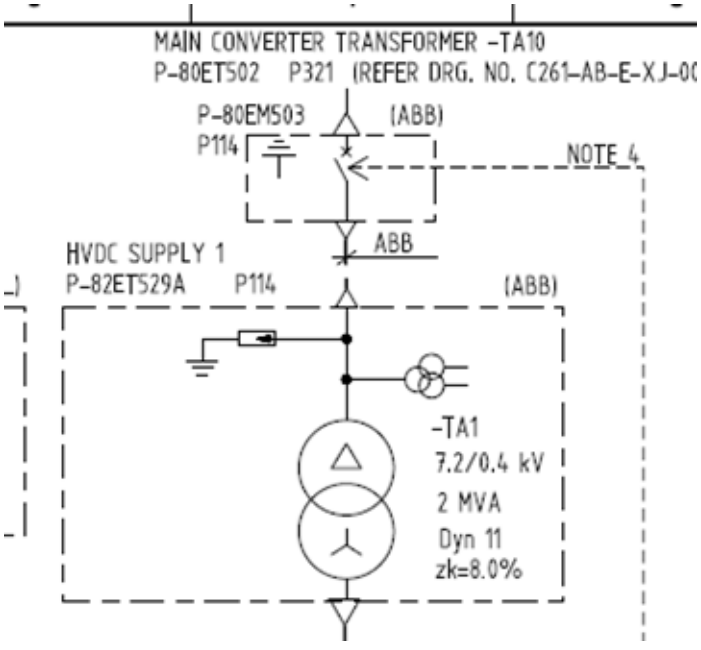
Part D - Technical Details

Code of Practice details

Metering Dispensation against Code of Practice*	CoP5
Issue of Code of Practice*:	Current version is v19.0. If version changes in the meantime it will be the version applicable at the time of first registration of CoP5 Metering Equipment for Settlement purposes.
If against Code of Practice 11 against which Asset Metering Type	N/A
Capacity of Metering Circuits/Site Maximum Demand (MW/MVA):	Site maximum auxiliary demand is 2MVA (for both Wind Farm and OFTO loads) as per auxiliary transformer. For the CTs in question, capacities are: • CT1 = 0.00811MW (8.11kW) • CT2 = 0.00118MW (1.18kW) • CT3 = 0.00829MW (8.29kW) Capacity of metering circuit would have a maximum of 1MW as per Code of Practice 5. 
(Proposed) Commissioning Date of Metering:	May 2024
Accuracy at Defined Metering Point:	CoP5

Accuracy of Proposed Solution (including loss adjustments):	CoP5
Outstanding non-compliances on Metering Systems or Asset Metering Systems*: *Delete as applicable	N/A
Deviations from the Code of Practice (reference to appropriate clause):	5.1.1 Current Transformers – class 0.5 CTs not class 0.5s CTs

* insert Code of Practice number and issue

Any Other Technical Information

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: *Date: 6 October 2023*

Duly authorised for and on behalf of BSCCo