4SCP32/4.1 Application for a Metering Dispensation

Part A – Applicant Details

To: BSCCo	**Date Sent:** 24/01/2022
From: Requesting Applicant Details Name of Sender: Contact email address: Contact Tel. No.	Contact Fax. No.
Name of Applicant Company: Uniper UK Ltd	
Address: Grain Power Station	
Power Station Road	
Isle of Grain	
Rochester	
Post Code: ME3 0AR	Our Ref:_____
Name of Authorised Signatory: Authorised Signature: _____	Password:

Confidentiality:

Does any part of this application form contain confidential information?

Request for Confidentiality 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: 2[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: Uniper UK Ltd	
Address: Grain Power Station	
Power Station Road	
Isle of Grain	
Rochester	
Post Code: ME3 0AR	

Contact Name at Affected party:	
Contact email address:	
Contact Tel. No:	Contact Tel. No.
Company Name of Affected party: National Grid ESO	
Address: L2 Floorplate	
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/……..

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:

Uniper UK are installing synchronous compensation units (SCU) on the site of the former Grain oil fired Power Station. A Metering Dispensation is required due to the Actual Metering Point (AMP) being remote from the Defined Metering Point (DMP). The application requires a dispensation against metering Code of Practice 1 (CoP1), and is for the lifetime of the SCUs.

The National Grid Stability Pathfinder Initiative requires that Reactive Power is measured at the individual SCUs, and it is proposed that the Settlements Central Data Collection Agent (CDCA) collects the Reactive Power Half Hourly (HH) data, which will be forwarded to NGESO on a daily basis. The SCU BM Units (BMUs) will be classed as a '0MW User' by NGESO. There will be a requirement to meter Active Power HH data, as the SCUs will import a small amount (less than 1MW) of Active Power during operational runs, which will be collected by the CDCA.

Two SCUs will be connected to the National Grid 400 kV sub-station via a common connection, using an existing bay (ex. Unit 4). Each SCU will be an individual BMU.

Four quadrant Settlement metering will be installed on the SCU 400kV system, instrument transformers to be installed between each SCUs step up transformer (400kV side) and the Transmission System DMP. The Metering Equipment (meters, instrument transformers etc) has been specified to comply with CoP1.

The connection between the SCU step up transformers is via air insulated aluminium busbar. The maximum distance between the AMP and the DMP is approximately 130 metres of aluminium busbar. The losses in the busbar have been calculated (see Part D1) and are insignificant; there is no requirement to compensate the meters for the losses.

Lead time for the necessary work to allow metering at the DMP would impact on the feasibility of the project, and the bid for Stability Pathfinder services would not have been economically viable. It would also impose additional costs to the project which would affect its financial viability (see Materiality).

Auxiliary power for the SCUs will be imported from the Transmission System through the step up transformers, and metered by the same meters used for SCU export.

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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 Stability Pathfinder business case requires activation of the SCUs in April 2022. It would not be possible to have the necessary changes to the National Grid infrastructure to allow metering at the DMP in the available timeframe. Following a period of commissioning, the contract with National Grid is due to commence in Quarter 2 of 2022.

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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, the power transformer in on the generator side of the metering instrument transformers.

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):

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? No. If Yes what are they?

The losses through the aluminium busbar are considered to be acceptable and will have no impact on Settlements.

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 Using the manufacturers data, we have calculated that the maximum resistance of the busbar will be 0.000647Ω at a maximum busbar length of 130m . The maximum current used by the synchronous compensation machine is 4426A (manufacturer's data). This equates to a maximum phase current of 166A per phase at the high voltage (400kV) side of the transformer. Therefore the 'per phase losses' (I^2R) will be in the order of 18 Watts. The losses are small and will have no material impact on Settlements. Therefore we do not intend to compensate the meters for these losses.

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?

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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? Yes/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.

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Materiality

Please complete the following:

What is the cost of providing compliant Metering Equipment?	What does this cost entail?
Estimated at £250,000	Significant modifications to the infrastructure of the National Grid sub-station, including civil enabling works, alteration to existing bus bar systems, removal of redundant instrument transformers and installation of CoP1 compliant Metering Equipment. Cabling from instrument transformers to metering cabinets in the existing gas turbine control room. This would also cause long delays to the project due to exceedingly long lead times for National Grid works; success of the project is dependant on delivery in mid-April 2022.
What is the cost of the proposed solution?	What does this cost entail?
£60,000	Installation of CoP1 compliant Metering Equipment on the 400kV side of the SCU step up transformers. Installation of metering panel and all cabling.
What is the impact to Settlement of your proposed solution?	Why?
None	The proposed solution will remain with the limits of CoP1.
What is the impact to other Registrants of your proposed solution?	Why?
None	The proposed solution will have no material impact on other Registrants. Accuracy will remain with CoP1 limits.

Site Details (for Site Specific Metering Dispensation)

Site Name:	Grain Power Station
Site Address:	Power Station Road Isle of Grain Rochester

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MSID(s):	TBC
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 (Version 13.0)
Capacity of Metering Circuits/Site Maximum Demand (MW/MVA):	115MVA)(115/-94 MVAr)
(Proposed) Commissioning Date of Metering:	16/04/2022
Accuracy at Defined Metering Point:	CoP1 limits for Active and Reactive Power
Accuracy of Proposed Solution (including loss adjustments):	CoP1 limits for Active and Reactive Power (no loss adjustments required)
Outstanding non-compliances on Metering Systems:	N/A
Deviations from the Code of Practice (reference to appropriate clause):	The AMP is not at the DMP. CoP 1, Appendix A, Clause 5 (i)

* insert Code of Practice number and issue

Any Other Technical Information

The Metering Equipment installed per SCU circuit is compliant with CoP1:

- Cewe Prometer R, Class 0.2s (main and check Meters)
- Current Transformers, Class 0.2s (two sets; one set dedicated to main Meter, one set for check Meter and (any) other non-Settlement burdens (there are no non-Settlement burdens connected))
- Voltage Transformer, Class 0.2 (one VT with two secondary windings; one secondary winding dedicated to main Meter, one secondary winding for check Meter and (any) other non-Settlement burdens (there are no non-Settlement burdens connected))

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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:24/01/2022*

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:*

Duly authorised for and on behalf of BSCCo

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