

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

## Part A – Applicant Details

<b>To: BSCCo</b>	<b>Date Sent:</b> 12 <sup>th</sup> November 2020
<b>From: Requesting Applicant Details</b>	
Name of Sender:	
Contact email address:	
Contact Tel. No.	Contact Fax. No. N/A
Name of Applicant Company: Western Power Distribution (East Midlands) plc	
Address:	
Avonbank	
Feeder Road	
Bristol	
Post Code:BS2 0TB	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\_\_2\_<sup>1</sup>

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

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

<sup>1</sup> 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/83

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

#### Background

Metering Dispensation D/83 was granted on 29 October 1992 when Willington GSP consisted of three SGTs (275/132kV @ 120MVA) plus one SGT (400/132kV @ 240MVA). These SGTs supplied nine unmetered 132kV feeders to the East Midlands distribution network and seven metered 132kV feeders to the power station owned and operated by National Power. The Metering Dispensation permitted the GSP metering to be located on the lower voltage side of the SGTs (the AMP), whereas the DMP is on the outgoing circuit breakers located in the 132kV switching station, with the supplies to the East Midlands network calculated by differencing off the supplies to the power station.

The power station supplies have all been decommissioned leaving the East Midlands distribution network as sole user of Willington GSP. This GSP recently consisted of three SGTs supplied from the 400kV (Nos 1, 6 & 7) plus two SGTs supplied from the 275kV (Nos 4 & 5).

SGT1 has its CoPB standard High Accuracy Metering (HAM) Units located within the 132kV substation on the incoming feeder to the 132kV busbars. SGTs 6 and 7 were installed in 2011 and 2013 with CoP1 standard (at the time) HAM Units and are also located within the 132kV substation on the incoming feeder. SGT5 has already been decommissioned and will be removed at some point in the near future. SGT4 (275kV) has been decommissioned and replaced with SGT2 (400kV/132kV @ 240MVA) and is to be energised in November 2020. The CoPB/1 compliant SGT4 HAM Units have been moved from the 275kV substation down to the 132kV substation and are located within the 132kV substation on the incoming feeder where SGT4 used to connect and are to be reused for SGT2.

The planned final arrangement will consist of four SGTs (Nos 1, 2, 6, 7 all 400/132kV @ 240MVA) supplying the nine unmetered 132kV feeders to the East Midlands network. Although there is no longer a requirement to difference off any third party supplies, the 132kV switching station remains the property of the NGET. In all cases the AMP is with 100m of the DMP however, the metering is legacy, hence the requirement for this Metering Dispensation.

Reason

Western Power Distribution (East Midlands) plc wishes to apply for a new Metering Dispensation for the following:

SGT	HAM Unit Brand	Complied with CoP	Qty	Class accuracy	Standards in relevant CoP
1	Ritz	B	3	2 sets of Class 0.1 CTs, 1 x Class 0.2 VT with 2 secondary windings	BS 3938 (CT) BS 3941 (VT) CEGB-HVS8 (combined CT/VT)
2	Ritz	B	2	As above	As above
2	Arteche	1 I2 (v8.0)	1	2 sets of Class 0.2s CTs, 1 x Class 0.2 VT with 2 secondary windings	IEC 60044-1 (CT) IEC 60044-2 (VT) IEC 60044-3 (combined CT/VT)
6	Arteche	1 I2 (v9.0)	3	As above	As above
7	Arteche	1 I2 (v9.0)	3	As above	As above

This is against current CoP1 Issue 2 (v13.0) standards. i.e. BS EN/IEC 61869-2 (CTs), BS EN/IEC 61869-3 (VTs) and BS EN/IEC 61869-4 (combined CT/VTs).

All the Meters comply with CoP1 standards in the current version as they were replaced during 2013-15 when National Grid changed all the GSP Meters and the Meter standards in CoP1 have not changed since February 2006, i.e. they are all class 0.2s main and check Active Energy Meters to BS EN/IEC 62053-22 and class 2.0 main and check Reactive Energy Meters to BS EN/IEC 62053-23.

For future administrative simplicity rather than create an additional Metering Dispensation WPD wishes to withdraw Metering Dispensation D/83 and replaced it with a new consolidated Metering Dispensation.

**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:

This is a permanent change.

## 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**

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? 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 to account for the losses of the power cable/line?

As the DMPs and the AMPs are within the allowable distance no correction is needed.

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?

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

\*Delete as applicable.

**Materiality**

Please complete the following:

<b>What is the cost of providing compliant Metering Equipment?</b>	<b>What does this cost entail?</b>
We estimate that the cost of this would be in the region of £500k	Compliant metering would consist of 12 HAM Units to current CoP1 standards at an estimated cost of £125k per SGT
<b>What is the cost of the proposed solution?</b>	<b>What does this cost entail?</b>
This is designed into the cost of the SGT	The re-use of the existing Metering Equipment as detailed above.
<b>What is the impact to Settlement of your proposed solution?</b>	<b>Why?</b>
None.	Overall accuracy at the DMP is maintained with CoP1 overall accuracy limits and the AMP and the DMP are now closer than the previous arrangement.
<b>What is the impact to other Registrants of your proposed solution?</b>	<b>Why?</b>
None	Overall accuracy at the DMP is maintained with CoP1 overall accuracy limits and the AMP and the DMP are now closer than the previous arrangement.

**Site Details (for Site Specific Metering Dispensation)**

Site Name:	Willington 400kV/132kV GSP
Site Address:	Willington 132kV Substation Twyford Road Willington Derby DE65 6DG
MSID(s):	2020, 2021, & 2039
Registered in: CMRS / <del>SMRS</del> *: *Delete as applicable.	
For SMRS, please advise of SMRA in space provided.	

**Manufacturer Details (for Generic Metering Dispensation)**

Manufacturer Name:	N/A
Metering Equipment Details:	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*	CoP1 (Four systems - SGT 1, 2, 6, 7)
Issue of Code of Practice*:	Issue 2 (v13.0)
Capacity of Metering Circuits/Site Maximum Demand (MW/MVA):	240MVA each
(Proposed) Commissioning Date of Metering:	SGTs 1, 6 & 7 commissioned prior to 2013. SGT2 to be commissioned 30/11/2020
Accuracy at Defined Metering Point:	Within CoP1 limits
Accuracy of Proposed Solution (including loss adjustments):	Within CoP1 – no loss adjustments
Outstanding non-compliances on Metering Systems:	N/A
Deviations from the Code of Practice (reference to appropriate clause):	5.1.1 Current Transformers 5.1.2 Voltage Transformers

\* 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:*  
2020

*Date: ..... 12<sup>th</sup> November*

*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:*      *Date: 13 November 2020.*

Duly authorised for and on behalf of BSCCo