

BSCP32/4.1 Application for a Metering Dispensation

Part A – Applicant Details

To: BSCCo	Date Sent: 31/10/2018
From: Requesting Applicant Details	
Name of Sender:	
Contact email address:	
Contact Tel. No.	Contact Fax. N/A
Name of Applicant Company: E.ON UK _____	
Westwood Business Park	
Coventry	
West Midlands	
Postcode: CV4 8LG _____	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

BSCP32/4.1 Application for a Metering Dispensation (Cont.)**Part B - Affected Party Details**

Number of Affected parties 2

Contact Name at Affected party:	
Contact email address:	
Contact Tel. No.	Contact Tel. No.
Company Name of Affected party: Eon UK PLC	
Westwood Way, Westwood Business Park Coventry CV4 8LG	
Post Code: S605TR	

Contact Name at Affected party:	
Contact email address:	
Contact Tel. No:	Contact Tel. No.
Company Name of Affected party: Northern Power Grid (Yorkshire) plc	
Address: Lloyds Court	
78 Grey Street.	
Newcastle upon Tyne	
Post Code:NE1 6AF	
Contact Name at Affected party:	

Contact email address:	
Contact Tel. No:	Contact Tel. No.
Company Name of Affected party: Gazprom Marketing & Trading Retail Ltd	
Address: 5th Floor Bauhaus	
27 Quay Street	
Manchester	
Post Code: M3 3GY	

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~~*

The metering installed at the original supply point is part of a group supply points that feeds an ex coal mine site which has since been developed into a business park. This supply point was believed to be compliant with Code of Practice (CoP) 3 and was used to facilitate a historical import capacity below 10MVA. The existing metering voltage transformers (VTs) and current transformers (CTs) within the Northern Power Grid (NPG) switchgear are located at NPG's Gascoigne 33kV substation. In order to facilitate Settlement arrangements for a 20 MVA generation asset within a private network, the maximum Export capacity onto the Distribution System, the Metering System will require an upgrade to comply with CoP2 (Issue 4).

During checks on the current substation installation equipment we have established the CT's are class accuracy 0.5, as opposed to the correct CT class accuracy of 0.2s required for CoP2 compliance, & mounted within old switchgear. The CTs cannot be changed due to the age of the switchgear & the removal of the internal busbar to install correct class accuracy CTs may cause irreparable damage to the site switchgear and will have a detrimental operational impact to the 33kV network. As such we are applying for a Metering Dispensation from the requirements as described in CoP2, Section 5.1.1 to allow the use of class 0.5 CT's within a CoP2 Metering System.

There is currently insufficient load (<10%) to commission the Metering System(s) end-to-end. This will be carried out as a priority once sufficient load is available to carry out a prevailing load test.

It will cost £1.5 million to fully comply with CoP2. We would like to use the existing CTs in existing old switchgear which are non-compliant and located away from the Defined Metering Point (DMP). Replacing the CTs could damage the busbar and cause disruption. Mitigation: Losses from DMP to Actual Metering Point (AMP) will be very minimal, CTs have been tested for accuracy and proposed solution will maintain CoP2 accuracy limits at DMP.

We also require a Metering Dispensation for the location of the CT/VTs (Appendix A, paragraph 7). All other elements of the Metering System will comply with the requirements of CoP2.

The CT/VT's are located on the incoming feeders to the switchgear so it is possible that energy could flow across the feeders from the distribution network when the busbar section switches are closed resulting in network flows recorded on the Settlement Metering System.

The busbar section switches have joint controls with our customer Harworth Estates & NPG. The switch positions are controlled through control logs. Additionally, a thermal protection switch has been installed which will prevent exported power from passing through the Braham circuit. However, to meet demand within the private wire network it is plausible for up to 20MVA to be pulled through the Braham circuit.

In order to mitigate the Settlement risk of potential distribution network flows through the Metering System we propose to implement a complex site supplementary form using an aggregation rule described under BSCP 514 section 8.4.8 'Network Flows Impacting Settlement Meters' on a permanent basis as relocating the busbars may cause further irreparable damage to the 33KV network. If a complex site aggregation rule was not in place on a permanent basis we would only discover changes to the busbar switch positions once consumption data had entered Settlement. The complex site aggregation rule would provide consistent Settlement accuracy at all times.

We have established that Settlement Meters will be installed & used within the private wire network to measure exported volumes from the generation asset that will feed other connection points within the private wire network (feeding a newly built business park). These MPANs are TBC & we are led to believe that Gazprom Supplier will submit a separate Metering Dispensation application (or use generic Metering Dispensation D/380) to cater for this arrangement. We currently believe that this will cater for the AMP not being at the DMP (i.e. the metering for the generation assets will not be at the distribution/private wire connection point).

Once generator MPANs are registered the generator volumes will need to be differenced from the Settlement metering associated with the private wire network to calculate the correct Settlement values for the private wire network MPANs.

Period of Metering Dispensation required

Lifetime

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:

The cost to upgrade the existing switch gear to comply with CoP2 would be prohibitive. As the connection is at 33kV, network disruption would also be caused whilst any physical site work is being undertaken.

The switchgear is owned and maintained by the NPG & the CTs cannot be changed due to the age of the switchgear. The removal of the internal busbar to install correct class CTs may cause irreparable damage to the site switchgear and will have operational impact to the 33kV network.

The costs to change the substation equipment has been quoted at £1.5 Million, there would be an impact on the downstream private wire business park consumers & the lead time to complete work would be over a period of 18-24 months to physically change the equipment with the substations.

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:

Minimal losses. No compensation proposed for losses (AMP to DMP).

Materiality

Please complete the following:

What is the cost of providing compliant Metering Equipment?	What does this cost entail?
£1.5 million	It will cost £1.5 million to fully comply with CoP2 (Issue 4). The option looked at was to establish a new 33kV substation on site. The circuits (x2) would need to be extended to the new substation housing a 33kV 5 panel board would be required (2 x incoming breakers and at least 2 x Metering breakers, 2 for HE demand and 1 for new generator). Labour costs are also included. There may be additional costs for disruption to the network or disruption to local services (road closures etc)
What is the cost of the proposed solution?	What does this cost entail?
C. £12,000	£11,844 – Siemens metering installation £410 – R Morgan installation of electrical supply for boundary metering
What is the impact to Settlement of your proposed solution?	Why?
There will be no impact to Settlements of the proposed solution.	Accuracy will be maintained within CoP2 limits and the proposed complex aggregation rule will mitigate any potential Settlement risk.
What is the impact to other Registrants of your proposed solution?	Why?
Other Registrants might be impacted in the GSP Group if the bus section switch is run closed and correct complex mapping is not in place because the network flows across the busbar will show up as Boundary Point	Export MPAN 2394000XXXXXX is currently unregistered however it is the intent for PGEN to register this in order to manage any potential network flows. We also expect new Import & Export MSIDs

flows and influence the GSP Group Take and hence GSP Group Correction Factor thus impacting Suppliers who pick up their share of corrected volumes.	to be created & registered by Gazprom, who will also need to apply for a site specific Metering Dispensation for Metering Systems within the Harworth estates private wire network (or use a generic Metering Dispensation like D/380).
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Site Details (for Site Specific Metering Dispensation)

Site Name:	Gascoigne 33kV Substation
Site Address:	Gascoigne Wood Mine Substation, Lennerton Road, Sherburn in Elmet, North Yorkshire, LS25 6LH
MSID(s):	2346526XXXXXX Import 2394000XXXXXX Export
Registered in:	SMRS
For SMRS, please advise of SMRA in space provided.	Northern Powergrid (Yorkshire)

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*	CoP2
Issue of Code of Practice*:	Issue 4
Capacity of Metering Circuits/Site Maximum Demand (MW/MVA):	20MVA
(Proposed) Commissioning Date of Metering:	N/A
Accuracy at Defined Metering Point:	CoP2 limits (+/-1%)
Accuracy of Proposed Solution (including loss adjustments):	<p>Within the CoP2 limits (+/-1%).</p> <p>Osgodby VTs/CTs = +0.237 %</p> <p>Bramham VTs/CTs = -0.166 %</p> <p>these tests exclude metering error, meters being used are COP1 type class 0.2S. Meters will be adjusted to compensate for errors if required</p>
Outstanding non-compliances on Metering Systems:	N/A
Deviations from the Code of Practice (reference to appropriate clause):	<p>Section 5.1.1 (incorrect CT accuracy class)</p> <p>Appendix A, paragraph 7 (AMP not at DMP)</p>

* insert Code of Practice number and issue

Any Other Technical Information

CEWE ProR Class 0.2s, metering panel will be built to the latest CoP2 Issue 4. The metering registration (D0268) will include a complex aggregation rule to remove any possible crossflow from one feeder to another, i.e. Osgodby to Bramham, vice versa.

Osgodby feeder:

CTs Class 0.5 600/5 7.5VA Meets IEC 60044-1, Serial Number 3KC 13005 (Red Phase), 3KC 13006 (Blue Phase)

Bramham feeder (ex Wistow Feeder)*

CTs Class 0.5 600/5 7.5VA Meets IEC 60044-1, Serial Number 3KC 13009 (Red Phase), 3KC 13010 (Blue Phase)

VTs Class 0.5 33000/110 3ph, Tested to **IEC61869-1-3**, Serial Numbers 3KP 703 (Osgodby) and 3KP704 (Bramham)

Please note: New standards IEC61869-1, IEC 61869-2 and IEC 61869-3 fully replace previous standards IEC 60044-1, IEC 60044-2 and IEC 60044-6 but the CoP 2 states that the tests should be done as per IEC 60044-2 therefore we will apply the generic Metering Dispensation D/477 against these VTs.

Note all the metering instrument transformers have been retested recently.

* Bramham cabling has been moved onto Wistow switchgear to adopt the existing CTs mounted within this unit to avoid relocating the existing CTs which may cause potential damage to the existing switchgear.

The VTs and CTs have been retested and the overall accuracy for each circuit is:

Osgodby VTs/CTs = +0.237 %

Bramham VTs/CTs = -0.166 %

Using the class 0.2s meters there will significant meter error budget to work with to still be within 1% as per CoP2 for both circuits.

VT and CT test certificates are provided to support the overall errors quoted above. There are no additional losses other than to include the cable burdens between the metering and the VT/CT units. The VT/CT units are within the NPG switchgear therefore the electrical losses from the AMP to the DMP will be very minimal.

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: 31/10/2018*

Password:

Duly authorised for and on behalf of Applicant Company

Confirmation of Receipt and Reference

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

Signature: M Smith..... *Date: 31 October 2018*.....

Duly authorised for and on behalf of the BSCCo