

ISG221/02 - METERING DISPENSATION D/497 – EAST CLAYDON GSP

MEETING NAME	ISG221
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Date of meeting	17 September 2019
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Paper number	ISG221/02
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Owner/author	Mike Smith
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Purpose of paper	Decision
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Classification	Public
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Summary	Southern Electric Power Distribution (SEPD) has applied for a temporary, three year, Metering Dispensation (D/497), from Code of Practice (CoP) 2. This is to use non-compliant capacitor voltage transformers (CVTs) on its two new Grid Supply Point circuits at the East Claydon 132kV substation. CoP2 requires the use of inductive voltage transformers (VT). SEPD proposes to replace the CVTs with compliant inductive VTs within three years. We invite the ISG to approve D/497 on a temporary, three year basis until 30 September 2022.
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1. BSC requirements

1.1 [Section L](#) 'Metering' of the Balancing and Settlement Code (BSC) requires all Metering Equipment to either:

- comply with the requirements set out in the relevant Code of Practice (CoP) at the time the Metering System is first registered for Settlement; or
- be the subject of, and comply with, a Metering Dispensation.

1.2 Section L allows the Registrant of a Metering System to apply for a Metering Dispensation if, for financial or practical reasons, Metering Equipment will not or does not comply with some or all the requirements of a CoP.

1.3 The process for applying for a Metering Dispensation is set out in [BSC Procedure \(BSCP\) 32 'Metering Dispositions'](#).

2. Metering Dispensation D/497

2.1 Southern Electric Power Distribution (SEPD) has applied for a temporary, three year, Metering Dispensation from [CoP2](#) 'Code of Practice for the metering of circuits with a rated capacity not exceeding 100 MVA for Settlement purposes'.

2.2 SEPD has discovered that the voltage transformers (VTs) installed on its two new circuits (Bicester North 1 and 2), for its new Grid Supply Point (GSP_ECLA_H), are non-compliant with CoP2 because they are capacitor voltage transformers (CVTs). CoP2 requires inductive (i.e. wire wound) VTs.

2.3 SEPD says the installation of the CVTs was an oversight with regards to the requirement for high accuracy metering. SEPD also says steps have been taken to review and update the SEPD guidance documentation used by project teams to clearly emphasise the requirements for measurement transformers where they are to be used in conjunction with such metering.

3. MDRG comments

3.1 We circulated the Metering Dispensation application (D/497) to the Metering Dispensation Review Group (MDRG) for comments.

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- 3.2 One MDRG member supports the application but suggested a two year Metering Dispensation because it might be more realistic to allow for procurement and scheduling circuit outages. The applicant responded there are potential risks surrounding getting suitable outages needed to perform the works. The risk to supply due to SE's Distribution Network capacity in the area already highlighted influence when there are suitable outage windows. Additionally, any outages need agreement with other parties involved at this shared Grid Supply Point. The potential for delays getting suitable outages agreed combined with the minimisation of risk to supply (e.g. by reducing the number of outages needed for this work to be carried out by scheduling it to occur co-incidentally with other scheduled maintenance work) mean that a 3 year period would be preferred to 2 years.

4. Affected party LDSO comments

- 4.1 We circulated the Metering Dispensation application to the Licensed Distribution System Operators (LDSOs) affected by the Metering Dispensation application, i.e. Western Power Distribution (WPD) for the _B GSP Group and the _E GSP Group.
- 4.2 WPD has no objections to the Metering Dispensation application.

5. NETSO comments

- 5.1 We also circulated the Metering Dispensation application to the National Electricity System Operator (NETSO).
- 5.2 The NETSO has no objections as the metering accuracy will be maintained and there is a plan for ensuring the site is compliant in the longer term.

6. ELEXON's view

- 6.1 ELEXON supports the temporary, three year, Metering Dispensation application (D/497), to use CVTs on the two new SEPD circuits, as accuracy will be maintained with CoP2 accuracy limits.

7. Recommendations

- 7.1 We invite you to:
- a) **APPROVE** Metering Dispensation D/497 for East Claydon GSP (GSP_ECLA_H) on a temporary, three year basis until 30 September 2022.

Appendices

Appendix 1 – East Claydon 132kV substation Settlement arrangements

Attachments

Attachment A – Metering Dispensation application D/497

Attachment B (CONFIDENTIAL) – East Claydon 132kV substation Single line diagram (SLD)

Attachment C (CONFIDENTIAL) – High level Bicester North 1 and 2 measurement transformers SLD

Attachment D (CONFIDENTIAL) – Detailed Bicester North 1 metering SLD

Attachment E (CONFIDENTIAL) – Detailed Bicester North 2 metering SLD

For more information, please contact:

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Appendix 1

1. Settlement arrangements in relation to the East Claydon 132kV substation

- 1.1 National Grid Electricity Transmission's (NGET's) 400kV system feeds the East Claydon 132kV substation via four, 400/132kV, supergrid transformers (SGTs), SGTs 1, 2, 3 and 4. NGET owns and operates the four SGTs and the 132kV main and reserve busbars. These assets form part of the Transmission System.
- 1.2 In 1992, there were originally four¹ feeder circuits off the 132kV busbars (i.e. Systems Connection Points (SCPs)):
 - two were owned and operated by East Midlands Electricity's (EME) and fed the _B GSP Group. These circuits were registered as a Grid Supply Point (GSP) under GSP_ECLA_1; and
 - there was a double 132kV circuit which was owned and operated by Midlands Electricity (ME) which fed the _E GSP Group at the Banbury 132kV substation. These circuits were registered as a Distribution Systems Connection Point (DSCP) under II_BANB_E. This Banbury double feeder also teed off to EME's Brackley 132kV substation in the _B GSP Group.
- 1.3 Under the Pooling and Settlement Agreement (P&SA) rules, metering was required as near as possible to the commercial boundary. EME, as the majority user at East Claydon, proposed 'difference' metering to be located on the low voltage side of the four 400/132kV SGTs, with EME as the Registrant.
- 1.4 This Metering Equipment was registered against GSP_ECLA_1 and was subject to an approved Metering Dispensation D/031. D/031 is due to the Actual Metering Point (AMP) not being at the Defined Metering Point (DMP).
- 1.5 ME also sought a Metering Dispensation (D/005) to move the metering from East Claydon to Banbury (i.e. AMP not at DMP). Line Loss Factors (LLFs) in the II_BANB_E Aggregation Rules are used to compensate for the 132 kV line losses from Banbury to the Brackley tees.
- 1.6 The II_BANB_E Metered Volumes are 'differenced' off the GSP_ELCA_1 Metered Volumes at a GSP Group Take Level in the GSP Group Take Aggregation Rules for the _B and _E GSP Groups (i.e. subtracted from the _B GSP Group and added to the _E GSP Group).
- 1.7 Due to the location of the metering for GSP_ECLA_1, this necessitates the inclusion of the Metered Volumes for the new GSP, GSP_ECLA_H, in a difference metering arrangement (i.e. they will need to be differenced off in the GSP_ELCA_1 Aggregation Rule itself).
- 1.8 The diagram below shows indicative circuit arrangements only from ELEXON's register of Complex GSP sites. The blue diamonds indicate the GSP circuit connections and the yellow diamonds indicate the DSCP circuit connections. The box containing the 'M' indicates the Settlement metering related to each SCP.

¹ There are now nine circuits off the busbars. Two new ones for SEPD (GSP_ELCA_H), five existing ones for WPD (_B) (GSP_ELCA_1) and two existing ones for WPD (_B) (II_BANB_E).

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