

METERING DISPENSATION D/504 – BADDESLEY ENERGY FROM WASTE PLANT

MEETING NAME	ISG
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Date of meeting	4 August 2020
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Paper number	232/02
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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	Total Gas & Power (TGP) has applied for a lifetime Metering Dispensation (D/504) from Code of Practice 2 for the location of the Metering Equipment associated with the Baddesley Energy from Waste (EfW) Plant. The Baddesley EfW Plant Metering Equipment is located approximately 150m below the Defined Metering Point (and the existing Baddesley Solar Farm's Boundary Point Settlement Metering Equipment). TGP proposes to compensate the Baddesley EfW Plant Meters for electrical losses over 130m of 33kV cable to the jointly owned Customer substation and use difference metering. We invite the ISG to approve Metering Dispensation D/504 on a lifetime basis.
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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 Dispensations'.

2. Confidentiality

2.1 BSCP32 allows applicants for Metering Dispensations to request confidentiality via the application form (BSCP32/4.1).

2.2 In this case the applicant has noted on the application form that it is not considered confidential. However, with the permission of the applicant, Elexon has extracted sensitive details from the application itself (e.g. screen shots which show personal email addresses) and has included these as a separate confidential attachment to this paper (Attachment C). This is to prevent these details from being made public on the BSC Website.

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3. Background to Metering Dispensation application D/504

- 3.1 The Baddesley Energy Park is the site of an existing Solar Farm and Customer substation. The Customer substation connects via 20m of cable to the Licensed Distribution System Operator's (LDSO's) network.
- 3.2 The Boundary Point Settlement Metering Equipment for the Solar Farm is located at the Defined Metering Point (DMP) for a Generating Plant (or a Customer), which is the point of connection to the LDSO's network, in the LDSO's substation. The Solar Farm has an export capacity of 2,744kVA.
- 3.3 Gravis Capital and Equitix EEEF WTE (Baddesley) Ltd ('the developers') have been working together to develop the site. They are joint owners of common assets, primarily the Customer substation, which is the 33kV switchgear that connects their respective Generation Plants to the LDSO's network. A 33/0.4kV auxiliary power transformer also connects to the 33kV switchgear and this feeds the shared low voltage (LV) supplies for the substation, for heating, lighting and substation battery chargers ('substation LV auxiliary supplies'). The two parties have a contractual arrangement between them, which provides for the allocation of the costs associated with these supplies.
- 3.4 Gravis Capital owns the Solar Park. Equitix EEEF WTE (Baddesley) Ltd owns the new Baddesley Energy from Waste (EfW) Plant, and associated 33kV cable (130m in length), that are being added and connected into the jointly owned 33kV switchgear in the Customer substation.
- 3.5 In order to try and fully comply with CoP2 the developers of the site have explored two possibilities:
- create a second DMP for Baddesley EfW Plant in the LDSO's substation at a cost in the region of £45k to £60k, assuming there is enough space for a second 33kV circuit breaker; or
 - create an Associated Distribution System where all entry/exit points on the Customer switchgear are metered and registered with MPANs. However, it is not possible to add metering voltage transformers to the feeders from the switchgear so it would have to be replaced at a cost of approximately £100k to £150k.
- 3.6 The developers propose to install CoP2¹ Metering Equipment for the Baddesley EfW Plant which is located 130m from the 33kV switchgear, and approximately 150m from the DMP, at a cost of approximately £4k.
- 3.7 The Baddesley EfW Plant wishes to use Third Party Access arrangements (and difference metering) and select a different Supplier than the Solar Farm. The Baddesley EfW Plant has an export capacity of 8,640kVA.

4. Metering Dispensation application D/504 – Baddesley EfW Plant

- 4.1 Total Gas & Power (TGP) has applied for a lifetime Metering Dispensation (D/504) from CoP2 for the location of the Metering Equipment associated with the Baddesley EfW Plant (Attachment A).
- 4.2 The Baddesley EfW Plant Metering Equipment is located approximately 150m below the Defined Metering Point (and the existing Baddesley Solar Farm's Boundary Point Settlement Metering Equipment).
- 4.3 TGP proposes to:
- compensate the Baddesley EfW Plant Meters for electrical losses over 130m of 33kV cable to the jointly owned 33kV switchgear (Attachment B and C); and
 - use difference metering arrangements to calculate the Solar Farm volumes (which will include the electrical losses on jointly owned equipment and the substation LV auxiliary supplies).

¹ 'Code of Practice for the metering of circuits with a rated capacity not exceeding 100MVA for Settlements purposes'

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5. MDRG comments

- 5.1 We circulated the Metering Dispensation application and attachments to the Metering Dispensation Review Group (MDRG) for comments.
- 5.2 All four MDRG members responded. All four MDRG members support the Metering Dispensation application as there is no material impact of the arrangements on Settlement and it is the most pragmatic solution.

6. LDSO comments

- 6.1 We circulated the Metering Dispensation application and attachments to the LDSO (Western Power Distribution) for comments.
- 6.2 The LDSO confirmed it has no objection to the ISG granting this Metering Dispensation.

7. ELVA comments

- 7.1 We circulated the Metering Dispensation application, loss calculations, cable data and proposed compensation factors to the Electrical Loss Validation Agent (ELVA) for assessment.
- 7.2 The ELVA noted a four watt (W) difference² in Active Energy, and a three volt-ampere reactive (var) difference³ in Reactive Energy, between the applicant's proposed loss compensation factors and the ELVA's calculated loss compensation factors, for the electrical losses in the 130m of 33kV cable.

8. Elexon's view

- 8.1 Elexon supports this lifetime Metering Dispensation application as:
- we believe the errors between the applicant's proposed loss compensation factors and ELVA's calculated loss compensation factors are not material to the overall accuracy of the Baddesley EFW Plant Metering Systems;
 - overall accuracy of the Baddesley EFW plant Metering Systems will be maintained within the limits defined within CoP2⁴, as referred to the DMP (excluding the shared losses in jointly owned equipment and the substation LV auxiliary supplies);
 - difference metering will be applied to the Boundary Point Metering Systems to determine the volumes associated with the Solar Farm (which will include the shared losses in jointly owned equipment and the substation LV auxiliary supplies); and
 - the substation LV auxiliary supplies will be allocated between the two parties via a contractual arrangement.

² 2.333kW vs 2.337kW.

³ 1.990kvar vs 1.987kvar.

⁴ e.g. $\pm 1.0\%$ for Active Energy from 120% and 10% (inclusive) rated current, at unity power factor and $\pm 5.0\%$ for Reactive Energy from 120% to 20% (inclusive) rated current, at 0.866 lag and 0.866 lead power factor.

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9. Recommendation

9.1 We invite you to:

- a) **APPROVE** Metering Dispensation D/504 for the Baddesley EfW Plant on a lifetime basis.

Attachments

Attachment A – Metering Dispensation application D/504

Attachment B – Losses calculations

Attachment C (CONFIDENTIAL) – Cable data, compensation factors and endorsements

For more information, please contact:

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