

Metering Dispensation D/538 – Lostock Sustainable Energy Plant

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Purpose of paper **Decision**

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Summary **SSE Energy Supply Limited has applied for a lifetime Metering Dispensation (D/538) from Code of Practice (CoP) 1 to use CoP2 compliant Metering Equipment for the Lostock Sustainable Energy Plant. We invite the ISG to approve Metering Dispensation D/538 on a lifetime basis.**

1. BSC requirements

- 1.1 Section L¹ 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 under the BSC (L3.2.2); or
 - be the subject of, and comply with, a Metering Dispensation (L3.4).
- 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 [BSCP32](#)².

2. Confidentiality

- 2.1 BSCP32 allows the Metering Dispensation applicant to request confidentiality via the application form (BSCP32/4.1).
- 2.2 In this case, the applicant has noted on the application form that the application itself is not confidential. However, the applicant has requested (via email) that we keep certain related documents (Attachments B - D) confidential because they are commercially sensitive.

3. Background to Metering Dispensation D/538

- 3.1 SP Manweb is building a new 132kV substation (Rudheath 132kV) at Lostock Gralam, Northwich, Cheshire, to facilitate the connection of a new Energy from Waste (EfW) Plant called the Lostock Sustainable Energy Plant.
- 3.2 The Lostock Sustainable Energy Plant will be located on land adjacent to the substation. It will comprise a single steam turbine Generating Unit with a maximum output of 95.3MVA. The Generating Unit connects, via a single 102MVA (ONAN³), 132/11kV power transformer, to two circuit connections to the Rudheath 132kV substation (Attachments C and D). The maximum contracted generation at the SPEN (SP Manweb plc) boundary is 75MW/84MVA, shared across the two points of connection.

¹ 'Metering'

² 'Metering Dispositions'

³ ONAN means the transformer has an internal cooling medium which is either mineral oil or a synthetic insulation fluid (O), it uses natural convection for the internal cooling medium (N), with air as the external cooling medium (A) and natural convection to circulate the external cooling medium (N).

- 3.3 The voltage transformers (VT) fitted to each connection (the Defined Metering Point (DMP)) in the substation comply with [Code of Practice 2](#)⁴, not [CoP1](#)⁵, i.e. are class 0.5, not class 0.2. The current transformers are fully compliant with CoP1 and satisfy, and exceed, the minimum requirements for CoP2, i.e. each set is class 0.2s and one set feeds the main Meter and the other set feeds the check Meter, for each connection. The Active/Reactive Energy Meters also comply with CoP2, i.e. class 0.5s/class 3.0, not class 0.2s/class 2.0 (Attachment B).
- 3.4 During the late stages of the design, it became apparent that the ONAN type power transformer has a nameplate MVA maximum continuous rating of 102MVA, so, based on the minimum rated item of primary plant of a circuit, this takes the connection into the CoP1 category.

4. Metering Dispensation D/538 – Lostock Renewable Energy Plant

- 4.1 SSE Energy Supply Limited has applied for a lifetime Metering Dispensation from CoP1 for the use of CoP2 compliant Metering Equipment for the Lostock Sustainable Energy Plant.
- 4.2 Complying with CoP1 would require significant changes to the VT arrangements and Metering Equipment already provided, should compliance be required. The transformer rating has been assigned to account for the ONAN cooling. It is not to provide Lostock Sustainable Energy Plant Limited with the potential to uprate the plant at a future date. This is not practicable based on the arrangement and construction of the plant and notable constraints on the SP Manweb Distribution System, which limits output to 89MVA at the point of connection.

5. MDRG comments

- 5.1 We circulated the Metering Dispensation application and its attachment to the Metering Dispensation Review Group (MDRG) for comments (Attachments A - D).
- 5.2 Three out of four MDRG members responded. All three MDRG members support the application on the following bases:
- the power flows across the boundary will remain within CoP2 limits. Any uprating of the generation plant (and associated connection) would trigger a review of the metering suitability;
 - as long as the site remains within the CoP2 limits. Any changes would require this to be revisited; and
 - the load on the circuit remains below 100MVA (and is therefore effectively CoP2 anyway). Even though the transformer is rated at 102MVA, the limiting factor in my opinion is the maximum output of the steam turbine at 95.3MVA. This together with the constraint on the SP Manweb Distribution System limiting the site's output to 89MVA is sufficient to ensure this will happen in my opinion.

6. LDSO comments

- 6.1 We circulated the Metering Dispensation application and its attachment to the Licensed Distribution System Operator (LDSO) for comments (Attachments A - D).
- 6.2 The LDSO confirmed it has no comments on the application, on the basis that the agreed capacity is below 100MVA and Elexon has confirmed that the accuracy will be maintained.

7. Elexon's view

- 7.1 Elexon supports this site specific Metering Dispensation application, on a lifetime basis, as accuracy will be maintained for each Metering Sub-System, within CoP2 limits at the DMP. The site will never be able to Export above 100MVA across either connection to the Distribution System, unless the generator uprates its Generating Unit and 132/11kV power transformer, and the LDSO changes the agreed capacity and reinforces its network.

8. Recommendation

- 8.1 We invite the ISG to:
- a) **APPROVE** Metering Dispensation D/538 from CoP1, to use CoP2 standards, for the Metering Equipment associated with Lostock Sustainable Energy Plant, on a lifetime basis.

⁴ 'Code of Practice for the metering of circuits with a rated capacity not exceeding 100MVA for Settlement purposes'

⁵ 'Code of Practice for the metering of circuits with a rated capacity exceeding 100MVA for Settlement purposes'

Attachments

Attachment A – Metering Dispensation application D/538 – Lostock Sustainable Energy Plant (LSEP)

Attachment B (CONFIDENTIAL) – LSEP Metering Equipment Single line diagram (SLD)

Attachment C (CONFIDENTIAL) – LSEP HV SLD

Attachment D (CONFIDENTIAL) – LSEP MV SLD

For more information, please contact:

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