ELEXON

Metering Dispensations D/529 and D/530 – Goosehall PV and Burwell BESS

Imbalance Settlement Group (ISG)

Date of meeting	**7 December 2021**	Paper number	**248/01**
Owner/author	**Mike Smith**	Purpose of paper	**Decision**
Classification	**Public**	Document version	**V1.0**

Summary

EDF Energy Customers Limited has applied for a lifetime Metering Dispensation (D/529) from Code of Practice (CoP) 2. This is for the location of new Metering Equipment related to the existing 35MW Goosehall PV site.

Erova Energy Limited has applied for a lifetime Metering Dispensation (D/530) from CoP2. This is for the location, and standards (to CoP3), of new Metering Equipment related to a new 5MW BESS (Burwell) to be connected into the Goosehall PV site. The new BESS will share the same Defined Metering Point (point of connection to the Distribution System) as the Goosehall PV site.

We invite the ISG to approve Metering Dispensations D/529 and D/530 on a lifetime basis.

1. BSC requirements

1.1 Section L[1] 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. Background to Metering Dispensations D/529 and D/530

2.1 The Goosehall Photo Voltaic (PV) site is currently metered to CoP2[3] standards at the Defined Metering Point (DMP). The DMP is the point of connection to UK Power Network's (UKPN's) Distribution System.

2.2 A 5MW Battery Energy Storage System (BESS) (Burwell BESS) will be built next to the Goosehall PV site and connect into the Goosehall PV site, i.e. it will share the same DMP.

2.3 The proposal is to:

- install a new Ring Main Unit (RMU) between the existing UKPN metering circuit breaker (at the DMP) and the existing PV site;

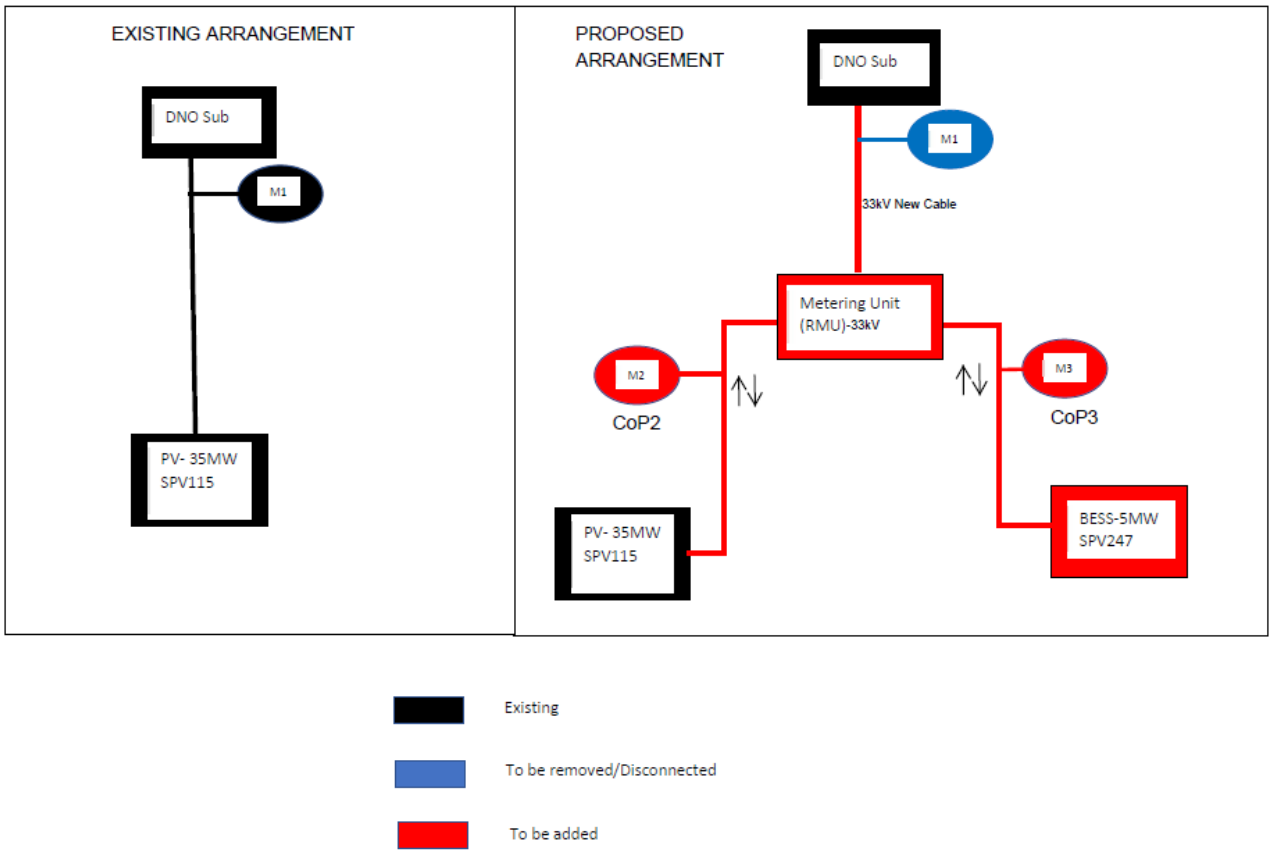
[1] 'Metering'
[2] 'Metering Dispensations'
[3] 'Code of Practice for the metering of circuits with a rated capacity not exceeding 100MVA for Settlement purposes'

- install 50m of new 33kV cable from the UKPN metering circuit breaker to the new RMU (Attachment D);
- reconnect the PV site 33kV cable into the new RMU; and
- connect the new 33kV Burwell BESS cable into the new RMU as well.

2.4 The RMU will contain one set of CoP2 Metering Equipment for the Goosehall PV site and one set of CoP3[4] Metering Equipment for the new Burwell BESS site.

2.5 When the new Metering Equipment for the Goosehall PV site and the Burwell BESS site is registered, the Metering Equipment at the DMP for the Goosehall PV site will be de-registered.

From Attachment C:



2.6 Since the Actual Metering Points (AMPs) for the new PV and BESS Metering Equipment will not be at the DMP, Metering Dispensations are required for the location of the Metering Equipment for both sites. Additionally, the applicant for the Burwell BESS Metering Dispensation proposes to seek a Metering Dispensation from CoP2, to meter to CoP3 standards, as the rated circuit capacity of the Burwell BESS circuit is less than 10MVA.

3. Metering Dispensation D/529 – Goosehall PV

3.1 EDF Energy Customers Limited has applied for a lifetime Metering Dispensation (D/529) from CoP2, on behalf of Lightsource BP SPV115 Ltd (SPV115) (Attachment A). The Metering Dispensation application is for the location of new Metering Equipment related to the existing 35MW Goosehall PV site.

3.2 The new Metering Equipment will be to CoP2 standards but will be located 50m below the DMP.

3.3 The losses between the AMP and the DMP caused by the PV operating at full load, over 50m of 33kV cable, will be 3.54kW. Lightsource BP (SPV115) does not intend to compensate the CoP2 Meters for the losses as, expressed as a percentage of full load, the unaccounted for losses equate to 0.01%. The Goosehall PV Metering System will be within CoP2 overall accuracy limits[5] at the DMP.

3.4 The expected date of (re-) energisation of Goosehall PV is 15th September 2022.

[4] 'Code of Practice for the metering of circuits with a rated capacity not exceeding 10MVA for Settlement purposes'
[5] The limits of error for Active Energy in CoP2, from 120% to 10% (inclusive) of rated measuring current, at unity power factor, are ± 1.0%. For the same current range the limits of error for Active Energy, at 0.5 lag and 0.8 lead power factor, are ± 2.0%.

4. Metering Dispensation D/530 – Burwell BESS

4.1 Erova Energy Limited has applied for a lifetime Metering Dispensation (D/530) from CoP2, on behalf of Lightsource BP SPV247 Ltd (SPV247) (Attachment B). The Metering Dispensation application is for the location, and standards, of new Metering Equipment related to a new 5MW BESS.

4.2 The new Metering Equipment will be to CoP3 standards instead of CoP2 standards and will be located 50m below the DMP. The applicant proposes to use CoP3 standards because the circuit capacity for the BESS is less than 10MVA.

4.3 The losses between the AMP and the DMP caused by the BESS operating at full load, over 50m of 33kV cable, will be 0.072kW. Lightsource BP (SPV247) does not intend to compensate the CoP3 Meters for the losses as, expressed as a percentage of full load, the unaccounted for losses equate to 0.00144%. The Burwell BESS Metering System will be within CoP3 overall accuracy limits[6] at the DMP.

4.4 The expected date of energisation of Burwell BESS is 15th September 2022.

5. MDRG comments

5.1 We circulated the Metering Dispensation applications and attachments to the Metering Dispensation Review Group (MDRG) for comments (Attachments A - D).

5.2 All three MDRG Members responded. All three MDRG Members support Metering Dispensations D/529 and D/530, on the following bases:

- the distance from the AMP to the DMP is minimal;
- the cable losses are minimal over this short distance;
- there is no voltage transformation; and
- there is no need for any differencing to achieve the correct allocation of energy.

6. LDSO (and NETSO) comments

6.1 We circulated the Metering Dispensation applications and attachments to the Licensed Distribution System Operator (LDSO) for comments (Attachments A - D). We did this because the LDSO is an Affected party under BSCP32 as the owner and operator of the Distribution System to which Goosehall PV is connected and Burwell BESS is to be connected.

6.2 At the time of writing the paper the LDSO had not provided a response on both applications. We will provide any updates to the ISG at its meeting.

6.3 We circulated Metering Dispensation application D/530 and its attachments to the National Electricity Transmission System Operator (NETSO) for comments (Attachments B, C and D). We did this because we understand that the Burwell BESS intends to participate in ancillary services with National Grid Electricity System Operator (NGESO) and NGESO are listed as an Affected party in the BSCP32 application form.

6.4 The NETSO had no comments from a Balancing and Services perspective as long as the volumes are correctly accounted for.

7. Elexon's view

7.1 D/529 (Goosehall PV) - Elexon supports this application as CoP2 overall accuracy limits will be maintained at the DMP for the 35MW PV without compensation for the losses between the AMP and DMP being applied to the Meters. The material impact on Settlement of not applying compensation will be small.

7.2 D/530 (Burwell BESS) - Elexon supports this application as CoP3 overall accuracy limits will be maintained at the DMP for the 5MW BESS without compensation for the losses between the AMP and DMP being applied to the Meters. The material impact on Settlement of not applying compensation will be negligible.

[6] The limits of error for Active Energy in CoP3, from 120% to 10% (inclusive) of rated measuring current, at unity power factor, are ± 1.5%. For the same current range the limits of error for Active Energy, at 0.5 lag and 0.8 lead power factor, are ± 2.5%.

8. Recommendations

8.1 We invite the ISG to:

a) **APPROVE** Metering Dispensation D/529 from CoP2, for the location of the Metering Equipment associated with Goosehall PV, on a lifetime basis; and

b) **APPROVE** Metering Dispensation D/530 from CoP2, for the location, and standards (CoP3), of the Metering Equipment associated with Burwell BESS, on a lifetime basis.

Attachments

Attachment A – Metering Dispensation application D/529 – Goosehall PV

Attachment B – Metering Dispensation application D/530 – Burwell BESS

Attachment C – D/529 and D/530 - Metering proposal (existing and proposed)

Attachment D – D/529 and D/530 - 33kV cable parameters

For more information, please contact:

Mike Smith, Metering Analyst

mike.smith@elexon.co.uk

020 7380 4033