ELEXON

# Metering Dispensations – D/552 Tiln Farm PV and D/553 Tiln Farm BESS

**Imbalance Settlement Group (ISG)**

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Summary

**Flexitricity Limited has applied for two lifetime, site specific Metering Dispensations from Code of Practice (CoP) 2. The applications (D/552 and D/553) are for the location of the CoP2 Metering Equipment associated with the Tiln Farm Photo Voltaic (PV) assets and the Tiln Farm Battery Energy Storage System (BESS) assets, respectively. The PV and BESS assets are located at the same site and share the same point of connection to the Distribution System. We invite the ISG to approve Metering Dispensations D/552 and D/553, 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/552 and D/553

2.1 Lightsource BP is planning to construct a new generation site called Tiln Farm, which will be located in Retford, Nottinghamshire. The site will comprise:

- 49.75MW of solar Photo Voltaic (PV) generation; and a
- 32MW Battery Energy Storage System (BESS).

2.2 The PV and BESS assets are at the same location and share the same grid connection and grid connection assets.

2.3 The site will connect into the National Grid Electricity Distribution (NGED), formerly Western Power Distribution (WPD), 132kV network and the Defined Metering Point (DMP) will be at the 132kV voltage level within the NGED owned and operated assets. This is the point of connection.

[1] 'Metering'
[2] 'Metering Dispensations'

2.4 A 132/33kV transformer installed downstream of the DMP, and within the private network, will provide for connection of the PV generation and BESS generation at 33kV. This is detailed within the accompanying single line diagram (SLD) (Attachment D).

2.5 There is a requirement to operate the grid connection assets (owned by Lightsource SPV 232 Limited), PV generation (owned by Lightsource SPV 154 Limited), and BESS generation (owned by Lightsource SPV 216 Limited) as separate companies and to maintain separate metering for each.

2.6 In order to maintain a single grid connection at 132kV, it is proposed to provide two Actual Metering Points (AMPs), at the 33kV voltage level in the private network, one for the PV and one for the BESS. Metering will also be provided at the DMP and this will be used as part of a difference metering arrangement to assign losses, between the PV AMP and BESS AMP, to/from the DMP, to an Import MPAN, along with the low voltage (LV) supplies for the site. This is also detailed within the accompanying SLD (Attachment D).

## 3. Metering Dispensation D/552 – Tiln Farm PV

3.1 Flexitricity Limited (Flexitricity) has applied for a lifetime Metering Dispensation (D/552) from CoP2[3] for the location of the Metering Equipment associated with the PV assets at Tiln Farm (Attachments A, C, D and E).

3.2 The PV assets will be metered to CoP2 standards at the point at which they connect to 33kV private network (the AMP) and not at the DMP (132kV). Overall accuracy will be maintained at the AMP. Any losses caused by its operation over the private network, and the LV supplies for the site, will be assigned to the Import MPAN for the private network and shared via a tripartite (private) agreement.

## 4. Metering Dispensation D/553 – Tiln Farm BESS

4.1 Flexitricity has applied for a lifetime Metering Dispensation (D/553) from CoP2 for the location of the Metering Equipment associated with the BESS assets at Tiln Farm (Attachments B, C, D and E).

4.2 The BESS assets will be metered to CoP2 standards at the point at which they connect to 33kV private network (the AMP) and not at the DMP (132kV). Overall accuracy will be maintained at the AMP. Any losses caused by its operation over the private network, and the LV supplies for the site, will be assigned to the Import MPAN for the private network and shared via a tripartite (private) agreement.

## 5. MDRG comments

5.1 We circulated the Metering Dispensation applications (D/552 and D/553) and their attachments to the Metering Dispensation Review Group (MDRG) for comments (Attachments A – D).

5.2 Three out of four MDRG members responded.

5.3 One MDRG member declined to comment on both applications as their company has been involved with the Tiln Farm project.

5.4 Two other MDRG members support both applications as the Licensed Distribution System Operator (LDSO) has now confirmed that the Reactive Power arrangements meet their requirements.

## 6. LDSO comments

6.1 We circulated the Metering Dispensation applications (D/552 and D/553) and their attachments to the LDSO for comments (Attachments A – D).

6.2 The LDSO (NGED) supports these Metering Dispensations, provided Reactive Energy is included in the difference metering arrangements. The applicant intends to and has updated its application forms (Attachments A and B) and the SLD (Attachment D) to include Reactive Energy in the difference metering arrangement.

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

## 7. Elexon's view

7.1 Elexon supports both Metering Dispensation applications as the Tiln Farm PV and BESS Metering Systems will remain within CoP2 accuracy limits at their AMPs on the 33kV side of the site's 132/33kV transformer.

7.2 Although Exports from the Tiln PV and BESS will appear higher than they would be if measured at the DMP (and Imports to the PV and BESS will appear lower), any losses within the private network[4] will be assigned to a separate Import MPAN and overall accuracy will also be maintained at the DMP for the BESS and PV Metering Systems, within CoP2 limits (+/- 1.0% at Unity Power Factor) (Attachment E).

## 8. Recommendations

8.1 We invite the ISG to:

a) **APPROVE** Metering Dispensation D/552, from CoP2, on a lifetime basis, for the location of the Metering Equipment associated with the Tiln Farm PV assets; and

b) **APPROVE** Metering Dispensation D/553, from CoP2, on a lifetime basis, for the location of the Metering Equipment associated with the Tiln Farm BESS assets.

## Attachments

Attachment A – Metering Dispensation application D/552 (Tiln Farm PV)

Attachment B – Metering Dispensation application D/553 (Tiln Farm BESS)

Attachment C – Annexure to D/552 and D/553

Attachment D – Single line diagram for D/552 and D/553

Attachment E – Appendix 1 to D/552 and D/553 – Losses Estimation

## For more information, please contact:

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[4] These will vary depending on the size of the flows and paths the electricity takes within the private network, e.g. the PV could be generating just enough to feed the BESS and auxiliary supplies, with no energy reaching the DMP (or even the going through the 132/33kV site transformer). The aggregation rules will still allocate energy to the Import MPAN for the site auxiliary supplies (i.e. load consumed by them) and the BESS's Import MPAN. The PV Export MPAN will record the full amount of the generation.