

SETTLEMENT METERING

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PURPOSE AND SCOPE

The purpose of this procedure is to ensure that:

- Settlement Metering installations comply with all the relevant standards.
- All documentation is satisfactorily completed and presented to relevant parties in an accurate and timely manner (Appendix A).
- Actions are carried out by the relevant responsible parties to achieve correct and timely completion of Settlement Metering installations (Appendix A).
- Planning, interfaces, standards, time scales and implementation of Settlement Metering Schemes are identified, and to ensure individuals involved in such Schemes are aware of their responsibilities.
- This Procedure covers Settlement Metering requirements at Grid Exit (Supply) Points and Grid Entry Points. The procedure is only applicable to schemes where the requirement for Settlement Metering has been clearly identified; or if the project involves the up-rating of plant resulting in the change of capacity for a given metered supply. In the case of Grid Entry Points the Generator Company (Registrant) may decide to own and provide their own Settlement Metering.
- Responsibility for registering new boundary points with ELEXON rests with Compliance and Notifications Team within Network Service (TNS). The overall responsibility for National Grid's interface with ELEXON remains with Commercial Frameworks (TNS).

Responsibility for registering the associated boundary point metering system rests with the Registrant (Generator, Distribution System Operator (DSO) or directly connected customer).

It should be noted that replacement of SGTs or changes to plant ratings are to be assessed for their impact on the metering system. Such changes may result in minor alterations to the metering system, and should be undertaken by a Meter Operator Agent who will be contracted by National Grid to undertake any minor works. Such minor alterations are not relevant to the Settlement Metering process outlined in this document, but may require a new or updated registration form.

Specifically excluded from the scope of this document is OFTO metering and metering for site supplies. Responsibility for the supply and registration of site supply metering equipment rests solely with National Grid's contracted electricity energy provider.

PART 1 – PROCEDURAL

1 INTRODUCTION

Settlement Metering is required at all commercial interface points on the Transmission System. The procurement, installation, registration and commissioning lead times for associated equipment shall be factored into overall project timescales.

The Metering equipment comprises High Voltage (HV) and Light Current components. The HV components comprise Current and Voltage Transformers (CT and VT), site cabling and CT/VT Marshalling Boxes. The Light Current components include the Metering Cubicle, test terminal blocks, energy meters, data collector outstations, Metering Impulse Interposing Units (MIU) and other ancillary equipment as identified in TS 3.09.13 and TGN (E) 056.

Metering Boundary Point Registration shall be carried out within the timescales and in accordance with the requirements of BSCP 25 that requires details of the location, name, type of connection, point of connection and the Effective Date.

Metering System Registration shall be carried out within the timescales and in accordance with the requirements of BSCP20 and is the responsibility of the Registrant.

Under the Balancing and Settlement Code (BSC) the associated circuit must not be energised until 'Approval to Energise' has been received from Elexon. Elexon issues the 'Approval to Energise' notification to Customer Service via e-mail as the final part of the registration process. Upon receiving 'Approval to Energise' Customer Service will forward a copy to relevant Commissioning Officer within Capital Delivery to formally notify that Stage 2 Commissioning may commence. Energisation without ELEXON's authorisation is a breach of the Code and the transmission licence (Condition C3).

After commissioning the data into the Settlement process, the Metered Data is collected from the Metering Equipment at site via either the Public Service and/or Corporate Telephone network (PSTN \ CTN) line provided.

2 RESPONSIBILITIES

The functional units with their main responsibilities and activities in this TP are as follows.

2.1 Transmission Network Services (TNS), Customer Service

2.1.1 Electricity Customer Account Manager

- a) First point of contact for new and modified connections to the National Grid Transmission System.
- b) Process Connection Application and liaise with System Design to initiate the project design and development process.
- c) Confirm ownership boundary and hence the Defined Metering Point.

2.1.2 Compliance and Notifications Team

- a) Obtain energisation date and Single Line Diagram (SLD) showing the defined metering points for projects requiring new boundary point registration
- b) Register the new boundary points on the Transmission Network with ELEXON in accordance with National Grid's obligations under the BSC
- c) Provide National Grid Commissioning Officer with 'Approval to Energise' notification as final stage of registration.

2.2 Transmission Network Service (TNS), Commercial Frameworks

2.2.1 Markets and Balancing Team

- a) Act as focal point for the overall National Grid interface with Elexon

2.3 Electricity Transmission Asset Management (ETAM)

2.3.1 Asset Policy

- a) Determine metering policy and produce related documentation.
- b) Provide support to Capital Delivery for technical and design requirements including Type Registration.
- c) Provide technical representation on ELEXON committees relating to metering technical issues.

2.3.2 ETAM Operations

- a) Maintenance and security sealing of the National Grid metering system (both HV and LV components).

Note: Although the Meter Operator Agent is ultimately responsible for the metering, ETAM Operations may carry out some maintenance and security sealing under a PDSA using Engineers who have been authorised by the Meter Operator Agent.

2.3.3 System Design

- a) Ensure that Settlement Metering is considered as part of System Design and is correctly located, thus identifying the Defined Metering Point.

2.4 Capital Delivery (CD)

2.4.1 Commissioning Officer

- a) Liaise with Asset Policy on technical aspects of design.
- b) Ensure the customer/Registrant is aware of their duties
- c) Ensure that metering suppliers liaise with the Meter Operator Agent, produce plant layouts, and that the positioning / point of connection of the Measurement Transformers comply with the requirements of the Defined Metering Point.
- d) Ensure that suppliers produce and submit documentation to the Meter Operator Agent in Elexon required time frame.
- e) Liaise with Investment Delivery / Technical Assurance to ensure the Asset Register is updated.

- f) Ensure circuit is not subject to energisation before receiving 'Approval to Energise' notification from TNS Customer Service

2.4.2 Project Engineer

- a) Request Meter Operator to undertake proving tests for DSO connections

2.5 Market Operation (MO)

2.5.1 National Access Planning

- a) Ensure circuit is not subject to energisation before receiving 'Approval to Energise' notification from TNS Customer Service

3 GENERAL

The following points provide details of the procedures involved in or associated with Settlement Metering. These points expand on or are included on the flowchart in Appendix B.

- a) Compliance and Notifications Team obtains the year ahead outage plan and track projects which they identify as requiring boundary point registration. This provides a central monitoring system for National Grid, and also provides information for regular communications between National Grid and Elexon.
- b) For individual projects it is the responsibility of the Commissioning Officer (as defined in UKBP TP106) to confirm with Customer Service whether there are any requirements for boundary point registration on their particular project. Typical requirements for boundary point registration are;
 - New connections by a DSO
 - New connections by Generators
 - Change in location of HV metering equipment

Where the requirement for boundary point registration has been identified the Commissioning Officer must inform the Compliance and Notifications Team of the anticipated energisation date. For the avoidance of doubt, this is the anticipated Stage 2 commissioning date where the equipment is first connected to the primary system and primary current can flow. The Commissioning Officer should also provide Compliance and Notifications Team with a Single Line Diagram (SLD) showing metering positions.

- c) Once the relevant information has been sent by the Commissioning Officer, the Compliance and Notifications Team will complete the boundary point registration form (BSCP25 form 5.1) and send a draft copy to Elexon. Once the draft form has been agreed in principle with Elexon, a signed version will be formally issued for processing. This stage completes the necessary inputs from National Grid for boundary point registration.
- d) As part of the overall registration process Elexon will receive the BSCP25 form from National Grid, and will also receive a boundary point meter system registration form (BSCP 20 form 4.1) which is completed by the Registrant.

In addition the Registrant will also appoint a Meter Operator Agent who will undertake the required commissioning/proving tests on the installed metering system to BSCP 02 and 06. Once satisfactory results have been obtained from the commissioning/proving tests the Meter Operator will notify Elexon of these results.