

## **OPERATOR COMMISSIONING OF 3-PHASE 4-WIRE SETTLEMENT METERING**

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### **PURPOSE AND SCOPE**

This schedule details the requirements for the final commissioning of Settlement metering installations engineered in accordance with Technical Guidance Note TGN(E)56. In instances where the metering system differs from the requirements of the TGN appropriate account of the differences should be taken when determining the commissioning requirements.

It is a pre-requisite that the installation contractor commissioning tests have already been performed in accordance with SCT 16.3 and that the meters are available for installation. Also available should be copies of the required meter compensation spreadsheet or meter compensation proforma, and the meter and measurement transformer test certificates

Some of the tests in this SCT (tests C3, C4 and C5) are performed to confirm the measurements made in SCT 16.3.

This SCT includes both Stage 1 and Stage 2 (clause 10) commissioning tests.

Some of the information required by this SCT is specifically needed for the Registration of the metering into Settlement in accordance with the Balancing and Settlement Code Procedure (BSCP20).

## PART 1 – PROCEDURAL

### 1 PROCESS

This schedule describes the procedures and tests necessary to commission; Meters, Meter Impulsing Interposing Relays (MIUs), Data Collector Outstations and modems, cubicle alarms, and the data links between outstations and the and the Settlement data collection system.

These commissioning tests meet both National Grid Transco's (NGT) requirements and those specified by Elexon in Metering Code of Practice 4. The tests should be performed by the NGT Meter Operator Agent (MOA), (Siemens Energy Services Ltd).

Where the installed metering system does not meet the requirements of TGN(E)56, Siemens Energy Services be requested to assess the discrepancies.

### 2 FORMS AND RECORDS

|           |   |                                                  |
|-----------|---|--------------------------------------------------|
| SCT 16.4A | - | Schedule of Site Commissioning Tests             |
| SCT 16.4B | - | Calibrated Test Equipment                        |
| SCT 16.4C | - | Wiring Tests                                     |
| SCT 16.4D | - | Confirmation of Equipment and Connection Details |
| SCT 16.4E | - | Burden Measurement                               |
| SCT 16.4F | - | Commissioning Of Outstations And Mius            |
| SCT 16.4H | - | On Load Tests                                    |
| SCT 16.4I | - | Completion Of Tests                              |

## PART 2 - DEFINITIONS AND DOCUMENT HISTORY

### 3 DEFINITIONS

Not applicable.

### 4 AMENDMENTS RECORD

| Issue | Date          | Summary of Changes / Reasons                   | Author(s)                           | Approved By (Inc. Job Title)         |
|-------|---------------|------------------------------------------------|-------------------------------------|--------------------------------------|
| 1     |               |                                                |                                     |                                      |
| 2     |               |                                                |                                     |                                      |
| 3     |               |                                                |                                     |                                      |
| 4     | December 2004 | General review and update to current practice. | Martin Skinner<br>Asset Engineering | Trevor Jones<br>Asset Policy Manager |

## **PART 3 - GUIDANCE NOTES AND APPENDICES**

### **5 REFERENCES**

TGN(E) 56 Settlement Metering

SCT 16.3 Installation Contractor Commissioning of 3-Phase 4-Wire Settlement Metering

## APPENDIX A – SCHEDULE OF SITE COMMISSIONING TESTS

### NATIONAL GRID TRANSCO

#### SCHEDULE OF SITE COMMISSIONING TESTS

#### SCT 16.4 - OPERATOR COMMISSIONING OF 3-PHASE 4-WIRE SETTLEMENT METERING

**Substation**

**Circuit**

**Manufacturer's  
Contract No:**

**Contractor's Signature**

**NGT Contract No**

**Accepted by  
(Engineer's Signature)**

**Contractor**

**Date**

## APPENDIX B - CALIBRATED TEST EQUIPMENT

### Record of Calibrated Test Equipment used during Commissioning

|                               | Manufacturer and Type | Serial Number | Date Last Calibrated | Date Next Calibration Due |
|-------------------------------|-----------------------|---------------|----------------------|---------------------------|
| Insulation Resistance Tester  |                       |               |                      |                           |
| *Voltmeter or Multimeter      |                       |               |                      |                           |
| Ammeter or Multimeter         |                       |               |                      |                           |
| Frequency Meter or Multimeter |                       |               |                      |                           |
| Oscilloscope                  |                       |               |                      |                           |
| Timer                         |                       |               |                      |                           |
| Others (state function)       |                       |               |                      |                           |
|                               |                       |               |                      |                           |
|                               |                       |               |                      |                           |

\* For resistance measurements an accuracy of 0.01 Ohms is required over the range 0.1 to 7.5 Ohms.