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INSTALLATION CONTRACTOR COMMISSIONING OF 3-PHASE 4-WIRE SETTLEMENT METERING

TABLE OF CONTENTS

PURPOSE AND SCOPE	1
PART 1 – PROCEDURAL	2
1 PROCESS	2
2 FORMS AND RECORDS	2
PART 2 - DEFINITIONS AND DOCUMENT HISTORY	2
3 DEFINITIONS	2
4 AMENDMENTS RECORD	2
PART 3 - GUIDANCE NOTES AND APPENDICES	2
5 REFERENCES	2
APPENDIX A – SCHEDULE OF SITE COMMISSIONING TESTS	3
APPENDIX B - CALIBRATED TEST EQUIPMENT	4
APPENDIX C - GENERAL INSPECTION	5
APPENDIX D - GENERAL WIRING	7
APPENDIX E - TESTS ON VT CIRCUITS	9
APPENDIX F - TESTS ON CT CIRCUITS	11
APPENDIX G - COMPLETION OF TESTS	13

PURPOSE AND SCOPE

This document details the initial commissioning tests for Settlement metering performed in accordance with Technical Guidance Note TGN(E) 56. In instances where the metering differs from the requirements of the TGN, appropriate account of the differences should be taken in determining commissioning requirements. Adequate notice of testing shall be given to enable National Grid Transco (NGT) to witness and authorise tests as it may require.

The tests given in sections E2, E3 and F2 provide the data required to determine the meter compensation requirements within the time constraints set out by BSCP20.

This SCT applies to new installations and to extensions/alterations where parts of the metering (e.g. VT, CT, cabling) are moved or altered. For these latter cases the appropriate sections of the SCT shall be applied.

All the tests and records required by this SCT are identified as Stage 1 Commissioning. (i.e. All tests are carried out isolated from other parts of the National Grid system including in this case the Primary or Measured circuit.)

Some of the information required by this SCT is specifically needed for the Registration of the metering into Settlement.

Where for project reasons it is not possible to measure the VT and CT cable resistances (clauses E2, E3 and F2) at the initial commissioning stage then estimated values using the method described in TGN(E) 56 shall be produced.

PART 1 – PROCEDURAL

1 PROCESS

This schedule describes the procedures and tests associated with the commissioning of 3-Phase 4-Wire Settlement Metering equipment provided in accordance with TGN(E)56 and is restricted to voltage and current transformers, assessment of wiring and general installation works. Final commissioning of the complete metering systems including meters and data collector outstations will be performed by the NGT meter operator agent (Siemens Energy Services Ltd) under SCT 16.4.

Where the metering system differs from the requirements set out in TGN(E)56, advice can be sought from Siemens Energy Services Ltd as to how this will affect the commissioning requirements.

2 FORMS AND RECORDS

SCT 16.3A	-	Schedule of Site Commissioning Tests
SCT 16.3B	-	Calibrated Test Equipment
SCT 16.3C	-	General Inspection
SCT 16.3D	-	General Wiring
SCT 16.3E	-	Tests of VT Circuits
SCT 16.3F	-	Tests of CT Circuits
SCT 16.3G	-	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 Asset Engineering	Trevor Jones Asset Policy Manager

PART 3 - GUIDANCE NOTES AND APPENDICES

5 REFERENCES

TGN(E) 56	Settlement Metering
SCT 16.4	Operator Commissioning of 3-Phase 4-Wire Settlement Metering

APPENDIX A – SCHEDULE OF SITE COMMISSIONING TESTS

NATIONAL GRID TRANSCO

SCHEDULE OF SITE COMMISSIONING TESTS

SCT 16.3 – INSTALLATION CONTRACTOR 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 No.	Calibration Date	Date next calibration due
500 V d.c. Insulation Resistance Tester				
*Digital Multimeter				
Clip on ammeter.				
Micro-ohmmeter.				
Manufacturers Test Equipment for Gas Detection Device.				
Others (State Function)				

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