

## Proposed changes to BSCP601 'Metering Protocol Approval and Compliance Testing' (updated 24 January 2007)

Modify Section 1.1 'Scope and Purpose of the Procedure' as follows:

### Metering Equipment Compliance

This process is defined to ensure that Metering Equipment is designed and manufactured to the requirements of the relevant Code/s of Practice. Each Compliance Approval is specific to that Metering Equipment tested including type reference and any firmware and software versions. Metering Equipment firmware and software updates not affecting Compliance need not be re-approved.

Modify Section 1.2 'Main Users of Procedure and their Responsibilities'

The main users are Meter Manufacturers, Half Hourly Data Collectors, Meter Operator Agents, Compliance and Protocol Testing Agents and BSCCo.

- The Applicant is responsible for submitting applications for the testing of Metering Equipment, arranging for testing to be conducted and any costs associated with testing.
- The Applicant is responsible for submitting notification of any amendment to Metering Equipment or Data Retrieval system for an existing Approval.
- The Compliance and Protocol Testing Agents are responsible for receiving Metering Equipment, undertaking the testing of that Metering Equipment and providing a written report to BSCCo of the findings of such tests.
- BSCCo is responsible for the selection of ~~the suitably accredited~~ Compliance and Protocol Testing Agents, the scheduling of tests and the determination of successful tests together with issue of certificates.

Modify Section 1.6.2 'Definitions':

Compliance Testing Agent

The agent responsible for the testing of Metering Equipment, accredited against an appropriate (as determined by BSCCo) body such as the UK Accreditation Service (UKAS).

## 2.1 APPLICATION FOR PROTOCOL APPROVAL

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
2.1.1	At any time.	Submit Application for Protocol Approval and any supporting documentation.	Applicant	BSCCo	Notification of Metering Equipment and/or HHDC Agent to be approved.  Form F601/ 03	Fax, Post.
2.1.2	Within 2WD of receipt of 2.1.1 above.	Validate application.	BSCCo			Internal Process.
2.1.3	Within 5 WD of 2.1.1 above.	Notify Applicant of acceptance or rejection of Application.  If accepted, provide copy of testing schedule and notification of Application reference number.	BSCCo	Applicant	Protocol Approval test schedule and Application reference number.	E-mail, Fax, Post.
2.1.4	Within 10 WD of receipt of 2.1.3 above.	Agree any re-drafting of test schedule.	Applicant	BSCCo	Re-drafted schedule (if required)	E-mail, Fax, Post.
2.1.5	Within 5 WD of 2.1.4 above.	Arrange with nominated HHDC to conduct testing and liase with BSCCo to witness testing.	Applicant	HHDC BSCCo		As agreed.
2.1.6	Within 10 WD of 2.1.5 above.	Submit 2 Outstations and any software for testing to the nominated HHDC.	Applicant	HHDC		As agreed.

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
2.1.7	Within 10 WD of 2.1.5 above.	Undertake testing of Protocol in accordance with agreed Test Schedule.  <u>Prepare and submit report including test results.</u>	HHDC  <u>HHDC</u>	  BSCCo	  <u>Test Report<sup>1</sup></u>	  <u>E-mail, Fax, Post.</u>
<del>2.1.8</del>	<del>Next opportune meeting.</del>	<del>Prepare and submit report including test results with recommendations of approval or rejection.</del>	<del>HHDC</del>	<del>BSCCo</del>	<del>Test Report</del>	<del>E-mail, Fax, Post.</del>
2.1. <del>8</del> <sup>9</sup>	Within 5 WD of 2.1. <del>7</del> <sup>8</sup> above.	Notify Applicant of <u>test result determination Panel decision</u> .  If <u>testing successful Approved</u> , update Protocol Approval list, notify Parties and Party Agents and issue certificate to Applicant.	BSCCo	Applicant  Parties  Party Agents	Form F601/02  <del>Panel decision</del> Approval details.  <u>Approval details</u>	E-mail, Fax, Post.  <del>Circular.</del>  E-mail, Fax, Post, <u>BSC Website.</u>
<u>2.1.9</u>	<u>Next opportune meeting.</u>	<u>Notify Panel of certificates issued and updates to Protocol Approval list.</u>	<u>BSCCo</u>		<u>Panel report.</u>	<u>Internal process.</u>

## 2.2 APPLICATION FOR COMPLIANCE APPROVAL

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
2.2.1	At any time	Submit Application for Compliance Testing.	Applicant	BSCCo	Form F601/03	E-mail, Fax, Post.

<sup>1</sup> Copies of the Test Report will be made available by BSCCo to Parties, Meter Operator Agents and Half Hourly Data Collectors on request to BSCCo.

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
2.2.2	Within 2WD of receipt of 2.2.1 above.	Validate Application.	BSCCo			Internal Process.
2.2.3	Within 5 WD of 2.2.1 above.	Notify Applicant of acceptance or rejection of Application.  If accepted, provide copy of testing schedule and notification of Application reference number.	BSCCo	Applicant	Compliance test schedule and Application reference number.	E-mail, Fax, Post.
2.2.4	Within 10WD of receipt of 2.2.3 above.	Agree any re-drafting to test schedule.	Applicant	BSCCo	Re-drafted schedule (if required).	E-mail, Fax, Post.
2.2.5	Within 10 WD of 2.2.4 above.	Agree Compliance Testing Agent with BSCCo.  Liase with CTA to undertake Compliance testing.	Applicant	BSCCo  CTA	Notification of CTA.	E-mail, Fax, Post.
2.2.6	Within 3 Months of 2.2.5 above.	Undertake testing and submit report to BSCCo.	CTA	BSCCo	Compliance test report <sup>2</sup> .	E-mail, Fax, Post.
<del>2.2.7</del>	<del>Next opportune meeting.</del>	<del>Prepare and present report to Panel.</del>	<del>BSCCo</del>		<del>Panel report.</del>	<del>Internal Process.</del>

<sup>2</sup> Copies of the compliance test report will be made available by BSCCo to Parties, Meter Operator Agents and Half Hourly Data Collectors on request to BSCCo.

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
2.2.78	Within 5 WD of 2.2.67 above.	Notify Applicant of <u>test result determination Panel decision</u> .  If <u>testing successful, Approved</u> , update Compliance Approval list. Notify Parties and Party Agents of new approval and issue certificate of Compliance to Applicant.	BSCCo	Applicant  <u>Parties</u>  <u>Party Agents</u>	Form F601/01.  <u>Panel decision.</u>  <u>Approval details.</u>  <u>Approval details.</u>	E-mail, Fax, Post.  E-mail, Fax, Post, <u>BSC Website.</u>
<u>2.28</u>	<u>Next opportune meeting.</u>	<u>Notify Panel of certificates issued and updates to Compliance Approval list.</u>	<u>BSCCo</u>		<u>Panel report.</u>	<u>Internal process.</u>

### 2.3 AMENDMENT TO METERING EQUIPMENT

REF	WHEN	ACTION	FROM	TO	INFORMATION REQUIRED	METHOD
2.3.1	At any time	Submit notification of amendment to Metering Equipment or Data Retrieval system for an existing Approval and agree impact of change.	Applicant	BSCCo	Details and impact of change.	E-mail, Fax, Post.
2.3.2	Within 30 WD of 2.3.1 above.	Consult with affected Parties (if required) <u>and determine whether Approval for the amendment to Metering Equipment or Data Retrieval system can be given.</u>	BSCCo	Affected Parties	Details and impact of change.	As agreed.
<u>2.3.3</u>	<u>Next opportune meeting.</u>	<u>Prepare and submit report to Panel with recommendations.</u>	<u>BSCCo</u>	<u>Panel</u>		<u>Internal Process.</u>

2.3.43	Within 5 WD of 2.3.23 above.	Notify Applicant of <del>Panel decision</del> <u>determination</u> and if <del>approved</del> <u>new Approval given</u> , update Approval list.	BSCCo	Applicant  Parties  Party Agents	<del>Panel Decision</del> <u>BSCCo determination.</u>  <u>Approval details.</u>  <u>Approval details.</u>	E-mail, Fax, Post, <u>BSC Website.</u>
<u>2.3.4</u>	<u>Next opportune meeting</u>	<u>Notify Panel of any updates to Approval list.</u>	<u>BSCCo</u>		<u>Panel Report</u>	<u>Internal Process</u>

**Form F601/01 – Certificate of Compliance**

Part 1 of 2

F601/01

# Certificate of Compliance

## Code of Practice [Five]

### CODE OF PRACTICE FOR THE METERING OF ENERGY TRANSFERS [WITH A MAXIMUM DEMAND OF UP TO (AND INCLUDING) 1MW FOR SETTLEMENT PURPOSES]

Application Reference No:

**Issued To:**

Meter Description: Type: Firmware Version:

Test Reference No. Date of Test: Software Version:

Test Laboratory:

**Test Environment:**

[ABC Manufacturer’s] Metering Equipment has undergone Compliance Testing in accordance with Code of Practice [Five], Issue \* (v \*.\* \*\*) dated n<sup>th</sup> Month Year, and the Specification for Type Testing Version [5.0] dated n<sup>th</sup> Month Year (and subsequent revisions) and BS EN 61036.

The Metering Equipment was tested in conjunction with the Manufacturer’s “XXXX Software, version V\*.\*\*\*”.

**Certificate of Compliance:**

The review of the Compliance Testing results on n<sup>th</sup> Month Year confirmed that the Metering Equipment was found, ~~subject to the observations set out in the attached ‘Table of Observations’, to comply with the requirements of Code of Practice [Five] in all material respects. These observations indicate minor deviations from the requirements of Code of Practice [Five]. These deviations should have no material effect on the operation of Settlement, Meter Operation, Data Collection and Customer Billing.~~

Signed: ..... Date: .....  
On Behalf of the Panel, ELEXON Limited, (as the Balancing and Settlement Code Company (‘BSCCo’))

# ~~Certificate of Compliance~~

## ~~Table of Observations~~

<del>Application Reference No:</del>	
<del>Meter Description:</del>	
<del>Type:</del>	
<del>Test Reference No:</del>	
<del>Date of Test:</del>	
<del>Observation 1</del>	
<del>Test:</del>	
<del>Requirement:</del>	
<del>Actual:</del>	
<del>Remarks:</del>	
<del>Materiality:</del>	
<del>Observation 2</del>	
<del>Test:</del>	
<del>Requirement:</del>	
<del>Actual:</del>	
<del>Remarks:</del>	
<del>Materiality:</del>	
<del>Observation 3</del>	
<del>Test:</del>	
<del>Requirement:</del>	
<del>Actual:</del>	
<del>Remarks:</del>	
<del>Materiality:</del>	
<del>Observation 4</del>	
<del>Test:</del>	
<del>Requirement:</del>	
<del>Actual:</del>	
<del>Remarks:</del>	
<del>Materiality:</del>	



**Form F601/02 – Certificate of Protocol Approval**

Part 1 of 2

F601/02

# Certificate of Protocol Approval

## METERING EQUIPMENT PROTOCOL MEETING THE REQUIREMENTS OF BSCP601 FOR SETTLEMENT PURPOSES

Application Reference No:

**Issued To:**

Meter Description: Type: Firmware Version:

Test Reference No. Date of Test: Software Version:

Test Laboratory:

**Test Environment:**

[ABC Manufacturer’s] Metering Equipment listed above, has undergone Protocol Testing in accordance with BSC Procedure BSCP601, Issue \* (v \*.\*), dated n<sup>th</sup> Month Year.

The Metering Equipment was tested in conjunction with the Manufacturer’s “XXXX Software, version V\*.\*” and the following Accredited Data Collector.

Data Collector	Certified System	Instation Version	Outstation Version

**Certificate of Protocol Approval:**

The review of the Protocol Testing results on n<sup>th</sup> Month Year confirmed that the Metering Equipment was found, ~~subject to the observations set out in the attached ‘Table of Observations’,~~ to be suitable for Settlement use in conjunction with the Accredited Data Collector listed above. ~~These observations indicate minor deviations from the requirements of BSC Procedure BSCP601. These deviations should have no material effect on the operation of Settlement, Meter Operation, Data Collection and Customer Billing.~~

Signed: ..... Date: .....

On Behalf of the Panel—, ELEXON Limited (as the Balancing and Settlement Code Company (‘BSCCo’))

## Certificate of Protocol Approval

### Table of Observations

Application Reference No:

Meter/Outstation Description:	
Type:	
Test Reference No.:	
Date of Test:	
<u>Observation 1</u>	
Test:	
Requirement:	
Actual:	
Remarks:	
Materiality:	
<u>Observation 2</u>	
Test:	
Requirement:	
Actual:	
Remarks:	
Materiality:	
<u>Observation 3</u>	
Test:	
Requirement:	
Actual:	
Remarks:	
Materiality:	
<u>Observation 4</u>	
Test:	
Requirement:	
Actual:	
Remarks:	
Materiality:	

**Add the following new sections to BSCP601 Appendices:**

**3.4 Protocol Test Specification**

The Protocol test schedule referenced in Section 2.1 above will be produced for each Applicant by BSCCo in collaboration with the Compliance Testing Agent, and will be based upon the requirements of the relevant Codes of Practice.

**3.5 Compliance Test Specification**

The documentation for the Compliance test schedule referenced in Section 2.2 above can be found at <http://www.exon.co.uk>, titled '~~Generic Test~~ Specification for Metering Equipment Compliance Testing for Codes of Practice One, Two, Three and Five' and 'Specification for ~~the Type Testing of~~ Metering Equipment Compliance Testing for Code of Practice Six'.

**Proposed changes to Generic Test Specification for CoPs 1, 2, 3 and 5.**

Modify the document title to be 'Specification for Metering Equipment Compliance Testing for Codes of Practice One, Two, Three and Five'.

Modify the wording in Section 2 'Scope' as follows:

The Compliance Testing Requirements as detailed in this specification apply only to parts of the Metering System (i.e. Meters and Outstations) and therefore satisfactory test results from this Compliance Testing do not constitute a compliant Metering System as required by the Code, Balancing and Settlement Code Procedures ("BSCPs") and the Codes of Practice.

Amend cross-reference in Section 4.3 'Test Conditions':

To test the metering accuracy requirements in Clause ~~4.4~~ 5.4 below, the test conditions shall...

In Section 4.4 'Samples for Testing', explain that:

The Applicant may present the following types of Metering Equipment for test:

- individual Meters;
- individual Outstations;
- Meters with integral Outstations; or
- separate Meters and Outstations to be tested jointly.

The Applicant shall provide a minimum of two samples of the chosen Metering Equipment ~~for test~~ and any supporting software and hardware necessary to fulfil testing.

Insert the following table at the beginning of Section 5 'Testing' to identify the relevance of each group of tests to the type of Metering Equipment being tested:

Ref	Description	Meter	Outstation	Meter with integral Outstation
5.1	General test conditions	✓	✓	✓

5.2	Measured quantities	✓		✓
5.3	Demand values	✓	✓	✓
5.4	Accuracy	✓		✓
5.5	CT/VT compensation	✓		✓
5.6	Power transformer and line losses compensation	✓		✓
5.7	Meter specification	✓		✓
5.8	Displays	✓		✓
5.9	Facilities	✓		✓
5.10	Outstation		✓	✓
5.11	Data storage		✓	✓
5.12	Timekeeping		✓	✓
5.13	Monitoring Facilities			
5.13.1	Phase failure indication		✓	✓
5.13.2	Battery monitoring		✓	✓
5.13.3	Time setting alarms		✓	✓
5.13.4	Other alarms		✓	✓
5.13.5	Reverse running	✓	✓	✓
5.14	Communications			
5.14.1	Local interrogation test		✓	✓
5.14.2	Remote interrogation test		✓	✓
5.15	Password protection (CoPs 3 and 5 only)		✓	✓
5.15.1	Level 1 Passwords		✓	✓
5.15.2	Level 2 Passwords		✓	✓
5.15.3	Level 3 Passwords		✓	✓
5.15.4	Level 4 Passwords		✓	✓
5.15.5	Password monitoring		✓	✓
5.16	Additional Tests			
5.16.1	EM compatibility test	✓	✓	✓
5.16.2	EM HF immunity check	✓	✓	✓
5.17	Sealing	✓	✓	✓

Rearrange text in Section 5.12 (a) to make clear that this step relates to the setup conditions and is not a test in itself:

#### 5.12 Time Keeping {5.2.2}

With the Metering Equipment connected to a supply, note the contents of all energy registers. Ensure that the time and date are correctly set to UTC. Disconnect the Metering Equipment from the supply and after 10 days<sup>2</sup> in the de-energised state verify on reconnection of the supply that:

(a)	<del>With the Metering Equipment connected to a supply, note the contents of all energy registers. Ensure that the time and date are correctly set to UTC. Disconnect the Metering Equipment from the supply and after 10 days<sup>2</sup> in the de-energised state verify on reconnection of the supply that:</del>	<b>064</b>
(ab)	all stored data has be correctly stored and is not corrupt;	<b>0645</b>
(be)	the Metering Equipment internal clock is accurate to within $\pm 10$ seconds <sup>2</sup> ; and	<b>0656</b>

(c)	partial Demand Values in which an Outstation supply failure and/or restoration occurs and any zero values associated with the Outstation supply failure are marked so that they can be identified by the Instation.	<del>067</del>
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The remaining tests should be renumbered accordingly.

Amend cross-reference in Section 5.16.2, test 121:

- (b) the metering accuracy remains within the requirements of Clause ~~4.3~~ 5.4 of this Specification.

**Proposed changes to 'Specification for the Type Testing of Metering Equipment to Code of Practice Six'.**

Modify the document title to be 'Specification for Metering Equipment Compliance Testing for Code of Practice Six'.