Redlined Balancing and Settlement Code Procedure (BSCP) 601 for CP1450 'Security Requirements for CoP10 Metering Equipment'.

This CP proposes changes to BSCP601 sections 1.1.1, 1.1.2 and 3.4.22.

We have redlined these changes against Version 17.0.

In addition, we have included some housekeeping changes to sections 3.4.16 and 3.4.27.

1.1 Acronyms and Definitions

1.1.1 Acronyms

Full definitions of the acronyms are, where appropriate, included in the Balancing and Settlement Code.

The terms used in this BSC Procedure are defined as follows.

BSCCo	Balancing and Settlement Code Company
CDCA	Central Data Collection Agent
CoP	Code of Practice
CT	Current Transformer
CTA	Compliance Testing Agent
HHDC	Half Hourly Data Collector (Qualified)
MD	Maximum Demand
ME	Metering Equipment
MOA	Meter Operator Agent
SMETS	Smart Metering Equipment Technical Specifications
SMRS	Supplier Meter Registration Service
WD	Working Day

1.1.2 Definitions

Applicant	Person applying for Compliance and/or Protocol approval
BSCCo	The Balancing and Settlement Code Company
Compliance Testing	means the testing of Metering Equipment in accordance with this BSCP601 to determine whether it conforms with the relevant Code of Practice to obtain approval from the Panel.
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).
Code of Practice One	means the latest version[§] of Code of Practice One - CODE OF PRACTICE FOR THE METERING OF CIRCUITS WITH A RATED CAPACITY EXCEEDING 100MVA FOR SETTLEMENT.
Code of Practice Two	means the latest version[§] of Code of Practice Two - CODE OF PRACTICE FOR THE METERING OF CIRCUITS WITH A RATED CAPACITY NOT EXCEEDING 100MVA FOR SETTLEMENT PURPOSES.
Code of Practice Three	means the latest version[§] of Code of Practice Three - CODE OF PRACTICE FOR THE METERING OF CIRCUITS WITH A RATED CAPACITY NOT EXCEEDING 10MVA FOR SETTLEMENT PURPOSES.

[§] The latest versions of the Codes of Practice can be found on the BSC Website (www.elexon.co.uk).

Code of Practice Five	means the latest version§ of 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.
Code of Practice Six	means the latest version§ of Code of Practice Six - CODE OF PRACTICE FOR THE METERING OF ENERGY IMPORTS VIA LOW VOLTAGE CIRCUITS FUSED AT 100 AMPS OR LESS PER PHASE FOR SETTLEMENT PURPOSES.
Code of Practice Ten	means the latest version§ of Code of Practice Ten - CODE OF PRACTICE FOR METERING OF ENERGY VIA LOW VOLTAGE CIRCUITS FOR SETTLEMENT PURPOSES.
Instation	means a computer based system which sends data to, or receives data from Outstation Systems on a routine basis.
Interrogation Unit	means a Hand Held Unit "HHU" (also known as Local Interrogation Unit "LIU") or portable computer which can program Metering Equipment parameters and extract information from the Metering Equipment and store this for later retrieval.
Metering Equipment	has, for the purposes of this BSCP601, the meaning ascribed to that term in the Balancing and Settlement Code, but excluding voltage and current measurement transformers
person	includes any individual, company, corporation, firm, partnership, joint venture, association, committee, organisation or trust (in each case, whether or not having separate legal personality).
Settlement	has the meaning ascribed to that term in the Balancing and Settlement Code.
Smart Metering Equipment Technical Specifications	As defined in Section X Annex X-1 of the Balancing and Settlement Code.
Test Laboratory	means the testing body so agreed with BSCCo to perform Compliance Testing to this BSCP601.
Type Approval	means the approval from the Electricity Meter Examination Service of the Office of Gas and Electricity Markets.
UTC	means Co-ordinated Universal Time based on atomic clocks as distinct from Greenwich Mean Time (GMT).

3.4.16 Time Keeping {5.5.2}

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[12] in the de-energised state verify on reconnection of the supply that:

(a)	all stored data has been correctly stored and is not corrupt;	**067**
(b)	the Metering Equipment internal clock is accurate to within ±10 seconds[1]; and	**068**
(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.	**069**

[Housekeeping]With the Metering Equipment energised, set the date and time correctly to UTC. Apply a load equivalent to full load (alternatively a high pulse rate of 2,000 pulses per half hour) using a stable power supply. Avoid any communication or time synchronisation with the Outstation for ~~twenty~~ten[2] days. At the end of the test and before any time synchronisation occurs, verify that:

(a)	the Metering Equipment internal time clock is accurate to within ±10 seconds[3]; and	**070**
(b)	the duration of each demand period is within ±0.1% of 30 minutes, this being achieved by the comparison of stored energy values or pulse counts in each Demand Period.	**071**

Set the Metering Equipment~~s~~ internal time clock to five minutes slow with respect to UTC. Then synchronise the internal time clock using the remote Instation and check that the Demand period has been marked with an alarm indication.	**072**
Repeat the synchronisation test using the Local Interrogation Unit and check that the Demand Period has been marked with an alarm indication	**073**

3.4.22 Level 1 Passwords

For CoP10 Outstations which comply with the SMETS security regime, tests 094 to 113 shall be confirmed using the relevant SMETS security access. For the avoidance of doubt it is for the Testing Agent to confirm that the Outstation is capable of meeting these requirements under secure conditions.

Using the Level 1 password, establish that the following data can be retrieved:

[1] For tests to Code of Practice 3, 5 and 10, period of disconnection is 20 days and the acceptable tolerance is ±20 Seconds.
[Housekeeping][2] For tests to Codes of Practice 3, 5 and 10, this period is 20 days
[3] For tests to Code of Practice 3, 5 and 10, the acceptable tolerance is ±20 Seconds.

(a)	Outstation ID;	**094**
(b)	all programmable Demand Values;	**095**
(c)	all programmable cumulative Measured Quantities;	**096**
(d)	the Maximum Demand for kW and/or kVA per programmable charging period;	**097**
(e)	the multi-rate cumulative Active Energy values;	**098**
(f)	the VT and CT transformer ratios, where appropriate;	**099**
(g)	(for combined Meter and Outstation only), the VT and CT transformer error correction factor and/or system loss factor applied as a constant factor to the entire dynamic range; Not applicable to CoP10.	**100**
(h)	all alarm indications; and	**101**
(i)	Outstation time and date	**102**

Establish that it is not possible to change any of the above values at Level 1 Password.	**103**

3.4.27 Additional Tests

3.4.27.1 Electromagnetic Compatibility Tests

Not applicable to CoP10

In addition to the EMC tests carried out by the Electricity Meter Examination Service of the Director of Electricity Supply as part of the process of Type Approval for the Meter in accordance with BS EN 61036, verify, by testing under all the conditions detailed in BS EN 61036, that:

(a)	any stored data and time/date is not corrupted or has been destroyed; and	**125**
(b)	the metering accuracy remains within the requirements of Clause 5.4 of this Compliance Testing .	**126**

3.4.27.2 Immunity to Electromagnetic HF Fields

Not applicable to CoP10

Verify, by testing in accordance with IEC 61000-4-3, and under the following conditions:

- the voltage and auxiliary circuits energised with reference voltage;
- a frequency band of 26MHz to 1GHz;
- a test field strength of 12.5V/m; and
- a carrier of 80% amplitude modulated with a 1kHz sine wave.

(a)	that without any current in the current circuits and the current terminals open circuit the application of the HF fields shall not produce a change in the Meter Register reading of more than 0.01kWh and the test output shall not produce a signal equivalent to more than 0.01kWh. (Where VT and CT connected Meter(s) is under test, equivalent scaled values should be used taking into account the transformer ratios); and	**127**
(b)	that with basic current Ib, and power factor equal to 1.0, at sensitive frequencies or frequencies of dominant interest, the variation of error does not exceed 3%.	**128**

[Housekeeping]On completion of each EMC test verify that:

(a)	any stored data is not corrupted or has been destroyed; and	**129**
(b)	the metering accuracy remains within the requirements of Clause 5.4 of this .	**1230**

NOTE: Where VT and CT connected Meter(s) are under test the equivalent scaled values, taking into account the transformer ratios, should be used when considering any differences in Meter Register reading and output signals.

3.4.27.3 Sealing {5.7}

Ensure that adequate sealing facilities are provided for Settlement requirements.	**131**