Redlined Code of Practice Two text for CP1508 'Updating the references to the British and International Standards within the relevant Codes of Practice and Balancing and Settlement Procedure'

This Change Proposal (CP) proposes changes to Sections 2, 5.1, 5.3 and 5.6.1. We have redlined these changes against Version 13.0.

There is no impact on any other part of this document for this CP.

Amend Section 2 as follows:

2. REFERENCES

The following documents are referred to in the text[2]:-

BS EN 50470 – 3	Electricity metering equipment (a.c.) - Part 3: Particular requirements – Static meters for active energy (class indexes A, B and C)
BS EN/IEC ~~60044-3~~61869-4	Instrument transformers. Combined transformers
BS EN/IEC 62053-11	Electricity metering equipment (a.c.). Particular requirements. Electromechanical meters for active energy (classes 0.5, 1 and 2)
BS EN/IEC 62053-22	Electricity metering equipment (a.c.). Particular requirements. Static meters for active energy (classes 0.2 S and 0.5 S)
BS EN/IEC 62053-23	Electricity metering equipment (a.c.). Particular requirements. Static meters for reactive energy (classes 2 and 3)
BS EN/IEC 62056-21	Electricity metering. Data exchange for meter reading, tariff and load control. Direct local data exchange
~~BS 5685 Part 4~~	~~Specification for Class 3 Var-Hour Meters~~
BS EN/IEC ~~60044-1~~61869-2	Instrument transformers. Current transformers
BS EN/IEC ~~60044-2~~61869-3	Instrument transformers. Inductive voltage transformers
Balancing and Settlement Code	Definitions, Section X; Annex X-1 and Section L and BSC Procedures
Code of Practice Four	Code of Practice for Calibration, Testing and Commissioning Requirements for Metering Equipment for Settlement Purposes
BSC Procedures	BSCP06, BSCP32, BSCP601
Electricity Act 1989	Schedule 7 as amended by Schedule 1 to the Competition and Services (Utilities) Act 1992.

[2] Metering Equipment should be tested and stamped to the latest iteration of the applicable standard named in this document at the time of initial registration.

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Amend Section 5.1 as follows:

5.1 Measurement Transformers

For each circuit current transformers (CT) and voltage transformers (VT) shall meet the requirements set out in clauses 5.1.1 and 5.1.2.

Additionally, where a combined unit measurement transformer (VT & CT) is provided the 'Tests for Accuracy' as covered in BS EN/IEC ~~60044-3~~61869-4 covering mutual influence effects shall be met.

All measurement transformers shall be of a wound construction.

For Metering Systems that represent low burdens on measurement transformers, consideration shall be given as to whether that operating burden is within the operating range of the measurement transformers. In such cases, it may be necessary to add additional burden.

Guidance for the use of multi core cables is provided in Appendix E.

5.1.1 Current Transformers

A dedicated set of current transformers in accordance with BS EN/IEC ~~60044-1~~61869-2 and with a minimum standard of accuracy to Class 0.2S (irrespective of the secondary current rating of the CTs) shall be provided solely for the Settlement Metering of each circuit. No other burden shall be connected to this dedicated set of current transformers. The main Meter shall always be connected to this dedicated set of current transformers. The check Meter may also be connected to this dedicated set of current transformers.

Alternatively the check Meter may be connected to another set of current transformers which shall be in accordance with BS EN/IEC ~~60044-1~~61869-2 and with a minimum standard of accuracy to Class 0.2S. Other burdens may be connected to this other set of current transformers provided that the Panel or Technical Assurance Agent is notified and that the overall accuracy requirements in clause 4.3.1 are met and evidence of the value of the additional burden shall be available for inspection by the Panel. The additional burden shall not be modified without prior notification to the Panel, and evidence of the value of the modified additional burden shall be available for inspection by either the Panel or Technical Assurance Agent.

CT test certificates showing errors at the overall working burden or at burdens which enable the working burden errors to be calculated shall be available for inspection by either the Panel or the Technical Assurance Agent.

The total burden on each current transformer shall not exceed the rated burden of such CT.

5.1.2 Voltage Transformers

Voltage transformer primary windings shall be connected to the circuit being measured for Settlement purposes and a dedicated secondary winding shall be provided for the main and check metering. The voltage transformer secondary

winding shall be in accordance with BS EN/IEC ~~60044-2~~61869-3 and with a minimum standard of accuracy to Class 0.5. Where a voltage transformer has other secondary windings these may be used for the check metering of that circuit and for other purposes provided the overall accuracy requirements in clause 4.3.1 are met and evidence of the value of the additional burden is available for inspection by either the Panel or the Technical Assurance Agent.

The additional burden shall not be modified without prior notification to the Panel, and evidence of the value of the modified additional burden shall be available for inspection by either the Panel or the Technical Assurance Agent.

A VT test certificate(s) showing errors at the overall working burden(s) or at burdens which enable the working burden errors to be calculated shall be available for inspection by either the Panel or the Technical Assurance Agent.

The total burden on each secondary winding of a VT shall not exceed the rated burden of such secondary winding.

Amend Section 5.3 as follows:

5.3 Meters

The Meters may be either static or induction disc types.

For each circuit main and check Active Energy Meters shall be supplied. These Meters shall meet the requirements of either BS EN/IEC 62053-22 Class 0.5S or BS EN 50470-3 Class C, or BS EN/IEC 62053-11 class 0.5 except where the overall accuracy as defined in Clause 4.3.1 is required in the range "Below 5% to 1%" of Rated Measuring Current. Subject to the agreement of the Panel or Registrant where system or plant conditions permit either the Import or Export Meters may be omitted.

All Meters shall be set to the actual primary and secondary ratings of the measurement transformers and the actual ratios displayed on the display or nameplate of the Meter.

Active Energy Meters provided for the metering of supplies to customers shall be in accordance with Schedule 7 of the Electricity Act 1989.

For each circuit only main Reactive Energy Meter(s) need be supplied. The Reactive Energy Meters shall meet the requirements of ~~either~~ BS EN/IEC 62053-23 Class 3.0 ~~or BS 5685 Part 4~~.

For existing metering installations a Reactive Meter connected in a PARh Meter configuration may be retained.

Active Energy Meters shall be configured such that the number of measuring elements is equal to or one less than the number of primary system conductors. These include the neutral conductor, and/or the earth conductor where system configurations enable the flow of zero sequence energy.

All Meters shall be labelled or otherwise be readily identifiable in accordance with Appendix B.

All Meters shall include a non-volatile Meter Register of cumulative energy for each measured quantity. The Meter Register(s) shall not roll-over more than once within the normal Meter reading cycle.

Meters which provide data to separate Outstations shall for this purpose provide an output per measured quantity.

For Meters using electronic displays due account shall be given to the obligations of the Central Data Collection Agent (CDCA) or other Data Collectors to obtain Meter readings. For example, where a Metering System is employed on multiple circuits, a Voltage Selector Relay or other similar method should be used to maintain the Meter display in the event of a circuit being de-energised where this is reasonably practical.

Fusing shall be placed as close as practicable to the VT. In addition, means of isolation shall be provided locally for each Meter, any additional burden and their associated test facilities in accordance with Appendix C.

Amend Section 5.6.1 as follows:

5.6.1 Local Interrogation

An interrogation port shall be provided for each Outstation which preferably shall be an opto port to BS EN/IEC 62056-21, and with a serial protocol such as BS EN/IEC 62056-21, for the following purposes:-

(i) Commissioning, maintenance and fault finding;

(ii) Transfer of metering data and alarms; and

(iii) Time setting.