

4.3 CP Form

Change Proposal – BSCP40/02	CP No: <i>Version No:</i> <i>(mandatory by BSCCo)</i>
Title (mandatory by originator) Tightening the requirements for the minimum accuracy classes for Meters in CoP5 and CTs in CoPs 3, 5 and 10	
Description of Problem/Issue (mandatory by originator) <u>Meter Accuracy Class</u> Currently the minimum accuracy class required for Meters in CoP5 is class 2, in accordance with BS EN 62053-21, or class A, in accordance with BS EN 50470-3. This makes it difficult for Meter Operator Agents (MOAs) to assure the overall accuracy of a low voltage (LV) Metering System is within the limits specified in CoP5 ($\pm 1.5\%$), without Meter Calibration Certificates detailing the actual errors of the Meter. As a result, the Technical Assurance Agent (TAA) issues Category 2 non-compliances as the Metering System could potentially be outside of the overall accuracy limits. <u>CT Accuracy Class</u> Currently the minimum accuracy class for current transformers (CTs) in CoPs 3, 5 and 10 is class 0.5, in accordance with BS EN 61869-2. BS EN 61869-2 details the limits of ratio error permitted for both classes 0.5 and 0.5s CTs. For class 0.5 CTs the standard only requires the CTs to be tested to a minimum of 5% of the rated current of the CT. The practice of “bulk buying” the same ratio CTs (e.g. 500/5A) for multiple installations of different agreed capacities can mean that some CTs are measuring current levels below 5% of rated current. As the standard does not define the limits of error below 5% of rated current then the accuracy of the CTs below these current levels is unknown. This means the errors of the CTs and the overall accuracy of the Metering System are unknown.	
Proposed Solution (mandatory by originator)	

Meter Accuracy Class

The Technical Assurance of Metering Expert Group (TAMEG) proposes to tighten the requirements for the minimum accuracy class of Meters to class 1/class B for CoP5. This will ensure that a LV CoP5 site will always be within the limits of overall accuracy as defined within CoP5. As result, the TAA will not issue Category 2 non-compliances for these Metering Systems potentially being outside the limits of overall accuracy as defined within CoP5.

CT Accuracy Class

As BS EN 61869-2 mandates that class 0.5S CTs are tested (and the permissible error limit defined) to 1% of rated current, the TAMEG propose to tighten the requirements for the minimum class accuracy of CTs from class 0.5 to 0.5s for CoPs 3, 5 and 10.

Justification for Change (mandatory by originator)Meter Accuracy Class

Category 2 non-compliances (following a TAA visit) against Metering Systems potentially being outside of the overall accuracy limits have been noted as a significant issue for a number of years. Tightening the requirements to ensure that all Meters registered against CoP5 are class1/class B Meters will remove the need to present Calibration Certificates for LV CoP5 Metering Systems.

As the minimum requirement for CTs is class 0.5, this means that an LV CoP5 Metering System should never exceed the defined overall accuracy requirements, if Metering Equipment of a compliant accuracy class is installed. As a result, the requirement within CoP4 and BSCP27 to present Calibration Certificates on request will be removed. This will greatly reduce the number of non-compliances given by the TAA for the non-provision of Calibration Certificates (related to LV CoP3, 5 and 10 sites).

However a footnote will be added to clarify that wherever compensation has been applied to a Meter then Calibration Certificates for all Metering Equipment comprised within a Metering System will need to be retained and available on request.

CT Accuracy Class

By mandating that class 0.5s CTs are installed for Metering Systems registered against CoPs 3, 5 and 10, it is more likely that the errors of the CT at the operating load will be known. Whilst it is feasible that, for low capacity sites, a CT may not measure currents greater than 5% of the rated current, it is far less likely that the energy associated with a Metering System will be consistently less than 1% of the rated current of the CTs. This will assist the MOA with assuring the overall accuracy of the Metering System.

To which section of the Code does the CP relate, and does the CP facilitate the current provisions of the Code? (mandatory by originator)

Section L

Estimated Implementation Costs (mandatory by BSCCo)

BSC Configurable Items Affected by Proposed Solution(s) (mandatory by originator) Code of Practice 3 Code of Practice 5 Code of Practice 10 BSCP27
Impact on Core Industry Documents or System Operator-Transmission Owner Code (mandatory by originator) N/A
Related Changes and/or BSC Releases (mandatory by BSCCo)
Requested Implementation Date (mandatory by originator) TBC
Reason:
Version History (mandatory by BSCCo)
<i>Originator's Details:</i>
<i>BCA Name:</i>
<i>Organisation:</i>
<i>Email Address:</i>
<i>Telephone Number:</i>
<i>Date:</i>
Attachments: Y/N* (If Yes, No. of Pages attached:) (delete as appropriate)