

**Redlined Balancing and Settlement Code Procedure (BSCP) 27 for CP1454
'Amendment to the category 1 materiality calculation'.**

This CP proposes changes to BSCP27 section 4.1.8.

We have redlined these changes against Version 15.0.

4 Appendices

4.1 Description of Inspection Checks

This appendix describes the tests & checks that may be required to be carried out by the TAA as part of an Inspection Visit, as determined by the PAB. This is not an exhaustive list.

4.1.1 Measurement Transformer Specification (where appropriate)

Where possible check the:

- (a) Ratio, class, rated burden and polarity from the labels physically attached to the measurement transformers and/or the identification plates attached to switchgear or other enclosures containing measurement transformers (in practice this will not always be practical for safety reasons). And
- (b) Test records/certificates detailing specific measured errors held by the LDSO, or equipment owner, associated with the measurement transformers on site or from agreed Generic CT/VT certificates (SVA) in the case of CTs and VTs.

4.1.2 Meter Technical Details

Check to ensure that the actual Meter Technical Details conform to those recorded in Settlement Systems using:

- (a) Information provided by the CDCA (CVA), Registrant (SVA) or Party Agent in accordance with Section 1.14 of this BSCP, including any measurement transformer error offsets & commissioning details.
- (b) Information supplied to the CDCA, HHDC and MOA.

(This may require a remote/local interrogation of data for comparison purposes).

4.1.3 Accuracy

The following checks should be performed to verify the overall accuracy requirements of the Metering System:

- (a) Measurement transformers relate to test certificates provided;
- (b) Meter - test certificate calibration details are in accordance with requirements in CoP Four;
- (c) Metering Equipment installed is in accordance with the relevant CoP and where required the Main and Check Meters are correctly identified.

The overall accuracy is to be determined by the TAA and shall be within the requirements of the applicable CoP.

4.1.4 Correct Energy Measurement Check

To verify that the Metering System is recording the correct amount of energy, checks shall be carried out that compare the primary load with that being recorded by the Metering System. However, due to the possible restrictive physical location of the primary conductors and Plant at an installation, access may be limited. Where this is the case, other suitable methods may be used to determine correct measurement.

For SVA sites installations can be divided up into the following three categories:

- (a) LV whole current;
- (b) LV, CT operated;
- (c) HV, CT & VT operated.

Sites that fall into categories (a) and (b) will prove to be the most accessible for prevailing load checks. Sites in category (c) may be more difficult to access, but it is often possible to use a clip-on ammeter around the current transformer cables where access to switchgear is restricted.

Note: When all preferred methods of checking the prevailing load fails, other suitable engineering methods may be adopted to establish correct measurement.

Methods of establishing primary load (in order of preference):

1. The demand (derived from independently measured primary values) shall be compared to the Meter's instantaneous demand reading for the same period; or
2. The demand (derived from independently measured secondary values where the primary/secondary ratios can be established) shall be compared to the Meter's demand reading for the same period; or
3. Where appropriate an alternative measurement device shall be used for comparison with that of the Settlement Meter; or
4. The MOA shall provide the TAA with appropriate commissioning records. The TAA is required to establish that these details sufficiently verify that the Meter has been proven to be operating correctly during commissioning; or
5. In the event that none of the above is possible, the TAA will notify BSCCo giving the reasons. (This recognises that if 1 to 4 are not possible additional checks do not add value.)

4.1.5 Consumption Data Comparison Check

The TAA shall compare the metered energy data for one half hour recorded at the time of the Inspection Visit with the consumption data held by the HHDC or CDCA for that same half-hour period. If the values differ by more than agreed tolerances the TAA will issue a non-compliance. This check can take place on site or off site at the discretion of the TAA and either method forms part of the Inspection Visit.

The tolerances will be agreed from time to time by the PAB.

In order to obtain and verify stored Meter data values that are eventually transferred to the HHDC or CDCA, it will be necessary to use a Hand Held Unit running relevant approved Hand Held Unit protocol to download data from the Meter or Outstation. This process will also provide engineering units (e.g. kW half hours) or raw pulses and some standing data. Once the pulse multiplier or constant (e.g. a multiplication constant of 0.5 is required to convert kW/MW half hour values to kWh/MWh half hour values) is applied the kWh/MWh value can be compared with the consumption data held by the CDCA or HHDC and the Meter's (displayed) cumulative advance over the same half hour period. The kWh/MWh value will also be compared with the measured value obtained from the Correct Energy Measurement Check.

This Consumption Data Comparison Check shall take the following format:

1. Compare the Meter Technical Details provided by both the HHDC or CDCA and MOA with that observed on-site. Consideration should also be given to Commissioning and historic proving test information.
2. Take a reading (for the dominant Active Energy flow direction at the time) of the cumulative register on the Meter's display at the beginning and end of the same half hour period that is to be downloaded from the Meter's Outstation and requested from the CDCA or HHDC.
3. Using the Meter Register Multiplier, calculate the true Meter register half hour advance for that half hour period.

This cumulative Meter register half hour advance shall also be used to confirm the findings from the Correct Energy Measurement Check where, ideally, the readings for that check were taken within the same half hour period and the load (or generation) was relatively constant during that period. The TAA shall use its discretion, bearing in mind the predictability of the load (or generation), where the readings weren't taken in the same half hour period.

4. Download a half hour reading from the Meter's Outstation and convert the value (raw pulses or engineering units) into a kWh half hour reading (for SVA registered Metering Systems) or
5. Request the current actual consumption data held by the CDCA or HHDC for the same half hour period and compare the energy recorded by the Settlement Meter (cumulative Meter register half hour advance) and its associated Outstation(s) (half hour value) with the energy value held in the CDCA or HHDC systems which will be submitted to Settlement.

One Active Energy channel will be requested unless a non-compliance is identified.

4.1.6 Code of Practice Compliance

All points to be checked as specified in the appropriate CoP.

4.1.7 Quality of Installation

All points to be checked as specified in the applicable CoP, including:

- (a) Labelling of equipment.
- (b) General standard of installation i.e. good working practice.

- | 4.1.8 ~~The TAAELEXON~~ will perform an estimated metered error calculation, to be included in the Annual Report to the PAB, to provide an indication of the impact of errors on Settlement, in particular the impact that category 1 non-compliances may be having, this will mean that ~~the TAAELEXON~~ will need to record the estimated materiality for all category 1 non-compliances.