

Approved redlined BSCP504 for CP1417 'Reading validation for smart Meters'.

The CP proposes changes to BSCP504 sections 4.1 and 4.2.

We have redlined these changes against Version 35.0.

4. Appendices

4.1 Site Checks of SVA Metering System - Site Visit Report.

The following checks shall be carried out by the NHHDC when visiting a site with a NHH SVA MS installed:

1. Any changes to site which could affect the Profile registered in SMRS
2. Energisation Status (i.e. on/off)
3. Number of Maximum Demand Register (MDR) Resets where appropriate
4. Zero reading on an MDR, if fitted
5. Whether the MDR is on full scale, if fitted
6. Any evidence of suspected faults to the SVA MS
7. Any evidence of damage to LDSO equipment
8. Whether any timeswitch is set to the incorrect time
9. Evidence of tampering with the SVA MS or LDSO equipment, particularly seals
10. Evidence of stopped meters (particularly zero advance on an occupied premises - refer to Appendix 4.2 - Validate Meter Data.)
11. Evidence of supply being taken when the meters are de-energised
12. That the time and date shown on the Meter are correct

The following checks shall be carried out by the NHHDC when remotely contacting a site with a NHH SVA MS installed:

1. Energisation Status (i.e. on/off)
2. Number of Maximum Demand Register (MDR) Resets where appropriate
3. Zero reading on an MDR, if fitted
4. Any evidence of suspected faults to the SVA MS

~~5. Whether any timeswitch is set to the incorrect time~~

~~6~~5. That the time and date shown on the Meter are correct

For the avoidance of doubt, checks undertaken remotely are referred to as site visit checks and relate (where appropriate) to DTC data item J0024 'Site Visit Check Code'.

If the Meter time and data collection system time differ by more than 20 seconds and less than 15 minutes then the Outstation time shall be corrected by the data collection system. If the time differs by more than 15 minutes then the NHHDC shall send a D0001 'Request Metering System Investigation' to the NHHMOA.

Where the Supplier, rather than the NHHDC, contacts a Metering System remotely, the Supplier shall ensure that the Meter and any associated switches keep accurate time and that faults are identified and acted upon appropriately.

The NHHDC shall receive and record cumulative meter readings and maximum demand readings from its Associated MOA following any change of meter detail, any fault rectification and any de-energisation or energisation of Metering Equipment. The NHHDC will report this information to the Supplier, LDSO, MOA, as appropriate via the Site Visit Report.

4.2 Validate Meter Data.

The minimum validation rules contained within BSCP504 apply equally for whether the reading to be validated lies after other valid Meter readings, before other Meter readings or between other Meter readings.

The validation requirements described below are the minimum requirements that the NHHDC shall carry out for each Settlement Register: Where the Supplier retrieves readings from the Meter remotely, the Supplier may perform pre-validation checks according to any relevant rules below and is not required to pass any readings to the NHHDC that are demonstrably invalid.

1. Check that where data is collected at site the Meter serial number for the MSID is the same as the serial number provided by the MOA for that MSID.
2. Check that the date of Meter reading is after the date of the last valid Meter reading.

In the Change of Supplier scenario, where no Meter reading history has been received:

- In the case of validating a Meter reading, using subsequent Meter readings, the date of the reading to be validated against will be before the date of the reading used to validate;
 - In the case of validating a Meter reading, using Meter readings either side, the date of the reading to be validated against will be between the date of the readings used to validate; and
 - The reading(s) used in validation will not have passed BSC Validation as there would have been nothing to validate these readings against.
3. Check for zero consumption, where the zero consumption/generation on the Meter register is not necessitated by the Time Pattern Regime, and if so:
 - 3.1 check for previous zero consumptions/generations,

- 3.2 check for zero MD,
- 3.3 check Site Visit Report.
- 3.4 check whether Metering System is being settled on a zero EAC, for example, the Supplier is treating the site as Long Term Vacant.

3.5 for advanced meters (and for smart Meters where data has been provided by the Supplier), check whether the Metering System is remotely disabled.

If zero explained by historical consumption, Site Visit Reports, Time Pattern Regime, remote disablement or Metering System being settled on a zero EAC, then valid, otherwise invalid.

4. Check for negative consumption/generation and if so:

- 4.1 check for Meter rollover
- 4.2 check if the previous Meter register reading is a deemed reading and that the reading prior to the deemed reading is an actual Meter register reading, and that the current Meter register reading advance creates a positive consumption/generation with respect to the last actual Meter register reading (i.e. obtained prior to the deemed reading), making allowance for any Meter register rollover (Appendix 4.1),

if so then reading valid, otherwise invalid

5. Check consumption/generation does not exceed twice the expected advance.

(using the EAC times the Profile Coefficient, or some other equivalent method.) Where the reading to be validated does not come after other validated readings the expected advance may be calculated using either:

- the class average Estimated Annualised Consumption (EAC) times the profile coefficient or some other equivalent method, and the first Meter reading available; or
- the Annualised Advance (AA), determined from two readings either side of the reading to be validated, times the Profile Coefficient.

Note that where Profile Coefficients are not yet available they may be submitted by using the Profile Coefficients from the same period last year. If consumption/generation does exceed twice the expected advance, this Meter register reading will fail validation, except where it is caused by a seasonal register Time Pattern Regime. However, a facility to review all Meter register readings which fail validation will be available. Based on this review, the NHHDC may choose to set it to valid and the status may be altered, where good reason exists. If not exceeded then the Meter register reading is valid.

6. Compare actual and expected Meter register readings and identify missing and overdue Meter register readings, in particular meters that have not been read by the Final Reconciliation Volume Allocation Run.
7. Check that the number of MD resets is not greater than one since the last time that the MD was reset by a person authorised by the NHHDC. Where the number of resets is unexplained, the Meter register reading(s) recording energy remain valid unless invalid for a separate reason.
8. For multi-register meters check that all registers have the same date of reading.
9. The NHHDC must inform the MOA of any error flags received from the Meter and record the reasons for accepting any error flagged data into Settlements. Where the Supplier receives error flags from the Meter, the Supplier should inform the MOA if relevant for the error flag in question.
10. The validation must retain the original value, the initial validation flag, the reason for failure where the flag is invalid and the reason for changing the status to valid.