

Change Proposal – BSCP40/02

CP No: 1261

*Version No: 1.0
(mandatory by BSCCo)***Title** *(mandatory by originator)*

Introducing Metering Code of Practice 10 to facilitate smart metering in the Half Hourly (HH) market

Description of Problem/Issue *(mandatory by originator)*

With the introduction of Automatic Meter Reading (AMR) / smart meters comes the opportunity to expand the Half Hourly (HH) elective (sub 100kW) market. The BSC requirements necessary to facilitate this were discussed during the BSC Smart Metering Review. It was agreed that the BSC, in respect of HH processes and controls, should not unnecessarily inhibit participation in this sector of the market. In addition, the processes and controls should be appropriate for the level of consumption being metered.

The Smart Metering Expert Group worked to the following principles while defining the solution:

- That the likely benefits would exceed the likely costs of service (Meter Operator and Data Collector) without creating “undue risk” (where “undue risk” is defined as no greater risk than if the same Metering System was settled in the Non Half Hourly (NHH) market)
- To achieve an appropriate balance between removing prohibitively expensive controls and minimising BSC and participant changes. For example, the application of new service levels for elective HH would affect both Supplier and agent systems as currently most participants have the same processes in place for Measurement Class (MC) C and E.

Processes were considered from the point of view of existing participants rather than new entrants. The appropriateness of requirements was considered in terms of different sections of the market. For instance some requirements were considered suitable for all HH and not for NHH, some for secondary current (also known as CV/VT operated meters) and not for Primary (whole) current and some for meters in MC C but not for those in MC E. This is illustrated in Attachment F.

The processes and relevant sections of the BSC and subsidiary documents considered can be seen in Attachment G. This table gives reasons why changes were thought to be necessary or not.

Proposed Solution *(mandatory by originator)*General

The proposed changes have sought to achieve a situation where the rules are such that meters that are capable of being used in the HH elective market adhere to the rules for this more stringent sector of the market (even if they are traded initially in the less stringent NHH sector). This is so that they can move to the more stringent sector at a later date without the need for a meter exchange and/or a site visit.

Code of Practice (CoP) 10 – CP1261 Attachment A

It is proposed that a new Code of Practice (CoP10) be introduced that covers whole current meters for use in the HH elective (sub 100kW) market. The Energy Retail Association’s (ERA’s) smart meter specification (as it currently stands) would be compliant with CoP10. Meters covered by CoP10 must also be consistent with the Electricity Act.

The reason for only allowing whole current meters to be covered by CoP10 and not secondary current meters is that secondary current meters carry more risk than whole current and so excluding them enables the lightening of requirements. It is also useful to have a clear definition of when CoP10 applies.

Compliance with the CoP10 will mean meters can be traded both HH elective (MC E) and NHH, negating the need for a site visit and meter exchange when changing between these markets. Such meters would never trade in the mandatory HH sector (MC C), as the technicalities of metering are such that secondary current meters are required above a threshold somewhat below 100kW.

Attachment A details the requirements to be included in CoP10. These requirements were established during the BSC Smart Metering Review and are in line with the ERA's Smart Meter Specification. CoP5 was used as a baseline when considering the appropriate requirements.

Amendments to CP1261 Attachment A following the DCP0033 industry impact assessment

Following the DCP0033 (see Version History) industry impact assessment comments a number of amendments have been made to CP1261 Attachment A. As CP1261 Attachment A is a clean version of CoP10, with no redline change marking, these amendments are detailed below:

- Section 3.9 and 3.10 – For consistency, the definition of Export and Import has been aligned to the Code, as opposed to IEC62053-23 (see CP1261 Attachment A for definition);
- Section 5.3 – Has been amended in line with the changes proposed by CP1251¹ to CoP8² and CoP9³. CP1251 proposes that the readings used in Settlement must be the kWh values obtained from the primary register(s) of a Meter that is compliant with S.I.1679 or is Ofgem approved. A kWh value derived by a peripheral device (for example from a pulsed output from a compliant Meter) is not acceptable for Settlement purposes, as this method is not believed to be reliable enough. An additional sentence has been added into Section 5.3: 'An integral Outstation that transfers the kWh value of the primary register in accordance with the manufacturers protocol may be used.';
- Section 5.4 – in response to an industry impact assessment comment Section 5.4 has been amended to not preclude the use of additional security levels (other than the three specified in CoP10). The text has been amended to read: 'A security regime allowing for at least three levels of access should exist with the levels of access as defined below:';
- Section 5.5.1 – In response to an industry impact assessment comment Section 5.5.1 has been amended to read: 'An interrogation port shall be provided for each Outstation ~~which may be an opto port to IEC62056-21, and with a serial protocol such as IEC62056-21.~~', on the basis that the only Settlement requirement is that there should be a local interrogation port;
- Appendix A – For consistency, the full Appendix A 'Defined Metering Points', which is present in the HH CoPs (CoP1, CoP2, CoP3 and CoP5), has been added to CoP10.

PARMS

In the HH market, these CoP10 meters would be traded as Measurement Class E meters (HH elective) and all the current timescales and performance standards around Measurement Class E (such as percentages of energy on actual data, and timescales for addressing meter faults etc.) would apply. The reason for this is that although they are in some cases more stringent than the NHH requirements, changing them (with the consequential PARMS implications) would impose a disproportionate cost given the relative small operational benefits of such changes. However, a change to meter fault timescales may be necessary in the future if high volumes begin to cause problems.

¹ CP1251 - Inferior / Inappropriate Peripheral Devices should not be used to Collect Automatic Meter Readings

² CoP8 - Code of Practice for the Metering of import active energy via low voltage circuits for Non-Half Hourly settlement purposes

³ CoP9 - Code of Practise for the Metering of import and export active energy via low voltage circuits for Non-Half Hourly settlement purposes

BSCPs – CP1261 Attachments B, C and D

Most of the HH requirements would apply to all Measurement Class C and E meters. However, some would be relaxed for all of Measurement Class E - on the basis that these sites could be traded NHH; and / or for whole current (which will be < 100kW) - on the basis that the risks associated with whole current metering are significantly less in certain areas.

Whole current meters would be exempt from the HH requirement for proving tests. These meters could be traded NHH where no proving test would be required so this would be no worse than NHH. Secondary current meters should continue to be proved regardless of whether they are in the elective or mandatory sector, as although they can be traded NHH they could potentially become mandatory HH which would require a proving test. These relaxations of HH processes would require changes to Appendix 4.6 'Proving of Half Hourly Metering Systems' of BSCP502 'Half Hourly Data Collection for SVA Metering Systems Registered in SMRS' and Appendix 8.3 'Proving of Half Hourly Metering Systems' of BSCP514 'SVA Meter Operations for Metering Systems Registered in SMRS' and also ensuring any references to proving tests throughout the rest of BSCP502 and BSCP514 state that they should be carried out in accordance with the relevant appendices.

HH elective sites (whole current and secondary current) would not be subject to mandatory yearly or two yearly site visits by the HH Data Collector. Site visits are not mandated for NHH sites. However, Suppliers would be expected to treat HH elective sites as NHH in terms of arranging for the inspection of Measurement Class E Meters in accordance with provisions 12.14 – 12.16 of the Standard Conditions of the Electricity Supply Licence, This would require a change to Appendix 4.1 'Validate Meter Data' of BSCP502 (specifically 4.1.8). Section 4.1.6 'Maximum Permissible Energy by Metering System Code of Practice' of BSCP502 would also need to have an entry for CoP10 included in the table.

These relaxations of HH processes would require changes to Appendix 4.6 'Proving of Half Hourly Metering Systems' and Appendix 4.1 'Validate Meter Data' of BSCP502 'Half Hourly Data Collection for SVA Metering Systems Registered in SMRS' and also any references to proving tests throughout the rest of BSCP502.

A change would also be made to section 3.3.2 'Change of Measurement Class from Half Hourly to Non-Half Hourly SVA Metering System coincident with change of Supplier, NHHDC, NHHDA and MOA' of BSCP502 removing the requirement for a site visit as a Change of Measurement Class (CoMC) could be carried out remotely.

BSCP601 would also be updated to accommodate the introduction of CoP10. In particular the testing under the Certification Act or the Measuring Instruments Directive (MID) to meet all requirements for accuracy under Settlement.

CoP 4 – CP1261 Attachment E

In the context of the proposed changes, CoP 4 deals with the calibration and commissioning requirements.

Metering Systems under CoP10 would be commissioned in the same way as a NHH whole current meter. Section 6 of CoP4 would be changed to reflect this and CoP10 should be included in the paragraph about NHH commissioning in the scope. None of the appendices are applicable to NHH commissioning. Type A calibration would be undertaken during MID approval.

Commissioning tests are covered by a "where appropriate" caveat, so only those tests relevant to

whole current metering would apply, and no changes are necessary.

Area	HH - Mandatory	HH –Elective (<u>not</u> CoP 10)	HH – Elective <u>and</u> CoP 10	NHH (regardless of whether CoP 10)
Metering	CoP 1, 3, 5	CoP 1, 3, 5	CoP 10	CoP 8, 9, 10
Calibration & Commissioning	CoP 4 Section 5	CoP 4 Section 5	CoP 4 Section 6	CoP 4 Section 6
DC BSCP	BSCP502	BSCP502	BSCP502	BSCP504
Proving Tests Required	Yes	Yes	No	No
Site Visits required by the BSC for detection of tampering and safety purposes	Yes	No	No	No
Applicable PARMS standards	HH Mandatory	HH Elective	HH Elective	NHH

Housekeeping changes to BSCP514

A number of housekeeping changes to BSCP514 have been identified. It is proposed these are addressed as part of CP1261. The redline changes are documented in Attachment C:

- Following the implementation of P197 ‘SVA Qualification Processes Review’ the terms ‘Accredited’ and ‘Accreditation’ have been replaced by ‘Qualified’ and ‘Qualification’;
- Section 1.5 ‘Associated BSC Procedures’ references BSCP512 which was discontinued on 23 May 2008 following the implementation of P197. This reference has been removed;
- Section 8.4.1 ‘Off-site Totalisation’ references Party Service Line (PSL) 130 ‘Half Hourly Data Collection’. The implementation of CP1214 ‘Removal of PSL130 following the creation of a generic non functional PSL via CP1182’ transferred the functional requirements of PSL130 into BSCP502 BSCP514 has been updated to remove the reference to PSL130. This proposed change is in line with the change to BSCP502 (Section 4.8.1) as implemented by CP1214.

Justification for Change (*mandatory by originator*)

In response to the Energy Billing and Metering Consultation, the Government has drafted new legislation (which is currently before parliament in the form of the Energy Bill 2007-08) that will allow the Government to modify the conditions of distribution and supply licences in relation to the installation and operation of meters of a particular kind. Under the new legislation the Government has advised that it will amend the Electricity Supply Licence to require that AMR metering is rolled out for larger business customers over the next five years. The proposed amendments to the Licence will affect sites in Profile Classes (PC) 5-8 which total approximately 170,000 sites. Notably the Government’s response to the Consultation states that ‘The Government agrees that profile and consumption categories are not immutable, and that it would be desirable to deal with any overlap between its proposal and its larger intention of providing smart meters to the smallest business customers and domestic customers. It is, therefore, considering how arrangements for the smallest businesses might best take the previous provision of advanced metering into account’. The response also notes that there is nothing to stop Suppliers from providing AMR metering to customers below the thresholds set by regulation. Indeed, AMR meters are already being fitted in some sites.

These AMR meters will be capable of remote communication and the production of HH values for use in the HH market as well as cumulative register values for use within the NHH market. However, they will not meet all the requirements of Code of Practice (CoP) 5 and so, currently, would not be allowed

to trade in the HH market.

Allowing these lower specification meters to be traded Half Hourly would cut the cost of entrance to the HH elective market and therefore provide Suppliers with a more cost effective option of trading these sites HH. It would also enable a change of Measurement Class between NHH and HH elective markets without the need for a site visit and meter exchange, giving Suppliers and customers greater flexibility. Improved Settlement accuracy is also a likely consequence.

The Government also highlighted ongoing discussions to determine whether to require the use of HH data in Settlement once advanced metering is installed. The proposed changes facilitate this requirement, removing the BSC as a potential barrier. No further BSC changes would be necessary should the use of HH data in Settlement be mandated.

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 'Metering'

Estimated Implementation Costs *(mandatory by BSCCo)*

The estimated ELEXON implementation cost is 7 man days which equates to £1,540.

Configurable Items Affected by Proposed Solution(s) *(mandatory by originator)*

BSCP502 'Half Hourly Data Collection for SVA Metering Systems Registered in SMRS'
BSCP514 'SVA Meter Operations for Metering Systems Registered in SMRS'
BSCP601 'Metering Protocol Approval and Compliance Testing'
CoP4 'The Calibration, Testing and Commissioning Requirements of Metering Equipment for Settlement Purposes'

Impact on Core Industry Documents or System Operator-Transmission Owner Code *(mandatory by originator)*

None identified

Related Changes and/or Projects *(mandatory by BSCCo)*

CP1251 'Ensuring Inferior / Inappropriate Peripheral Devices not used to Collect AMR Reads'
CP1252 'Reading Submission Frequency for AMR Meters'
CP1253 'Remote Reading Assurance'
CP1254 'Prevention of Unauthorised Access to AMR / Smart Meters'

Requested Implementation Date *(mandatory by originator)*

February 2009 Release

Reason:

The Government has mandated that all Profile Class 5 -8 Meters installed after 1 January 2009 will require a Meter that can be remotely read. The February 2009 Release is the next available Release and although the changes will not be implemented until February 2009 they will have been approved by the Panel before 1 January 2009.

Version History (*mandatory by BSCCo*)

DCP0033 was raised on 4 July 2008. It was issued for industry impact assessment on 4 July 2008. The industry impact assessment responses, together with ELEXON's comments can be found on the ELEXON Website:

http://www.elexon.co.uk/changeimplementation/changeprocess/draft_change_proposals/proposal_details.aspx?proposalId=764

Following a favourable response from industry CP1261 was raised on 5 September 2008.

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Attachments: Yes

CP1261 Attachment A – Code of Practice for Whole Current Metering of Energy Via Low Voltage Circuits for Settlement Purposes (CoP10) (22 pages)

CP1261 Attachment B – Redline changes proposed to BSCP502 (5 pages)

CP1261 Attachment C – Redline changes proposed to BSCP514 (8 pages)

CP1261 Attachment D – Redline changes proposed to BSCP601 (19 pages)

CP1261 Attachment E – Changes to Code of Practice Four (2 pages)

CP1261 Attachment F – Matrix of Applicable Requirements for Different Types of Metering (1 page)

CP1261 Attachment G – Table of Processes Considered by Smart Metering Expert Group (9 pages)