

Change Proposal – BSCP40/02	CP No: 1297 <i>Version No: v1.0</i> <i>(mandatory by BSCCo)</i>
Title <i>(mandatory by originator)</i> Mandatory Capability to Record Reactive Power Demand (kvar) Values in Code of Practice 10 (CoP10) Meters	
Description of Problem/Issue <i>(mandatory by originator)</i> <p>As described in paper SVG97/04, a Working Group on Absent and Erroneous Reactive Power Data was established by the Supplier Volume Allocation Group (SVG). The Group investigated problems that arise when the metered data provided to LDSOs by Half Hourly Data Collectors does not include all of the Reactive Power data required by the LDSO (for purposes of DUoS charging and network management).</p> <p>When LDSOs do not receive Reactive Power data, they are forced to make their own estimates of the missing data, for the purpose of calculating kVA Demand and Reactive Power charges. This presents difficulties for Suppliers, who potentially find it difficult to pass on to customers charges based on estimated data. The issue is made more difficult – particularly for customer groups with sites spread across the country – by the inconsistent approaches to estimation adopted by different LDSOs.</p> <p>Missing Reactive Power data also creates issues for LDSOs, who require such data to understand the power flows on their networks, the capacity requirements of their customers, and the efficiency of customers’ electrical usage.</p> <p>The Working Group identified a number of potential root causes for missing and erroneous Reactive Power data. One of these is that some of the metering Codes of Practice (including CoP10) do not currently require a capability to record period values for Reactive Power.</p>	
Proposed Solution <i>(mandatory by originator)</i> <p>In order to address the issues caused by absent and erroneous Reactive Power data, it is proposed to amend Code of Practice 10 (CoP10) to require that the Meter has the capability to record Demand (kvar) values for Reactive Import and Reactive Export¹.</p> <p>This will ensure that CoP10 Meters installed for Non Half Hourly customers who may enter the elective Half Hourly market at some future point can provide Reactive Power data when required to do so.</p> <p>The Working Group acknowledged that the requirement for Reactive Power metering was more relevant to industrial and commercial customers than domestic customers. However, with the extension of CoP10 to 100kW², and the likelihood that domestic customers will end up with smart Meters under different governance, it is proposed that the benefits of changing CoP10 will outweigh the disbenefits.</p>	

¹ The terms ‘Reactive Import’ and ‘Reactive Export’ are defined in Appendix B to CoP5. For a site without generation, Reactive Import corresponds to a lagging power factor, and Reactive Export to a leading power factor. For sites with generation as well as demand, the situation is more complex, with Reactive Import corresponding to either leading demand or lagging generation.

² Change Proposal CP1273 (‘Changes to the scope of CoP10 to cover current transformer operated Meters’) was approved by SVG for inclusion in the June 2009 BSC Release at the 3 March 2009 meeting.

BSCP601 'Metering Protocol Approval and Compliance Testing' will need to be updated in order to ensure that the 'Meter Protocol Approval' and 'Compliance Testing' procedures align with the CoP10 changes³.

Justification for Change *(mandatory by originator)*

For those customers for whom the LDSO already requires Reactive Power data, this change will assist Suppliers in meeting their BSC and DCUSA obligations to provide LDSOs with relevant metered data.

For those customers for whom the LDSO does not currently require Reactive Power data, this change will 'future proof' the metering (should a change in the customer's circumstances or in LDSO requirements mean that Reactive Power data is required at some point in the future).

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

This CP facilitates:

- The Section L requirement that Registrants install Metering Equipment that measures and records flows of Reactive Energy "where relevant" (see sections L1.1.2 and L2.1.1)
- The S2.3.1(h) requirement that Half Hourly Data Collectors provide validated metered data to Suppliers and LDSOs

Estimated Implementation Costs *(mandatory by BSCCo)*

The estimated ELEXON implementation cost is 2 man days, which equates to £440

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

BSCP601 – Metering Protocol Approval and Compliance Testing
CoP10 - Code of Practice for Whole Current Metering of Energy via Low Voltage Circuits for Settlement Purposes

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

None

³ Note: The same section of BSCP601 is impacted by CP1296. If both CP's are approved there will be minor changes to the redlining.

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

This Change Proposal is one of a package of four recommended to SVG by the Working Group. The four related Change Proposals are:

- CP1296, 'Mandatory Capability to Record Reactive Power Demand (kvar) Values in Code of Practice 5 (CoP5) Meters'
- CP1297, 'Mandatory Capability to Record Reactive Power Demand (kvar) Values in Code of Practice 10 (CoP10) Meters'
- CP1298, 'Requirement on MOAs to Configure Meters to Record Half Hourly Reactive Power Data (for Half Hourly Settled CT-Metered Customers)'
- CP1299, 'Requirement on Half Hourly Data Collectors to Collect and Report Reactive Power Data (where the Meter is configured to record it)'

The Working Group recommended raising the changes to CoP5 and CoP10 as separate Change Proposals, as they recognised that the two CoPs are relevant to different types of customer, and the two changes may therefore raise different issues for Parties.

Two further changes are currently being developed relating to the validation and estimation of Reactive Power Data. These changes will be progressed as soon as their solution has been developed.

Requested Implementation Date (*mandatory by originator*)

February 2010

Reason:

Next available release

Version History (*mandatory by BSCCo*)

Version 1.0 for Impact Assessment

Originator's Details:

BCA Name.....*Stuart Holmes*

Organisation.....*ELEXON*

Email Address.....*stuart.holmes@elxon.co.uk*

Telephone Number.....*020 7380 4135*

Date.....*05 June 2009*

Attachments: Y

Attachment A - redline changes to COP10 Issue 1 V1.0 (1 Page)

Attachment B - redline changes to BSCP601 V10.1 Conformed (2 Pages)