

Change Proposal – BSCP40/02	CP No: 1296 <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 5 (CoP5) 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 CoP5) 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 5 (CoP5) 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 CoP5 Meters installed for Half Hourly customers (or 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>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 CoP5 changes².</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 Note: The same section of BSCP601 is impacted by CP1297. If both CP’s are approved there will be minor changes to the redlining.

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).

The Working Group suspected that, historically, the reason for CoP5 not mandating Reactive Power Demand values was that different LDSOs had different charging requirements; and that Reactive Power metering requirements therefore varied from geographical area to geographical area. However, as the industry moves towards a common charging methodology (and higher levels of distributed generation), the Group believed that Reactive Power metering will become a requirement in all geographical areas.

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)*

- Code of Practice 5 (CoP5) – Code of Practice for the Metering of Energy Transfers with a Maximum Demand of up to (and including) 1MW for Settlement Purposes
- BSCP601 – Metering Protocol Approval and Compliance Testing

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

None

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

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Attachments: Y

Attachment A - redline changes to CoP5 Issue 1 V6.1 Conformed (1 Page)

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