

4.3 CP Form

Change Proposal – BSCP40/02	CP No: CP1472 <i>Version No: 1.0 (mandatory by BSCCo)</i>
Title	
Removal of SVA Proving Tests for Meters with a Pulse Multiplier of 1	
Description of Problem/Issue (mandatory by originator)	
<p>Background:</p> <p>During the 2014/15 audit year, the BSC Auditor identified an Audit Issue¹:</p> <ul style="list-style-type: none"> ● Proving tests not being performed and/or communicated <p>The subsequent recommendation was for ELEXON to hold a workgroup with Half Hourly Meter Operator Agents (HHMOAs) to ensure explicit requirements for the completion of proving tests.</p> <p>ELEXON established this workgroup in December 2015 consisting of representatives from five HHMOAs, one Half Hourly Data Collector (HHDC), and the Association of Meter Operators (AMO).</p> <p>The workgroup discussed the proving test requirements and how to make explicit such requirements. This discussion led to the workgroup questioning the need for proving tests and their value to Settlement. This Change Proposal (CP) represents the conclusions of the workgroup and ELEXON.</p> <p>Proving tests:</p> <p>A proving test is a requirement for the HHMOA to confirm that the HHDC is correctly interpreting the Metering Equipment information to correctly collect data. This process confirms that the HHDC has the correct pulse multiplier in its system to convert the data into kWh for Settlement.</p> <p>The proving test process originated when older mechanical type Meters were exclusively connected to separate Outstations. The Outstation would automatically store a count of pulses from the Meters connected to it on a Half Hourly basis and allow the HHDC to collect that data from the Outstation. However, most Outstations did not convert the pulse counts into kWh, so the HHDC was required to do this by the post application of a pulse multiplier. The pulse multiplier is provided to the HHDC by the MOA via the D0268 ‘Half Hourly Meter Technical Details’ data flow and is a defined set of constants based upon the type of Meter, its capacity and the value of the Meter’s output pulse.</p> <p>Most modern Meters have in-built Outstations so the need to convert data from the Metering</p>	

¹ <https://www.elexon.co.uk/reference/market-compliance/audits/bsc-audit/>

System for use in Settlement is now greatly reduced. The pulse multiplier applied by HHDCs across the industry with around 90% or more of all Meter types is fixed at 1, as the integral Meter/Outstation stores the consumption data directly in kWh values. Therefore the probability of error is less than with separate Meters and Outstations.

The workgroup and ELEXON were unanimous in the opinion that there is no benefit to Settlement of proving Metering Systems that can only ever have a pulse multiplier of 1 unless they are sending signals to a separate Outstation or are involved with Complex sites.

Complex Sites:

The workgroup considered the current proving test requirements for Complex sites as defined in BSCPs 514 'SVA Meter Operations for Metering Systems Registered in SMRS' and 502 'Half Hourly Data Collection for SVA Metering Systems Registered in SMRS' and, in summary, concluded that there is no overall process that verifies the Complex mapping is correct. The workgroup believes that a new process would greatly provide the missing assurances needed for these arrangements and agreed to include a new process in BSCPs 514 and 502. This new process would be very similar to a proving test but would require the HHDC to provide the MOA with a single HH reading that had been processed in accordance with the Complex mapping. In this way the MOA would be able to verify if the HHDC had properly interpreted the complex aggregation for the site as a whole. The new process is referred to as a Complex Site Validation Test.

Proposed Solution (mandatory by originator)

It is proposed that a proving test is not required for integral Meter/Outstations that have a Pulse Multiplier fixed at 1 unless the Metering Equipment is part of a Complex Site or is connected to a separate Outstation.

A new process would be introduced into BSCP514 and 502 called a Complex Site Validation Test. The new process will enable the MOA to confirm that the complex site aggregation is correct.

Changes to BSCP601 'Protocol Approval and Compliance Testing' will make it a requirement for the testing agent to establish the pulse multiplier ranges of new Outstations. ELEXON will publish these on its website. Where the pulse multiplier can only be 1, ELEXON will make this clear on the list of approved Meters/Outstations on its website denoting Outstation types that do not require a proving test.

Changes to BSCP514 and 502 will then remove the need for the HHMOA & HHDC to carry out a proving test where the pulse multiplier can only be 1 (as identified on the list of approved Meters) and the Meter is not connected to a separate Outstation.

In addition, BSCP514 and 502 will be changed to include the Complex Site Validation Test requirements.

Justification for Change (mandatory by originator)

The workgroup believes that it is very rare for a proving test to fail because of an incorrect pulse multiplier. Analysis of proving test records carried out by the workgroup members (see below)

revealed that none have failed for reasons that cause incorrect data to enter Settlement. There are failures due to the HHDC providing data from an incorrect day or not be able to provide data due to communication failures, etc.

Analysis:

Workgroup members from MOAs provided the following analysis of their proving tests results:

- Of the last 2000 proving tests none have resulted in a new D0268 being triggered.
- So far in 2016 we have completed over 4,000 proving tests, zero have failed due to incorrect multipliers in the D0268;
- Between 1st April 2015 and 31st October 2015 we carried out 546 Proving Tests during the 6 month period. All were successfully completed. 545 have a pulse multiplier of 1; and
- Of 93,153 proving tests carried out, none failed due the kWh value being wrong. 85% have a pulse multiplier of 1.

The workgroup has estimated that a proving test cost the industry around £55 (HHDC £25, MOA £25 and Supplier £5) to carry out. If it is to be assumed that 10,000 proving tests per year are carried out the cost to industry is around £550k.

ELEXON has established that between 1 April 2015 and 31 March 2016 there were 25,936 requests for Proving Tests across the industry. Of which, 20,100 (77%) had a pulse multiplier of 1. On the assumption that these were Meters that could not been set to anything other than a pulse multiplier of 1 then the approximate cost of these proving tests is £1.1m per year.

Impact for P272 ‘Mandatory Half Hourly Settlement for Profile Classes 5-8’:

The need to prove Meters under P272 has the potential to add delay to the process of moving Meters from NHH to HH. The workgroup noted benefits from the earliest possible implementation of this CP to assist in the migration of Meters from NHH to HH.

The workgroup has given careful consideration to the risks and benefits in Settlement of both proving and not proving. The workgroup believes that the opportunity for error being introduced into Settlement by the incorrect application of a pulse multiplier is very minimal for any pulse multiplier. It further considers that the potential for an error where the pulse multiplier of the Meter is 1 is even smaller. The workgroup believes that metering technologies have improved to a point that make the need for proving mostly irrelevant and it believes that proving tests offer little benefit for Settlement, particularly if the pulse multiplier can only be set to 1.

The strengthening of the validation of the Complex Sites is recognised as a higher risk due to the implicit manual completion of the Complex Site information by the HHMOA and the manual configuration required by the HHDC. The proposal is to strengthen the requirements to check the HH aggregated consumption data which may identify errors which would otherwise result in incorrect Settlement and customer billing.

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

BSC Section L 'Metering'

Estimated Implementation Costs (mandatory by BSCCo) One ELEXON Working Day of document implementation cost: £240
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'
Impact on Core Industry Documents or System Operator-Transmission Owner Code (mandatory by originator) N/A
Related Changes and/or Projects (mandatory by BSCCo) N/A
Requested Implementation Date (mandatory by originator) February 2017 Reason: This is the earliest BSC Release that this change can be included in.
Version History (mandatory by BSCCo) Version 1.0
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