

CP1472 'Removal of SVA proving tests for Meters with a pulse multiplier of one'



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About This Document

The purpose of this CP1472 Change Proposal (CP) Consultation is to invite BSC Parties, Party Agents and other interested parties to provide their views on the impacts and the merits of CP1472. The Imbalance Settlement Group (ISG) and Supplier Volume Allocation Group (SVG) will then consider the consultation responses before making a decision on whether or not to approve CP1472.

There are five parts to this document:

- This is the main document. It provides details of the solution, impacts, costs, and proposed implementation approach. It also summarises the ISG's and SVG's initial views on the proposed changes.
- Attachments A, B and C contain the proposed redlined changes to deliver the CP1472 solution.
- Attachment D contains the specific questions on which we seek your views. Please use this form to provide your response to these questions, and to record any further views or comments you wish to be considered.

1 Why Change?

Background

During the 2014/15 Audit year, the Balancing and Settlement Code (BSC) Auditor identified an Audit Issue¹ that proving tests are not being performed and/or communicated. The subsequent recommendation was for ELEXON to hold a workgroup with Half Hourly Meter Operator Agents (HHMOAs) to ensure requirements for the completion of proving tests are explicit.

ELEXON established this workgroup in December 2015. It consisted of representatives from five HHMOAs, one Half Hourly Data Collector (HHDC), and the Association of Meter Operators (AMO). The workgroup discussed how to make the proving test requirements explicit. This discussion led to the workgroup questioning the need for proving tests and their value to Settlement. This CP represents the conclusions of the workgroup and ELEXON.

Proving tests

A proving test is a requirement for the HHMOA to confirm that the HHDC is correctly interpreting data from Meters. This process confirms that the HHDC has the correct pulse multiplier in its system to convert the data into kWh for Settlement.

The proving test process originated when older mechanical type Meters were always connected to separate Outstations. The Outstation would automatically store a count of pulses from the Meters connected to it on a Half Hourly (HH) basis and then the HHDC would 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 using a pulse multiplier. The HHMOA provides the pulse multiplier to the HHDC via the [D0268 'Half Hourly Meter Technical Details'](#) data flow. The value of pulse multiplier is based upon the type of Meter and its capacity. The HHMOA must look up the pulse multiplier in a data table provided by the Meter manufacturer and enter it into the D0268. For a given Meter, the table could contain several different pulse multipliers, one of which is selected by the HHMOA depending on capacity of the circuit to be measured. This process is manual and prone to human error.

Most modern Meters have an in-built Outstation, which stores the consumption data directly in kWh so there is no need to convert this data for use in Settlement. For most (but not all) of these Meters with the in-built Outstation, the pulse multiplier value is always one. This means it is much less likely for the HHMOA to make an error when selecting the correct pulse multiplier from the table as all the values in the table are one. Across the HH market in Supplier Volume Allocation (SVA), around 90% or more of Meters have a pulse multiplier fixed at one.

The workgroup and ELEXON unanimously agreed that there is no benefit to Settlement of proving Metering Systems that can only ever have a pulse multiplier of one unless they are sending signals to a separate Outstation or are involved with Complex Sites.



Outstation

Outstation means equipment which receives and stores data from a Meter(s) for the purpose of transfer of that metering data to a Data Collector. It may perform some processing before such transfer and may be one or more separate units or may be integral with the Meter.

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

What is the issue?

The workgroup agreed 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 Appendix 2) 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. The workgroup estimated that a proving test costs around £55 (HHDC £25, HHMOA £25 and Supplier £5) to carry out. ELEXON has established that between 1 April 2015 and 31 March 2016 there were 25,936 requests for proving tests across the industry. Of these, 20,100 (77%) had a pulse multiplier of one. The approximate cost of these proving tests (for Meters with a pulse multiplier of one) is £1.1m per year. We expect that around 90% of these Meters can only possibly have a pulse multiplier of one. Therefore the expected cost to industry is around £990k per year.

The workgroup has given careful consideration to the risks and benefits in Settlement of both proving and not proving Meters in SVA. 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. Furthermore it believes that the potential for error where the pulse multiplier of the Meter is one is even smaller. The workgroup believes that metering technologies have improved to a point that makes the need for proving mostly irrelevant and it believes that SVA proving tests offer little benefit for Settlement, particularly if the pulse multiplier is and can only be one.

Impact for P272 'Mandatory Half Hourly Settlement for Profile Classes 5-8'

The need to prove Meters under [P272 'Mandatory Half Hourly Settlement for Profile Classes 5-8'](#) could delay the process of moving Meters from Non Half Hourly (NHH) to HH. The workgroup believes implementing this CP as early as possible would assist in the migration of Meters from NHH to HH.

Complex Sites

The validation of Complex Sites is 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.

The workgroup considered the current proving test requirements for Complex Sites as defined in BSC Procedures (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.



Complex Sites

'Complex Site' means any site that requires a 'Complex Site Supplementary Information Form' to enable the HHDC to interpret the standing and dynamic Metered Data relating to SVA Metering Systems for Settlement purposes to be provided to the HHDC in addition to the D0268 'Half Hourly Meter Technical Details'.

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Proposed solution

It is proposed that a proving test is not required for integral Meter/Outstations that have a fixed pulse multiplier of one unless the Metering Equipment is part of a Complex Site or is connected to a separate Outstation. Redlined changes to BSCP514 and BSCP502 remove the need for the HHMOA and HHDC to carry out a proving test where the pulse multiplier can only be one (as identified on the list of approved Meters) and the Meter is not connected to a separate Outstation or part of a Complex Site arrangement. It should be noted that this CP does not propose changing the requirements for Central Volume Allocation (CVA) Proving Tests which are set out in [BSCP02 'Proving Test Requirements for Central Volume Allocation Metering Systems'](#).

Changes to [BSCP601 'Protocol Approval and Compliance Testing'](#) will make it a requirement for the Compliance Testing Agent (as defined in BSCP601) to establish the pulse multiplier ranges of new Outstations. ELEXON currently maintains a list of approved Meters/Outstations. We will indicate on this list which Meters/Outstations can only have a pulse multiplier of one and, under normal circumstances, do not require a proving test.

A new process is proposed for BSCP514 and BSCP502 called a Complex Site Validation Test. The new process will enable the HHMOA to confirm that the Complex Site aggregation is correct. This new process would be very similar to a proving test but would require the HHDC to provide the HHMOA with a single HH reading that had been processed in accordance with the Complex mapping. In this way the HHMOA 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.

Proposer's rationale

This change is required to address an issue identified by the BSC Auditor.

CP Consultation Question

Do you agree with the CP1472 proposed solution?
Please provide your rationale.

We invite you to give your views using the response form in Attachment D

CP Consultation Question

Do you agree that the proposed Complex Site Validation Test will reduce the risk of Settlement Error?
Please provide your rationale.

We invite you to give your views using the response form in Attachment D

Proposed redlining

Attachments A, B and C contain the proposed changes to BSCP502, BSCP514 and BSCP601 respectively to deliver CP1472.

We presented CP1472 to the SVG on 4 October 2016 and the ISG on 25 October 2016.
The Committee Members had no initial comments on the redlining.

CP Consultation Question

Do you agree that the draft redlining delivers the CP1472 proposed solution?

If 'No', please provide your rationale.

We invite you to give your views using the response form in Attachment D

3 Impacts and Costs

Central impacts and costs

This change will require document changes only.

There are no system changes required for this CP and no impact on BSC Agents.

The maintenance of the list of approved Meters/Outstations, which do not require a proving test, will be absorbed in ELEXON business as usual (BAU) costs.

Central Impacts	
Document Impacts	System Impacts
<ul style="list-style-type: none">BSCP502BSCP514BSCP601	<i>None</i>

The central implementation costs for CP1472 will be approximately £240 (one ELEXON man day) to implement the necessary document changes.

BSC Party & Party Agent impacts and costs

We expect that HHMOAs and HHDCs will be impacted by the implementation of CP1472.

BSC Party & Party Agent Impacts	
BSC Party/Party Agent	Impact
HHMOA	<ul style="list-style-type: none">Stop performing SVA proving tests for Meters with a pulse multiplier of 1Verify processed HH readings from the new Complex Site Validation Test
HHDC	<ul style="list-style-type: none">Stop performing SVA proving tests for Meters with a pulse multiplier of 1Will need to follow the new processes for HH readings for the Complex Sites Validation Test

We do not expect CP1472 to impact any other BSC Parties or Party Agents but we seek confirmation of this through the CP Consultation.

CP Consultation Questions

Will CP1472 impact your organisation?

If 'Yes', please provide a description of the impact(s) on your organisation and any activities which you will need to undertake between the approval of CP1472 and the CP1472 Implementation Date (including any necessary changes to your systems, documents and processes). Where applicable, please state which of the roles that you operate as will be impacted and any differences in the impacts between each role.

Will your organisation incur any costs in implementing CP1472?

If 'Yes', please provide details of these costs, how they arise and whether they are one-off or on-going costs.

We invite you to give your views using the response form in Attachment D

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4 Implementation Approach

Recommended Implementation Date

We propose to implement CP1472 on **23 February 2017** as part of the February 2017 BSC Release.

The February 2017 Release is the next available Release that can include this CP.

CP Consultation Question

Do you agree with the proposed implementation approach for CP1472?

Please provide your rationale.

We invite you to give your views using the response form in Attachment D

SVG's initial views

The SVG considered CP1472 at its meeting on 4 October 2016 ([SVG 188/05](#)).

An SVG Member commented that HHMOAs and HHDCs often use the same platform and they believe, in such cases, proving tests add little value. This Member questioned the need for proving tests at all. An ELEXON representative confirmed that this CP will remove the proving test requirement for majority of SVA Metering Systems that are currently in use but there will be some systems that do require proving test including Complex Sites, Meters where the pulse multiplier is not always one and some older Meters that do not have an inbuilt Outstation. An SVG Member commented that there are very few Meters with separate Outstation and their use is declining.

An SVG Member noted that over recent years there have been several CPs relating to proving tests and asked whether there are likely to be any more. An ELEXON representative confirmed we do not expect any more proving test related CPs in the near future.

SVG Members did not request any additional question be added to the CP Consultation.

ISG's initial views

The ISG considered CP1472 at its meeting on 25 October 2016 ([ISG 186/01](#)).

Several ISG Members raised concerns that proving tests actually perform a wider purpose than purely confirming the value of the pulse multiplier, for example establishing working communications between the Metering System and the HHDC. ELEXON responded that there is a data validation process set out in BSCP502 which would identify any communication issues and places an obligation on the HHMOA to investigate it. ELEXON noted that when proving tests were first introduced they did indeed have a broader role but since validation tests were introduced, the only practical purpose they serve now is to confirm the value of the pulse multiplier.

After the meeting ELEXON contacted the ISG Members to highlight to them that in CVA the role of a Proving Test is somewhat different to SVA proving tests. For CVA, [BSCP02 'Proving Test Requirements for Central Volume Allocation Metering Systems'](#) gives a definition for Proving Tests which does indeed include a requirement to establish communications. However this is not the term that is referred to in BSCP502 for SVA. BSCP502 does not explicitly define the term proving test.

An ISG Member questioned the figure of £55 as the cost of a proving test. They believed that it could be lower than this as proving tests are often combined with another reason to visit a site, such as installation.

The ISG requested that the two additional questions below be included in the CP Consultation.

CP Consultation Question

Do you agree with the workgroup's cost estimate for proving tests of £55?
Please provide your rationale.

We invite you to give your views using the response form in Attachment D

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CP Consultation Question

Do you believe that by removing SVA proving tests, as proposed by CP1472, there is any increase in risk to Settlement?

Please provide your rationale.

We invite you to give your views using the response form in Attachment D

Appendix 1: Glossary & References

Acronyms

Acronyms used in this document are listed in the table below.

Acronyms	
Acronym	Definition
AMO	Association of Meter Operators
BAU	Business as usual
BSC	Balancing and Settlement Code (<i>industry Code</i>)
BSCP	BSC Procedure
CP	Change Proposal
CVA	Central Volume Allocation
HH	Half Hourly
HHDC	Half Hourly Data Collector
HHMOA	Half Hourly Meter Operator Agent
ISG	Imbalance Settlement Group (<i>Panel Committee</i>)
NHH	Non Half Hourly
SVA	Supplier Volume Allocation
SVG	Supplier Volume Allocation Group (<i>Panel Committee</i>)

DTC data flows and data items

DTC data flows and data items referenced in this document are listed in the table below.

DTC Data Flows and Data Items	
Number	Name
D0268	Half Hourly Meter Technical Details

External links

A summary of all hyperlinks used in this document are listed in the table below.

All external documents and URL links listed are correct as of the date of this document.

External Links		
Page(s)	Description	URL
2	BSC Audit Report 2015/16	https://www.elexon.co.uk/reference/market-compliance/audits/bsc-audit/
3	P272 webpage	https://www.elexon.co.uk/p272-mandatory-half-hourly-settlement-profile-classes-5-8/
3	BSCP514 webpage	https://www.elexon.co.uk/bsc-related-documents/related-documents/bscps/5/?show=10&type

External Links		
Page(s)	Description	URL
3	BSCP502 webpage	https://www.elexon.co.uk/bsc-related-documents/related-documents/bscps/4/?show=10&type
4 and 9	BSCP02 webpage	https://www.elexon.co.uk/bsc-related-documents/related-documents/bscps/
4	BSCP601 webpage	https://www.elexon.co.uk/bsc-related-documents/related-documents/bscps/7/?show=10&type
9	SVG meeting 188 webpage	https://www.elexon.co.uk/meeting/svg-188/?from_url=https://www.elexon.co.uk/events-calendar-item/svg-188/
9	ISG meeting 186 meeting webpage	https://www.elexon.co.uk/meeting/isg-186/?from_url=https://www.elexon.co.uk/events-calendar-item/isg-186/

Appendix 2: HHMOA analysis of proving tests

Workgroup members from HHMOAs provided the following analysis of their proving tests results. Each statement is from a different HHMOA.

- Of the last 2,000 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 1 April 2015 and 31 October 2015 we carried out 546 Proving Tests during the 6 month period. All were successfully completed. 545 have a pulse multiplier of one.
- Of 93,153 proving tests carried out, none failed due to the kWh value being wrong. 85% have a pulse multiplier of one.