

CP Progression Paper

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

ELEXON



Committee

Supplier Volume Allocation
Group and Imbalance
Settlement Group



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Contents

1	Why Change?	2
2	Solution	4
3	Impacts and Costs	5
4	Implementation Approach	6
5	Proposed Progression	7
6	Recommendations	8
	Appendix 1: Glossary & References	9
	Appendix 2: HHMOA analysis of proving tests	11

About This Document

This document provides information on new Change Proposal (CP) CP1472 and outlines our proposed progression timetable for this change, including when it will be issued for CP Consultation in the next suitable Change Proposal Circular (CPC) batch.

We are presenting this paper to capture any comments or questions from Supplier Volume Allocation Group (SVG) and Imbalance Settlement Group (ISG) Members on this CP before we issue it for consultation.

There are five parts to this document:

- This is the main document. It provides a summary of the solution, impacts, anticipated costs, and proposed implementation approach, as well as our proposed progression approach for this CP.
- Attachment A contains the CP1472 proposal form.
- Attachments B-D contain the proposed redlined changes to deliver the CP1472 solution.

SVG188/05

CP1472
CP Progression Paper

26 September 2016

Version 1.0

Page 1 of 11

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1 Why Change?

Background

During the 2014/15 audit year, the 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.

SVG188/05

CP1472

CP Progression Paper

26 September 2016

Version 1.0

Page 2 of 11

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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. 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 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'.

SVG188/05

CP1472

CP Progression Paper

26 September 2016

Version 1.0

Page 3 of 11

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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.

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.

Proposed redlining

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

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">• BSCP502• BSCP514• BSCP601	<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 1• Verify 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 1• Will need to follow the new processes for HH readings for the Complex Sites Validation Test

We do not expect CP1474 to impact any other BSC Parties or Party Agents but we seek confirmation of this through the CP Consultation.

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.

5 Proposed Progression

Progression timetable

The table below outlines the proposed progression plan for CP1472:

Progression Timetable	
Event	Date
CP Progression Paper presented to SVG for information	6 Oct 16
CP Progression Paper presented to ISG for information	25 Oct 16
CP Consultation	07 Nov 16 – 02 Dec 16
CP Assessment Report presented to SVG for decision	3 Jan 17
CP Assessment Report presented to ISG for decision	24 Jan 17
Proposed Implementation Date	23 Feb 17 (Feb 17 Release)

CP Consultation questions

In addition to the standard CP Consultation questions for CP1472, we intend to ask an additional question as outlined below.

Standard CP Consultation Questions
Do you agree with the CP1472 proposed solution?
Do you agree that the draft redlining delivers the CP1472 proposed solution?
Will CP1472 impact your organisation?
Will your organisation incur any costs in implementing CP1472?
Do you agree with the proposed implementation approach for CP1472?

Additional CP Consultation Questions
Do you agree that the proposed Complex Site Validation Test will reduce the risk of Settlement Error?

6 Recommendations

We invite you to:

- **NOTE** that CP1472 has been raised;
- **NOTE** the proposed progression timetable for CP1472;
- **PROVIDE** any comments or additional questions for inclusion in the CP Consultation; and
- **NOTE** that we will also present CP1472 to the ISG for initial comment on 25 October 2016.

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
BSCP	BSC Procedure
CP	Change Proposal
CPC	Change Proposal Circular
HH	Half Hourly
HHDC	Half Hourly Data Collector
HHMOA	Half Hourly Meter Operator Agent
ISG	Imbalance Settlement Group
NHH	Non Half Hourly
SVA	Supplier Volume Allocation
SVG	Supplier Volume Allocation Group

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

SVG188/05

CP1472

CP Progression Paper

26 September 2016

Version 1.0

Page 9 of 11

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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	BSCP601 webpage	https://www.elexon.co.uk/bsc-related-documents/related-documents/bscps/7/?show=10&type

SVG188/05

CP1472

CP Progression Paper

26 September 2016

Version 1.0

Page 10 of 11

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Appendix 2: HHMOA analysis of proving tests

Workgroup members from HHHMOAs 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.