

CP1514 'Number of register digits for smart Meters'



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About This Document

This document is the CP1514 Final Change Proposal (CP) Report which ELEXON has published following the final decision from the Supplier Volume Allocation Group (SVG) to approve CP1514 at its meeting on 5 February 2019.

There are 4 parts to this document:

- This is the main document. It provides details of the solution, impacts, costs, and implementation approach. It also summarises the SVG's views on the changes and the views of respondents to the CP Consultation, along with the final decision to approve this change.
- Attachments A-B contains the approved redlined changes to deliver the CP1514 solution.
- Attachment C contains the full responses received to the CP Consultation.

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1 Why Change?

Background

Following the implementation of [Smart Energy Code \(SEC\) Modification SECMP0006 on 8 November 2018](#), Electricity Smart Metering Equipment (ESME) and Gas Smart Metering Equipment (GSME) will display a specified subset of digits from their Consumption Registers on their User Interfaces (UI). As a result the number of register digits on a smart Meter's display (when converted from Wh to kWh) has reduced to five for single phase electricity Meters and to six for polyphase electricity Meters.

Single Phase Electricity Meters

A single phase electricity meter is a Meter measuring a single phase supply.

Polyphase Electricity Meters

A polyphase electricity meter typically has three power lines 120 degrees out of phase with each other.

[The Master Registration Agreement](#) (MRA) change [DTC CP 3558](#) has been approved for implementation in June 2019 and will change the Meter Technical Details (MTD) such that the number of digits in the internal Meter register is consistent with those displayed on the UI. However, the Meter will still hold more digits than specified in the MTD. Although the MRA change will provide a consistent view of the number of digits on the UI, it does not address the issue of readings being retrieved containing more digits than specified in the MTD. This could result in valid readings being rejected or in erroneous Meter Advances being calculated.

What is the issue?

Readings taken from the visual display of Meters compliant with Smart Metering Equipment Technical Specifications 2 (SMETS 2) Version 3.1 and above (for example customer-own readings), will appear lower than those taken remotely. These readings could be invalidated, depending on how the DC interprets the information. This would mean that valid readings from a working smart Meter read could be prevented from entering Settlement and would result in the continued use of the latest Estimated Annual Consumption (EAC). Furthermore, there are general obligations in BSC Procedure (BSCP) 504 '[Non Half Hourly Data Collection for SVA Metering Systems Registered in SMRS](#)' and BSCP514 '[SVA Meter Operations for Metering Systems Registered in SMRS](#)' that could result in reads failing validation or being misinterpreted, causing erroneous data to enter Settlement.

[CP1253 'Remote Reading Assurance'](#), implemented in the February 2009 BSC Release, introduced a requirement for Non Half Hourly Data Collectors (NHHDCs) to ensure that readings retrieved remotely are the same as readings on the display of the Meter. This requirement is no longer relevant following the approval of SECMP0006 and is, in any case, not applicable where readings are being retrieved from smart Meters by the Supplier, rather than the NHHDC.

Proposed solution

The proposed solution is to set out new rules for Suppliers and NHHDCs to ensure that the readings retrieved remotely from SMETS2 compliant Meters are treated consistently with readings shown on the UI. This will instruct DCs and Suppliers how to treat Meter readings sent using the 'Meter Readings' data flow (D0010) with more register digits (J0478)¹ than specified in their MTD (D0150², D0268³).

We propose to address the issue by amending BSCP504 as follows:

- Add a paragraph to section 1.1 (i) that clearly describes the Supplier's responsibility to ensure the number of register digits contained within Meter readings retrieved from Data and Communications Company (DCC)-serviced smart Meters is consistent with the number of digits specified in the MTD.
- Add a new validation rule to section 4.2 stating that if the DC receives readings with more digits than specified in the MTD, they should be treated as valid if the least significant digits (as specified in the MTD) are consistent with historical readings.
- Amend section 1.2.1 to clarify that:
 - a) NHHDC is not responsible for retrieving readings from DDC-serviced Meters and that this is the responsibility of the Supplier; and
 - b) Readings from Meters compliant with SMETS2 Version 3.1 (and above) may be truncated in order for the number of digits to be consistent with the UI and MTD.

BSCP514 section 1.2 will be amended to include a rule for Meter Operator Agents (MOAs) in the event that they use hand-held devices to retrieve readings from a smart Meter's internal registers, rather than relying on a visual reading from the display. This rule will state that readings from Meters of type SMETS2 Version 3.1 (or above) should be consistent with the number of register digits specified in the MTD and displayed on the UI.

Proposer's rationale

Inconsistencies between readings taken remotely and those taken locally could result in readings failing validation or being misinterpreted causing erroneous data to enter Settlement. This Change would add clarity and consistency across industry, therefore reducing the risk of error.

Proposed redlining

The proposed redlining to deliver the CP1514 solution can be found in Attachments B and C.

¹ Number of Register Digits.

² Non Half Hourly Meter Technical Details

³ Half Hourly Meter Technical Details

3 Impacts and Costs

Central impacts and costs

Central impacts

Document only changes will be required to deliver the CP1514 solution as outlined in the table below:

Central Impacts	
Document Impacts	System Impacts
<ul style="list-style-type: none">BSCP504 - 'Non Half Hourly Data Collection for SVA Metering Systems Registered in SMRS'BSCP514 - 'SVA Meter Operations for Metering Systems Registered in SMRS'	<ul style="list-style-type: none">No BSC Central System Impacts

Central costs

The central implementation costs for CP1514 will be approximately £360 (one and a half ELEXON Working Days (WDs)) of effort to implement the necessary document changes.

BSC Party & Party Agent impacts and costs

Participant impacts

We anticipate the following positive impacts will result from the implementation of the CP1514 solution.

BSC Party & Party Agent Impacts	
BSC Party/Party Agent	Impact
Supplier	Will need to truncate any Meter reading retrieved from a SMETS2 compliant Meter where the reading has a greater number of register digits than specified in the MTD.
NHHDC	Will need to change their validation such that, if a Supplier does not truncate a reading, the NHHDC can validate if the least significant digits are consistent with the Meter reading history.

Participant costs

We do not anticipate there to be any material market participant implementation costs for CP1514. The majority of respondents to the CP consultation highlighted implementation costs, but clarified that these would be minimal.

4 Implementation Approach

Approved Implementation Date

CP1514 is approved for implementation on 27 June 2019 as part of the June 2019 BSC Release.

The June 2019 BSC Release is the next available Release following the expected approval date that can include this CP. This will align CP1514 with MRA change [DTC CP 3558](#), also scheduled for release in June 2019.

SVG's initial views

CP1514 was presented to the SVG for information and comment on 8 January 2019.

The SVG agreed that the CP1514 Implementation Date should be aligned with the MRA change that is also being released in June 2019. The SVG noted that CP1514 had been raised and the CP progression timetable.

6 Industry Views

This section summarises the responses received to the CP Consultation. You can find the full responses in Attachment C.

Summary of CP1514 CP Consultation Responses

Question	Yes	No	Neutral/ No Comment	Other
Do you agree with the CP1514 proposed solution?	7	0	0	0
Do you agree that the draft redlining delivers the intent of CP1514?	5	2	0	0
Will CP1514 impact your organisation?	7	0	0	0
Will your organisation incur any costs in implementing CP1514?	5	1	0	1
Do you agree with the proposed implementation approach for CP1514?	6	1	0	0
Do you have any further comments on CP1514?	1	6	0	0

Comments on the CP

ELEXON received 7 responses to the CP1514 CP Consultation. Respondents unanimously agreed with the proposed solution.

Respondents unanimously highlighted that they would be impacted by the change, noting that this would be a positive change.

Five out of seven respondents identified incurred costs but described these as minimal.

The majority of respondents (six out of seven) agreed with the proposed Implementation Date. One respondent requested more time to allow them to develop, test and implement the solution. However, we note that this change is aligning with the associated MRA change, which is confirmed to be implemented in June.

Comments on the proposed redlining

One respondent outlined concerns over the truncation of readings not being defined clearly enough within the proposed redlining, and suggested ELEXON rewords some of the text to remove ambiguity. The respondent stated that with the proposed wording a Supplier could truncate by removing either the first or the last digit depending on how they interpret the text. We agree with the proposed changes, and the redlining has been amended accordingly as part of the Assessment Report.

Another respondent commented in BSCP504 section 1.1 (i) and 1.2.1 (d) that the impression is that whilst the Supplier should ensure the read matches the MTD digits, this is not a steadfast requirement as the NHHDC will correct any issues with the read length. This increases the impact of CP1514 on NHHDC and their systems. We have looked into this and can confirm that the obligation to ensure that Meter readings do not fail is on the

Supplier, with the NHHDC acting as a safeguard. Therefore, the redlining does not need to be amended.

One respondent outlined the perceived ambiguity of certain references throughout BSCP514 and BSCP504. These included using references to NHHDC as opposed to Data Collector, and the use of the term User Interface instead of 'display of the Metering System'. These changes have now been amended to add clarity.

One respondent questioned why reference numbers had been changed in BSCP504 3.3.8.2. ELEXON can clarify that these are housekeeping changes.

Another respondent questioned whether the validation requirement only applied to readings for SMETS2 Meters. We have clarified this in the redlining for BSCP514 and BSCP504 to state, SMETS 2 Version 3.1 or above (or for other Meter Types where there is known to be a difference between the number of digits held in the internal register and those displayed on the Meter).

Please see below for a summary table outlining comments on the draft redlining and our response.

Comments on the CP1514 Proposed Redlining		
Document & Location	Comment	ELEXON's Response
BSCP504 1.1 (i)	should refer to NHHDC not data collector or DC	Text updated
BSCP504 1.2.1	UI should be "display of the Metering System"	Text updated
BSCP504 3.3.8.2	some "when" reference seem to have been red lined but they do not seem relevant to this CP so I am not sure why they are being changed.	ELEXON have confirmed that these are Housekeeping changes
BSCP504 4.2.11	DC should be NHHDC. This requirement is also not very clear. I believe the intension is that if the NHHDC receives a reading that seems to have too many digits (compared to the MTD) then it should only use the appropriate digits assuming the reading is correctly provided in kWh. (whole units only, excluding any decimal places) Does this validation requirement only apply to readings for SMETS2 meters?	We have amended DC to NHHDC We haven't further clarified BSCP504 4.2.11 as the proposed text is similar to the redlined text consulted upon, and would unlikely add benefit for all market participants.
BSCP514	I believe the term User Interface (and UI) are not used elsewhere within the BSCP, and perhaps could be ambiguous with reference to a SMETS meter? The term "display of	Text updated

Comments on the CP1514 Proposed Redlining

Document & Location	Comment	ELEXON's Response
	the Metering System" is used elsewhere.	

SVG's final views

CP1514 was presented to the SVG on 5 February for decision, whereby it did not provide further comment on the change.

Final decision

The SVG unanimously:

- **AGREED** the amendments to the proposed redlining for BSCP504 and BSCP514 for CP1514 made following the CP Consultation;
- **APPROVED** the changes to BSCP504 and BSCP514 for CP1514; and
- **APPROVED** CP1514 for implementation on 27 June 2019 as part of the June 2019 BSC Release.

Appendix 1: Glossary & References

Acronyms

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

Acronyms	
Acronym	Definition
BSC	Balancing and Settlement Code
BSCP	Balancing and Settlement Code Procedure
CP	Change Proposal
CPC	Change Proposal Circular
DC	Data Collector
DCC	Data and Collection Company
ESME	Electricity Smart Metering Equipment
GSME	Gas Smart Metering Equipment
kWh	Kilowatt Hour
MRA	Master Registration Agreement
MTD	Meter Technical Details
NHHDC	Non Half Hourly Data Collector
SEC	Smart Energy Code
SMETS2	Smart Metering Equipment Technical Specifications: Version Two
SVA	Supplier Volume Allocation
SVG	Supplier Volume Allocation Group
UI	User Interface
WD	Working Day
Wh	Watt Hour

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
D0010	Meter Readings
D0150	Non Half-hourly Meter Technical Details
D0268	Half Hourly Meter Technical Details
J0478	Number of Register Digits

External links

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

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

External Links		
Page(s)	Description	URL
2	Smart Energy Code (SEC) Modification SECMP0006	https://smartenergycodecompany.co.uk/modifications/specifying-the-number-of-digits-for-device-display/
2	BSC504 - Non Half Hourly Data Collection for SVA Metering Systems Registered in SMRS	Non Half Hourly Data Collection for SVA Metering Systems Registered in SMRS
2	BSCP514 - SVA Meter Operations for Metering Systems Registered in SMRS'	SVA Meter Operations for Metering Systems Registered in SMRS'
2	CP1253 - Remote Reading Assurance	Remote Reading Assurance'
2	The Master Registration Agreement	The Master Registration Agreement
5	MRA DTC CP 3558 Change	https://www.mrasco.com/changes/change-tracker/standardisation-of-number-of-register-digits-for-smets2-meters-2/