

CP1530 'Introduction of a formalised process for the validation of measurement transformer ratios by ELEXON'

ELEXON



Contact

Faysal Mahad

020 7380 4375

BSC.change@elexon.co.uk

Faysal.lastname@elexon.co.uk



Contents

1	Summary	2
2	Why Change?	3
3	Solution	4
4	Impacts and Costs	6
5	Implementation Approach	8
6	Initial Committee Views	9
	Appendix 1: Glossary & References	10

About This Document

The purpose of this CP1530 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 CP1530. The Supplier Volume Allocation Group (SVG) will then consider the consultation responses before making a decision on whether or not to approve CP1530.

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 SVG's initial views on the proposed changes.
- Attachment A contains the CP Proposal Form.
- Attachment B contains the proposed redlined changes to deliver the CP solution.
- Attachment C contains the list of the valid transformer set complied by ELEXON
- 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.

CP1530
CP Consultation

14 July 2020

Version 1.0

Page 1 of 11

© ELEXON Limited 2020

Why change?

Licensed Distribution System Operators (LDSOs) currently submit transformer ratios for measurement transformers as free text, where any value can be entered. There is currently no list of valid transformer ratios or a process for the validation of the transformer ratios submitted by LDSOs. This can at times lead to erroneous data being entered and thus used in Settlement.

Solution

This CP proposes to create a valid list of transformer ratios sorted by Distributor ID and introduce a process, documented in [Balancing and Settlement Code Procedure \(BSCP\) 515 'Licensed Distribution'](#), where LDSOs submit transformer ratios to ELEXON. On receipt, ELEXON will check that the submitted ratios meet the valid format and establish a list of valid transformer ratios, to be used by LDSOs and Meter Operator Agents (MOAs), on the [ELEXON Portal](#). A corresponding change to the [Master Registration Agreement](#) (MRA), which requires all registrations of metering systems to use a ratio selected from the valid set published on the ELEXON Portal, has been raised: [DTC CP 3576 - Introduction of Valid Sets for J0454 \(CT Ratio\) and J0455 \(VT Ratio\)](#).

Impacts and costs

The central implementation cost for ELEXON to make the required system and document changes will be approximately £9000.

Implementation

The proposed Implementation Date for this CP is **25 February 2021** as part of the scheduled February 2021 BSC Release. This will align this CP to the MRA change Implementation Date to deliver an aligned solution for industry.

Recommendation

The CP1530 Progression Paper was presented to the SVG for information on 7 July 2020 ([ISG233/05](#)). The SVG noted that:

- CP1530 has been raised; and
- the proposed progression timetable for CP1530.

The SVG's initial views are outlined in section six of this report.

What is the issue?

Historically, there have been issues with the quality of the data submitted for CT/VT ratios. The current data format limits the amount of characters that can be entered when populating the data items. The data submitted for the CT ratio is currently limited to six characters, and to ten characters for the VT ratio. However, it does not restrict the type of characters that can be entered. This allows for the transmitting of obviously erroneous values such as 'w/c' or '999'. So, whilst the data received by the Licenced Distribution System Operators (LDSOs) and Meter Operator Agents (MOAs) may indicate that these ratios are correct, it could have been misconfigured by technical errors.

Background

Metering Systems are comprised of measurement transformers i.e. Current Transformers (CTs) and Voltage Transformers (VTs). The ratios for these transformers are communicated between Parties via Meter Technical Detail (MTD) data flows. These ratios are instrumental in allowing a Meter to record the correct primary energy flow to or from the site. Under the [Master Registration Agreement](#) (MRA), ratios are detailed via two data items, [J0454](#) and [J0455](#), which represents the CT and VT ratios respectively.

Accurate measurement of transformer ratios is essential for the Commissioning process, which is a series of site tests and checks on Metering Equipment. This ensures that the energy flowing across a Defined Metering Point (DMP) is accurately recorded by the associated Metering System. Absent or inaccurate CT/VT ratios can lead to erroneous data being used in Settlement.



What are Meter Technical Details?

This is all technical details (including Outstation channel mapping) of a Metering System required to enable metered data to be collected and correctly interpreted from that Metering System.



What is the MRA

The MRA is an Agreement that sets out the rules for the electricity Supplier registration process for the GB Market. It sets out the terms for the provision of Metering Point Administration Services (MPAS Registrations), and procedures for Change of Supplier for premise/ metering point.

Proposed solution

This CP proposes the creation of a list of valid transformer ratios that can be used by LDSOs and MOAs. It will also introduce a process into [Balancing and Settlement Code Procedure \(BSCP\) 515 'Licensed Distribution'](#) where LDSOs submit CT/VT ratios to ELEXON for publishing on the [ELEXON Portal](#). On receipt, ELEXON will check the submitted ratios meet the valid format before publishing on the ELEXON Portal.

Corresponding MRA Change

ELEXON has raised a corresponding MRA change to update the valid set for both affected data items. The MRA change, [DTC CP 3576](#), references the BSC managed valid set maintained by ELEXON. This will ensure that Parties are obligated (under the MRA) to populate CT and VT ratios with a value that is present in the valid set. However, ELEXON notes that this does not prevent LDSOs (if they own the CTs/VTs) or MOAs (if the customer owns the CTs/VTs) from populating an erroneous, but valid, ratio within the dataflow.

Measurement Transformer Ratios Analysis

As part of this change, ELEXON has undertaken analysis of current measurement transformer ratios sent over the [Data Transfer Network](#) (DTN). From these data flows, we have compiled an initial suggested valid set of CT/VT ratios. ELEXON issued an industry consultation on 14 March 2019 to ascertain whether this data set was an accurate representation of all valid ratios used in the market. For the past year we have been seeking to validate this information. We have received feedback from all LDSOs; however, it is possible that there could be a CT/VT with an abnormal ratio which would be excluded by the valid set compiled under this Change Proposal. This would only occur if this ratio was not provided to ELEXON by the LDSOs; however, the valid set can be updated if an LDSO wishes to provide a new set as part of the industry consultation for this CP.

CP Consultation Question

Do you believe that there are any additional CT/VT ratios which should be included in valid set compiled by ELEXON under this Change Proposal?

Attachment C contains the list of the valid transformer set compiled by ELEXON

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

CP Consultation Question

Do you agree with the CP1530 proposed solution?

Please provide your rationale.

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

Proposer's rationale

Accurate measurement of transformer ratios is essential for the Commissioning process¹ of a Metering System. Their absence or inaccuracy may lead to erroneous data being used in Settlement. Therefore, to reduce the risk to Settlement, CT and VT ratios within data flows should be as accurate as possible.

[CP1496 'Introduction of two data flows for the Commissioning process for Half Hourly \(HH\) Supplier Volume Allocation \(SVA\) Current Transformer \(CT\) operated Metering Systems'](#)

introduced two new data flows to be used as part of the Commissioning process. Both data flows related to measurement transformer ratios. CP1496 was approved by the Imbalance Settlement Group (ISG) on 16 January 2018 ([ISG 201/02](#)) and the Supplier Volume Allocation Group (SVG) on 30 January 2018 ([SVG 204/06](#)). Members discussed the benefits of raising a CP for CT/VT ratio validation, which is why ELEXON is raising this CP.

Proposed redlining

Attachment B contains the proposed changes to [BSCP515 'Licensed Distribution'](#) to deliver this CP.

CP Consultation Question

Do you agree that the draft redlining delivers the CP1530 proposed solution?

If 'No', please provide your rationale.

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

¹ Commissioning is a process (i.e. a series of site tests and checks on Metering Equipment) to ensure that the energy flowing across a Defined Metering Point (DMP) is accurately recorded by the associated Metering System.

4 Impacts and Costs

BSC Party & Party Agent impacts and costs

Participant impacts

Through this CP Consultation, we are seeking to clarify the potential impacts and costs arising from the proposed solution for BSC Parties and Party Agents.

BSC Party & Party Agent Impacts

BSC Party/Party Agent	Impact
LDSOs	As a result of this CP and the consequential MRA change, LDSOs will be required to use the valid set and use the validation process if they wish to add any new process.
Party Agent and Suppliers	MOAs and Suppliers are impacted by this change as they also manage CV/VT ratios and therefore would need to make system changes.

Central impacts and costs

Central impacts

Central Impacts

Document Impacts	System Impacts
<ul style="list-style-type: none">BSCP515: Changes will be required to implement the solution to this CP	<ul style="list-style-type: none">ELEXON Portal: A new page will be created on the ELEXON Portal in the Operational Data section. The page will allow ELEXON, from time to time, to upload a file containing the valid set of CT/VT ratios.

Impact on BSC Settlement Risks

Impact on BSC Settlement Risks

Absent or inaccurate CT/VT ratios can lead to erroneous data being used in Settlement. The introduction of the valid list will form an additional control measure for risks:

001 SVA Risk: Metering Point Registered Incorrectly or not at all, such that metered data is not collected or aggregated.

002 SVA Risk: Metering System Attributes are incorrect: SVA Metering System attributes held in the Supplier Meter Registration Service (SMRS) or by any party in the Supplier Hub are incorrect.

003 SVA Risk : SVA Metering Equipment is installed, programmed or maintained incorrectly including where Commissioning is performed incorrectly or not at all resulting in Erroneous or estimated data in Settlement.

012 SVA Risk: Meter System Technical Details inaccurate are created incorrectly.

Impact on Core Industry Documents

ELEXON has raised a corresponding MRA change, [DTC CP 3576 - Introduction of Valid Sets for J0454 \(CT Ratio\) and J0455 \(VT Ratio\)](#), to update the valid set for both for the J0454 and J0455 data items. The MRA change will reference the BSC managed valid set maintained by ELEXON.

Central costs

The central implementation cost for ELEXON to make the required system and document changes will be approximately £9000.

CP Consultation Questions

Will CP1530 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 CP1530 and the CP1530 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 CP1530?

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

5 Implementation Approach

Recommended Implementation Date

This CP is targeted for implementation on **25 February 2021** as part of the February 2021 BSC Release. This will align this CP to the MRA change Implementation Date to deliver an aligned solution for industry.

CP Consultation Question

Do you agree with the proposed implementation approach for CP1530?

Please provide your rationale.

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

6 Initial Committee Views

The CP1530 Progression Paper was presented was presented to the SVG for information on 7 July 2020 ([ISG233/05](#)).

The SVG noted that:

- CP1530 has been raised; and
- the proposed progression timetable for CP1530.

SVG's initial views

An SVG Member noted that Party Agents and Suppliers are impacted by this change as they also manage CT/VT ratios and therefore would need to make system changes. ELEXON noted the initial list of impacts of the CP is the anticipated impacts and through the CP Consultation, we will be seeking to clarify the potential impacts and costs arising from the proposed solution for BSC Parties and Party Agents.

An SVG Member suggested that placing the obligation to submit the CT/VT data solely on LDSOs might be contestable as LDSOs might not always physically install the metering systems that process the CT/CV ratios; as Parties use subcontractors as part of the commissioning process. The SVG Member added some non-industry Parties can store CT/VT ratios on any connection across the country.

ELEXON clarified, where the ratio is not yet known by LDSOs (i.e. when another Party installs the connection) there will be an option to state the ratio as unknown as the CP will create a ratio option of 'unknown'.

An SVG Member stated the cost of the CP could not be justified against the potential benefits.

An SVG member queried whether moving away from free text field for submitting transformer ratios was considered and thereby only allowing the submission of numeric values and data separators (i.e. forward slash). ELEXON confirmed this was considered and is being done as part of the MRA change.

An SVG Member queried whether any invalid ratios have already been identified. ELEXON confirmed that as part of the RFI to LDSOs, outlined in section two of this report, a valid list had already been drafted, see attachment C. And any invalid ratios were identified and removed by the LDSOs.

Appendix 1: Glossary & References

Acronyms

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

Acronyms	
Acronym	Definition
BSCP	Balancing and Settlement Code Procedure
CP	Change Proposal
CPC	Change Proposal Circular
CT	Current Transformer
DMP	Defined Metering Point
DTN	Data Transfer Network
HH	Half Hourly
ISG	Imbalance Settlement Group
LDSO	Licensed Distribution System Operator
MRA	Master Registration Agreement
MTD	Meter Technical Detail
SMRS	Supplier Meter Registration Service
SVA	Supplier Volume Allocation
SVG	Supplier Volume Allocation Group
VT	Voltage Transformer

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
J0454	CT Ratio
J0455	VT Ratio

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	BSCP515	https://www.elexon.co.uk/csd/bscp515-licensed-distribution/
2	ELEXON Portal	https://www.elexonportal.co.uk/
3	MRA website	https://www.mrasco.com/mra-products/master-registration-agreement/
3	J0454 webpage	https://dtc.mrasco.com/DataItem.aspx?ItemCounter=454
3	J0455 webpage	https://dtc.mrasco.com/DataItem.aspx?ItemCounter=0455&searchMockItems=False
4	Data Transfer Network	https://www.electralink.co.uk/services/data-transfer-network/
4	Webpage for CP1496	https://www.elexon.co.uk/change-proposal/cp1496/
4	ISG meeting 201	https://www.elexon.co.uk/meeting/isg-201/
4	SVG meeting 204	https://www.elexon.co.uk/meeting/svg-204/
2,9	SVG meeting 233	https://www.elexon.co.uk/meeting/svg233/