

4.3 CP Form

Change Proposal – BSCP40/02	CP No: CP1530 <i>Version No: 3.0</i> <i>(mandatory by BSCCo)</i>
Title (mandatory by originator) Introduction of a formalised process for the validation of measurement transformer ratios by ELEXON	
Description of Problem/Issue (mandatory by originator) Licensed Distribution System Operators (LDSOs) currently provide the transformer ratios for measurement transformers as free text, where any value can be entered, via the Data Transfer Network (DTN) ¹ . There is currently no list of valid transformer ratios nor a process for the validation of the transformer ratios submitted by LDSOs. Further Information 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. The absent or inaccuracy CT/VT ratios can delay the process of Commissioning which in turn may lead to erroneous data being used in Settlement. 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. For example, the energy flow could be under-recorded: a CT ratio of 1000/5 could be incorrectly recorded as 100/5. This leads to data mismatches and confusion between Parties around measurement transformer errors and has the potential to impact Settlement.	

¹ Transformer ratios are detailed via two data items, J0454 and J0455, which represents the CT and VT ratios respectively.

Proposed Solution (mandatory by originator)

This CP proposes to create a national valid list of transformer ratios and introduce a process where LDSOs and Meter Operator Agents (MOAs) 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 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 \(VT Ratio\)](#).

Further Information

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.

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. Although we have now received feedback from most LDSOs, 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 or MOA wishes to provide a new set as part of the industry consultation for this CP.

Justification for Change (mandatory by originator)

Accurate measurement of transformer ratios is essential for the Commissioning process². Their absence or inaccuracy may delay the process of Commissioning, and/or 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.

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'](#)

[BSC Section S 'Supplier Volume Allocation'](#)

² 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.

Estimated Implementation Costs (mandatory by BSCCo)

The central implementation cost for ELEXON to make the required systems changes and implement the change will be approximately £9000.

BSC Configurable Items Affected by Proposed Solution(s) (mandatory by originator)

[BSCP515 'Licensed Distribution'](#)

Impact on Core Industry Documents or System Operator-Transmission Owner Code (mandatory by originator)

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 \(VT Ratio\)](#).

Related Changes and/or BSC Releases (mandatory by BSCCo)

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

Requested Implementation Date (mandatory by originator)

24 June 2021 as part of the scheduled June BSC Release.

Reason:

This will align this CP to the MRA change Implementation Date to deliver an aligned solution for industry.

Version History (mandatory by BSCCo)

This is the third version of the Proposal Form for the CP.

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Attachments: **Y** – BSCP514 and BSCP515 Draft Redlining