256/15 - TRADING DISPUTE DA797: UPDATE

MEETING NAME	BSC Panel Meeting

Date of meeting	11 August 2016
Paper number	256/15
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Purpose of paper	Information
Classification	Public
Summary	This paper provides the Panel with an update on Trading Dispute DA797.

1. Background

1.1 On 29 June 2016, ELEXON was notified of a potential Settlement Error impacting Grid Supply Point (GSP) Group_P (North Scotland) from Settlement Dates 20 May 2014 onwards.

1.2 The Settlement Error is attributed to a metering issue whereby the wiring to the Current Transformer (CT) terminals was reversed when the Meters were relocated to a new substation in May 2014. This resulted in the metered volumes being erroneously recorded as Active Export rather than Active Import. Proving tests and commissioning of the Metering System from the secondary circuits were performed as part of the work.

1.3 Upon identifying the metering issue, the Registrant, in conjunction with the Central Volume Allocation (CVA) Meter Operator Agent (MOA), implemented a metering solution effective from 7 July 2016.

1.4 Trading Dispute DA797 was raised by ELEXON to correct the Settlement Error. It was presented to the TDC on 4 August 2016. The TDC upheld DA797 and agreed that it should be rectified through normal and Post-Final Settlement Runs.

1.5 The estimated materiality of DA797 is £23.6 million for the valid period of the dispute, 29 October 2014 to 7 July 2016. The period 20 May 2014 to 28 October 2014 fell beyond the valid Dispute Deadlines (materiality for this period is approximately £5.25 million).

1.6 All impacted Parties were notified of the issue and its impact on them on 28 July, and an industry-wide circular was issued on 29 July.

2. Could the error have been identified sooner?

Commissioning and proving processes

2.1 The metering issue that led to the error arose when Meters were relocated to a new substation. As part of this exercise, proving tests and commissioning of the Metering System from the secondary circuits were performed.

2.2 The CDCA completed a proving test, which passed. However, proving tests only show data on a specific channel and whether it can poll correctly (ie, not if the data is on an import or export channel or being collected from the wrong CT).

2.3 The Meter Operator Agent (MOA) did not confirm, following the relocation of the Metering System, that the output of the Metering System correctly recorded the energy polarity in the primary system at the Defined Metering Point. We also believe that secondary injection testing took place; but this would not pick up the interface between CT/VTs and the Meter.

2.4 Primary injection testing or prevailing load tests would have identified the issue on site.

CDCA Data validation

2.5 The CDCA completes validation on metering Data for any Metering System, including GSP Metering Systems.

2.6 In the DA797 scenario, the validation would not have identified or flagged any issues, as 'A' reads were being received for the correct number of channels and periods. The data passed all the validation checks and there would have been no reason to suspect that it had been set up incorrectly.

2.7 In addition, the CDCA completes further Data Validation by the Meter Advance Reconciliation (MAR). MAR is a retrospective audit check that the Metered Volumes within the CDCA are comparable with the site meter readings. MAR would not pick up instances where an Export and Import were incorrect, so this would not have highlighted the issue.

2.8 In summary, there is no validation in place within the CDCA process that would have identified this issue once the site went live.

ELEXON Validation

2.9 ELEXON carries out daily and weekly market monitoring activities with the aim of identifying and correcting data anomalies at the earliest stage of Settlement. The two main areas of focus are – Central Volume Allocation (CVA) and Supplier Volume Allocation (SVA). The CVA monitoring looks at validity of Transmission Losses, CVA registered BM Unit Metered Volumes and GSP Metered Volumes. The SVA monitoring looks at GSP Group Correction Factors (GCFs) and Supplier Balancing Mechanism (BM) Unit Deemed take volumes built up form Consumption Component Class (CCC) level.

2.10 CVA Metered Volumes directly feed into the calculation of Transmission Loss Multipliers (TLMs), and therefore transmission losses are the key market indicator in ELEXON's analysis. ELEXON would normally expect the losses to be within a threshold of between 1.5% and 2.5%, and would investigate any Settlement Periods that have losses outside this range or spikes that stand out from the overall trend. Spikes in losses would become obvious when the values shift by at least 30MWh/Period.

2.11 For the site relating to DA797, the GSP had Metered Volume of approximately 10MWh per Settlement Period before the site works, when it flipped for a particular settlement period; the shift in volume was around 20MWh (i.e. from -10MWh to 10MWh). The monitoring processes currently in place would not pick up such a small volume change since it did not cause any obvious transmission losses/GCF issues and would have been seen as a natural movement rather than an indication of a metering issue.

2.12 The significant impact of the issue was down to the length of time the error covered, rather than sharp erroneous volume movements. ELEXON does not complete analysis on long term GSP metered volumes so the issue was not picked up through our validation techniques.

Technical Assurance Agents (TAA)

2.13 The TAA checks 14.75% (116 MSIDs a year) of the CVA market. This represents an increase from the previous sample size of 5% (40 MSIDs a year). In March 2015 there were 882 CVA MSIDs connected so it would take 7 ½ years to check all of the connected MSIDs (5% would have taken 20 years). The sample size was increased because there was an increase in the focus on commissioning and also in response to an increase in Trading Disputes caused by meters incorrectly recording volume.

2.14 Currently, a random sample is checked rather than targeting a specific type of meter systems. This is outlined in BSCP27 – Technical Assurance of HH MS for Settlement purposes. A change to sample selection (ie to make it targeted rather than random) would need a CP.

2.15 A TA Check would have been unlikely to identify the error that led to DA797, purely because a random sample of 14.75% of total sites is checked. If ELEXON had suspected the error, a targeted check could have been performed.

3. Potential enhancements to current working practices

3.1 Data validation by ELEXON could be enhanced further to identify a higher number of exceptions. A 'control chart' which is a statistical process control would have identified the error that led to DA797. However, there is no guarantee that further investigation would have identified the root cause. The analyst may not have taken the necessary steps to resolve the issue due to the depth of investigation required to reach the root cause.

3.2 Increasing validation would require a higher number of exceptions to be investigated and hence an increased resource. In order to identify the root cause of exceptions ELEXON would also require additional support from the CDCA to provide information that is not easily accessible due to the system functionality. In particular, CDCA data is not held in a relational database and cannot be queried.

3.3 ELEXON could expand its drill down capability and data quality process by loading the CDCA-I012 raw meter data report into a data warehouse, this would provide MSID level data which could be joined to BMU registrations.

3.4 Whilst the CDCA can identify and manage certain exceptions and issues, the CDCA does not have the tools, data or experience to be able to identify this type of issue. There is also an assumption that ELEXON would be able to clearly define the requirements, in a way that would not cause more issues than it fixes. CDCA would need to hold historical data in a relational database in order to complete trend analysis.

3.5 CVA commissioning could be the subject of a future TAPAP or targeted TA check, or the approach to sampling for TA checks could be amended to include all GSP Metering where changes have occurred (this would require a change to BSCP27).

4. Enhancements to current working practices in progress

4.1 We are developing new exception reports to enhance our ability to identify data issues automatically using the business intelligence system that has been developed under our Business Process Reporting project. This will use the Settlement Administration Agent files which allow analysis of BM Unit volume. It will reduce the manual effort in identifying errors and allow resource to be focused on identifying the root cause. The new reports will be in place from October 2016.

5. Recommendations

5.1 We invite the Panel to:

a) **NOTE** the update provided.

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