PUBLIC

BSC Audit Scope 2017/18

Published March 2017

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Version 0.1

25 February 2017

BSC AUDIT SCOPE 2017/18

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BSC AUDIT SCOPE 2017/18

FOCUS OF THE BALANCING AND SETTLEMENT CODE (BSC) AUDIT 2017/18

For the year 2017/18 ELEXON identified three high-risk processes that the BSC Audit should particularly concentrate on:

- Change of Measurement Class
- Change of Supply Process
- Commissioning

The processes were picked based on previous year's BSC Auditor's recommendation, the areas of concern identified during the year 2016/17, input from the Risk Evaluation Workgroup (REWG) and from Performance Assurance Technique (PAT) process owners.

The Change of Measurement Class process will still be included in the BSC Audit 2017/18 but at a significantly reduced intensity.

ELEXON will determine (based on Metering System Identifier (MSID) count, growth and other performance measures) where an entity should undergo audit of both Half Hourly (HH) and Non Half Hourly (NHH) systems/processes despite having breached only the HH or NHH MSID threshold.

This allowing for an intelligent approach to determining where auditing an entity for both HH and NHH might add value where the BSC Auditor is already on site for either a HH or NHH audit.

The areas shaded in light grey in the scope will be reduced in audit intensity for the year 2017/18 due to lower risk to the market. They will be on rotational approach for the scope and will be reviewed ahead of the 2018/19 BSC Audit to re-evaluate whether they should be in scope.

SCOPE OF THE BSC AUDIT

This document details the scope of the BSC Audit and terms of reference for the BSC Auditor for 1 April 2017 to 31 March 2018.

The scope of the BSC Audit for 2017/18 will include the functions and processes described below.

1. Central Registration

The Central Registration Agent (CRA) collects, validates, stores and distributes shared reference data used by other related business processes. This includes the registering of all Meter Points, Metering Systems, Balancing Mechanism (BM) Units, Trading Units, and sets of Aggregation Rules for each BSC Party.

The BSC Audit will include:

- Maintenance of the BM Credit Assessment Export Capability (BMCAEC)
- Maintenance of the BM Credit Assessment Import Capability (BMCAIC)

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2. Aggregate and Check Contract Volume

The Energy Contract Volume Aggregation Agent (ECVAA) accepts or rejects Energy Contract Volume Notifications (ECVNs) and Metered Volume Reallocation Notifications (MVRNs). The ECVAA aggregates valid ECVNs and MVRNs to determine the Account Bilateral Contract Volume for each Party's Energy Account. The ECVAA reports the Account Bilateral Contract Volume for each Party and Settlement Period for that Settlement Day to the Settlement Administration Agent (SAA) on a daily basis.

The BSC Audit will include:

- Acceptance of ECVN and MVRN
- Aggregation of valid Energy Contract Volume Reallocation Notifications and Metered Volume Reallocation Notifications
- Submission of data to the Settlement Administration Agent

3. Credit Cover Management

Credit monitoring of BSC Parties is the responsibility of the Funds Administration Agent (FAA), ECVAA and BSCCo. Letters of credit/cash are lodged with the FAA. The ECVAA calculates the Credit Cover Percentage and notifies BSCCo if the agreed Default limits are exceeded.

The BSC Audit will include:

- Application of Credit Cover rules as defined within the BSC

4. Balancing Mechanism Reporting

The Balancing Mechanism Reporting Agent (BMRA) publishes a range of public market information for users of the service and calculates data for submission to Settlement.

The BSC Audit will include:

- The consistency of the data that is included within the reports that are published by the BMRA

5. Calculation of Market Index Data

The Market Index Data Providers (MIDPs) calculate and provide to the BMRA and SAA a market price in respect of each Settlement Period on a half hourly and daily basis. The market price reflects the price of wholesale electricity in the short term market.

The BSC Audit will include:

- The controls surrounding the calculation and transfer of the Market Index Data to the BMRA and SAA
- Determination and calculation of the Market Index Data (in accordance with the Market Index Definition Statement)

6. Calculation and Aggregation of Metered Data

The Central Data Collection Agent (CDCA) collects and aggregates the metered data from Metering Systems registered in CRA. The volumes for missing or disputed data are estimated in accordance with the BSC and reported to the Central Volume Allocation Meter Operator Agent (CVA MOA) and BSCCo; the Grid Supply Point (GSP) Group Take is calculated in accordance with the Settlement timetable (published on the BSC Website). This information is passed to the Supplier Volume Allocation Agent (SVAA) and is used as the basis for calculating the Supplier Volume Allocation (SVA).

The BSC Audit will include:

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- Completeness of Commissioning and Proving Test records
- Aggregation of metered data registered in CDCA
- Calculation of GSP Group Take

7. Calculate Settlement Debits and Credits

The SAA receives SVAs, Contract Volume and reallocation data, GSP Group Take and Information Imbalance Price. The SAA performs the Interim, Initial Settlement and Reconciliation runs according to the Settlement timetable and calculates the Credits and Debits resulting from the Settlement of Balancing Mechanism actions and Imbalance cash-out. Settlement reports are sent to BSC Parties to validate, and to the FAA.

The BSC Audit will include:

- Calculation of Credits and Debits to BSC Parties via Balancing Mechanism and the imbalance settlement arrangements
- Calculation of Main and Market Prices as used in imbalance settlement arrangements

8. Funds Transfer

The FAA manages the funds transfer process.

The BSC Audit will include:

- Calculations of the charges for each BSC Party for each Settlement Run
- Aggregation of instructions for Initial Settlement related transfers of money into one charge/payment per BSC Party per day
- Production of Advice Notes/Statements to be sent to BSC Parties on the basis of the required charge payments

9. Market Domain Data

Market Domain Data (MDD) is standing data required for the operation of SVA. The data falls into two categories - Organisation Data and Classification Data. Organisation Data includes company name and identifiers for Distributor, Supplier and relevant Supplier Agents. Classification Data includes Valid Measurement Requirement Profile Classes, Time Pattern Regimes and Standard Settlement Configurations.

The BSC Audit will include:

- Completeness and consistency of data items entered into MDD
- Input of key data items received from MDD by Data Aggregators (DAs) including Line Loss Factors (LLFs)

10. Supplier Meter Registration Data

Each Supplier Meter Registration Agent (SMRA) identifies all Metering Systems attached to a Distribution Network. SMRAs will hold the history of Supplier registrations for each Metering System. They provide information on unmetered exit points with the history of their Supplier registrations. In addition SMRAs will provide Line Loss Factor Classes. The contractual relationship between Suppliers and SMRAs is encapsulated in the Master Registration Agreement (MRA).

The BSC Audit will include:

- Consistency of relevant data held by SMRAs

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- Comparison of Metering System Identifiers (MSIDs) registered on the Supplier Meter Registration Service (SMRS) against Supplier/Data Collector (DC)/DA/Standard Settlement Configuration etc
- Comparison of Supplier IDs/MSIDs registered on SMRS based against records held by the SMRA (note: excludes checking accuracy of records held by SMRA)
- Consistency of standing data between SMRS and the Suppliers' databases
- Consistency of relevant data held in SMRS & CRA

11. Data Retrieval & Data Processing (Data Collection)

Retrieval encompasses Meter reading and detection of potential Meter reading faults (on behalf of the MOA).

Data Processing is the validation and conversion of Meter readings into energy consumption, the estimation of missing data using an approved method and the transmission of this data to the DA.

The BSC Audit will include:

- Retrieval of data used in Data Processing from Suppliers / MOAs including:
  - Half Hourly (HH) Meter readings
  - Non Half Hourly (NHH) Meter readings
  - Allocation of consumption data to the correct Settlement Period
- Calculation of KWh consumption data
- Application of profile information used in Data processing
- Calculation and application of Estimated Annual Consumption (EACs)/ Annualised Advance (AAs) and HH consumption data
- Transmission of data to correct DA
- Application of instructions from Trading Disputes
- Estimation of missing data/Deemed Advance
- Processing/application of instructions to increase Meter readings (from the Revenue Protection Board)
- Operational controls relating to the collection, recording and validation of (HH and NHH) Meter readings entered into Settlement
- Imbalance volume correction processes in case of a Demand Control action, as introduced by Modification P305

12. Data Aggregation

Data Aggregation is the aggregation of Supplier or BM Unit specific energy consumption data, after the application of LLF for half hourly metered data, to produce the aggregated data.

The BSC Audit will include:

- Aggregation of EACs/AAs produced by the Data Collector for Metering System Identifier (MSID)/Supplier for use in Supplier Purchase Matrices
- Aggregation to BM Unit level for HH energy where agreed with the Supplier
- Application of NHH/HH registration data and LLF (for HH) by the DA
- Trading Dispute Dispute Final (DF) Run checks

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- Imbalance volume correction processes in case of a Demand Control action, as introduced by Modification P305

13. Meter Operation

MOAs hold key information on all Metering Systems attached to the Distribution System including Meter history and technical details. MOAs are also responsible for the installation and removal of Meters and their general maintenance in compliance with the relevant Codes of Practice. MOAs form part of the Supplier hub and as such operate several key interfaces with other Supplier Agents (particularly Data Collectors).

The BSC Audit will not directly cover accuracy of metering or standards of metering installation, however the findings of the Technical Assurance Agent (TAA) under the Technical Assurance of Metering (TAM) technique will be sent to the BSC Auditor for consideration in its reporting.

Audit intensity to be reduced for CVA MOAs in order to allow time for issues identified through the 2015/16 BSC Audit to be addressed in advance of full audit intensity being resumed. Ref: Market Issues Issue Number: 5176 Based on information provided by Central Systems two CVA MOAs to be removed from scope for 2017/18 (no activity to date in 2016/17); Both of these are currently L intensity audits.

The BSC Audit will include:

- Fault resolution
- Checks on the Meter registration process
- Interfaces with other agents in the Supplier hub
- Performance relating to requests for proving tests, sample of one (Reduction in intensity to reflect the reduced number of proving tests required as a result of CP1472)
- Operational controls in relation to Meter Technical Details changes and the validation of changed Meter Technical Details provided to Suppliers and Data Collectors
- Commissioning process (pre and post Modification P283 implementation and post CP1458 Commissioning timescales implementation)
  - For Measurement Classes E and F
  - For Measurement Class C

14. Licensed Distribution System Operation and Independent Distribution Network Operation

Licensed Distribution System Operators (LDSOs) are responsible for the overall management and maintenance of Distribution Systems in addition to the registration of Metering Systems in SMRS. Independent Distribution Network Operators (IDNOs) develop, operate and maintain local electricity distribution networks.

The BSC Audit will include:

- Provision of site technical details
- Preparation and notification of GSP Group Aggregation Rules to CDCA
- Notification of LLFs to BSCCo
- Interfaces with Suppliers and Supplier Agents
- Disconnection of Metering Systems
- Changes to energisation status

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- Provision of appropriate Current Transformer (CT)/Voltage Transformer (VT) information as required by the BSC
- Notification of new Small Scale Generation Plants to Suppliers
- Commissioning process (pre and post P283 implementation)
  - For Measurement Classes E and F (sub 100 kW)
  - For Measurement Class C (over 100 kW)
- Imbalance volume correction processes in case of a Demand Control action, as introduced by Modification P305

15. Unmetered Supplies

LDSOs are responsible for the Unmetered Supplies Operator (UMSO) function. UMSOs are responsible for managing any Unmetered Supplies (UMS) attached to a Distribution Network, and are required to provide specific details to Suppliers and Supplier Agents in order that they can meet their Settlement obligations.

The BSC Audit will include:

- Maintenance and provision of UMS inventories and summary inventories
- Calculation and provision of NHH Estimated Annual Consumption
- ~~Provision of Standard Settlement Configuration and Profile Class details including disconnections and energisation status~~
- ~~Creation and provision of UMS Certificates~~
- Interfaces with Suppliers and Supplier Agents
- ~~Maintenance and provision of connection agreements~~

16. Meter Administration

Meter Administrators are responsible for calculating the half hourly allocation for HH SVA UMS and providing this information to the DC.

The BSC Audit will include:

- Calculation of deemed metered volumes (estimated energy consumption) for Equivalent UMS relating to SVA Customers
- Provision of data to the HH DC, SVAA, LDSO and Supplier
- Fault Reporting

17. Supplier Volume Allocation & Reconciliation

Supplier Volume Allocation & Reconciliation is the aggregation of Supplier/BM Unit Purchase Matrices to a GSP Group and calculation/recalculation of the Deemed Take for each GSP Group.

The Temperature Provider is sub-contracted by the SVAA to provide Noon Temperature Data.

The Time of Sunset Provider is sub-contracted by the SVAA to provide Time of Sunset Data.

The Teleswitch Agent provides the Teleswitch Data.

The Profile Administrator is the agent contracted by BSCCo to derive sets of regression coefficients for each Profile Class. The Profile Administrator will monitor the accuracy of profiles delivered from the Profile coefficients.

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The BSC Audit will include application of key standing and dynamic data items used by the SVAA including:

- NHH data (from Supplier Purchase Matrix)
- HH data
- Daily Profile variables (Noon Temperature Data, Time of Sunset Data, Teleswitch Data)
- GSP Group Take (from CDCA)
- LLFs
- Application of regression coefficients
- Application of time of sunset/Teleswitch data
- Application of Default data (including BM Units)
- Production of daily Profiles
- Calculation of Deemed Take
- Calculation of volumes by BM Unit

18. Trading Disputes

The Trading Disputes process is used to correct errors in Settlement.

The BSC Audit will include:

- Procedures and documentation for registration and logging of Trading Disputes in respect of Reconciliation Settlement Runs
- Procedures and documentation in operation for the registration/logging of queries and requests for assistance
- Resolution of Trading Disputes and application of dispute payments

19. Data Transfer

The Data Transfer Service and NETA network service are outside the scope of the BSC Audit but the audit will include reviews at market participants' premises to check despatch and receipt of data messages.

The BSC Audit will include:

- Reviews at selected market participants' premises to check despatch and receipt of data messages

20. Supplier Systems and Associated Internal Procedures

Suppliers are responsible for managing their Supplier Agents and for providing key data to their Supplier Agents as set out in the BSC and BSC Procedures.

The BSC Audit will include:

- Information provided by Suppliers on Change of Supplier, new connections and changes of Meter technical information including energisation status
- Suppliers managing their Supplier hub responsibilities
- Review and follow up of validation exceptions as reported by Supplier Agents
- Treatment of Long Term Vacant sites

21. Balancing Mechanism

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The System Operator shall be audited by the BM Auditor against the requirements of Section H 5.1.6 of the BSC which relates to the compilation and submission of data to the SAA.

22. Implementation of Specific BSC Changes ~~Change Management~~

All BSC Parties and Central Systems have to implement changes approved by the BSC Panel. The releases are issued three times a year (February, June and November) and have to be fully implemented in the affected systems to ensure compliance with the BSC.

The BSC Audit will include:

- Checks to ensure 0 to 3 BSC Modifications or Change Proposals selected by ELEXON have been successfully implemented by Suppliers, Supplier Agents and Licensed Distribution System Operators. (Changes will be selected on the basis of potential material impact.)
- ~~Processes and controls used to implement BSC change releases by Suppliers, Supplier Agents, Licensed Distribution System Operators~~

23. Off The Shelf Suppliers

The majority of the newer 'off the shelf' Suppliers do not breach the MSID threshold to fall in scope for the BSC Audit; this is perceived as a gap between the Qualification process and the BSC Audit process. While the size of these smaller Suppliers limits their potential impact on Settlement, there are concerns in some cases that some 'off the shelf' Suppliers may not have sufficient experience and processes in place in order to operate effectively in terms of Settlement.

ELEXON will be adopting the following approach in response to the changing market where looking exclusively at MSID thresholds may no longer be appropriate in all instances.

The BSC Audit will include:

- 1 to 4 'off the shelf' Suppliers targeted for full intensity audit irrespective of whether or not they fall in scope through MSID threshold. ELEXON will aim to target managed services groups and Suppliers it has poor levels of communication with. (A proportional number of smaller Suppliers which do meet the MSID threshold and have performed well in previous audits will be removed from scope to compensate.)

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AREAS OUT OF SCOPE

Below details the activities/data which fall outside the scope of the BSC Audit.

Activity/ Data	Reason For Exclusion
Customer billing.	Outside scope of BSC.
Production of Transmission Network Use of System (TNUoS)/ Distribution Use of System (DUoS) reports.	Outside scope of BSC - does not form part of calculation and allocation of funds under the BSC.
MRA disputes procedures.	Outside scope of BSC – included within the Master Registration Agreement.
Contractual relationship between Parties and their Party Agents and between BSCCo and BSC Agent.	Does not form part of calculation and allocation of Trading Charges under the BSC.
Electricity Market Reform (EMR)	Outside scope of BSC.

MATERIALITY THRESHOLD

The BSC Auditor will 'Qualify' its audit opinion if it cannot provide reasonable assurance that the total level of error in Settlement is less than the materiality threshold.

The materiality threshold for the BSC Audit for 2017/18 is 1.3TWh, which represents approximately 0.5% of the total annual electricity supplied across Great Britain in 2016.

REPORTING

Unless otherwise agreed with the BSC Panel, the BSC Audit Report for 2017/18 will be presented to the Panel in June 2018.

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