



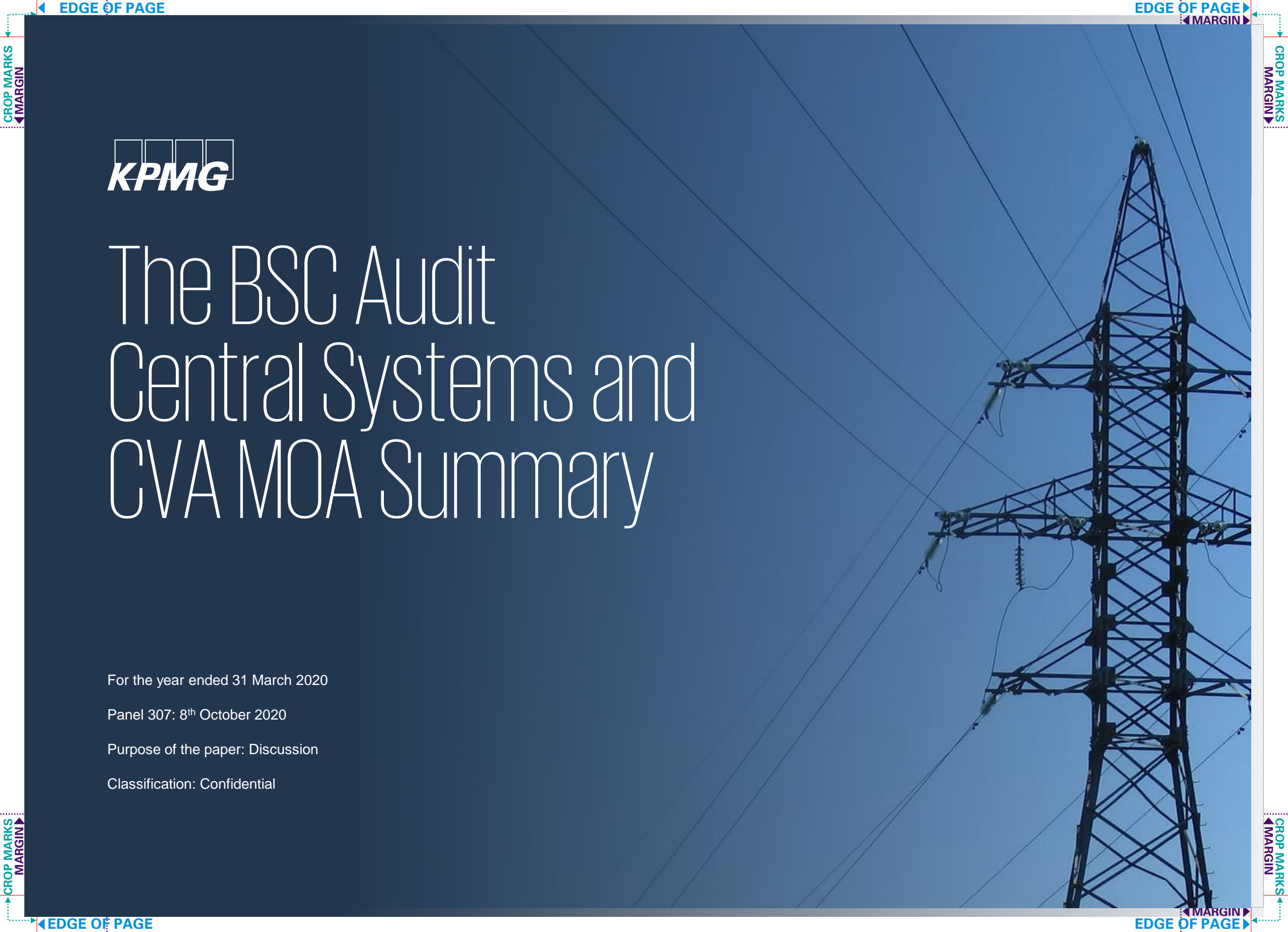
The BSC Audit Central Systems and CVA MOA Summary

For the year ended 31 March 2020

Panel 307: 8th October 2020

Purpose of the paper: Discussion

Classification: Confidential



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The contacts at KPMG in connection with this report are:



Nathan Cain
Partner, KPMG LLP
Tel: +44 (0)121 232 3976
Nathan.Cain@KPMG.co.uk



George Richards
Director, KPMG LLP
Tel: +44 (0)207 311 8466
George.Richards@KPMG.co.uk



Gavin Gardner
Manager, KPMG LLP
Tel: +44 (0)7468 768848
Gavin.Gardner@KPMG.co.uk

Executive summary

The scope of our work within our ISAE 3000 Assurance Conclusion for the BSC Audit year 2019/20 is consistent with previous years. It covers the BSC Central Services (referred in this report as Central Systems) and Central Volume Allocation Meter Operator Agents (CVA MOAs).

Materiality for the Assurance Conclusion is 1.2 TerraWatt Hours (TWh). In aggregate our findings were not of sufficient severity to cause a qualification of the Assurance Conclusion <0.1 TWh of estimated potential impact of BSC Audit findings in 2019/20, an improvement on prior years figure of 0.13 TWh.

Based on our assurance work, we noted 12 potentially Settlement impacting findings across Central Systems and CVA MOAs compared to nine last year. The number of Settlement impacting findings at CVA MOAs has increased from three to eight in the current year. For Central Systems we have seen improvement, with Settlement impacting findings decreasing from six to four in the current year.

Both Central Systems and CVA MOA continue to use legacy systems. In the CVA MOA market; many of the forms required under the BSC are paper based, in contrast to the fully digital data transfer network in the SVA market. While system limitations still exist for Central Systems applications, the Foundation project aims to update these systems. We recognise this upgrade may potentially resolve legacy findings, however we also anticipate new risks which we plan to consider as part of our scope of

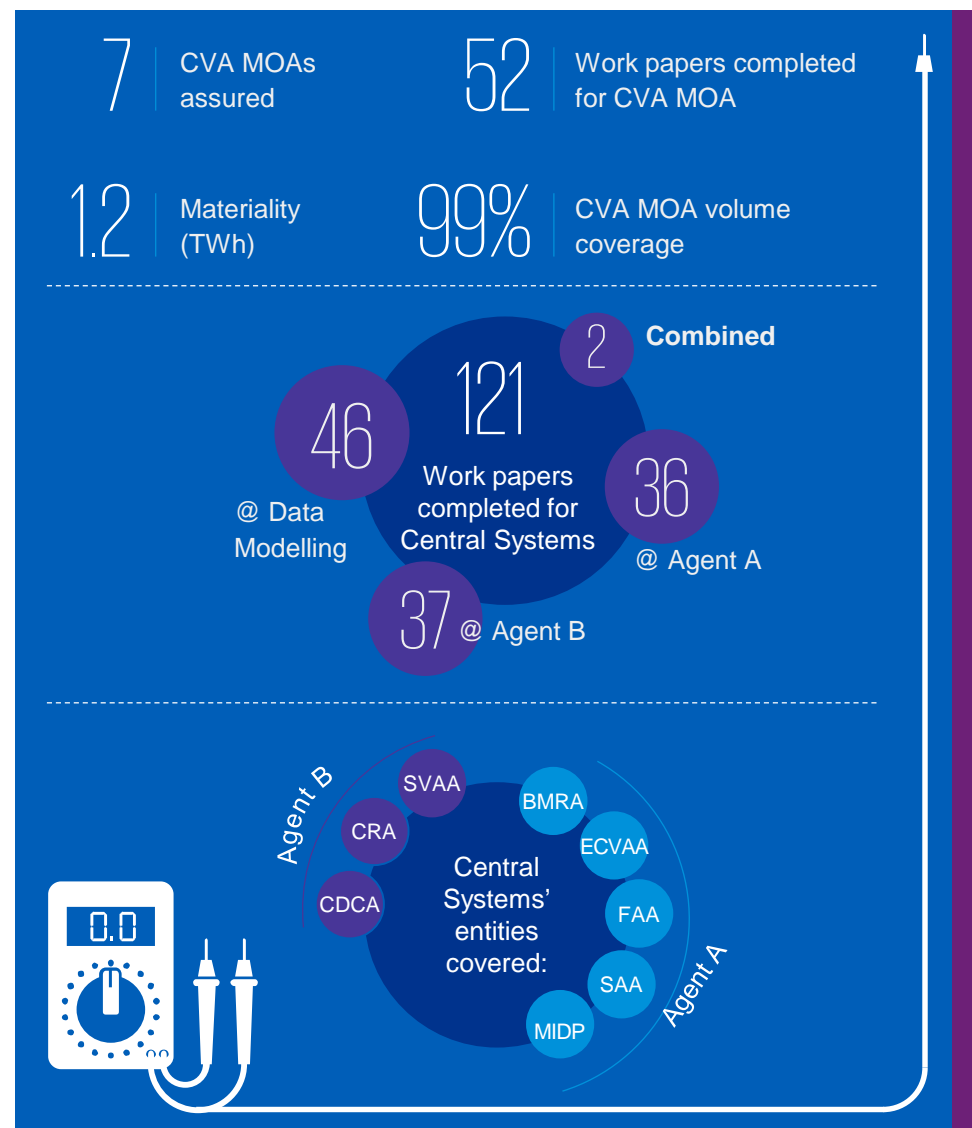
work in the 2020/21 assurance cycle.

In the **CVA MOA** market Settlement impacting findings increased from three in the prior year (one Medium, two Low) to eight (all Low) in the current year. Despite this increase, due to the manual nature of findings identified, combined with the low frequency of activity, we identified the estimated potential impact to be lower than previous years.

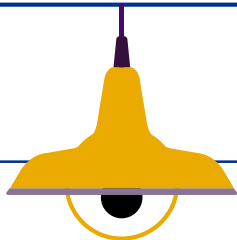
In **Central Systems**, we have seen a decrease in the number of overall findings (Settlement impacting and non Settlement impacting) which is attributed to increased efforts to resolve long standing findings. Despite this, we continue seeing a small number of recurring legacy findings caused by system limitations. The audited entities have deemed the effort to resolve some of these findings is deemed too high when the potential impact on Settlement is considered negligible.

The majority of our assurance testing work was completed prior to the disruption caused by COVID-19 lockdowns. All CVA MOA audits were completed as planned, as well as work for all central systems roles other than SVAA, CDCA and CRA. For these, the testing was delayed until June 2020, and completed in August 2020. All procedures were tested as originally planned, using video meetings and screen share technology.

There has therefore been no significant impact from COVID-19 on our ability to conclude on our ISAE 3000 opinion.



BSC Audit findings – overview of findings



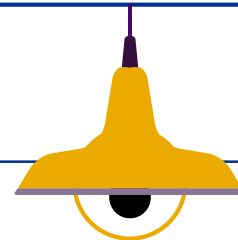
Summary

Subject to satisfactory completion of our assurance procedures and receipt of the Management Representation Letters, at this stage we expect to issue an unmodified opinion on 8 October 2020 following the Panel Meeting.

We have identified an increase in the number of Settlement impacting exceptions in the CVA market, from three to eight, but a decrease in Central Systems providers from six to four. However, the overall worst case market impact of these findings is <0.1 TWh compared to 0.13 TWh in 2018/19.

The highest impacting finding at Central Systems from prior year, lack of audit trail on the DF run, has been free from Settlement impacting issues for two consecutive years and as such has been closed.

In the CVA MOA audit, we identified an increased number of issues related to resolution of Faults, Commissioning and Incomplete or delayed Meter Readings or Meter Technical Details.



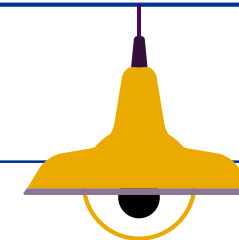
CVA MOA

There was an increase in the number of issues in all categories in the Current Year (CY) compared to Prior Year (PY):

- Resolution of Faults issues increased from one Low issue in PY to four in CY;
- Incomplete or delayed provision of meter reads and Meter Technical Details increased from one Low issue in PY to two in CY;
- There was one Medium issue relating to Commissioning in PY and two Low issues in CY.

Despite this rise in the number of Settlement impacting Issues raised on CVA MOA, there is no significant trend in specific areas. Instead it better reflects the overall manual nature of the CVA MOA market, where manual errors can occur in different areas between years.

Further to this, three Settlement impacting Issues remain open from the prior year as there were no instances of the process occurring during the 2019/20 BSC Audit, and therefore no evidence yet that these issues have been closed.



Central Systems

Improved controls and review around manual processes has lead to a decrease in the number of issues identified with the root cause related to manual error. Significant effort has been put into performing quality checks on manual work and training is provided if quality indicators are not met. Additionally, more focus has been placed on staff retention which has lead to an increase in the stability of processes, resulting in higher quality.

ELEXON's Foundation Programme to implement new IT systems has experienced delays due to COVID-19, as such several issues which were expected to be resolved as a result of these system changes have remained open.

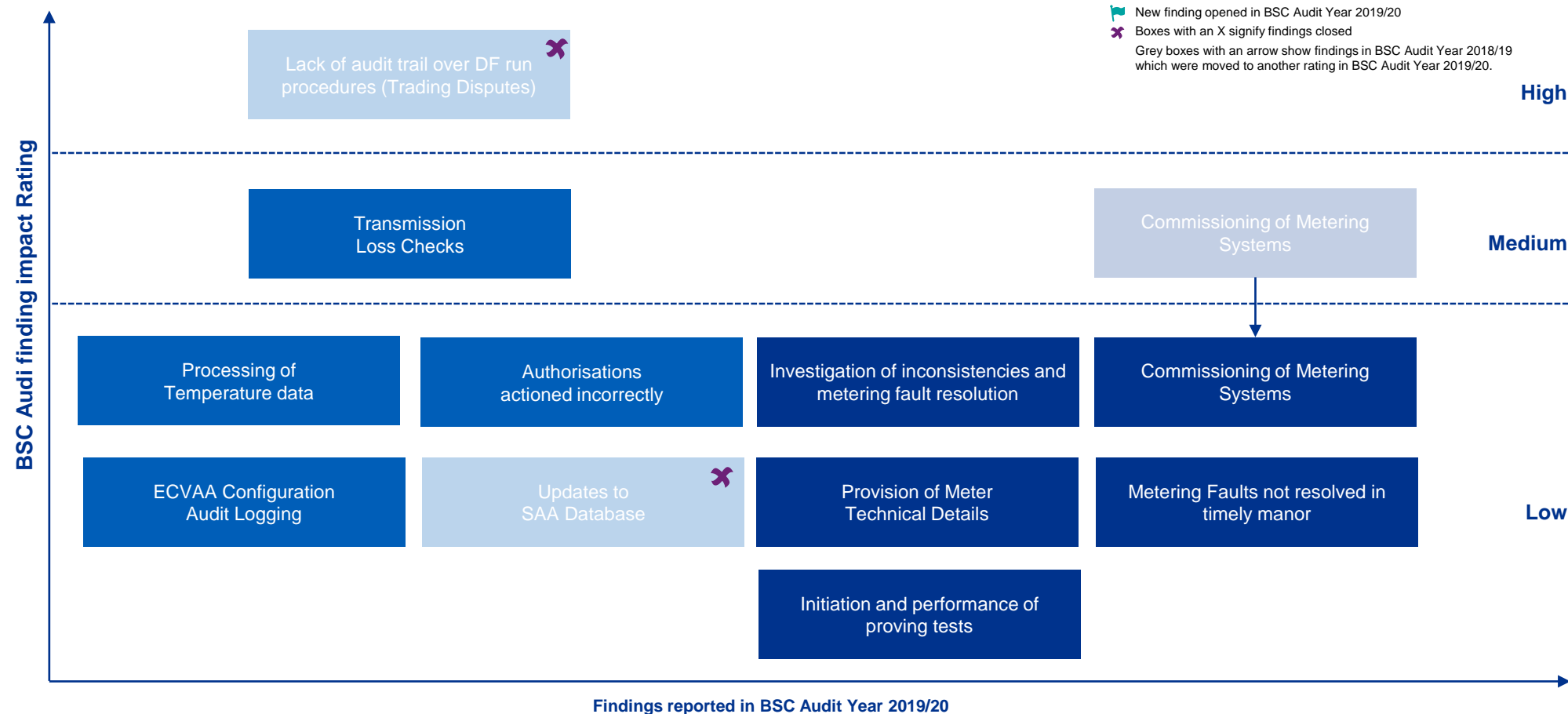
Key BSC Audit findings



The diagram below shows the individual categories of open Settlement impacting findings from the BSC Audit 2019/20 split into CVA MOA and Central Systems and their potential impact on Settlement. For current year we see two Settlement impacting findings closed following effective operation of these processes.

Heat map showing potentially Settlement impacting audit findings identified during BSC Audit 2019/20

- Key:
- Open Central Systems findings
 - Open CVA MOA findings
 - 🚩 New finding opened in BSC Audit Year 2019/20
 - ✗ Boxes with an X signify findings closed
 - Grey boxes with an arrow show findings in BSC Audit Year 2018/19 which were moved to another rating in BSC Audit Year 2019/20.



Root causes and key findings

The table below summarises the number of BSC Audit findings arising from our work performed for the year ended 31 March 2020 categorised by root causes (see Appendix 7 for definition and examples of root causes). Only Settlement impacting findings have been included, with comparison to prior year given in the bracket.

Root cause	Additional comments	Settlement Impacting Findings: 2019/20 (2018/19)	
		Central Systems	CVA MOA
Minor Manual Error	One-off error	1 (2)	5 (1)
Training and Knowledge	Lack of knowledge	1 (1)	1 (1)
Process Design Weakness	Process is not appropriately designed	0 (1)	2 (1)
System Issues	System misconfiguration or limitation	1 (2)	0 (0)
Accepted Non-compliance	Party aware of an issue but not pro-actively pursuing its resolution	1 (0)	0 (0)
Resource Constraints	Backlogs due to lack of staff	0 (0)	0 (0)
Other – external factors	Other reasons outside above	0 (0)	0 (0)
TOTAL		4 (6)	8 (3)



Central systems

For the current year we have seen one finding move category. The finding around the CDCA Transmission loss graph has moved from system issue to an accepted non-compliance. This is due to Agent B having the risk identified on their risk register but following a risk assessment they consider the effort too great to resolve the issue at this stage due to system limitations. It was noted however as the system is updated in the future, this audit issue will be discussed in the hope of identifying a solution.



CVA MOA market

The number of CVA metering systems in the market is far fewer than SVA metering systems and that Change of Agent events are much more seldom. Where the process due to be audited does not happen during the audit year, the finding will remain open unless evidence can be provided to support the closure of this finding. As such in three instances, prior year findings have remained open due to a lack of testable scenarios to provide evidence for finding closure.

We see the majority of findings falling into the Minor Manual Error category, which reflects the manual nature of the CVA MOA processes.

Although there was an increase in the number of findings, our estimated potential impact for these issues has decreased from prior year.



1

Three more Settlement impacting findings vs prior year

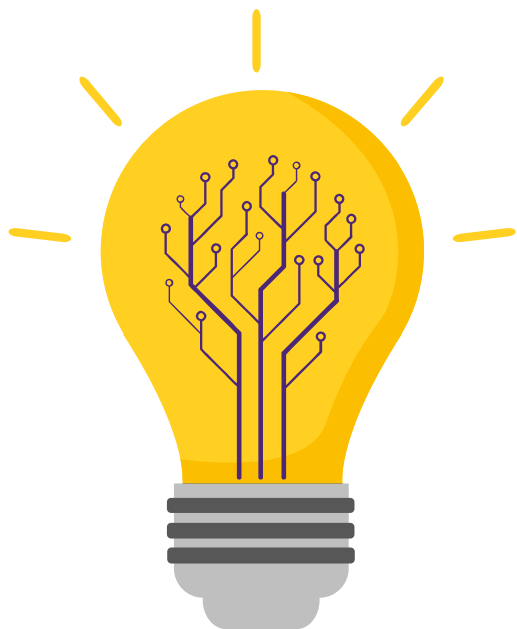
2

Focus on reduction in manual errors for Central Systems providers

3

CVA MOA shows an increase in Settlement impacting findings with a root cause of manual error

Steps to completion



1

BM Audit

Delays to the BM audit as a result of COVID-19 mean we have not yet been able to review the final report, so signing our Assurance opinion is subject to satisfactory BM audit results.

2

2019/20 assurance conclusion

The Conclusion is planned to be signed and issued on 8 October 2020. As in previous years, there will be a confidential and non-confidential version.

3

Planning for 2020/21

With significant changes planned to IT systems of Central Systems we will be planning new procedures required to complete our assurance work for the 2020/21 assurance cycle.



Appendices



Appendix 1

Basis of preparation

Basis of preparation

This paper is presented for the purpose of the PAB meeting on 24 September 2020.

- Circulation of this report is restricted.
- The content of this report is based solely on the procedures necessary for our assurance work.
- Our work and subsequent reports are subject to a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical and independence requirements and professional standards as well as applicable legal and regulatory requirements.

Basis of preparation

We have prepared this PAB paper (referred to as 'Report') in accordance with our BSC Audit and Qualification Agreement dated 15 July 2013.

Purpose of this report

This Report is made to the PAB in order to communicate matters of interest, and other matters coming to our attention during our assurance work that we consider might be of interest, and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone (beyond that which we may have as the BSC Auditor) for this Report, or for the opinions we have formed in respect of this Report.

Restrictions on distribution

This Report is subject to disclosure restrictions as set out in our BSC Audit and Qualification Agreement.

Limitations on work performed

This Report is separate from our Final BSC Audit Report, due to be issued on 8 October 2020, and does not provide an additional opinion on the application of the Balancing and Settlement Code and Code subsidiary documents (the 'Code'), nor does it add to or extend or alter our duties and responsibilities as the BSC Auditor reporting to Trading Parties to the Balancing and Settlement Code, the Transmission Company and ELEXON.

We have not designed or performed procedures outside those required of us as BSC Auditor under our BSC Audit and Qualification Agreement for the purpose of identifying or communicating any of the matters covered by this Report.

The matters reported are based on the knowledge gained as a result of being the BSC Auditor. We have not verified the accuracy or completeness of any such information provided by the client other than in connection with and to the extent required for the purposes of our work performed under our BSC Audit and Qualification Agreement.

Status of our BSC Audit

Our assurance work is not yet complete as at the date of this Report and matters communicated in this Report may change pending signature of our ISAE 3000 Assurance Conclusion (expected on 8 October 2020). We will provide an oral update on the status of our work at the PAB meeting on 30 May 2019.

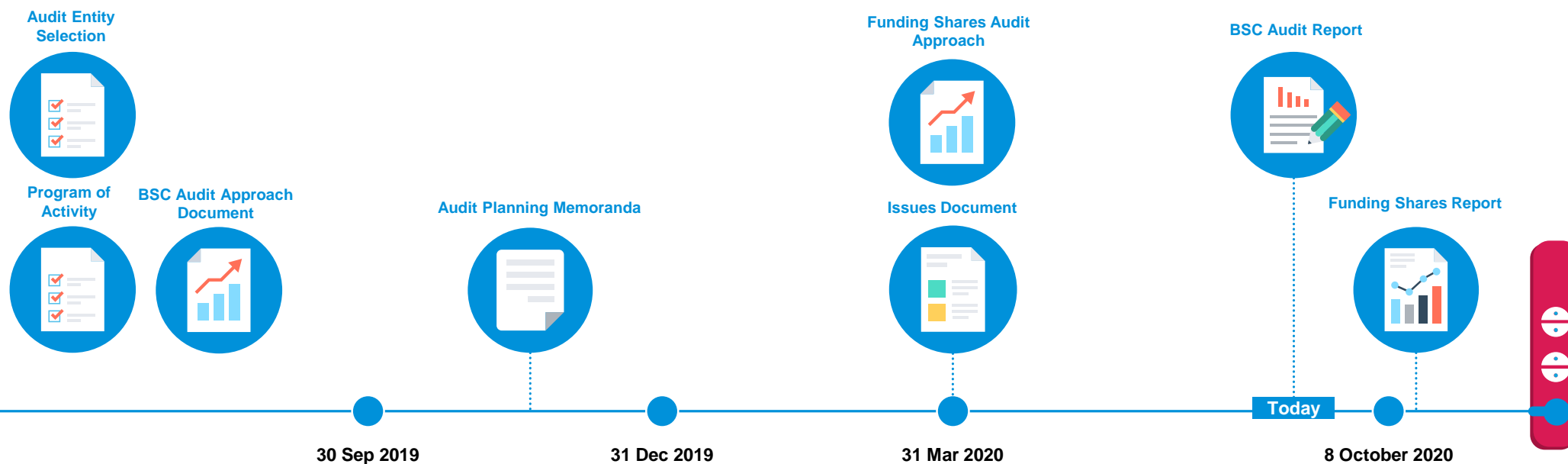


Appendix 2

BSC Audit approach

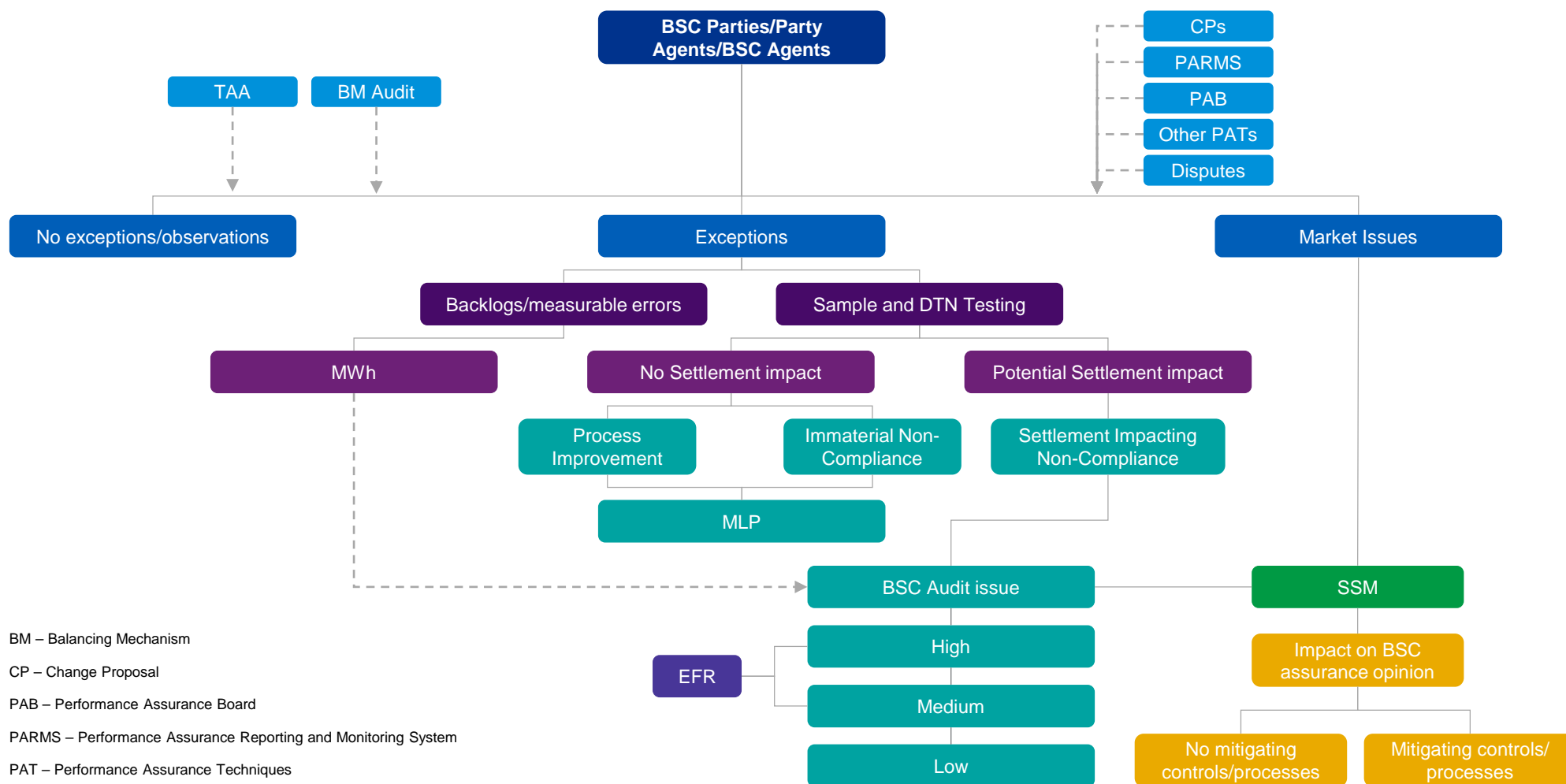
BSC audit approach 2019/20

- Selection of audited entities for the BSC Audit was according to: unresolved audit findings, volume, system changes, risk rating and discussions with ELEXON.
- Materiality was set at 1.2TWh.
- Audit fieldwork testing began in November 2019. Findings considered between 1 April 2019 and 31 March 2020. Any event outside that period are not considered within our Report.
- Our ISAE 3000 ('Revised') Reasonable Assurance Report will be included within the final BSC Audit Report
- Findings of PAF techniques are used to support and enhance our assurance work (e.g. TAA, SVA Process Assessment Report).
- Audit findings (Settlement Impacting Non-Compliance) are graded as High, Medium or Low. We understand High and Medium issues will be considered for Error and Failure Resolution (EFR) by ELEXON. Non-Settlement Impacting Non-Compliance findings are categorised as MLPs and are not subject to EFR.



Appendix 3

Background to BSC Audit findings and ratings



BM – Balancing Mechanism

CP – Change Proposal

PAB – Performance Assurance Board

PARMS – Performance Assurance Reporting and Monitoring System

PAT – Performance Assurance Techniques

SSM – Statement of Significant Matters

TAA – Technical Assurance Agent

MLP – Management Letter Point

Appendix 4

Glossary of terms

Acronyms used in this document have the following meanings (as defined in the Balancing and Settlement Code), unless otherwise stated.

Acronym	Definition	Acronym	Definition	Acronym	Definition
Approach	BSC Auditor's Audit Approach for the year ended 31 March 2020	ECVAA	Energy Contract Volume Aggregation Agent	NHHDC	Non Half Hourly Data Collector
Audit Year	Year ended 31 March 2020	EFR	Error and Failure Resolution	NHHMOA	Non Half Hourly Meter Operator Agent
BM	Balancing Mechanism	ELEXON	ELEXON Limited	PAB	Performance Assurance Board
BMRA	Balancing Mechanism Reporting Agent	FAA	Funds Administration Agent	PAF	Performance Assurance Framework
BMU	Balancing Mechanism Unit	HHDA	Half Hourly Data Aggregator	Panel	BSC Panel
BSC	Balancing & Settlement Code	HHDC	Half Hourly Data Collector	SAA	Settlement Administration Agent
BSCCo	Balancing & Settlement Code Company	HHMOA	Half Hourly Meter Operator Agent	SSM	Statement of significant matters
BSCP	Balancing & Settlement Code Procedure	LDSO	Local Distribution System Operator	SEAE	Suppliers Energy Allocation Error
CDCA	Central Data Collection Agent	MA	Meter Administrator	Statement	Statement of significant matters
Central Systems	BSC Central Services	MDD	Market Domain Data	SMRS	Supplier Meter Registration Service
Code	Balancing and Settlement Code	MIDP	Market Index Data Provider	SVA	Supplier Volume Allocation
CRA	Central Registration Agent	MLP	Management Letter Point	SVAA	Supplier Volume Allocation Agent
CVA	Central Volume Allocation	MPAN	Metering Point Administration Number	TAA	Technical Assurance Agent
CVA MOA	Central Volume Allocation Meter Operator Agent	MOA	Meter Operator Agent	TDC	Trading Disputes Committee
DF	Dispute Final Run	NHH	Non Half Hourly	TWh	TeraWatt Hour(s)
DTN	Data Transfer Network	NHHDA	Non Half Hourly Data Aggregator	UMSO	Unmetered Supplies Operator

Appendix 5

Detailed BSC Audit findings



In this table we have set out the Settlement impacting findings identified as part of our assurance work.

BSC Audit Findings	Number of Audited Entities with findings		Root cause	Change
	2019/20	2018/19		
Metering issues: Metering system faults not resolved in a timely manner	4 out of 7 CVA MOAs	1 out of 9 CVA MOAs	Training and Knowledge	↑
Metering issues: Incomplete or delayed provision of meter reads and Meter Technical Details	2 out of 7 CVA MOAs	1 out of 9 CVA MOAs	Minor Manual Error	↑
Metering issues: proving tests not performed or not performed on a timely basis	2 out of 7 CVA MOAs	1 out of 9 CVA MOAs	Process Design Weakness	↑
ECVAA Configuration Audit Logging	1 out of 1 ECVAA (Agent A)	1 out of 1 ECVAA (Agent A)	System Configuration	▪
Updates to SAA Database performed incorrectly	1 out of 1 SAA (Agent B)	1 out of 1 SAA (Agent B)	Minor Manual Error	▪
BSCP38 Authorisations actioned incorrectly	1 out of 1 SAA (Agent B)	1 out of 1 SAA (Agent B)	Minor Manual Error	▪
Limited possibilities for producing and analyzing Transmission Loss Graphs	1 out of 1 CDCA (Agent B)	1 out of 1 CDCA (Agent B)	System Configuration	▪
Lack of control in the trading disputes process	Closed	1 out of 1 SAA (Agent B)	Process Design Weakness	✗
Erroneous processing of Temperature data	1 out of 1 SAA (Agent B)	1 out of 1 SAA (Agent B)	Minor Manual Error	▪

Appendix 6

Root causes definition

The following are definitions and examples of Root Cause's which are used throughout the document

Category	Description	Common Examples
System Issues	An issue arising as a result of an automated system error. This could potentially be as a result of unexpected actions made by the system, the system being incorrectly configured for the scenario in question or system performance issues. This does not include issues which have been made by human error despite the error being reflected on the system.	<ul style="list-style-type: none"> — System has blocked valid flows — System has not sent the correct flows because it was not configured to send these flows under the given scenario — Exceptions are not flagged by the system, so they can not be worked manually to resolve.
Training and Knowledge	As issue arising as a result of a knowledge gap of the users working the scenarios. This would generally be a widespread issue, where a user or whole team consistently performed the wrong action in a scenario. This does not include issues which have been made as a one off issue, or as a result of not having enough time to complete tasks.	<ul style="list-style-type: none"> — D0023 or D0095s flows are resolved using appropriate actions, and as such remain open — Users consistently take the wrong action in a manual process — Instances where you were unable to find someone within the business to explain the processes, indicating a knowledge gap within the business in general.
Process Design Weakness	An issue arising as a result of a poorly designed process or total lack of process. This might be that a process is inefficient in relation to its goal (e.g. an exception report does not actually flag the exceptions the business expected it to), or that the process which is documented or is taught to staff does not comply with the BSC. Also if there is a total lack of process or control, this would also fall under this category. This does not include instances where the agent have accepted non-compliance (ref to Accepted non-compliance root cause for details).	<ul style="list-style-type: none"> — Staff have been taught a progress, but the process which they are all taught is incorrect — An exception report is designed to capture any D0023 flows over 30 days old, but in fact only flags one error code and not all error codes — The process documentation held by the agent does not comply with the BSC, as such employees referencing this perform an incorrect process.
Accepted Non-compliance	Things where the agent knows they are non-compliant but they choose not to fix it. They must be aware of the requirements, but have actively chosen not to comply for various reasons, normally for operational reasons. Note this does not include scenarios where they were unaware their processes were not compliant, or if they have tried to comply but don't have sufficient controls or appropriate processes to achieve compliance.	<ul style="list-style-type: none"> — The main example of this is LTV for NHHDC where they know they aren't compliant however choose to not resolve it — It also comes about where contractual requirements of agents conflict with the BSC requirements.
Resource constrains	Issue arising as a result of a lack of resource. This might be as a result of a large influx of new MPANs or new requirements which have not been appropriate planned for, which then lead to the teams not having enough staff to deal with the manual elements of processes.	<ul style="list-style-type: none"> — Mainly this is seen through a large backlog (although be careful, if a backlog is remaining high because people are taking incorrect action to clear this, categorise this as 'training and knowledge' or 'process design weakness') — Commonly results when there is a mass switching and a large volume of MPANs change supplier and agent in a short period of time.
Minor Manual Error	Issue arising as a result of a small, manual error. This would not be the 'norm', and was just a mistake made by a member of staff. Within a sample we would expect to see 3 or less mistakes in the sample before this becomes a training and knowledge issue. Generally if people are making the same mistake time and time again this indicates poor training or poor process, so we are looking for isolated mistakes to fall into this category.	<ul style="list-style-type: none"> — Someone has made a typo in a flow e.g. sending it in 2019 rather than 2018 or writing 01 rather than 10. — This will be 3 or below instances within a sample
Other	Please only use this is very rare occasions where absolutely none of the other categories can be chosen. Where other is selected please ensure people have given a suggestion about another root causes category this could fall under, we will need to review these and potentially create a new root causes category.	

Appendix 7

The BSC Audit approach



The BSC Audit approach

As in previous years, our overall BSC Audit work is delivered in two distinct streams:

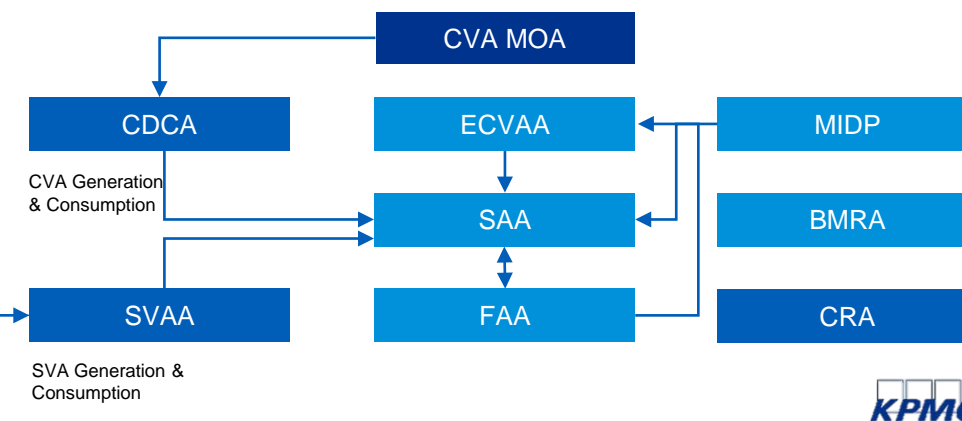
Central Systems and CVA MOA are within the scope of an ISAE 3000 Assurance Conclusion. Supplier and SVA Agents are within the scope of our tailored Process Assessment engagement, forming part of ELEXON's Performance Assurance Framework (PAF).

- **Assurance Conclusion (ISAE 3000):** We continue to issue an Independent ISAE 3000 Assurance Conclusion over Central Systems and CVA MOA. In practice, this means our approach to testing this area of Settlement processes will largely remain consistent with prior year. We issue a Reasonable Assurance Report and present it to the Performance Assurance Board (PAB) and the Panel.
- **Process Assessment:** For the SVA Market, we are not issuing an Assurance Conclusion over the SVA Market. ELEXON is responsible for the scope of the detailed on site work as well as the owner of the conclusions reached on the assessment.

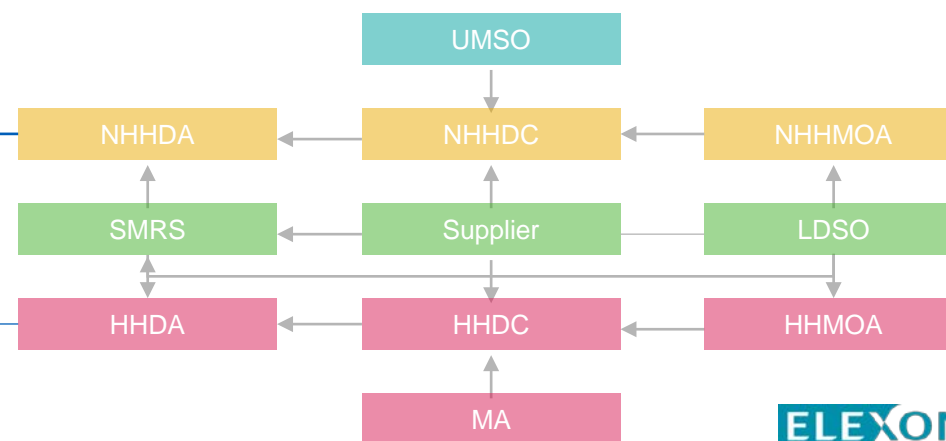
The diagram outlines how the scope of the BSC Audit is split between Process Assessment and the ISAE 3000 Assurance Conclusion.

We have used a materiality of 1.2 TWh to conclude on our opinion.

Assurance Conclusion (ISAE3000) – CVA MOA and Central Systems



Process Assessment – SVA Market (BSC Parties and BSC Party Agents)





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