

BSC Change Business Requirements

Introducing Desktop Audits

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1.0

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BSC CHANGE BUSINESS REQUIREMENTS

Document History

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30/05/19	0.1	IM	SJ	First Draft
12/06/19	0.2	JC	IM	Incorporating review comments & expanding on Business Requirements, rules and scenarios.
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Approvals

Date	Name	Role
25/06/19	Justin Andrews	Design Authority Manager

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BSC CHANGE BUSINESS REQUIREMENTS

1. INTRODUCTION

1.1 Purpose

The BSC Change Business Requirements document is produced as part of the 'End to End BSC Change Process' during the BSC Change Assessment process. It is produced in line with ELEXON's standards for Business Analysis.

The purpose of this document is to communicate the Business Requirements to industry members and service providers. It enables an initial impact assessment to be carried out by the relevant Service Provider(s).

In addition, it describes the anticipated impact on BSCCo (people, processes and systems), the BSC, Code Subsidiary Documents, and other Configurable Items.

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2. BSC CHANGE SUMMARY

2.1 BSC Change Problem Statement

The auditing of Metering Systems is a vital Performance Assurance Technique that provides assurance that calculations and allocations are in accordance with the BSC and its Subsidiary Documents.

The requirement for Inspection Visits to be carried out on-site (and for the Registrant and the MOA (or a nominated representative) to attend the Inspection Visit), is resource intensive for both the TAA to undertake and audited Parties to support.

The Performance Assurance Board (PAB)'s TAM Recommendations Report ([217/13](#)) identified an opportunity to introduce lower intensity Desktop Audits. These are to supplement onsite Inspection Visits as directed within the annual audit scope.

The introduction of Desktop Audits would have the benefit of reducing levels of no access visits and increasing confidence in the accuracy of Settlement due to an increased number of annual audits being performed.

By amending BSC Section L, BSCP27 and BSC Systems (namely the TAAMT) to facilitate Desktop Audits, BSCCo via the TAA can provide a flexible, pragmatic and cost-effective addition to onsite Inspection Visits.

Desktop Audits will cover areas such as (but not limited to) documentation (e.g. Commissioning, measurement transformer Calibration Certificates etc.), alignment of Meter Technical Details across participant systems.

It was noted that a number of desktop-based activities (such as Meter Technical Detail alignment) are already undertaken as part of a TAM Inspection Visit. However, the PAB felt that a clearly defined, structured Desktop Audit process could supplement on-site Inspection Visits, on the understanding that such an activity would not provide the same level of assurance as an on-site Inspection Visit.

The number of on-site Inspection Visits and Desktop Audits to be completed within the audit scope will be determined annually by the PAB.

2.2 BSC Change Objectives

This seeks to provide a flexible, pragmatic and cost-effective addition to onsite Inspection Visits by introducing a lower intensity Desktop Audit process. Desktop Audits will supplement onsite Inspection Visits as directed by the PAB within the annual audit scope.

Success criteria

Under the solution, we would expect the following:

- A greater number of audits able to be undertaken, thus increasing confidence in Settlement;
- Greater flexibility in applying audit sample types to Settlement Risks;
- Reduction in the percentage of audits unable to be completed due to no access to site; and
- The ability to focus Inspection Visits where it is more likely that a Settlement Error has occurred based on documentation provided by parties for a Desktop Audit, e.g. mismatches in Meter Technical Details

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2.3 BSC Change Scope

This Modification aims to introduce a new process to clearly define and structure a Desktop Audit.

Changes will be required to the following documents to deliver this Modification Proposal:

- BSC Section L 'Metering';
- BSC Section Z 'Performance Assurance'; and
- BSCP27 'Technical Assurance of Half Hourly Metering Systems for Settlement Purposes'.

The following Guidance Notes will be amended to include the new TAM desktop audit process:

- Technical Assurance Metering Authorisations Guidance Notes;
- Technical Assurance HH Metering Categories Common Non-Compliance Guidance Notes;
- Technical Assurance Inspections Securing Access Guidance Notes;
- CVA TAA Service Description for CVA Technical Assurance;
- SVA TAA Technical Assurance Service Description; and
- Technical Assurance of Metering Working Instructions.

Changes may also be required to:

- BSC Section X 'Definitions and Interpretation'; and
- PAB Terms of Reference.

Metering Registrants and the TAA will need to be made aware of the additional audit method, and how it will be progressed in combination with the standard on-site Inspection Visits. They will need to know what information is required to complete a Desktop Audit and how it compares to an on-site Inspection Visit. System changes will need to be made to the Technical Assurance Agent Management Tool (TAAMT) to accommodate Desktop Audits and a new or amended Local Working Instruction (LWI) document must be created.

2.4 Architecture Fit

The introduction of Desktop Audits will require an enhancement of ELEXON's existing capability for delivering Technical Assurance of Metering. The Technical Assurance processes operated by ELEXON and the TAA will need to be expanded to recognise audits as effectively another type of inspection. As part of the overall process, Desktop Audits will need to be planned and scheduled, and the results recorded alongside conventional Inspection Visits.

The current process is underpinned by the TAA Management Tool (TAAMT) software used by the TAA, ELEXON and market participants. This will therefore require modification to support the scheduling, recording and reporting of Desktop Audits. No other software or technology changes are expected to be required.

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3. BUSINESS REQUIREMENTS

3.1 Current State (As-Is situation)

TAA Overview

The role of the Technical Assurance Agent (TAA) is to monitor compliance by Parties with the requirements of the Balancing and Settlement Code (BSC), Codes of Practice (CoPs) and Balancing and Settlement Code Procedures (BSCPs).

The TAA is appointed by the BSCCo (ELEXON) as a BSC Agent to deliver Half Hourly (HH) Metering Systems audits on a representative sample of the market place (by GSP Group, Meter Operator Agent (MOA) and Metering System type).

The TAA will inspect Metering Systems and identify cases where requirements are not being complied with. The TAA will ensure that the required actions are taken to rectify and clear any non-compliances identified following an Inspection Visit or the proposed Desktop Audit.

The TAA will annually present its audit findings to the Performance Assurance Board (PAB) for its endorsement and to the BSC Panel, to provide an expert opinion on the health of the HH Metering market. The TAA will deliver expert advice and opinion highlighting trends, issues and provide recommendations to a non-technical audience and industry decision makers.

ELEXON has developed an online support tool to help organise site visits and share information with the TAA. The Technical Assurance Agent Management Tool (TAAMT) is a central database that contains all historical data and information for Metering System Inspection Visits performed by TAA Auditors. Its role is to provide ELEXON with compliance information, as well as support the TAA and industry participants in scheduling Inspection Visits, cataloguing Desktop Audits, recording results, raising non-compliances, Queries and Appeals. The TAAMT is also used to report on the status of these activities and the health of the market.

The TAA process

Inspection Visits

When a Metering System is selected for audit, the TAA notifies the relevant Parties/Party Agents prior to the date of the intended Inspection Visit and obtains confirmation of the Inspection Visit. The Parties involved are:

- Registrant;
- Meter Operator Agent (MOA);
- Licenced Distribution System Operator (LDSO) (or Transmission Company); and
- Half Hourly Data Collector (HHDC) or Central Data Collection Agent (CDCA).

Prior to the Inspection Visit, the relevant Parties are required to provide information (stored in TAAMT) such as Meter Technical Details (MTDs) by MOAs and HHDCs. Following the Inspection Visit, the TAA Auditor records its findings for the Inspection Visit.

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Proposed Desktop Audit process

On an annual basis, the PAB shall determine the size and scope of a Desktop Audit sample to be run in addition to onsite Inspection Visits.

The PAB shall approve a set of criteria to determine which groups of Metering Systems shall be audited by Desktop Audit. The criteria is anticipated to be based on factors such as volume of energy being measured by the Metering System. Based on the audit scope provided by the PAB, the TAA will be required to randomly select the agreed number of each type of Metering System that comprises the agreed Desktop Audit Sample.

At least 10 WD prior to a Desktop Audit, the TAA will be required to notify and provide an Evidence Request to the Registrant, LDSO (or Transmission Co), MOA and HHDC/CDCA (as appropriate) of HH Metering System identified for Desktop Audit and confirm the date that the Desktop Audit will be completed. .

Following the Desktop Audit, the TAA will be required to record its findings and notify the relevant parties.

Following the Desktop Audit, the TAA will be required to identify instances where an Inspection Visit is required. An Inspection Visit should be used if there is any uncertainty around the documentation provided by parties or if further information is required regarding a possible non-compliance.

Non-Compliance

The TAA audits Metering Systems, which can contain multiple circuits, against a set of checks prescribed in BSCP27 appendix 4. Checks may differ according to Metering Equipment and version of the applicable Code of Practice (CoP). Where the Metering Equipment or the related documentation does not comply at the time of the Inspection Visit or Desktop Audit, the TAA raises a non-compliance. These non-compliances must be resolved by the responsible parties in accordance with agreed timescales.

The TAA raises a non-compliance if, after taking into account any Metering Dispensations:

- The requirements of the Code and Code Subsidiary Documents (CSDs) are not being adhered to;
- **Proposed:** Failure to provide Metering System documentation when requested as part of the Inspection Visit or Desktop Audit; and
- The actual configurable Meter parameters are not consistent with the Meter Technical Details (MTDs) recorded in Settlement systems as provided by the HHDC or Central Data Collection Agent (CDCA), or MOA prior to the Inspection Visit.

The findings of the Inspection Visit will be recorded on an Inspection Schedule and presented to the MOA at the time of the Inspection Visit. Wherever possible any identified non-compliances shall be rectified by the MOA or the LDSO at the time of the visit.

Within 2 WD of a Desktop Audit, the TAA will be required to produce Desktop Audit findings on a Desktop Audit Schedule, determine Metering System compliance and outline follow up actions to the appropriate parties, where required.

Rectification Plans

The Registrant (or MOA, LDSO, HHDC or the Transmission Company on behalf of the Registrant) will rectify the non-compliance or create a rectification plan (BSCP27/05) via the TAAMT solution within 10 WDs of an Inspection Visit or Desktop Audit.

Queries and Appeals

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Where non-compliance has been identified, the following Parties/Agents may raise a Query via the TAAMT solution.

- The Registrant responsible for that Metering System; or
- The relevant MOA, HHDC, LDSO or the Transmission Company

If the Query is not upheld, the Party/Agent may raise an Appeal via the TAAMT solution.

The Registrant (or MOA, HHDC, LDSO or the Transmission Company on behalf of the Registrant) will be required to provide evidence via the TAAMT solutions in support of the queries and appeals, if requested to do so by the Registrant and BSCCo.

3.2 Future State

Under the proposed solution, Desktop Audits will function as a flexible addition to on-site Inspection Visits.

This follows the Performance Assurance Framework (PAF) review recommended that the scope of TAM be extended through a Modification to the BSC to include lower intensity Desktop Audits.

The wording of the scope for Balancing and Settlement Code (BSC) Section L 'Metering' Clause 7 Technical Assurance of Metering Systems (TAM) is focused around onsite Inspection Visits where Metering Equipment is installed. This will be amended to include a greater degree of flexibility, allowing Desktop Audits to be used as an additional Audit technique.

How Desktop Audits are used in an annual period should be outlined in the scope of each audit, to provide flexibility in deployment.

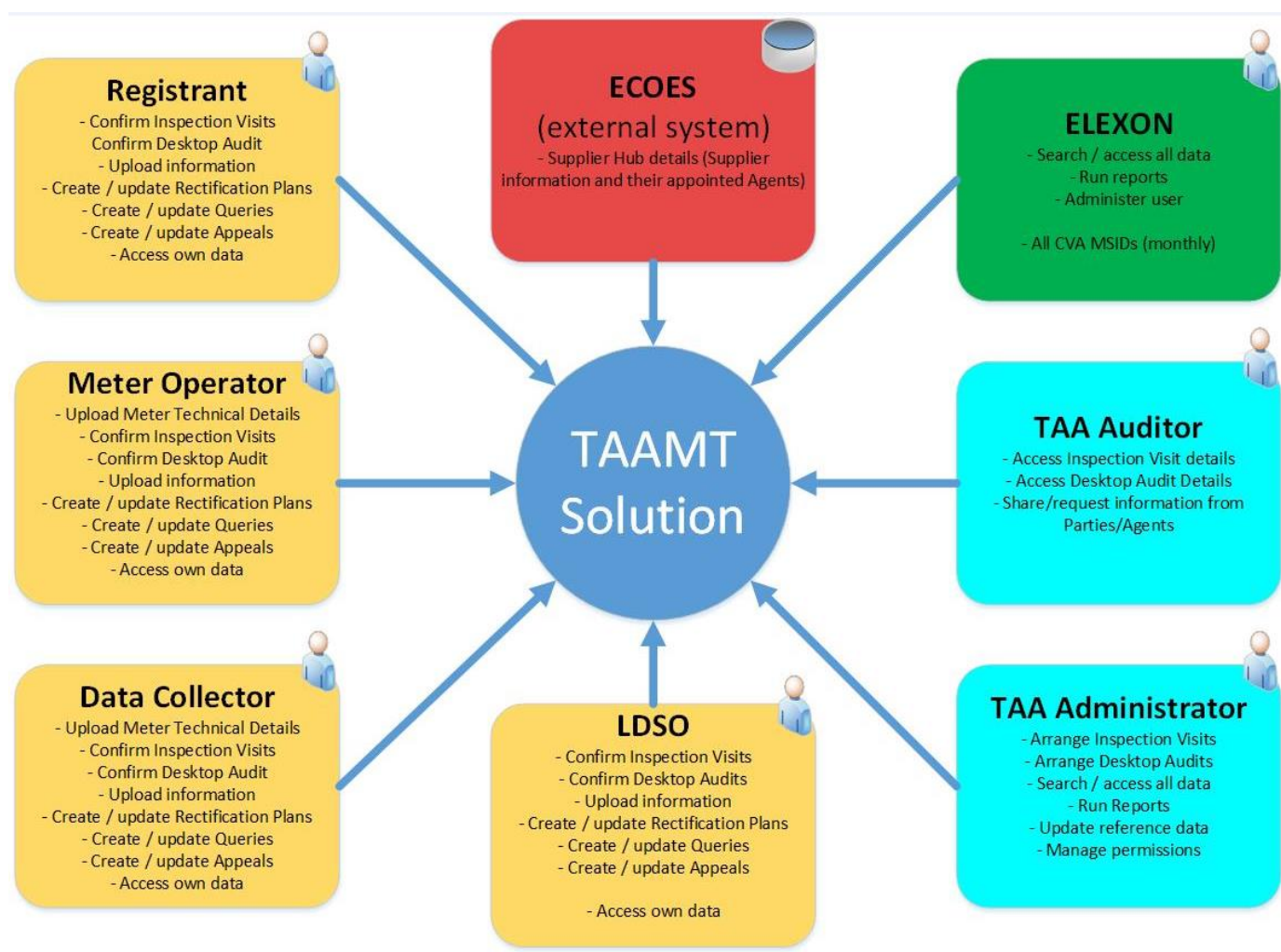
Such audits would cover areas such as (but not limited to) documentation (e.g. Commissioning, measurement transformer Calibration Certificates etc.), alignment of Metering Equipment technical details across participant systems.

It should be noted that a number of desktop-based activities (such as Metering Equipment technical detail alignment) are already undertaken as part of a TAM Inspection Visit. However, we feel that a clearly defined, structured Desktop Audit could supplement an onsite Inspection Visit, on the understanding that such an activity would not provide the level of assurance as an onsite Inspection Visit.

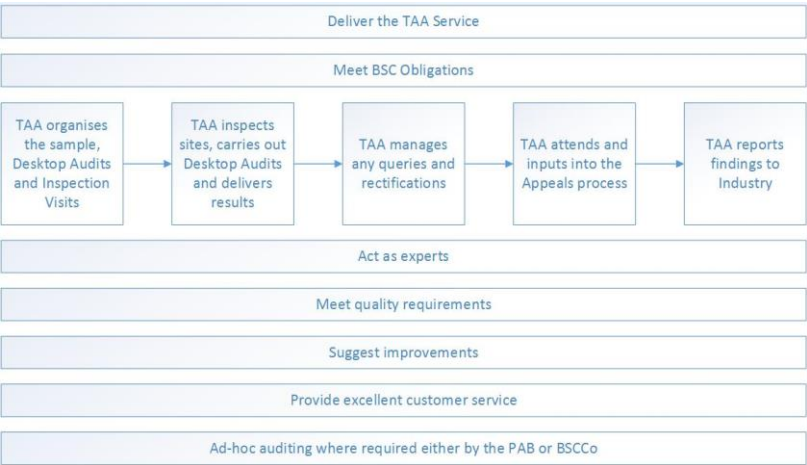
Scope of the change

The diagram below illustrates the post interaction between the TAAMT solution and its users and external interfaces.

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3.3 Business Requirements

The following table lists the business requirements. They are prioritised as follows:

'M' = Must have

'S' = Should have

'C' = Could have

'W' = Won't have this time

BR1		
Amend the Technical Assurance Of Metering Systems Process to include Desktop Audits		
1.1 Legal BSC	The BSC must be amended to allow for Desktop Audits to take place.	
1.1.1	Section L of the BSC must be amended to permit the Technical Assurance Agent (TAA) to audit Metering Systems by an on-site Inspection Visit or by a Desktop Audit.	M
1.1.2	Section L of the BSC must be amended to acknowledge that the criteria for which groups of Metering Systems are audited by on-site Inspection Visits and which groups of Metering Systems are audited by Desktop Audits shall be approved by the PAB. It is noted that this may be achieved by a direct reference to the PAB or may be achieved by reference to the Panel, which then delegates the power to the PAB.	M
1.1.3	Section L of the BSC must be amended to acknowledge that the criteria for which groups of Metering Systems are audited by on-site Inspection Visits and which groups of Metering Systems are audited by Desktop Audits shall be approved by the PAB. It is noted that this may be achieved by a direct reference to the PAB or may be achieved by reference to the Panel, which then delegates the power to the PAB.	M
1.1.4	Section L of the BSC must be amended to acknowledge that the scope of Desktop Audits shall be approved by the PAB. It is noted that this may be achieved by a direct reference to the PAB or may be achieved by reference to the Panel, which then delegates the power to the PAB.	M
1.1.5	If the changes to Section L of the BSC specified above are achieved by adding definitions of Inspection Visit or On-Site Inspection Visit then consideration must be given to paragraphs that relate only to on-site Inspection Visits, such as L.7.4 'Site Visits' which addresses practical arrangements for a accessing a site.	S
1.1.6	Section Z of the BSC must be amended to give the PAB the power to approve the selection criteria used to determine which groups of Metering Systems are audited via a Desktop Audit process and which groups of Metering Systems are audited by	M

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	on-site Inspection Visits.	
1.1.7	Section Z of the BSC must be amended to give the PAB the power to agree the scope of the Desktop Audit. The PAB may vary this scope from time to time.	M
1.1.8	Section X of the BSC could be modified to incorporate definitions of Inspection Visit, On-site Inspection Visit, Desktop Audit or any other term if appropriate.	C
1.2 Legal Subsidiary Documents	Code Subsidiary Documents must be amended to facilitate Desktop Audits.	
1.2.1	BSCP27 must be amended to include relevant obligations and processes for Desktop Audits and Desktop Audit Samples.	M
1.2.2	BSCP27 must be amended to reflect the existence of Desktop Audit as well as on-site Inspection Visits.	M
1.2.3	BSCP27 must define the processes for: <ul style="list-style-type: none"> • Data exchange / submission of electronic evidence • Action to be taken in the event of a non-compliance • Interface and Timetable information for a Desktop Audit 	M
1.2.4	The Terms of Reference of the PAB should be reviewed, and updated if the changes to the legal text so require.	S

BR2		
TAAMT software must be amended to receive and load information required for Desktop Audits.		
2.1 Functional	TAAMT must allow for documentation to be submitted by Metering Registrants as well as relevant LDSOs/MOAs for validation.	
2.1.1	Documentation may be submitted in the form of an electronic scan of a paper document. This scan may be in PDF format or in any standard image format (e.g. jpg, png, bmp).	C
2.1.2	Documents could be submitted by e-mail or directly through the TAAMT.	C
2.1.3	Individual files should be limited to a size of 5 Mb or less.	C
2.1.4	There should be an electronic signature process whereby the person	S

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	submitting the data confirms that the data is accurate, and that they are authorised to act on behalf of their company.	
2.1.5	There could be a naming convention for submitted files. There could be validation within TAAMT that the submitted file conforms to the naming convention.	C
2.1.6	The submitted data must be stored in the TAAMT system in accordance with ELEXON's data retention policy	M
2.1.7	Metadata should be stored along with the file to enable search and retrieval of the data	S
2.1.8	There could be a search tool provided to enable data to be retrieved.	C
2.2 Operational/Functional	The Metering Registrants as well as relevant LDSOs/MOAs must be able submit sufficient evidence to resolve non-compliance arising from Desktop Audits via the already established process.	
2.2.1	Metering Registrants as well as relevant LDSOs/MOAs must be able to submit additional data at a later date that is identified as part of the same data submission.	M
2.2.2	Where update versions of the same file are submitted there must be a version control system that ensure that all version of submitted data are retained, and an audit trail maintained.	M
2.2.3	This could be achieved via a validated naming convention, and/or via metadata recorded against each file.	C
2.2.4	It must be possible for multiple parties (Metering Registrants, LDSOs/MOAs) to submit data relating to the same audit of the same Metering System.	M
2.2.5	TAAMT must ensure that the Auditor is presented with all data relating to the current audit of an individual Metering System, including multiple versions of the same document, and documents submitted at different times by different organisations.	M
2.3 Operational	Metering Registrants as well as relevant LDSOs/MOAs will need to know how to re-submit their data to the TAAMT to confirm that any issues of non-compliance have been rectified.	
2.3.1	BSCP27 must define a clear process to address issues of non-compliance identified by a Desktop Audit.	M
2.3.2	TAAMT must be able to support the process defined in BSCP27. In some cases this may consist of the submission of revised / additional	M

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	documentation relating to the Desktop Audit, while in other cases this may consist of an on-site Inspection Visit.	
	TAAMT must be able to record data from a desktop audit and a subsequent on-site Inspection Visit and associate this data to form a complete record of a complete audit of an individual Metering System.	M

BR3		
TAAMT software must be amended to make results of Desktop Audits available to audited entities.		
3.1 Functional	TAAMT must display details of the Desktop Audit Process to all users with access permissions to the individual Metering System.	
3.1.1	This must include ELEXON, the TAA auditor and the Registrant.	M
3.1.2	This may also include LDSOs/MOAs or any agents appointed by these parties to act on their behalf.	S
3.2 Operational/Functional	The findings of a Desktop Audit must be recorded on a Desktop Audit Schedule and communicated to Registrants and relevant agents via the software system used by the TAA.	
3.3 Functional	Desktop Audit notes made by the TAA must be made available to the Metering Registrants via the Desktop Audits screen.	

BR4		
The PAB must produce a Desktop Audit Sample on an ad hoc or annual basis.		
4.1 Operational	The Performance Assurance Board (PAB) shall agree the number of Desktop Audits to be completed in the audit year and the scope of the Desktop Audit Sample.	
4.2 Operational	The size and scope of the Desktop Audit Sample should be captured in Risk Operating Plan (PAB Paper)	
4.3 Operational	BSCCo must confirm to the TAA the number and type of each Metering System to be audited as part of the Desktop Audit Sample.	
4.4 Operational	Upon receipt of information or as directed by BSCCo, the TAA shall randomly select the agreed number of each type of Metering System which comprises the agreed Desktop Audit Sample.	

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3.4 Non-Functional Requirements

3.4.1 Security

BR5: The TAAMT solution must process and store personal data in line with the principles of the General Data Protection Regulation (GDPR).

3.4.2 Compliance

BR7: Any development to the TAAMT solution must not impact the integrity of data that is processed, transferred and stored as part of the solution.

BR7.1: Any change to the TAAMT solution must not impact the integrity of the existing data held in the existing solution.

3.4.3 Performance

BR9: The TAAMT solution must continue to meet existing performance timescales as set out in section 7 of the services and deliverables schedule.

3.4.4 Training

BR11: The Service Provider must include Desktop Audits as part of its regular training and education on the TAA processes (including the TAAMT solution) to provide the best possible chance of successful audits (e.g. to avoid site access issues).

3.4.5 Deliver Documentation

BR12: The Service Provider must ensure all documentation is updated to reflect new requirements for Desktop Audits.

BR13: The Service Provider must ensure that all internal procedures are updated to reflect new requirements for Desktop Audits.

3.5 Business Rules

A Desktop Audit may serve as an alternative to on-site Inspection Visits

3.6 Business Scenarios

Scenario 1:

1. The PAB shall approve a set of criteria to determine which groups of Metering Systems shall be audited by Desktop Audit.
2. The PAB define how many Desktop Audits are to be performed.
3. TAA randomly selects a Metering System to receive a Desktop Audit.
4. The Registrant is notified.

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5. The Registrant submits the data specified by PAB through TAAMT.
6. The TAA Auditor reviews the data.
7. The Metering System passes the audit.
8. The Registrant is notified of a successful audit.
9. TAAMT stores the data and the Auditors notes.
10. TAAMT produces statistics for inclusion in TAA reporting cycles.

Scenario 2:

1. The PAB shall approve a set of criteria to determine which groups of Metering Systems shall be audited by Desktop Audit.
2. The PAB define how many Desktop Audits are to be performed.
3. ELEXON define how many Desktop Audits are to be performed.
4. TAA randomly selects a Metering System to receive a Desktop Audit.
5. The Registrant is notified. The Registrant submits the data specified by PAB through TAAMT.
6. The TAA Auditor review the data.
7. The Metering System fails the audit.
8. The Registrant is notified of a failed audit and the reasons for the failure.
9. The Registrant resolves the issues and submits updated data through TAAMT.
10. The TAA Auditor review the data.
11. The Metering System passes the audit.
12. The Registrant is notified of a successful audit.
13. TAAMT stores the complete set of data and the Auditors notes, including data on the initial failure.
14. TAAMT produces statistics for inclusion in TAA reporting cycles.

Scenario 3:

1. The PAB shall approve a set of criteria to determine which groups of Metering Systems shall be audited by Desktop Audit.
2. The PAB define how many Desktop Audits are to be performed. TAA randomly selects a Metering System to receive a Desktop Audit.
3. The Registrant is notified.
4. The Registrant submits the data specified by PAB through TAAMT.
5. The TAA Auditor review the data.
6. The Metering System fails the audit.
7. The Registrant is notified of a failed audit and the reasons for the failure.
8. The reasons for failure are sufficient in the opinion of the TAA to require an on-site Inspection Visit.
9. The Registrant is notified of the on-site Inspection Visit.
10. Registrant resolves the issues.

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11. The Metering System passes the on-site Inspection Visit to the TAA.
12. The Registrant is notified of a successful audit.
13. The TAA auditor enters data into TAAMT, which stores the complete set of data and the Auditors notes, including data on the initial failure.
14. TAAMT produces statistics for inclusion in TAA reporting cycles.

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