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Technical Assurance Agent Annual Report: BSC Year 2021/22

Public

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1 Technical Assurance Agent (TAA) Objectives

Technical Assurance of Metering is designed to monitor compliance with metering requirements set out in the BSC and its subsidiary documents.

It consists of a combination of Sampled and Targeted Onsite Inspection Visits and Desktop Audits performed by the Technical Assurance Agent (TAA) of sites with Half Hourly Metering Systems, to check the compliance of Metering Systems registered in Supplier Volume Allocation (SVA) and Central Volume Allocation (CVA).

The size and scope of the sample is set by the Performance Assurance Board (PAB) within the Risk Operating Plan (ROP).

The process of assessing the overall health of the Half Hourly Metering System population includes, but is not limited to, recording non-compliances that affect the quality of data used in Settlement (“material non-compliances”).

The total impact of material non-compliances recorded during the 2021-22 Audit Year is currently estimated by Elexon as **~£117,462,000** although the figure for may increase as Elexon progresses Trading Disputes for affected SVA metering systems. Full details can be found in

2 Continuing Impact of COVID-19 on TAA Audit Activities in 2021-22

The ongoing impact of the COVID-19 pandemic restricted the audit activities that the TAA were able to perform.

From the start of the Operational Year in April 2021 through to 15 August 2021, the only Onsite activities that took place were Targeted Audits requested by Elexon. Those being:

- 1 x SVA in April
- 3 x CVA in April
- 11 x CVA in August

During this period of restriction, 635 optional Desktop Audits were performed involving:

Role	Market Participant Identifier (MPID) count
Supplier	23
MOA	11
HHDC	11
LDSO	23

From 16 August 2021, all restriction was removed by Elexon, meaning that Desktop Audits, SVA Onsite and CVA Onsite visits became mandatory once again, allowing the following to be performed:

Sample Set	Audits performed
SVA Desktop Audits	843
SVA Onsite	295
CVA Onsite	93

Due to the restrictions, similar to the previous Operational Year, no Offshore Wind Farm audits took place which means that the most recent was in August 2019.

3 Executive Summary: Market Risk and TAA Observations

SVA Participants engagement

The TAA has found that engagement from all SVA Participants has been very good. In addition to the willingness of Participants, the TAA believes that the success throughout the year has benefited from the additional support that Participants have received from the TAA and Elexon teams, including the Operational Support Managers, Newscast, and all other day-to-day engagement.

The TAA would encourage that this continues.

Desktop Audit initial confirmation activity

As can be seen in section 5.2, performance relating to the initial confirmation activity (Supplier commitment) has deteriorated, compared to that of the previous year.

Elexon may wish to consider reminding Suppliers of their Desktop Audit obligations.

CVA MOA engagement

The TAA has found the CVA MOAs to be cooperative and willing to work alongside the TAA from the initial planning stages through to attendance on site.

It can be seen within section 5.3 that one MOA cancelled several visits due to resource issues late in the audit year. Elexon has instructed the TAA to include these visits into the forthcoming Operational year, in addition to those which the MOA will be required to complete.

CVA Registrant engagement

Where the CVA Metering System is located within a non-Grid Supply Point, access cannot always be guaranteed as it requires attendance from the LDSO.

LDSOs are currently aware of the CVA assurance process in the capacity of a Registrant. However, there have been multiple occasions where the LDSO has been required to attend site, as the Network Operator, to facilitate full access to the metering equipment.

Since the LDSOs were brought into the SVA assurance process (P283¹), access for SVA Metering Systems that require their attendance has improved.

Elexon may wish to consider bringing the LDSOs into the CVA assurance process, in a similar way as SVA, to help address this issue.

Increase in the lack of Certificates and Commissioning documents available for audit

As can be seen in section 6.1 (Figure 6), there is an increase in SVA Onsite audit non-compliances due to Certificates and Commissioning records not being provided to the TAA.

As can be seen in section 6.2 (Figure 10), there is a high number of Desktop Audit non compliances due to Commissioning records not being provided.

As can be seen in section 6.3 (Figure 15), there is an increase in CVA Onsite audit non-compliances due to Certificates and Commissioning records not being provided to the TAA.

Elexon may wish to consider what actions can be undertaken to address this.

¹ [P283, Reinforcing the Commissioning of Metering Equipment Processes](#)

SVA Desktop Audits - Measurement Transformer ratio mismatch

As can be seen in Section 6.2 (Figure 10), 35.4% of all Category A non-compliances were attributed to Measurement Transformer ratio mismatch across all market roles. Out of the twenty Desktop Audits that have this non-compliance, the TAA has identified twelve that they are recommending to Elexon which should be subject to an Onsite audit.

D0268 data not provided by the HHDC, MOA and Supplier

As can be seen in section 6.2 (Figure 10), there is a high count of instances where the D0268 data was not provided to the TAA for auditing. The spread of non-compliance is attributed to most MOAs, HHDCs and Suppliers.

Elexon may wish to consider whether to request the BSC Auditor to investigate the reasons for the lack of provision.

D0215 DTC flow not provided by the LDSO

As can be seen in section 6.2 (Figure), there is a high count of instances where the D0215 DTC file was not provided to the TAA for auditing by the LDSO. The spread of non-compliance is attributed to all LDSO.

Elexon may wish to consider whether to request the BSC Auditor to investigate the reasons for the lack of provision.

D0215 DTC flow missing fields

As can be seen in section 6.2 (Figure), there is a high count of instances where the D0215 DTC file has missing fields, spread across all LDSOs. The TAA understands that there is an open BSC Issue (Issue 99) 'Review of the use of the D0215 'Provision of Site Technical details' and associated processes'.

Overall Accuracy calculation and supporting evidence not provided by the MOA

It is the responsibility of the MOA to provide the Overall Accuracy calculation, along with evidence supporting the calculation, for the Desktop Audit. As can be seen in section 6.2 (Figure 10), 43% (1873) of all Category B non-compliances relate to Overall Accuracy.

Settlement data (3 days) not provided

The HHDC and MOA is required to provide three days of Half Hourly Settlement data to the TAA. The format of the data is to be provided in accordance with the instruction detailed in the Local Working Instruction (LWI)² provided by Elexon.

As can be seen in section 6.2 (Figure), there is a high count of instances where the HHDC and MOA failed to do so.

CVA Target Sample

The past two years of Targeted CVA visits focused on Grid Supply Points (GSP) where Elexon's investigations identified potential Annual Demand Ratio (ADR) issues. Across the 2020-21 and 2021-22 PAOPs this work has identified a combined estimated material impact of **~£129,462,000**.

The TAA supports Elexon's decision to continue further investigations in the forthcoming Operational year, as well as their decision to increase the CVA Main Sample.

² <https://www.elexon.co.uk/documents/performance-assurance/techniques/tams/technical-assurance-agent-instructions-for-desktop-audits/> (Version 2.0 page 6)

4 Sample sets

The table below provides a summary of the Sample Sets and Operational Years which are referenced within this report.

		<i>2018-2019</i>	<i>2019-2020</i>	<i>2020-2021</i>	<i>2021-2022</i>
SVA	Main Sample Onsite	✓	✓		✓
	Desktop Audits			✓	✓
CVA	Main Sample Onsite		✓	✓	✓
	Targeted Sample Onsite				✓

- There were no SVA Main Sample Onsite audits in 2020-2021, due to the effects of the COVID-19 pandemic
- The first year that SVA Desktop Audits took place was in 2020-2021

5 Engagement

For Onsite visits, the Supplier is responsible for securing access to the site and Metering System that has been selected for audit. The Supplier should ensure that a suitably qualified Meter Operator Agent (MOA) can attend.

For High Voltage (HV) sites and for Low Voltage (LV) sites with remote Current Transformers (CTs), the Supplier will also need to ensure that a Licensed Distribution System Operator (LDSO) engineer can attend.

For Desktop Audits, the Supplier is responsible for providing the TAA with an initial set of information (Supplier commitment). Once provided, the TAA will request further information from the Supplier, MOA, Half Hour Data Collector (HHDC) and LDSO.

5.1 SVA Onsite audits

Consistent with previous audit years, the TAA has found the engagement from all Parties to be very good.

Overall, the no-access percentage was similar to that of the previous two years of Onsite audits. This year, 15.4% (54 of 351) of sites were visited where access could not be secured upon attendance.

As shown in the table below, there was a notable increase due to the Meter Operator being unable to secure access or locate the Meter. This year, 2.3% (8 of 351) of Onsite visits were affected, five of which were with LOND Meter Operator.

	2018-2019	2019-2020	2021-2022
Attended site	1536	1445	351
No Access - MOA unable to secure access / or locate meter	0.8% (12)	0.5% (7)	2.3% (8)

The work that Suppliers undertake to secure Onsite access with customers has resulted in a slightly improved success rate across three of the four measures, which can be seen in the table below.

Appointment Status	2018-2019	2019-2020	2021-2022
Cancelled - Supplier unable to secure access	3.6% (59)	2.5% (39)	2.1% (8)
No Access - Site visited customer unable to provide access	2.0% (31)	2.1% (30)	2.0% (7)
No Access - Site visited customer unavailable to provide access	7.4% (114)	6.3% (91)	5.7% (20)
No Access - Site visited customer unwilling to provide access	0.6% (9)	0.3% (5)	1.4% (5)

Figure 1 Percentage (and count) of Onsite audits that have not been able to proceed due to issues with the customer.

The TAA notes that due to significantly fewer SVA Onsite visits this year compared to the previous, the counts may appear skewed however the percentages are comparable.

Further details can be found in Figure , Figure , Figure and Figure 23

5.2 Desktop Audits

This year was the second where Desktop Audits took place, and (from 16 August 2021) the first in which they were mandatory, increasing the number of Supplier MPIDs that were involved from 26 to 49.

The percentage of planned Desktop Audits where the Supplier did not undertake the initial confirmation activity increased from 7.3% to 14.0%. Planned audits that fail this activity trigger a Category A.01X³ non-compliance to be raised, preventing the audit work from progressing further.

³ Category A.01X mean that the Registrant failed to confirm or complete the Desktop Audit notification process

5.3 CVA Onsite audits

As can be seen in the table below, this year there was a far greater number of CVA audits scheduled than recent previous years.

Appointment Status	2019 -2020	2020 - 2021	2021 - 2022
Attended site	46	30	112
Accepted	44	29	107
No Access - LDSO and/or SAP ⁴ attendance required			2
No Access - MOA unable to secure access / or locate meter			1
No Access - Other Reason (onsite)	2		
No Access - Customer unavailable to provide access			1
No Access - Customer unwilling to provide access			1
No Access - Supply Disconnected		1	
Not visited	1	4	28
Cancelled - De-energised and/or no Meter		1	
Cancelled - MOA Unable to Attend		1	
Cancelled - Recently audited another Meter System Identifier (MSID)			3
Cancelled - To be rescheduled	1	2	20
No Access - Severe Weather Conditions			5
Grand Total	47	34	140

Figure 2 Count of all scheduled CVA visits by outcome. Where the Metering System was a multi-circuit site, this has been counted as one visit. [CVA All_parent 01]

The reason for those where access was not achieved on-site can be found in the table below.

No access status	Notes
LDSO and/or SAP attendance required	MOA did not identify this prior to attending site.
MOA unable to secure access / or locate meter	MOA withdrew their availability the day prior to the visit.
Customer unavailable to provide access	MOA had not made prior arrangements with the customer.
Customer unwilling to provide access	MOA had not made prior arrangements with the customer.

Of the 20 scheduled audits which were cancelled, 18 are to be rescheduled and were due to Siemens MOA. Siemens initially confirmed its availability to attend but subsequently advised the TAA that it was no longer able to do so. This was at the end of the reporting year and is why the appointments were unable to be rescheduled within the same Operational Year.

⁴ Senior Authorised Person

6 Audits

6.1 SVA Main Sample – Onsite inspection visits

Category 1 non-compliance

As can be seen in Figure , the rate of Category 1 non-compliance this year is broadly in line with that of two years ago.

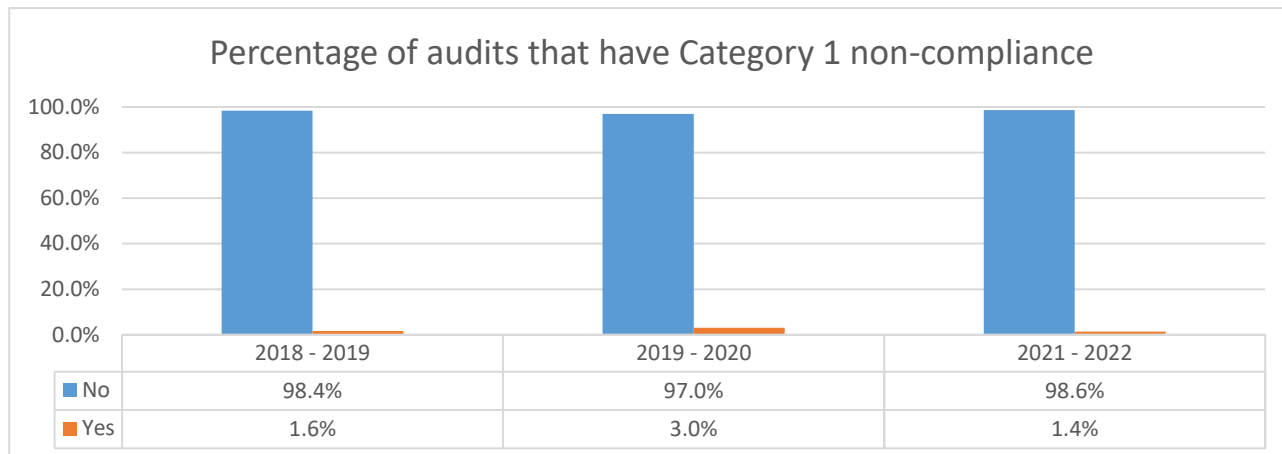


Figure 3 Percentage of SVA Main Sample Onsite inspection visits, identifying whether Category 1 non-compliance was identified

Information relating to each Category 1 non-compliance that has been identified over the past three years can be found in Figure .

Category 1 issue	2018 - 2019	2019 - 2020	2021 - 2022
Measurement Transformer ratios different from those set up in Meter	7	5	2
Metering Equipment not functioning correctly	8	6	1
Outstation clock outside agreed tolerance	4	5	1
Other non-compliance not covered elsewhere		5	
Correct Energy Measurement Check indicates an error in the metered volume	1	6	
Complex Site Supplementary Information Form		1	
Meter Id - Main Meter	1	2	
Total	21	30	4

Figure 4 Count of Category 1 non-compliances by year

Category 2 non-compliance

As can be seen in Figure , the rate of Category 2 non-compliance this year is broadly in line with previous audit years.

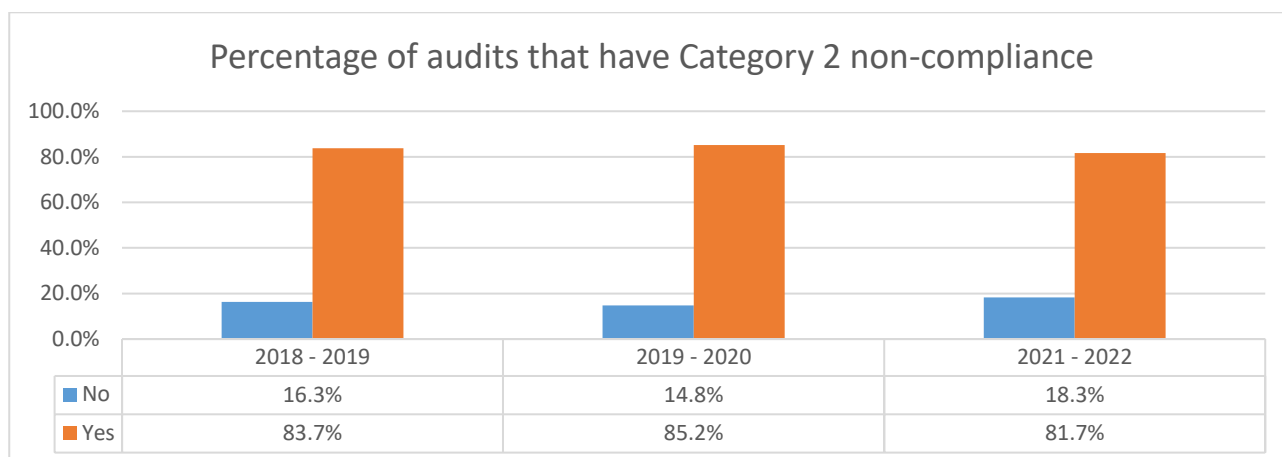


Figure 5 Percentage of SVA Main Sample Onsite inspection visits, identifying whether Category 2 non-compliance was identified

As can be seen in Figure , 71.3% of all Category 2 non-compliance was due to information not provided to the TAA. This is much higher than previous years.

Further breakdown of the details below can be found in Figure and Figure .

Category 2 grouping	2018 - 2019	2019 - 2020	2021 - 2022
Information incorrect or inconsistent	39.8%	39.9%	28.7%
Certificates	16.2%	15.3%	10.4% ↓
Meter Setup	5.3%	4.6%	6.5%
Commissioning	6.8%	10.4%	5.8% ↓
Clock timing	1.5%	1.2%	2.4%
Miscellaneous	9.4%	7.6%	2.2%
D0268 - Meter Technical Details	0.5%	0.7%	1.3%
CT/VT	0.1%	0.0%	0.0%
Information not provided	60.2%	60.1%	71.3%
Certificates	35.7%	39.5%	41.6% ↑
Commissioning	23.8%	19.9%	26.5% ↑
Meter Setup	0.0%	0.0%	2.6%
D0268 - Meter Technical Details	0.7%	0.7%	0.4%
Complex/shared	0.0%	0.0%	0.1%
Total	100.0%	100.0%	100.0%

Figure 6 Percentage of Category 2 non-compliance grouped by issue

The TAA notes that there is a decrease in the percentage of non-compliances relating to information incorrect or inconsistent on certificates and Commissioning that have been made available for audit. Conversely, there is an increase in the lack of information relating to certificates and Commissioning being made available for audit. It is not possible for the TAA to determine whether this would have identified additional non-compliance if the information had been made available for audit.

Count of non-compliance per audit

As can be seen in Figure 7, 18.3% of audits did not identify any non-compliance. This is an improvement from 14.7% in the previous audit year.

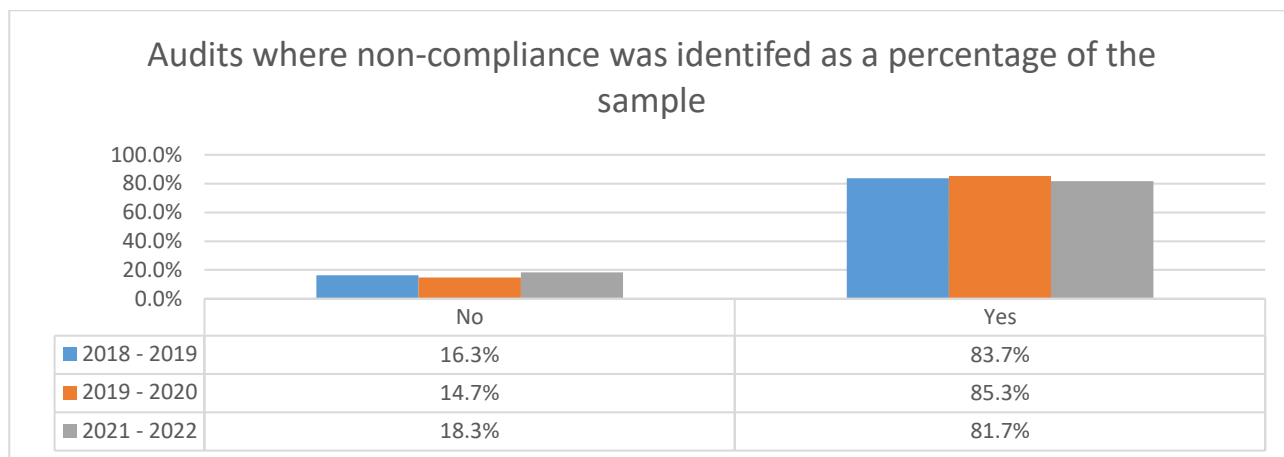


Figure 7 Percentage of SVA Main Sample audits where a Category 1 or 2 non-compliance was identified

The table below provides information relating to the count of non-compliances that were identified per audit, which is broadly in line with previous audit years.

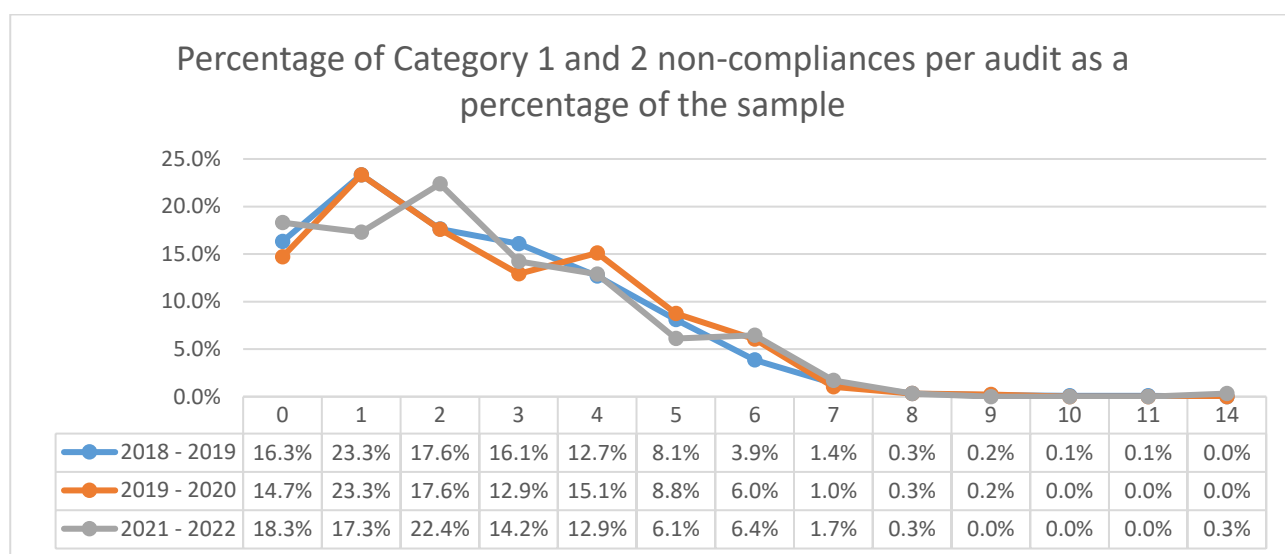


Figure 8 Count of Category 1 and 2 non-compliances per audit as a percentage of the SVA Main Sample Onsite inspection visits

6.2 SVA Main Sample – Desktop Audits

Category A non-compliance

This year, 93.3% of Desktop Audits performed did not identify a Category A non-compliance, compared to 94.5% the previous year.

The figure below provides a distribution of the Category A non-compliances identified between market roles. The percentage of Category A non-compliances relating to the:

- HHDC and LDSO is broadly in line with the previous year
- MOA has increased by 20.4%, using last year as the baseline
- Supplier has reduced by 38%, using last year as the baseline

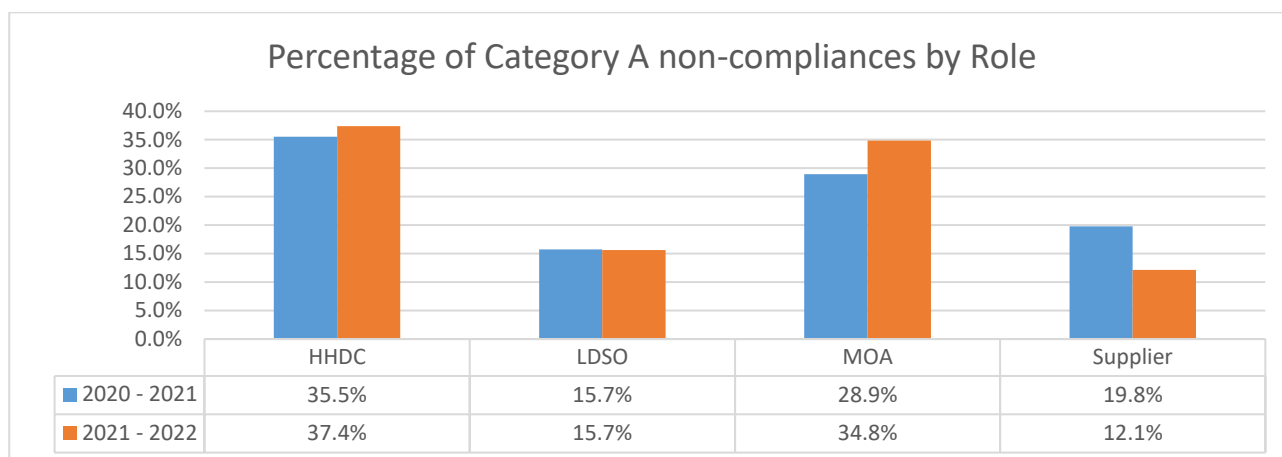


Figure 9 Percentage of Category A non-compliance by market role

As can be seen in Figure 10 below, most of the Category A non-compliances were found to be due to measurement transformer ratio mismatch and Settlement data mismatch between the MOA and HHDC.

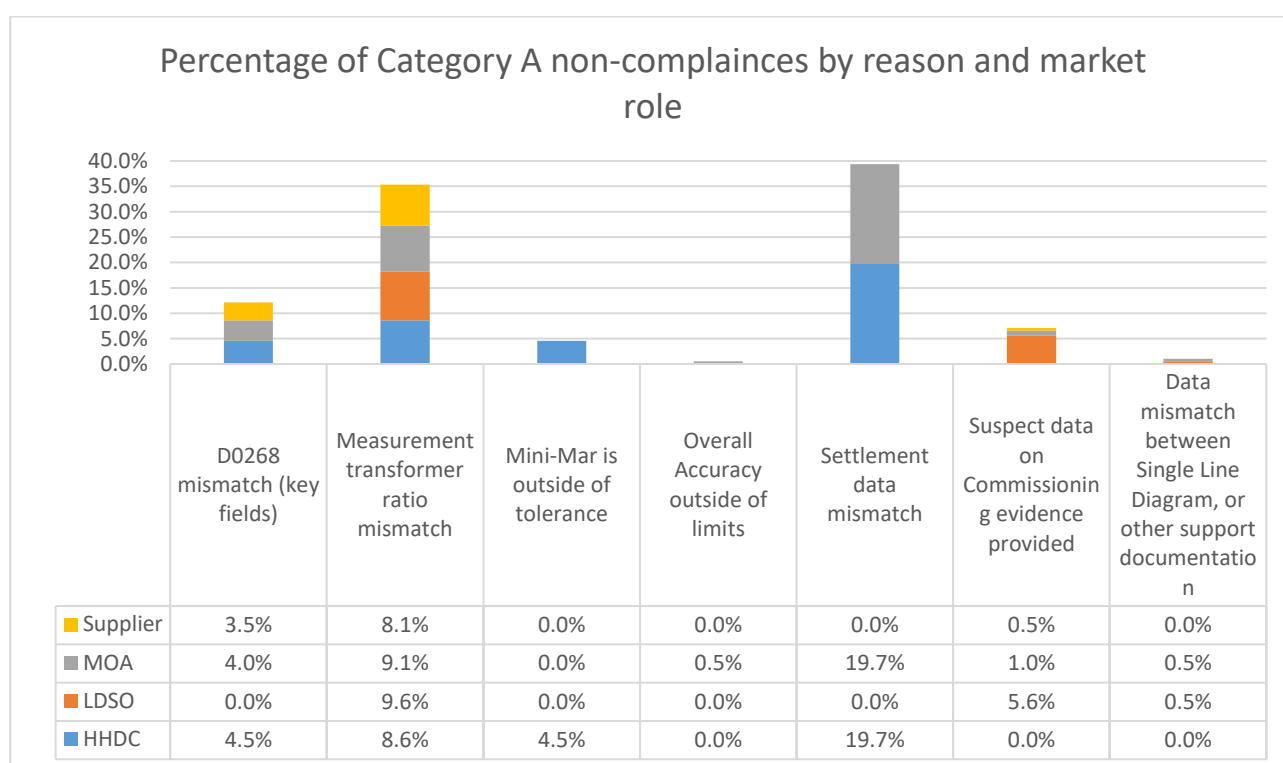


Figure 10 Percentage of Category A non-compliances by reason and market role (excludes A.01X)

The four charts below provide a breakdown of Category A non-compliance by Supplier, MOA, HHDC and LDSO.

Category B non-compliance (information not provided to the TAA)

93.4% of audits attracted one or more Category B non-compliance as a result of information not being provided to the TAA.

The figure below provides a distribution of the Category B non-compliances identified between market roles

Consistent with the previous year, the largest percentage of non-compliance due to lack of information provision was attributed to the MOA, which can be seen in Figure below. However, it is noted that the MOA is required to submit a larger and more diverse amount of data compared to that of other market roles. Nonetheless, the percentage of Category B non-compliances for MOAs has increased further when compared to the previous year and therefore trending in the wrong direction.

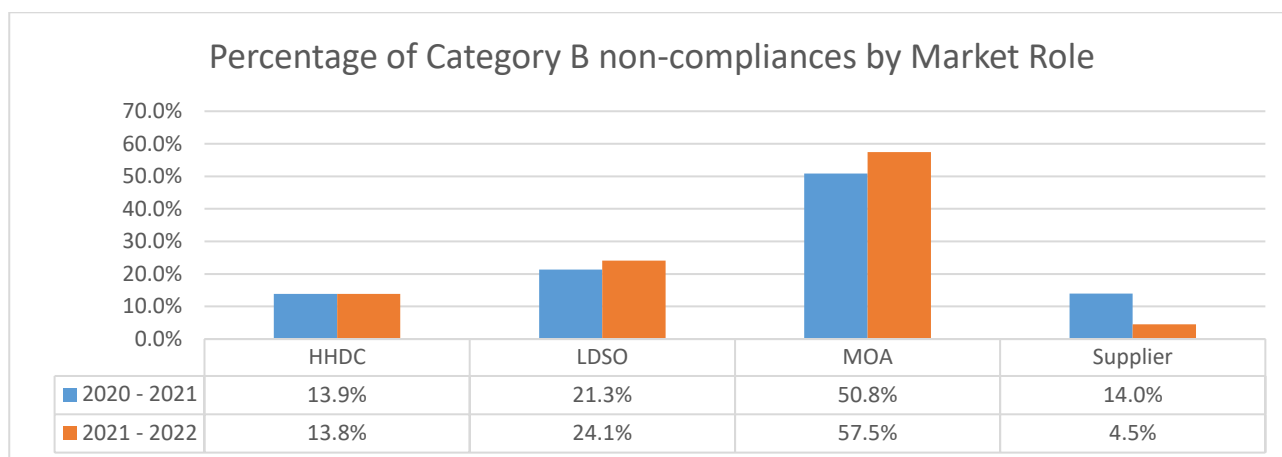


Figure 11 Percentage of non-compliance due to information not being provided to the TAA by market role

The table below provides a breakdown of the Category B non-compliances by market role.

Non-compliance	HHDC	LDSO	MOA	Supplier
Allocation Schedule not provided	5			5
Commissioning record (part 1) not provided (Post Nov 2018)		549	86	
Commissioning record (part 1) not provided (Pre Nov 2018)			76	
Commissioning record (part 2) not provided			995	
Compensation figures not provided (where applicable)			4	
Complex Site Supplementary Information Form not provided	5		5	
D0001 & D0002 fault resolution report not provided	19		29	
D0268 mismatch (non-key fields)	11		10	13
D0268 not provided	273		328	323
Missing D0215		607		
Missing fields in the D0215 flow		208		
Overall Accuracy calculation not provided			1023	
Settlement data (3 days) not provided	732		931	
Single Line Diagram not provided ⁵		458		2
Supporting evidence for Overall Accuracy calculation not provided			850	
Total	1045	1822	4337	343

Figure 12 Count of Category B non-compliances by market role

⁵ Following the discussion with TAMEG and the Issue 93 Workgroup (Review of all the BSC metering Codes of Practice), from November 2021 Elexon temporarily suspended the obligation on the LDSO to submit Single Line Diagrams for Desktop Audits. All 460 Non-compliances recorded are prior to this decision.

6.3 CVA Main Sample – Onsite inspection visits

There were no Category 1 non-compliance identified within the CVA Main Sample. The table below provides a count of all Category 1 non-compliances identified over the past three years.

Category 1 issue	2019 - 2020	2020 - 2021	2021 - 2022
Incomplete Aggregation Rules		1	
Meter Id (serial number) - Main Meter	2		
Metering Equipment not functioning correctly	2		
Total	4	1	0

Figure 13 Category 1 non-compliances by year

As can be seen in Figure 14, the frequency of Category 2 non-compliance has increased significantly this year compared with previous audit years.

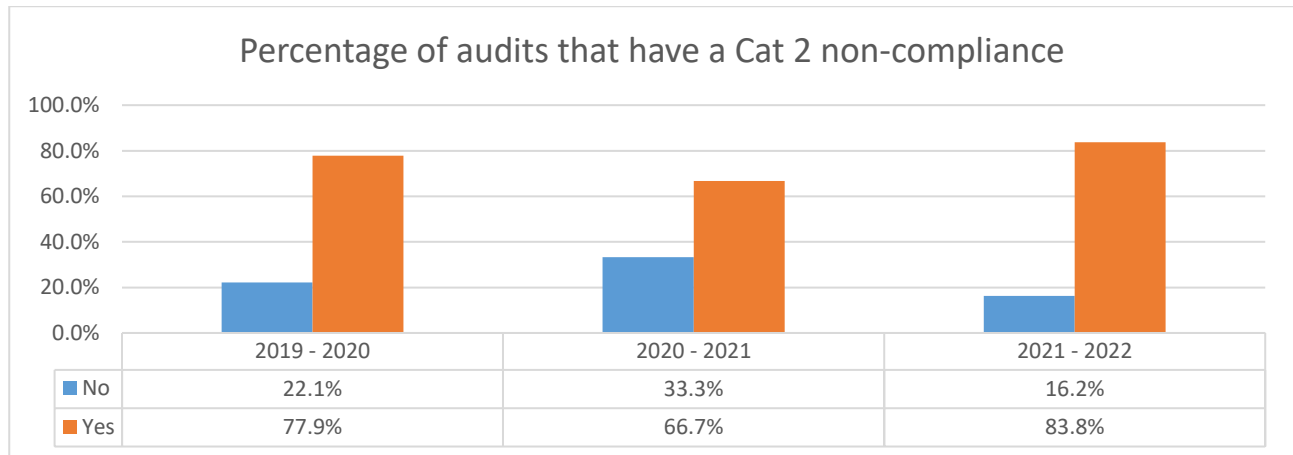


Figure 14 Percentage of CVA Main Sample Onsite inspection visits, identifying whether Category 2 non-compliance was identified

As can be seen in the table below, 71.7% of all Category 2 non-compliance was due to information not provided to the TAA, which is higher than previous years.

Category 2 grouping	2019 - 2020	2020 - 2021	2021 - 2022
Information incorrect or inconsistent	44.4%	60.7%	28.3%
Certificates	13.2%	32.6%	18.7% ↓
Commissioning	6.3%	19.1%	7.0% ↓
D0268 - Meter Technical Details	1.1%	0.0%	0.0%
Meter Setup	2.7%	7.9%	1.7%
Miscellaneous	21.1%	1.1%	0.9%
Information not provided	55.6%	39.3%	71.7%
Certificates	38.4%	32.6%	50.9% ↑
Commissioning	10.1%	6.7%	18.3% ↑
D0268 - Meter Technical Details	7.1%	0.0%	0.0%
Meter Setup	0.0%	0.0%	2.6%
Grand Total	100.0%	100.0%	100.0%

Figure 15 Percentage of Category 2 non-compliance grouped by issue

The TAA notes that there is a decrease in the percentage of information incorrect or inconsistent non-compliances relating to certificates and Commissioning, which have been made available for audit. However, conversely there is an increase in the lack of provision of information relating to certificates and commissioning, being made available for audit. It is therefore not possible for the TAA to determine if the

information had been made available for audit, whether this would have identified additional information incorrect or inconsistent non-compliance.

Count of non-compliance per audit

As can be seen in Figure 16, 16.2% of audits did not identify any non-compliance. This is a step change deterioration from 33.3% in the previous audit year, due to the frequency of certificates and commissioning information not being provided to the TAA for audit.

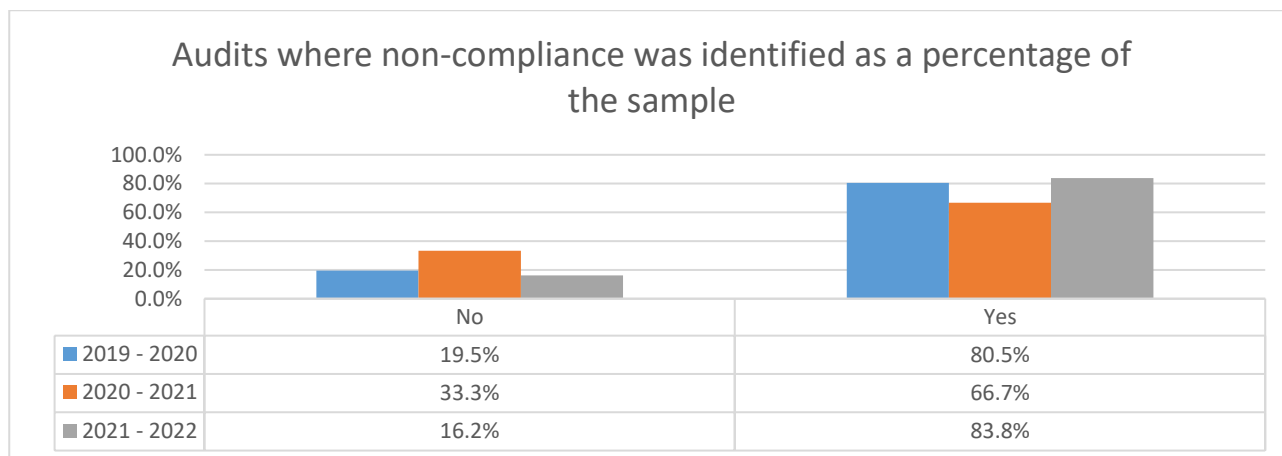


Figure 16 Percentage of CVA Main Sample audits where a Category 1 or 2 non-compliance was identified

As can be seen in Figure , there has been a step increase in the count of audits where four and five non-compliances were identified, compared to previous years, as well as a reduction where no non-compliance was identified.

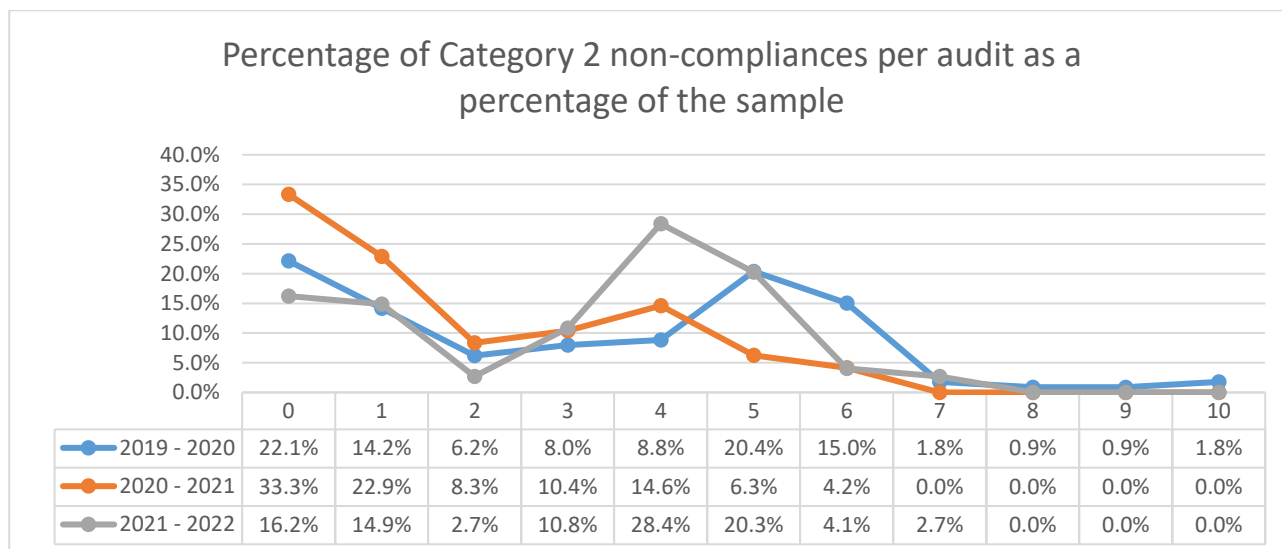


Figure 17 Count of Category 2 non-compliances per audit as a percentage of the SVA Main Sample Onsite inspection visits

6.4 CVA Targeted Sample – Onsite inspection visits

Background

The 2020-2021 CVA Target Sample focused on Grid Supply Points (GSP) where Elexon's investigations identified potential Annual Demand Ratio (ADR) issues. The subsequent TAA Onsite inspections audits identified a Category 1 non-compliance that had an estimated materiality of **~£12,000,000**.

This year's CVA Target Sample was a continuation of the previous years, initially focussing on sixty five GSPs in GSP Groups _M, _K and _J. During the year, the TAA recommended a further five located in GSP Group _C, which borders GSP Group _J.

Identified Category 1 non-compliance

As a result of the TAA audits this year, three Category 1 non-compliances were identified, although one was subsequently established not to have had a material effect on Settlement. As detailed in

Appendix A – Materiality, below, the material impact of the two remain non-Compliances has been estimated at ~£117,462,000.

Non-compliance comparison between the Main and Targeted Sample sets

The chart below provides a comparison between the CVA Main and Targeted Samples and whether any non-compliance was identified.

The TAA notes that there is a greater percentage of audits within the Target Sample where no non-compliance was identified.

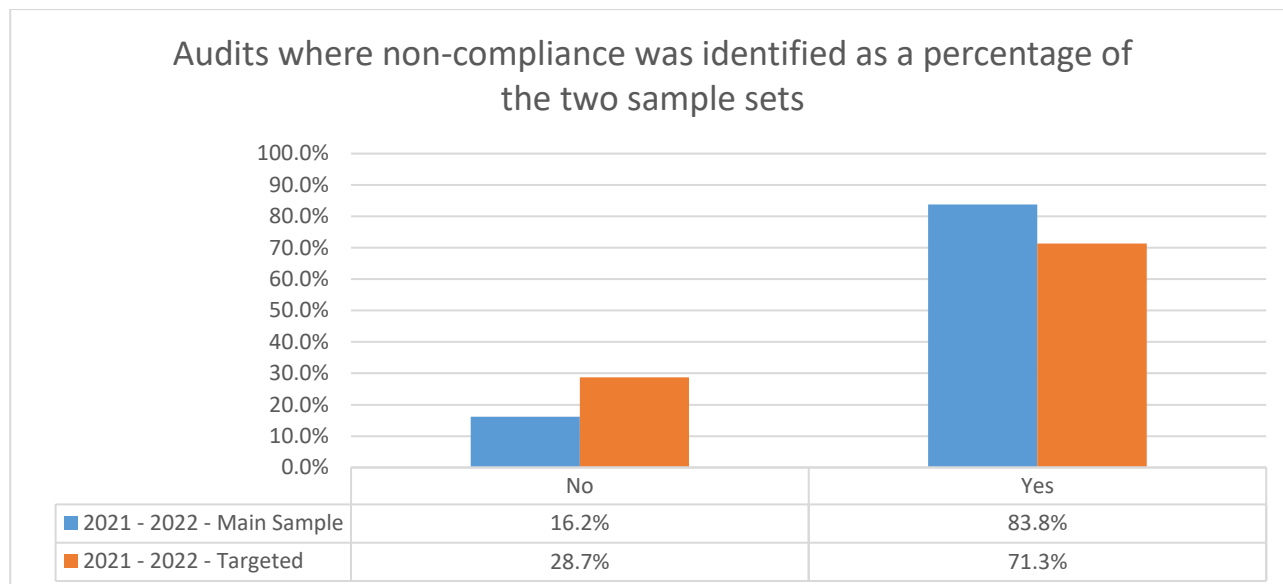


Figure 18 Comparison between the Main and Targeted Sample sets

The table below provides a comparison of the percentage of non-compliance between this year's Main and Target Samples, showing that there is significant variance between the two samples sets.

Grouping	Main Sample	Targeted
Information incorrect or inconsistent	28.3%	56.8%
Certificates	18.7%	12.8%
Commissioning	7.0%	22.9%
D0268 - Meter Technical Details	0.0%	5.1%
Meter Setup	1.7%	7.7%
Miscellaneous	0.9%	8.3%
Information not provided	71.7%	43.2%
Certificates	50.9%	19.9%
Commissioning	18.3%	5.1%
Meter Setup	2.6%	18.2%
Grand Total	100.0%	100.0%

Figure 19 Comparison between the CVA Main and Targeted Sample non-compliance percentage, grouped by issue

Appendix A – Materiality

Market Segment	Root Cause	Risk	Risk Description	Estimated Materiality
CVA	Metering Equipment not functioning correctly	20	CVA Metering Equipment is installed, programmed or maintained incorrectly including where Commissioning is performed incorrectly or not at all	£17,431,203.58
CVA	Metering Equipment not functioning correctly	20	CVA Metering Equipment is installed, programmed or maintained incorrectly including where Commissioning is performed incorrectly or not at all	£100,031,282.65
SVA	Outstation clock outside agreed tolerance	3	SVA Metering Equipment is installed, programmed or maintained incorrectly including where Commissioning is performed incorrectly or not at all	£0.00
SVA	Metering Equipment not functioning correctly	3	SVA Metering Equipment is installed, programmed or maintained incorrectly including where Commissioning is performed incorrectly or not at all	TBC
SVA	Measurement Transformer ratios different from those set up in Meter	3	SVA Metering Equipment is installed, programmed or maintained incorrectly including where Commissioning is performed incorrectly or not at all	TBC
SVA	Measurement Transformer ratios different from those set up in Meter	3	SVA Metering Equipment is installed, programmed or maintained incorrectly including where Commissioning is performed incorrectly or not at all	TBC

Appendix B – Further engagement statistics

SVA Onsite inspection visits

	2018-2019	2019-2020	2021-2022
Not visited			
Cancelled - De-energised and/or no Meter	0.1%		0.5%
Cancelled - MOA does not have a contract with the customer	0.1%	0.1%	
Cancelled - MOA Unable to Attend			0.5%
Cancelled - No longer a Measurement Class C Site	0.5%	0.1%	0.5%
Cancelled - Pending Change of Participant	1.6%	1.4%	2.3%
Cancelled - Recently audited the same metering equipment for another MSID		0.2%	
Cancelled - Supplier unable to secure access	3.6%	2.5%	2.1%
Cancelled - Supply Disconnected	0.1%	0.1%	
Cancelled - TAA Unable to Attend		0.7%	1.0%
Cancelled - To be rescheduled	0.4%	0.6%	1.3%
No Access - Severe Weather Conditions	0.1%		
Total	6.6%	5.7%	8.4%

Figure 20 Percentage of all audits that were scheduled that did not take place

	2018-2019	2019-2020	2021-2022
Not visited			
Cancelled - De-energised and/or no Meter	2		2
Cancelled - MOA does not have a contract with the customer	2	1	
Cancelled - MOA Unable to Attend			2
Cancelled - No longer a Measurement Class C Site	8	2	2
Cancelled - Pending Change of Participant	27	22	9
Cancelled - Recently audited the same metering equipment for another MSID		3	
Cancelled - Supplier unable to secure access	59	39	8
Cancelled - Supply Disconnected	2	1	
Cancelled - TAA Unable to Attend		11	4
Cancelled - To be rescheduled	7	9	5
No Access - Severe Weather Conditions	1		
Total	108	88	32

Figure 21 Count of all audits that were scheduled that did not take place

	2018-2019	2019-2020	2021-2022
Attended site			
Accepted	84.5%	84.2%	84.6%
No Access - Customer unable to find keys	1.8%	1.3%	0.6%
No Access - LSDO and/or SAP attendance required to access Metering Equipment	0.2%	0.6%	0.3%
No Access - MOA Representative did not attend	0.7%	1.7%	1.4%
No Access - MOA unable to secure access / or locate meter	0.8%	0.5%	2.3%
No Access - Other Reason (onsite)	0.1%	2.1%	0.3%
No Access - Premises closed/unoccupied and no-one available to provide access.	1.2%	0.6%	0.9%
No Access - Site visited customer unable to provide access	2.0%	2.1%	2.0%
No Access - Site visited customer unavailable to provide access	7.4%	6.3%	5.7%
No Access - Site visited customer unwilling to provide access	0.6%	0.3%	1.4%
No Access - Supply Disconnected	0.1%	0.1%	0.3%
No Access - Unsafe access	0.6%	0.1%	0.3%
Total	100%	100%	100%

Figure 22 Percentage of visits by outcome

	2018-2019	2019-2020	2021-2022
Attended site	1536	1445	351
Accepted	1298	1217	297
No Access - Customer unable to find keys	27	19	2
No Access - LSDO and/or SAP attendance required to access Metering Equipment	3	9	1
No Access - MOA Representative did not attend	10	25	5
No Access - MOA unable to secure access / or locate meter	12	7	8
No Access - Other Reason (onsite)	2	30	1
No Access - Premises closed/unoccupied and no-one available to provide access.	19	9	3
No Access - Site visited customer unable to provide access	31	30	7
No Access - Site visited customer unavailable to provide access	114	91	20
No Access - Site visited customer unwilling to provide access	9	5	5
No Access - Supply Disconnected	2	2	1
No Access - Unsafe access	9	1	1
Total	1644	1533	383

Figure 23 Count of visits by outcome

SVA Desktop Audits

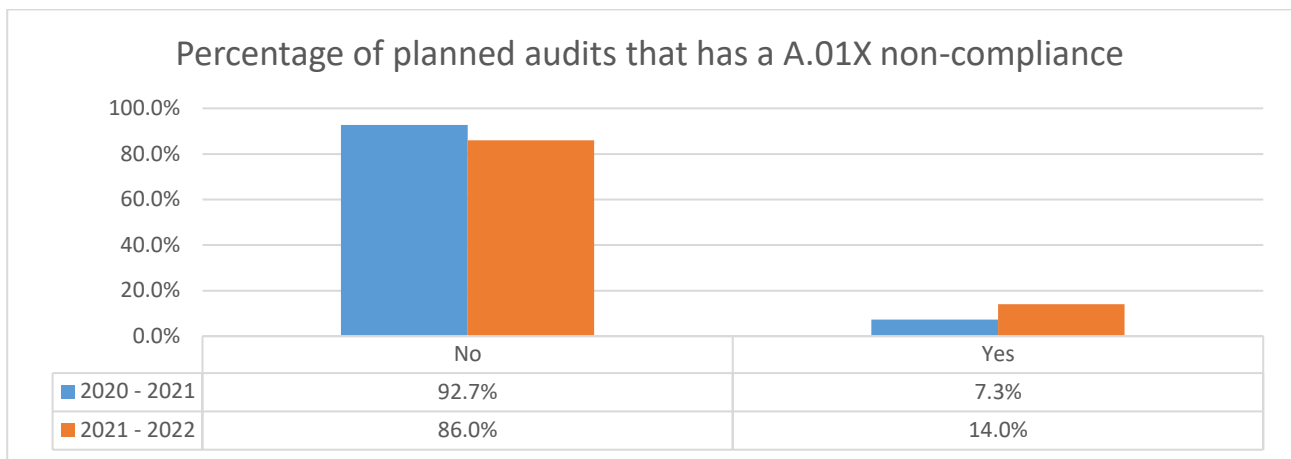


Figure 24 Percentage of planned audits where a Category A.01X non-compliance was created, meaning that the Supplier failed to confirm or complete Desktop Audit notification

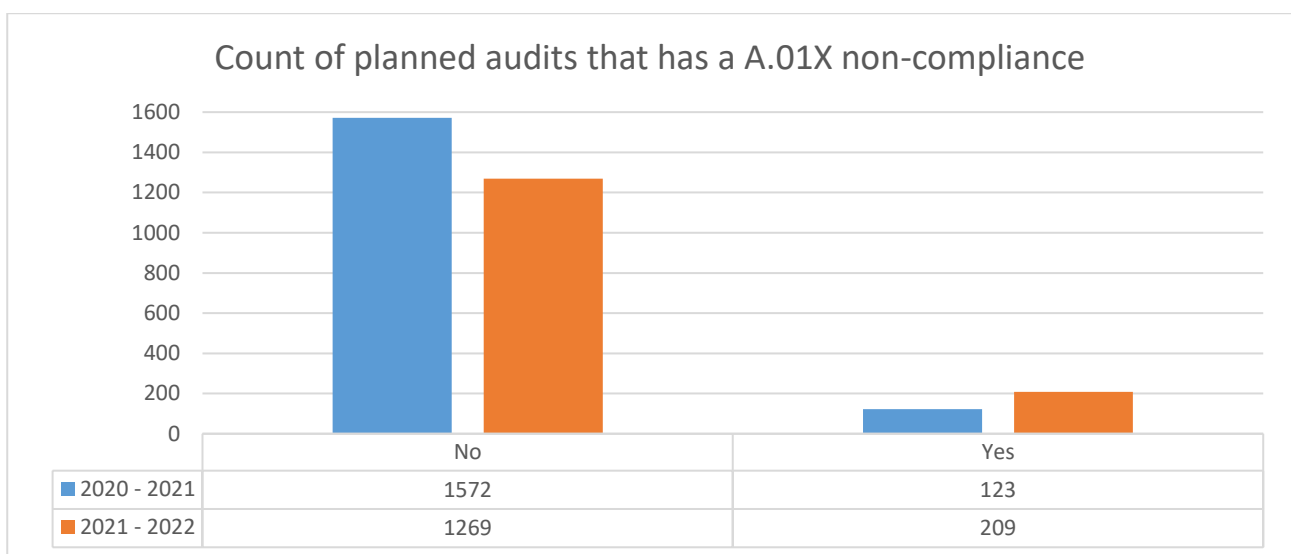


Figure 25 Count of planned audits where a Category A.01X non-compliance was created, meaning that the Supplier failed to confirm or complete Desktop Audit notification

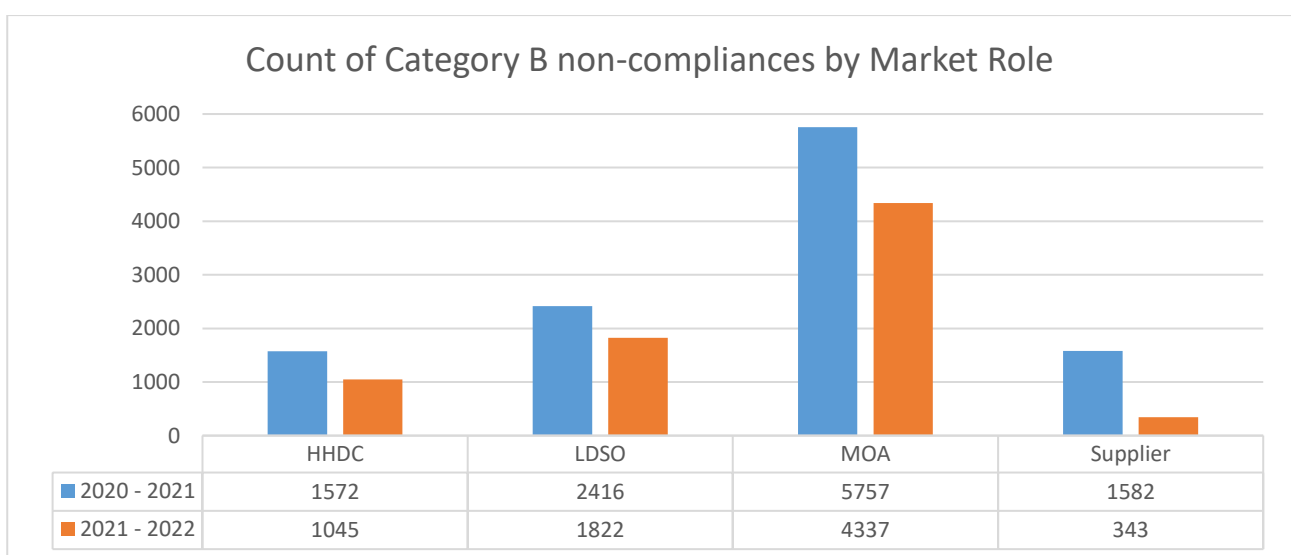


Figure 26 Count of non-compliance due to information not being provided to the TAA by market role

Appendix C – Further SVA non-compliance statistics

SVA Main Sample – Onsite inspection visits

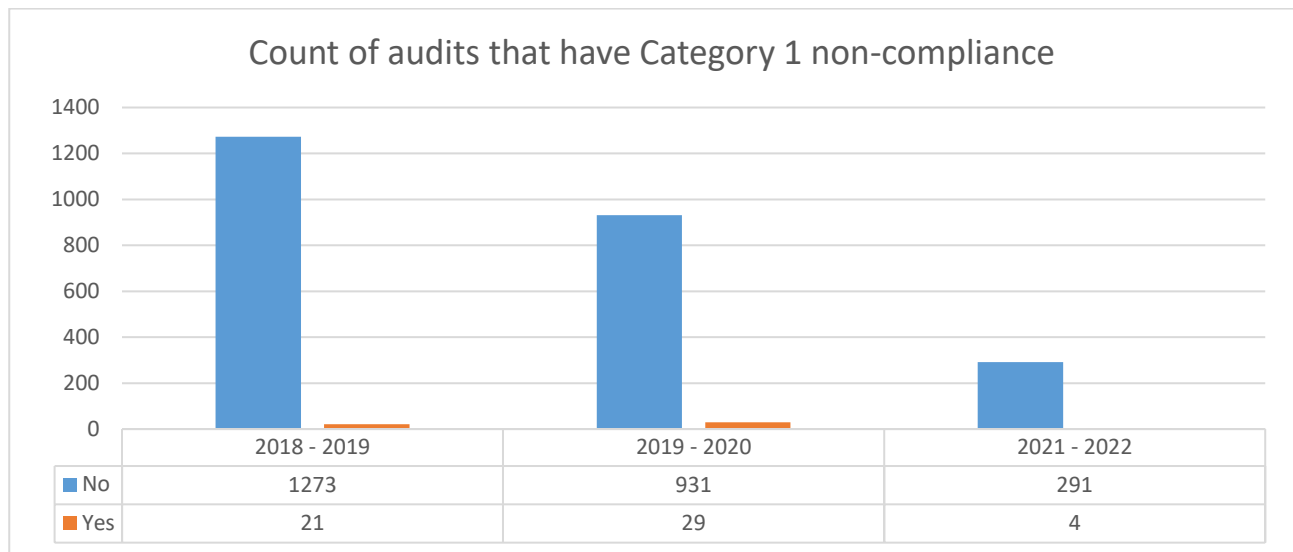


Figure 27 Count of SVA Main Sample Onsite inspection visits, identifying whether Category 1 non-compliance was identified

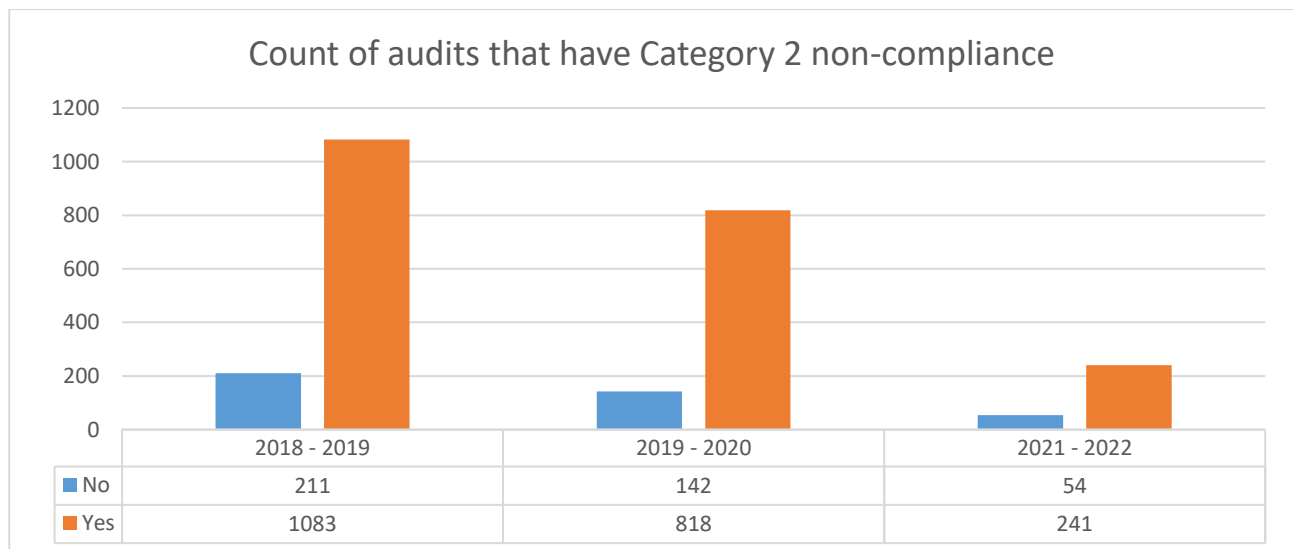


Figure 28 Count of SVA Main Sample Onsite inspection visits, identifying whether Category 2 non-compliance was identified

Count of Category 1 non-compliances per audit as a percentage of the sample

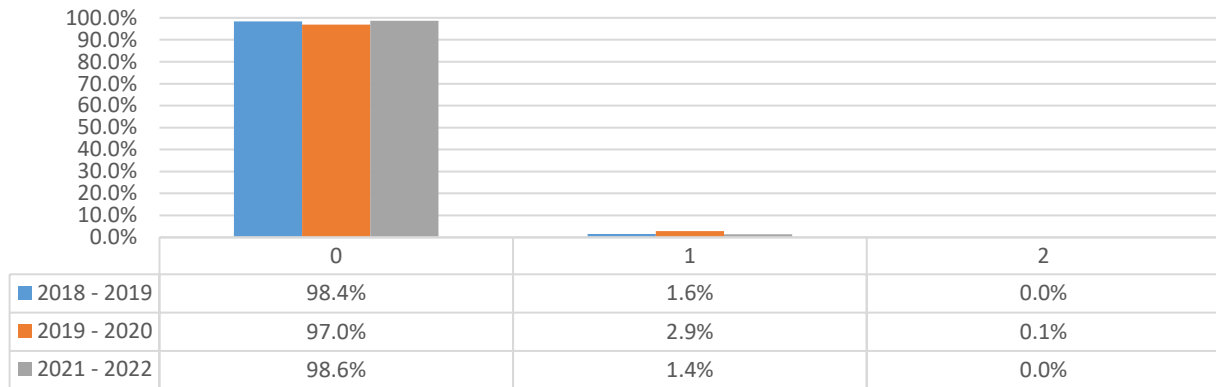


Figure 29 Count of Category 1 non-compliances per audit as a percentage of the SVA Main Sample Onsite inspection visits

Count of Category 2 non-compliances per audit as a percentage of the sample

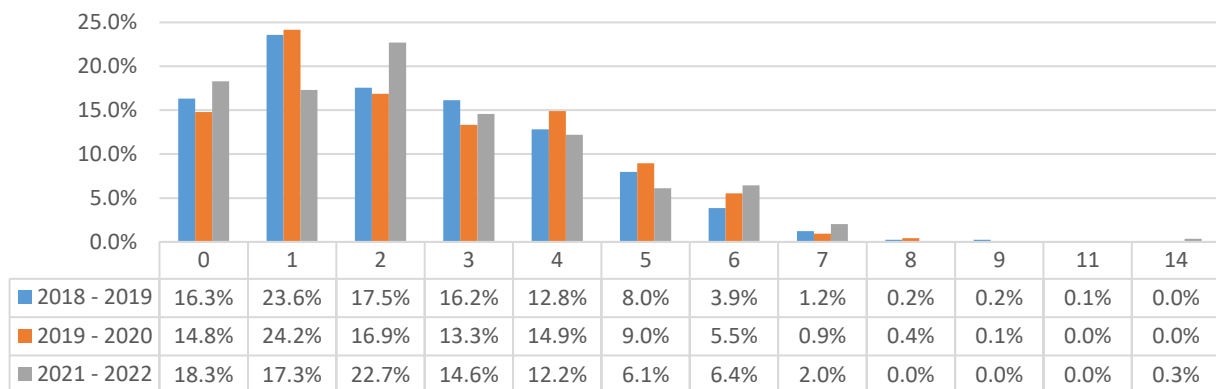


Figure 30 Count of Category 2 non-compliances per audit as a percentage of the SVA Main Sample Onsite inspection visits

Category 2 grouping	2018 - 2019	2019 - 2020	2021 - 2022
Information incorrect or inconsistent	1208	943	206
Certificates	492	362	75
Meter Setup	160	109	47
Commissioning	207	246	42
Clock timing	46	29	17
Miscellaneous	285	180	16
D0268 - Meter Technical Details	16	16	9
CT/VT	2	1	
Information not provided	1830	1421	512
Certificates	1086	934	299
Commissioning	724	470	190
Meter Setup			19
D0268 - Meter Technical Details	20	17	3
Complex/shared			1
Total	3038	2364	718

Figure 31 Count of Category 2 non-compliance grouped by issue

Category 2 issue	2018 - 2019	2019 - 2020	2021 - 2022
Information incorrect or inconsistent			
Certificates			
Possibility that Overall Accuracy of Metering System not maintained	481	348	72
Meter Certificates do not match site equipment	9	13	3
Measurement Transformer Certificates do not match site equipment	2	1	
Clock timing			
Outstation clock outside agreed tolerance	46	29	17
Commissioning			
Commissioning records incomplete	177	226	33
Commissioning records incorrect	30	20	9
CT/VT			
CT accuracy class incorrect	2	1	
D0268 - Meter Technical Details			
Other non-Key fields (e.g. Measurement Transformer Ratios)	9	10	8
HHDC MTDs don't match on site equipment (recent Meter Exchange)	5	5	1
Miscellaneous D0268	2		
Meter Id - Main Meter		1	
Meter Setup			
Settlement Metering Equipment not sealed	39	41	24
Meter Register Multiplier	16	4	10
Incorrect CoP applied	20	20	5
Measurement Transformer Ratios	17	8	2
Alarm not fitted where required	11	4	2
No local isolation	2	2	1
Alarm not functioning	16	6	1
Meter Id - Check Meter		2	1
Miscellaneous - Accuracy	7	1	1
Unapproved data format and protocol in use	1		
Other Metering Equipment not separately fused	3	5	
Note for Elexon	8		
Channel configuration	1	2	
Measurement Quantity Id	1		
Voltage selection relay not installed/working when summation CTs used	1	1	
Meter accuracy class incorrect	6	2	
Non-Settlement Meters not separately fused	6	7	
Meter Id - Main Meter	5	4	
Miscellaneous			
No Supporting evidence provided			9
Other non-compliance not covered elsewhere	281	171	4
Miscellaneous - Commissioning	3	5	2
Miscellaneous - not covered elsewhere		3	1
Miscellaneous - ME Seals	1	1	
Total	1208	943	206

Figure 32 Count of information incorrect or inconsistent Category 2 non-compliances grouped by issue

Category 2 issue	2018 - 2019	2019 - 2020	2021 - 2022
Information not provided			
Certificates			
Meter Certificates not provided	422	371	219
Measurement Transformer Certificates not provided	664	563	80
Commissioning			
Commissioning records not provided	724	470	190
Complex/shared			
Complex Site Supplementary Information Form not provided			1
D0268 - Meter Technical Details			
MTDs not provided - MOA and/or HHDC	20	17	3
Meter Setup			
No justification provided of applied compensation			19
Total	1830	1421	512

Figure 33 Count of Category 2 non-compliances due to information not being provided to the TAA, grouped by issue

SVA Main Sample – Desktop Audits

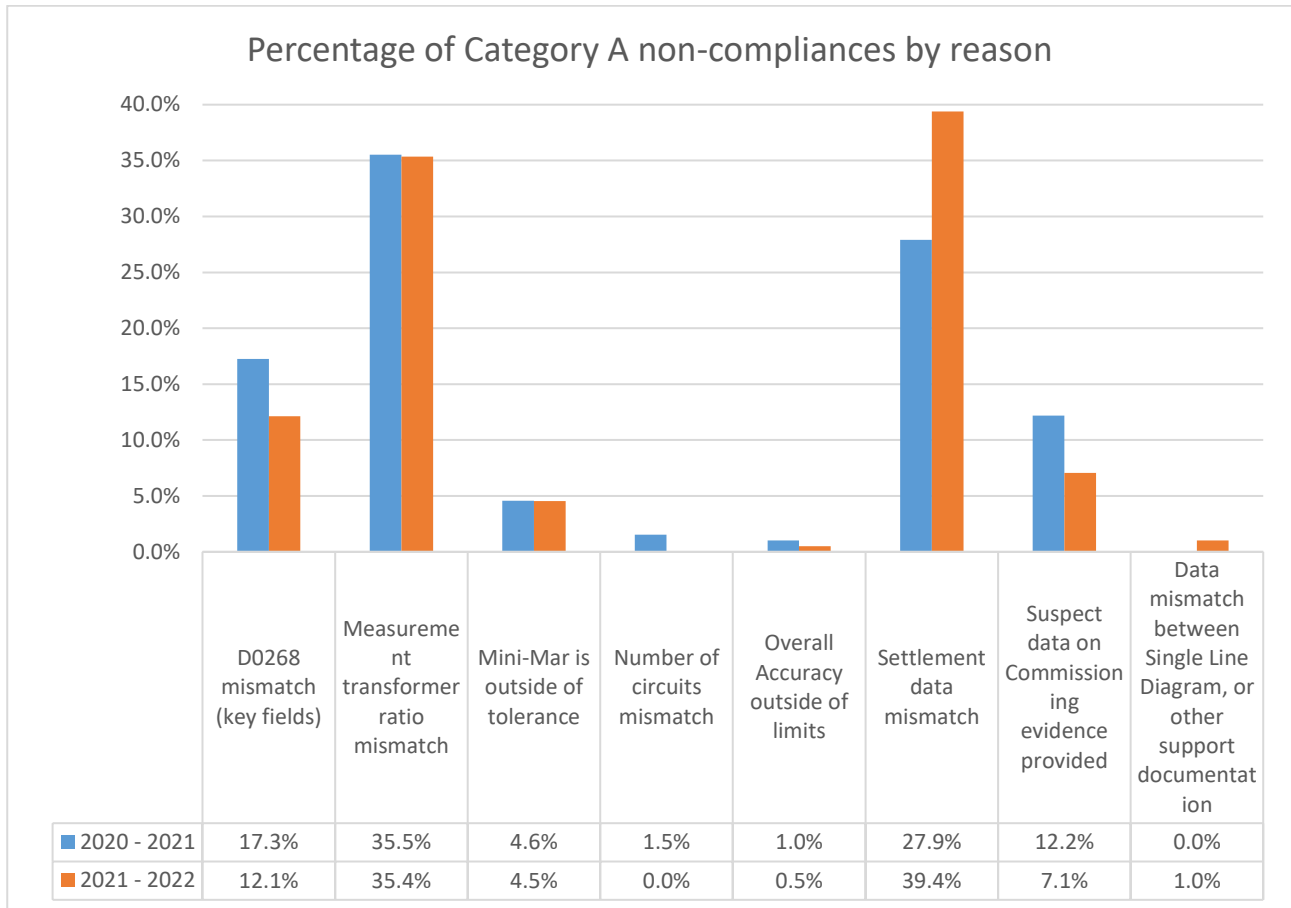


Figure 34 Percentage of Category A non-compliance by reason

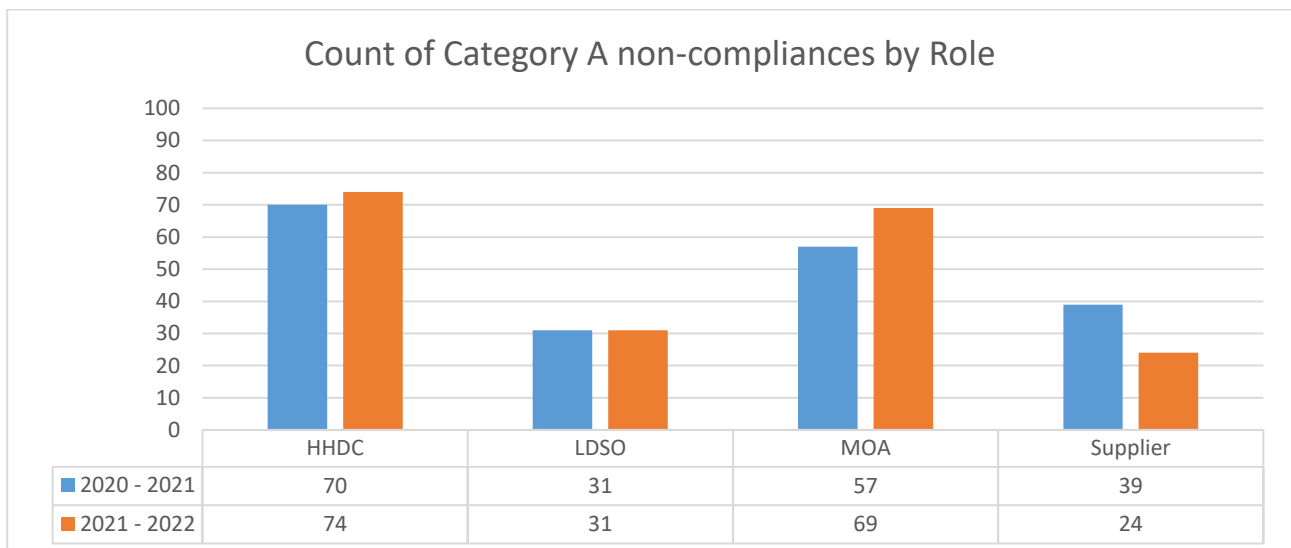


Figure 35 Count of non-compliance due to information incorrect or inconsistent error, discrepancy and/or process failure by market role

Count of Category A non-compliances by reason and market role

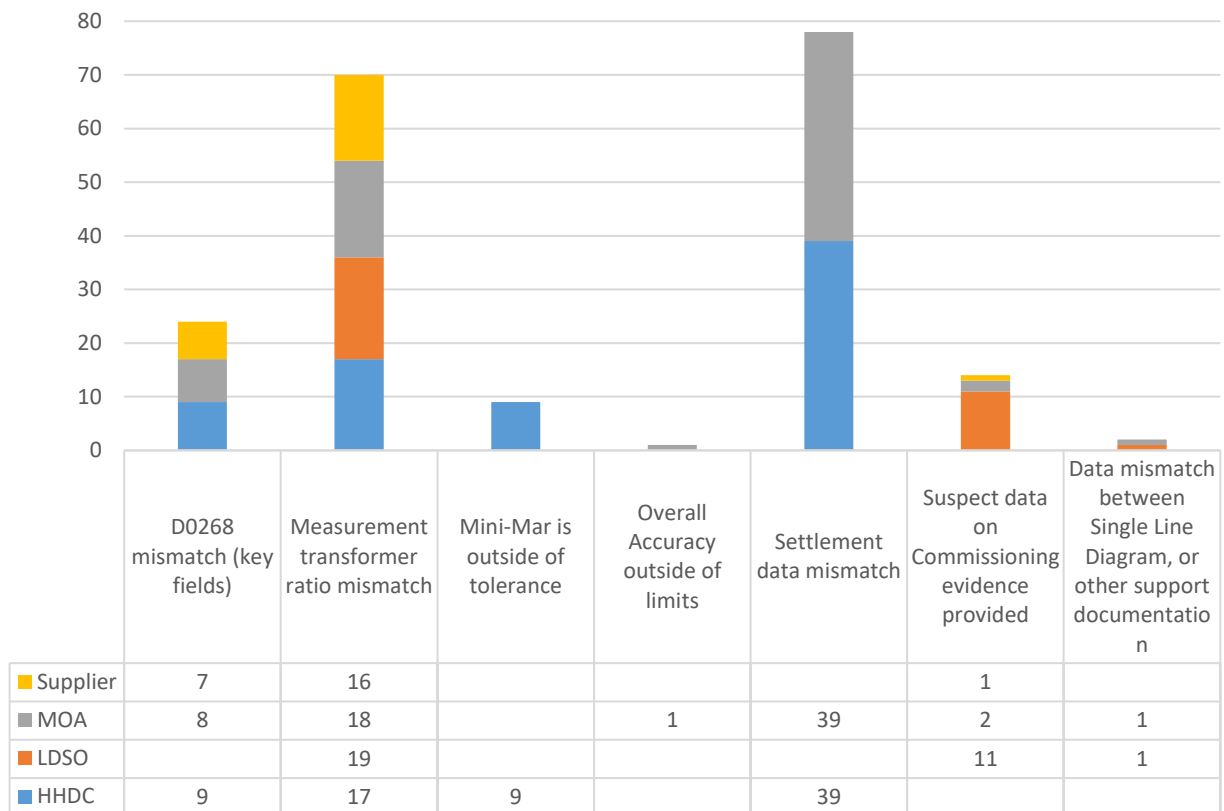


Figure 36 Count of Category A non-compliances by reason and market role (excludes A.01X)

HHDC percentage of Category A non-compliances by issue

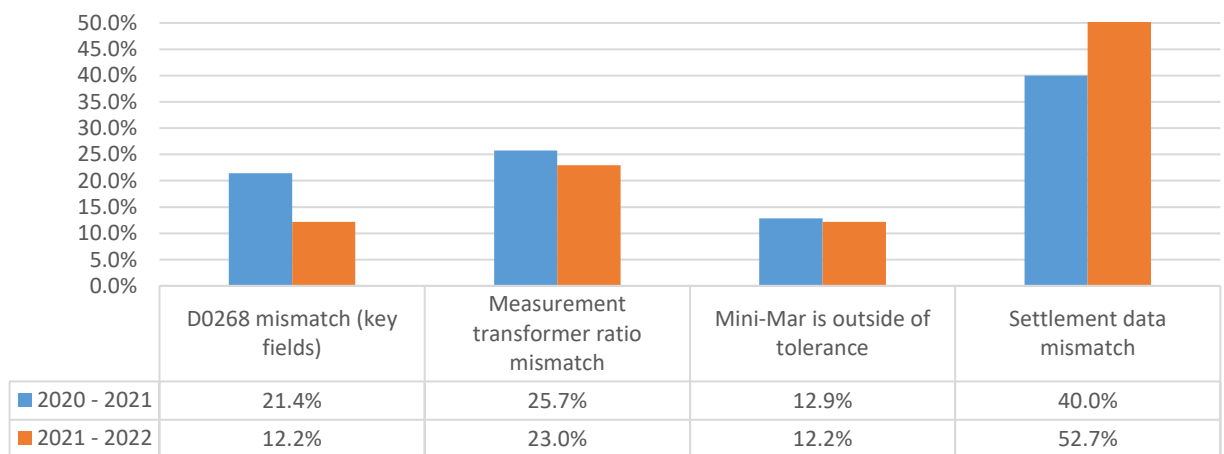


Figure 37 HHDC percentage of non-compliances by issue

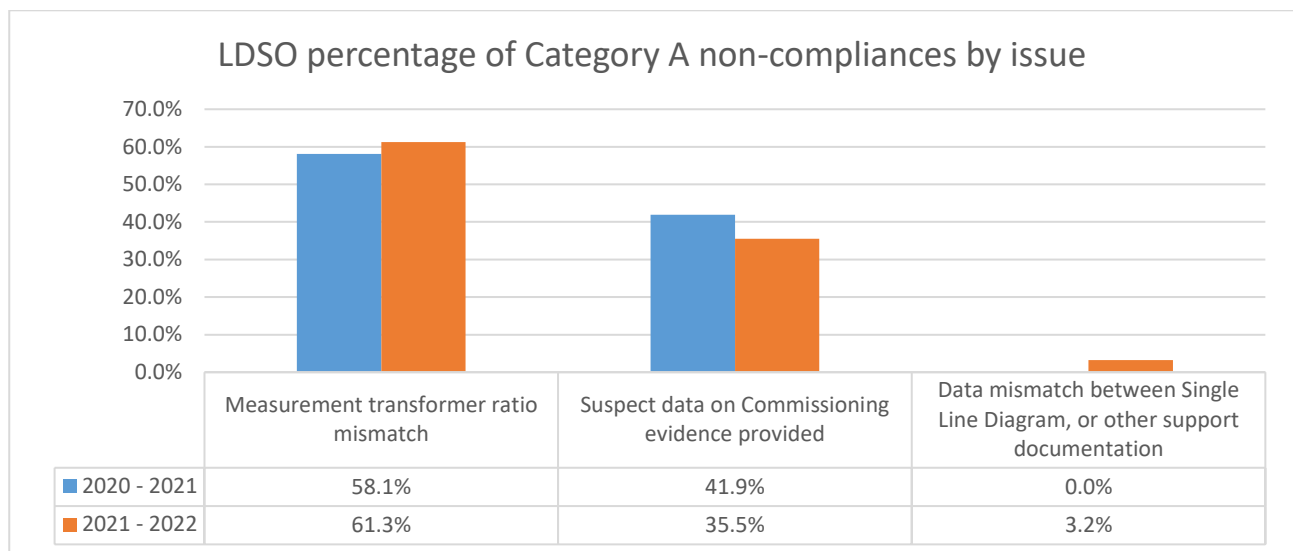


Figure 38 LDSO percentage of non-compliances by issue

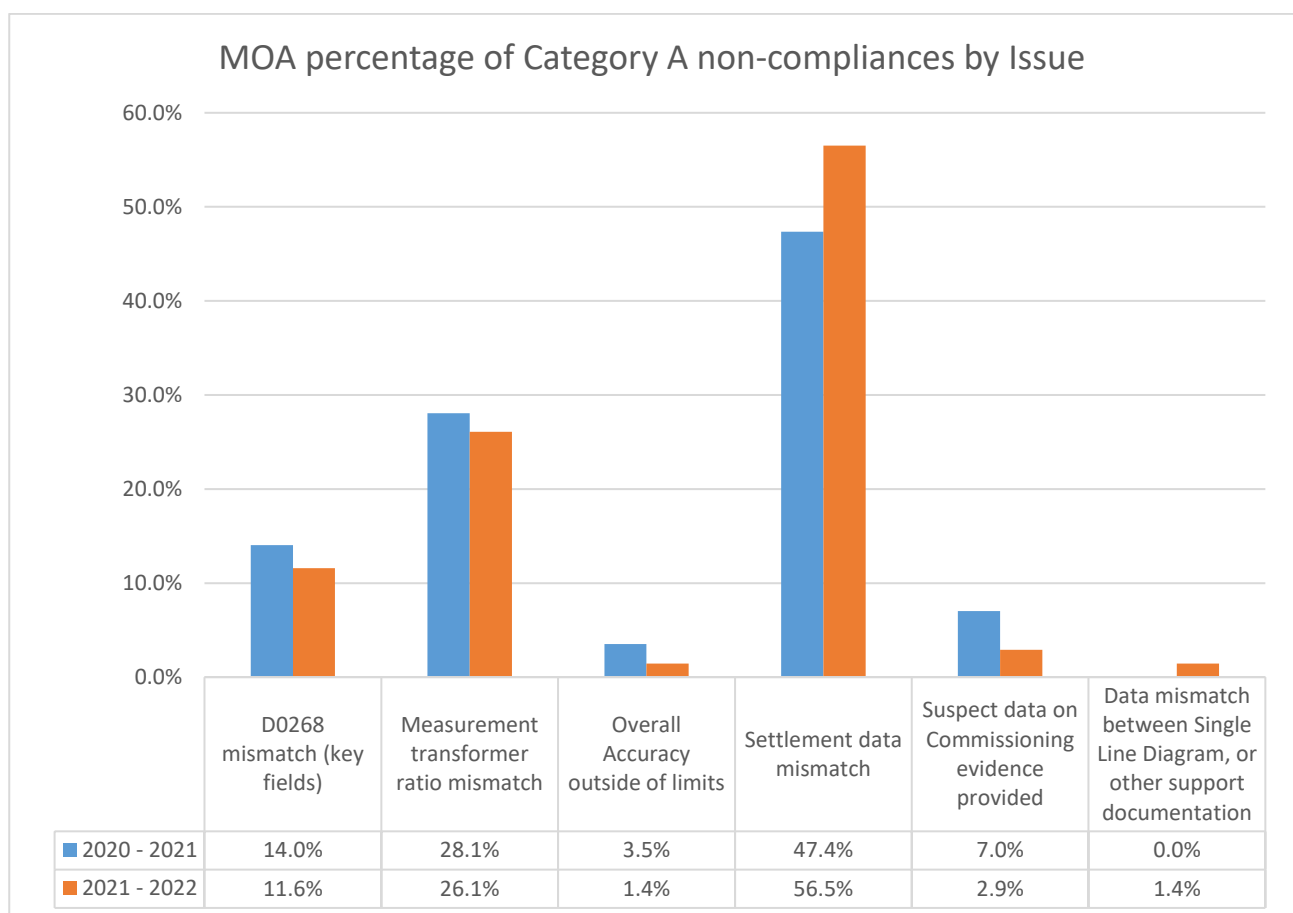


Figure 39 MOA percentage of non-compliances by issue

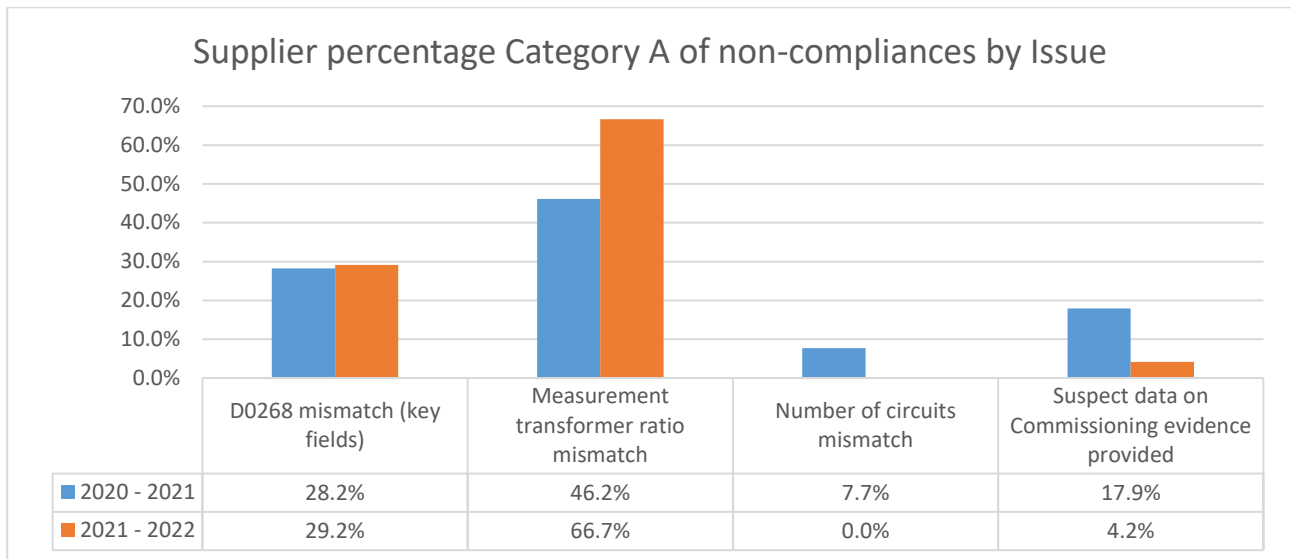


Figure 40 Supplier percentage of non-compliances by issue

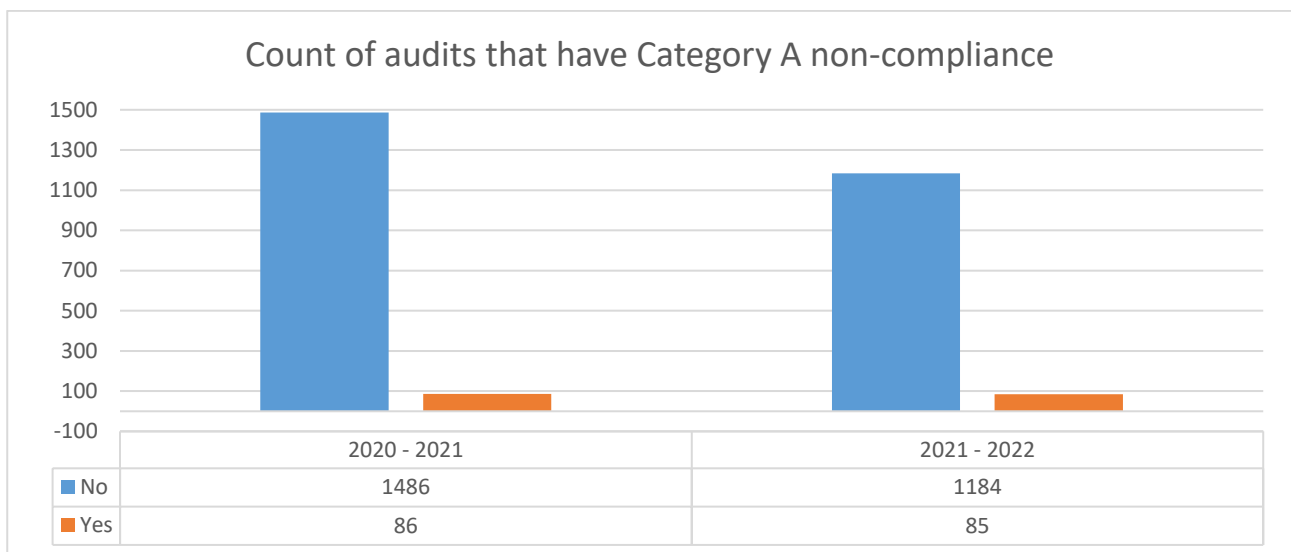


Figure 41 Count of audits where a Category A non-compliance was identified

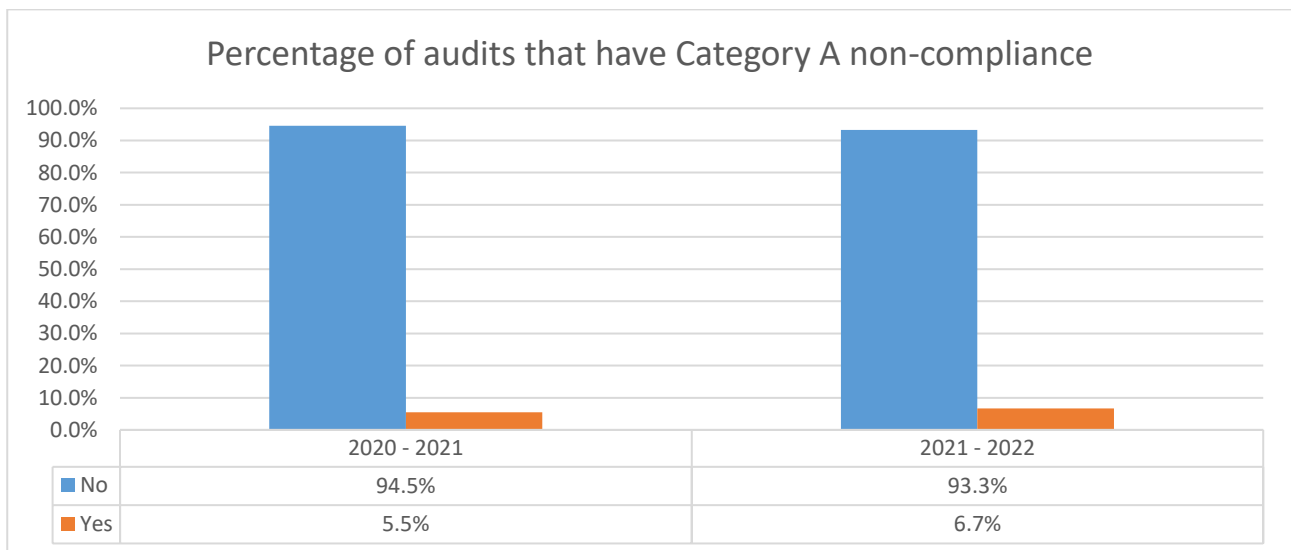


Figure 42 Percentage of audits where a Category A non-compliance was identified

Count of Category A non-compliances per audit as a percentage of the sample

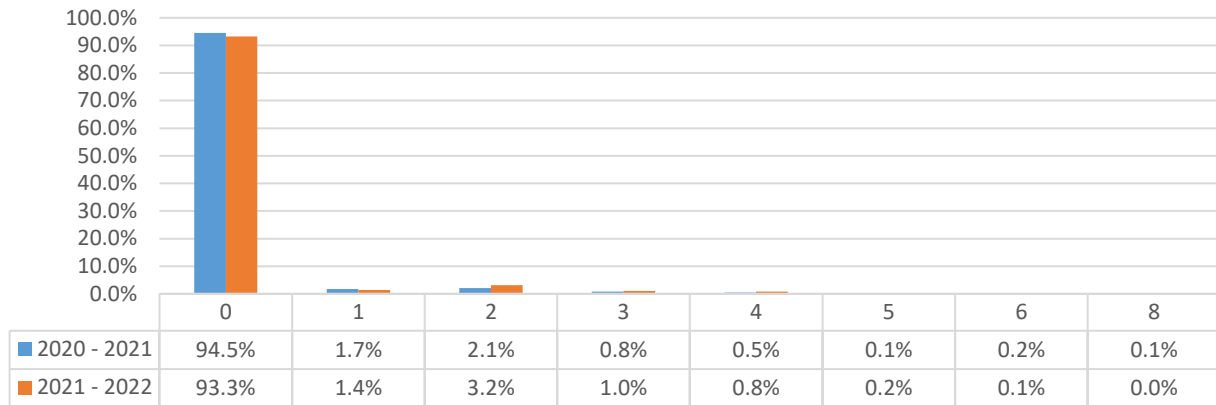


Figure 42 Count of Category A non-compliances per audit as a percentage of the sample

Count of Category A non-compliances per audit as a count of the sample

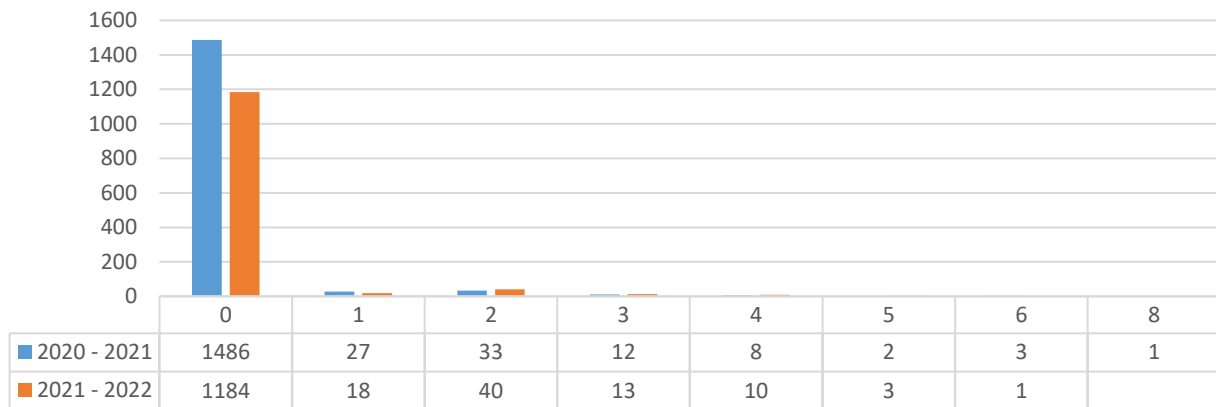


Figure 43 Count of Category A non-compliances per audit as a count of the sample

Count of audits that have Category B non-compliance

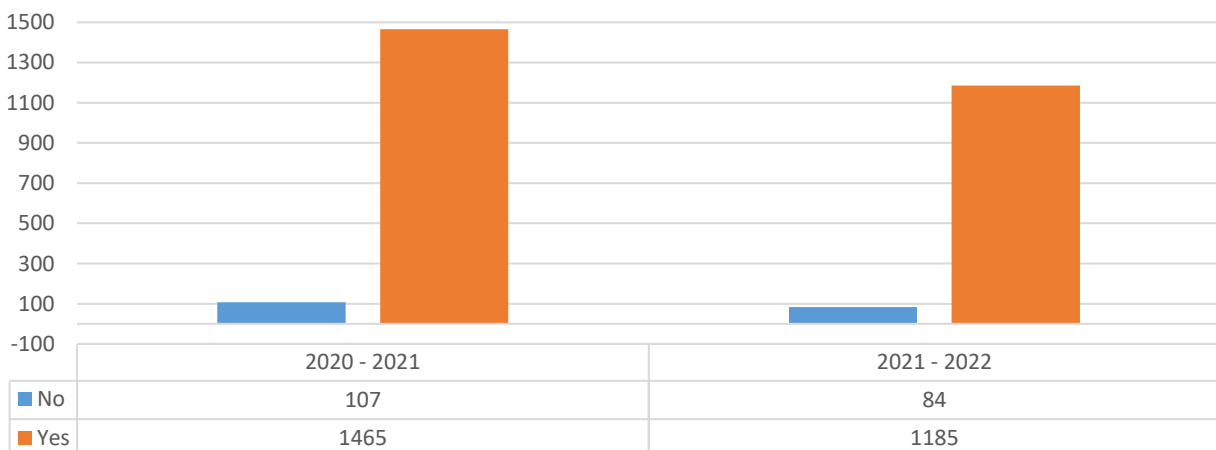


Figure 44 Count of audits where a Category B non-compliance was identified

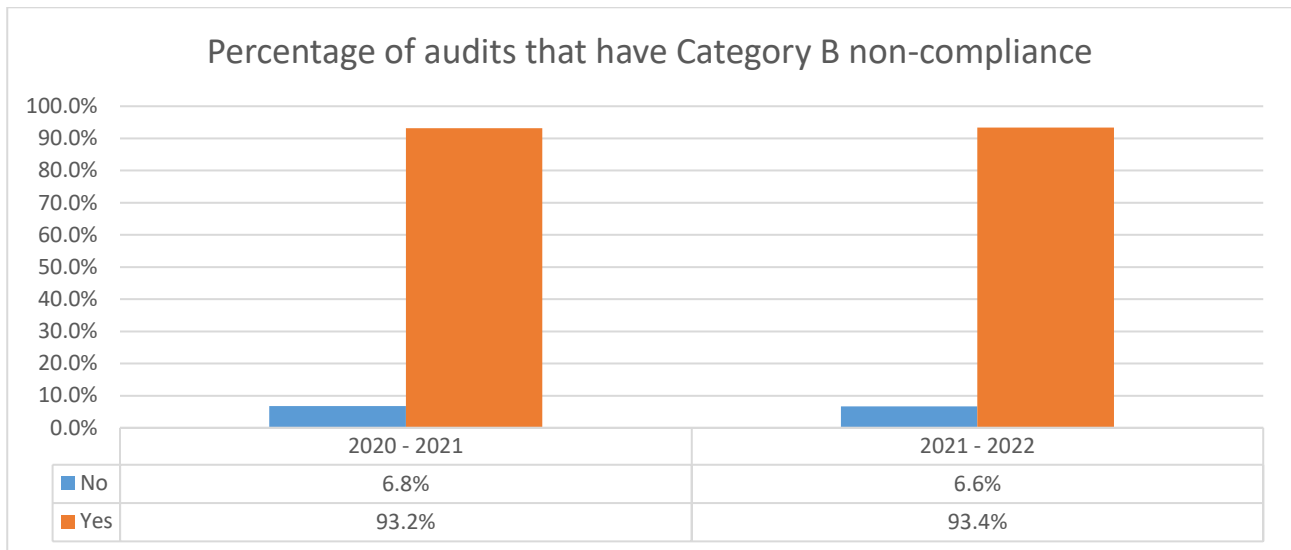


Figure 45 Percentage of audits where a Category B non-compliance was identified

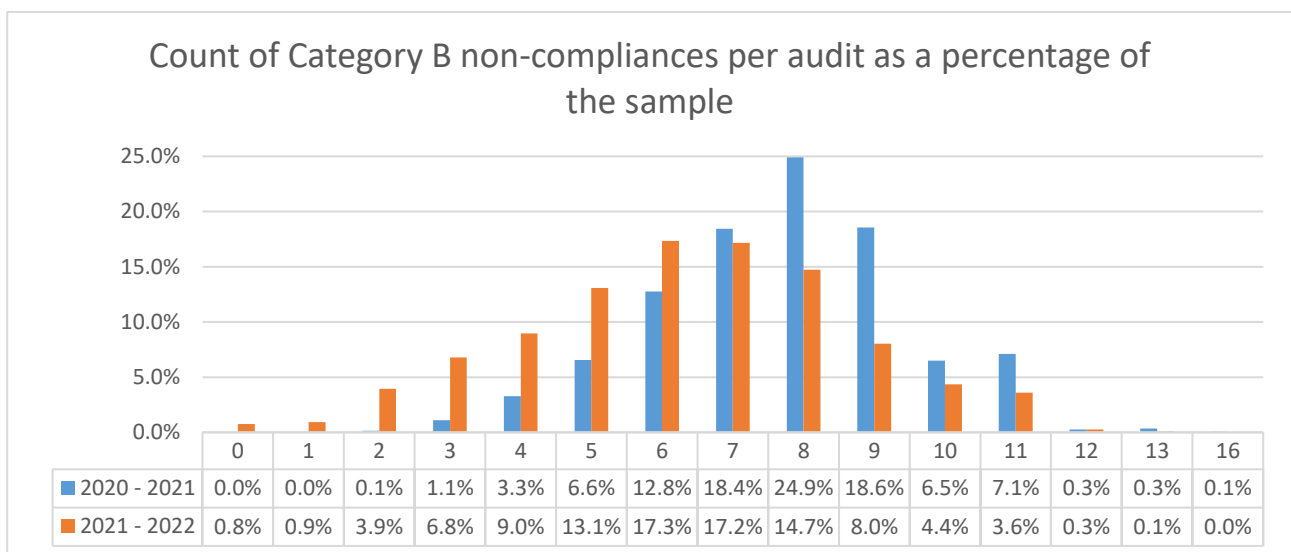


Figure 46 Count of Category B non-compliances per audit as a percentage of the sample]

Appendix D – Glossary of terms and acronyms

Term/Acronym	Definition
100kW Metering System	As defined in Section X, Annex X-1. Section L2.2 requires the Metering Equipment for a 100kW Metering System to be Half Hourly Metering Equipment
ADR	Annual Demand Ratio
BSC	Balancing and Settlement Code
BSCP	Balancing and Settlement Code Procedure
Category 1 non-compliance	A non-compliance that is deemed to be currently affecting the quality of data for Settlement purposes
Category 2 non-compliance	A non-compliance that is deemed to have the potential to affect the quality of data for Settlement purposes
Category A non-compliance	A non-compliance that has been identified from a Desktop Audit, which is deemed to be currently affecting, or has a high likelihood of affecting the quality of data for Settlement purposes
Category B non-compliance	A non-compliance that has been identified from a Desktop Audit, which is deemed to have a lower likelihood of affecting the quality of data for Settlement purposes, or for the non-provision of evidence
CDCA	Central Data Collection Agent
CDCC	Consumption Data Comparison Check
Commissioning	A process to ensure that the energy flowing across a Defined Metering Point is accurately recorded by the associated Metering System
CoP	Code of Practice
CT	Current Transformer
CVA	Central Volume Allocation
HHDC	Half Hourly Data Collector
HV	High Voltage
LDSO	Licensed Distribution System Operator
LV	Low Voltage
MAR	Meter Advance Reconciliation
Measurement Class C	Half Hourly metered at 100kW premises
Measurement Class E	Half Hourly metered at below 100kW premises with current transformer
ME	Metering Equipment
MOA	Meter Operator Agent
MSID	Metering System Identifier
MTD	Meter Technical Details
OSWF	Offshore Wind Farm
PAB	Performance Assurance Board
PAOP	Performance Assurance Operating Period
SAP	Senior Authorised Person
SMRS	Supplier Meter Registration Service
SVA	Supplier Volume Allocation
TAA	Technical Assurance Agent
VT	Voltage Transformer

Appendix E – Non-compliance Categories and description

Category 1 non-compliance

Category	Description
1.01	Complex Site Supplementary Information Form
1.01	Incomplete Aggregation Rules
1.01	Meter Id - Main Meter
1.02	Correct Energy Measurement Check indicates an error in the metered volume
1.02	Metering Equipment not functioning correctly
1.03	Outstation clock outside agreed tolerance
1.04	Measurement Transformer ratios different from those set up in Meter
1.06	Other non-compliance not covered elsewhere

Category 2 non-compliance

Category	Description
2.01	Aggregation Rules not provided
2.01	Alarm not fitted where required
2.01	Alarm not functioning
2.01	Channel configuration
2.01	Complex Site Supplementary Information Form
2.01	Measurement Quantity Id
2.01	Measurement Transformer Ratios
2.01	Meter Id - Check Meter
2.01	Meter Id - Main Meter
2.01	Meter Register Multiplier
2.02	HHDC MTDs don't match on site equipment (recent Meter Exchange)
2.02	Meter Id - Main Meter
2.02	Meter Register Multiplier
2.02	Miscellaneous D0268
2.02	Other non-Key fields (e.g. Measurement Transformer Ratios)
2.03	Complex Site Supplementary Information Form not provided
2.03	MTDs not provided - MOA and/or HHDC
2.06	CT accuracy class incorrect
2.06	Incorrect CoP applied
2.06	Meter accuracy class incorrect
2.06	Miscellaneous - Accuracy
2.06	Note for Elexon
2.06	Possibility that overall accuracy of Metering System not maintained
2.06	Unapproved data format and protocol in use
2.06	Voltage selection relay not installed/working when summation CTs used
2.06	VT accuracy class incorrect
2.09	Main and check Meters not separately fused
2.09	No local isolation
2.09	Non-Settlement Meters not separately fused
2.09	Other Metering Equipment not separately fused
2.11	Miscellaneous - ME Seals
2.11	Settlement Metering Equipment not sealed
2.13	Miscellaneous - not covered elsewhere
2.13	No justification provided of applied compensation
2.13	No Supporting evidence provided
2.13	Other non-compliance not covered elsewhere

2.13	Outstation clock outside agreed tolerance
2.14	Outstation clock outside agreed tolerance
2.15	Commissioning records incomplete
2.15	Commissioning records incomplete
2.15L	Commissioning records incomplete
2.15M	Commissioning records incomplete
2.15M	Commissioning records incomplete
2.15	Commissioning records incorrect
2.15L	Commissioning records incorrect
2.15M	Commissioning records incorrect
2.15	Commissioning records not provided
2.15L	Commissioning records not provided
2.15L	Commissioning records not provided
2.15M	Commissioning records not provided
2.15	Miscellaneous - Commissioning
2.16	Measurement Transformer Certificates do not match site equipment
2.16	Measurement Transformer Certificates not provided
2.16L	Measurement Transformer Certificates not provided
2.16	Miscellaneous - Measurement Transformer Certificates
2.17	Meter Certificates do not match site equipment
2.17	Meter Certificates not provided
2.17	Miscellaneous - Meter Certificates

Category A non-compliance

Category	Description
A.01X	Registrant failed to confirm or complete Desktop Audit notification
A.02M	Data mismatch between Single Line Diagram, or other support documentation
A.02R	Data mismatch between Single Line Diagram, or other support documentation
A.04C	Measurement transformer ratio mismatch
A.04M	Measurement transformer ratio mismatch
A.04R	Measurement transformer ratio mismatch
A.04X	Measurement transformer ratio mismatch
A.05M	Suspect data on Commissioning evidence provided
A.05R	Suspect data on Commissioning evidence provided
A.05X	Suspect data on Commissioning evidence provided
A.06C	Settlement data mismatch
A.06M	Settlement data mismatch
A.07M	Overall Accuracy outside of limits
A.09C	D0268 mismatch (key fields)
A.09M	D0268 mismatch (key fields)
A.09X	D0268 mismatch (key fields)
A.10C	Mini-Mar is outside of tolerance
A.14X	Number of circuits mismatch

Category B non-compliance

Category	Description
B.01C	D0268 not provided
B.01M	D0268 not provided
B.01X	D0268 not provided
B.03R	Single Line Diagram not provided
B.03X	Single Line Diagram not provided
B.04C	Complex Site Supplementary Information form not provided

B.04M	Complex Site Supplementary Information form not provided
B.07C	Allocation Schedule not provided
B.07X	Allocation Schedule not provided
B.08C	D0001 & D0002 fault resolution report not provided
B.08M	D0001 & D0002 fault resolution report not provided
B.09C	Settlement data (3 days) not provided
B.09M	Settlement data (3 days) not provided
B.10M	Compensation figures not provided (where applicable)
B.11M	Commissioning record (part 1) not provided (Post Nov 2018)
B.11R	Commissioning record (part 1) not provided (Post Nov 2018)
B.12M	Commissioning record (part 1) not provided (Post Nov 2018)
B.12M	Commissioning record (part 1) not provided (Pre Nov 2018)
B.13M	Commissioning record (part 2) not provided
B.14M	Supporting evidence for Overall Accuracy calculation not provided
B.15R	Missing D0215
B.16M	Overall accuracy calculation not provided
B.17C	D0268 mismatch (non-key fields)
B.17M	D0268 mismatch (non-key fields)
B.17X	D0268 mismatch (non-key fields)
B.18R	Missing fields in the D0215 flow