

# Technical Assurance Agent Annual Report: BSC Year 2019/20

## Non-Confidential

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## References

No	Title
1	TAA Agreement

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# 1 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.
BMU	Balancing Mechanism Unit
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
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
DC	Data Collector
DMP	Defined Metering Point
ECOES	Electricity Central Online Enquiry Service
EFR	Error and Failure Resolution
HHMS	Half Hourly Metering Systems
HV	High Voltage
LDSO	Licensed Distribution System Operator
LV	Low Voltage
MAR	Meter Advance Reconciliation
MC	Measurement Class
MC 'C'	Measurement Class C – Half Hourly metered at 100kW premises
MC 'E'	Measurement Class E – Half Hourly metered at below 100kW premises with current transformer
MCI	Multi Circuit Inspection
ME	Metering Equipment
MOA	Meter Operator Agent
MRM	Meter Register Multiplier
MSID	Metering System Identifier
MTD	Meter Technical Details
NC non-compliance	Consumption data held by Data Collector outside tolerance when compared with metered energy data
NMTES	National Measurement Transformer Error Statement
Observation	A non-compliance that is deemed neither to affect nor have the potential to affect the quality of data for Settlement purposes
OSWF	Offshore Wind Farm
PAB	Performance Assurance Board
SAP	Senior Authorised Person
SVA	Supplier Volume Allocation
TAA	Technical Assurance Agent
TAAMT	TAA Management Tool
TAM	Technical Assurance of Metering
TAMEG	Technical Assurance of Metering Expert Group
TAPAP	Technical Assurance of Performance Assurance Parties
UTC	Co-ordinated Universal Time
VT	Voltage Transformer

## 2 Introduction

### 2.1 The purpose of the Technical Assurance Agent (TAA) Annual Report

The Technical Assurance of Metering (TAM) technique monitors compliance of 100kW Metering Systems that are registered and energised in Settlement, as defined in the Balancing and Settlement Code (BSC) and its Code Subsidiary Documents (CSDs).

The TAA Annual Report provides an opinion on the health of the 100KW Metering System population as per findings throughout the 2019/20 audit year and trends over the previous three audit years.

The following sections provide key findings and data summaries for the 2019/20 audit year. Please refer to Appendix 1 – 2019/20 Audit Statistics for the complete data set.

## 3 Executive Summary

### 3.1 Audit Summary

In the 2019/20 audit year, the TAA completed **1,392**<sup>1</sup> Supplier Volume Allocation (SVA) and **50**<sup>2</sup> Central Volume Allocation (CVA) Inspection Visits. As part of the 2019/20 audit scope, the TAA has continued the process of auditing all circuits associated with CVA Metering System Identifiers (MSIDs). The TAA has successfully audited **three** offshore CVA windfarms, which included **28** circuits.

The 2019/20 audit scope included an SVA Specific Sample, which focused on Half Hourly (HH) Metering Systems registered against Codes of Practice (CoPs) 1 and 2. The TAA completed **265** Inspection Visits for the SVA specific sample. Where access was granted all circuits associated with SVA specific sample MSIDs were audited.

The breakdown of Inspection Visits for the 2019/20 audit year is as follows:

- SVA HH Metering Systems:
  - **Total Inspection Visits - 1,392**
  - Main sample<sup>3</sup> – 1,124
  - Re-inspection<sup>4</sup> - 0
  - Specific sample<sup>5</sup> – 265
  - Targeted<sup>6</sup> – 3
- CVA Metering Systems:
  - **Total Inspection Visits - 50**
  - Main sample – 49
    - Offshore wind farms – 3
  - Re-inspection – 0
  - Targeted – 1

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<sup>1</sup> 1% of the SVA Metering System population

<sup>2</sup> 5% of the CVA Metering System population.

<sup>3</sup> A representative sample of Metering Systems.

<sup>4</sup> Re-audits Metering Systems where non-compliances have been reported as rectified

<sup>5</sup> Focuses on an area of perceived risk to Settlement - SVA only.

<sup>6</sup> Where non-compliance is suspected.

## 3.2 Compliance Summary

The breakdown of non-compliances recorded during the 2019/20 audit are as follows:

- SVA HH Metering Systems: **1,392**
  - Category 1<sup>7</sup> non-compliance: **35**
  - Category 2<sup>8</sup> non-compliance: **3,476**
    - Certificate non-compliances: **2,978**
    - Non-certificate non-compliances: **498**
- CVA Metering Systems:
  - Category 1 non-compliance: **4**
  - Category 2 non-compliance: **404**
    - Certificate non-compliances: **282**
    - Non-certificate non-compliances: **122**

The TAA recorded an increase in SVA Category 1 non-compliances from **21** in the 2018/19 audit year to **35** in the 2019/20 audit year. Commissioning remains an underlying issue, with most observed Category 1 non-compliances having associated Commissioning non-compliances. Further analysis on non-compliances will be undertaken by ELEXON as part of the TAA annual report response.

The TAA is pleased to report a **59%** reduction in Category 1 non-compliances associated with incorrect measurement transformer ratios (Category 1.04 non-compliance). The total number of Category 1.04 non-compliances has reduced from **seven** in the 2018/19 audit year to **three** in the 2019/20 audit year.

The TAA reports a significant increase in SVA Category 2 non-compliances from **3,070** in 2018/19 to **3,476** in 2019/20. The increase is primarily due to poor retention of CT and VT Certificates, resulting in the TAA being unable to confirm overall accuracy of the Metering System.

The TAA also observed an increase in SVA market Category 2.02 non-compliances (inaccuracy of standing data, non-key fields) from **18** in 2018/19 to **40** in 2019/20.

The TAA reports a reduction in both CVA Category 1 and 2 non-compliances. CVA Category 1 non-compliances reduced from **five** in 2018/19 to **four** in 2019/20. CVA Category 2 non-compliances reduced from **547** in 2018/19 to **404** in 2019/20.

The TAA also observed a percentage increase in CVA Miscellaneous Category 2 non-compliances, from **38.9%** in 2018/19 to **67%** in 2019/20. However, the total number has remained at **82** non-compliances. The majority of non-compliances were due to insufficient evidence provided to justify Meter compensation factors.

## 3.3 No Access Performance

The TAA reports a no access rate of **16%** for SVA Metering Systems, which is the same as the 2018/19 audit year. The no access rate for CVA Metering Systems has reduced from **8%** in the 2018/19 audit year to **5%** in the 2019/20 audit year.

ELEXON and the TAA have explored a number of new strategies to reduce the rate of no access, including engaging with the Commercial Operations Group (COG) to improve LDSO attendance. This has resulted in an increase in LDSO representation at the Technical Assurance of Metering Expert Group (TAMEG) and a number of TAAMT updates, including the addition of LDSO notifications for all Inspection Visits.

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<sup>7</sup> A non-compliance that is deemed to be currently affecting the quality of data for Settlement purposes

<sup>8</sup> A non-compliance that is deemed to have the potential to affect the quality of data for Settlement purposes

ELEXON has continued to chase the worst offending Parties for no access, reminding them of their obligations to provide site access to the TAA.

## 4 Key audit findings

The TAA key findings for the 2019/20 audit year are as follows:

- Statement on the health of the Metering System population ([Section 5](#));
- Key Issues identified (Section 6); and
- Appendix 1 2019/2020 detailed audit findings (Section 8).

### 4.1 Non-compliances<sup>9</sup>

The TAA has presented the SVA specific sample findings separately for the purpose of this report. The sub-categories of Category 1 non-compliances are defined in Section 9.1.

#### 4.1.1 SVA Category 1 non-compliances

The 2019/20 audit identified **27** Category 1 non-compliances for the SVA main sample, re-inspections and targeted inspections. A total of **1,127** Inspection Visits were completed for this sample type. No multi circuits were completed for these under this sample type.

Category <sup>10</sup>	1.01	1.02	1.03	1.04	1.06	Total
Number of Category 1 NCs	3	12	5	2	5	27
% of SVA Category 1 NCs identified	11.1%	44.4%	18.5%	7.4%	18.5%	99.9%
% of total SVA inspections undertaken	0.3%	1.3%	0.5%	0.2%	0.5%	2.8%

#### 4.1.2 SVA specific sample Category 1 non-compliances

The 2019/20 audit identified **eight** Category 1 non-compliances for the SVA specific sample. A total of **265** Inspection Visits were completed for the SVA specific sample, with **254** number of circuits audited.

Category	1.01	1.02	1.03	1.04	1.06	Total
Number of Category 1 NCs	4	2	0	1	1	8
% of SVA Category 1 NCs identified	50.0%	25.0%	0.0%	12.5%	12.5%	100%
% of total SVA circuit inspections undertaken	2.0%	1.0%	0.0%	0.5%	0.5%	4%

#### 4.1.3 CVA Category 1 non-compliances

The 2019/20 audit identified **four** Category 1 non-compliances for the CVA main sample and targeted inspections. A total of **50** Inspection Visits were completed for these sample types, with **123** number of circuits audited including **three** Offshore Windfarms.

Category	1.01	1.02	1.03	1.04	1.06	Total
Number of Category 1 NCs	2	2	0	0	0	4
% of CVA Category 1 NCs identified	50.0%	50.0%	0.0%	0.0%	0.0%	100%
% of total CVA circuit inspections undertaken	1.6%	1.6%	0.0%	0.0%	0.0%	3.2%

#### 4.1.4 SVA Category 2 non-compliances

Summary tables have been sub-divided by non-certificate related and certificate related Category 2 non-compliances. This distinction has been made due to the volume of certificate related Category 2 non-compliances.

<sup>9</sup> A non-compliance against the BSC or CSD, which is deemed to be currently affecting the quality of data for Settlement purposes.

<sup>10</sup> See Appendix 2 for descriptions of all categories of non-compliance.



The sub-categories of Category 2 non-compliances are defined in Section 9.2.

#### 4.1.5 Non-certificate related SVA Category 2 non-compliances

The 2019/20 audit identified **328** non-certificate related Category 2 non-compliances for the SVA main sample, re-inspections and targeted inspections. A total of **1,127** Inspection Visits were completed for these sample types. No multi circuit inspections were completed in these sample types.

Category	2.01	2.02	2.03	2.09	2.10	2.11	2.13	2.14	Total
Number of Category 2 NCs	20	20	17	14	10	42	176	29	328
% of SVA Category 2 NCs identified	0.8%	0.8%	0.7%	0.6%	0.4%	1.8%	7.4%	1.2%	13.7%
% of total SVA circuit inspections undertaken	2.1%	2.1%	1.8%	1.5%	1.0%	4.4%	18.3%	3.0%	34.2%

#### 4.1.6 Non-certificate related SVA Specific Sample Category 2 non-compliances

The 2019/20 audit identified **170** non-certificate related Category 2 non-compliances for the SVA specific sample. A total of **265** Inspection Visits were completed for the SVA specific sample, with **254** number of circuits audited.

Category	2.01	2.02	2.03	2.09	2.10	2.11	2.13	2.14	Total
Number of Category 2 NCs	16	20	15	1	23	5	76	14	170
% of SVA Category 2 NCs identified	1.5%	1.8%	1.4%	0.1%	2.1%	0.5%	7.0%	1.3%	15.7%
% of total SVA circuit inspections undertaken	6.3%	7.9%	5.9%	0.4%	8.3%	2.0%	30.0%	5.5%	66.3%

#### 4.1.7 Certificate related SVA Category 2 non-compliances

The 2019/20 audit identified **2057** certificate related Category 2 non-compliances for the SVA main sample, re-inspections and targeted inspections. A total of **1127** Inspection Visits were completed for these sample types. No multi circuit inspections were completed in these sample types.

Category	2.06	2.15	2.15L	2.15M	2.16	2.16L	2.17	Total
Number of Category 2 NCs	378	601	64	58	570	3	383	2057
% of SVA Category 2 NCs identified	15.9%	25.2%	2.7%	2.4%	23.9%	0.1%	16.0%	86.2%
% of total SVA circuit inspection undertaken	40.9%	65.0%	6.9%	6.3%	61.7%	0.3%	41.5%	222.6%

#### 4.1.8 Certificate related SVA Specific Sample Category 2 non-compliances

The 2019/20 audit identified **921** certificate related Category 2 non-compliances for the SVA specific sample. A total of **265** Inspection Visits were completed for the SVA specific sample, with **254** number of circuits audited.

Category	2.06	2.15	2.15L	2.15M	2.16	2.16L	2.17	Total
Number of Category 2 NCs	220	163	8	5	422	2	101	921
% of SVA Category 2 NCs identified	20.2%	24.1%	0.7%	0.5%	38.7%	0.2%	9.3%	93.7%
% of total SVA circuit inspections undertaken	86.6%	64.2%	3.2%	0.0%	166.1%	0.8%	39.8%	360.7%

#### 4.1.9 CVA Category 2 non-compliances

The 2019/20 audit identified **404** Category 2 non-compliances for the CVA main sample and targeted inspections. A total of **50** Inspection Visits were completed for these sample types, with **123** number of circuits audited including **three** Offshore Windfarms.

Category	2.02	2.03	2.06	2.09	2.10	2.11	2.13	2.14	2.15	2.16	2.17	Total
Number of Category 2 NCs	4	26	49	2	3	1	82	4	68	120	45	404
% of SVA Category 2 NCs identified	1.0%	6.4%	12.1%	0.5%	0.7%	0.3%	20.3%	1.0%	16.8%	29.7%	11.1%	99.9%
% of total CVA circuit inspections undertaken	3.3%	21.2%	39.8%	1.6%	2.4%	0.8%	66.7%	3.3%	55.3%	97.6%	36.6%	328.6%

## 5 Statement on the health of the Metering System population

This section provides the TAA's view on the overall health of the SVA and CVA markets, based on the 2019/20 audit year findings.

The TAA has formulated its opinion by monitoring trends in non-compliances observed in previous audit years and through discussions with Market Participants.

### 5.1.1 Good news

The TAA is pleased to report a **59%** reduction in Category 1 non-compliances associated with incorrect measurement transformer ratios (Category 1.04 non-compliance<sup>11</sup>). The total number of Category 1.04 non-compliances has reduced from **seven** in the 2018/19 audit year to **three** in the 2019/20 audit year.

A table of Category 1 non-compliances is presented in Section 8 (Table 8 and 9).

### 5.1.2 Bad news

The TAA has observed a significant increase in the number of Category 1 non-compliances. The total number of Category 1 non-compliances increased from **21** in the 2018/19 audit year to **35** in the 2019/20 audit year.

The Category 1 non-compliances which have seen the most significant increase are 1.01<sup>12</sup>, 1.02<sup>13</sup> and 1.06<sup>14</sup>.

- 1.01 has increased from **one** in the 2018/19 audit year to **seven** in the 2019/20 audit year.
- 1.02 has increased from **nine** in the 2018/19 audit year to **14** in the 2019/20 audit year.
- 1.06 has increased from **no non-compliances** in the 2018/19 audit year to **six** in the 2019/20 audit year.

The increase in 1.01, 1.02 and 1.06 non-compliances indicates poor management in back office operations and Commissioning.

The TAA observed **five** Metering Systems which had either incorrect polarity, or shorted out CT's. All **five** Metering Systems reported non-compliances for lack of Commissioning documentation. Furthermore, **four** out of **five** of the non-compliances were assigned to Metering Systems that were Commissioned post BSC Modification P283 implementation.

Category 1 non-compliance rectification timescales continue to be poor, increasing from an average of **30** working days in the 2018/19 audit year to **79** working days in the 2019/20 audit year. At the time of writing, **15** Category 1 non-compliances identified during the 2019/20 audit year are still outstanding.

A table of Category 1 non-compliance rectification timescales is presented in Section 8 (Table 11).

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<sup>11</sup> Measurement transformer ratios different from those set up in Meter (except for any difference being consistent with a measurement error compensation applied within the Metering Equipment)

<sup>12</sup> Inaccuracy of Standing Data (Key MTD fields) held by Data Collector

<sup>13</sup> Metering Equipment Incorrect or Unsatisfactory

<sup>14</sup> Miscellaneous – Other Non-compliances not covered elsewhere

## 5.2 The CVA market

### 5.2.1 Good news

The TAA successfully audited **three** offshore windfarms, including 28 circuits which were all accessed.

### 5.2.2 Bad news

The TAA reports that **68** out of the **123** circuits audited in 2019/20 had non-compliances relating to missing, incomplete, or incorrect Commissioning records. Of the **123** circuits inspected, **95** were for onshore Metering Systems and **28** were for offshore Metering Systems.

Of the **95** onshore circuits inspected, **62** were found to have Commissioning related non-compliances. This equates to **65%** of the population of onshore circuits audited.

Of the **28** offshore circuits inspected, **six** were found to have Commissioning related non-compliances. This equates to **21%** of the population of offshore circuits audited.

The majority, **41** out of **68** non-compliances were raised because Commissioning records were not provided. The remainder were related to Commissioning records being either incomplete or incorrect.

There has not been a significant change in observed Commissioning related non-compliances in the CVA market when compared to the 2018/19 audit findings. The lack of improvement emphasises the need for additional work to be completed in this area.

## 5.3 Category 1 Non-Compliances

### 5.3.1 The SVA Market

Figure 1 represents SVA Category 1 non-compliances identified in the previous three audit years. Whilst there has been an overall increase in Category 1 non-compliances, there has been a shift in the type of Category 1 non-compliance recorded.

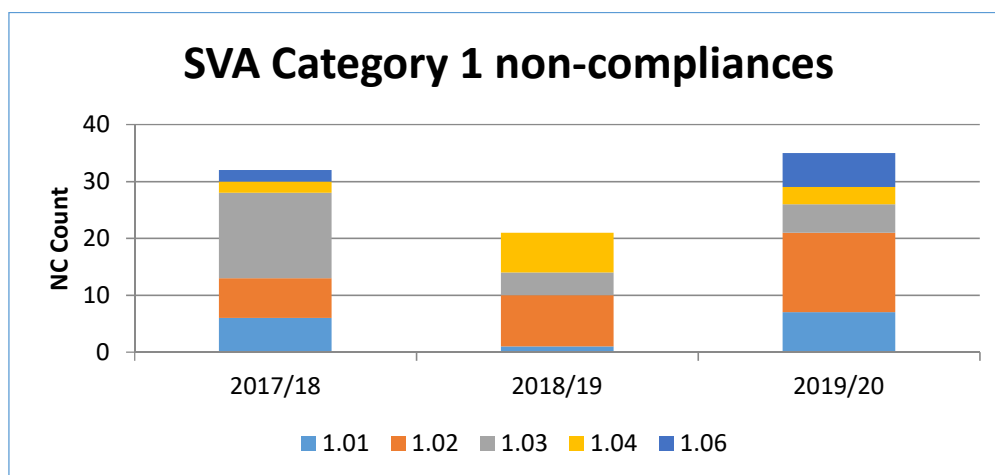
Outstation time drift (Category 1.03) appears to have stabilized, following a spike in 2017/18. The improvements in reported Category 1.04 non-compliance is overshadowed by the increase in Category 1.02 non-compliances.

Category 1.01 has increased from **one** in the 2018/19 audit year, to **seven** in the 2019/20 audit year.

Category 1.06 has increased from **no non-compliances** in the 2018/19 audit year to **six** in the 2019/20 audit year. It is the TAA's opinion that these increases can be attributed to metering registration issues. Primarily this is due to inconsistencies between site conditions and technical details.

The TAA also recorded a number of Metering Equipment (Category 1.02) non-compliances, none of which were under investigation, known by the Supplier, or MOA prior to the TAA Inspection Visit.

Figure 1 SVA Category 1 non-compliances identified in the previous three audit years

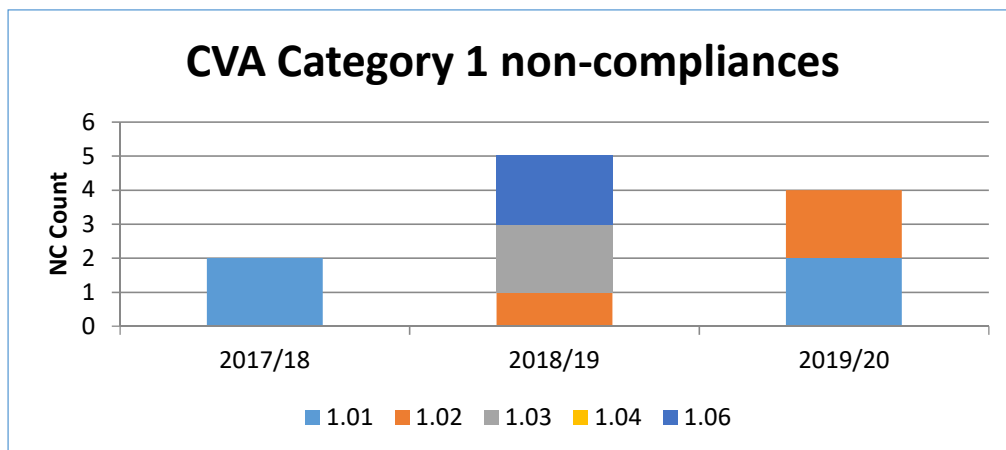


### 5.3.2 The CVA Market

The TAA identified **four** Category 1 non-compliances in the CVA market, during the 2019/20 audit year. Non-compliances comprised of **two** Category 1.01's and **two** Category 1.02's. The Category 1.01 non-compliances were both attributed to incorrect Meter serial numbers recorded in the Meter Technical Details.

**One** offshore inspection accounted for the **two** Category 1.02 non-compliances, which were attributed to primary plant failure. The TAA findings suggest that the appointed MOA had not been made aware of the equipment failure. In addition, no logs had been raised by the Central Data Collection Agent (CDCA).

Figure 2 CVA Category 1 non-compliances identified in the previous three audit years



## 5.4 Category 2 Non-Compliances

### 5.4.1 The SVA Market

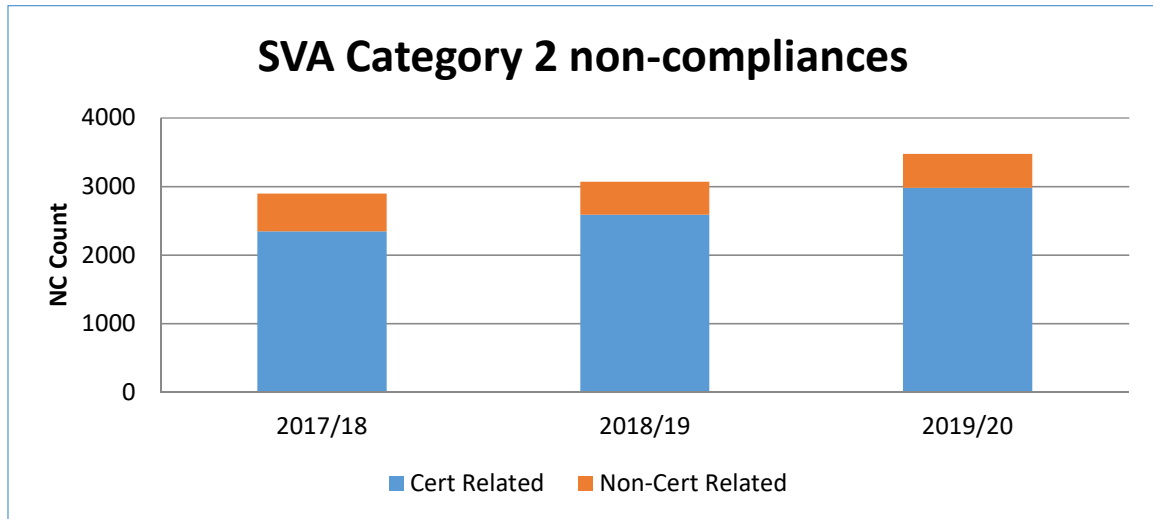
Figure 3 presents the SVA Category 2 non-compliances identified in the last three audit years. Category 2 non-compliances have been sub-divided by certificate related and non-certificate related non-compliances.

Certificate related non-compliances continue to grow. Of the **2,978**-certificate related non-compliances raised in 2019/20, **997** were attributed to the non-provision of measurement transformer Calibration Certificates. Please note that part of the increase is due to this year's Specific Sample.

The Specific Sample comprised CoP1 and CoP2 Metering Systems, which are typically High Voltage (HV). Therefore, CT/VT certificates would be required for virtually every circuit inspected. This is not the case for CoP3 and CoP5 Metering Systems, which include more LV Metering Systems. As such, this will introduce a bias to certificate related non-compliance results, when compared to previous audit periods.

The TAA is pleased to report a stabilisation in non-certificate related non-compliances.

Figure 3 SVA Category 2 non-compliances identified

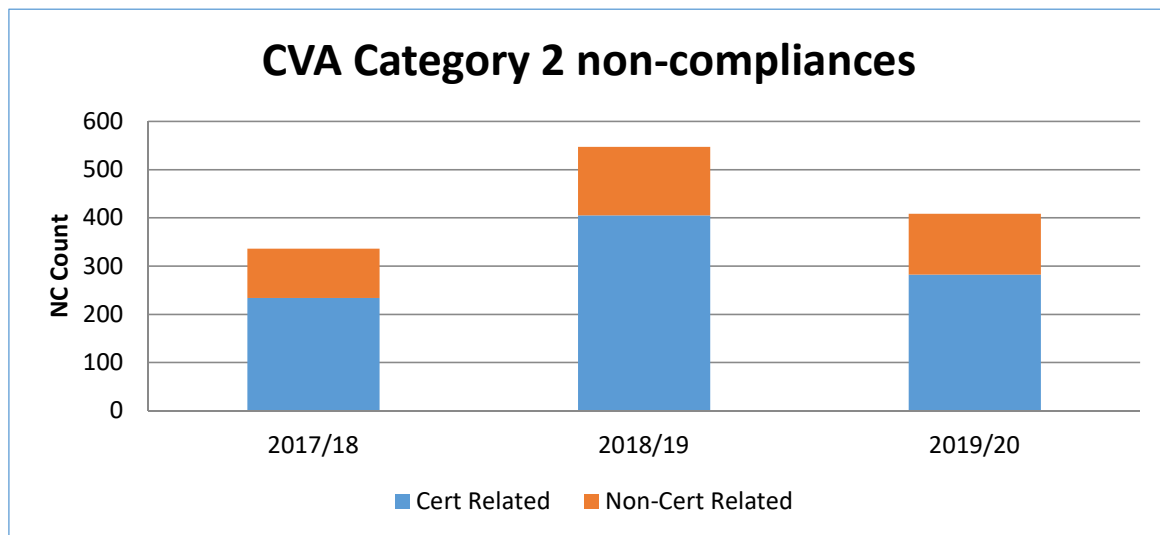


### 5.4.2 The CVA Market

The total number of CVA circuits audited reduced from **211** in the 2018/19 audit year to **123** in the 2019/20 audit year. However, the 2019/20 audit included fewer circuits than the 2018/19 audit.

Whilst there has been an overall reduction in observed CVA Category 2 non-compliances, the lower number of circuits must be taken into consideration.

Figure 4 CVA Category 2 non-compliances identified



## 5.5 Materiality

Following the identification of a Category 1 non-compliance by the TAA, a Trading Dispute is automatically raised with ELEXON. If the non-compliance meets the criteria outlined in the BSC, the Trading Dispute can be approved and funds are processed.

The materiality of a Category 1 is not typically confirmed until the non-compliance has been rectified and the subsequent investigation by the Trading Dispute team has been completed. As such, the below materiality's only reflect Category 1 non-compliances that have completed the Trading Dispute investigation process.

### CVA

#### No Identified Materiality

The TAA identified **four** Category 1 non-compliances in the 2019/20 audit year. The Trading Disputes team concluded that none of the identified non-compliances impacted the accuracy of Settlement.

### SVA

#### 350MWh of Materiality

The TAA identified **35** SVA Category 1 non-compliances, **two** of which were determined to have impacted the accuracy of Settlement. The impacting non-compliances were associated with measurement transformer errors.

At the time of writing, **23** Category 1 non-compliances have Trading Disputes outstanding.

## 6 Key Issues

The TAA would like to draw attention to the following key issues identified in 2019/20.

### 6.1 Commissioning

#### 6.2 The Issue

Commissioning is a control that where completed fully should identify any Metering System issues similar to those identified and reported as either Category 1.02 and 1.04 (see Section 5.1).

The reported figures for the 2019/20 audit indicate a stabilisation of Commissioning associated non-compliances in the SVA Market. As per previous Annual Reports, the majority of Metering Systems where Category 1 non-compliances have been raised the TAA also recorded Commissioning related non-compliances.

The figures in the tables below will have been impacted by the introduction of Change Proposal (CP)1495<sup>15</sup> and CP1496<sup>16</sup>, which enabled Commissioning non-compliances to be allocated to the equipment owners. As such, the TAA has observed a percentage increase in LDSO Commissioning non-compliances from **48%** in the 2018/19 audit year to **53%** in the 2019/20 audit year. However, there has been a reduction in MOA Commissioning non-compliances from **60%** in the 2018/19 audit year to **47%** in the 2019/20 audit year. This indicates that the measures taken to facilitate Commissioning process have had a positive effect, yet there is still room for improvement.

##### Post P283 Half Hourly Metering Systems with Commissioning non-compliances (per circuit)

Audit Year	Number of Completed Circuit Inspections	2.15L	% of Inspections	2.15M	% of Inspections
2019/2020	135	72	53%	63	47%
2018/2019	157	76	48%	94	60%

##### Pre-P283 Half Hourly Metering Systems with Commissioning non-compliances (per circuit)

Audit Year	Number of Completed Circuit Inspections	2.15	% of Inspections
2019/2020	1,083	764	71%
2018/2019	1,145	777	68%

#### 6.2.1 Our recommendations

The TAA recommends that ELEXON (and the TAA) continue to engage with MOAs and LDSOs to establish why Commissioning errors persist.

### 6.3 Measurement transformer Calibration Certificates

The 2019/20 audit year saw the introduction of current transformer (CT) and voltage transformer (VT) Calibration Certificate related non-compliances being allocated to Licensed Distributor System Operators (LDSO).

<sup>15</sup> CP1495 proposes changes to BSC Code Subsidiary Documents to reflect the introduction of the new dataflow

<sup>16</sup> 'Introduction of two data flows for the Commissioning process for Half Hourly (HH) Supplier Volume Allocation (SVA) Current Transformer (CT) operated Metering Systems' (and related MRA Change DTC CP 3522)



The BSC November 2018 release implemented Change Proposal (CP)1495 and CP1496. These changes enabled LDSOs to respond to a MOA Request for Meter System Related Details where they do not hold the required information, and for the exchange of Commissioning information using the Data Transfer Network. This is for Meter Systems with a Trading Status effective from date greater than, or equal to 1<sup>st</sup> November 2018. However, the LDSO is still required to retain the Calibration Certificate so that it can be provided upon request.

### 6.3.1 The issue

The TAA recognises that the lack of measurement transformer Calibration Certificates (Category 2.16<sup>17</sup>) persists as a key issue.

Previous TAA annual reports have highlighted escalating figures in Calibration Certificate non-compliances, which are likely associated with poor retention of documentation for historic 100kW Metering System installations.

ELEXON continues to work alongside the TAMEG to develop a process to confirm Overall accuracy of CoP3 and CoP5 Metering Systems in the absence of Calibration Certificates.

### 6.3.2 Our recommendations

The TAA recommend that the industry agree an alternative procedure for the calculation of Overall Accuracy, without the requirement for Calibration Certificates. Currently, the significance of reporting Category 2.16 non-compliances is diminished by the known issues and party's inability to rectify historic non-compliances.

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<sup>17</sup> Measurement Transformer Certificates not provided or incorrect

## 7 Audit Planning Performance

### 7.1 Planned Inspection Visits vs cancellations

The TAA planned **1,475** SVA Inspection Visits during the 2019/20 audit, with **83** (5.6%) visits cancelled at the request of Market Participants. There has been a reduction in cancelled Inspection Visits from **107** (6.5%) in the 2018/19 audit year.

The cancellation rate for CVA Inspection Visits has dramatically reduced from **20** (8.0%) in the 2018/19 audit year to **one** (0.8%) in the 2019/20 audit year. The TAA is particularly pleased with the engagement demonstrated by parties to achieve this reduction.

### 7.2 No access performance

#### 7.2.1 SVA

The no access rate for SVA Inspection Visits has remained at **16%** for the second consecutive audit year. There was a total of **217** failed Inspection Visits due to no access.

- The TAA recommends that all parties should take a proactive approach to arranging Inspection Visits to reduce the number of no access.
- No access can primarily be attributed to a mixture of lack of customer and MOA availability. To improve on access rates, a number of actions were put into place;
  - ELEXON proactively raised the issue with the worst offending parties for no access and requested an explanation.
  - The TAAMT is currently being updated to allow for Inspection Visit notifications to be sent to all LDSOs. The TAA anticipates this will improve access to measurement transformers.
  - The TAA will continue to work with ELEXON with a view to introducing additional measures to improve no access rates.

The TAA would like to extend its offer made in the 2018/19 audit report, to hold discussion with Suppliers to try and pinpoint process failures that result in no access.

Please refer to Section 8 (Table 2 and 3) for a detailed breakdown of no access rates by Supplier.

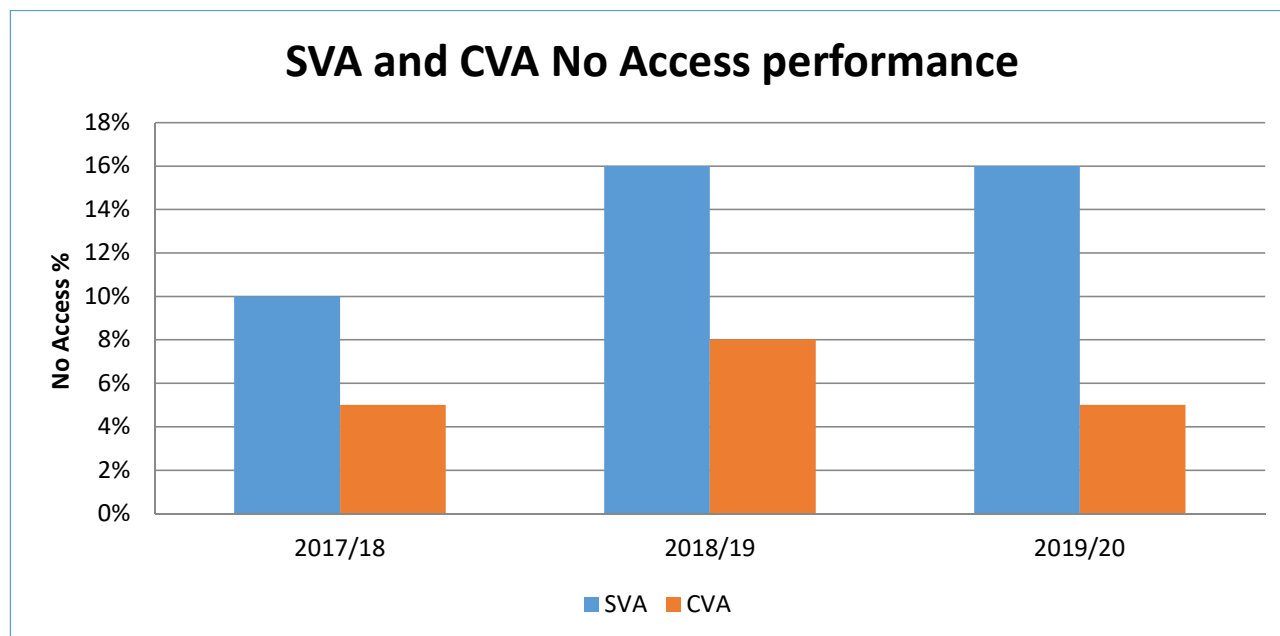
## 7.2.2 CVA

The TAA was unable to gain access to **seven** (5.4%) circuits, which is a reduction from **18** (8%) in the 2018/19 audit year.

## 7.2.3 No access performance comparison

The following graph shows no access rates for the last three audit years:

Figure 5 No access performance for previous three audit periods



## 7.2.4 Reasons for no access:

The following tables present the most common reasons for Inspection Visits that failed due to no access.

### SVA

Appointment Status	Count	% of No Access
No Access - Site visited customer unavailable to provide access	88	40.6%
No Access - Site visited customer unable to provide access	30	13.8%
No Access – MOP Representative did not attend	25	11.5%

### CVA

Appointment Status	Count	% of No Access
No Access - Other Reason (onsite)	7	100.0%

## 7.3 LDSO attendance at Inspection Visits

Where Metering Systems are HV, or LV with remote CTs, BSCP27<sup>18</sup> states that it is the Registrant's responsibility to ensure that the LDSO attends the Inspection Visit. Analysis undertaken by the TAA suggests that in many cases the Registrant is not meeting this obligation. Please refer to Section 8 (Table 4 and 5) for CT and VT rating plate access performance by Supplier Company Group.

<sup>18</sup> BSCP27 Technical Assurance of Half Hourly Metering Systems for Settlement Purposes

## 8 Appendix 1 – 2019/20 Audit Findings

### 8.1 Introduction

Appendix 1 details the results of the TAA audit findings for the 2019/20 audit year.

#### 8.1.1 Important notes and assumptions

Please note that percentage totals may not always equal 100%, as values have been rounded. Furthermore, some non-compliances have been recorded as miscellaneous, as the issues are too different to group and report on effectively.

The 2019/20 audit scope involved a number of multi-circuit Metering Systems. As such, some of the tables included in Appendix 1 are at circuit level, rather than Inspection level. Where tables refer to circuit level, it has been identified in the title.

### 8.2 SVA Audits

#### 8.2.1 Appointment statistics summary

Table 1 Total number of SVA Inspection Visits planned and outcome by Inspection Visit type

SVA visits by type	Visits planned	Of those planned		Of those visited	
		Visits Cancelled	Visited	Access gained	No Access
Main sample	1,187	63	1,124	961	163
Re-inspection	0	0	0	0	0
Specific sample	284	19	265	211	54
Targeted inspection	4	1	3	3	0
<b>Total</b>	<b>1,475</b>	<b>83</b>	<b>1,392</b>	<b>1,175</b>	<b>217</b>
<b>Percentages</b>		<b>5.6%</b>	<b>94.4%</b>	<b>84.4%</b>	<b>15.6%</b>

**Table 2 No access performance by Supplier Company Group (main sample/targeted inspection)**

Supplier Company Group	Visited	Access Gained	No Access	% No Access
SUPPLIER	1		1	100.0%
SUPPLIER	1		1	100.0%
SUPPLIER	4	2	2	50.0%
SUPPLIER	14	9	5	35.7%
SUPPLIER	31	21	10	32.3%
SUPPLIER	4	3	1	25.0%
SUPPLIER	81	62	19	23.5%
SUPPLIER	146	112	34	23.3%
SUPPLIER	57	47	10	17.5%
SUPPLIER	12	10	2	16.7%
SUPPLIER	6	5	1	16.7%
SUPPLIER	38	33	5	13.2%
SUPPLIER	222	193	29	13.1%
SUPPLIER	8	7	1	12.5%
SUPPLIER	70	62	8	11.4%
SUPPLIER	118	105	13	11.0%
SUPPLIER	79	72	7	8.9%
SUPPLIER	144	134	10	6.9%
SUPPLIER	52	49	3	5.8%
SUPPLIER	29	28	1	3.4%
SUPPLIER	1	1		0.0%
SUPPLIER	1	1		0.0%
SUPPLIER	1	1		0.0%
SUPPLIER	1	1		0.0%
SUPPLIER	1	1		0.0%
SUPPLIER	1	1		0.0%
SUPPLIER	1	1		0.0%
SUPPLIER	1	1		0.0%
SUPPLIER	2	2		0.0%
<b>Totals</b>	<b>1127</b>	<b>964</b>	<b>163</b>	

**Table 3 No access performance by Supplier Company Group (specific sample)**

Supplier Company Group	Visited	Access Gained	No Access	% No Access
SUPPLIER	13	6	7	53.8%
SUPPLIER	2	1	1	50.0%
SUPPLIER	2	1	1	50.0%
SUPPLIER	9	5	4	44.4%
SUPPLIER	12	7	5	41.7%
SUPPLIER	25	17	8	32.0%
SUPPLIER	18	13	5	27.8%
SUPPLIER	25	20	5	20.0%
SUPPLIER	41	34	7	17.1%
SUPPLIER	19	16	3	15.8%
SUPPLIER	44	39	5	11.4%
SUPPLIER	10	9	1	10.0%
SUPPLIER	22	20	2	9.1%
SUPPLIER	1	1		0.0%
SUPPLIER	1	1		0.0%
SUPPLIER	2	2		0.0%
SUPPLIER	11	11		0.0%
SUPPLIER	3	3		0.0%
SUPPLIER	1	1		0.0%
SUPPLIER	2	2		0.0%
SUPPLIER	1	1		0.0%
SUPPLIER	1	1		0.0%
<b>Totals</b>	<b>265</b>	<b>211</b>	<b>54</b>	

**Table 4 Main sample and targeted inspection no access to CT/VT rating plates by Supplier Company Group**

Supplier Company Group	Inspections Affected	Total Inspections	% of Inspections Affected
SUPPLIER	3	1	100%
SUPPLIER	2	0	100%
SUPPLIER	2	0	100%
SUPPLIER	2	0	100%
SUPPLIER	1	1	100%
SUPPLIER	1	1	100%
SUPPLIER	1	1	100%
SUPPLIER	8	14	57%
SUPPLIER	40	118	34%
SUPPLIER	27	79	34%
SUPPLIER	2	6	33%
SUPPLIER	10	31	32%
SUPPLIER	66	222	30%
SUPPLIER	4	14	29%
SUPPLIER	4	15	27%
SUPPLIER	10	38	26%
SUPPLIER	20	81	25%
SUPPLIER	2	8	25%
SUPPLIER	17	70	24%
SUPPLIER	12	52	23%
SUPPLIER	27	141	19%
SUPPLIER	2	12	17%
SUPPLIER	23	146	16%
SUPPLIER	9	56	16%

Table 5 specific sample no access to CT/VT rating plates by Supplier Company Group

Supplier Company Group	Inspections Affected	Total Inspections	% of Inspections Affected
SUPPLIER	1	1	100%
SUPPLIER	1	1	100%
SUPPLIER	1	1	100%
SUPPLIER	1	1	100%
SUPPLIER	17	22	77%
SUPPLIER	9	13	69%
SUPPLIER	2	3	67%
SUPPLIER	22	36	61%
SUPPLIER	27	45	60%
SUPPLIER	6	11	55%
SUPPLIER	1	2	50%
SUPPLIER	1	2	50%
SUPPLIER	11	25	44%
SUPPLIER	8	18	44%
SUPPLIER	11	25	44%
SUPPLIER	7	18	39%
SUPPLIER	5	13	38%
SUPPLIER	4	11	37%
SUPPLIER	1	3	33%
SUPPLIER	2	10	20%

## 8.2.2 CDCC performance

Table 6 CDCC summary for those SVA Inspection Visits where access has been provided

Visit Type (by circuit)	Not Performed	Compliant	Non-compliant	Metering Systems accessed
Main sample	12	948	1	961
Re-inspection	0	0	0	0
Specific sample	13	240	1	254
Target	0	3	0	3
<b>Total</b>	<b>25</b>	<b>1,191</b>	<b>2</b>	<b>1,218</b>



### 8.2.3 SVA non-compliances identified during the 2019/20 audit year

Table 7 Number and % of SVA Inspection Visits where non-compliances are identified by Category

Visit Type (circuit)	%	No. of Visits	No NCs	Has Cat1	Has Cat2	Has NC	Has Observations
Main Sample	81.3%	781			✓		
Main Sample	14.3%	137	✓				
Main Sample	2.2%	21		✓	✓		
Main Sample	0.7%	7			✓		✓
Main Sample	0.6%	6			✓	NP	
Main Sample	0.4%	4		✓	✓	NP	
Main Sample	0.2%	2		✓	✓	✓	
Main Sample	0.1%	1	✓			NP	
Main Sample	0.1%	1					✓
Main Sample	0.1%	1		✓			
Specific Sample	79.9%	203			✓		
Specific Sample	7.1%	18	✓				
Specific Sample	4.7%	12			✓	NP	
Specific Sample	4.3%	11			✓		✓
Specific Sample	3.1%	8		✓	✓		
Specific Sample	0.4%	1	✓			NP	
Specific Sample	0.4%	1			✓	✓	
Target	100%	3			✓		

Table 8 Summary SVA Main Sample Category 1 non-compliances by Supplier and HHMOA

Supplier	HHMOA	1.01	1.02	1.03	1.04	1.06	Total
SUPPLIER	HHMOA		1				1
SUPPLIER	HHMOA	1	2				3
SUPPLIER	HHMOA	1	6				7
SUPPLIER	HHMOA				1		1
SUPPLIER	HHMOA		1				1
SUPPLIER	HHMOA					1	1
SUPPLIER	HHMOA			1			1
SUPPLIER	HHMOA			1			1
SUPPLIER	HHMOA				1		1
SUPPLIER	HHMOA	1					1
SUPPLIER	HHMOA			1			1
SUPPLIER	HHMOA		1				1
SUPPLIER	HHMOA					3	3
SUPPLIER	HHMOA			1			1
SUPPLIER	HHMOA					1	1
SUPPLIER	HHMOA		1				1
SUPPLIER	HHMOA			1			1
<b>Total</b>		<b>3</b>	<b>12</b>	<b>5</b>	<b>2</b>	<b>5</b>	<b>27</b>

**Table 9 Summary SVA Specific Sample Category 1 non-compliances by Supplier and HHMOA**

Supplier	HHMOA	1.01	1.02	1.03	1.04	1.06	Total
SUPPLIER	HHMOA	4					4
SUPPLIER	HHMOA		1				1
SUPPLIER	HHMOA		1			1	2
SUPPLIER	HHMOA				1		1
<b>Total</b>		<b>4</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>8</b>

## 8.2.4 Potential Settlement impacting materiality calculations for Category 1 non-compliances

Table 10 includes an indication of materiality impact that may result from Category 1 non-compliances identified in the SVA market. Potential metered error volumes are calculated by ELEXON.

**Table 10 SVA Inspection Visits where there has been a material error identified**

Visit Reference	Potential metered Errors MWh	Non-compliance status
XXXX-XXXX	TBC	Non-Compliance Outstanding
XXXX-XXXX	TBC	Rectified Pending Confirmation
XXXX-XXXX	0	Resolved
XXXX-XXXX	0	Resolved
XXXX-XXXX	0	Resolved
XXXX-XXXX	0	Resolved
XXXX-XXXX	292	Rectified Pending Confirmation
XXXX-XXXX	58	Resolved
XXXX-XXXX	TBC	Resolved
XXXX-XXXX	0	Resolved
XXXX-XXXX	0	Resolved
XXXX-XXXX	0	Rectified During Inspection Visit
XXXX-XXXX	TBC	Non-Compliance Outstanding
XXXX-XXXX	TBC	Non-Compliance Outstanding
XXXX-XXXX	TBC	Resolved
XXXX-XXXX	0	Resolved
XXXX-XXXX	0	Non-Compliance Outstanding
XXXX-XXXX	TBC	Resolved
XXXX-XXXX	0	Rectified Pending Confirmation
XXXX-XXXX	TBC	Rectified Pending Confirmation
XXXX-XXXX	TBC	Rectified Pending Confirmation
XXXX-XXXX	TBC	Non-Compliance Outstanding
XXXX-XXXX	TBC	Non-Compliance Outstanding
XXXX-XXXX	TBC	Non-Compliance Outstanding
XXXX-XXXX	TBC	Non-Compliance Outstanding
XXXX-XXXX	TBC	Non-Compliance Outstanding
XXXX-XXXX	TBC	Non-Compliance Outstanding
XXXX-XXXX	TBC	Resolved
XXXX-XXXX	TBC	Non-Compliance Outstanding
XXXX-XXXX	TBC	Rectified Pending Confirmation
XXXX-XXXX	TBC	Resolved
XXXX-XXXX	TBC	Resolved
XXXX-XXXX	TBC	Non-Compliance Outstanding
XXXX-XXXX	TBC	Non-Compliance Outstanding
XXXX-XXXX	TBC	Resolved
<b>Total</b>	<b>350</b>	

## 8.2.5 Rectification of Category 1 non-compliances

Table 11 SVA Main, Re-inspection, Specific and Target Sample Category 1 non-compliances average number of days to resolution

Notified Month	Number of NCs Identified	Average WD to resolve				
		1.01	1.02	1.03	1.04	1.06
Apr 2019	1	0	0	0	0	0
May 2019	5	0	109	0	0	333
Jun 2019	3	0	165	0	0	0
Jul 2019	4	0	0	29	67	0
Aug 2019	4	0	163	51	0	0
Sep 2019	2	0	64	0	0	0
Oct 2019	0	0	0	0	0	0
Nov 2019	6	0	0	0	0	0
Dec 2019	1	0	0	0	0	0
Jan 2020	9	110	40	0	0	48
Feb 2020	0	0	0	0	0	0
Mar 2020	0	0	0	0	0	0
<b>Total identified</b>	<b>35</b>	<b>7</b>	<b>14</b>	<b>5</b>	<b>3</b>	<b>6</b>
<b>Unresolved</b>	<b>20</b>	<b>5</b>	<b>8</b>	<b>3</b>	<b>2</b>	<b>2</b>
<b>Resolved</b>	<b>15</b>	<b>2</b>	<b>6</b>	<b>2</b>	<b>1</b>	<b>4</b>
<b>Average days to resolve</b>	<b>79</b>	<b>55</b>	<b>90</b>	<b>40</b>	<b>67</b>	<b>95</b>

## 8.2.6 Category 2 non-compliances

Table 12 Summary of SVA Main and Target Sample Category 2 (non-cert) non-compliances by Supplier

Supplier	2.01	2.02	2.03	2.08	2.09	2.10	2.11	2.13	2.14	Total
SUPPLIER	4	2	4		2	1	9	39	1	62
SUPPLIER	5	9	3		2		2	28	4	53
SUPPLIER	3	3	5			1	5	19	13	49
SUPPLIER	2	2	1		2	1	9	13		30
SUPPLIER	4	2	1		2		2	15		26
SUPPLIER			1		2	1	8	8	1	21
SUPPLIER						1		15		16
SUPPLIER	2		1		2	2		7	2	16
SUPPLIER								10	3	13
SUPPLIER							5	6	2	13
SUPPLIER		1				1		5	1	8
SUPPLIER		1	1			1	1	1		5
SUPPLIER					1	1		3		5
SUPPLIER					1			3	1	5
SUPPLIER								2		2
SUPPLIER								2		2
SUPPLIER							1			1
SUPPLIER									1	1
SUPPLIER										0
SUPPLIER										0
SUPPLIER										0
SUPPLIER										0
SUPPLIER										0
SUPPLIER										0
SUPPLIER										0
SUPPLIER										0
SUPPLIER										0
<b>Total</b>	<b>20</b>	<b>20</b>	<b>17</b>	<b>0</b>	<b>14</b>	<b>10</b>	<b>42</b>	<b>176</b>	<b>29</b>	<b>328</b>

**Table 13 Summary of SVA Specific Sample Category 2 (non-cert) non-compliances by Supplier**

Supplier	2.01	2.02	2.03	2.08	2.09	2.10	2.11	2.13	2.14	Total
SUPPLIER	3	3	2				2	23	4	37
SUPPLIER	3	3	2			4		7	2	21
SUPPLIER		3	4			2		9		18
SUPPLIER	2	2						8	2	14
SUPPLIER	3					4		5	2	14
SUPPLIER	1		2			2		8	1	14
SUPPLIER		3				3		3		9
SUPPLIER		1				3		5		9
SUPPLIER					1	2		3	1	7
SUPPLIER	1	1					1	3		6
SUPPLIER		2	3						1	6
SUPPLIER			2			2				4
SUPPLIER	2							1		3
SUPPLIER							2			2
SUPPLIER	1	1								2
SUPPLIER						1				1
SUPPLIER		1								1
SUPPLIER								1		1
SUPPLIER									1	1
SUPPLIER										0
SUPPLIER										0
SUPPLIER										0
<b>Total</b>	<b>16</b>	<b>20</b>	<b>15</b>	<b>0</b>	<b>1</b>	<b>23</b>	<b>5</b>	<b>76</b>	<b>14</b>	<b>170</b>

Table 14 Summary of SVA Main and Target Sample category 2 (non-cert) non-compliances by HHMOA

HHMOA	2.01	2.02	2.03	2.08	2.09	2.10	2.11	2.13	2.14	Total
HHMOA	2	1	2		1	2	1	73		82
HHMOA	6	6	4		1	5	2	26	3	53
HHMOA		1	5		1		5	33	3	48
HHMOA	3	6	5		1		6	26		47
HHMOA	4	1			3	1	2	5	11	27
HHMOA	1	1			3		18	3	1	27
HHMOA	1	1			2	2	4	2	4	16
HHMOA		1			1		1	7	4	14
HHMOA		1	1				3	1		6
HHMOA	3				1					4
HHMOA		1							3	4
<b>Total</b>	<b>20</b>	<b>20</b>	<b>17</b>	<b>0</b>	<b>14</b>	<b>10</b>	<b>42</b>	<b>176</b>	<b>29</b>	<b>328</b>

Table 15 Summary of SVA Specific Sample category 2 (non-cert) non-compliances by HHMOA

HHMOA	2.01	2.02	2.03	2.08	2.09	2.10	2.11	2.13	2.14	Total
HHMOA	3	5	6				2	25	1	42
HHMOA	5	5	2			6	2	10	2	32
HHMOA	3	3				4	1	14	5	30
HHMOA	3					3		17	2	25
HHMOA		2	2			6		6	1	17
HHMOA	2	3	5					4	3	17
HHMOA					1	3				4
HHMOA		2				1				3
<b>Total</b>	<b>16</b>	<b>20</b>	<b>15</b>	<b>0</b>	<b>1</b>	<b>23</b>	<b>5</b>	<b>76</b>	<b>14</b>	<b>170</b>

Table 16 Summary of SVA Main and Target Sample Category 2 (cert) non-compliances by Supplier

Supplier	2.06	2.15	2.15L	2.15M	2.16	2.16L	2.17	Total
SUPPLIER	84	125	19	19	113	2	53	415
SUPPLIER	49	82	12	11	75	1	64	294
SUPPLIER	51	63	7	6	78		45	250
SUPPLIER	34	60	8	6	49		37	194
SUPPLIER	26	44	1	1	45		24	141
SUPPLIER	27	43	4	3	30		31	138
SUPPLIER	23	45	2	2	34		27	133
SUPPLIER	17	36	1	1	31		25	111
SUPPLIER	19	29	1	1	29		22	101
SUPPLIER	11	19	4	3	17		14	68
SUPPLIER	12	17			17		15	61
SUPPLIER	10	12	3	3	23		7	58
SUPPLIER	6	6	1	1	14			28
SUPPLIER	3	4			5		4	16
SUPPLIER	2	5			3		5	15
SUPPLIER	1	1			2		1	5
SUPPLIER		2					2	4
SUPPLIER	1	1			2			4
SUPPLIER	1		1	1	1			4
SUPPLIER		3					1	4
SUPPLIER	1	1					2	4
SUPPLIER					2		1	3
SUPPLIER		2					1	3
SUPPLIER		1					1	2
SUPPLIER							1	1
SUPPLIER								0
<b>Total</b>	<b>378</b>	<b>601</b>	<b>64</b>	<b>58</b>	<b>570</b>	<b>3</b>	<b>383</b>	<b>2057</b>



**Table 17 Summary of SVA Specific Sample Category 2 (cert) non-compliances by Supplier**

Supplier	2.06	2.15	2.15L	2.15M	2.16	2.16L	2.17	Total
SUPPLIER	40	22	1		68		25	<b>156</b>
SUPPLIER	45	29	1	1	64		16	<b>156</b>
SUPPLIER	32	28	1	1	74		11	<b>147</b>
SUPPLIER	16	14			34		11	<b>75</b>
SUPPLIER	18	10	3	1	32		5	<b>69</b>
SUPPLIER	12	8	1	1	30		6	<b>58</b>
SUPPLIER	6	11			16		9	<b>42</b>
SUPPLIER	12	7			18		5	<b>42</b>
SUPPLIER	11	7			20		2	<b>40</b>
SUPPLIER	8	8			18		6	<b>40</b>
SUPPLIER	6	6			12			<b>24</b>
SUPPLIER	3	4			9		2	<b>18</b>
SUPPLIER	1	3			6		1	<b>11</b>
SUPPLIER	3	1			6			<b>10</b>
SUPPLIER	2	1			4			<b>7</b>
SUPPLIER	1	1			2		1	<b>5</b>
SUPPLIER			1	1		2		<b>4</b>
SUPPLIER	1	1			2			<b>4</b>
SUPPLIER	1				2		1	<b>4</b>
SUPPLIER	1	1			2			<b>4</b>
SUPPLIER	1	1			2			<b>4</b>
SUPPLIER					1			<b>1</b>
<b>Total</b>	<b>220</b>	<b>163</b>	<b>8</b>	<b>5</b>	<b>422</b>	<b>2</b>	<b>101</b>	<b>921</b>

**Table 18 Summary of SVA Main and Target Sample category 2 (cert) non-compliances by HHMOA**

HHMOA	2.06	2.15	2.15L	2.15M	2.16	2.16L	2.17	Total
HHMOA	82	82	16	16	136		41	<b>373</b>
HHMOA	73	96	4	2	113		78	<b>366</b>
HHMOA	51	102	4	6	87		54	<b>304</b>
HHMOA	45	92	18	16	54	3	53	<b>281</b>
HHMOA	45	68	5	4	69		57	<b>248</b>
HHMOA	14	72	6	6	17		36	<b>151</b>
HHMOA	25	38			42		26	<b>131</b>
HHMOA	20	24	4	3	31		1	<b>83</b>
HHMOA	10	9			13		10	<b>42</b>
HHMOA	4	12	3	2	2		18	<b>41</b>
HHMOA	9	6	4	3	6		9	<b>37</b>
<b>Total</b>	<b>378</b>	<b>601</b>	<b>64</b>	<b>58</b>	<b>570</b>	<b>3</b>	<b>383</b>	<b>2057</b>

**Table 19 Summary of SVA Specific Sample category 2 (cert) non-compliances by HHMOA**

HHMOA	2.06	2.15	2.15L	2.15M	2.16	2.16L	2.17	Total
HHMOA	47	47			106		20	<b>220</b>
HHMOA	60	25			107		25	<b>217</b>
HHMOA	24	21	3	3	61	2	8	<b>122</b>
HHMOA	30	22	2	2	46		14	<b>116</b>
HHMOA	30	24			42		16	<b>112</b>
HHMOA	18	9	3		36		13	<b>79</b>
HHMOA	11	10			20		3	<b>44</b>
HHMOA		5			4		2	<b>11</b>
<b>Total</b>	<b>220</b>	<b>163</b>	<b>8</b>	<b>5</b>	<b>422</b>	<b>2</b>	<b>101</b>	<b>921</b>

## 8.3 CVA Audits

### 8.3.1 Appointments planned and cancelled

Table 20 Total number of CVA Inspection Visits planned and outcome by Inspection Visit type

CVA Visits by Type	Visits Planned	Of those planned		Of those visited	
		Visits Cancelled	Visited	Access Gained	No Access
Main Sample	50	1	49	47	2
Targeted	1	0	1	1	0
Re-inspection	0	0	0	0	0
<b>Total</b>	<b>51</b>	<b>1</b>	<b>50</b>	<b>48</b>	<b>2</b>
<b>Percentages</b>		<b>2.0%</b>	<b>90.0%</b>	<b>96%</b>	<b>4%</b>

Table 21 Total number of individual CVA circuits planned and outcome by Inspection Visit type

CVA Circuits by Type	Circuits Planned	Of those planned		Of those visited	
		Cancelled	Visited	Access Gained	No Access
Main Sample	128	1	127	120	7
Targeted	3	0	3	3	0
Re-inspection	0	0	0	0	0
<b>Total</b>	<b>131</b>	<b>1</b>	<b>130</b>	<b>123</b>	<b>7</b>
<b>Percentages</b>		<b>0.8%</b>	<b>99.2%</b>	<b>94.6%</b>	<b>5.4%</b>

### 8.3.2 CDCC Performance

Table 22 CDCC summary for those CVA Inspection Visits where access has been provided

Visit Type (by circuit)	Compliant	Non-compliant	Check not performed	Metering Systems accessed
Main Sample	44	0	3	47
Targeted	1	0	0	1
Re-inspection	0	0	0	0
<b>Total</b>	<b>45</b>	<b>0</b>	<b>3</b>	<b>48</b>

Table 23 CDCC summary for those individual CVA circuits where access has been provided

Visit Type	Compliant	Non-compliant	Check not performed	Metering Systems accessed
Main Sample	91	0	29	120
Targeted	3	0	0	3
Re-inspection	0	0	0	0
<b>Total</b>	<b>94</b>	<b>0</b>	<b>29</b>	<b>123</b>

### 8.3.3 CVA non-compliances identified during 2019/20 audit year

Table 24 Number and % of CVA Inspection Visits where non-compliances were identified by category

Visit Type (by circuit)	%	Number of Visits	No NCs	Has Cat1	Has Cat2	Has NC	Has Observations
Main Sample	67.5%	81			✓		
Main Sample	13.3%	16	✓			NP	
Main Sample	9.2%	11			✓	NP	
Main Sample	5.0%	6	✓				
Main Sample	1.7%	2			✓		✓
Main Sample	1.7%	2		✓		NP	
Main Sample	1.7%	2		✓			
Targeted	100.0%	3			✓		

Table 25 Summary of CVA Category 1 and 2 non-compliances identified during the 2019/20 audit year

Non-compliance identified	1.01	1.02	2.02	2.03	2.06	2.09	2.10	2.11	2.13	2.14	2.15	2.16	2.17	Total
Error in MTD's	2		4	26					4					36
Error/failure		2												2
Commissioning incomplete, incorrect or not provided											68			68
Overall accuracy may not be being maintained					49									49
VT certificates not provided												58		58
Miscellaneous									56					56
CT certificates not provided												62		62
Alarms							3		14					17
Meter Calibration Certificate not provided													45	45
Valid Aggregation Rule not received/incorrect									8					8
Time drifts										4				4
Fusing						2								2
Metering seals not intact								1						1
<b>Total</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>26</b>	<b>49</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>82</b>	<b>4</b>	<b>68</b>	<b>120</b>	<b>45</b>	<b>408</b>

### 8.3.4 Potential Settlement impacting non-compliance calculations

Table 26 includes an indication of materiality impact that may result from Category 1 non-compliances identified in the SVA market. Potential metered error volumes are calculated by ELEXON.

Table 26 CVA Inspection Visits where there has been a material error identified

Visit Reference	Potential metered Errors MWh	Non-compliance status
XXXX-XXXX	0	Rectified Pending Confirmation
XXXX-XXXX	0	Rectified Pending Confirmation
XXXX-XXXX	0	Resolved
XXXX-XXXX	TBC	Resolved
<b>Total</b>	<b>0</b>	

## 9 Appendix 2 – Category 1 and 2 non-compliance descriptions

### 9.1 Category 1

#### 1.01 Inaccuracy of Standing Data (Key MTD fields) held by Data Collector

- Outstation serial number
- Meter ID (serial number)
- Outstation number of channels
- Measurement Quantity ID
- Pulse multiplier
- Channel configuration
- Outstation multiplier/Outstation channel multiplier
- Complex Site Supplementary Information Form (SVA only)

#### 1.02 Metering Equipment Incorrect or Unsatisfactory

- Metering Equipment not functioning correctly
- Metering Equipment not programmed correctly
- Overall accuracy of Metering System not maintained
- Summation CTs used
- Correct Energy Measurement Check (Primary/Secondary conductor prevailing load test) indicates an error in the Metered Volume
- Measurement Transformers not located at Defined Metering Point

#### 1.03 Timing Error (Major)

- Outstation clock outside agreed tolerance

#### 1.04 Measurement Transformer Ratios Physically Incorrect

- Measurement transformer ratios different from those set up in Meter (except for any difference being consistent with a measurement error compensation applied within the Metering Equipment)

#### 1.05 Compensation Calculations Incorrect

- Meter compensation for Measurement Transformers Incorrectly applied or not applied
- Meter compensation for Power Transformers incorrectly applied or not applied

#### 1.06 Miscellaneous

- Other non-compliance not covered elsewhere

### 9.2 Category 2

#### 2.01 Inaccuracy of Standing Data held by HHMOA

- Outstation serial number
- Meter ID (serial number)
- Outstation number of channels
- Measurement Quantity ID
- Meter Register Multiplier
- Pulse multiplier
- Channel configuration
- Outstation multiplier/Outstation channel multiplier
- Measurement Transformer Ratios

- Complex Site Supplementary Information Form (SVA only)

## **2.02 Inaccuracy of Standing Data (non-Key MTD fields) held by Data Collector**

- Data Collector's Meter Technical Details do not match on site equipment due to recent Meter Exchange
- Other non-Key fields (e.g. Measurement Transformer Ratios, Meter Register Multiplier)

## **2.03 Non-provision of Standing Data**

- Meter Technical Details not provided – HHMOA and Data Collector
- Complex Site Supplementary Information Form not provided (SVA only)

## **2.06 Metering Equipment Incorrect or Unsatisfactory**

- Incorrect CoP applied
- Check Meter missing
- Main Meter missing, Check Meter present and accurate
- Voltage selection relay not installed/working when Summation CTs used
- Meter accuracy class incorrect
- CT accuracy class incorrect
- VT accuracy class incorrect
- Unapproved data format and protocol in use
- Possibility that overall accuracy of Metering System not maintained

## **2.07 Measurement Transformer and/or Meter Certificates<sup>19</sup>**

- Certificates not provided
- Certificates do not match on-site equipment

## **2.08 Unsuitable Environment**

- Environmental conditions likely to cause Metering Equipment failure

## **2.09 Inadequate Over-current Protection**

- Insufficient discrimination between source and local fusing
- No local isolation
- Main and check Meters not separately fused
- Other Metering Equipment not separately fused
- Non-settlement Meters not separately fused

## **2.10 Separate Phase Failure Alarms Not Installed or Inadequate/Failed – Local and Remote**

- Alarm not fitted where required
- Alarm not functioning

## **2.11 Inadequate Metering Equipment Integrity**

- Settlement Metering Equipment not sealed
- Password functionality not included in Outstation

## **2.12 Metering Equipment Test Facilities**

- Lack of adequate Metering Equipment test facilities

## **2.13 Miscellaneous**

- Other non-compliance not covered elsewhere

## **2.14 Timing Error (Minor)**

<sup>19</sup> Category 2.07 non-compliance was replaced by Category 2.16 and 2.17 in February 2009.

- Outstation clock outside agreed tolerance

#### **2.15 Commissioning Records**

- Commissioning records not provided
- Commissioning records incorrect
- Commissioning records incomplete
- Commissioning records not provided (LDSO)
- Commissioning records incorrect (LDSO)
- Commissioning records incomplete (LDSO)
- Commissioning records not provided (HHMOA)
- Commissioning records incorrect (HHMOA)
- Commissioning records incomplete (HHMOA)

#### **2.16 Measurement Transformer Certificates not provided or incorrect**

- Measurement Transformer Certificates not provided
- Measurement Transformer Certificates do not match site equipment

#### **2.17 Meter Certificates not provided or incorrect**

- Meter Certificates not provided
- Meter Certificates do not match site equipment



## 10Appendix 3 Risk Mapping Table

Category 1 Non-Compliance	SVA				CVA				
	R003*	R004	R005*	R006	R020	R021*	R022	R023*	R024
1.01 – Inaccuracy of Standing Data (Key MTD fields) held by Data Collector		✓	✓	✓		✓	✓	✓	✓
1.02 – Metering Equipment Incorrect or Unsatisfactory	✓		✓		✓			✓	
1.03 – Timing Error (Major)			✓			✓		✓	
1.04 – Measurement Transformer Ratios Physically Incorrect	✓				✓				
1.05 – Compensation Calculations Incorrect	✓			✓	✓				
1.06 – Miscellaneous									
*Focus Risks 2019/2020									