

**Technical Assurance Agent**

***Technical Assurance of Metering Systems  
TAA Annual Report  
BSC Year 2009/10***



**Non-Confidential**

## Document Control

<b>Distribution List:</b>	ELEXON	
<b>Reviewers:</b>	Stuart Jackson, Lisa Young, Paul Gregory – C&C Group ELEXON	
<b>Owner / Issuing Authority</b>	<b>Approved by</b>	<b>Date</b>
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## 1 Introduction

The Technical Assurance Agent (TAA) Annual Report 2009/10 summarises the findings of inspection visits performed by the TAA during the BSC Year 1 April 2009 to 31 March 2010.

It provides feedback on the health of the Half Hourly Metering System (HHMS) population and highlights key issues, particularly those with a high potential materiality or which might pose a large risk to the quality of data used in Settlement.

The report has been compiled by C&C Group as the TAA on behalf of ELEXON.

Not all the non-compliances that are found by the TAA audits are reported in this document, mainly because they are of lower material value and not sufficiently significant<sup>1</sup>.

### 1.1 Scope of the TAA Audit

The purpose of the TAA is to provide assurance that HHMSs installed for Settlement purposes comply with the relevant metering Code of Practice (CoP) specifications and operate in accordance with the associated BSC Procedures (BSCP). The technique is detailed in the following:

- Section L7 of the Balancing and Settlement Code (BSC)
- BSCP27 – ‘Technical Assurance of Half Hourly Metering Systems for Settlement Purposes.’

The checks performed by the TAA are prescribed within the BSCP and CSDs.

The findings in this document present the results from the TAA inspection visits for HHMS.

In 2009/2010 the TAA visited 1239 SVA and CVA HHMSs<sup>2</sup>. Of these visits:

- 46 were randomly selected to provide a representative sample of CVA HHMSs;
- There were 13 targeted CVA inspections where a non-compliance was suspected;
- 1180 SVA HHMSs were visited, of which;
  - 1,114 were from the Main Sample;
  - 61 were from the Specific Sample (complex sites).

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<sup>1</sup> A breakdown of non-compliances for Supplier Volume Allocation (SVA) and Central Volume Allocation (CVA) is contained in the document, “TAA Annual Statistics Report for 2009/2010”.

<sup>2</sup> These include both visits where access was attained as well as where no access was provided.



- 3 were targeted visits conducted at the request of the Performance Assurance Board (PAB) for SVA sites.
- 2 were revisits to ensure previous category 1 non-compliances had been rectified.

Whilst the BSC affords the capability for all HHMSs to be audited, only those HHMSs where the Measurement Class recorded in Supplier Meter Registration Service (SMRS) is MC 'C'<sup>3</sup> were selected as stipulated in BSCP27 Section 1.1.

Additionally, only HHMSs that have an Energisation status of 'E' and where the Meter Operator Agent (MOA) has advised ecoes<sup>4</sup> that a Meter is present are selected for an audit.



### ***1.2 Important notes regarding this report***

All percentage totals for a particular serial may not equal exactly 100% if summed, due to rounding.

It should be noted that some non-compliances are noted miscellaneous categories due to the fact that the issues are too disparate to report on effectively.

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<sup>3</sup> Measurement Class C is Half Hourly Metered > 100kw

<sup>4</sup> ecoes is the Electricity Central Online Enquiry Service, which provides a consolidated view of current SMRS and MOA data.

## 2 Summary of Findings

### 2.1 Overview of Performance

#### 2.1.1 Compliant Metering Systems

The TAA found more compliant Metering Systems by percentage than last year, up by 6.2% to 34.3%. Last year was 28.1%. Although the numbers are still relatively low the majority of issues found do not directly affect Settlement.

#### **SVA Category 1 Non-compliances**

The TAA has undertaken several exercises over the year to prompt Suppliers to resolve outstanding Category 1 non-compliances. The TAA's lead auditor has spoken with the Suppliers, MOAs and DCs to discuss progress and assist with any queries that they may have. The effect of this work appears to have been very useful and successful.

There were 143 Category 1 non-compliances identified. There remains 47 outstanding from 2009-2010 and 5 from 2008-2009, making 52 outstanding in total. The majority of the outstanding non-compliances for this year relate to the incorrect setting of the complex metering indicator on specific sample sites. Anecdotal evidence suggests that Suppliers are unsure who has ultimate responsibility for rectifying these issues.

The TAA supports the ongoing work in this area by ELEXON. It will help to resolve a number of these outstanding non compliances.

The average number of days from identifying to resolving non compliances varies significantly. This is dependent on whether or not there are physical equipment changes or simple administrative amendments required.

The time to rectify Category 1 non-compliances that require physical work to be carried out on site (such as a Meter exchange) can fall outside the timescales defined in BSCP27.





Average Working Days to resolve	Count of non-compliances
At visit	6
1-10	38
11-20	18
21-50	23
51-100	6
101-150	1
151-200	1
<b>Total</b>	<b>93</b>

**Table 1 Average number of Working Days taken to resolve SVA Category 1 non-compliances regardless of sub category<sup>5</sup>**

### SVA Category 2 non-compliances

There was a significant improvement on the number of category 2 non-compliances found against the previous year. There was 1829 Category 2 non-compliances identified this year or 1.67 per inspection in 2009/10 (compared to 1.82 in 2008/09).

Of the 1829 category 2 non-compliances raised over the operational year 2009-2010 the TAA has received valid rectification plans to resolve a total of 394. The nett increase of 1435 non-compliances not resolved (outstanding) increases the cumulative total of outstanding non-compliance to 7953.

Consistent with last year, the vast majority of outstanding non-compliances relate to certificates and overall accuracy issues.

Audit Year End	Cumulative Outstanding
2007	4141
2008	5144
2009	6518
2010	7953

**Table 2 Outstanding SVA Cat 2 non-compliances as at the year end**

### CVA Non-compliances

The TAA identified one CVA Category 1 non-compliance and 143 Category 2 non-compliances this year.

The cumulative total of category 2 non-compliances not resolved has risen from 130 in April 2009 to 262 in April 2010. Of the 143, category 2 non-compliances identified during the 2009/10 operating year, a total of 11 have been satisfactorily addressed by Customers.

<sup>5</sup> Excludes the 47 category 1 non-compliances that remain outstanding.

Audit Year End	Outstanding	Variance	Percentage change
2007	41		
2008	31	-10	-24%
2009	58	+27	+46%
2010	132 <sup>6</sup>	+74	+132%

**Table 3 Outstanding CVA Cat 2 non-compliances as at the year end**

## 2.1.2 Queries

A Query is the method by which a Registrant and / or a Supplier Agent may challenge an identified non-compliance raised by the TAA.

This year there were 75 Queries raised. 41 of these were found to be invalid, and therefore the non-compliance remains.

- 31 Queries were upheld and the non-compliance removed.
- 3 remain open and are currently under review.



Short Category	Total
Late provision of data preventing new data from being uploaded to auditor PC in time for visit	10
Cleared on Clarification between TAA and Customer	12
Updated File not used due to timing issues of delivery of data prior to visit	9
<b>Total</b>	<b>31</b>

**Table 4 Headline reasons for queries being upheld following TAA review**

84% of Queries were raised by the MOA, 3% by the Supplier and 13% by the DC.<sup>7</sup>

## 2.1.3 Appeals

The appeal process gives Registrants an opportunity to challenge the TAA where a query is found to be invalid.

There were no Appeals during the year; this is no change on the previous year.

<sup>6</sup> The increase in category 2 non-compliances can be attributed to the additional 13 targeted CVA visits. A total of 81 additional non-compliances were raised for these visits,

<sup>7</sup> The TAA routinely performs QA checking of inspections to ensure consistency of findings. Any erroneous non-compliance identified will be removed via the Query process to ensure all necessary automated email communications are issued by TAAMT to participants. These QA Queries are included within the figures.

**2.1.4 Consumption Data Comparison (CDC) Check**

The CDC check is a comparison of the consumption of one half hour period recorded by the TAA auditor on site to what the DC is processing.

100% of the audits had a CDC check performed.

1.6% (17) was found to be non-compliant and 98.4% (1080) compliant. Last year 98.5% were found to be compliant.

**2.1.5 Visit Arrangements**

**Cancelled Visits**

There were 1,229 Main Sample SVA visits planned, of which 115 (9%) were cancelled prior to the TAA visiting the site, 3 of the 49 CVA planned audits were also cancelled (6%).

Most visit cancellation requests by Suppliers are received within a few days of the visit notice being issued by the TAA. The instances of short-notice cancellation have dropped significantly from last year, leaving sufficient time to arrange a replacement Metering System for auditing.

A number of visits had to be cancelled at short notice due to the TAA auditor being unable to attend sites due to adverse weather conditions encountered during January 2010. This affected 29 audits which were successfully rescheduled during March 2010.

**No Access Visits**

A summary of the No Access visits can be found in the below table:

Sample (HHMS)	Total Visits Accessed	No Access Visits	Percentage
SVA Main	1033	81	7%
CVA Main	45	1	2%
SVA Specific	59	2	3%
Targeted CVA	13	0	0%
Targeted SVA	3	0	0%
Re-Inspected SVA	2	0	0%

**Table 5 Summary of No-Access visits**

**Conclusion**

An area which could be concentrated on by the Supplier with help from the HHMOA and HHDC are those inspections that were recorded as premises closed/unoccupied and no one available to provide access. The TAA would certainly expect in these cases consumption to be very low if not zero which could flag that the site may require contacting to



ascertain occupancy. For the sites suspected of being closed, the Supplier could contact the local HHMOA to check occupancy. The TAA believes it is worth considering this action as this type of no access accounted for 30% 5 of the total no access recorded in SVA sample.

7 inspections are recorded as LDSO attendance required. The TAA realise it is for the Supplier to arrange access but maybe the Supplier could via TAAMT when trying to organise access contact the HHMOA and ask if they are aware of any known access issues as the party who probably attends site more than any other?

10 SVA inspections were aborted on safety grounds, this included reasons such as unsafe entry and exit to the metering systems, Clarke cabinets (BSC instruction), poor/no lighting and one asbestos panel.



## 2.2 Specific Sample

36 out of the 59 Metering Systems audited under the Specific Sample had Category 1 non-compliances identified, details of those found are summarised below.

Reasons for non compliance	Count
Site is not complex but identified as complex.	32
Site is complex but not identified as complex.	1
Outstation clock outside of tolerance.	3
Data Collectors site details do not match those on site.	3
Data Collector Meter details do not match those on site.	2
Main Meter Error.	2



**Table 6 Summary of the Specific Sample Category 1 non-compliances**

## 3 Specific Sample

### Overview

The specific sample for 2009/2010 was for those sites which were registered as having a complex metering arrangement and associated aggregation rules. The purpose of these audits was to confirm whether or not the sites are correctly set up as complex and if not, the potential impact on Settlement.

ELEXON provided the TAA with an initial list of MSIDs, which were used as a basis for our visit planning activities. The TAA then made contact with all customers to determine what sites were currently registered as complex. The TAA identified 61 MSIDs requiring inspection. Some of the MSIDs were located on the same geographic site.

In total 61 inspections were completed. Each site was reviewed against the industry guidelines set out in BSCP502 Section 4.9 and BSCP514 Section 9.8 Guide to Complex Sites.

Each visit required additional information from Suppliers and Supplier Agents;

- Circuit diagrams
- Aggregation rules
- Other associated documentation.

Before each audit visit the TAA auditor reviewed this information. Following the audit, The TAA produced a report of the findings and the layout of the metering circuits and any other relevant information.

In total the TAA expended in excess of 180 Man days effort in preparing, undertaking and reporting these audit visits. The TAA believes that this has identified an issue in the way in which parties deem sites to be complex. The TAA has raised the issues with ELEXON.



## Inspection Findings

NC Category (Summary)	Number of NCs
Overall Accuracy not maintained (Cat 2)	84
MOA Complex Site Supplementary Information Incorrect (Cat 2)	79
Commissioning Certificates Not provided (Cat 2)	50
No CT Certificates or Generic Statements (Cat 2)	38
No VT Certificates or Generic Statements (Cat 2)	36
Site is not Complex. Potential Settlement Error (Cat 1)	31
No Meter Test Certificates provided (Cat 2)	30
Miscellaneous (Cat 2)	15
DC Data does not match equipment of site (non-key fields) (Cat 2)	14
Metering System Clock out of tolerance (Cat 2)	13
Meter Seals not intact (Cat 2)	12
Metering System clock not within tolerance (Cat 1)	3
Data Collector MSID data does not match site (Cat 1)	3
Data Collector Meter Register Details do not match those on site (Cat 1)	2
Main Meter Error Detected (Cat 1)	2
Meter fusing inadequate (Cat 2)	2
Site is complex but not registered as complex (Cat 1)	1



**Table 7 Counts of Category 1 and Category 2 non-compliances for the Specific Sample.**

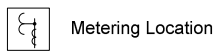
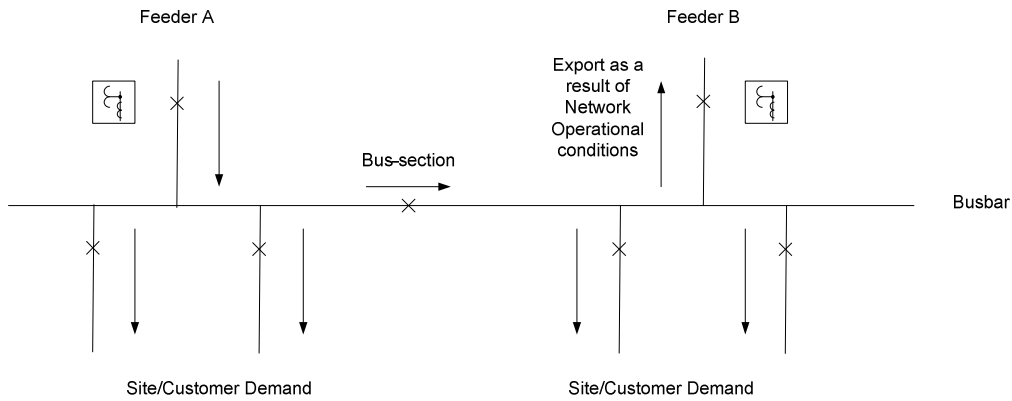
The TAA discovered that other setups (where the site should not be considered complex) fall into one of two categories, best described as erroneous export and net demand/export.

### i. Erroneous Export

Some sites have multiple connections to the distribution system. These connections can be connected together within the customer's own network. It is possible for energy being distributed around the DNOs system to flow into the customer's network and back out again. The Settlement Meters will record this additional energy.

This will impact Settlement unless it is dealt with by the Supplier. Some Suppliers have opted to use the complex site arrangements in dealing with these additional flows where the extra Import volumes are identified by the unexpected Exports and are removed from the customer's Meter readings.

The diagram below shows a typical arrangement where the correct Import volumes would be the total Import - Export.

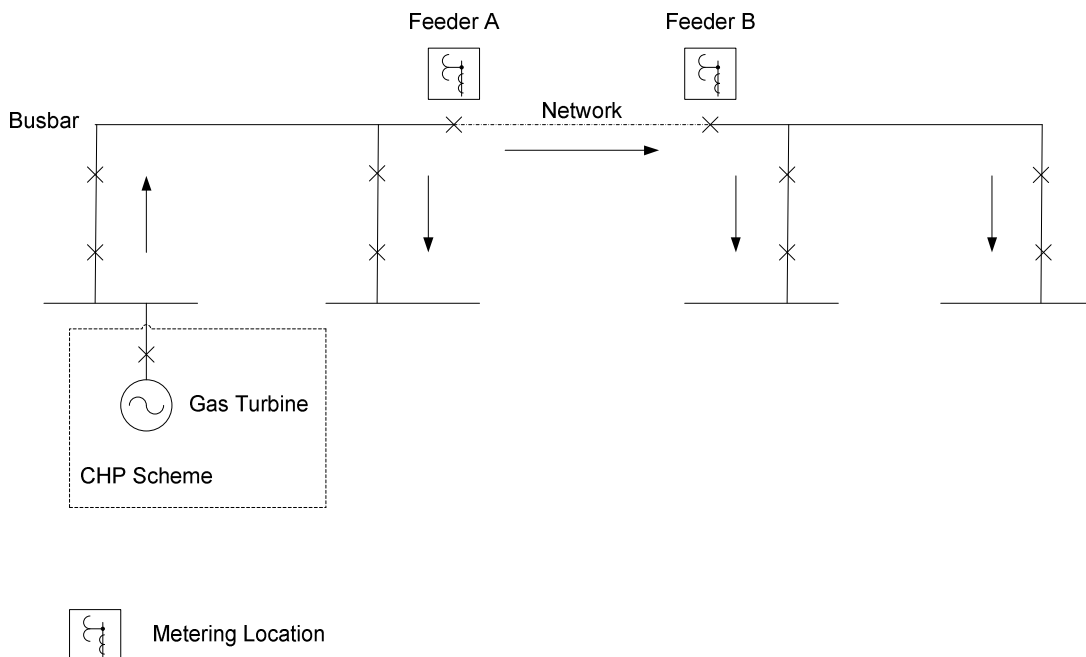


The issue with this scenario is that if a customer is only registered on a demand tariff, they would be paying for energy not used and is therefore disadvantaged.

## ii. Erroneous Imports

This issue is very similar to i. above, however the additional Imports are caused by the customer's generating equipment. The output of these generators can flow through one Settlement Meter and back to the customer via another. This inhibits the ability of a customer to provide their own demand.

The example below shows typical arrangements for erroneous Imports.



## Conclusion

Approximately 75% of the Specific Sample sites visited were determined non-compliant for being incorrectly registered as complex.

Both of these issues have been highlighted to ELEXON and the TAA is working closely with ELEXON to develop solutions.

## 4 Targeted CVA Audits

### Overview

The TAA was directed by the PAB to investigate CVA sites identified by ELEXON to determine how Import and Export volumes were allocated. The TAA was also directed to identify the existence of demand (if any) that was not associated with the site. Predominantly the sites selected were power stations.

In order to complete this task the TAA compiled a file of information for each site comprising:

- Aggregation Rules from the CDCA
- MTDs from both CDCA and MOA
- Single Line Diagrams
- Commissioning records

Access to all of the selected sites was gained with the assistance of the Registrants and other associated parties involved, which the TAA gratefully acknowledges.

### Inspection Findings

NC Category 1 and 2 (Summary)	Number of NCs	%
Certificate related	42	51%
Overall accuracy not maintained	7	9%
DC MTDs problems	4	5%
MOA MTDs problems	4	5%
Metering display issues	7	9%
Meter seals not intact	1	1%
Prevailing Load Test detected a blue phase voltage anomaly (low volts)	1	1%
Other	16	20%
<b>Total</b>	<b>82</b>	

**Table 8 Counts of Category 1 and Category 2 non-compliances for the Specific Sample.**

Only one category 1.02 non-compliance was identified during these visits. This non compliance related to a Prevailing Load Test detecting a blue phase voltage anomaly (low volts). The cause is unknown and the HHMOA is investigating.



The TAA discovered a few peculiarities in site arrangement, though the TAA inspections revealed no errors in registration and the applied aggregation rules for each BMU.

The TAA found that in most cases non compliances related to poor maintenance of records:

- Missing measurement transformer records
- Missing meter calibration records
- Incomplete or not provided commissioning documentation.

The lack of evidence for commissioning and the availability of electrical drawings meant that in many cases the TAA could not determine the orientation of current transformers.

This is a key requirement for good and proper Meter readings for Settlement purposes.

A CDC check was performed on at least one register of each outstation at each site. The TAA did this to ensure that meter readings are arriving at the CDCA in proper order. All of the checks performed were satisfactory.

A number of metering faults effecting Settlement were detected:

- Low volts
- Drop in current transformer output
- Meter dials not advancing.

The TAA notified the Registrant of all these issues.

### Conclusion

The scope of this work was to verify that all of the particular sites were correctly recording data to enter into Settlement. The TAA found this to be the case. What these targeted inspections did identify were a number of Settlement impacting meter faults but also noted a failure common to that seen in the SVA market with regards to appropriate record keeping.



## 5 Significant Issues

The following section details what the TAA consider significant issues noted during the audit year. These include non-compliances recorded in high numbers.

### 5.1 Commissioning Certificates

The number of non-compliances associated with commissioning records was 472, which is 26% of all Category 2 SVA non-compliances for the period 2009/2010 as opposed to 26.2% for the 2008/2009 audit period. This breaks down to:

- No commissioning record evidenced
- Commissioning record didn't match the HHMS
- Commissioning records deemed incomplete.

In many cases, there is no evidence available to show any attempt to verify that energy is being accurately recorded by using other local indicators or measurements. The TAA saw that most records do not clarify why the HHMS could not be verified initially and / or that records have not been made available for inspection by the LDSO.

#### Recommendation

This has not changed since the previous year and the TAA stands by its recommendation that the industry consider developing a harmonised national commissioning procedure between the LDSO and MOA.

The TAA also recommended last year and does so again this year that the industry consider developing a centralised repository of commissioning certificates to ensure that access to them is readily available. This approach could also provide the benefit of certificates being accessible for audits on quality and completeness and the TAA.

Both these points have been fed into the Technical Assurance of Metering Expert Group (TAMEG) for further discussion.

### 5.2 Measurement Transformer Certificates and Overall Accuracy

Measurement Transformer Certificates (CT and VT) are essential in the determination of the Overall Accuracy of a HHMS. The results for the year 2009/2010 show no improvement in the number of HHMS where the Overall Accuracy may not be maintained:

- In 2008/2009 - 17.5%.
- In 2009/2010 - 17%



These figures alone do not indicate that Overall Accuracy is not being maintained, and the TAA notes that there is no part of the physical audit process that can provide assurance in its entirety.

There is slight improvement in the Category 2 non-compliances related to CT and VT Certificates. Failure to provide the certificates directly correlates to the non-compliance recorded for Overall Accuracy:

- In 2009/2008 - 16% of all non-compliances were due to no CT certificate; 8% were due to no VT certificate.
- In 2009/2010 - 13% of all non-compliances were due to no CT certificate; 8% were due to no VT certificates.



ELEXON has provided instruction to the TAA on how to audit Low Voltage CT-operated HHMSs employing Class 0.5 or better CTs:

“In the absence of a certificate the TAA will employ the extremes in both directions of the accuracy class in its assessment of Overall Accuracy<sup>8</sup>.”

It is possible that this instruction provides a disincentive for the MOA to obtain and retain certificates for new installations.

The implementation of the National Measurement Transformer Error Statement (NMTES) has had some further impact in reducing the number of non-compliances that would have been raised. Anecdotal evidence continues to suggest that MOAs do not have visibility of Measurement Transformer Certificates during day-to-day operations, but rely on alternative instruction or advice issued by the LDSO.

The availability of Measurement Transformer certificates remains an ongoing issue. Dialogue at industry meetings appears to support the view that the MOA has difficulties in obtaining Measurement Transformer Certificates.

### Recommendations

The market has changed significantly in recent years and this has most likely led to Measurement Transformer Certificates being lost or not retained. The BSC requirement is that the Overall Accuracy of HHMSs should be maintained and these administrative issues should not detract from that. The TAA have three specific recommendations in this area:

- The Industry may wish to consider a centralised repository ensuring that access to the certificates is readily available.
- The TAA continues to recommend that efforts should be made to encourage the MOA and LDSO to understand their own and each others' responsibilities.
- The NMTES is updated to assist in resolving outstanding non-compliances and limit the number of future reported failures.

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<sup>8</sup> Reported to ELEXON as a note within TAAMT, 'site is LV CT with class 0.5 rating plate'.

The TAA in the past has flagged the issue of LV CT instructions and recommends that a cut off date be quoted as the instruction was originally derived to reduce the number of non-compliances being raised on historical sites that have class 0.5 CTs or better but no certificate. It is the TAA's opinion that the only party that consistently refers to NMTES is the TAA; it is very rare that the HHMOA will state they are applying as per the NMTES.



## 5.3 Update on Previously Reported Issues

The following issues have previously been reported in the TAA Annual Reports. This section provides an update.

### 5.3.1 Pre Audit Visits and Meter Exchanges

Some SVA MOAs undertake a pre-audit visit when they become aware of a planned Technical Assurance audit.

The TAA has found a number of category 2 non-compliances where meter technical details (MTDs) have not been up to date following a recent meter change. The MTDs effective date is between the notification and the audit. This could point to pre-audit visit taking place to assess for compliance.

When the TAA issues the notification of an audit, the MOA is asked if there is a planned meter change or any known faults. The answers indicate that there has only been one occurrence where the MOA has advised that there is a planned exchange. The appropriate category 2 non compliances are greater in volume.

Anecdotal evidence (from the metering customer) suggests a steady increase of pre visits over the early part of the audit year. On one occasion a MOA representative turned up at a planned visit (post TAA notification and prior to the inspection visits) whilst the TAA was auditing another metering system in the same location.

ELEXON sent a letter to all MOAs and Suppliers to highlight that this practice is not acceptable and since then the TAA has noticed a decrease in this practice.

#### Recommendation

ELEXON has made Industry aware that this practice is not consistent with the objectives of the assurance technique via a recent communication.

The TAA recommends that ELEXON continues to consult Suppliers to seek their support in ceasing the practice. The TAA will continue to monitor this issue during 2010/11 audit period.



## 5.3.2 Outstation Clock Errors

This year there were 10 SVA category 1 and 54 category 2 non-compliances relating to the clock in the Meter and/ or the Outstation not being in time with co-ordinated Universal Time (UTC).

Last year there were five SVA category 1 non-compliances and 27 SVA category 2 non-compliances. The non-compliances have doubled in 2009/2010 audit year.

There is not one singular root cause for the category 1 clock timing non-compliance captured during this audit period.

Given the frequency of HHDC communications with Meters it is almost impossible to determine if the increase in minor clock drift (category 2 non compliances) is representative of the UK as a whole. There is no specific HHDC that these non compliances were attributed to.

It continues to be difficult to quantify the impact on Settlement. . If the electricity price is particularly volatile between half hour periods or the level of consumption at the Meter fluctuates considerably around the Settlement period boundary there is the potential for the Registrant to be financially impacted by the imbalance price. This price may not be representative of the HH period in which the energy was consumed or generated. In these circumstances it is especially important that the energy is allocated to the correct Settlement period.

If the clock is fast, some energy will be erroneously allocated to the earlier Settlement period; if the clock is slow then some of the energy will be erroneously allocated to the later Settlement period.

As long as the consumption / generation and price remain stable across the relevant Settlement periods the effect of this error should be negligible.

## 5.3.3 Measurement Transformer Test Certificates (CT and VT)

As stated in section 5.2, the TAA uses CT and VT Certificates to calculate the Overall Accuracy of a HHMS. If they are not provided then the TAA must use other means less accurate to do the calculation.

In 2008/2009 there were 479 instances of missing Current Transformer/Voltage Transformer (CT and VT) certificates. In 2009/2010 this decreased to 386.

In 2008/2009 and 2009/2010, 25% and 21% respectively of all Category 2 non-compliances were identified as a result of the non provision of measurement transformer test certificates. The TAA are unable to confirm an exact reason for the reduction in numbers as there is no evidence of an actual improvement in maintenance/provision of meter certificates. This decrease may be partly down to a flux in the trend based upon those metering systems identified for the 2009/2010 sample set.



## 6 Performance Statistics

### 6.1 Non-compliances identified

#### 6.1.1 SVA

##### Category 1

119 (83%) of all Category 1 non-compliances identified during the year related to the Data Collector's Meter Technical Data not matching that found on site.



Category 1 questions <sup>9</sup> asked by the TAA Inspector	'No' count	%
Does the Data Collector D0268 Meter Register Details data match the TAA Agent data?	62	43%
The D0268 Complex Site flag is set to YES. Is the Metering System considered complex against the guidance in the BSC?	31	21%
Does the Data Collector D0268 Meter Details data match the TAA Agent data?	14	10%
Is the Metering System clock within the allowable tolerance as detailed in section 4.2 of BSCP27?	10	7%
Prevailing Load Test detected an error in metered volume.	7	5%
Does the Data Collector D0268 MPAN Core data match the TAA Agent data?	6	4%
Does the Data Collector D0268 Outstation data match the TAA Agent data?	5	4%
Supply physically disconnected but still trading in ecoes	1	1%
Are all the CT links in the open position and the CTs have not shorted out?	3	1%
The Metering System is considered complex against the guidance in the BSC, is the D0268 Complex Site flag is set to YES?	1	1%
Is the Outstation display advancing?	1	1%
Is the Metering Equipment correct or satisfactory / Is the Metering Equipment functioning correctly / Is the Blue phase functioning?	1	1%
Metering equipment removed and no notice of disconnection <sup>10</sup>	1	1%
<b>Totals</b>	<b>143</b>	

**Table 9 Category 1 non-compliances identified during the year**

<sup>9</sup> The TAAMT tablet application used by the TAA auditors asks a series of questions. Where 'No' is the response, this will generate the relevant non-compliance.

<sup>10</sup> The TAA has been updated that the supply has been re-instated but not by the HHMOA of the LDSO. It is understood that this site is now the focus of a revenue protection investigation by the Supplier.

The majority volume of non-compliances suggest that there is an issue with whether a site should be considered complex and also the general issue of DC MTDs not being in line with what is found on site.

## Category 2

1,402 (84%) of all Category 2 non-compliances identified during the year were 'certificate' related. Refer to Section 5 'Significant Issues' for more details.

Category 2 questions <sup>11</sup> asked by the TAA Inspector	'No' count	%
Is there a commissioning certificate(s)?	472	26%
Is overall accuracy maintained?	321	18%
Are there valid CT certificates or Generic Statements?	232	13%
Are the Meter Test certificates valid?	211	12%
Are there valid VT certificates where appropriate or valid Generic Statements?	149	8%
Is there a valid CoP4 certificate(s), where appropriate?	17	1%
<b>Total</b>	<b>1,402</b>	<b>84%</b>



Table 10 Category 2 non-compliances identified during the year

### 6.1.2 CVA

There was one category 1 non-compliance found during the audit year.

There were 143 category 2 non-compliances found during the audit year.

- 90 (63%) of these were 'certificate' related.
- 45 Overall Accuracy (direct correlation to certificate related non-compliances)
- 4 phase failure protection

<sup>11</sup> The TAAMT tablet application used by the TAA auditors asks a series of questions. Where 'No' is the response, this will generate the relevant non-compliance.

## 6.2 Potential Settlement Impacting Non-compliances

There were nine Metering Systems visited where potential Settlement impacting non-compliances were found due to timing errors.

The total estimated potential impact is **3200.85 MWh**.

There were eight Metering Systems visited where potential Settlement impacting non-compliances were found where only a percentage of the energy was being recorded. The total estimated potential impact is **8324.04 MWh**.



Visit Reference	Clock Timing Errors MWh	Timing Error Seconds
A	890.6	3600
B	876	3600
C	-61.03	-114
D	0.11	480
E	0.53	50
F	0.53	50
G	0.53	50
H	48.18	180
I	1445.40	1800
<b>Totals</b>	<b>3200.85</b>	<b>9696.00</b>

**Table 11 Audits were there has been a potential for a material error identified as a result of clock timing issues**

Visit Reference	Errors MWh
J	963.69
K	67.32
L	476.00
M	415.66
N	81.03
O	328.50
P	3679.20
Q	2312.64
<b>Totals</b>	<b>8324.04</b>

**Table 12 Audits were there has been a potential for a material error identified**

The materiality calculations used to impact assess the above details for the effect on Settlement is described in BSCP27 section 4.1.8. ELEXON undertakes additional activities for such non-compliances to identify if there is an actual impact on Settlement, and if so what that is. This is not reported within this document.

For those visits where a material error was recorded and were not the result of timing errors the key reasons for the failure are as follows:

Visit Reference	Issue
R	Meter fault
S	Low output from all CTs
T	Meter error
U	Crossed CT secondary wiring
V	Meter programmed with incorrect VT ratio
W	Red CT shorted out at test facility
X	Low voltage output from VT
Y	Low voltage output from VT



**Table 13 Visits where potential Settlement impacting non-compliances were found**

## 6.3 Rectifying Non-compliances

### 6.3.1 SVA Category 1 non-compliances

The average number of days to resolve the category 1 non-compliances is shown below.

Category	Total identified	Unresolved	Resolved	Closed	Average WD taken to resolve
1.01	119	35	81	3	24
1.02	13	4	8	0	15
1.03	10	6	4	0	3
1.06	1	1	0	0	N/A

**Table 14 Average number of days to resolve the Category 1 non-compliance**

The TAA has undertaken several exercises over the course of the year to prompt Suppliers to resolve category 1 non-compliances; this usually triggers the relevant party to take action.

Three non-compliances were closed as a result of queries being upheld.

At the end of the audit year there were 47 outstanding category 1 non-compliances.



Month notified	Remaining outstanding
May 2009	2
July 2009	2
Sept 2009	2
Oct 2009	2
Nov 2009	2
Dec 2009	8
Jan 2010	5
Feb 2010	6
Mar 2010	18

**Table 15 Month and count of Category 1 non-compliances that remain unresolved at the year end**

### 6.3.2 SVA Category 2 Non-compliances

There were 1829 Category 2 non-compliances found in 2009/2010 audit period.

Audit Year End	Outstanding	% increase from previous year
2007	4141	
2008	5144	24%
2009	6518	27%
2010	7953	22%

**Table 16 Count of Category 2 non-compliances that remain unresolved at the year end**

### 6.3.3 CVA Category 1 Non-compliances

There was one Category 1 non-compliance identified and none outstanding from any previous audit year.

### 6.3.4 CVA Category 2 Non-compliances

There were 58 CVA HHMS audited during the year. Of these;

- 50 were found to have Category 2 non-compliances
- Of the 143 category 2 non-compliances identified 131 from this audit year remain un-rectified, and 262 remain un-rectified in total from all Audit years.

## 6.4 Queries and Appeals

Of the individual non-compliances associated with audits undertaken during 2009/2010:

- 41 (55%) Queries have been investigated and found to be invalid, and therefore the non-compliance remains, requiring rectification.
- 33 (45%) Queries<sup>12</sup> have been investigated and found to be valid Queries, thereby removing the associated non-compliance. Of these, 62 (84%) were raised by the MOA.



There have been no Appeals during the year.

## 6.5 Cancelled appointments

There were SVA HHMSs and CVA HHMS that were chosen for visits, which were then cancelled.

The principle reasons for cancellation of the SVA visits are;

- 23 (20%) were cancelled because the Supplier advised that it was unable to secure access.
- 20 (17%) were due to a pending change of Supplier, Meter Operator or Data Collector.
- 6 (5%) were due to the supplier changing the Measurement Class from C to E.
- 9(8%) were due to the HHMS either being de-energised and/or without a meter.
- 29(25%) auditor unable to attend due to adverse weather conditions.

Investigations by the TAA suggest that cancelled appointments relating to change of measurement class and de-energised sites are avoidable if market participants were to update their registrations within the meter point registration system (MPRS) within agreed BSCP timescales.

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<sup>12</sup> In the event that the TAA identifies an erroneous non-compliance during QA checking of a visit some have been removed by way of raising a Query in order to ensure that all necessary automated email communications are issued by TAAMT. These are included within these figures.

Number of Working Days notice prior to the visit date	2008/2009	2009/2010
b	1	7
1	2 to 5	8
e	6 to 10	3

Table 17 Numbers of late cancellations over the past 2 years

## 6.6 No Access

There were 82 SVA audits where the TAA could not gain access to the HHMSs when on site, despite any prior actions that the Supplier may have taken in advance. This equates to 7% of HHMS that were attended by the auditor.

This is a decrease of 4.4% from the previous year.

Two were from the Specific Sample. (. One CVA visit was aborted due to adverse weather conditions.



	BSC Year				
	2005/2006	2006/2007	2007/2008	2008/2009	2009/2010
<b>SVA</b>	12.1%	11.0%	8.9%	11.4%	7%
<b>CVA</b>	7.5%	4.0%	0.0%	0.0%	2%

Table 18 No access rate over the past 4 years

No Access Appointment Status	Main Sample	Specific Sample	CVA	Total	%
Premises closed/unoccupied and no-one available to provide access.	26			26	31%
Site visited customer unavailable to provide access	18			18	21%
Site visited customer unable to provide access	15			15	18%
Unsafe access.	10			10	12%
LSDO and/or SAP attendance required to access Metering Equipment.	2	2		4	5%
Other Reason (onsite)	4			4	5%
MOA unable to secure access	3			3	4%
Site visited customer unwilling to provide access	2			2	2%
Severe Weather Conditions			1	1	1%
Supply Disconnected	1			1	1%
<b>Totals</b>	<b>81</b>	<b>2</b>	<b>1</b>	<b>84</b>	



**Table 19 No access rate by reason and sample set**

## 6.7 Data Provision

The TAA is often required to put much effort into obtaining both data and access to sites, much more than the remit of the role. This section describes those efforts and the processes.

There were 1097 SVA Metering Systems where the TAA achieved access, which equates to 93% of all visits.

Prior to the audit taking place the Supplier, MOA and DC must provide certain data. Over the course of the past three years<sup>13</sup> there has been a steady improvement with respect to the timeliness of required data being provided by Suppliers, MOA and DC prior to the visit date.

However, there are still approximately 10% of instances where data is provided late in the process, with less than 5 days before the audit date. Automated reminders are issued for incomplete datasets on an individual audit basis to prompt late providers. The TAA has daily processes in place to look for data that has been delivered and is required for imminent audits and proactively chases where data is missing.

Particular focus has been paid to ensure that the data required for the CVA targeted and SVA specific sample was available in advance of the audit date to enable the TAA to effectively plan these visits. This proved to be a time consuming exercise requiring repeated reminders to the relevant customers by the TAA.

Inevitably, due to the volume of data that is provided for all visits planned, if a document is provided late (less than 5 WDs prior) in the audit process there is the potential for it not to be processed in time for the audit.

On a number of occasions (approximately 5%) access was only gained due to the tenacity of both the auditor and the onsite MOA representative. This is consistent with the previous audit year. This involved:

- Repeated visits to the site
- Multiple telephone calls
- Discussing the reason for the visit with the customer.

Without this proactive approach to the audit the volume of no access visits would have been significantly greater.

The TAA in partnership with customers and ELEXON have reduced no access by 4% from last year to 7% this year. This is considered to be a good, continued improvement year on year and the TAA wishes to thank the Suppliers and MOAs for their assistance in this area.

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<sup>13</sup> C&C Group have been the TAA since April 2007.



Suppliers are aware that they need to ensure that they do all they reasonably can to ensure that when the TAA attends site that access will be afforded.

### **6.8 CDC Check**

There have been occasions (approximately 3%) where the HH reading provided by the HHDC did not match that recorded by the TAA auditor when on site.

Rather than mark the check as non-compliant immediately the TAA Administrator contacts the HHDC and makes them aware and asks that they provide additional data and performs further analysis.

Upon investigation and dialogue it often transpires that the data submitted by the HHDC to the TAA relates to the wrong HH period or there has been a typo error, and as such is satisfied that the CDC check is compliant.

#### **6.8.1 SVA**

Of the HHMS where access was gained all had a CDC check performed.

Of those sampled, 1080 (98.5%) were found to be compliant.

#### **6.8.2 CVA**

All CVA audits underwent a CDC check and none were found to be non-compliant.



## 7 Comments from the Service Delivery Manager

### 7.1 Visit planning

As with previous audit years, when planning ahead for the forthcoming months the TAA contacts those MOAs that will receive the greater number of visits due to their market share to ask if they have any specific pinch points for scheduling purposes.

Where possible The TAA do all we can to keep a relatively evenly loaded monthly schedule for MOAs, taking into account such factors as market share & holiday seasons.

As described earlier in this report, the TAA has expended significant effort in planning and scheduling both the SVA specific sample and the CVA targeted visits. These visits required complex planning with the market participants who have been extremely helpful with this process. This is especially true in the CVA arena, where we have required security access in addition to the standard data requirements.

The TAA notes that some specific sample sites have proved difficult to gain access to, but due to the combined efforts of the TAA, the Supplier and the MOA, all sites were visited with only one no access due to the LDSO representative being unable to attend site.

The TAA operates an 'Open Door' policy not only for visit planning but for all aspects of the service which has been very well received by both ELEXON and the TAA Customer base.

### 7.2 Data provision

In general, the timeliness of information provided prior to the planned visit by Supplier, MOA and HHDC continues to be good. The reminder function to prompt for this information continues to work well. There remains occasions when the TAA needs to chase for information, sometimes with only a day or two before the visit.

Late delivery of data continues to cause non-compliances that would otherwise not be necessary.

### 7.3 Provision of rectification plans

During 2008/2009 there were a total of 511 non-compliances closed with a completed rectification plan. At this stage there are 165 plans that have been reviewed where the TAA has requested further information from the Customer to clear the non-compliance. These primarily relate to certificate related non-compliances.

The number of completed rectifications has decreased from last year which is disappointing even with the introduction of the new rectification plan functionality within the TAA management tool. TAAMT enhancements



## Technical Assurance Agent

The TAA are currently working with ELEXON to deliver some minor changes to the TAAMT including some automated notifications when a change of Supplier and / or change of agent take place. This is helpful because outstanding non-compliances need to be transferred to the new Supplier / Supplier Agent. The TAA hope this will improve resolution of legacy non-compliances in a timelier manner.



## 8 Glossary of terms

Acronym	Definition
BMU	Balancing Mechanism Unit
BSC	Balancing and Settlement Code
BSCP	Balancing and Settlement Code of Practice
Category 1 non-compliance	A non-compliance that is deemed to be currently be 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
CDC check	Consumption Data Comparison Check
CoP	Code of Practice
CVA	Central Volume Allocation
DC	Data Collector
eco.es	Electricity Central Online Enquiry Service
HHMS	Half Hourly Metering System
HV	High Voltage
LV	Low Voltage
MAR	Meter Advance Reconciliation
MC	Measurement Class
MC 'A'	Measurement Class A – Non Half Hourly Metered
MC 'C'	Measurement Class C –Half Hourly Metered > 100kw
MC 'E'	Measurement Class E – Half Hourly Metered < 100kw
MOA	Meter Operator Agent
MTD	Meter Technical Details
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
PAB	Performance Assurance Board
SAP	Senior Authorised Person
SVA	Supplier Volume Allocation
TAA	Technical Assurance Agent
TAAMT	TAA Management Tool
UTC	Co-ordinated Universal Time



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