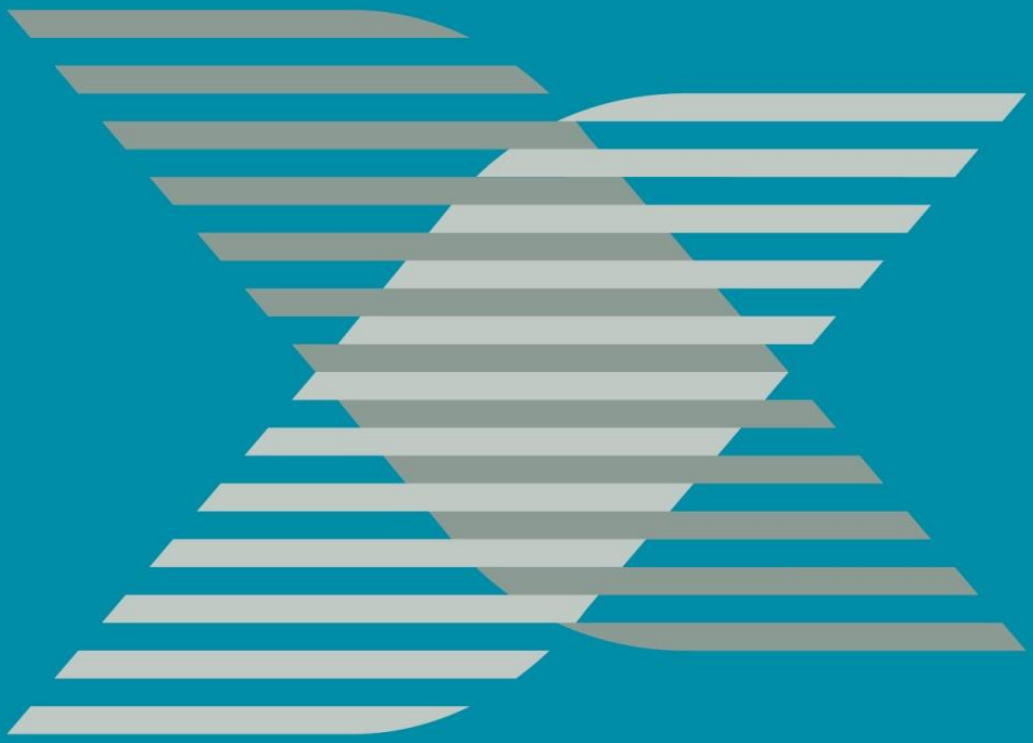
Technical Assurance

Investigating how Licensed Distribution System Operators and Meter Operator Agents manage and maintain Metering System records (Measurement Transformer Certificates, Meter Certificates and Commissioning Records)



Elizabeth Montgomerie
Technical Auditor
Telephone: 020 7380 4224
Email: elizabeth.montgomerie@elexon.co.uk

Contents

What is Technical Assurance of Performance Assurance Parties (TAPAP)?

Technical Assurance is used as a detective assurance technique and forms part of the Performance Assurance Framework (PAF). It consists of an on or off-site check of compliance, commonly known as a TA check.

The Performance Assurance Board (PAB) agrees a scope of work for Technical Assurance, within the Risk Operating Plan (ROP) every year. The scope details checks designed to provide assurance on high-risk processes and any gap areas not covered by other PAF techniques.

The ROP and TA scope for 2010/11 was approved by the PAB in October 2009. One of the TA checks in scope was the management and maintenance of Half Hourly **Metering System records**.

Why investigate how Metering System records are managed?

Metering System records consist of:

- Measurement Transformer (both Current Transformer (CT) and Voltage Transformer VT)) certificates
- Meter certificates
- Commissioning records

For the purposes of this check, Meter Technical Details were not included.

These records are important under the BSC because they provide assurance that the Metering Equipment is accurate and will record energy volumes as such. Participants must store and retrieve existing and new records in a way that supports their Code obligations.

There were a number of indicators that led the PAB to approve a TA check on Metering System records.

The Technical Assurance of Metering (TAM) technique shows that there is a growing level of missing, CT, VT and Meter certificates and incomplete, inaccurate or missing Commissioning records.

In 2009/10 59% of the 1245 HH Metering System TAM inspections had one or more missing certificates. This is a breakdown of the missing certificates for these Metering Systems certificates:

- 26% Commissioning records
- 21% CT / VT Certificates
- 12% Meter Test certificates

At the time of writing the report there were 336 CT / VT certificate related non-compliant sites, 243 Meter certificate non compliant sites and 497 commissioning related non-compliant sites raised from the audit year 2010-2011, of all these over 77% are still outstanding.

In total, there are 1670 (67% of all visits made for the TAM process) sites that still have outstanding certificate and commissioning record related non-compliances since April 2009.

The Technical Assurance of Metering Expert Group (TAMEG) has concerns that the level of the non -compliances issued for missing, inaccurate or incomplete records is skewing the results of the TAM technique.

We are concerned about the level of missing or incomplete records and the impact this may have on assurance that the Metering Systems are recording accurately and the resulting data entering the Settlement process.

We are using this TA check to help us measure Settlement Risks 0037, 0022, 0112, 0113 and 0116.

The scope of this TA check was that ELEXON would review how LDSOs and MOAs manage, maintain and exchange Metering System records.

Out of scope of the check were:

- Meter Technical Details. This was the subject matter for a check that took place in 2008.
- The technical assessment of the Metering System. This is covered by the Technical Assurance of Metering (TAM) process.
- How records are created and the content and completeness of individual CT and VT records. The supporting evidence and long standing issues lie in the storage, management and provision of these records rather than with quality. This area is also checked by the TAM process.

Table 1 - Settlement Risks

Settlement Risk	Description	Net Significance
SR0022	The risk that HHDCs do not use the correct Meter Technical Details resulting in Meter readings being misinterpreted or not collected. *We use Commissioning, COP4 requirements, Proving Tests (if requested) and D0001 (Request Metering System Investigation) data flows as controls for this risk.*	12 (Controls = Medium)
SR0112	The risk that HHDCs use data from faulty Metering Systems resulting in incorrect data being entered into Settlement. *We use Commissioning, Meter Advance Reconciliations (MARs), Error flags, Meter Reading Validation, Proving Tests, COP4 Testing, Investigate inconsistencies process, Periodic Calibration Testing, Safety site visits and Automatic trimming of clock as controls for this risk.*	12 (Controls = High)
SR0116	The risk that Import/Export Metering Systems are incorrectly installed/configured resulting in inaccurate data entering Settlement. *We use Commissioning, Proving Tests (if appropriate), COP4 Testing, D0001 (Request Metering System Investigation), Investigate inconsistencies process as controls for this risk.*	10 (Controls = Medium)
SR0113	The risk that the LDSO-owned Settlement Metering Equipment is not maintained, resulting in incorrect data entering Settlement. *We use Commissioning, Error Flags on Meters and the National Measurement Transformer Error Statement as controls for this risk.*	8 (Controls = Low)
SR0037	The risk that LDSOs connect and energise Supplies before MOAs have installed, commissioned and energised a Metering System. *No controls have been identified for this risk.*	3

We suggest that the strength of commissioning as a control for these risks should be assessed as part of the Risk Evaluation Register review in June 2011. We have made this recommendation the findings from the TA checks section.

A Summary of the Key Findings

ELEXON visited six Licensed Distribution System Operators (LDSOs) and four Half Hourly Meter Operator Agents (MOAs).

We developed a checklist of obligations to assess these parties, extracted from:

- BSC Section L 'Metering';
- Party Service Line 100 –PSL100 'Generic Non Functional Requirements for LDSOs and Party Agents';
- Balancing and Settlement Code Procedure 27 – BSCP27 'Technical Assurance of Half Hourly Metering Systems'; and
- Code of Practice 4 'For the Calibration, Testing and Commissioning Requirements of Metering Equipment for Settlement Purposes'.

Table 2 shows an overview of where we found non-compliances with these obligations.

The key findings of this check (more details are in the later in section 'Findings from the TAPAP Checks'):

1. MOAs are operating incomplete commissioning procedures. This can lead to very significant impacts upon Settlement, both in volume and financially, some examples are described in the 'Findings from the TAPAP Checks' section.
2. Commissioning of parts (CT / VTs) of the Metering System is sometimes being performed by a third party (rather than the appointed MOA) and the details are not being passed on - creating inefficiencies.
3. MOAs experience more problems in getting CT / VT certificates and completing commissioning procedures where they are not affiliated with the LDSO (i.e. they are not part of a vertically integrated company).
4. Non-compliances against BSCP27 where the MOA for fails to request CT / VT certificates.
    - This is due to the lack of involvement of LDSOs in the TAM process (BSCP27) and difficulties experienced by MOAs in obtaining reliable contacts with the LDSO.
5. Non-compliances against BSCP27 where the LDSO fails to respond to a request from the MOA.
    - This is due to the lack of involvement of LDSOs in the TAM process (BSCP27) and difficulties experienced by MOAs in getting an adequate and reliable contact to liaise with at the LDSO.

6. Where there were processes in place and operating, there is no supporting written documentation in line with Party Service Line 100.
    - This is a regular finding from the checks done under the TAPAP technique.
7. On a positive note, we are pleased to report that all of the Meter Certificates that we requested to see from MOAs on our site visits were available.
    - Meter certificates provided by the manufacturer directly to the MOA, these certificates rarely change hands (there is very little need to) and are stored by the MOA.

Table 2 - Areas of non-compliance (NC)

Obligation	LDSO NCs	MOA NCs	Observations
PSL100 5.3 Processing Continuity Lack of processes in place to minimise risk of continuity	1	0	Inappropriate reliance by LDSOs on the MOA to check measurement transformer accuracy Inconsistent use of forms to record HV and LV Metering Equipment details A Lack of controls or supervision in place to prevent new recruits making amendments to meter configurations
PSL100 9.1 Processing Auditability Lack of documented processes to support the auditability and traceability of processes	3	1	n/a
PSL100 4.2 Access to Non-computerised Records Records were inadequately protected from fire, water damage, theft	1	1	n/a
BSCP27 4.3 Provision of Measurement Transformer Certificates for Metering Equipment	6	4	A lack of effective communication between LDSOs and MOAs relating to MT certificates A lack of clarity to participants of the contacts within a particular organisation (e.g. not published on LDSO website or MOCOPA contacts out of date or too general (call centre with no knowledge of appropriate contact)
Code of Practice 4 - 5.5 Missing commissioning documentation	0	1	n/a
Code of Practice 4 – 5.5 Incomplete commissioning process	0	3	A lack of understanding of what a complete commissioning process is

Areas of concern – raised by Industry

Throughout all the checks that we performed, we asked parties to tell us what their concerns were in relation to the management and maintenance of Metering System records. They told us that the level of expertise of the field workers is falling, particularly when dealing with complex Metering set ups and also that there is a communication breakdown between LDSOs and MOAs.

Expertise is disappearing from the field workers (and back office staff who process the data from the field workers) and in some cases define internal procedures.)

There is a worry that as the industry changes and there is greater focus on Smart Metering the level of understanding of Metering System Equipment and set up is falling, through retirement and differing requirements for what is needed to perform the role of Metering Equipment installation and commissioning. This includes a lack of understanding in the back office staff who support the field workers.

ELEXON Response: The BSC mitigates this issue through the PAF –

- A Self Assessment Document (SAD) is part of the **Qualification process** for new market entrants and Qualified agents making changes. There is a section of the SAD that asks the applicant to provide details of how it manages its resource and ensures it is capable of doing the roles necessary. The SAD is reviewed (though it is not confirmed with evidence as the party won't have gone live) by the Qualification Service Provider (QSP) and further investigation can be made if necessary. The PAB will only approve the application if the SAD has been satisfactorily completed. Qualification is a pre go live process; it may not be representative of processes post go live. ELEXON could work with the QSP to strengthen the questions in the SAD.
- If it is suspected or indicated that a participant, once live, is not deploying resource capable of delivering its BSC obligations to the appropriate standard, this can be escalated to the PAB. The PAB may employ other detective or corrective assurance techniques, including **Re-Qualification** or even **Removal of Qualification**.

Outside of the BSC there is much done to support the expertise in the market:

- On an annual basis the MOCOPA (Metering Operator Code of Practice Agreement) initiates on site audits with a selection of Meter Installation staff with a focus on Health and Safety.
- The MOCOPA is currently drafting the requirements for a national meter qualification certificate that could stipulate the minimum requirements of a meter installation worker.

Communication lines between LDSOs and MOAs

Currently there is minimal and in some cases no interaction between MOAs and LDSOs, particularly in respect of the TAM process (where requests are made by the Technical Assurance Auditor (TAA) to see CT / VT / Meter and commissioning documentation) and during the actual Metering Equipment commissioning process on site.

ELEXON Response: The BSC mitigates this issue by –

Using the TAM process to highlight areas of concern in the Half Hourly Metering market.

Up until now the LDSOs have had little interaction with the TAM process. Particularly in terms of not being involved in the scheduling process and they are not aware of any non-compliances that exist in their operating area. Going forward, we intend to bring LDSOs into the TAM process in a more structured way:

- We will provide access to the non-compliances raised by the Technical Assurance Agent (TAA) that are relevant to the LDSO.
- We will make sure that the LDSO is aware of visits scheduled to be made by the TAA. These are changes that we can make by altering the system that manages this data.
- We will undertake a review of BSCP27 to establish any necessary changes to the TAM process and will also look at Code of Practice 4 to see if there are any improvements that can be made.
- The **Technical Assurance of Metering Expert Group** (TAMEG) has started making progress in collating contact names, email addresses and telephone numbers for LDSOs and MOAs who partake in the TAM process. We will collate this data and publish this on the ELEXON website in the future. This will be available for the TAM process and also the commissioning process.

Is there more that we can do in either of these areas? Let us know what you think, email **technical.assurance@elexon.co.uk**.

Findings from the TA Checks

You have read in the Summary of Key Findings section that we found a number of particular areas of concern. We will expand on these here and will also recommend next steps to assist industry in complying with the obligations set out in the BSC and the Code Subsidiary Documents (CSDs).

1. MOAs operating incomplete commissioning procedures.

Commissioning is used to provide assurance that a Metering System is set up correctly and will measure and record energy flows accurately. A Metering System set up incorrectly and not accurately recording energy can lead to a significant impact upon Settlement accuracy. For example:

- The Trading Disputes Committee (TDC), through the Trading Disputes processed 23 disputes in the last 24 months where Settlement errors were related to Meters being programmed incorrectly and errors in equipment installation. This was coupled with missing commissioning records, suggesting that the commissioning of parts of the Metering System may not have taken place (if they had, and these records were passed on to the MOA who commissioned the Meter, it is without question that these issues would have been highlighted).It was calculated for the purpose of the Trading Disputes that the materiality amounted to over **£643,000**. The TDC upheld 11 of these disputes with a materiality of **£609,000**.

- Another Trading Dispute was raised in 2008 when Metered Volumes credited to an exporting Power Station were proved to be incorrect (this was a site registered for Central Volume Allocation (CVA), rather than Supplier Volume Allocation (SVA)). In this case the commissioning process failed because the commissioning documentation provided was assumed correct by the MOA when in fact the convention for energy flow direction had been interpreted incorrectly. It was calculated for the purpose of this Trading Dispute that the materiality amounted to **over £9,000,000**. The Disputes process only looks so far back in order to correct Settlement errors. As the error occurred around installation the actual impact was estimated at around **£50,000,000**.

2. Commissioning performed by a third party rather than the appointed MOA.

On some occasions some items of Metering Equipment are installed/'commissioned' by a subcontractor to the LDSO. In these circumstances the participant who performed the commissioning tests may not be aware of the requirements in CoP4 and does not pass the documentation on to the appointed MOA who is responsible for commissioning the whole Metering System.

This leads to inefficiencies and potential errors if the incoming MOA assumes those items have not been commissioned appropriately. Ensuring that details are passed on should ensure that MOAs have an opportunity to assess these test results and determine the overall accuracy of the Metering Equipment properly.

3. MOAs experience more problems in completing commissioning procedures and getting MT certificates where they are not affiliated with the LDSO.

Most MOAs find it problematic to perform full end to end commissioning tests if they are not associated to the LDSO (who is usually the CT/VT Equipment Owner) or do not know who is installing the CT and or VTs on the Equipment Owner's behalf. In addition, if the MOA is not present on site at the same time as the CT / VTs are being installed, then the difficulties are exacerbated and the MOA is unable to fully commission the Metering System.

Not being associated with the LDSO or knowing who to approach more generally is also a problem for MOA when they want to obtain CT/VT certificates. This is of particular concern for MOAs that are independent of any LDSO where access to records is always problematic.

What are the requirements in the BSC & CSDs to support findings 1, 2 and 3?

- *BSC Section L 'Metering', L1.2 – details that the principle function of a Meter Operator Agent is to install, commission, test, maintain, rectify faults and provide a sealing service, in accordance with PSL100 and the relevant BSCPs (namely BSCP514 – Half Hourly Meter Operations).*
- *BSC Section L 'Metering', L2.1 – details that the Registrant of each Metering system shall ensure that the Metering Equipment is installed and commissioned and maintained and operated (discharged to the Meter Operator Agent upon appointment in line with Section J).*
- *BSC Section L 'Metering', L3.6 – details that the Metering Equipment shall be commissioned in accordance with Code of Practice 4.*
- *Code of Practice 4 - details what commission tests must consist of as a minimum and what calibration records must be retained.*

How does ELEXON currently provide assurance?

- ELEXON uses the Risk Evaluation Register (RER)_to assess the level of risk against Settlement related processes. We then apply PAF techniques to both identify problems and mitigate them arising. In the case of commissioning, Table 1 lists the Settlement Risks related to or controlled by commissioning.
- The technique that we deploy against the commissioning element of these risks, the TAM process measures the availability, correctness and completeness of commissioning documents. During audit year 2010- 2011 46% of TAM inspections resulted in non-compliances for commissioning records not being available, fully complete or correct.
- During BSC Audit year 2009-2010, the BSC Auditor informally asked market participants about the commissioning process and asked if there were any difficulties in performing the process. Its findings mirror those from this TA check. In addition the BSC Auditor found the very *manual* nature of passing the detail between the field operatives, the back office and uploading of the detail into any database for the MOA to use caused problems in the process,

What can we do to further mitigate the Settlement Risks?

- Code of Practice 4 (CoP4) provides flexibility as to how certain obligations are to be met. For example, it is a requirement that the CT ratios are confirmed to reduce the risk of incorrectly programming Meters, causing very large Settlement Errors. CoP4 does not stipulate how this is to be achieved leaving the MOAs to best determine this for themselves.

  ELEXON has previously provided guidance as to how to achieve these things. However, there is some evidence of a lack of experience; therefore we suggest that specific tests be defined to remove any ambiguity. Similarly the data in commissioning records seldom reflect all the requirements. It is left to the MOA's own internal processes and procedures to develop commissioning records that best suit them rather than the BSC providing an exhaustive template for the tests performed and results.

  We suggest a change to CoP4 so that a standard approach can be devised which gives the minimum required information for this process.
- The Settlement Risks in Table 1 need to be assessed for the strength of commissioning as a control. We will do this via the RER review taking place in 2011.

- The commissioning of Metering Equipment associated with the primary supply to a customer such as CT and / or VTs can only be done at installation and before a site is energised. It is neither practical nor realistic to shut down a customer at a later date if the opportunity to commission has been missed.
  This means that improper or no commissioning at the outset can conceal significant Settlement Errors for many years giving rise to very high materiality.
  Therefore we suggest reassessing the likelihood and impact ratings for SR0037 in particular, as part of the RER review taking place in June 2011.

- When a MOA goes through Qualification, it must complete the Self Assessment Document. In the SAD there is a question that asks "What controls do you have in place to ensure that all commissioning tests are conducted to meet the requirements detailed in CoP4, Appendix A?" The response is required to address set areas (e.g. How the MOA transfers documentation to the new MOA on a change of agent).
  The Qualification Service Provider (QSP) assesses this document once it is submitted and if it is not satisfied with the answer then it will request further information. ELEXON and the QSP may or may not recommend to the PAB that a MOA be (re)qualified.
  - *We recommend that the guidance supporting parties in filling out the SAD is reviewed for clarity in the expected responses.*
  - *We also recommend that the Operational Support Managers (OSMs) at ELEXON liaise with the parties during the go live process (post the Qualification process), to support them in mitigating common issues (by educating and training parties about the idiosyncrasies with particular processes).*
  - *We may also consider using the TA check process if there is additional assurance required that a particular party is meeting its obligations.*

- On some occasions commissioning is taking place at installation, by a subcontractor (including the MOA associated to the LDSO or its contractor). The party who performed the commissioning does not pass the documentation on to the appointed MOA, leading to inefficiencies.

  Some MOAs find it problematic to perform full commissioning tests if they are not associated to the LDSO or do not know who the CT / VT Equipment Owner is, especially if they are not the party installing the Meter on site at the same time as the CT / VTs are installed.

- This is the same issue for obtaining CT and VT certificates from LDSOs.
    - *We recommend that CoP4 clearly defines what should happen in the event that the commissioning of a Metering System is not performed by the appointed MOA and explore the option of including the requirement that the registrant should be advised where commissioning has not been completed.*
    - *In terms of the difficulty that MOAs may have in getting CT / VT certificates from the LDSOs, the TAMEG has started making progress in collating contact names, email addresses and telephone numbers for LDSOs and MOAs who take part in the TAM process. We will publish this on the ELEXON website in the near future. The ENA (via the Commercial Operations Group) is currently engaged with the TAMEG and supporting this process and others (including commissioning) where communication lines are an issue.*

4. Non-compliances against BSCP27 by MOAs for failing to request MT Certificates from LDSOs.

5. Non-compliances against BSCP27 by LDSO, where it has not responded to a request for MT certificates from the MOA.

31% of the TAA's inspections on Metering Systems that require a certificate to be provided to the TAA (Class 0.5 LV CT Metering Systems do not; approximately 50% of the TAA's inspection sample this type of Metering System) resulted in missing CT / VT certificates.

Both of the findings above (numbered 4 and 5) are due to the lack of involvement of LDSOs in the TAM process (BSCP27) and difficulty by MOAs in getting adequate and reliable contacts to liaise with at the LDSO.

However, even if the communications lines were in place and reliable, it is highly likely that some LDSOs would still be unable to provide the records to MOAs.

We saw and heard evidence at some LDSOs that CT / VT certificates were no longer kept and in fact the policy at some LDSOs was not to keep them. In addition LDSOs did not proactively chase missing certificates from the manufacturers.

We also noted that in many cases the CT / VT certificates were not protected from damage, including water damage and fire (PSL 100 4.2.1). Some LDSOs were starting to store certificates electronically.

The TAA has for a number of years recommended a central repository in his annual reports. This would be an effective solution, but also a significant change to many organisations' working practices and likely very costly; we think that we should and can look at alternative ways first.

Lastly, where LDSOs used a third party to procure and install the CTs and VTs, it was very unclear as to how the LDSO as the Equipment Owner (in almost all cases) would retain and store the certificates appropriately as per the requirements in the BSC and CSDs.

Some LDSOs take the view that as long as site details are included in its systems and it can bill appropriately, it is not concerned with confirming what Metering Equipment is on site by retaining, validating and using certificates.

It is important to note that it seems the only use of the certificates besides the information confirmed or conveyed by their initial production, is the by the TAA during the TAM process.

What are the requirements in the BSC & CSDs to support findings 4 and 5?

- *Code of Practice 4 - details the requirement to calibrate Metering Equipment and maintain calibration records. This document details the requirements for MOAs and LDSOs in reference to commissioning and also in retaining records.*
- *BSCP27 (4.3) - details the requirements for MOAs to request CT and VT certificates from the LDSO. It also describes the process that the LDSO should go through to provide the certificates.*
- *PSL100 - details the requirements for keeping non-computerised documents adequately. It also details the requirements for having procedures in place and also having those procedures fully documented.*

How does ELEXON currently provide assurance?

- ELEXON uses the TAM technique to measure the number of non-compliances where the MOA has failed to provide CT / VT certificates in the case of the TAA's inspection visits.
- The certificates are used by the TAA to assess the overall accuracy of the Metering System. If they are not available then there are alternatives for both the MOA and LDSO to provide / source and deliver to the TAA (e.g. the NMTES).
    - The National Measurement Transformer Error Statement (NMTES) is an alternative source of CT / VT data in the event that the CT / VT certificate is unavailable for use by the TAA. Whilst is does not provide him with a certificate, it can provide him with some data that enables him to check the overall accuracy of the Metering System, which is another part of his audit process of the Metering System.
    - The NMTES cannot be used for CoP1 and 2 Metering Systems and there are other alternative arrangements in place described in BSCP27.
- One of the TAMEG's Terms of Reference is to look at the TAM process, assess what it is highlighting and to look at how to improve the process within the scope of the BSC and its CSDs. In particular work has been undertaken by the group to update the NMTES and this work will continue.

- The ENA has also voiced concerns about the availability and use of the CT / VT certificates by the TAA and about the risk of commissioning not happening completely or accurately. In doing so it has also proposed steps to take in working to resolve some of these issues. These steps include;
    - Further expansion of the NMTES
    - Workshops facilitated by ELEXON to develop full workable solutions
    - Voluntary publication of contact details by LDSOs
    - How to improve use of the D0215 data flow, which is a flow designed to be sent by the LDSO to the MOA and Supplier detailing the site technical details. Currently the inclusion of CT / VT Ratios are not mandatory data items, this is because some Metering Systems do not have CTs or VTs.

What can we do to further mitigate this Settlement Risk?

- We can bring LDSOs into the TAM process by introducing system changes to the database that manages all the associated data to the process and by making changes to the process by performing a BSCP27 review.
- The TAMEG is considering options on how to improve this area and we intend to feed the findings for this TAPAP check into the group to contribute to those considerations. Any recommendations that come out of the TAMEG will be presented to the PAB for consideration.
- We will continue to encourage updates to be made to the NMTES through the TAMEG and the TAM process. This TA check has raised the profile and understanding of the NMTES with the LDSO and MOAs. By making updates to the NMTES there will be an alternative to enable the TAA to calculate the overall accuracy of a Metering System.
  However, it will not remove the *requirement* for the equipment owner (usually the LSDO) to retain and maintain the certificates and for MOAs to confirm the MT ratios during the commissioning process.

6. A lack of supporting documentation where processes were in place and operating.

We regularly report this as a finding from other checks done under the TAPAP technique.

If a business is accredited to the ISO 9001 standard, then this failure could also form a non-conformance under any ISO 9001 audit which could affect its accreditation.

Whilst this is not directly related to the BSC, it does provide a wider benefit to Industry participants and can support the participant in fulfilling the requirements for documentation under PSL100.

In addition, a lack of documented process can lead to a lack of understanding in the business and this in itself could lead to operational issues and present a risk to Settlement.

What is the requirement?

- *PSL100 - details the requirements for parties to retain records adequately, have documented procedures and maintain an adequate audit trail.*

How does ELEXON currently provide assurance?

- The TA checks that we develop at ELEXON are generally developed and focused to look at one particular area of risk to Settlement at any one time. We use the checks to look at how the business as usual process works and if it is adequately documented.
- Qualification technique – when a party is going through Qualification and Re-Qualification it must demonstrate that it has documented processes, and may submit working procedures as evidence of meeting the obligations set out in the BSC and CSDs. These working procedures are not audited by the QSP, as they are not yet operating live at this point of the process.

What can we do to further mitigate this Settlement Risk?

- We recommend that the PAB approves invoking the Error and Failure Resolution technique for this non-compliance. We will then monitor progress and ensure that the non-compliance is rectified.

Next steps & Recommendations

In summary, we recommend that the following actions and next steps take place:

- We reassess the controls ratings for the related Settlement Risks as part of the Risk Evaluation Register (RER) review in June 2011, including the impact and probability of SR0037.

  This will increase the visibility of using commissioning as a control for getting accurate data into Settlement poses a significant risk.

- We will review Code of Practice 4 with a view to tightening up the approach for the commissioning process including how certain tests are to be done and specifying the format of commissioning records. We will ask that the PAB endorses the raising of a Change Proposal to implement any improvements the review concludes on.

- We will continue to work with the TAMEG to implement improvements to the TAM process. The TAMEG concerns mirror those of the ENA about the availability and use of the CT / VT certificates.
  We will also work with the TAMEG on how outstanding TAM non-compliances relating to missing CT and VT certificates can be appropriately treated.

  The TAMEG also has additional concerns relating to the commissioning & wider metering process, raised by the TAM technique. It has proposed steps to take in working to resolve these issues. These steps include:

  - Further expansion of the NMTES
  - Developing a solution to retrospectively clear any non-compliances that can be satisfied with the expansion of the NMTES.
  - Voluntary publication of contact details by LDSOs (this is already showing early signs of success)

  ELEXON will work with industry to ensure that updates can be made efficiently to the NMTES. Any changes that need approval by the PAB (such as changes to the common categories of non-compliance) will be presented in due course.
  We will ask the PAB to endorse the approach by the TAMEG.

- We will work with the TAA to look at how to involve the LDSO with the TAM process. This will include changes to the TAAMT software so that LDSOs can be made aware of visits to site within its particular region.
  We will also do a review of BSCP27 with a focus on how to best improve communications both with other parties and LDSOs and also ELEXON and LDSOs.

  We will ask that the PAB endorses the raising of a Change Proposal to implement any improvements the review concludes on.

- ELEXON will review how to provide additional assurance during the Qualification and Re-Qualification process for ensuring that parties are capable of completing the commissioning process adequately by:
  - Reviewing the questions in the SAD that relate to expertise, resource and the procedures for meeting the requirements for commissioning.
  - Reviewing and strengthening the guidance that supports participants in filling out the SAD and providing evidence of the answers.

- All of the recommendations so far are designed to prevent the issues going forward. We also need to consider how we can address the issues that may exist in the past e.g. we could look at what is currently feeding into Settlements to provide comfort that there is equitable allocation of energy between Suppliers for Half Hourly High Voltage sites.
  - We recommend that we investigate the possibility of performing inspections of Metering Systems to check the Metering Equipment and accuracy of the data that it is recording.
  - We will investigate how this can be done, what the cost vs. benefits will be and make any proposals to the PAB as necessary.