**Stage 01**: Recommendation to raise a Modification Proposal and Initial Written Assessment

What stage is this document in the process?

01 Initial Written Assessment

02 Definition Procedure

03 Assessment Procedure

04 Report Phase

# Reinforcing the Commissioning of Metering Equipment Processes

Based on work conducted by ELEXON and the Technical Assurance of Metering Expert Group, the Performance Assurance Board recommends the Panel raise a Modification Proposal to reinforce Metering Equipment commissioning.

The Modification would place commissioning obligations on the Transmission Company and Licenced Distribution System Operators because the Registrant and Meter Operator Agent are often not well placed to complete Metering Equipment commissioning.

ELEXON recommends:
- Raise the attached Modification Proposal
- Progress it to the Assessment Procedure

High Impact:
Registrants of Metering Systems, the Transmission Company, Licensed Distribution System Operators, Meter Operator Agents

Low Impact:
ELEXON

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## About this document:

This document is a recommendation to the Panel, by ELEXON on behalf of the PAB, to raise a Modification Proposal (Attachment A). If the Panel agree to raise the Modification Proposal, this document will form its Initial Written Assessment (IWA).

We will present this recommendation on 12 April 2012 and ask the Panel to consider its recommendations and decide whether to raise the Modification Proposal and how to progress it.

**Any questions?**


Contact:
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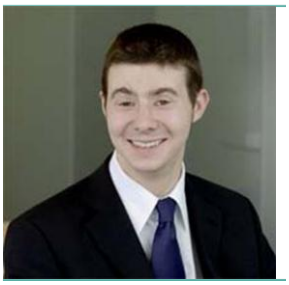


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# 1 Why Change?

## Background

Metering Equipment is subject to the commissioning process as set out in Code of Practice 4 (CoP4). The Registrant of a Metering System is responsible for ensuring that the Metering Equipment that makes up that Metering System is commissioned for Settlement purposes. Registrants typically discharge this responsibility through the Meter Operator Agent (MOA) appointed to the Metering System.

The commissioning process is in place to prove the accuracy of metering and detect any metering problems that would not otherwise be identified. Failure in the commissioning process may therefore mask very significant issues that are unlikely to be detected later.

In 2011 we informed the Performance Assurance Board (PAB) (PAB123/08) of concerns of the Technical Assurance of Metering Expert Group (TAMEG) and ELEXON around the commissioning of Metering Equipment, specifically that certain Metering Equipment is not usually within the control of the Registrant or MOA. This means BSC commissioning requirements can sometimes be difficult to meet. We also informed the PAB (PAB123/09) that a number of key issues prevent proper commissioning of Meter Equipment, leading to incomplete or inappropriate records.

In January we informed the PAB (PAB132/04) of the TAMEG's conclusions regarding the underlying problems with Metering Equipment commissioning and how these issues could be addressed. Under Section Z8.2 of the BSC the PAB may recommend to the Panel that the BSC be modified in order to remedy an error, ambiguity, inconstancy or deficiency. We believe, based on the TAMEG work, that the BSC is deficient in the area of responsibility for certain Metering Equipment (i.e. measurement transformers).

The PAB agreed to recommend this Modification Proposal, which was developed by the TAMEG and which all TAMEG members, the Transmission System Operator and ELEXON believe is a practical and efficient solution.

## TAMEG views

The TAMEG concluded that commissioning problems are predominantly associated with the timing of the appointment of MOAs and the provision and installation of measurement transformers (i.e. current transformers (CTs) and voltage transformers (VTs)).

At present the MOA is required to perform Metering Equipment commissioning tests, but often no MOA is appointed for a Metering System in the period in which the tests can reasonably be conducted. This issue is particularly significant for High Voltage (HV) sites, where connection of the HV switchgear (which contains the measurement transformers) before MOA appointment means commissioning tests cannot be conducted on CTs and VTs by the MOA.

In addition, there is no specific requirement on any party to report problems with commissioning tests to the Registrant. Therefore the Registrant is unlikely to be aware of problems, which exacerbates the issue.

### Agreed solution principles

Following a TAMEG workshop (with balanced participation from CVA and SVA MOAs, Suppliers and Licensed Distribution System Operators (LDSOs) and input from a Transmission System Operator representative) the TAMEG unanimously agreed a set of

**What is the TAMEG?**

The Technical Assurance of Metering Expert Group is an industry forum for discussion of issues and exchange of ideas relating to technical assurance.

More information can be found on the TAMEG page of ELEXON's website.

principles for a solution to address the issues identified around commissioning. The attached Modification Proposal is based on these agreed principles, set out below.

- Responsibility for commissioning CTs and VTs and provision of relevant records should be placed on the relevant System Operator (SO);
- The Registrant should remain responsible for the Metering System as a whole, and the MOA should be required to assess performance and notify the Registrant of any potential uncontrolled risks (e.g. incomplete commissioning); and
- When notified of such potential issues by the MOA, the Registrant should be required to consult with the relevant System Operator to agree steps to minimise the risk.

## Benefits

Significant issues around CTs and VTs can arise if these components are not properly commissioned upon installation. This has been shown by the Trading Disputes and Technical Assurance Agent processes. It can take many years for problems caused by inadequate commissioning to be identified, which may cause issues for previous Registrants as well as the current customer and Registrant.

The period in which commissioning tests can reasonably be carried out is relatively small, and the participants currently responsible (i.e. Registrant and MOA) may not be in place at that time. Placing obligations on the relevant System Operator, with the Registrant retaining ultimate responsibility for the Metering System, appears to be a reasonable and practical way forward. In addition, requiring the MOA to actively identify potential issues and inform the Registrant should significantly improve the control of these Settlement risks.

### Settlement Risk

As detailed in PAB132/094, we believe the issues around commissioning are relevant to the following four Settlement Risks, and that implementation of the attached Modification would result in benefits against each of these risks.

- That HHDCs do not use correct MTDs (SR0022);
- That Import/Export Metering Systems are incorrectly installed/configured resulting in inaccurate data entering Settlement (SR0116);
- That HHDCs use data from faulty Metering Systems (SR0112); and
- That LDSO Metering Equipment is not maintained (SR0113).

For each off these risks commissioning is identified as a control, so strengthening this area would decrease the significance of each risk. In particular, we believe that implementation of the solution set out in the attached Modification would reduce risk SR0116, which would cause a consequential reduction in SR0022. This could impact deployment of Performance Assurance Techniques in 2014/2015 (depending on Implementation Date).

### Applicable BSC Objectives

The Modification Proposal asserts that by addressing the issues set out above the proposed change would better facilitate Applicable BSC Objectives (c and (d). The Modification contends that increased accuracy and reduced risk will promote competition and increased accuracy and placing obligations on the most suitable participants will promote efficiency in the BSC arrangements. The Workgroup will assess the impact of the Modification and provide specific arguments against the Objectives it considers relevant.

**Which Applicable BSC Objectives are relevant?**

Objectives (c), which relates to competition in the generation, supply, sale and purchase of electricity, and (d), which relates to the efficiency of the balancing and settlement arrangements.

# 2 Solution

## Agreed Principles

The solution set out in the Modification Proposal is based on the following principles agreed by the TAMEG:

- Make the relevant SO responsible for commissioning CTs and VTs and providing relevant certificates and commissioning records;
- Require the MOA to assess performance and notify Registrant of potential uncontrolled risks (Registrant remains responsible for overall Metering System); and
- Require the Registrant to consult the relevant System Operator and agree steps to minimise risk of potential issues.

## Proposed Solution

### System Operators

Place obligations on the relevant System Operator (Transmission Company or LDSO) around newly installed measurement transformers installed on its system for Settlement purposes relating to the requirements of CoP4, requiring:

- The relevant SO to commission CTs and VTs; and
- Provide, or make readily available, to the Registrant both CT/VT certificates and commissioning records.

In addition, place an obligation on SOs to cooperate with the Registrant of a Metering System to resolve issues when they are contacted by the Registrant under the new provisions set out below.

### MOAs

Remove MOAs' commissioning obligations where the obligations are being placed on the relevant SO instead. Where obligations are not shifted to the relevant SO, maintain MOAs' present obligations to perform commissioning tests.

Place obligations on the MOA to evaluate the accuracy of the overall Metering System and inform the Registrant of any issues, including incomplete or ambiguous tests, and their potential impact. The MOA will be required to assess and report within a specified period following a specific event or events (probably the effective registration date of the Metering System, but provision may need to be made for the replacement of existing CT/VTs) though the timescales are not included in the Modification Proposal.

### Registrants

Under the Proposed Modification the Registrant will continue to remain responsible for the Metering System as a whole, as under the current arrangements.

The Proposed solution would place a requirement on the Registrant, upon receipt of notification of issues from the MOA (as above), to discuss the issues with the relevant SO and agree actions to be taken to address them.

## Prospective Application

The provisions introduced by the Proposed Modification would apply on a prospective basis only. Under the Proposed solution participants will not be required to take retrospective action in relation to Metering Systems installed, or issues extant, prior to implementation of the Proposed Modification.

## Areas for Development

As part of the progression of the Modification Proposal it will be necessary to consider the approach for the installation of measurement transformers on Associated Distribution Systems, private or other networks which are not part of the Total System.

As well as consideration of this particular aspect, the detail of the Proposed solution must be developed and confirmed, including the following areas:

- The specific obligations to be placed on the relevant SO and removed from the MOA;
- Requirements, processes and specific responsibilities relating to the requirement for the relevant SO to provide/make readily available to the Registrant Metering Equipment certificates and commissioning records (including storage and format);
- Processes/guidelines for MOAs' assessment of Metering Systems and reporting of issues, including timescales (with reference to specified reference event(s) such as the effective registration date of the Metering System, installation of new CT/VTs and/or replacement of existing CT/VTs);
- Interactions and processes relating to reporting and resolution of issues between MOA, Registrant and relevant SO (including how participants will liaise); and
- Where requirements, processes and timescales should be documented (the Code or Code Subsidiary Documents (CSDs)) and the degree of flexibility around processes and timescales (e.g. fixed in the Code/CSDs and subject to the BSC change processes, to be agreed between participants or subject to Panel review, etc.).

# 3 Proposed Progression

## Next Steps

We recommend the Modification is progressed to an Assessment Procedure for consideration by a Workgroup comprising any interested parties, with participation particularly sought from the TAMEG and the Volume Allocation Standing Modification Group's (VASMG). The Workgroup's recommended Terms of Reference are set out in Section 4.

Neither the TAMEG nor the PAB, in respectively developing and recommending the Modification Proposal, requested that it be treated as a Self-Governance Modification Proposal.

We believe that the Modification is not suitable for self-governance because its implementation would materially affect the activities of the participants involved, i.e. Metering System Registrants, SOs and MOAs.

## Timetable

We recommend a five month Assessment Procedure, meaning the Workgroup will submit the Assessment Report by the Panel meeting on 12 September 2012.

As part of the Assessment Procedure the Workgroup will meet to develop, and consider the merits of, the Proposed Modification (and any Alternative) and the solution will be issued for separate impact assessment and industry consultation (each of 15 Working Days duration).

It is not clear whether it will be a straightforward task for the Workgroup to develop the areas of the Proposed solution not confirmed by the TAMEG, and if an Alternative solution is progressed its development may require significant work by the Workgroup (i.e. considering the amount of work by the TAMEG that was necessary to develop the areas of the Proposed solution already agreed). We therefore believe that a five month Assessment Procedure is appropriate.

We will submit the Assessment Report to an earlier Panel meeting if possible.

**Self-Governance Criteria**

A Modification Proposal that, if implemented:

a) is unlikely to have a material effect on:

i) existing or future electricity consumers; and

ii) competition in the generation, distribution or supply of electricity or any commercial activities connected with the generation, distribution, or supply of electricity; and

iii) the operation of the national electricity transmission system; and

iv) matters relating to sustainable development, safety or security of supply, or the management of market or network emergencies; and

v) the Code's governance procedures or modification procedures, and

b) is unlikely to discriminate between different classes of Parties.

## Estimated Progression Costs

| Estimated progression costs based on proposed timetable | |
|---|---|
| Meeting costs (including Modification Group member expenses) | £1,500 (based on three Workgroup meetings) |
| Non-ELEXON legal and expert costs | None |
| Service Provider impact assessment costs | £3000 |
| ELEXON resource | 50 man days, equating to approximately £12,000 |

| Estimate of industry assessment costs | | | | | |
|---|---|---|---|---|---|
| Workgroup support | Est #mtgs | Est # att | Est effort | Est rate | total |
| | 3 | 10 | 1.5 | 605 | **£27,225** |
| Consultation response support | Est #con | Est # resp | Est effort | Est rate | total |
| | 2 | 10 | 2.5 | 605 | **£30,250** |
| Total | | | | | **£57,475** |

The estimated industry assessment costs are based on:

- The estimated number of Workgroup meetings and industry attendees per meeting, plus the estimated number of industry consultations and responses (including both the Assessment Procedure and Report Phase consultations);
- The assumption that each industry attendee puts in 1.5 man days of effort per meeting, and that each respondent spends 2.5 man days in effort per consultation response; and
- A standard rate of £605 per man day of effort.

# 4 Areas for Consideration

## Terms of Reference

This section sets out specific areas which we believe should be considered by a Workgroup as part of an Assessment Procedure for this Modification. We recommend that the Terms of Reference (ToR) of the Workgroup are formed from the ToR of the VASMG (i.e. as the most relevant Standing Modification Group), the specific areas set out in this section and any additional points specified by the Panel.

## Areas Specific to the Modification Proposal

### Prior work and agreements of the TAMEG

The TAMEG, in general and via its specific workshop, has given considerable consideration to the underlying issues behind the Modification Proposal and to developing, with the input of a representative range of participants, a practical way forward to address the identified issues. While there are areas of the solution that need to be developed, the agreements of the TAMEG should form the basis of the Proposed Modification. It would be inefficient to ignore and/or re-do work already conducted by the TAMEG.

Therefore deviations from the solution agreed by the TAMEG should only be part of an Alternative Modification, not the Proposed solution, and the Workgroup should specify a clear rationale to support the departure from the TAMEG's solution.

Note that this does not preclude the Workgroup conducting work to assess any rationale put forward by the TAMEG in support of the agreed solution.

### Development of the Proposed Modification

The Workgroup should develop the detail of the Proposed solution in relation to the areas set out in Section 2 of this document and any other areas identified by the Workgroup.

### Test certificates and results

The solution must be explicitly clear with regard to who will keep test certificates and results and to whom they must be made available and how.

### Materiality of issue and potential benefit

The Workgroup should assess, and quantify where possible, the materiality of the issue identified in the Modification Proposal and the potential benefits of the Proposed Modification (and any Alternative).

### Retrospection/legacy issues out of scope

The Modification is only intended to address issues going forward, not apply with any retrospection or seek to address legacy issues. We expect the TAMEG to consider possible approaches to addressing legacy concerns separate to the progression of this Modification.

## Standard Terms of Reference

All Workgroup's Terms of Reference[1] include the following standard areas:

- Assessing the Proposed Modification (and any Alternative) based on facilitation of the achievement of the Applicable BSC Objectives compared with the current BSC arrangements;
- Developing an Alternative Modification if (in the view of the majority of the Group) that Alternative would better facilitate the achievement of the Applicable BSC Objectives compared with the Proposed Modification;
- Establishing the impacts and costs of the Proposed Modification and any Alternative Modification;
- Developing BSC legal text;
- Consulting BSC Parties and other participants; and
- Producing a recommended Implementation Date and implementation approach.

# 5 Likely Impacts

This is our initial view of the probable impacts of the Modification. The detailed impact of the Modification will be fully assessed as part of the Assessment Procedure.

| Impact on BSC Parties and Party Agents |
|---|
| The obligations and processes of Metering System Registrants, LDSOs and MOAs relating to commissioning of Metering Equipment would be changed. |

| Impact on Transmission Company |
|---|
| The obligations and processes of the Transmission Company relating to commissioning of Metering Equipment would be changed. |

| Impact on ELEXON |
|---|
| ELEXON would make the required changes to documentation as part of implementation of the Modification. Going forward, Performance Assurance activities may be affected by the changes to participants' obligations. |

| Impact on the BSC/CSDs |
|---|
| BSC Section A 'Parties and Participation' |
| BSC Section J 'Party Agents and Qualification under the Code' |
| BSC Section L 'Metering' |
| Code of Practice 4 'The Calibration, Testing and Commissioning Requirements of Metering Equipment for Settlement Purposes' |
| BSCP514 'SVA Meter Operations for Metering Systems Registered in SMRS' |
| BSCP515 'Licensed Distribution' |

[1] BSC Section F, Annex F-1 sets out the areas that must be included in a Workgroup's assessment of a Modification.

## 6 Recommendations

Based on this recommendation/Initial Written Assessment document ELEXON invites the Panel to:

- **RAISE** the Modification Proposal in Attachment A.
- **DETERMINE** that the Modification Proposal progresses to the Assessment Procedure;
- **AGREE** the Assessment Procedure timetable such that an Assessment Report should be completed and submitted to the Panel at its meeting on 12 September 2012;
- **AGREE** that the Workgroup is open to any interested parties; and
- **AGREE** the Modification Group's Terms of Reference.

## 7 Further Information

More information is included in the attached Modification Proposal form (Attachment A to this document).