



PAB Approval:- Industry Consultation

Performance Assurance Framework: Risk Evaluation Methodology

This document is an update on the methodology approved in 2008. No major amendments have been applied to the initial methodology.

This document should be read in conjunction with Section Z of the BSC and sets out the principles that the Performance Assurance Board (PAB) will follow to:

- Identify risks that are Settlement Risks;
- Evaluate risks which have been identified as Settlement Risks; and
- Assess the materiality of such Settlement Risks in relation to Performance Assurance Parties.

This document also details the additional supporting principles that will enable the PAB to carry out the above.

The methodology within this document is designed to ensure fairness and consistency in the application of Performance Assurance Techniques to Performance Assurance Parties.

The methodology within this document shall be carried out in accordance with the Performance Assurance Timetable.

This document will be reviewed by the PAB in accordance with the Performance Assurance Timetable.



Performance Assurance Board (PAB)

The PAB is appointed by, and reports to the BSC Panel.

The PAB conducts and administers activities to provide assurance that all participants in the BSC arrangements are suitably qualified and the relevant standards maintained.

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1 Introduction



Balancing and Settlement Code (BSC)

The BSC Section Z can be found at the following web site:-

http://www.elexon.co.uk/documents/BSC_and_Related_Documents/BSC_-_Live_Version/Section_Z_v2.0.pdf



Balancing and Settlement Code (BSC)

Referred to as either the BSC or the Code

1.1 Summary of Risk Evaluation Methodology (REM)

As set out in Section Z, 5.4.1 of the BSC, this REM will:

- Define how the PAB will identify which risks are Settlement Risks
- Evaluate those risks that are Settlement Risks; and
- Assess the materiality of such Settlement Risks in relation to Performance Assurance Parties.

1.2 Key Concepts

1.2.1 Settlement

Annex X-1 – of the BSC defines Settlement as:

“The determination and settlement of amounts payable in respect of Trading Charges (including Reconciliation Charges) in accordance with the Code (including where the context admits Volume Allocation)”

1.2.2 Settlement Risk

Section Z, paragraph 5.1.1 (a) and (b) of the BSC defines a Settlement Risk as:

(a): *“ a risk of any failure or error in a step or process required under the Code (including in each case a risk which has materialised as an actual failure or an error) for the purpose of effecting Settlement or otherwise required in connection with Settlement in accordance with the provisions of the Code;”*

(b): *“references to the significance of a Settlement Risk are to be construed in terms of both the probability of the failure or error (referred to in paragraph 5.1.1(a)) and its impact on Settlement;”*

1.2.3 Settlement Risk Materiality

Section Z, 5.1.1 (d) of the BSC states that:

“a Settlement Risk is “material” to a Performance Assurance Party where:

- there is a risk that the Performance Assurance Party may, by failing (in whole or part) to perform any obligation under the Code or any Code Subsidiary Document, cause or contribute to the occurrence of such Settlement Risk; and*
- the significance of the Settlement Risk is of a level which the Performance Assurance Board determines (in its opinion) to be material;...”*

1.2.4 SVA Performance Assurance Objectives

Section Z 5.1.4 (i) and (ii) of the BSC states that, in the context of Supplier Volume Allocation, the PAB:

“...shall have regard to the following (so far as consistent with the provisions of the Code) save where to do so would, in the opinion of the Performance Assurance Board or Panel as applicable, substantially prejudice the interests of

all Performance Assurance Parties collectively or a class of Performance Assurance Parties collectively:

- (i) the efficient, equitable and accurate allocation of energy between Suppliers resulting from the aggregated consumption of Metering Systems for which each Supplier is responsible; and*
- (ii) the efficient, accurate and co-ordinated transfer of Metering Systems data by Performance Assurance Parties between Suppliers and Supplier Agents."*

1.3 Scope

The scope of the REM is to detail how the PAB and the PAA will carry out the activities detailed in section 1.1 of this document. Additionally, this document will provide insight into the processes surrounding the identification, assessment and management of Settlement Risks. The sections below detail how the management of SVA and CVA Settlement Risks will differ.



Performance Assurance Administrator (PAA)
ELEXON, acting on the behalf of the PAB

1.3.1 SVA Settlement Risks

SVA risks will be subject to a full assessment of probability and impact in order to determine the overall significance of the risk. The PAB will deploy Performance Assurance Techniques according to the significance of SVA Settlement Risks.

1.3.2 CVA Settlement Risks

The methodology outlined in this document supports PAB and the Panel in identifying all CVA Settlement Risks. As required by Section Z of the BSC, all CVA risks shall be deemed to be significant in terms of both probability of failure and impact on Settlement. Performance Assurance Techniques will continue to be deployed in a manner consistent with their deployment prior to the Performance Assurance Effective Date and as mandated within the BSC.

1.4 Glossary of Terms

A full glossary of terms can be found in Appendix A of this document.

2 Identify Settlement Risks

The Performance Assurance Administrator (PAA) (ELEXON, acting on the behalf of the PAB) will use both evidence-based (bottom-up) and strategic (top-down) approaches to identify new Settlement Risks.

2.1 Approach to Settlement Risk Identification and Closure.

The PAA will use the prior year Risk Evaluation Register (RER) as the baseline for the current review.

They will also review the Performance Assurance Framework (PAF) to ensure any changes during the PAOP are identified.

Changes identified by industry parties or, as a result of approved or rejected Change Proposals or Modifications, will be considered for inclusion in the revised RER.

This approach enables the PAA to identify any new risks and validate these to ensure that they are Settlement Risks as defined in 1.2.2 and the BSC. It will also identify Settlement Risks that are no longer relevant and candidates for removal from the RER.

As each new risk is identified or revised through either annual review or within period revisions, the PAB will:

- Validate the risk to ensure that it is a Settlement Risk (as described by Section Z, paragraph 5.1.1 (a) – see section 1.1).
- Categorise the Settlement Risk using the Categories developed in section 2.1.3.
- Evaluate the Settlement Risk using the criteria specified in section 3.

Any new risk identified as a Settlement Risk will be recorded in the RER. Any risk that is not a Settlement Risk will be disregarded (but may be noted and recorded elsewhere if it is relevant to ELEXON or the PAB).

Each Settlement Risk will be documented in the RER using the following format:

“The risk that [Event] [Result]”

Where:

- [Event] represents the event that would cause the Settlement Risk to materialise e.g. “Data Collectors do not calculate Estimated Annual Consumptions (EACs)/Annualised Advances (AAs) in a timely manner...”
- [Result] represents the result that is triggered by the event e.g. “... resulting in the use of previous data”.

2.1.1 Sources of Information

The PAA will not revisit and assess the Risk Register in its entirety, but will conduct focused analysis on only those areas that may have changed.

Examples of good sources of Settlement Risk information for the REM review include:

- New and closed BSC audit issues during PAOP 1 and that part of PAOP2 completed by the time analysis is done,
- The results and outcomes of the application of the Performance Assurance Techniques during PAOP1,
- ISG, SVG, PAB and TDC papers presented during PAOP 1,

- Approval and rejection of Change Proposals (CPs), Draft Change Proposals (DCPs), issues, standing issues and Modifications¹ during PAOP1, and
- Potential Settlement Risks that have been highlighted by Industry and made available to the PAA.

2.1.2 Risk Analysis

Consideration has been given to adopting a more quantitative approach to risk evaluation such as quantifying the materiality for each Settlement Risk. However, to allow the existing methodology to be fully evaluated, no changes to the risk evaluation will be made during the 2010/11 review.

This structured approach identifies the areas of Settlement that may go wrong or have the potential to introduce Settlement Risks.

The PAA may form a Working Group comprised of:

- ELEXON staff drawn from a variety of teams who work closely with the Settlement Process.
- Any PAB members that the PAB wishes to involve in the process.
- Any other industry representatives that the PAB wishes to involve in the process.
- Other representatives (e.g. Risk Experts).

The PAA will use the categories developed in section 2.1.3 to review the Risk Analysis of Settlement. If required, workshops will be convened to focus on one or more of the Settlement Risk Categories.

Any PAB members attending these workshops shall provide assurance to the PAB and the Industry that:-

- The process detailed within this REM is being followed;
- The work of the Working Group is thorough;
- Any Settlement Risks identified via Risk Analysis are reasonable.

2.1.2.1 Function of the Working Group

Where new categories are identified the group will consider the area of Settlement as guided by the categories. The group may use:-

- The relevant parts of the BSC Process model (published on the ELEXON website);
- The relevant section of the BSC and the Code Subsidiary Documents (CSDs) (and other configurable items) that relate to the area of Settlement being considered to develop a failure model of Settlement.

The group will consider what happens if particular steps in Settlement are:

- Carried out late;
- Not completed properly; or
- Not performed at all.

The group will validate and evaluate each new risk as it is identified (as described in the introduction to this section).

The group will compare its output to the Settlement Risks identified in step 2.1 to identify any Settlement Risks that may have been missed.

¹ Whilst rejected Modifications, Change Proposals and Issues won't have resulted in a BSC change it may highlight an issue that the Risk-Based PAF should focus on during the next PAOP.

All Settlement Risks will be recorded in the RER.

2.1.3 Compile List of Settlement Risk Categories

The PAA will review the list of Settlement Risk Categories (see Appendix B for examples) approved for PAOP 1 and 2. This list will be used during step 2.1 to help with Settlement Risk identification.

Each category relates to areas of the Settlement process (rather than participant specific activities). As the Risk Analysis work progresses, additional categories may be added by the PAA or the PAB as required².

2.2 Performance Assurance Techniques

The group will look at the outcome of deploying Performance Assurance Techniques (PATs) over the previous year to consider:-

- Whether they are still appropriate;
- Whether a new PAT should be introduced.

This review of PATs will consider the cost of deployment and the associated benefit to Settlement as a result of deploying a specific PAT.

² For example, whilst considering Settlement Risks that relate to Industry Standing Data or MDD processes, the group assessing those Settlement Risks may feel that one or more new categories (see Appendix B) would be better suited to capture these Settlement Risks.

3 Evaluate Settlement Risks

Each Settlement Risk will be evaluated and defined in the terms of the following Settlement Risk attributes:

1. Gross Settlement Risk Significance.
2. The Controls³ that are in place, and the strength of those Controls.
3. Net Settlement Risk Significance.

3.1 Settlement Risk Attributes

3.1.1 Determine Gross Settlement Risk values

The Gross Settlement Risk is comprised of the probability, impact and significance that a Settlement Risk would have on Settlement if no controls were applied.

Gross Risk represents the 'worst case' scenario for each Settlement Risk⁴. PAB will assess the Gross Settlement Risk as:

- Gross Settlement Risk probability: how likely a Settlement Risk is to occur if there are no controls in place.
- Gross Settlement Risk impact: how severe the impact of a Settlement Risk would be (should it happen) if there are no controls in place.
- Gross Settlement Risk significance: the Gross probability multiplied by the Gross impact.

The PAB will assess each Settlement Risk and agree probability and impact ratings based on the criteria explained in this section. In assessing the Gross Settlement Risk, the PAB will not take any current or planned Controls into account. The PAB will record the Gross Settlement Risk values against each Settlement Risk in the RER.

3.1.1.1 Settlement Risk Probability

Settlement Risk probability is the likelihood of a Settlement Risk occurring and is scored using a numeric scale between 1 and 5, where 1 is the least likely and 5 the most likely. In the case of the Risk-Based PAF, Settlement Risk probability is defined as the chance of a Settlement Risk occurring during a single PAOP:

Probability Rating	Description
5	It is highly likely that the Settlement Risk will occur during a single PAOP
4	It likely that the Settlement Risk is will occur during a single PAOP.
3	Approximately, the Settlement Risk is as likely to occur as not occur during a single PAOP.
2	It is unlikely that the Settlement Risk would occur during a single PAOP.
1	It is highly unlikely that the Settlement Risk would occur in a single PAOP.

3.1.1.2 Settlement Risk Severity

Settlement Risk severity represents how severe the impact of the Settlement Risk would be if it occurred. The impact rating is measured by the extent to which it has an impact on the SVA Objectives (see section 1.3.1 of REM). Settlement Risk

³ An explanation of what a Control is can be found in section 3.1.2 of this document.

⁴ Gross probability, impact and significance offer a method to measure the relative Settlement Risk and facilitate a comparison of other Settlement Risks relative to each other.

Impact is scored using a numeric scale between 1 and 5, where 1 is the least severe and 5 the most severe. The scale is further detailed as:

Impact Rating	Description
5	The Settlement Risk has the potential to threaten the Balancing Mechanism and Industry Settlement procedures as a whole, causing severe problems for customers, Industry, the System Operator or ELEXON. Extreme Settlement Risks would have significant financial or political consequences on Performance Assurance Parties.
4	The Settlement Risk has the potential to impact one or more GSP Groups and would have a significant impact on the Business Plans of multiple Performance Assurance Parties
3	The Settlement Risk could have an impact on a particular area of Settlement and/or the Business Plans of one or more Performance Assurance Parties
2	The impact of the Settlement Risk is not severe enough to pose a threat to Performance Assurance Parties' businesses, but is significant enough for the Industry to consider addressing via corrective measures.
1	The Settlement Risk is not severe enough to pose a threat to Performance Assurance Parties' businesses and could be dealt with using normal business procedures or the cost and effort required to address the Settlement Risk outweighs the benefit.

3.1.1.3 Settlement Risk Significance

The Settlement Risk significance is the Settlement Risk probability multiplied by the Settlement Risk impact. Risk significance is a relative measure of the importance of Settlement Risks and should not be interpreted as the absolute magnitude of each Settlement Risk. The PAB will use Settlement Risk significance as one of the means of ranking and targeting specific Settlement Risks⁵.

3.1.2 Assess Controls

Having identified a list of Settlement Risks and assigned each Settlement Risk a Gross Risk impact, probability and significance, the PAB will assess what controls are in place to mitigate against the Settlement Risk occurring. Having considered all relevant controls, the PAB will then determine Net Settlement Risk values for each identified Settlement Risk.

For the purposes of this methodology, a control is identified as any BSC-defined requirement or otherwise established mechanism that should be applied routinely to the Settlement processes.

For the purposes of this methodology, the Performance Assurance Framework Techniques are not considered to be controls as they are tools that will be deployed to provide Industry with additional assurance needs.

Examples of controls include failure monitoring (e.g. exception reports or validation), failure mitigation (e.g. use of default and estimation methods) and defined standards (e.g. Commissioning of Metering Systems).

Further consideration of the specific controls in place at individual Business Unit (BU) when developing Risk Management Plans (RMP) as set out in Section 7.

3.1.3 Assess Strength of Controls

Once the set of controls for each Settlement Risk has been identified, the group will assess the effectiveness (or "strength") of each control in the set.

⁵ A full list of the details that the PAB will take into account when assessing how to prioritise and manage Settlement Risks can be found in section 6.3

Each individual control will be assigned a strength rating of “High”, “Medium” or “Low”, which will be derived from consideration of the following factors⁶:

- Type of control – e.g. Preventative or Detective / Corrective;
- Control mechanism – automated or manual; and
- Control process frequency – routine or one-off.

Then the overall strength (“High”, “Medium” or “Low”) of the aggregated set of controls will be derived from consideration of each of the individual control strengths and available supporting evidence (e.g. the prevalence of issues arising in areas subject to the controls).

3.1.4 Net Settlement Risk Significance

Net Settlement Risk significance is the value of Settlement Risk significance once the controls identified in section 3.1.3 have been taken into account. Net Risk, therefore, represents the ‘best case’ scenario for each Settlement Risk.

For each Settlement Risk, the group will assess and agree whether the control strength is High, Medium or Low. The rating that is chosen will determine the Net Settlement Risk significance as follows:

- Where the control strength is Low, or no controls exist, Net Settlement Risk significance will be Gross Settlement Risk significance multiplied by 1.0 (i.e. will equal Gross Settlement Risk significance).
- Where the control strength is Medium, Net Settlement Risk will be Gross Settlement Risk significance multiplied by 0.8.
- Where the control strength is High, Net Settlement Risk will be Gross Settlement Risk significance multiplied by 0.6.

As a result of taking the controls into account, the Net Settlement Risk significance will be scored using the same scale as Gross Settlement Risk (i.e. out of 25) and decimals will be rounded normally.

⁶ A guidance note has been published on the ELEXON website which will include a matrix to show how the control strength is derived.

4 Consistency Check Settlement Risks

The PAA shall check the identified Settlement Risk evaluations. Any inconsistencies will be revisited and revised to ensure consistency across Settlement Risks.

5 Publish Settlement Risks

The PAA will record the list of Settlement Risks and all associated Settlement Risk information in the RER. Following the annual revision⁷, the RER will be presented to the PAB for endorsement prior to being published on the ELEXON website for Industry Consultation.

All comments raised by Industry within the allotted Consultation period will be considered by the PAB for final approval⁸ (the Panel have delegated approval of the RER and the ROP to the PAB). Once the RER has been issued for consultation and, where appropriate, approval obtained, the approved complete RER will be published on the ELEXON website so that the document is available to all Participants.

⁷ There is no requirement for an industry consultation for within-period revisions to the RER.

⁸ Note the RER may be amended to add or remove Settlement Risks via a "Within-Period Revision". Such Revisions to the RER do not require Industry Consultation or Panel Approval. Any changes to the RER would be reflected in the ROP and RMPs.

6 Determine Applicable Performance Assurance Techniques

The PAB will publish the list of identified Settlement Risks and their associated mitigating Performance Assurance Techniques in the Risk Operating Plan (ROP).

6.1 Assessing Mitigating Performance Assurance Techniques

Details of the Performance Assurance Techniques (as approved and published by the Panel from time to time) can be found on the Performance Assurance Framework pages of the ELEXON website (or see Appendix C):

<<http://www.elexon.co.uk/participating/PerformanceAssuranceFramework/paftechniques/default.aspx>>

For each Settlement Risk that has been identified by the risk identification process detailed in section 2 of this document, the PAB will assess the Performance Assurance Techniques that are best suited to mitigate the Settlement Risk. For each Settlement Risk, the PAB will determine the mitigating Performance Assurance Techniques for the Settlement Risk by considering:

- Its own professional judgement
- The cost-benefit of applying the Performance Assurance Techniques to the Settlement Risk.
- Past-precedent for similar Settlement Risks.
- General Risk Management best practice, for example:
 - The application of preventative techniques to high-impact Settlement Risks.
 - Consideration of corrective Performance Assurance Techniques to Settlement Risks that are low impact (and possibly high probability).

For each Settlement Risk, the PAA will identify:

- The 'Mandatory' Performance Assurance Technique(s).
- The 'Standard' Performance Assurance Technique(s).
- The 'Non-Standard' Performance Assurance Technique(s).

The PAB will also record the projected costs for deploying the Performance Assurance Techniques across the Settlement Risks and will highlight any variations required to the previously published BSCCo Strategy (including any impact on the approved ELEXON budget).

6.1.1 Mandatory Performance Assurance Techniques

Each Settlement Risk's Mandatory Performance Assurance Techniques are those Techniques that the PAB is required to apply to a BU who has been assigned the Settlement Risk in question because they are mandated by the BSC (e.g. Supplier Charges).

6.1.2 Standard Performance Assurance Techniques

Each Settlement Risk's Standard Performance Assurance Techniques are the default Techniques that the PAB will apply to a PAP who has been assigned the Settlement Risk in question in the MBU's RMP. Standard Performance Assurance Techniques may be switched off to a BU and, where this is the case, an explanation will be provided.

6.1.3 Non-Standard Performance Assurance Techniques



Business Unit (BU)

A market participant role code combination



Material Business Unit (MBU)

Combination of one or more Business Units for the same legal entity

Each Settlement Risk's Non-Standard Performance Assurance Techniques are extra Techniques that the PAB may consider applying to derive additional assurance that the BU is addressing the Settlement Risks that have been assigned to them. Where additional Non-Standard Performance Assurance Techniques are applied to address a PAB Settlement Risk, an explanation will be provided in the MBU's RMP.



Business Unit (BU)

A market participant role code combination

6.2 Determining Settlement Risk Threshold for PAOP

The Settlement Risk Threshold represents the PAB and the industry's risk appetite.

The PAB will determine a universal Settlement Risk Threshold value. The value will be a number between 1 and 25 and can be thought of as a net settlement risk significance threshold. The current threshold has been set at 3, i.e. all Settlement Risks with a net significance of 4 and above are open to PAB management.

Except in limited circumstances⁹, Settlement Risks that have a settlement risk significance below the settlement risk significance threshold will not be actively managed by the PAB using Performance Assurance Techniques.



Material Business Unit (MBU)

Combination of one or more Business Units for the same legal entity

6.3 Prioritising Settlement Risks

The PAB will prioritise Settlement Risks in the ROP and will focus on addressing:

- All Settlement Risks that have an impact rating of 5, unless otherwise determined by the PAB; and
- All Settlement Risks having a significance which exceeds the settlement risk threshold set by PAB and the Industry¹⁰.

The PAB will prioritise its deployment of resources (as defined by the ROP) against Settlement Risks according to their net significance.

6.4 Publishing Settlement Risks and Mitigating Performance Assurance Techniques

The PAB will publish the complete list of Settlement Risks (prioritised by Net Settlement Risk significance) via the Risk Operating Plan (ROP). The ROP will cover all Settlement Risks on the RER and the mitigating Performance Assurance Techniques for each Settlement Risk (N.B. some Settlement Risks may not have associated Performance Assurance Techniques). The PAB will publish the ROP on the PAF section of the ELEXON website so that the document is available to all Participants and provides the opportunity for Participants to comment on the ROP.

⁹ Some Mandatory Performance Assurance Techniques may focus on Settlement Risks which are deemed to fall below the Net Settlement Risk Significance Threshold. These Settlement Risks will be allocated to the appropriate PABs and the Mandatory Performance Assurance Techniques set out on each PAB's RMP. Settlement Risks that have an impact rating of 5 will automatically be assigned to the relevant PAB and managed via the RMPs, unless otherwise determined by PAB.

¹⁰ The Settlement Risk Threshold will be included in the ROP each year and therefore will be subject to industry comment.

7 Assessing MBU Settlement Risk Rating

Settlement Risks will be automatically assigned to the relevant Business Unit based on Role Code (and therefore, the Settlement Risks will appear in their RMPs). For example, Non Half Hourly Data Collectors (NHHDC) will be automatically assigned all Settlement Risks that relate to NHHDCs. However, only where that specific BU poses a Settlement Risk will the Performance Assurance Techniques be applied to help mitigate that risk.

The Settlement Risk Report (SRR) is presented to the PAB on a monthly basis. The SRR illustrates Market Trends and the performance of Suppliers in relation to the Top Settlement Risks (Net significance of 12 and above). In addition Material Business Unit (MBU) Dashboards are available to the PAB which illustrate the MBU trend analysis for appropriate Top Settlement Risks.

Combining the SRR, MBU Dashboards and the RMPs allows the PAB to consider how the MBU's situation and activities might impact and/or contribute to the materiality of the Settlement Risk.

Within the context of each Settlement Risk, the PAB will ask the question: "to what extent could this BU materially impact the SVA Objectives?" (Section 1.2.4). For example, one BU, operating in a well managed environment, may pose inherently less risk to the successful delivery of a process than a BU with the same settlement Risk but a less well developed management processes.

When developing the Business Unit Settlement Risk Rating (BUSRR) for each BU, the following dimensions are taken into account:

- The BU's dimensions and portfolio of metering systems.
- The BU's historic performance in this area of Settlement Risk.
- The BU's relevant control arrangements in the areas in which they have Settlement Risk.
- Current market knowledge.
- Results of previously applied Performance Assurance Techniques (for example, the Qualification process could provide information about a BU's control environment).
- Past Precedent (how similar BUs with similar Settlement Risks have or are being managed under the Risk-Based PAF).
- Any additional information provided by the BU.

The materiality of Settlement Risks and RMPs for each will be treated confidentially and only made available to the associated MBU in the form of an MBU Dashboard. The MBU Dashboard(s) for each MBU will be reviewed and updated on a regular basis.

The PAA will ensure that the tailored MBU Dashboards and RMPs are being produce in accordance with this methodology and that there is:

- Efficiency in the cost and application of Performance Assurance Techniques.
- Fairness and consistency in the application of Performance Assurance Techniques across MBUs.

The PAB will validate the activities carried out by the PAA to provide assurance to industry that the process is being followed.



Business Unit (BU)

A market participant role code combination



Material Business Unit (MBU)

Combination of one or more Business Units for the same

7.1 Application of Mandatory, Standard and Non-Standard Performance Assurance Techniques to a MBU

7.1.1 Approach

To appear on a MBU Risk Management Plan (RMP), a Settlement Risk must have at least one Mandatory, Standard or Non-Standard Performance Assurance Technique assigned to be deployed. The PAB will then assess the Settlement Risk for each associated BU to determine how rigorous it will be in the application of Performance Assurance Techniques.

Typically, when a BU is identified as having the potential to contribute to a particular Settlement Risk (or to have caused a Settlement Risk to materialise as an issue), it will be assigned those Performance Assurance Techniques that are flagged as 'Mandatory' and 'Standard' for the Settlement Risk in question. The PAB shall also be able to choose to additional Non-Standard Performance Assurance Techniques that relate to the Settlement Risk in Question.

There is no flexibility in the application of Mandatory Performance Assurance Techniques: they must always be applied to address the Settlement Risk to which they relate.

If the PAB feels that it is appropriate then fewer Standard Performance Assurance Techniques (from the shortlist against the Settlement Risk in the ROP) may be applied to the BU. Conversely, where the PAB feels it is appropriate, the BU may have some of the additional Non-Standard Performance Assurance Techniques (from the ROP) assigned to it. For each Settlement Risk that has been assigned to a BU, the BU will only have those Performance Assurance Techniques that are 'linked' to the Settlement Risk on the ROP assigned to it.

Where a BU has been assigned a reduced number of Standard Performance Assurance Techniques, or additional Non-Standard Performance Assurance Techniques, the PAB will provide the rationale for this in the BU's Risk Management Plan. Where the Performance Assurance Techniques that are assigned to address the BU's Settlement Risks do not differ from the Mandatory and Standard Performance Assurance Techniques, no rationale will be provided in the RMP.

Each RMP will be reviewed on a regular basis¹¹ which may result in the application and/or disapplication of Non-Mandatory Performance Assurance Techniques to address BU Settlement Risks.

Initially, the PAB will consider all BU Settlement Risks on an individual basis and for each Settlement Risk that the BU has, the PAB will determine what Performance Assurance Techniques (from the shortlist in the ROP) it wishes to apply to the BU.

Having assessed each Settlement Risk individually, the PAB will consider all of the Settlement Risks that the BU has as a whole. This will enable the PAB to identify any opportunities for greater efficiency in the application of Performance Assurance Techniques by considering where a single Performance Assurance Technique can be applied once to address more than one Settlement Risk.

¹¹ This will be carried out Quarterly and following the application of a PAT, as appropriate.

7.1.2 Example

For example in the ROP, Settlement Risk 1 has Performance Assurance Techniques A, B, C, D and E listed against the Settlement Risk. In the case of Settlement Risk 1, Technique A is Mandatory and Techniques B and C are flagged as being the Standard Techniques that will be applied to any BU that has Settlement Risk 1. Techniques D and E are the additional Non-Standard Techniques.

'BU X is identified as having Settlement Risk 1. The PAB investigates BU X's Risk Profile and believes that, in the case of Settlement Risk 1, there is nothing to suggest that BU X is a particularly risky or 'risk free' BU. Therefore, BU X is assigned Techniques B and C against Settlement Risk 1. Additionally, BU X must have Technique A assigned against Settlement Risk 1 as it is a Mandatory Technique.

BU Y also has Settlement Risk 1 and the PAB has some concerns about BU Y's control framework because it has recently bought another company and is in the process of merging its systems and business processes. Therefore, the PAB feels that, in relation to Settlement Risk 1, BU Y is riskier and some additional assurance will be required. Therefore, BU Y is assigned Techniques A, B, C and D against Settlement Risk 1. For Settlement Risk 1, the PAB has assigned BU Y some Techniques that are in addition to the Mandatory and Standard Techniques A, B and C and will therefore provide the rationale for why Technique D is also being applied to BU Y on the MBU's Risk Management Plan.

If Performance Assurance Techniques F and G also existed in the Risk-Based PAF, the PAB would not be able to apply these Techniques to address Settlement Risk 1 as they were not recorded against Settlement Risk 1 in the ROP'.

8 Communicating MBU Settlement Risks

Each MBU will have a RMP that will be developed by the PAB in conjunction with the relevant MBU. Each MBU's RMP will not be made available for consultation with anyone other than the MBU concerned because of the confidential nature of the data contained within the RMP. However, the RER and ROP (from which Settlement Risks on the RMPs are derived) will be made available to all participants to provide assurance of the fairness and consistency of approach in the Risk-Based PAF. Each time a new version of the RMP is produced, the PAB will work with the MBU to whom the RMP relates to develop all revisions to the RMP. MBUs will also be given the opportunity to confirm their understanding of the RMP.

The PAB will publish each RMP in a way that ensures only the MBU to whom the RMP relates is able to access their information.

9 Document Control

a Authorities

Version	Date	Author	Reviewer	Reason for review
0.1	22/05/2009	D. Alexander	Katie Wilkinson	First Draft for Risk Evaluation Working Group Review
			Jon Spence	
			Sarah Jones	
			Caroline Wright	
			Beth Brown	
0.2	27/05/2009	D. Alexander	Katie Wilkinson	Update following Risk Evaluation Working Group Review comments
			Jon Spence	
			Sarah Jones	
			Caroline Wright	
			Beth Brown	
0.3	04/06/2009	D. Alexander	Katie Wilkinson	Update following Risk Evaluation Working Group Review comments
			Jon Spence	
			Sarah Jones	
			Caroline Wright	
			Beth Brown	
0.4	16/06/2009	D. Alexander	Dorcas Batstone	Update following pre- PAB review

Version	Date	Author	Approver	Signature
1.0	25/06/09		PAB	

b Distribution

Recipient	Version	Date	Reason

Appendix A: Glossary of Terms

Term	Definition
Annualised Advance (AA)	The rate of consumption for a Settlement Register over the period between two Meter readings. The value is nominally expressed as kWh/Year, but this is only for ease of understanding and can not be relied upon as a true value.
BSC	The Balancing and Settlement Code
Business Unit (BU)	A Business Unit is a market participant role code combination.
Control	A control is identified as any BSC-defined requirement or otherwise established mechanism that should be applied routinely to the processes for deriving Trading Charges from recorded energy production or consumption.
Code Subsidiary Documents (CSDs)	Any document referred to in section H1.4 as modified from time to time in accordance with sections F3 and/or I.
Estimated Annual Consumption (EAC)	An estimated rate of consumption, nominally expressed in kWh/Year, that is used in Settlement until an AA is calculated.
Gross Settlement Risk	Gross Risk is the probability, impact and significance that a Settlement Risk would have if no controls were applied. Gross Risk, therefore, represents the 'worst case' scenario for each Settlement Risk.
Material Business Unit (MBU)	Combination of one or more Business Units for the same legal entity.
Net Settlement Risk	Net Risk is the significance that a Settlement Risk would have when existing controls are taken into account.
Performance Assurance Operating Period (PAOP)	As defined in section Z 5.1.1 of the BSC.
Performance Assurance Administrator (PAA)	As defined in section Z 5.1.1 of the BSC.
Performance Assurance Board (PAB)	As defined in section Z 1.2 of the BSC.
Performance Assurance Framework (PAF)	Performance Assurance Framework (PAF) consists of a complementary set of preventative, detective, corrective and remedial techniques designed to mitigate against risks to the BSC arrangements. The aim of the PAF is to provide independent, equitable, positive and consistent assurance regarding the integrity of Settlement, and to promote corrective actions to address any issues that are identified
Performance Assurance Party (PAP)	A Performance Assurance Party is a Participant (or organisation) with Performance Assurance Risks (see the BSC section Z 5.1.1 (c) for more information).
Performance Assurance Technique (PAT)	As defined in section Z 5.3.2 of the BSC.
Risk Evaluation Methodology (REM)	As defined in section Z 5.4 of the BSC.
Risk Evaluation Register (RER)	As defined in section Z 5.5 of the BSC.
Risk Management Plan (RMP)	As defined in section Z 5.7 of the BSC.
Risk Operating Plan (ROP)	As defined in section Z 5.6 of the BSC.
Risk Probability	Risk Probability is represented by a score between 1 and 5 and is the likelihood of a Settlement Risk occurring, (1 being the least probably and 5 being the most probable).
Risk Impact	Risk impact is the impact of the impact that a Settlement Risk would have if it occurred. The Risk impact is represented by a number between 1 and 5 (1 being the least severe and 5 being the most severe).
Risk Significance	Risk Significance is the Risk Probability multiplied by the Risk impact
Settlement Risk	The definition of a Settlement Risk can be found under the Balancing and Settlement Code, section Z, paragraph 5.1.1 (a) and (b).

Appendix B: Categories

The PAA has initially identified eight categories under which Settlement processes can be grouped. These categories will facilitate the process of Risk Analysis and aid assessment of Settlement Risks. This is non-comprehensive list which may be added to or refined as risks are identified.

- Meter Reading Acquisition
- Derivation of Energy Volumes
- Allocation of Energy Volumes to Half Hour Periods
- Allocation of Half Hourly Energy Volumes to Trading Parties
- Correction of Half Hourly Energy Volumes Between Trading Parties
- Derivation of Energy Imbalance Volumes
- Derivation of Energy Imbalance Cashflows
- Allocation of Trading Charges to Trading Parties (and Collection)
- Miscellaneous

Appendix C: Performance Assurance Techniques

The table below identifies the approved Performance Assurance Techniques¹² that can be applied to Settlement Risks. Each Technique is associated with one or more of the four categories listed below. Please note that, for clarity, only the primary category is listed against each Performance Assurance Technique.

The four categories are:

- **Preventative (P)** techniques are designed to limit the possibility of an undesirable outcome being realised.
- **Detective (D)** techniques are designed to identify occasions of undesirable outcomes having been realised.
- **Incentive (I)** techniques are designed to motivate action in order to avoid the possibility of an undesirable outcome being realised.
- **Remedial (R)** techniques are designed to correct undesirable outcomes that have been realised.

Technique	Type
Qualification	P
Re-Qualification	P
Bulk Change of Agent	P
Education	P
Performance Monitoring and Reporting	D
Material Error Monitoring	D
Technical Assurance of Metering Systems	D
BSC Audit	D
Technical Assurance of Performance Assurance Parties	D
Peer Comparison	I
Removal of Qualification	I
Breach and Default	I
Supplier Charges	R
Error and Failure Resolution	R
Trading Disputes	R
Change Mechanisms	R

¹² This list of PATs was correct when this document was approved, but is included here for illustrative purposes only. The Panel may vary the list of PATs from time to time – please refer to the PAF page of the ELEXON Website for the definitive set of PATs at any time.