



## Risk Evaluation Methodology 2012/2013

### PAB Approval Post Industry Consultation

This is the Risk Evaluation Methodology (REM) for Performance Assurance Operating Period (PAOP) 5 - 2012/2013. This document has been updated for clarity, however there have been no changes made to the methodology it describes and which is in use for PAOP 4 (2011/2012).

This document should be read in conjunction with Section Z of the BSC. It 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.

The methodology within this document is designed to ensure fairness and consistency in the application of Performance Assurance Techniques to Performance Assurance Parties and will be carried out in accordance with the [Annual Performance Assurance Timetable](#).

This document has been reviewed and approved by the PAB on the 31 March 2011; the REM will be effective from the 1 April 2012.

---

#### Target Audience

All BSC Parties, BSC Agents and Performance Assurance Parties as defined within the BSC.

---



#### 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.

## Contents

1	Introduction	3
2	Identify Settlement Risks	5
3	Evaluate Settlement Risks	8
4	Consistency Check Settlement Risks	11
5	Publish Settlement Risks	11
6	Determine Applicable Performance Assurance Techniques	12
7	Application of Mandatory, Standard and Non-Standard Performance Assurance Techniques	14
8	Assessing MBU Settlement Risk Rating	16
9	Communicating MBU Settlement Risks	18
10	Document Control	19



**Any questions?**  
**Contact: Zaahir Ghanty**



**Zaahir.Ghanty@elexon.co.uk**



**020 7380 4362**

## Intellectual Property Rights, Copyright and Disclaimer

The copyright and other intellectual property rights in this document are vested in ELEXON or appear with the consent of the copyright owner. These materials are made available for you for the purposes of your participation in the electricity industry. If you have an interest in the electricity industry, you may view, download, copy, distribute, modify, transmit, publish, sell or create derivative works (in whatever format) from this document or in other cases use for personal academic or other non-commercial purposes. All copyright and other proprietary notices contained in the document must be retained on any copy you make.

No representation, warranty or guarantee is made that the information in this document is accurate or complete. While care is taken in the collection and provision of this information, ELEXON Limited shall not be liable for any errors, omissions, misstatements or mistakes in any information or damages resulting from the use of this information or action taken in reliance on it.

# 1 Introduction



## Balancing and Settlement Code (BSC)

The BSC Section Z can be found at the following location: [BSC Section Z](#)

## 1.1 Purpose of the Risk Evaluation Methodology (REM)

As set out in Section Z, 5.4.1 of the BSC, the Risk Evaluation Methodology prescribes how the Performance Assurance Board (PAB):

- Identifies Settlement Risks;
- Evaluates those risks by taking account of the probability<sup>1</sup> of the risk occurring, the impact on Settlement and the level of controls in place to mitigate the impact;
- Assesses the materiality of the Settlement Risks in relation to Performance Assurance Parties.

The REM is designed to ensure fairness and consistency in the application of Performance Assurance Techniques (PATs) to Performance Assurance Parties (PAPs).

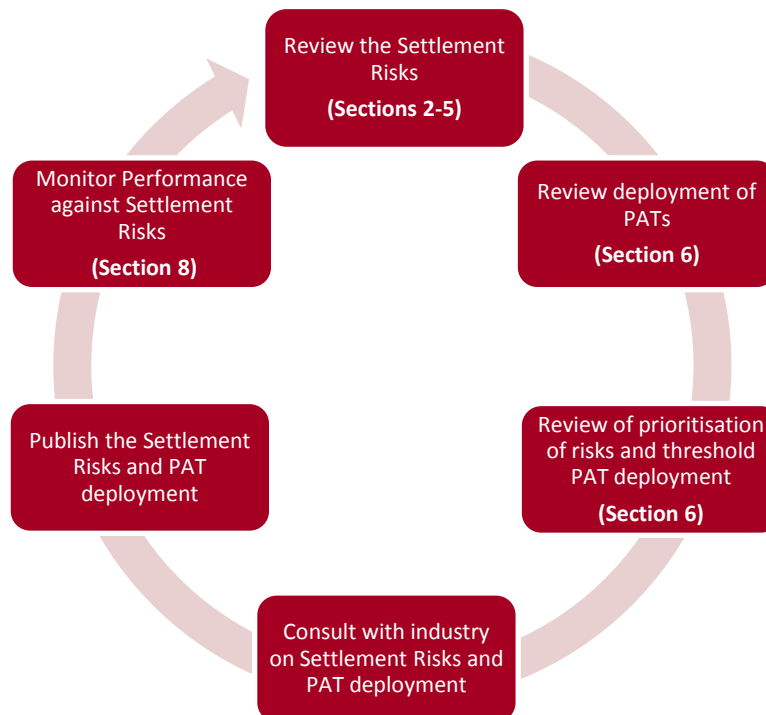
## 1.2 Key Steps within the REM

The REM describes a set of actions that the PAB and/or the Performance Assurance Administrator (PAA) will perform; these include:



## Performance Assurance Administrator (PAA)

ELEXON, acting on the behalf of the PAB



<sup>1</sup> Probability, impact and control that are used to evaluate Settlement Risks are defined in Section 3 of the REM

### 1.3 SVA Performance Assurance Objectives

The PAB has two objectives in the context of Supplier Volume Allocation (BSC Section Z 5.1.4):

*"...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."*

### 1.4 Scope of the REM

The scope of the REM is the activities the PAB and the PAA will carry out to deliver the Performance Assurance Procedures.

This document will provide insight into the processes surrounding identifying, assessing and managing Settlement Risks. The sub-sections below detail how the management of SVA and CVA Settlement Risks will differ.

#### 1.4.1 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 PATs according to the significance of SVA Settlement Risks.

#### 1.4.2 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.

### 1.5 Considerations for 2012/2013 REM

The risk-based Performance Assurance Framework has been in existence since November 2008. Since then the PAB has gained a greater understanding of the top Settlement Risks with Suppliers being more focused on the data that determines their Business Unit Settlement Risk Rating (BUSRR).

This document has been updated for clarity, however there have been no changes made to the core methodology it describes.

## 2 Identify Settlement Risks

### 2.1 Approach to Settlement Risk Identification and Closure

The PAA will use the current Risk Evaluation Register (RER) as the baseline for the review. During assessment of the RER, more focus will be geared towards areas that have changed.

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

As risks are 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));
- 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

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

- New and closed BSC Audit issues during 2010/11 (PAOP3) and that part of 2011/2012 (PAOP4) completed at the time the analysis is done;
- The results and outcomes of the application of the PATs during PAOP3;
- Panel and Panel Committee papers presented during PAOP 3;
- Approval and rejection of Change Proposals (CPs), Draft Change Proposals (DCPs), issues, standing issues and Modifications<sup>2</sup> during PAOP3;
- Potential Settlement Risks that have been highlighted by Industry and made available to the PAA; and
- Feedback from discussion with PAPs on Settlement Risks and their net significance.

<sup>2</sup> 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.



#### Risk Evaluation Register

The Risk Evaluation Register (RER) sets out the Settlement Risks identified and evaluated by the Performance Assurance Board (PAB) in accordance with the Risk Evaluation Methodology (REM).



#### Within-period revision

A revision by the PAB by the PAB of the Risk Evaluation Register, Risk Operating Plan or Risk Management Plan; as applicable in relation to a PAOP after such register or plan has been adopted for such PAOP

## 2.1.2 Risk Analysis

Previously, consideration has been given to adopting a more quantitative approach to risk evaluation such as quantifying the materiality for each Settlement Risk. We agree that ideally all risks would be fully quantified for both impact and probability. However the data which we currently have access to, does not provide the level of granularity for a consistent and robust assessment of each Settlement Risk in the Risk Evaluation Register to accommodate this approach.

To obtain this amount of data would require significant changes to the output of PATs, such as the BSC Audit and PARS Serials. We are still of the view that this is neither feasible nor cost effective for PAOP 5; consequently no changes of this manner to the risk evaluation methodology will be made during the 2012/2013 review.

We welcome any additional evidence of impact and probability participants can provide to assist with the review of the RER that will start in April 2011.

The approach in section 2.1 identifies the areas of Settlement that may go wrong or have the potential to introduce Settlement Risks.

## 2.1.3 Role and Function of the Risk Evaluation Working Group

The PAA formed a Risk Evaluation Working Group (REWG) comprising ELEXON staff drawn from a variety of teams who work closely with the Settlement Process, to deliver the core activities prescribed in the REM and BSC Section Z. The REWG also welcomes input and participation from:

- Any PAB members that the PAB wishes to involve in the process;
- Any other industry experts that the PAB wishes to involve in the process;
- Other representatives (e.g. Risk Experts).

The REWG will review and use list of Settlement Risk Categories that have already been developed (see Appendix B for examples) to perform Risk Analysis of relevant Settlement Process. Where new Settlement Risks are identified, we map the Settlement Risks to those categories. Where a new Settlement Risk does not fit with the existing categories, new ones will be created. The REWG 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:

- Performed late;
- Not performed properly; or
- Not performed at all.

The group will validate and evaluate each new risk as it is identified.

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

All Settlement Risks will be recorded in the RER.



### Settlement Risk Categories

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 required

## 2.2 Performance Assurance Techniques

The REWG will look at the outcome of deploying PATs over the previous year against the SVA objectives and if necessary recommend changes to the PAB e.g. introduce a new PAT.

This review of PATs will consider the cost of deployment and the associated benefit to Settlement as a result of deploying a specific PAT. Further details on PATs can be found in section 6 and Appendix C.

## 3 Evaluate Settlement Risks

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

1. Gross Settlement Risk Significance;
2. The Controls<sup>3</sup> that are in place, and the strength of those Controls; and
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 Risk<sup>4</sup>. The 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 Impact

Settlement Risk impact 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

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

<sup>4</sup> 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.



has an impact on the SVA Objectives (see section 1.3 of REM). Settlement Risk 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. Settlement 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 Risks<sup>5</sup>.

### 3.1.2 Assess Controls

Having identified a list of Settlement Risks and assigned each Settlement Risk with 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; and
- The Performance Assurance Framework Techniques are not considered to be controls. They are tools that will be deployed to provide industry with additional assurance.

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.

<sup>5</sup> A full list of the details that the PAB takes into account when assessing how to prioritise and manage Settlement Risks can be found in section 6.3

### 3.1.3 Assess Strength of Controls

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

Each individual control will be assigned a strength rating of “High”, “Medium” or “Low”, which will be derived from consideration of the following factors<sup>6</sup>:

- Type of control – e.g. Preventative / 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 REWG 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 shown below:

Control Strength	Description
<b>Low</b>	Where the control strength is Low, or no controls exist, Net Settlement Risk significance will be Gross Settlement Risk significance multiplied by <b>1.0</b> (i.e. will equal Gross Settlement Risk significance).
<b>Medium</b>	Where the control strength is Medium, Net Settlement Risk will be Gross Settlement Risk significance multiplied by <b>0.8</b> .
<b>High</b>	Where the control strength is High, Net Settlement Risk will be Gross Settlement Risk significance multiplied by <b>0.6</b> .

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.

---

<sup>6</sup> A guidance note has been published on the ELEXON website which includes a matrix to show how the control strength is derived.

## 4 Consistency Check Settlement Risks

The PAA will review 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 revision<sup>7</sup>, 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 approval<sup>8</sup> (the Panel has 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.

---

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

<sup>8</sup> 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. 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 PATs in the Risk Operating Plan (ROP).

### 6.1 Assessing Mitigating Performance Assurance Techniques

Details of the PATs (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 PATs that are best suited to mitigate the Settlement Risk. For each Settlement Risk, the PAB will determine the mitigating PATs for the Settlement Risk by considering:

- Its own professional judgement;
- The cost-benefit of applying the PATs 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 PATs to Settlement Risks that are low impact (and possibly high probability).

For each Settlement Risk, the PAA will identify:

- The 'Mandatory' PAT(s);
- The 'Standard' PAT(s); and
- The 'Non-Standard' PAT(s).

The PAB will also record the projected costs for deploying the PATs 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 PATs 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 PATs are the default Techniques that the PAB will apply to a BU who has been assigned the Settlement Risk in question in the Material Business Unit's (MBU) RMP. Standard PATs may be switched off for a BU (Business Unit) and, where this is the case, an explanation will be provided.



#### **Business Unit (BU)**

A market participant role code combination. PATs are deployed at BU level

#### **Material Business Unit (MBU)**

Group of one or more Business Units for the same legal entity. RMPs are deployed at MBU levels

### **6.1.3 Non-Standard Performance Assurance Techniques**

Each Settlement Risk's Non-Standard PATs 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 PATs are applied to address a PAB Settlement Risk, an explanation will be provided in the MBU's RMP.

## **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 managed by the PAA through the use of applicable PATs and this will also be overseen by the PAB on an exception basis. Except in limited circumstances<sup>9</sup>, Settlement Risks that have a Settlement Risk significance below the Settlement Risk significance threshold will not be actively managed by the PAB using PATs.

## **6.3 Prioritising Settlement Risks**

The PAB will prioritise its deployment of resources (as defined by the ROP) against Settlement Risks according to their net significance. It 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 Industry<sup>10</sup>.

## **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 ROP. The ROP will cover all Settlement Risks on the RER and the mitigating PATs for each Settlement Risk (N.B. some Settlement Risks may not have associated PATs). 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.

---

<sup>9</sup> Some Mandatory PATs 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 PAPs and the Mandatory PATs set out on each PAP's RMP. Settlement Risks that have an impact rating of 5 will automatically will be assigned to the relevant PAP and managed via the RMPs, unless otherwise determined by PAB.

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

## **7 Application of Mandatory, Standard and Non-Standard Performance Assurance Techniques**

### **7.1 Risk Management Plans**

Risk Management Plans (RMPs) document the Settlement Risks and the Performance Assurance Techniques relevant to each PAP/MBU.

### **7.2 Approach**

To appear on a RMP, a Settlement Risk must have at least one Mandatory, Standard or Non-Standard PAT available to be deployed (in the ROP). The PAB will then assess the Settlement Risk for each associated BU to determine how rigorous it will be in the application of PATs.

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 PATs that are flagged as 'Mandatory' and 'Standard' for the Settlement Risk in question. There is no flexibility in the application of Mandatory PATs and 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 PATs (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 PATs (from those available in the ROP) assigned to it. For each Settlement Risk that has been assigned to a BU, the BU will only have those PATs that are 'linked' to the Settlement Risk on the ROP assigned to it.

Where a BU has been assigned fewer Standard PATs, or additional Non-Standard PATs, the PAB will provide the rationale for this in the BU's RMP. Where the PATs that are assigned to address the BU's Settlement Risks do not differ from the Mandatory and Standard PATs, no rationale will be provided in the RMP.

The PAB will create an initial RMP for each MBU. When there is a change in circumstance, such as a trigger for Re-Qualification or a Technical Assurance check, it will make amendments to an MBU's RMP to reflect this by the application and/or disapplication of non-mandatory PATs.

At the end of each quarter, the PAA provides the PAB with a summary of all the changes carried out within that period.

On an annual basis, following the review of the RER and the ROP, the PAB is presented with all the RMPs to review and, if necessary, amends the RMPs for the following Performance Assurance Operating Period (PAOP) in relation to the RER, ROP and additional information from the BU. 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 PATs (from the shortlist in the ROP) it wishes to apply to the BU. RMPs can also be updated on a monthly basis if the BU's performance changes or there are associated changes to the RER and the ROP.

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 PATs by considering where a single PAT can be applied once to address more than one Settlement Risk.

An example of the application of PATs is shown in Appendix C.

## 8 Assessing MBU Settlement Risk Rating

Settlement Risks will be automatically assigned to BUs based on Role Code (and therefore, the Settlement Risks will appear in their RMPs). For example, a Non Half Hourly Data Collector (NHHDC) will be automatically assigned all Settlement Risks that relate to NHHDCs. However, only where that specific BU poses a Settlement Risk will the non-mandatory PATs be applied to help mitigate that risk.

### 8.1 Settlement Risk Report

The Settlement Risk Report (SRR) is presented to the PAB on a monthly basis. The SRR illustrates, where data is available, market trends and the performance of Suppliers in relation to the top Settlement Risks (Net significance of 12 and above). In addition MBU Dashboards are available to the PAB which illustrate the MBU trend analysis for appropriate Top Settlement Risks.

Reviewing the SRR, MBU Dashboards and the RMPs allows the PAB to consider how each BU's performance 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 1.3). 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.

### 8.2 Business Unit Settlement Risk Rating

The Business Unit Settlement Risk Rating (BUSRR) has been developed to determine the extent of BU materiality.

The PAB approves criteria for determining a BUSRR for all the top Settlement Risks which are currently measurable.

Applying these criteria allows the PAB to assess the materiality of the top Settlement Risks for measured Role Code.

When calculating the BUSRR for each BU, the following dimensions are taken into account:

- The BU's performance against the PAB approved criteria;
- 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 PATs (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);
- Industry input;
- Any additional information provided by the BU.



#### **Business Unit Settlement Risk Rating (BUSRR)**

The BUSRR is a broad indication of relative risk. It indicates whether a business unit is considered as higher risk (RED), lower risk (GREEN), or about average risk (AMBER) within the context of each Settlement Risk Guidance on BUSRRs can be found on the [website](#).



We are looking to put in place a new set of BUSRR criteria from the changes associated with the new PARMs serials. All changes to the BUSRR criteria are agreed with the PAB.



**CP1334: New PARMs Serials**

The 12 new serials proposed by CP1334 will be implemented in June 2011. For further information please email [paa@elexon.co.uk](mailto:paa@elexon.co.uk)

## 9 Communicating MBU Settlement Risks

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 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, 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.

### 9.1 Management of Settlement Risks

The MBU dashboards, BUSRRs and RMPs will be treated confidentially and only made available to the associated MBU. Dashboard(s) will be reviewed and updated on a regular basis.

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

- Efficiency in the cost and application of PATs;
- Fairness and consistency in the application of PATs across MBUs.

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

## 10 Document Control

### a Authorities

Version	Date	Author	Reviewer	Reason for review
0.1	04/01/2011	Zaahir Ghanty	Beth Brown	First Draft for Risk Evaluation Working Group Review
			Jon Spence	
			Caroline Wright	
			Katie Wilkinson	
			Rosalind Hartley	
			Jonna Piipponen	
0.2	14/01/2011	Zaahir Ghanty	Beth Brown	Update following Risk Evaluation Working Group Review comments
			Jon Spence	
			Caroline Wright	
			Katie Wilkinson	
			Rosalind Hartley	
			Jonna Piipponen	
0.3	17/01/2011	Zaahir Ghanty	Beth Brown	Update following pre- PAB review

Version	Date	Author	Approver	Signature
1.0	31/03/2011	Zaahir Ghanty	PAB	

### b Distribution

Recipient	Version	Date	Reason
PAPs	1.0	1 April 2011	

## 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.
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 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

Term	Definition
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)”
Settlement Risk	Section Z, paragraph 5.1.1 (a) and (b) of the BSC defines a Settlement Risk as: (a): <i>" 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;"</i> (b): <i>"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;"</i>
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: (i) <i>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</i> (ii) <i>the significance of the Settlement Risk is of a level which the Performance Assurance Board determines (in its opinion) to be material;..."</i>

## 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 PATs<sup>11</sup> 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	Category
Qualification	P	Non Standard
Re-Qualification	P	Non Standard
Bulk Change of Agent	P	Non Standard
Education	P	Non Standard
Performance Monitoring and Reporting	D	Mandatory
Material Error Monitoring	D	Standard
Technical Assurance of Metering Systems	D	Mandatory, Standard, Non Standard
BSC Audit	D	Standard
Technical Assurance of Performance Assurance Parties	D	Non Standard
Peer Comparison	I	Standard
Removal of Qualification	I	Non Standard
Breach and Default	I	Non Standard
Supplier Charges	R	Mandatory
Error and Failure Resolution	R	Non Standard
Trading Disputes	R	Non Standard
Change Mechanisms	R	Non Standard

<sup>11</sup> This list of PATs was correct when this document was approved, but is included here for illustrative purposes only. The PAB 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.

## Example for Application of PATs

For example in the ROP, Settlement Risk 1 has PATs 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 role code 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 RMP.

If PATs 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.

