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## Risk Evaluation Register 2024/25

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### Performance Assurance Board (PAB)

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Summary	<b>The Risk Evaluation Register (RER) for the 2024/25 Performance Assurance Operating Period (PAOP) sets out all of the currently identified Settlement Risks and assesses their potential materiality. This assessment is based on future events that could impact industry compliance with Balancing and Settlement Code (BSC) governed procedures. The RER assists with the subsequent development of the Risk Operating Plan (ROP), which will propose areas of specific focus for 2024/25.</b>
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## Introduction

The BSC, Section Z 5.5, requires the Performance Assurance Board (PAB) to identify and evaluation Settlement Risks, in line with the Annual Performance Timetable (APAT). The PAB is required to prepare and maintain the RER, setting out potential Settlement Risks, their likelihood and their significance.

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### The RER and the RER Ledger

This 2024/25 RER (effective from **1 April 2024 to 31 March 2025**) has been created based on Elexon's assessment of risk events that could impact Settlement in the 2024/25 PAOP and the results of annual detective audits, which can indicate an increase in risk probability.

This RER sets out the following:

- Risk events that may occur in the 2024/25 PAOP;
- An assessment of the likelihood of such events in relation to individual Settlement Risks;
- Key findings from annual detective audits; and
- The forecasted impact on all Settlement Risks during the 2024/25 PAOP.

The RER ledger will be combined with the ROP Ledger for the 2024/25 PAOP, which will be available once the ROP is finalised.

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### Executive Summary

Elexon has identified the following risk events, which could impact Settlement in 2024/25:

- A potential shortage of natural gas affecting energy supply;
- Meter Operator shortage;
- Changes to policy;

- Issues identified in the BSC Audit;
- Issues identified in the TAM Audit; and
- Horizon scanning

## Identified Risk Events for 2024/25

### 1. A potential shortage of natural gas affecting energy supply

Energy supply to Europe and the UK, particularly due to a shortage of natural gas, was listed as a potential risk event for 2022/23. Supply chains remain fragile as Europe looks to diversify away from a reliance on pipeline imports from Russia. Geopolitical tensions, particularly in the Middle East, may threaten shipping routes, and therefore energy imports to the UK.

The potential shortage of energy supply remains a concern for the upcoming operating year, and Elexon has identified several risks that could arise if there were to be a shortage of supply:

#### 1.1 Change of Supply (CoS) events

The UK market saw a wave of Supplier of Last Resort (SoLR) events between 2019 and 2022, as Suppliers exited the market. This was largely due to Suppliers having insufficient capital to manage the increase in wholesale energy prices.

Uncertainty over energy security could drive up wholesale market prices, due to worldwide competition for Liquid Natural Gas (LNG) shipments. There are constraints on the global shipping capacity for LNG, meaning that nations must outbid one another in order to receive a finite number of deliveries.

If market prices were to rise sharply once again, we could see further SoLR events or Supplier acquisitions if Suppliers are either struggling financially, or lose the risk appetite for remaining in the market. This in turn would lead to bulk switching activities that would create risks to Settlement in the form of data loss, error and delays in operating activities such as maintenance and fault resolution.

Contrarily, if the supply of natural gas was to stabilise, wholesale energy costs would decrease, which could also encourage switching activities in both the domestic and non-domestic energy supply sectors due to greater competition between Suppliers.

Risk	Title	Material effect	Severity	Comment
3	Metering equipment, installation, programming, maintenance and commissioning	Increase	Medium	If customers switch Supplier at any time during an installation or fix of Metering Equipment, there is an increased potential for data loss and disruption to scheduled maintenance activities.
5	Fault resolution	Increase	Medium	Increase potential for data loss and disruptions to planned fault resolution activities during any switching process.
6	Meter Technical Details, transfer and processing	Increase	Low	Increased switching events would result in more transfer of data, subsequently, leading to potential for errors and data loss.
7	Retrieval of metered data	Increase	High	Increased switching would require more final reads potentially leading to erroneous data or missing data.
8	Processing of metered data	Increase	High	Increased switching could lead to data being incorrectly transferred or lost.
10	Meter read history	Increase	Medium	Increased potential for Meter read history loss and erroneous Meter read history to be transferred.
14	Agent appointments	Increase	Medium	Increased switching results in more appointment and de-appointments of Agents subsequently increasing the potential for error in the process.

## 1.2 Increased usage of pre-payment Meters

The recent increase in wholesale energy costs has led to an increase in the use of pre-payment Meters<sup>1</sup>. Pre-payment Meters record consumption on a pay-as-you-go basis, which improves the accuracy of Settlement as more actual Meter reads are collected.

Risk	Title	Material effect	Severity	Comment
1	Registered	Increase	Low	Any new Metering System installations would need to be registered. An increase in exchanges or installations would increase potential error.
2	Attributes	Increase	Low	Any new Metering System installations would need to have attributes registered, an increase in exchanges or installations would increase potential error
3	Metering equipment, installation, programming, maintenance and commissioning	Increase	Low	There is an increased risk that Metering Equipment is installed incorrectly if there are more Meter exchanges.
4	Notification of change to Metering equipment	Increase	Low	Potential for more Meter Exchanges if there is a shift to pre-payment Meters from traditional (non-smart) Meters.
7	Retrieval of metered data	Decrease	Medium	Pre-payment metered data is more accurate than other Meter types from a Settlement point of view.
10	Meter read history	Increase	Low	Increased potential for data loss if more Meters are exchanged
12	Metering equipment technical detail quality	Increase	Low	Increased potential for data loss if more Meters are exchanged

## 1.3 Increased energy theft

With higher market prices, there is the potential for greater levels of energy theft. This disrupts the accuracy of Settlement, due to estimates not reflecting the true nature of consumption.

Risk	Title	Material effect	Severity	Comment
5	Fault resolution	Increase	Medium	Potential for increased faults if Metering Equipment is tampered with.
7	Retrieval of Metered data	Increase	High	Meter read data could be withheld or obstructed in Settlement, meaning erroneous data could be entered into Settlement and increased reliance on Estimated Annual Consumption (EACs).
8	Processing of metered data	Increase	High	Intentionally incorrect Meter reads may be submitted by customers and then processed into Settlement.
16	Energisation status	Increase	High	De-energised Meters may be activated as part of stolen electricity.
18	Revenue protection	Increase	High	Stolen electricity decreases the accuracy of Settlement.

## 1.4 Issues with error monitoring and estimation inaccuracies

If energy supply, and subsequently, market prices were to increase or decrease at a fast pace, we would expect changes in behaviour from consumers in both the Supplier Volume Allocation (SVA) and Central Volume Allocation (CVA) markets.

<sup>1</sup> <https://www.ofgem.gov.uk/news-and-views/blog/tackling-inappropriate-energy-supplier-prepayment-meter-practices>

Error monitoring processes including Metered Volume monitoring compares data received against historical usage patterns and identifies change points in the trends. If there was a wide-spread and change in consumption, greater levels of change points may occur. This would increase the resource needed to investigate and may delay necessary fixes.

Estimated Annual Consumptions (EACs) are used in the absence of actual reads and relies on historical data. If consumption behaviour were to change significantly in a short period of time, there is a risk that estimated data is not reflective of current consumption patterns, which would decrease the accuracy of Settlement data.

Risk	Title	Material effect	Severity	Comment
5	Fault resolution	Increase	Medium	Meters that require fixes could be delayed if large numbers of data points are flagged.
7	Retrieval of metered data	Increase	High	Historical Metered Volumes would not be viable to compare against current Metered Volumes due to a change in consumption Estimated Annual Consumptions (EACs) may not be reflective of consumption.
8	Processing of metered data	Increase	Medium	EAC data may not be reflective of consumption.
21	Retrieval and processing of metered data (CVA)	Increase	High	Historical Metered Volumes would not be viable to compare against current Metered Volumes due to a change in consumption. Estimated data may not be reflective of consumption.
23	Fault resolution (CVA)	Increase	High	Meters that require fixes could be delayed if large numbers of data points are flagged.

## 1.5 Increasing Export metering

Such a reliance on natural gas highlights the requirement to move to alternative energy generation, including greener options. Green generation has been a focus for the previous few decades and has led to an increase in micro generation at domestic sites, to allow for this, more Export Meters are required to facilitate generation.

Risk	Title	Material effect	Severity	Comment
1	Registration	Increase	Low	Increased numbers of SVA Export Meters being installed could lead to these Meters being registered incorrectly.
2	Attributes	Increase	Low	Increased levels of SVA export metering could lead to incorrect Meter details.
3	Metering equipment, installation, programming, maintenance and commissioning	Increase	High	An increase in SVA export Meters could increase the potential for error in the installation and maintenance of Metering equipment.
7	Retrieval of metered data	Increase	High	Data Collector contracts may not require or support the reading of export Meters. Elexon has noted that SVA export data is an area of notable underperformance.
8	Processing of metered data	Increase	High	The relative novelty of export Metering in the SVA market may cause issues with data processing. Elexon has noted that SVA export data is an area of notable underperformance.

## 1.6 Resourcing

If Suppliers were to face financial difficulty as a result of wholesale energy costs, there could be situations in which the fulfilment of BSC obligations are in competition with financial incentives. This could lead to situations in which overall market performance declines, as Suppliers prioritise other activities.

Elxon had previously noted a decrease in market performance across several operating areas in the 2023/24 RER as a result of the COVID-19 pandemic. While performance across the Half Hourly and Sub 100kW have gradually improved in the last 12-months, they remain below pre-pandemic levels.

There is a risk that sharply rising wholesale energy costs have an impact on progress being made in these areas due to resourcing issues.

## 2. Meter Operator shortage

Elxon have anecdotally been made aware of a shortage of Meter Operators Agents (MOAs) available in the Market. This can affect the timeliness of fault resolution and the regularities of commissioning activities, which have direct impacts on Settlement accuracy.

Risk	Title	Material effect	Severity	Comment
3	Metering equipment, installation, programming, maintenance and commissioning	Increase	High	A lack of Meter operators could increase the potential for error in the installation and maintenance of Metering equipment.
5	Fault resolution	Increase	High	A lack of Meter operators will cause delays in fault resolution.
12	Metering equipment technical detail quality	Increase	High	Inexperienced Meter operators may increase the potential for meter detail errors.
14	Agent appointments	Increase	Low	A Shortage of Meter operators and a greater potential for a lack of experience could cause issues in the appointment process.

## 3. Changes to Policy

Several major policy changes are active in the current period, including the transition to Market Wide Half Hourly Settlement (MHHS), the Review of Electricity Market Arrangements (REMA) and the potential to fundamentally review the Consumer Energy Price Cap (advocated by Ofgem, amongst other regulatory bodies).

MHHS is one of the most significant ongoing changes to the industry, with wide ranging effects across throughout the market. Although the scheme is not set to officially go live in the upcoming year, there are a series of milestones occurring now, in preparation for the start of migration in April 2025. The long-term expectation is that MHHS will improve market performance, by reducing the length of Settlement runs to get data of a higher quality more quickly.

Review of Electricity Market Arrangements (REMA) is an ongoing project owned by the Department for Energy Security and Net Zero (DESNZ) that looks to review various aspects of the UK energy market.

The Energy Price Cap has not currently had changes accepted, but there is a likelihood that changes could be implemented in the current operating period.

Changes to policy that affect BSC obligations or Settlement processes must be carefully managed to reduce any potential impacts of Settlement. These changes could trigger insufficient reaction by market participants if changes aren't sufficiently communicated. Given the number of market participants, and a general dispersion of roles, a lack of cohesion generally, could put the accuracy of Settlement at risk.

We consider policy changes to have the potential to affect Settlement Risks in all areas of the SVA and CVA markets. The likelihood and severity of their impact very much depends on the nature of the changes proposed, Elxon continues to review the implications as changes progress.

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## Key findings from annual detective audits

Elxon notes that issues and non-compliance trends highlighted in annual detective audits increase the likelihood of risks in the next PAOP. The issues have been highlighted below, and will be fed into the 2024/25 ROP with regards to providing additional assurance to mitigate the increased risk probability.

### 4. Issues Identified in the BSC Audit

The 2022/23 BSC Audit Report identified a substantial increase in material findings across the Parties that were audited, with 197 material findings identified, compared to 74 in 2021/22. This is an increase of 166% from the previous year.

In 2021/22, 40% of all material findings were identified at just five Parties. In 2022/23, 40% of findings identified were across seven Parties. The number of 'High' and 'Medium' rated findings has increased from 13 (26 including CVA Meter Operator Agents (MOAs)) to 56 as of 2022/23.

Risk	Title	Comment
002	Metering System attributes are incorrect	The Audit found 26 issues related to various flows.
005	Metering Equipment faults are not resolved	28 issues were discovered, relating to the reporting of faults with D0001 flows and the tracking of D0002 flows.
008	Processing of metered data	30 issues were discovered. These fell into categories of Processing of D0010 flows, actions on potentially erroneous EAC/AAs and Meter reading withdrawals and Deemed Meter Advances.
011	Unmetered Supplies volumes calculated incorrectly	The Audit reported 26 issues, relating to Unmetered Supply certificates and
017	Exception Reporting	29 issues were discovered relating to D0095 and D0235 flows.

### 5. Issues Identified in the Technical Assurance of Metering (TAM) Audit

The 2022/23 TAM Audit was conducted from April 2022 to March 2023.

Of the 529 SVA on-site sample Audits conducted, 16 Category 1 non-compliance and 428 Category 2 non-compliance issues were discovered. Of the 309 CVA on-site Audits conducted, 12 Category 1 and 277 Category 2 non-compliance issues were discovered.

The key risk areas identified by the TAM Audit are presented below:

Risk	Title	Comment
003	Metering equipment, installation, programming, maintenance and commissioning	The majority of issues in the SVA market consisted of errors in outstation clocks, transformers and in the testing of meters.
020	Metering equipment, installation, programming, maintenance and commissioning (CVA)	This year's audit found a greater number of issues with CVA metering systems. The majority of issues found were concerning Metering equipment functioning incorrectly, as well as incorrect measurement checks.
026	Aggregation rules (CVA)	Two issues were identified concerning incorrect Aggregation Rules.

## 6. Horizon scanning

### 6.1 Modernisation of Technology

Artificial Intelligence, the use of unqualified systems and an increasingly decentralised energy generation market are reflective of the process of modernisation within the energy industry. A phasing out of aging technologies, notably the discontinuation of the Public Switched Telephone Network (PSTN) (covered under Issue 75), present ongoing risks unless metering systems are upgraded. In the more distant future, 2G and 3G networks are also expected to be discontinued.

As Energy markets become more digital in nature, the potential impact of cyber-attacks become more prescient.

The accuracy of Settlement data, the timeliness of error detection and a greater potential for large system outages are potential consequences of a changing technological environment. All of these factors present a threat to Settlement accuracy. Elexon continues to review any progressive technologies entering the market and will take decisions to mitigate Risk as they are presented.

### 6.2 Political Uncertainty

UK general elections will take place in 2024/25, potentially leading to a shift in the overall direction that the UK may take in regards energy policy. Further, elections around the world, especially in the United States, may also have an impact on global energy policies, such as through decisions on the policing of shipping routes and global trade.

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