

PUBLIC

Risk Operating Plan 2017/18 Endorsed



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RISK OPERATING PLAN 2017/18

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INTRODUCTION

Description of the Risk Operating Plan

The Risk Operating Plan (ROP) is part of the risk based Performance Assurance Framework (PAF) as defined in Section Z of the Balancing and Settlement Code (BSC). The ROP sets out how the Performance Assurance Board (PAB) will provide assurance in respect of Settlement and the cost of providing that assurance. It describes the techniques available to the PAB to assign to Performance Assurance Parties¹ (PAPs) for each Settlement Risk in the Risk Evaluation Register.

Management of Supplier Volume Allocation (SVA) Settlement Risks

There are currently 16 available PATs that the PAB can apply to mitigate risks. All 16 PATs can be assigned to SVA risks. The PAB has set a minimum net significance threshold of four, below which no assurance techniques will be applied, unless mandated by the BSC. Net significance is based on the gross probability and impact scoring set out in the [Risk Evaluation Methodology](#).

High Impact Settlement Risks

Any Settlement Risks identified as having the most severe impact (i.e. a gross impact of 5) will be subject to PATs irrespective of the minimum net significance threshold. Currently there are no SVA Settlement Risks, which fulfil this criterion.

Types of Performance Assurance Techniques (PATs)

While a PAT is assigned to a Settlement Risk, it may not be deployed in all cases.

Mandatory PATs are those techniques, which the PAB is required to apply, to a PAP because they are mandated by the BSC (e.g. Supplier Charges). Mandatory PATs may provide assurance in respect of one or more identified Settlement Risks.

Standard PATs are the default techniques that the PAB will apply uniformly across the PAPs that have been assigned to the relevant Settlement Risk. Standard PATs may not always be applied to a PAP and, where this is the case, an explanation will be provided in the ROP.

Non-Standard PATs are extra techniques that the PAB may consider applying to derive additional assurance that one or more PAPs are addressing the Settlement Risks that have been assigned to it. Where the PAB applies a Non-Standard PAT the PAB will provide an explanation to the PAP in line with the relevant BSC Section or Code Subsidiary Document. Where the PAB observes significant failures over a range of risks, it will look to deploy Breach and Default and Removal of Qualification techniques.

PATs Triggered by PAPs

Qualification, re-Qualification and Bulk Change of Agent are PATs that a PAP can trigger. Where a Settlement Risk is below the minimum net significance threshold (4), these techniques will still be recorded against those Settlement Risks.

Within Period Revisions

Whilst the ROP will be reviewed on an annual basis in line with the [Annual Performance Assurance Timetable](#), a 'within period revision' of the ROP may be performed to facilitate variations to risks and/or assurance techniques.

¹ A Performance assurance Party is defined in BSC Section Z, 5.1.1 (c) as a Supplier, Meter Operator Agent, Data Collector, Data Aggregator, Meter Administrator, Licensed Distribution System Operator and/or Registrant.

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This provides the flexibility to refocus should a significant risk arise during the Performance Assurance Operating Period².

Management of Central Volume Allocation (CVA) and Central Systems Settlement Risks

The BSC states that all Settlement Risks that affect CVA shall be deemed to be significant in terms of probability and impact on Settlement. The BSC mandates the PATs that we will deploy in order to manage CVA and Central Systems Settlement Risks. In particular:

- The scope of the BSC Audit will encompass Central Systems including the Balancing Mechanism Reporting Agent, Central Registration Agent, Central Data Collection Agent, CVA Meter Operator Agents (MOA), Energy Contract Volume Aggregation Agent, Funds Administration Agent, Market Index Data Provider(s), Settlements Administration Agent, and Supplier Volume Allocation Agent;
- CVA Meter Operator Agents will be subject to the Supplier Volume Allocation Qualification, re-qualification and Removal of Qualification processes; and
- CVA Metering Systems will be within the scope of the Technical Assurance of Metering Systems technique delivered by the Technical Assurance Agent.

PERFORMANCE ASSURANCE TECHNIQUES

There are 16 Performance Assurance Techniques (PATs) available to manage Settlement Risks.

Performance Assurance Technique	Technique Category	Technique Type
Qualification (QUAL)	Preventative	Non-standard
Re-Qualification (RQUAL)	Preventative	Non-standard
Bulk Change of Agent (BCoA)	Preventative	Non-standard
Education	Preventative	Non-standard
Performance Monitoring & Reporting (PM)	Detective	Mandatory
Material Error Monitoring (MEM)	Detective	Standard
Technical Assurance of Metering Systems (TAM)	Detective	Standard
BSC Audit (BSA)	Detective	Standard
Technical Assurance of PAPs (TAPAP)	Detective	Non-standard
Peer Comparison (PC)	Incentive	Standard
Removal of Qualification	Incentive	Non-standard

² Equivalent to a period of one year, 1 April – 31 March.

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Breach and Default	Incentive	Non-standard
Supplier Charges (SC)	Remedial	Mandatory
Error and Failure Resolution (EFR)	Remedial	Non-standard
Trading Disputes	Remedial	Non-standard
Change Mechanisms	Remedial	Non-standard

Table 1: Performance Assurance Techniques

These techniques and the Performance Assurance Parties (PAPs) that they may be applied to are described in more detail in Appendix 1. Further details on the PATs are in the [Performance Assurance Framework Techniques Guiding Principles](#) and in the [Risk Evaluation Methodology](#).

Deployment of Performance Assurance Techniques

The Performance Assurance Board (PAB) is more likely to deploy PATs against those risks with the highest net significance (net significance 12 and above). Where regular data is available, the PAB is able to undertake more frequent and detailed reporting which allows it to have a greater focus on performance improvement. However, the PAB may deploy any of the techniques at its disposal on a case-by-case basis. Where no regular data is available the PAB may also routinely deploy PATs such as BSCA, TAM and/or TAPAP, EFR and Trading Disputes to identify and correct issues reported by industry or ELEXON. The ROP ledger shows:

- All SVA risks with a net significance of 4 and above;
- The impacted PAP for each of the Supplier Volume Allocation (SVA) risks;
- PATs assigned to SVA risks for deployment³ to PAPs;
- PATs routinely deployed against the top SVA Settlement Risks (those with a net significance of 12 and above); and
- All CVA risks and the mandated PATs available for deployment.

³ The full list and description of PATs is in Appendix 1.

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CHANGES TO THE RISK OPERATING PLAN 2017/18

We have not identified any changes to the Risk Operating Plan (ROP) 2017/18. However, the Performance Assurance Board (PAB) approved within-period revisions to the Risk Evaluation Register 2016/17 and the ROP 2016/17 ([PAB188/04](#)) in September 2016. These revisions were to combine two existing top Settlement Risks to form one risk and two new Central Volume Allocation risks. We have carried these revisions through to the ROP 2017/18. We provide a summary of these revisions below.

Existing risks:

SR0022: The risk that HHMOAs do not provide correct Meter Technical Details to the HHDCs resulting in Meter readings being misinterpreted or not collected.

SR0028: The risk that HHMOAs make changes to the Metering System and do not inform the HHDCs resulting in Meter readings being misinterpreted or not collected.

Combined risk:

SR3019: The risk that HHMOAs do not provide correct MTDs, including when HHMOAs make changes to MTDs, to the HHDC resulting in Meter readings not being collected or misinterpreted.

The impacted Performance Assurance Parties (PAPs) and the Performance Assurance Techniques (PATs) available for deployment against this risk are the same as for the two individual risks.

Please note that until we have fully updated and tested our systems used to monitor the combined risk we will continue to monitor SR0022 and SR0028 individually. This is likely to be until April next year.

We have included all three risks (SR0022, SR0028 and SR3019) in Table 2, which shows the PATs assigned and routinely deployed to the top Settlement Risks in 2017/18.

New CVA risks:

SR3017: The risk that the Transmission Company sends incorrect Final Loss of Load Probability (LoLP) values to the SAA resulting in incorrect Energy Imbalance Prices and incorrect amounts payable by or to Parties.

SR3018: The risk that the Transmission Company sends incorrect Balancing Services Adjustment Data (BSAD) to the SAA resulting in incorrect Energy Imbalance Prices and incorrect amounts payable by or to Parties.

The BSC mandated PATs are available for deployment by the PAB.

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The table below shows the impacted PAPs and the assigned and routinely deployed PATs for the top Settlement Risks.

The full ROP ledger is in Attachment B.

SRIN	HH/NHH	Risk Description	Net Sig.	Impacted PAP	Assigned PATs	Routinely deployed PATs
SR0022	HH	The risk that HHMOAs do not provide correct Meter Technical Details to the HHDCs resulting in Meter readings being misinterpreted or not collected.	20	Supplier MOA DC	All except RQUAL All except B&D; SC; TD All except B&D; SC; TD	EFR– case by case basis following poor performance, not routinely applied to DC PM – We use PARMs ⁴ Serial HM13 'Quality of Half Hourly Meter Technical details' to monitor performance of PAPs against this risk.
SR0024	NHH	The risk that NHHMOAs do not provide Meter Technical Details to the correct NHHDCs resulting in Meter readings not being collected.	12	Supplier MOA DC	All except RQUAL All except B&D; SC; TD All except B&D; SC; TD	EFR– case-by-case basis following poor performance, not routinely applied to DC. PM – We use PARMs Serial NM12 'Missing Non Half Hourly Meter Technical Details' to monitor performance of PAPs against this risk.
SR0025	HH	The risk that HHMOAs do not provide Meter Technical Details to the correct HHDCs resulting in Meter readings not being collected.	12	Supplier MOA DC	All except RQUAL All except B&D; SC; TD All except B&D; SC; TD	EFR– case-by-case basis following poor performance, not routinely applied to DC. PM – We use PARMs Serial HM12 'Missing Half Hourly Meter Technical Details' to monitor performance of PAPs against this risk.

⁴ Performance Assurance Reporting and Monitoring System.

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SRIN	HH/NHH	Risk Description	Net Sig.	Impacted PAP	Assigned PATs	Routinely deployed PATs
SR0028	HH	The risk that HHMOAs make changes to the Metering System and do not inform the HHDCs resulting in Meter readings being misinterpreted or not collected.	12	Supplier MOA DC	All except RQUAL All except B&D; SC; TD All except B&D; SC; TD	<p>EFR – Case-by-case basis following poor performance, not routinely applied to DC.</p> <p>TAM – We use data from the Technical Assurance Agent (TAA) on the instances of Meter Technical Details non-compliances with the BSC to measure the performance of PAPs against this risk.</p>
SR0072	NHH	The risk that NHHDCs process incorrect Meter readings, resulting in erroneous data being entered into Settlement.	16	Supplier DC	All except RQUAL All except B&D; SC; TD	<p>EFR – Case-by-case basis following poor performance, not routinely applied to DC.</p> <p>MEM – We use data processed by ELEXON's Large Estimated Annual Consumption/Annualised Advances (EAC/AA) system to identify instances of excessive consumption that exist in Non Half Hourly Data Aggregation.</p>
SR0073	NHH	The risk that stolen energy notified by Revenue Protection units is not used in calculations by Suppliers and NHHDCs resulting in inaccurate data being entered into Settlement.	15	Supplier DC	All except RQUAL All except B&D; SC; TD	BSCA (if poor performance is identified EFR may be deployed).

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SRIN	HH/NHH	Risk Description	Net Sig.	Impacted PAP	Assigned PATs	Routinely deployed PATs
SR0074	NHH	The risk that NHHDCs do not collect and / or enter valid Meter readings resulting in old/default data entering Settlement.	15	Supplier DC	All except RQUAL All except B&D; SC; TD	<p>EFR – Case-by-case basis following poor performance, not routinely applied to DC. We currently use SP08 'Energy and MSIDs on Actuals' data from the Supplier Volume Administrator Agent (SVAA), which provides ELEXON with the energy volumes settled on AAs at final reconciliation (RF) to determine performance of PAPs.</p> <p>PC – We use PARMS Serial SP08 to provide Peer Comparison against this risk.</p> <p>PM – We use PARMS Serial SP08 to monitor the performance of PAPs against this risk.</p> <p>Supplier Charges (SC) - SP08</p>



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SRIN	HH/NHH	Risk Description	Net Sig.	Impacted PAP	Assigned PATs	Routinely deployed PATs
SR0081	HH	The risk that HHDCs do not process valid HH readings resulting in estimated data being entered into Settlement.	12	Supplier DC	All except RQUAL All except B&D; SC; TD	<p>EFR – Case-by-case basis following poor performance, not routinely applied to DC. We currently use SP08 'Energy and MSIDs on Actuals' data from the SVAA to determine the performance of PAPs based on volumes settled on actual (rather than estimate) values at the Initial Settlement Run (SF).</p> <p>PC – We use PARMS Serial SP08 to provide Peer Comparison against this risk.</p> <p>PM – We use PARMS Serial SP08 to monitor the performance of PAPs against this risk.</p> <p>SC – calculated based on performance against PARMS Serial SP08</p>
SR0111	NHH	The risk that NHH Metering Systems are tampered with resulting in under-accounting of energy in Settlement.	12	Supplier DC	All except RQUAL All except B&D; SC; TD	BSCA
SR0112	HH	The risk that HHDCs use data from faulty Metering Systems resulting in incorrect data being entered into Settlement.	16	Supplier DC	All except RQUAL All except B&D; SC; TD	TAM (if issues are identified EFR may be turned on).
SR0116	HH	The risk that Half Hourly Import/Export Metering Systems are incorrectly installed/configured resulting in inaccurate data entering Settlement.	12	Supplier LDSO MOA	All except RQUAL All except BCoA; PC; PM; SC All except B&D; SC; TD	TAM (if issues are identified EFR may be turned on).

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SRIN	HH/NHH	Risk Description	Net Sig.	Impacted PAP	Assigned PATs	Routinely deployed PATs
SR2868	NHH	The risk that non Half Hourly Import/Export Metering Systems are incorrectly installed/configured resulting in inaccurate data entering Settlement.	12	Supplier LDSO MOA	All except RQUAL All except BCoA; PC; PM; SC All except B&D; SC; TD	
SR3019		The risk that Half Hourly Meter Operator Agents (HHMOAs) do not provide correct Meter Technical Details (MTDs), including when HHMOAs make changes to MTDs, to the Half Hourly Data Collector, resulting in Meter readings not being collected or misinterpreted.	12	Supplier MOA DC	All except RQUAL All except B&D; SC; TD All except B&D; SC; TD	<p>EFR– case by case basis following poor performance, not routinely applied to DC</p> <p>PM – We use PARMs⁵ Serial HM13 'Quality of Half Hourly Meter Technical details' to monitor performance of PAPs against this risk.</p> <p>TAM – We use data from the Technical Assurance Agent (TAA) on the instances of Meter Technical Details non-compliances with the BSC to measure the performance of PAPs against this risk.</p>

Table 2: Top Settlement Risks

⁵ Performance Assurance Reporting and Monitoring System.

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CHANGES TO THE DEPLOYMENT OF PERFORMANCE ASSURANCE TECHNIQUES

BSC Audit

From November 2016, Commissioning will be part of the BSC⁶ Audit. Changes BSCP⁷ 514⁸ and BSCP515⁹ introduced by [CP1458 'Introduction of timescales for the P283 Commissioning process for SVA CT operated Metering Systems'](#) will be used to audit the obligations. This follows poor performance of Performance Assurance Parties when audited by ELEXON against the P283¹⁰ Commissioning process during 2014/15 and 2015/16.

Technical Assurance of Metering

During 2015/16 the Technical Assurance Agent (TAA) inspected a specific sample of Half Hourly Metering Systems that were commissioned after the introduction of P283 in November 2014, to identify if the commissioning process and subsequent record keeping activities had improved.

Following the audit the TAA reported continuing concerns with the commissioning process and specifically the lack of commissioning evidence. We will repeat the specific sample on P283 sites in 2017/2018.

Other Techniques

We are not proposing any changes to the deployment of the following techniques:

- Bulk Change of Agent;
- Breach & Default;
- Change Mechanisms;
- Education;
- Error and Failure Resolution;
- Material Error Monitoring;
- Peer Comparison;
- Performance Monitoring and Reporting;
- Qualification, re-Qualification, Removal of Qualification; and
- Supplier Charges;
- Technical Assurance of Performance Assurance Parties; and
- Trading Disputes

We will continue to deploy these techniques against any relevant risk in the usual manner or if Parties and/or Party Agents meet the relevant conditions, e.g. a particularly material issue arises or a BSC Party or Party Agent fails in a

⁶ Balancing and Settlement Code

⁷ Balancing and Settlement Code Procedures

⁸ SVA Operations for Metering Systems Registered in SMRS.

⁹ Licensed Distribution.

¹⁰ Reinforcing the Commissioning of Metering Equipment Processes.

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number of areas. We will present any changes to the deployment of these techniques to the PAB as a within-period revision to the ROP.

FUTURE CONSIDERATIONS

Performance Monitoring and Reporting

A change has been raised to request that PARMS Serials HM12 and NM12 include missing MTDs where there has been a Change of Measurement Class (CoMC). This may result in changes to BSCP533 'Appendix B: PARMS Calculations Guidelines'.

Currently NM12 and HM12 measure the performance of MOAs sending MTDs only following a Change of Agent. Excluding the count of MTDs due to a CoMC event implies that MTDs are not required to be sent following a CoMC event. However, this is not the case, as the MOAs require MTDs to complete CoMC within timescales and to determine if a Meter exchange is needed.

We will report our findings to the Performance Assurance Board (PAB) and any changes to the deployment of this technique will be dealt with as within-period revisions to the Risk Operating Plan.

Lessons learned from a Trading Dispute related to Central Volume Allocation (CVA) site

In August 2016 the Trading Disputes Committee upheld a Trading Dispute (with a materiality of £23,600,000) attributed to a metering issue where the wiring to the Current Transformer (CT) was reversed when the Meters were relocated to a new substation. This resulted in metered volumes being erroneously recorded as Active Export rather than Active Import. The error had been undetected for approximately 25 months. Proving tests and Commissioning of the Metering system had been performed. No exceptions were raised by the Central Data Collection Agent's (CDCAs) validation system and the CDCA's dialling software did not encounter any exceptions. The issue was identified by the Registrant after extensive investigation into the growing disparities between corrected and uncorrected metered volumes from the end of 2014 to 2016.

ELEXON is currently undertaking a lessons learned exercise for the Trading Dispute. It is expected that a number of changes will be recommended that may impact the Risk Operating Plan (ROP) 2017/18.

We are in the process of raising a change to BSCP 27 'Technical Assurance of Half Hourly Metering Systems for Settlement Purposes', to enable the Technical Assurance Agent (TAA) to select a specific sample of CVA sites to be audited in the same way they are allowed to select a SVA specific sample for audit. We are also gathering evidence to see at if a Technical Assurance of Performance Assurance Parties check on the CVA Commissioning process is required.

We will present any changes to the deployment of these techniques to the PAB as a within-period revision to the ROP.

Performance Assurance Framework Review

We are undertaking a complete review of the Performance Assurance Framework (PAF) which was implemented through Modification P207¹¹ in November 2008. ELEXON and the PAB believe there are opportunities to further enhance the application of the risk-based PAF to address the challenges of a changing industry.

¹¹ Introduction of a new governance regime to allow a risk based Performance Assurance Framework (PAF) to be utilised and reinforce the effectiveness of the current PAF.

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The entirety of the PAF is in scope for the review, i.e. the set of Settlement Risks monitored, all of the current Performance Assurance Techniques, ownership of and PAB powers relating to the PAF.

Further details of the review are provided in the BSC Panel paper [255/12](#) Scope of the Performance Assurance Framework Review. We will report monthly to the PAB on the progress of the review, which is expected to take until September 2017 to complete.

ESTIMATED COSTS FOR EXERCISING PERFORMANCE ASSURANCE TECHNIQUES

The cost of delivering the Performance Assurance Framework in 2017/18 is shown below. We anticipate a £130,711 increase in expenditure compared to what we forecasted for 2016/17. We explain the differences below.

Cost Type	ROP 2016/17 Forecast	ROP 2017/18 Forecast
Operational	£1,007,530	£1,047,436
Contractual	£2,424,913	£ 2,515,718
Total	£3,432,443	£3,563,154

Table 4: ROP Forecast Costs.

Operational Costs

We have based the 2017/18 forecast operational costs on current staff numbers, daily rates and staff allocated time to Performance Assurance Framework (PAF) activities. Our forecast is £39,906 higher than the 2016/17 forecast. The additional costs reflect:

- Increased time existing staff spend on OSM activities; and
- Year on year increase equivalent to inflation (2%¹²).

Contractual Costs

We derived the 2017/18 contractual costs from the BSC budget numbers as of September 2016. These figures are subject to amendment to reflect contractual changes and changes to indicative costs. The forecast for 2017/18 is £90,804 higher than the 2016/17 forecast. Please note that figures below do not match exactly due to rounding. The key differences compared to the 2015/16 forecast are:

- Additional BSC Audit costs (£71,978). This is due to changes in ad hoc costs for additional work requested, number of audits and changes in indicative costs;
- Additional costs for Technical Assurance of Metering (£7,519). This is due to changes in the number and type of TAA checks and ad hoc costs;
- Additional Qualification costs (£17,945). This is demand-led, and therefore subject to change with the number of applications; and

¹² Our calculation is based on the Bank of England Inflation Report August 2016 – 2017 RPI 1.9%; 2018 RPI 2.4%. Average of the two RPIs is 2.15% which is rounded down to account for nine months of the year with 1.9% RPI applied and three months with 2.4% RPI applied.

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- Lower database hosting/maintenance and meeting costs (down by £6,637). This is demand led and therefore subject to change with database requirements and meeting attendance.

REFERENCES

Links

[Risk Evaluation Methodology 2017/18](#)

[Risk Evaluation Register 2017/18](#)

[Performance Assurance Techniques](#)

[PAF Techniques Guiding Principles](#)

[Glossary](#)

FURTHER INFORMATION

If you have any questions or require further information on the Risk Operating Plan please contact:

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APPENDIX 1

This table lists all the Performance Assurance Techniques that the Performance Assurance Board **may** deploy against Performance Assurance Parties to mitigate risk to Settlement.

Performance Assurance Technique	Summary	HH/NHH	Impacted PAP	BSC Obligation
Breach and Default Non-standard	Formal notification may be provided to a BSC Party of persistent or material breach of the BSC. A failure to address this breach in all material respects with all reasonable diligence and so far as reasonably practicable may constitute a 'Default'. The Panel may apply specific provisions to Defaulting Parties including (but not limited to): notifying each other Party of such Default, suspending the right of the Party to submit: Energy Contract Volume Notifications, Metered Volume Reallocation Notifications, Bid-Offer Pairs, or, with the prior approval of the Authority, the right to register further Metering Systems and BM Units, or expelling the Party from the BSC in accordance with Section A5.	HH/NHH	LDSO Supplier	The breach and Default provisions are set out in section H3 of the BSC. Section Z of the BSC establishes PAB's responsibilities with regard to the PAB Escalation Cycle detailed in BSCP534 "PARMS Techniques" which may lead to escalation to the Panel.
BSC Audit (BSCA) Standard	The BSC Audit involves reviewing systems and business processes at Performance Assurance Parties, as well as the Central Settlement Systems in order to provide a level of assurance that the calculations and allocations that have been performed within Central Volume Allocation (CVA) and Supplier Volume Allocation (SVA) are in accordance with the BSC and its subsidiary documents. The scope of the BSC Audit is set by the Panel for each audit year	HH/NHH	DA DC MA MOA LDSO Supplier	The BSC Audit is set out under section H5 of the BSC. The BSC requires that the BSC Audit is a compliance-based audit.

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Performance Assurance Technique	Summary	HH/NHH	Impacted PAP	BSC Obligation
	<p>and includes the determination of the annual Audit Materiality Threshold.</p> <p>The BSC Auditor bases its opinion for a 'qualified' or 'unqualified' audit on the level of cumulative error discovered in Settlement against the acceptable level of error as defined by the Materiality Threshold. The Materiality Threshold represents approximately 0.5% of the total annual electricity supplied across Great Britain.</p>			
<p>Bulk Change of Agent (BCoA)</p> <p>Non-standard</p>	<p>Where responsibilities change for large volumes of Metering Systems, this preventative technique ensures that such Bulk Changes of Agent are only carried out where the Panel is satisfied that the Supplier, Supplier Agents and SMRAs involved can undertake the necessary procedures in a controlled and competent manner without adversely impacting their daily operations and other Suppliers within the SMRS; thereby protecting the integrity of Settlements.</p>	NHH	<p>DA</p> <p>DC</p> <p>MA</p> <p>MOA</p> <p>Supplier</p>	<p>Defined in Section J of the BSC and detailed in BSCP513 "Bulk Change of NHH Supplier Agent".</p>
<p>Change Mechanisms</p> <p>Non-standard</p>	<p>The PAB, on identifying a perceived weakness or defect in the arrangements set out in the BSC, may recommend to the Panel that a Modification Proposal is raised. Alternatively, the PAB may instruct ELEXON to raise a Change Proposal to address the identified defect. This provides a mechanism to correct areas of weakness within</p>	HH/NHH	<p>DA</p> <p>DC</p> <p>MA</p> <p>MOA</p> <p>LDSO</p> <p>Supplier</p>	<p>Amendments to the BSC, Code Subsidiary Documents, BSC Systems and associated documentation are subject to a formal change procedure as set out in Section F of the BSC.</p>

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Performance Assurance Technique	Summary	HH/NHH	Impacted PAP	BSC Obligation
	the design of Settlement under the BSC. This limits the scope of the technique to only those applications of the change process made in order to address specific defects relating to Settlement Risks. It is distinct from the more general Change Management function and the assurance that it may provide to Trading Parties.			
Education Non-standard	Publication of guidance on common (market) issues identified by the PAF and on the best ways to address them. This may include a view of root causes of these issues. It may also reference other areas of the BSC that may help in monitoring or controlling the issue in some way. This excludes sharing of business operational practices as these are confidential and are an area where competitive advantage may be gained. In addition to these communication and education mechanisms, ELEXON assigns an Operational Support Manager (OSM) to each BSC Party and Party Agent when they accede to the BSC. The OSM provides a first point of contact and is able to provide support and guidance regarding the BSC arrangements.	HH/NHH	DA DC MA MOA LDSO Supplier	Section C3.1.1 (e) of the BSC states that BSCCo is responsible for the provision of such facilities, services and information in connection with the implementation of the BSC as it may provide or the BSC Panel may require.
Error and Failure Resolution (EFR) Non-standard	The Error and Failure Resolution (EFR) processes are managed by BSCCo and constitute a remedial assurance technique that is composed of a number of activities. The objective of the technique is to provide a	HH/NHH	DA DC MA MOA LDSO Supplier	Section C3.1.1 (n) of the BSC states that BSCCo is responsible for monitoring whether any Party is or could be in Default of the BSC (in accordance with Section H3). The Error and Failure

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Performance Assurance Technique	Summary	HH/NHH	Impacted PAP	BSC Obligation
	<p>structured and managed framework for the rectification of Party and Party Agent issues including areas of non-compliance and underperformance against obligations and standards prescribed in the BSC and identified through other PATs. The process includes the provision of general support and information.</p> <p>This technique ensures that action is taken to resolve issues identified by PATs, in particular issues found during the BSC Audit and Technical Assurance checks.</p>			<p>Resolution Process allows BSCCo to track areas of non-compliance and is identified in the BSC under section Z and detailed in the associated BSCP. Section Z of the BSC establishes PAB's responsibilities with regard to Error and Failure Resolution which interfaces with the PAB Escalation Cycle detailed in BSCP538 "Error and Failure Resolution".</p>
<p>Material Error Monitoring (MEM) Standard</p>	<p>The Material Error Monitoring process constitutes a detective technique that complements the BSC Audit, Technical Assurance and Trading Disputes processes through the provision of quantitative data designed to quantify the contribution made by Performance Assurance Parties to error and the impact of such errors on Performance Assurance Parties.</p>	NHH	<p>DA DC LDSO MA MOA Supplier</p>	<p>Section C3.1.1 (n) of the BSC states that BSCCo is responsible for monitoring whether any Performance Assurance Party is or could be in Default of the BSC (in accordance with Section H3). Data is collected by the PAB in order to calculate and track identified material errors on a regular basis. This monitoring supports a range of assurance mechanisms including, but not limited to, the BSC Audit as noted in section Z7.1.2(f) of the BSC. It enables BSCCo to model and communicate the impact of identified Settlement errors. The PAB establishes each set of reporting requirements as it considers necessary or</p>

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				appropriate in accordance with Sections Z1.4.2 and Z1.4.3 of the BSC.
Peer Comparison (PC) Standard	Peer Comparison is designed to encourage performance improvement and compliance with the required standard through the publication of named Peer Comparison data to Trading Parties and also publicly on the BSC Website. Suppliers and Supplier Agents are required to submit data for certain key performance Serials (Serials are defined above in the Reporting and Monitoring section). Graphs showing comparative performance levels are produced by BSCCo and then authorised for use by the PAB. A copy is also sent to all participants who appear on the graphs.	HH/NHH	Supplier MOA DC – only NHH at present	The process is identified in the BSC under section Z and is detailed in BSCP533 “PARMS data provision, Reporting and Publication of Peer Comparison Data”. Section Z of the BSC establishes PAB’s responsibilities with regard to Peer Group Comparison.
Performance Monitoring and Reporting (PM) Mandatory	The Performance Reporting and Monitoring process constitutes a detective technique that complements the BSC Audit and Technical Assurance processes through the provision of quantitative data designed to identify performance at key control points in Settlement processes. The Performance Assurance Reporting and Monitoring System (PARMS) Serials and Standards are defined Service Levels on Suppliers, Non Half Hourly and Half Hourly Data Collectors, Non Half Hourly and Half Hourly Meter Operator Agents and Supplier Meter Registration	HH/NHH	DC MOA Supplier	The Serials and Standards are established in either Annex S-1 of the BSC or identified within Section J of the BSC as being further defined in BSCP533 “PARMS Data Provision, Reporting and Publication of Peer Comparison Data”. Section Z of the BSC sets out PAB’s responsibilities with regard to performance monitoring and reporting.

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	Service Agents (SMRAs). The purpose of the Serials is to provide assurance that participants are meeting their obligations in the BSC and Code Subsidiary Documents. The Serial determines the process being measured, and the Standards are the measurement points within the process.			
Qualification (QUAL) Non-standard	This process is designed to provide assurance that new organisations entering the market in certain roles have developed their systems and processes to an appropriate standard in order to meet their obligations under the BSC. This constitutes the approval of "Qualified status" to new participants (applicants) seeking to enter Settlement based upon: a declaration from an officer of the applicant that it will meet the requirements of the BSC and an independent review of evidence and risk-based witnessing of testing.	HH/NHH	DA DC MA MOA LDSO Supplier	Defined in Section J of the BSC and detailed in BSCP537 "Qualification Process for SVA Parties, SVA Party Agents and CVA MOAs". Section Z of the BSC sets out PAB's responsibilities with regard to the Qualification process.
Removal of Qualification Non-standard	The PAB may remove previously granted Qualified status for Supplier Agents based upon historic performance and non-compliance with BSC requirements. As Suppliers must use Qualified Supplier Agents this constitutes a significant response to a breach of the BSC.	HH/NHH	Supplier LDSO DA DC MA MOA	Defined in Section J of the BSC and detailed in BSCP537 "Qualification Process for SVA Parties, SVA Party Agents and CVA MOAs". Section Z of the BSC sets out the PAB's responsibilities with regard to the Removal of Qualification process.
Re-Qualification (R-QUAL)	Once an organisation is Qualified in a certain role (other than Suppliers), that organisation is	HH/NHH	DA DC MA	Defined in Section J of the BSC and detailed in BSCP537 "Qualification Process for

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Performance Assurance Technique	Summary	HH/NHH	Impacted PAP	BSC Obligation
Non-standard	<p>required to maintain its Qualified status through the re-Qualification process when it makes material Changes to its previously Qualified systems and/or processes. This requires re-approval of "Qualified status" for existing participants (applicants) seeking to make material changes to their systems and processes:</p> <p>a declaration from an officer of the applicant that it will continue to meet the requirements of the BSC and</p> <p>an independent review of evidence and risk-based witnessing of testing.</p>		MOA LDSO	SVA Parties, SVA Party Agents and CVA MOAs". Section Z of the BSC sets out PAB's responsibilities with regard to the Re-Qualification process.
Supplier Charges (SC) Mandatory	<p>Supplier Charges constitute liquidated damages that Suppliers incur for failing to meet applicable Performance Levels set out in the BSC. Pursuant to the BSC, each Supplier has agreed that each of the Supplier Charges represent a genuine pre-estimate of loss likely to be suffered by other Parties as a result of the failure of a Supplier to meet the appropriate Performance Level.</p> <p>The PARMS system calculates Supplier Charges per calendar month (reporting period) and by Grid Supply Point Group (GSPG). The charges are capped for each Supplier based on the Supplier energy take in the GSPG thus limiting the liability of any participant in any one reporting period.</p> <p>Ninety percent of the total capped Supplier Charges are</p>	HH/NHH	Supplier	<p>Supplier Charges are applied for failure to meet obligations set out in Annex S-1 of the BSC and are applied only to those Serials defined within Annex S-1. The process for managing Supplier Charges is detailed within BSCP536 "Supplier Charges".</p> <p>Section Z of the BSC sets out PAB's responsibilities with regard to Supplier Charges.</p>

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	then redistributed to other Non Half Hourly Suppliers in each GSPG pro-rated according to the energy registered to each Supplier for that month with a further ten percent of the total charge distributed to Trading Parties.			
Technical Assurance of Metering Systems (TAM) Mandatory, Standard, Non-standard.	The Technical Assurance Agent (TAA) service consists of a combination of sampled and targeted visits to sites with HH Metering Systems registered in SVA and CVA and is designed to monitor the compliance of these Metering Systems with respect to the requirements stated in the BSC and its Subsidiary Documents, in particular the Metering Codes of Practice (CoP). This provides a level of assurance that the metered values being passed into Settlement are representative of actual consumption.	HH	DC LDSO MOA Supplier	The Technical Assurance of Metering Systems is identified in Section Z of the BSC and the functions and activities of the Technical Assurance Agent (TAA) are set out in Section L of the BSC and detailed in BSCP 27 "Technical Assurance of Half Hourly Metering Systems for Settlement Purposes". Section Z of the BSC sets out PAB's responsibilities with regard to the Technical Assurance of Metering Systems process.
Technical Assurance of Performance Assurance Parties (TAPAP) Non-standard	The service consists of a combination of routine and targeted checks and site visits which seek to ensure that each Supplier or Supplier Agent continues to meet its obligations in respect of the BSC. The scope of work for Technical Assurance is agreed by the PAB on an annual basis. The scope is designed to cover gap areas, recently introduced requirements and significant market issues. Targeted checks may also be performed by BSCCo as and when required. Checks can either be performed centrally or	HH/NHH	DA DC MA MOA LDSO Supplier	The process of Technical Assurance is identified in Section Z of the BSC and defined in BSCP535 "Technical Assurance". Section Z of the BSC sets out PAB's responsibilities with regard to the Technical Assurance process.

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	as part of a site visit to a market participant.			
Trading Disputes Non-standard	<p>The process for resolving Trading Disputes is a remedial technique that provides a mechanism for the correction of identified Settlement Errors. A Trading Dispute can arise where errors in the data, processes and/or rules used for the purposes of Settlement are identified and where such errors affect the amounts paid to or from Trading Parties.</p> <p>Trading Disputes can also arise as a result of errors in the determination of whether a Party is in Credit Default.</p>	HH/NHH	Supplier LDSO	<p>The process for settling Trading Disputes under the BSC is set out in Section W of the BSC and is detailed in BSCP11 "Trading Disputes". Section W of the BSC sets out TDC's responsibilities with regard to Trading Disputes.</p>