PUBLIC

Annual Performance Assurance Report

2015-2016

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ELEXON

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ANNUAL PERFORMANCE ASSURANCE REPORT

MESSAGE FROM THE PERFORMANCE ASSURANCE BOARD (PAB) CHAIR

During 2015/16, we have again seen many challenges for ELEXON and its customers. The migration of Profile Class 5-8 customers to trade in the half hourly market, has continued to dominate both industry and ELEXON priorities. We expect to see around 140,000 Meters go through the Change of Measurement Class process by April 2017, which we recognised as complex. Our monitoring showed that by March 2016 cumulative actual migration was ahead of planned migration by 0.80%. We encourage Parties to continue with all best efforts throughout the remainder of the migration, especially as more complex sites move to half hourly Settlement.

Non half hourly market performance remained below the 97% target (on average it achieved 96.59%) during the year. This is due to the continuing impact of one Party experiencing processing issues due to a new IT system. ELEXON continues to work closely with the Party.

Half hourly market performance fell below the 99% standard (averaging 98.76%) for much of 2015/16. We continue to engage with poor performing Suppliers and provide monthly updates to the PAB.

The level of gross error attributed to erroneously large non half hourly consumption values after Final Reconciliation remained well below the 165GWh threshold (at an average of 26GWh).

We saw the BSC Auditor give an unqualified opinion in 2015/16. However, the materiality of the errors found was closer to the materiality threshold of 1.4 TWh compared to previous years. We are working with Parties to deliver actions required to address the risk to Settlement.

Despite the introduction of Modification P283 'Reinforcing the Commissioning of Metering Equipment processes' in November 2014, the findings reported by the Technical Assurance Agent and the results of further Technical Assurance checks by ELEXON were disappointing. We have undertaken a number of steps to address the issues found and continue to work with Parties to deliver compliance in this area.

I appreciate the work that all Performance Assurance Parties have put into resolving issues during 2015/16. Thank you for all your efforts.

EXECUTIVE SUMMARY

The Performance Assurance Board (PAB) is required, by the Balancing and Settlement Code (BSC) Section Z 8.1, to prepare an Annual Performance Assurance Report (APAR), which summarises:

- Results from risk evaluation and risk assurance procedures focussing on the outcome of the deployment of Performance Assurance Techniques (PATs);
- The costs associated in delivering the Performance Assurance Framework (PAF);
- Recommendations for modifying the PATs; and
- The benefits of any modifications to the PATs.

Settlement Risks Performance

We strive to deliver a transparent risk based PAF, focusing on the key Settlement Risks affecting BSC Parties. We employ a collaborative approach with our customers to monitor their performance against BSC obligations. During 2015/16 we observed the following:

- SR0022[1] - On average 2.92% (248) of Half Hourly (HH) Meter Technical Details (MTDs) received were re-submitted;
- SR0024[2] - On average the number of missing Non Half Hourly (NHH) MTDs after Final Reconciliation (RF) was 0.08% (24,089) of total registrations;
- SR0025[3] - The average number HH MTDs missing after RF was 0.14% (250);
- SR0028[4] - The number of MTD related non-compliances identified by the Technical Assurance Agent (TAA) which affected the quality of data for Settlement rose from 1 in 2014/15 to 3 in 2015/16;
- SR0072[5] - Gross error post RF remained well below the 165 GWh threshold (maximum gross error recorded in 2015/16 was 37 GWh);
- SR0074[6] - Industry did not meet the 97% standard (averaging 96.59%) for NHH energy settled on Annualised Advances (AAs) at RF during 2015/16. This was primarily due to the performance of a single Party, which has been in Error and Failure Resolution (EFR) since June 2014. Industry performance has subsequently improved in line with the improved performance of the Party for Settlement Dates in April and May 2015; and
- SR0081[7] - During 2015/16 the threshold to settle 99% of Half Hourly energy on Annualised Advances by the Initial Settlement Run was not met on 343 days (Industry average was 98.76%). The PAB put in place seven EFR plans to address poor performance.

[1] The risk that Half Hourly Meter Operator Agents (HHMOAs) do not provide correct MTDs to the Half Hourly Data Collectors (HHDCs) resulting in Meter readings being misinterpreted or not collected.
[2] The risk that Non Half Hourly Meter Operator Agents (NHHMOAs) do not provide MTDs to the correct Non half Hourly Data Collectors (NHHDCs) resulting in Meter readings not being collected
[3] The risk that HHMOAs do not provide MTDs to the correct HHDCs resulting in Meter readings not being collected.
[4] 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.
[5] The risk that NHHDCs process incorrect Meter readings, resulting in erroneous data being entered into Settlement.
[6] The risk that NHHDCs do not collect and / or enter valid Meter readings resulting in old/default data entering Settlement.
[7] The risk that HHDCs do not process valid HH readings resulting in estimated data being entered into Settlement.

Deployment of PATs in 2015/16

BSC Audit: The BSC Audit findings did not exceed the BSC Audit materiality of 1.4 TWh and was therefore not qualified. Key areas of concern were issues relating to Change of Measurement Class (CoMC), proving tests, Meter faults, MTDs and large Estimated Annual Consumption/Annualised Advances (EAC/AAs).

Change Mechanism: The PAB recommended the Change Proposal (CP) 1458 'Introduction of timescales for the P283 Commissioning process for Supplier Volume Allocation Current Transformer (CT) operated Metering Systems'. This seeks to introduce timescales in relation to activities performed during the Commissioning process and with the communications obligations introduced under Modification P283 'Reinforcing the Commissioning of Metering Equipment Processes'.

Education: We provided 29 educational sessions and 2 industry workshops related to Performance Assurance.

Error & Failure Resolution (EFR): During 2015/16, the PAB put in place 68 non-audit EFR plans and closed 21. The PAB put in place 30 audit related EFR plans and closed 24.

Material Error Monitoring (MEM): We routinely use MEM to monitor Party performance against SR0072, as reported in the previous section (Settlement Risk Performance).

Performance Reporting and Monitoring: We routinely deploy this technique to monitor Party performance against the top Settlement Risks.

Peer Comparison: We routinely deploy this technique to encourage performance improvement and compliance with the BSC. We publicise named Peer Comparison data on the BSC Website.

Qualifications/Re-Qualifications: The PAB considered and approved 83 role specific applications: 56 for off-the-shelf Supplier Qualifications.

Supplier Charges: The total value of uncapped Supplier Charges for 2015/16 was £18.7m and capped Supplier Charges was £6.2m.

Technical Assurance of Metering: In response to the Technical Assurance Agent Annual Report, we are addressing issues relating to Commissioning and Commissioning records. This includes conducting a second specific sample (related to Commissioning records) should it be required, changes to the Technical Assurance Agent Management Tool to enable us to split Commissioning record non-compliances between HH Meter Operator Agents and Licensed Distribution System Operators and a specific sample on possible incorrect CT ratios.

Technical Assurance of Performance Assurance Parties[8]: We undertook a more detailed investigation of the P283[9] Commissioning process. We audited a further 23 Parties and Party Agents. We are introducing timescales for request/receipt of Commissioning information and considering new data flows to provide the Commissioning information to relevant Parties and Party Agents. The P283 Commissioning process is now in scope for the BSC Audit from 2016/17.

Trading Disputes: A total of 40 Trading Disputes were raised during 2015/16. The Trading Disputes Committee heard 52 Trading Disputes and upheld 34 for rectification, with a total materiality of £20.7 million.

PAB Strategy and Future Considerations

Throughout 2015/16, we undertook a significant amount of work on the introduction of mandatory HH Settlement of Profile Classes 5-8 Meters and ensuring Parties migrate Meters successfully.

[8] A "Performance Assurance Party" is a Supplier, Meter Operator Agent, Data Collector, Data Aggregator, Meter Administrator, Licensed Distribution System Operator and/or a Registrant.

[9] Modification to the BSC implemented in November 2014 to reinforce the Commissioning process of Metering Equipment.

The PAB reviewed the CoMC risks, recommended amendments to four existing risks, and the addition of three new risks.

The PAB recommended 12 new risks related to the introduction of demand control actions into the imbalance price (introduced by Modification P305 'Electricity Balancing Significant Code Review').

We are currently undertaking a Business Unit Settlement Risk Rating (BUSRR) review. Our initial view is that we will need to amend the BUSRR criteria for four of the seven monitored top settlement risks.

ELEXON is reviewing the Performance Assurance Framework to ensure it meets the challenges of a rapidly changing industry including smart Metering and Non Traditional Business Models such as off-the-shelf Suppliers.

The Competition and Markets Authority has concluded that the absence of locational pricing for transmission losses creates an adverse effect on competition. In line with its determination, we will introduce a Modification to the BSC to apply a Transmission Loss Factor for each GSP Group for each BSC Season in order to allocate transmission losses on a geographical basis. We will monitor the progression of this Modification for any impact on the Performance Assurance Framework.

P344 is a proposed Modification to the BSC that seeks to align the Balancing and Settlement Code (BSC) with the European Balancing Project TERRE (Trans European Replacement Reserves Exchange) requirements. This is in order to allow the implementation of the project at national level and be compliant with the first tranche of obligations in the European Network Codes (ENCs). The TERRE go live date is scheduled for summer 2018. We will monitor the progression of this Modification for any impact on the Performance Assurance Framework.

Financials

The actual cost of delivering the PAF in 2015/16 was ~£114k higher than our forecast for the Risk Operating Plan (ROP) 2015/16. This is largely due to actual operational costs being higher than forecasted. During 2015/16 we required the equivalent of an additional 2.8 (Band A) FTEs to contribute to PAF related activities.

INTRODUCTION

Structure of the Annual Performance Assurance Report (APAR)

We have structured the APAR for 2015/16 as follows:

- A summary of the risk identification/evaluation processes we follow;
- Industry/participants' performance against measurable Settlement Risks;
- A review of the deployment of assurance techniques, including our response to the Technical Assurance Agent's (TAA) report and the BSC Auditor's report;
- The cost of delivering assurance techniques; and
- The Performance Assurance Board (PAB) strategy and future considerations.

Risk Identification & Evaluation

The requirements for the delivery of performance assurance procedures are set out in Section Z Paragraph 5 of the BSC, which includes the Risk Evaluation Methodology (REM) and the Risk Evaluation Register (RER)

The REM describes how the PAB:

- Identifies Settlement Risks;
- Evaluates Settlement Risks; and

- Assesses the materiality of Settlement Risks.

We apply the principles of the REM to the RER to identify and evaluate Settlement Risks. The RER is a record of the Settlement Risks, and the significance of each risk to Settlement in relation to a specific Performance Assurance Operating Period (equivalent to the BSC year, 1 April – 31 March).

Through industry consultation, we identified and assessed the materiality of 135 Supplier Volume Allocation (SVA) and 50 Central Volume Allocation (CVA) Settlement Risks.

Risk Significance Thresholds

The Settlement Risk thresholds represent the PAB and industry's risk appetite.

The thresholds for SVA risks are:

- Net significance below four – low;
- Net significance four to 11 – medium; and
- Net significance 12 and above - high.

There are 83 SVA Settlement Risks with a net significance between 4 and 11. The PAB reviews these risks on a less frequent/ad hoc basis than the top Settlement Risks.

We monitor CVA risks through the BSC Audit, Qualification and the Technical Assurance of Metering.

The next section provides a high-level overview of industry performance against SVA Settlement Risks with a net significance of 12 and above for which we received regular data for 2015/16.

SUPPLIER VOLUME ALLOCATION SETTLEMENT RISKS (SVA) MONITORED IN 2015/16

The Performance Assurance Board (PAB) monitors industry and participant performance against top SVA Settlement Risks on a monthly basis in the Settlement Risk Report (SRR), where data is available. ELEXON assigns a Business Unit Settlement Risk Rating (BUSRR) to the relevant participants. The BUSRRs help the PAB to determine the extent to which a Party's performance impacts Settlement. The PAB may place Parties that perform poorly against the BUSRR standards in Error and Failure Resolution (EFR), a technique applied by PAB to understand and address root causes of poor performance. In this section, we discuss industry performance against the Settlement Risks we monitored in 2015/16.

SR0022: The risk that Half Hourly Meter Operators (HHMOA) do not provide correct Meter Technical Details (MTDs) to Half Hourly Data Collectors (HHDCs) resulting in meter readings being misinterpreted or not collected. (net significance 20).

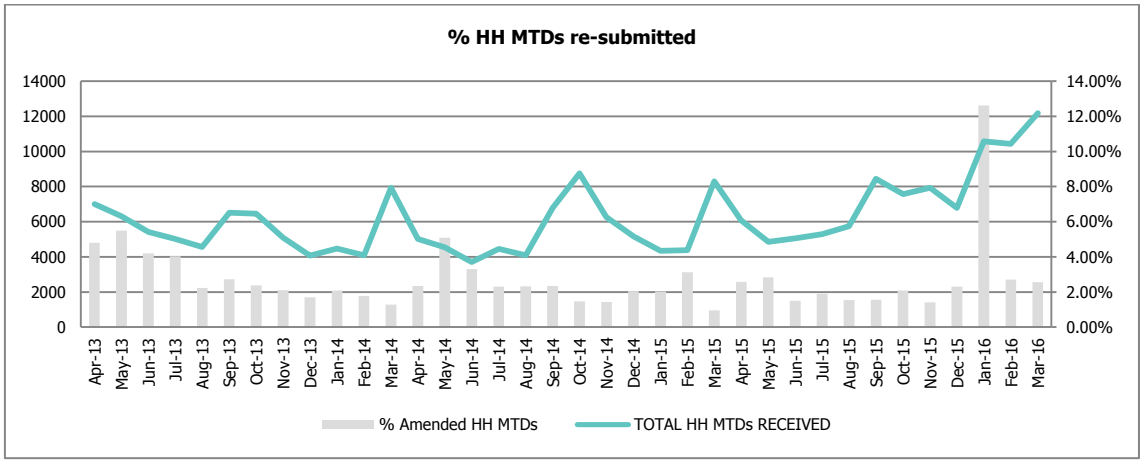


Chart 1: SR0022 – Quality of MTDs (Source: PARMS Serial HM13)

We use PARMS[10] Serial HM13[11] to gauge the quality of MTDs sent. HM13 shows how many times HHMOAs re-send HH MTDs (D0268s). Where HHDCs receive HHMTDs with a key data field change but the same Metering System Effective-from Date (i.e. a backdated correction), we assume that the HHMOA did not provide correct MTD the first time.

Chart 1 shows industry performance since April 2013. On average, the total number of MTDs re-submitted in 2015/16 was 2.92% (248) compared to 2.40% (121) the year previous. The highest number of re-submissions for the period occurred in January. This was due to a single Party's internal Change of Measurement Class (CoMC) process. Where an initial MTD did not contain the information required for a successful CoMC the Party amended and resent these MTDs to include the required information within the same data item. The Party has since amended it's internal processes and following this the volume of amended MTDs has returned to previous levels.

SR0024: The risk that Non Half Hourly Meter Operator Agents (NHHMOAs) do not provide Meter Technical Details (MTDs) to the correct Non Half Hourly Data Collectors (NHHDCs) resulting in Meter readings being not collected (net significance 12).

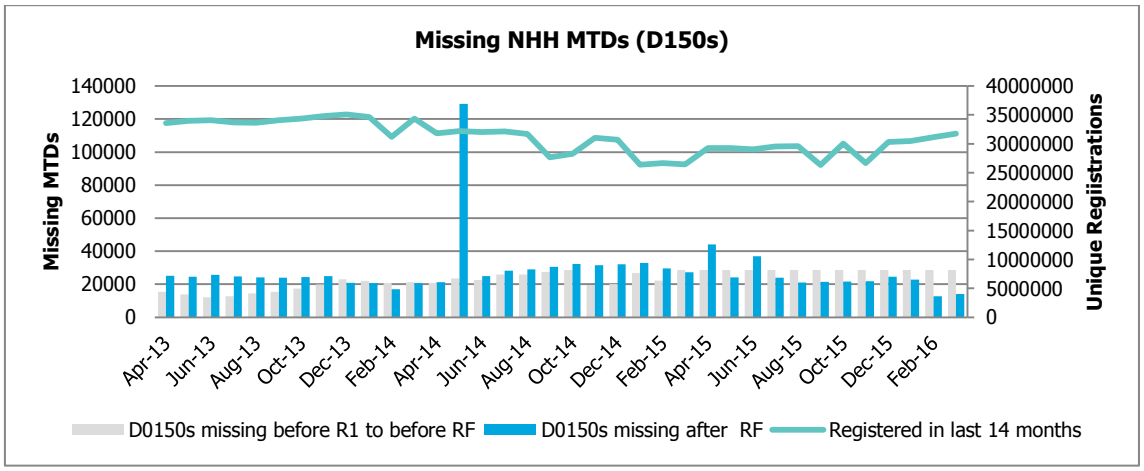


Chart 2: SR0024 Missing NHHDC MTDs (Source: PARMS Serial NM12 as reported by DCs)

We use PARMS Serial NM12[12] (as reported by the NHHDC) to monitor the transfer of MTDs from NHHMOAs following a Change of Agent, or Change of Supplier with a concurrent Change of Agent. If NHHDCs do not receive NHH MTDs, Meter readings may not be collected. NHH MTDs (D0150s) are considered missing when a D0155 (Notification of Meter Operator or Data Collector Appointment and Terms) or D0148 (Notification of Change to Other parties) flow has been received but no associated NHH MTDs have been received. In order to capture instances where NHH MTDs are missing, Party Agents count the number of unique registrations[13] held over the previous 14-month period and report how many of those do not have corresponding NHH MTDs.

Chart 2 shows performance since April 2013. During 2015/16, the average number of missing MTDs before the First Reconciliation Run (R1) through to before the Final Reconciliation Run (RF) was 28,528 (0.10% of total registrations) compared to 24,312 (0.08% of total registrations) the year previous. After RF the average number of missing MTDs in 2015/16 was 0.08% of total registrations (24,089) compared to 0.13% (37,382) the year previous. of total registrations. The spike that occurred in May 2014 was due to a reporting error by a single Party Agent.

[10] Performance Assurance Reporting and Monitoring System.
[11] Quality of HH MTDs.
[12] Missing NHH MTDs.
[13] Unique Registrations include any Unique D0155/D0148 received and accepted.

SR0025: The risk that Half Hourly Meter Operator Agents (HHMOAs) do not provide Meter Technical Details (MTDs) to the correct Half Hourly Data Collectors (HHDCs) resulting in Meter readings being not collected (net significance 12).

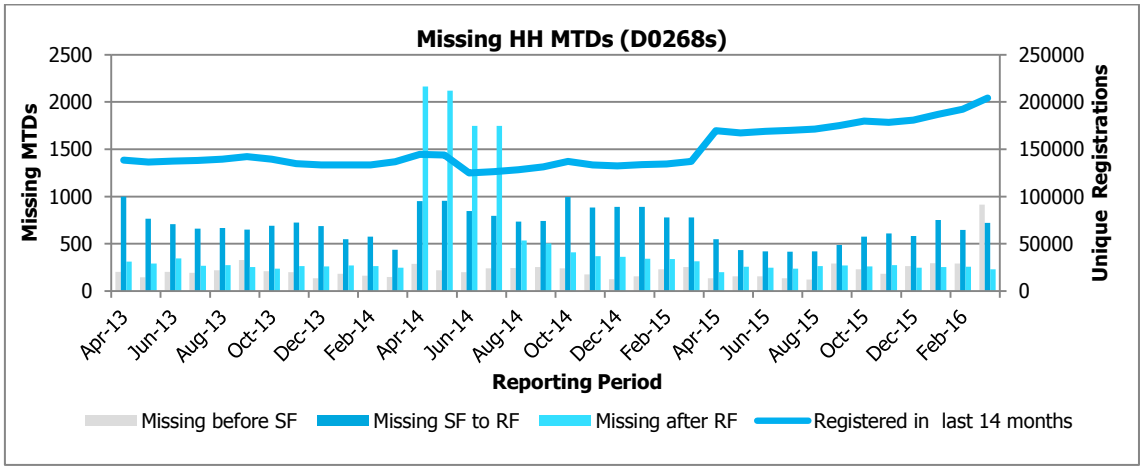


Chart 3: SR0025 Missing HH MTDs (source: PARMS Serial HM12 as reported by DCs)

We use PARMS Serial HM12[14] (as reported by HHDCs) to monitor the transfer of MTDs from HHMOAs following a Change of Agent, or Change of Supplier with a concurrent Change of Agent. We consider HH MTDs (D0268) to be missing when a Notification of Meter Operator or Data Collector Appointment and Terms flow (D0155) or Notification of Change to Other Parties flow (D0148) has been received but no associated HH MTDs have been received. In order to capture instances where HH MTDs are missing, Party Agents count the number of unique registrations held over the previous 14-month period and report how many of those do not have corresponding HH MTDs.

Chart 3 shows performance since April 2013. On average, the number of MTDs missing as a percent of registrations was 0.59% (1,064) in 2015/16 compared to 1.48% (1,985 per reporting period) in 2014/15. During 2015/16 0.15% of MTDs were missing from the Initial Settlement Reconciliation Run (SF) to RF compared to 0.16% the previous year. After RF, the average number missing MTDs was 0.14% (250) compared to 0.68% (913 per reporting period) in 2014/15. The spikes that occurred in April, May, June and July 2014 were due to poor appointment processes and subsequent reporting issues by a Party Agent.

SR0028: The risk that Half Hourly Meter Operator Agents (HHMOAs) make changes to the Metering System and do not inform the Half Hourly Data Collectors (HHDCs) resulting in Meter readings being misinterpreted or not collected (net significance 12).

This risk focuses on the HHMOAs sending MTDs following a change to a Metering System. We monitor this risk using data provided by the Technical Assurance Agent (TAA) on MTD non-compliances following inspection visits to Half Hourly Metering Systems.

Types of MTD Non-Compliances:

We categorise non-compliances in two ways:

- Those that are deemed to be currently affecting the quality of data for Settlement purposes (Category 1); and
- Those are deemed to have the potential to affect the quality of data for Settlement purposes (Category 2).

The TAA identifies MTD non-compliances using the following codes:

[14] Missing HH MTDs.

1.01: Incorrect Standing Data held by DC (MTDs);

2.01: Incorrect Standing Data held by MOA (MTDs);

2.02: Non key field MTDs do not match DC; and

2.03: MTDs not provided.

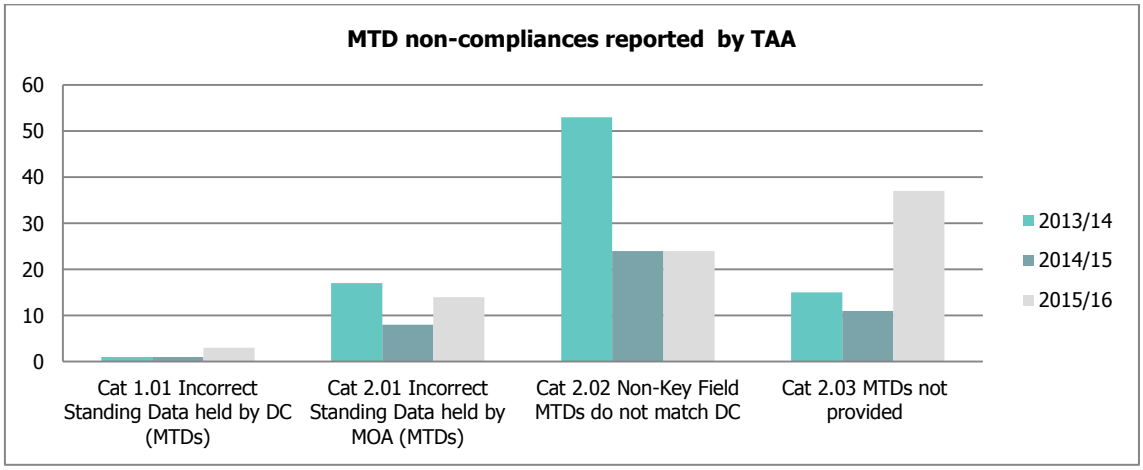


Chart 4: MTD non-compliances reported by the TAA

Chart 4 shows the volume of MTD related non-compliances reported by the TAA for the last 3 years. During 2015/16, the Technical Assurance Agent reported 78[15] non-compliances, compared with 44 in 2014/15.

Non-compliances deemed to be currently affecting the quality of data for Settlement:

- 3 non-compliance related to incorrect standing data held by DC compared to 1 in 2014/15

Non-compliances deemed to have the potential to affect the quality of data for Settlement:

- 14 non-compliances related to incorrect standing data held by MOA compared to 8 in 2014/15;
- 24 non-compliances related to Non key field MTDs not matching DC/MOA – no change from 2014/15; and
- 37 non-compliances related to MTDs not provided – compared to 11 in 2014/15.

This continues to be a high-risk area. Any errors or inconsistencies with MTDs could have an impact on the accuracy of HH Settlement. We continue to manage these issues through the normal Performance Assurance Framework process.

[15] This includes the specific sample of 108 Half Hourly Metering Systems commissioned post implementation of P283 'Reinforcing the Commissioning of Metering Equipment Processes.

SR0072: The risk that Non Half Hourly Data Collectors (NHHDCs) process incorrect Meter Readings, resulting in erroneous data being entered into Settlement (net significance 16).

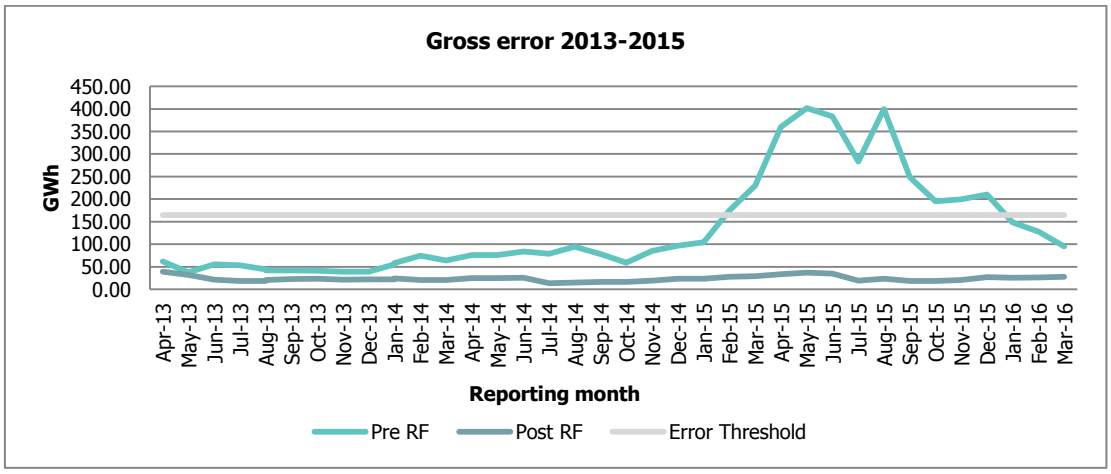


Chart 5: SR0072 Gross Error (Source: Material Error Monitoring Data)

We monitor performance against this risk focusing on the NHHDCs' ability to take corrective action against Parties who submit erroneous reads into Settlement. Corrective action needs to take place within the Final Reconciliation Settlement Run (RF).

Chart 5 shows performance from April 2013 to March 2016. During 2015/16 the level of gross error remained below the threshold of 165 GWh post RF but above the threshold pre RF between April 2015 and Jan 2016. The increase in pre RF gross error began in February 2015 when an error by a single Party occurred due to a system error. The Party continued to exceed the threshold until August 2015. We deployed the EFR process in May 2015 and continue to work with the Party to resolve its issues. Since October 2015, we have seen the Party's and industry's error levels reduce significantly.

SR0074: The risk that Non Half Hourly Data Collectors (NHHDCs) do not collect and/or enter valid Meter Readings resulting in old/default data entering Settlement (net significance 15).

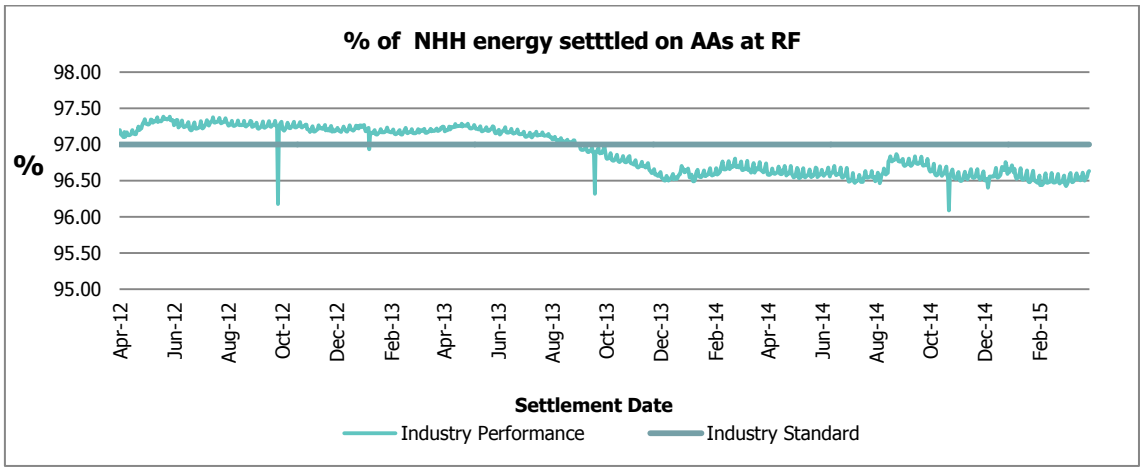


Chart 6: SR0074 Percentage of Energy Settled on AAs at RF (Source: SVAA)

To measure performance against this risk we apply the standard in the BSC[16] that states that by the Final Reconciliation Settlement Run (RF) NHH Suppliers should settle 97% of energy on Annualised Advances (AAs). We obtain the energy volumes settled on AAs at RF from the Supplier Volume Administration Agent (SVAA).

Industry did not meet the 97% standard for NHH energy settled on Annualised Advances (AAs) at RF during the reporting period 2015/16. On average, industry settled 96.59% of NHH energy on AAs at RF. The chart above shows industry performance for Settlement dates April 2012 to March 2015. The decline in overall performance was initially due to a single Party experiencing system errors caused by a migration to a new IT system. This issue has been impacting Settlement since August 2013. We placed the Party into the EFR process in June 2014 and continue to work with it to resolve issues. Although not part of this reporting period we have seen an improvement in the performance of the initial impacting Party and industry in the early part of 2016/17.

SR0081: The risk that Half Hourly Data Collectors (HHDCs) do not process valid HH readings resulting in estimated data being entered into Settlement (net significance 12).

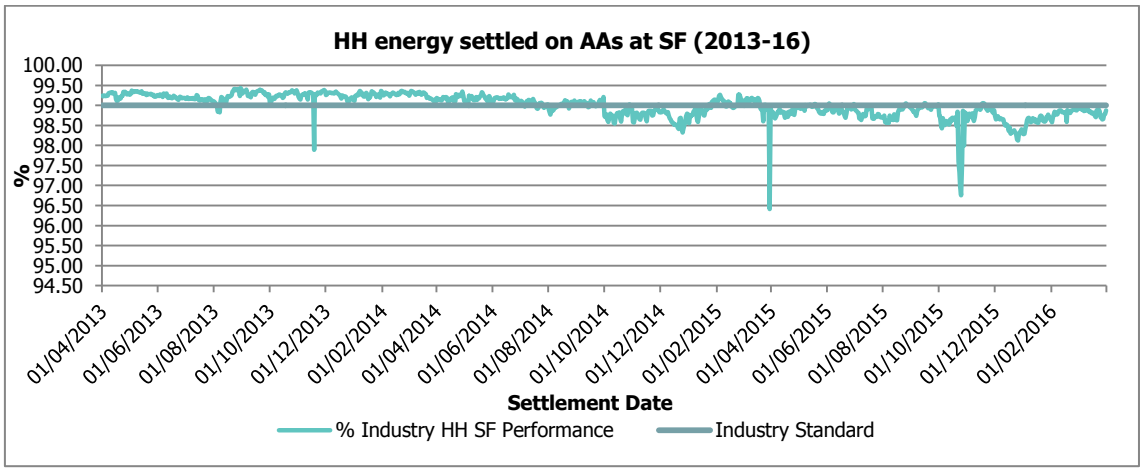


Chart 7: Percentage of HH Energy Settled on Actual Meter Readings at SF (Source: SVAA)

We measure performance against this risk using the standard in the BSC[17] that states that by SF Suppliers should settle 99% of energy on actual Meter reads. We use data from the Supplier Volume Administration Agent (SVAA) to calculate Suppliers' HH Settlement Performance.

During 2015/16 the 99% threshold was not met on 343 days. On average, industry settled 98.76 of HH energy on AAs at SF. We put 7 EFR plans in place to address poor performance against this risk. We continue to monitor Parties on a monthly basis and report our findings to the PAB.

Overall Performance of Supplier Volume Allocation Settlement Risks

Each month we calculate an overall risk rating (BUSRR) for each active Supplier ID. The BUSRR determines the extent to which the performance of a Business Unit (BU) affects the top monitorable Settlement Risks.

Chart 8 shows performance for 2013 through to 2016. During 2015/16, the number of red BUSRRs remained stable, ranging between 0-2. The number of amber BUSRRs ranged from 13-21 up from 5-19 in 2014/15. Green BUSSRs ranged from 46-63 compared to 47-58 in 2014/15.

We provide further information on the BUSRRs in the BUSRR guidance.

[16] Annex S-1 paragraph 2.2.1.
[17] Annex S-1 paragraph 2.2.4.

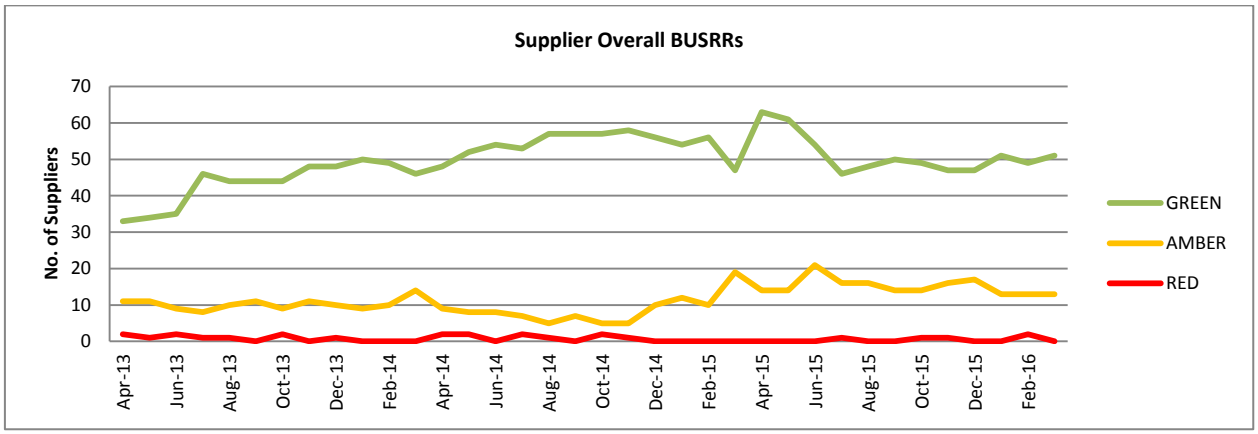


Chart 8: Overall BUSRR Performance - 2013/16

Appointments and Notifications

We monitor the appointment of Supplier Agents, the timely sending of MTDs and the notification of missing MTDs on a monthly basis and report our findings to the PAB on a monthly basis. We monitor these activities to detect any problems early on in the Settlement process and understand root causes of non-compliance against top Settlement Risks.

The focus of our monitoring is:

- The number of notifications and MTDs received before the Effective-from date (EFD) i.e. compliant with BSC obligations;
- The number of notifications and MTDs received after EFD and before SF i.e. no impact on Settlement;
- The number of notifications and MTDs received after SF but before RF i.e. correctable impact on Settlement but potential for impact on Supplier Charges; and
- The number of notifications and MTDs received after RF i.e. data correctable only by a Trading Dispute.

Timely Appointment of Agents (SP11)

Supplier performance as reported by	HHDC		HHMOA		NHHDC		NHHMOA	
	2014/15	2015/16	2014/15	2015/16	2014/15	2015/16	2014/15	2015/16
Total D0155s received	41,625	66,416	42,550	58,380	3,737,850	4,496,896	3,890,195	5,246,378
Total D0155s received before EFD	34,222	51,044	34,511	49,343	3,461,119	4,197,447	3,710,152	5,105,177
%	82.22	76.85	81.06	84.52	92.60	93.34	95.37	97.31
D0155s received after EFD and before SF	6,232	14,233	6,662	6,852	260,384	285,728	167,420	131,613
Total D0155s received after EFD and after SF but before RF	1,087	1,087	1,337	2,136	15,206	11,709	11,739	7,845
Total D0155s received after EFD and after RF	84	52	40	49	1,141	2,012	884	1,743
As % of total D0155s received	0.20	0.08	0.09	0.08	0.03	0.04	0.02	0.03

Table 1: Timely appointments of Agents

If Suppliers do not appoint agents in a timely manner, there is a risk that Meter readings will not be collected and/or default data will be entered into Settlement. We use SP11 to monitor the ability of Suppliers to submit notification of appointment to agents (D0155) prior to the EFD of the appointment. Data Collectors (DCs) and Meter Operator Agents (MOAs) provide the data.

Table 1 shows industry performance in 2015/16 compared to 2014/15.

Missing Appointments of Agents (SP15)

Supplier performance as reported by	HHDC		HHMOA		NHHDC		NHHMOA	
	2014/15	2015/16	2014/15	2015/16	2014/15	2015/16	2014/15	2015/16
Average no. D0155s received	173,249	186,445	160,968	172,810	30,697,160	29,568,516	31,452,315	32,679,458
Average no. D0148s missing	660	832	1,863	2,112	79,212	107,928	113,649	108,867
As % of D0155s received	0.38	0.45	1.16	1.22	0.26	0.37	0.36	0.33
Average no. D0148s missing BEFORE_SF	144	204	139	111	37,471	7,740	44,827	6,297
Average no. D0148s missing after SF before RF	404	495	797	935	16,794	36,797	40,949	35,053
Average no. D0148s missing after RF	112	133	927	1,066	24,947	63,391	27,873	67,517
As % of total D0155s received	0.06	0.07	0.58	0.62	0.08	0.21	0.09	0.21

Table 2: Missing Appointments of Agents

We use SP15 to monitor the ability of Suppliers to inform DCs and MOAs of changes to the Supplier hub composition. DCs and MOAs provide the data.

The Supplier receives acceptance of appointment from agents and issues a D0148 (Notification of Change to other parties) confirming appointment to DCs and MOAs. The Supplier then notifies the relevant agents of their appointment with a given EFD (D0155). The number of D0148s should therefore match the number of D0155s received (i.e. none should be missing).

Table 2 shows industry performance in 2015/16 compared with 2014/15.

Timely Sending of Meter Technical Details (MTDs) by Meter operator Agents (MOAs) to Data Collectors (DCs) (NM/HM11)

	NHHMTDs		HHMTDs	
	2014/15	2015/16	2014/15	2015/16
Total MTDs received due to change of MS	1,641,059	1,675,640	5057	7115
Received before SF	1,395,936	1,362,450	3800	5455
As % of MTDs received due to change of MS Before SF	85.06	81.31	75.14	76.67
Received after SF but before RF	181,174	185,864	666	1118
Received after RF	63,949	127,326	591	542
As % of total MTDs received due to change of MS	3.90	7.60	11.69	7.62

Table 3: Timely sending of MTDs

The BSC requires that all MTDs be received by the DC within a certain number of working days of the MTD EFD following a change to or of a Metering System (HH MTDs within 5 working days and NHH MTDs within 10 working days).

We use NM/HM11 to monitor when MOAs send MTDs to DCs following such a change. The figures in Table 3 are the volumes of MTDs received from MOAs reported by DCs.

Table 3 shows industry performance in 2015/16 compared with 2014/15.

Missing Meter Technical Details (MTDs) from (NM/HM12)

	NHHMTDs		HHMTDs	
	2014/15	**2015/16**	**2014/15**	**2015/16**
Average MS Registered in last 14 months	26,475,257	28,932,834	134,898	338,729
Average MS Registered without MTDs (missing)	201,783	144,071	13,192	5,389
% of MTDs missing	0.76	0.50	9.78	1.59
Missing after R1 to before RF	**28,944**	**48,022**	**6,931**	**2,033**
Missing after RF	**161,157**	**87,418**	**5,979**	**2,724**
As % of average registered	**0.61**	**0.30**	**4.43**	**0.80**

Table 4: Missing MTDs

Where there is a Change of Agent (CoA) MTDs must be transferred in a timely manner between agents. Where there is a change of MOA, the old MOA must transfer MTDs to the new MOA. The new MOA must then send MTDs to the current DC. Where there is a change of DC, the current MOA must send MTDs to the new DC. Where MTDs are not sent on a CoA or Meter installation it can result in a risk to Settlement.

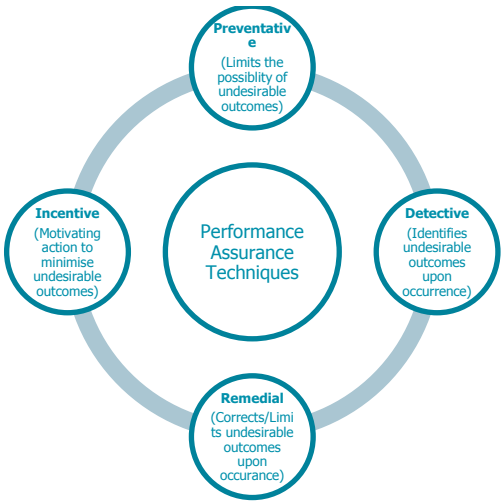
We use the HM/NM12 PARMS Serial as reported by MOAs, in root cause analysis of missing MTDs reported by DCs (SR0024/25). The figures above show the volumes of missing MTDs as reported by new MOAs.

Table 4 shows industry performance in 2015/16 compared with 2014/15.

DEPLOYMENT OF PERFORMANCE ASSURANCE TECHNIQUES 2015/16

The Performance Assurance Techniques

There are currently 16 Performance Assurance Techniques (PATs), which fall into four categories: Preventative, Detective, Incentive and Remedial. This section summarises the outcome of the deployment of PATs and our responses to the Balancing and Settlement Code (BSC) Auditor and Technical Assurance Agent (TAA) annual reports.



Balancing and Settlement Code (BSC) Audit

The BSC Audit is a detective technique used to provide assurance that calculations and allocations performed during the year are in line with the BSC.

ELEXON's Response to the Auditor's Annual Report

At the May 2016 Performance Assurance Board (PAB) meeting, the BSC Auditor presented its annual report with an unqualified audit opinion. The BSC Auditor highlighted particular areas where more attention from BSC Parties and ELEXON is needed.

ELEXON noted that while the audit is still unqualified, the quantification of error has shown that it got closer to the materiality threshold (1.4 TWh) this year and thus the risk to Settlement needs to be addressed.

The BSC Auditor highlighted nine key observations in the report. We provide the details below with the actions required to address them.

Proving tests not being performed and/or communicated

Proving tests are performed on Half Hourly (HH) Supplier Volume Allocation (SVA) and Central Volume Allocation (CVA) Meters after they are commissioned to confirm that the reads obtained by the Data Collector (DC) and Meter Operator Agent (MOA) coincide. If proving tests are not performed there is a risk that erroneous consumption enters Settlement. The BSC Auditor found several instances of proving tests either not being performed or the proving results not being communicated on the Commissioning of HH SVA and CVA Meters.

Throughout 2015/16 ELEXON has undertaken three workgroup meetings with the industry to identify potential solutions to the issue. The workgroup has identified that under certain criterion SVA proving tests are not required, because the lack of proving does not introduce additional risk to Settlement. These criterions are:

- The pulse multiplier in the Meter can only be set to 1;
- When there is no separate outstation; and
- When the site is non complex.

ELEXON intends to make a change to the BSC Procedure (BSCP) to exempt Parties from undertaking a proving test under this criterion. ELEXON is also intending to change the BSCP to put a proving test code in the D0001 (Request Metering System Investigation) flow. This would help MOAs identify when an investigation is required due to a failed proving test, and save time on investigating.

The BSC Auditor also noted that MOAs are not undertaking proving tests on CVA sites in all instances. It is ELEXON's view that for any CVA site, proving tests are essential to prevent potential error entering into Settlement. ELEXON will undertake further analysis in circumstances where MOAs are not performing proving tests on CVA sites and will look to produce guidance to educate BSC Parties on the situations where sites need to be proved.

Change of Measurement Class (CoMC)

This year the BSC Auditor noted that compliance with CoMC processes has become significantly worse compared to prior years. MOAs have difficulty in successfully managing the CoMC process in line with the BSCP requirements. The issues identified by the BSC Auditor have predominantly affected HHMOAs.

BSC Party Agents are not always able to identify a CoMC scenario or whether a CoMC is due to the requirement that Profile Class 5-8 Meters be settled half hourly. This is because of insufficient information being received from other BSC Party Agents. Other issues observed include:

- Final and initial meter readings not being sent;

- Proving tests not being performed; and
- Meter Technical Details (MTD) not being provided or inaccurate MTDs being provided.

The CoMC process is a high risk and high priority area of the BSC for the year 2016/2017, which was reflected in the BSC Audit Scope, placing CoMC in the list of key areas to focus on.

The BSC Auditor identified that the key problem in the CoMC process at the moment is appointment flows not being sent on time to provide the right information to BSC Party Agents. However, changes to these flows have been considered as part of Issue 49 'Change of Measurement Class process for Advanced Meters'. The workgroup decided not to pursue the change because it seemed too costly for a relatively low benefit.

The second problem identified in the BSC Audit was that the final Meter reads are not being sent to the old MOA on time or at all, thus increasing the risk of incorrect estimates being used. However, it is ELEXON's view that as most of these issues are observed through the mandatory migration of Automated Meter Read (AMR) Meters in Profile Class 5-8 to half hourly Settlement, the issues with final reads not being sent is not as severe. AMR Meters are likely to be read monthly before CoMC happens and the creation of Annualised Advances (AA) is based on those reads. Therefore, the estimate produced in such instances would have a high degree of accuracy. While this does not constitute a high risk to Settlement, ELEXON intends to conduct a root cause analysis into why the MOAs are not sending final Meter reads.

ELEXON will work with individual parties through Error and Failure Resolution (EFR) processes.

Incomplete or delayed provision of Meter Technical Details (MTDs)

The BSC Auditor identified several instances of MOAs not providing MTDs to DCs in line with BSC requirements. While being reported in previous years, this year the issue seems to have worsened with the auditor observing more non-compliant Party Agents.

ELEXON is aware that this has been an ongoing problem in the industry and the BSC Auditor has raised issues about the quality of HH MTDs.

In summer 2016, ELEXON is undertaking a Technical Assurance of Performance Assurance Parties (TAPAP) check to examine the provision of Auxiliary MTDs (D0313 flow) as well as other related flows, including NHH MTDs and Notification of Mapping Details. The results of that check will be presented to the PAB in September 2016 with recommendations on how to improve the process.

ELEXON is also investigating potential ways to reduce the likelihood of this issue occurring. One of the potential suggestions on how to improve the provision of MTDs is to put an obligation on MOAs to provide accurate MTDs. Currently, while there is an obligation for MOAs to provide MTDs within a particular timeframe, the obligation to provide them accurately is only implied. The change would require a change to the BSCP, therefore ELEXON will seek to conduct a cost benefit analysis and engage with the industry on whether this change would be beneficial.

Another potential solution is to introduce a peer comparison on HM11 PARMS serial. The serial looks at timely provision of MTDs in the Half Hourly (HH) market and could indicate if HH MTDs are delayed. However, the serial does not look at the quality of information provided. If ELEXON produce a peer comparison, it might incentivise the MOAs to provide the MTDs on time. ELEXON will therefore gather industry views of the benefit of such a peer comparison before deciding on whether the change would be beneficial.

Metering System faults not resolved

The BSC Auditor identified issues in more Parties surrounding the actioning of Metering System faults. However, the auditor also noted that the materiality of the issues has decreased in significance.

ELEXON has undertaken a number of workgroup meetings regarding fault investigation. Following the Fault Investigations Review Group (FIRG), two potential changes may be raised. The first option is to introduce a new data flow to replace the current Instruction on Action flow (D0005) in the fault investigations process. The second

refines the Instruction on Action flow to include a unique fault reference number and a fault category reference to define the type of fault that has occurred.

Both of these options will include amendments to the existing Request Metering System Investigation (D0001), and Fault Resolution Report or Request for Decision on Further Action (D0002) data flows to add a unique fault reference number (to tie the flows relating to the same fault together) and the fault category reference as above.

As the FIRG changes are cross-code changes with the Meter Registration Agreement (MRA), ELEXON will be working with the MRA Development Board to progress the most suitable option.

Energisation status not confirmed to data collectors

The BSC Auditor closed this issue in 2014/15, however, during 2015/16, it had access to additional data via the Data Transfer Network, and upon review of this, the auditor re-opened the issue.

ELEXON will conduct further analysis into the BSC Auditor's findings for individual Parties and root causes for non-compliances. Any individual non-compliances that are identified as having medium or high materiality will be addressed through EFR.

NHH Data Aggregator (DA) exception report

The NHHDA exception report provides Suppliers with details of anomalies in data provided to the NHHDA by the NHHDC and Supplier Meter Registration Agent (SMRA). The report identifies irregularities in consumption data provided by NHHDC and any inconsistencies in Metering System attributes.

The auditor found that, while the issue with exception handling remains present, the level of error in Settlement attributable to it is reducing. However, the number of Parties impacted by this non-compliance is increasing.

ELEXON continues to work with individual Parties that receive medium or high materiality non-compliances in the area through EFR, primarily focusing on reducing the backlogs and creating controls around managing the exception processes. It is clear by reduction in outstanding backlogs that the approach ELEXON has taken to help the industry to manage the issue is helping it get better.

However, ELEXON is now considering whether to introduce the peer comparisons to material NHHDA exceptions. ELEXON is already producing a NHHDA exceptions default materiality report and individual NHHDA performance is sent to them. However, no comparison to other Parties is being done. A public anonymised version could incentivise parties to resolve the outstanding material NHHDA exceptions.

Large/erroneous Estimated Annual Consumption (EACs) and Annualised Advances (AAs)

A number of Metering Systems have again been identified with values of EACs and AAs that are in excess of reasonable or expected levels for their Profile Class. The estimate of error to be crystallised is similar to the year before, meaning that the issue did not reduce in significance. In addition, more BSC Parties received non-compliances in this area.

ELEXON acknowledges that there are more Suppliers that are struggling with large EAC/AAs, especially smaller Suppliers. Current reporting done by ELEXON might not pick up small Suppliers contributing to the error on time, as they might not be breaching the threshold for reporting on PARMS.

The Business Unit Settlement Risk Reporting (BUSRR) review ELEXON is currently undertaking is looking to amend the criteria applied to the risk that NHHDCs do not collect and/or enter valid Meter readings, to not only account for a percentage of energy settled on estimates but also the actual volume.

ELEXON will also engage with smaller Suppliers to see if they require additional training on EAC/AAs and potentially create tailor-made sessions to address particular areas that are causing underperformance.

Long Term Vacant (LTV) process

The LTV process allows Suppliers to enter a zero EAC for energised Meter Point Administration Numbers (MPANs) that are not consuming electricity for an extended period. The BSC Auditor this year found that a number of Suppliers who have elected to use the LTV process were non-compliant where:

- Zero EACs were not being entered into Settlement despite the MPAN being in LTV and zero EACs not being removed on exiting LTV; and
- The effective date upon exiting or entering LTV status was incorrect.

The auditor noted that overall, the number of impacted entities increased from the prior year; however the Settlement impact associated with those issues has decreased.

ELEXON is analysing individual audit issues to identify any trends in root causes for these non-compliances. Any medium or high materiality non-compliances raised against individual Parties will also be placed into EFR.

NHH standing data flow and meter reading backlogs

BSC Auditor found several instances of non-compliance in the market surrounding flow and Meter read backlogs in 2014/15 and again in 2015/16.

ELEXON will investigate which flows are affected, and try to identify the root causes. Once ELEXON is able to estimate the impact on Settlement, it will be possible to devise an action plan on how to address the issue across the industry. In the meantime, any medium or high materiality non-compliances raised against individual Parties will also be placed into EFR.

Breach and Default

Breach and Default is an incentive technique. The Performance Assurance Board (PAB) may provide formal notification to a Balancing and Settlement Code (BSC) Party of a persistent or material breach of the BSC. A failure by a Party to address such a breach may constitute a 'Default'. The BSC 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;
- Suspending the right to register further Metering Systems and Balancing Mechanism Units; or
- Expelling the Party from the BSC.

The PAB did not place any Party into Breach and Default during 2015/16.

Bulk Change of Non Half Hourly Agent

Bulk Change of Non Half Hourly (NHH) Agent is a preventative technique designed to provide assurance that when responsibilities for large volumes of NHH Metering Systems change, it is managed in a controlled way. The process involves checking that the Supplier, Supplier Agent(s) and Supplier Metering Registration Agents (SMRAs) concerned undertake the necessary procedures appropriately so they do not affect other Suppliers. This helps protect the integrity of Settlement.

The process is mandatory where the number of NHH Metering Systems planned for the change of agent exceeds the threshold (20,000 per day per SMRA). This threshold requires approval by the Balancing and Settlement Code (BSC) Panel (see BSC Section J 4.2.5).

There were no applications submitted for Bulk Change of Agent during 2015/16.

Change Mechanism

The Change Mechanism is a remedial technique that the Performance Assurance Board (PAB) can use to direct ELEXON to raise a Change Proposal to address a Settlement Risk or make a recommendation to the Panel to raise a Modification Proposal.

During 2015/16, the PAB recommend changes to BSC Procedure (BSCP) 514 'SVA Meter Operations for Metering System Registered in SMRS' and BSCP515 'Licensed Distribution'. Change proposal (CP)1458 'Introduction of timescales for the P283 Commissioning process for SVA CT operated Metering Systems' seeks to introduce timescales in relation to activities performed during the Commissioning process and with the communications obligations introduced under Modification P283 'Reinforcing the Commissioning of Metering Equipment Processes'.

CP1458 is due to be implemented on 3 November 2016.

Education

Education is a preventative technique. ELEXON publishes guidance on common (market) issues identified and 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. In addition, ELEXON assigns an Operational Support Manager (OSM) to each Balancing and Settlement Code (BSC) Party and Party Agent when it accedes to the BSC. The OSM provides a first point of contact and is able to provide support and guidance regarding the BSC arrangements.

During 2015/16, we provided the following performance assurance related training/educational days:

- 5 Technical Assurance of Metering educational sessions;
- 6 Performance Assurance Framework educational sessions;
- 17 Performance Assurance Reporting and Monitoring System educational sessions;
- 1 Trading Disputes educational sessions;
- 1 TAM and P283 industry workshop; and
- 1 P272[18] workshop.

Off the Shelf Suppliers

In the past 12 months, 35 Suppliers completed Qualification, 34 with the intention of being sold to third parties ('off the shelf' Suppliers).

There is no BSC obligation for Suppliers to operate under the model in which they Qualified. Additionally, third parties could potentially have a knowledge gap from not completing the full Qualification process themselves. This has the potential to cause performance and operational issues, which have an impact on Settlement and ELEXON's time and resources.

To bridge the potential knowledge gap, ELEXON's Customer Operations Team has developed information packs and standard templates for communication of key information to new Suppliers. We designed this approach to improve consistency and ensure the proactive delivery of the Education Performance Assurance Framework technique.

We have made a training timeline of the core topics that we need to deliver to an 'off the shelf' Supplier after it has been sold. Either the Supplier's Operational Support Manager or the relevant Subject Matter Expert delivers the training sessions. The training timetable provides assurance that 'off the shelf' Suppliers will have the required knowledge at appropriate times prior to being a live Supplier. In the past six months, 71% of the training delivered by ELEXON has been for 'off the shelf' Suppliers or Suppliers that Qualified with the assistance of a consultant.

[18] 'Mandatory Half Hourly Settlement for Profile Classes 5-8'.

Error & Failure Resolution (EFR)

EFR is a remedial Performance Assurance Technique. We use the technique to provide assurance to the industry that Performance Assurance Parties (PAPs) understand the reason for poor performance and have robust plans in place to correct root causes in a timely manner. We call these plans EFR plans and we closely monitor them in conjunction with the Performance Assurance Board (PAB).

ELEXON can consider placing a PAP in EFR (turning EFR on) when we identify any Settlement issue. During 2014/15, we have used the technique to address:

- Medium and higher rated audit issues;
- Poor performance of PAP's against our top risk monitoring;
- Issues identified by other industry participants that present us with sufficient evidence of non-compliance. EFR will only be required after we have encouraged the organisations to resolve the matter between themselves first; and
- Non-compliances identified during Technical Assurance of Performance Assurance Parties (TAPAP) checks.

Non Audit Plans

We provide the total numbers of the non-audit plans in the table below. We then break down each type of EFR plan into sections.

	Number of plans	Number closed during period	Number ongoing after the period ended.
Total:	68	21	47

Table 5: Non-audit EFR plans

EFR Plans against Top Settlement Risks Monitored

SR0022[19], 24[20] and 25[21]

We monitor these top risks related to the correct provision of Meter Technical Details (MTDs) by using data from our Performance Assurance Reporting and Monitoring System (PARMS).

At its January 2015 meeting (PAB168), the PAB approved changes to the way it uses PARMS data reporting against SR0022, SR0024 and SR0025. The committee agreed that we should consider applying the EFR technique to Suppliers and MOAs that obtain three red Business Unit Settlement Risk Rating (BUSRRs) from the August 2015 PAB meeting (PAB175) onwards.

We have now started working closely with PAPs to understand the root causes of poor performance against these risks. Because of some of our discussions, we now recommend focusing EFR on Meter Operator Agents (MOAs) who perform poorly against SR0022 initially.

Investigating cases for EFR and working with PAPs on EFR plans for these risks has not been straightforward. This is because the PARMS data we receive provides numbers of MTDs resubmitted (in the case of SR0022), or MTDs not received from an MOA (in the case of SR0024 and SR0025). It does not provide Metering System Identifier (MSID)

[19] The risk that HHMOAs do not provide the correct Meter Technical Details to the HHDCs resulting in Meter readings being misinterpreted or not collected.
[20] The risk that NHHMOAs do not provide Meter Technical Details to the correct NHHDCs resulting in Meter readings not being collected.
[21] The risk that HHMOAs do not provide Meter Technical Details to the correct HHDCs resulting in Meter readings not being collected.

level data so the PAPs need to contact the reporting agents to obtain this data before they can begin investigating the issue.

PAPs have also stated that, in relation to SR0024 and SR0025, the MTDs reported are often either:

- Misreported by the reporting agent (where, for example, the MTDs are missing as part of a Change of Measurement Class (CoMC) activity for an MSID when they should not be); or
- That the reporting is accurate but the issue is not preventing the MSID from being settled. Examples of this include:
  - where the MOA does not hold the MTD (as the previous MOA did not pass it on) but the DC has always held the MTD; or
  - where the MOA that has not passed on the MTDs to the DC was only appointed to the site for a short period of time before the appointment returned to the previous MOA. In this instance, it is highly unlikely that the Metering System changed in that time, meaning that both the current MOA and DC hold the correct MTDs.

Getting a true picture of the data and the issues is taking considerable time for both ELEXON and PAP's. There is a frustration expressed by some PAPs, that time and resource is being spent on investigations that are not causing current Settlement issues.

ELEXON explored the PARMS reporting for SR0024 and SR0025 further with PAPs at the P272 industry day and is considering what changes could be made to improve the process of investigating data for these Settlement Risks.

The breakdown of EFR plans for SR0022, SR0024 and SR0025 is shown below.

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

During 2015/16, the PAB put one EFR plan in place. One plan was on-going prior to 2015/16. One plan was closed during the period.

	Number of plans	Number closed during period	Number ongoing after the period ended.
EFR turned on before APAR period and open during the period	1	1	0
EFR turned on during the APAR period	1	0	1
Total:	2	1	1

Table 6: SR0022 EFR plans.

SR0024: The risk that NHHMOAs do not provide Meter Technical Details to the correct NHHDCs resulting in Meter readings not being collected.

The PAB put in place 3 EFR plans to address issues related to SR0024 during 2015/16. These remained open at the end of period.

	Number of plans	Number closed during period	Number ongoing after the period ended.
EFR turned on before APAR period and open during the period	0	0	0
EFR turned on during the APAR period	3	0	3
Total:	3	0	3

Table 7: SR0024 EFR plans.

SR0025 The risk that HHMOAs do not provide Meter Technical Details to the correct HHDCs resulting in Meter readings not being collected.

The PAB put one EFR plan in place to address issues with SR0025 during 2015/16. The plan remained in place at the end of the period.

	Number of plans	Number closed during period	Number ongoing after the period ended.
EFR turned on before APAR period and open during the period	0	0	0
EFR turned on during the APAR period	1	0	1
Total:	1	0	1

Table 8: SR0025 EFR plans.

SR0028: The risk that Half Hourly Meter Operator Agents (HHMOAs) make changes to the Metering System and do not inform the Half Hourly Data Collectors (HHDCs) resulting in Meter readings being misinterpreted or not collected.

During 2015/16 one pre-exiting EFR plan was in place for Settlement Risk SR0028. The PAB closed the plan during the period.

	Number of plans	Number closed during period	Number ongoing after the period ended.
EFR turned on before APAR period and open during the period	1	1	0
EFR turned on during the APAR period	0	0	0
Total:	1	1	0

Table 9: SR0028 EFR plans.

SR0072: The risk that Non Half Hourly Data Collectors (NHHDCs) process incorrect Meter Readings, resulting in erroneous data being entered into Settlement.

There has been a significant increase in EFR plans being required to address erroneous Estimated Annual Consumption/Annualised Advance instances between 1 April 2015 and 31 March 2016. Whilst one root cause related to errors created by the system of one large Supplier, the other plans focus on putting adequate processes in place to investigate and resolve the instances in order of size and, in particular, liaising with other Suppliers when errors are identified during or caused by the Change of Supplier process.

The PAB put seven EFR plans in place during 2015/16 and closed two plans.

	Number of plans	Number closed during period	Number ongoing after the period ended.
EFR turned on before APAR period and open during the period	0	0	0
EFR turned on during the APAR period	7	2	5
Total:	7	2	5

Table 10. SR0072 EFR plans.

SR0074: The risk that Non Half Hourly Data Collectors (NHHDCs) do not collect and/or enter valid Meter Readings resulting in old/default data entering Settlement.

The EFR plans that are in place to deal with Settlement Risk SR0074 focus on Suppliers setting out the root causes for not settling 97% of their Non Half Hourly energy on Annualised Advances by the Final Reconciliation Run and putting in place actions to address the root causes.

Issues within the plans often relate to obtaining reads through pedestrian site visits, customer own reads or automated collections and errors or problems that can occur when processing the reads.

Some Suppliers have highlighted that shorter contract periods with a customer can result in it being harder to obtain and process Annualised Advances.

The PAB put six EFR plans in place during 2015/16. Nine plans were pre-existing. Three pre-existing EFR plans were closed and one plan put in place in 2015/16 was closed during the period.

	Number of plans	Number closed during period	Number ongoing after the period ended.
EFR turned on before APAR period and open during the period	9	2	7
EFR turned on during the APAR period	6	1	5
Total:	15	3	12

Table 11: SR0074 EFR plans.

SR0081: The risk that Half Hourly Data Collectors (HHDCs) do not process valid HH readings resulting in estimated data being entered into Settlement.

The EFR plans that are in place to deal with Settlement Risk SR0081 focus on Suppliers setting out the root causes for not settling 99% of their Half Hourly energy on Actual Advances by the Initial Settlement Run and putting in place actions to address the root causes.

The issues here are often caused by addressing Meter faults at very large customer sites and with issues collecting hand held data at sites where communications with the Meter are not in place. The EFR plans look to put in place actions to address these issues.

The PAB put seven EFR plans in place during 2015/16. None were closed during the period.

	Number of plans	Number closed during period	Number ongoing after the period ended.
EFR turned on before APAR period and open during the period	0	0	0
EFR turned on during the APAR period	7	0	7
Total:	7	0	7

Table 12: SR0081 EFR plans.

EFR Plans against PARMS Reporting Non-Compliances

Ten EFR plans were in place during 2015/16 due to issues ELEXON identified during a TAPAP check investigating PAPs' compliance with PARMS reporting (undertaken in 2014/15). The PAB closed nine plans during 2015/16.

The PAB closed nine of ten pre-existing EFR plans during 2015/16. No new plans were put in place during 2015/16.

	Number of plans	Number closed during period	Number ongoing after the period ended.
EFR turned on before APAR period and open during the period	10	9	1
EFR turned on during the APAR period	0	0	0
Total:	10	9	1

Table 13: PARMS Technical Assurance check EFR plans.

EFR Plans against P283 Commissioning Non-Compliances

EFR was used to address non-compliances identified during the TAPAP check on the P283 Commissioning process. Further details of this check are provided in the section on Technical Assurance of Performance Assurance Parties, p.33.

The PAB put 16 EFR plans in place during 2015/16, none of which were closed during the period.

	Number of plans	Number closed during period	Number ongoing after the period ended.
EFR turned on before APAR period and open during the period	0	0	0
EFR turned on during the APAR period	16	0	16
Total:	16	0	16

Table 14: P283 Technical Assurance check EFR plans.

EFR Plans against Non Compliances Identified Through Supplier Migration Monitoring

We used EFR for Parties not complying with the requirements for the migration of Profile Class 5-8 Metering Systems to HH Settlement.

EFR was applied where:

- Suppliers had not submitted a Supplier Migration Plan (SMP) within the required timescales;

- Suppliers were off track with their planned migration activities by 5% of the intended monthly migration or 20 MSIDs, whichever is the higher; or
- The Supplier Volume Allocation registration data ELEXON monitors is significantly different to that reported by the Supplier in its Supplier Migration Plan and a satisfactory explanation is not given.

The PAB put six EFR plans in place during 2015/16 and closed five.

	Number of plans	Number closed during period	Number ongoing after the period ended.
EFR turned on before APAR period and open during the period	0	0	0
EFR turned on during the APAR period	6	5	1
Total:	6	5	1

Table 15: Migration non-compliance EFR plans.

EFR Plans for Issues Detected by the BSC Auditor

The PAB put in place 30 EFR plans to address high and medium rated issues identified during the 2014/15 BSC Audit.

We have now received the findings from the 2015-2016 BSC Audit, and EFR has been switched off where an issue has reduced to a lower issue/management letter point or if it has been closed.

	Number of plans	Number closed during period	Number ongoing after the period ended.
Total:	30	24	6

Table 16: Audit issues EFR plans.

Please note that in addition to the six ongoing plans from issues identified during the 2015-2016 BSC Audit we also have 16 new medium and higher issues that we will address using the EFR technique during 2016/17.

Material Error Monitoring (MEM)

The MEM process is a detective technique that complements the Balancing and Settlement Code (BSC) Audit, Technical Assurance and Trading Disputes processes.

We use the MEM process to analyse Settlement data and supplementary data to estimate and track identified material errors. We can model and communicate the impact of identified Settlement Errors to the Performance Assurance Board and/or Trading Disputes Committee to help them make decisions. It also enables us to provide estimated error contribution to customers confidentially so they can monitor their progress in resolving errors.

We currently use MEM to monitor Settlement Risk 0072: 'The risk that NHHDCs process incorrect Meter Readings, resulting in erroneous data being entered into Settlement'. We provide further information on SR0072 in the section entitled 'Top Supplier Volume Allocation Settlement Risks 2015/16 Performance', p.11.

Peer Comparison

Peer Comparison is an incentive technique designed to encourage performance improvement and compliance with the BSC. We publicise named Peer Comparison data on the BSC website. We send a copy to all participants who appear on the graphs.

There is recognition that Supplier Agents heavily impact overall Settlement performance and there are concerns that the Supplier Hub principle does not provide sufficient incentives to drive improvement. During 2014/15, we introduced two tables for peer comparison of Meter Operator Agents (MOAs) performance against SR0024/25. The Performance Assurance Board (PAB) monitors these confidential tables. MOAs are able to monitor their performance within industry. The PAB may consider Supplier Agents that consistently underperform for the Error and Failure Resolution process.

Performance Monitoring and Reporting

Performance Monitoring and Reporting is a detective technique in ELEXON's Performance Assurance Framework. It complements other techniques (such as Error and Failure Resolution, Peer Comparison and Supplier Charges) through providing quantitative data designed to identify performance at certain points in the Settlement processes.

We define performance requirements within the Performance Assurance Reporting and Monitoring System (PARMS) Serials. Each Serial defines an area or process for performance measurement and sets out the Standards that we require Parties and Party Agents to submit in order to monitor performance levels within the process. We provide full details on the PARMS Serials in the PARMS Guidance Note.

Qualification, Re-Qualification and Removal of Qualification

Supplier Volume Allocation Qualification & Re-Qualification are preventative techniques to ensure that new entrants to the market are compliant with the BSC arrangements and existing agents remain compliant when making major changes.

Removal of Qualification is an incentive technique that allows the Performance Assurance Board (PAB) to remove the qualifications of Party Agents based on historic poor performance and non-compliance with the BSC.

During 2015/16, the PAB considered and approved 83 role-specific applications. The majority of Supplier Qualifications were by consultancies - 56 applications can be attributed to off-the-shelf Suppliers.

Role	Qual. 2014/15	Re-Qual. 2014/15	Qual. 2015/16	Re-Qual. 2015/16
Non Half Hourly Data Aggregator (NHHDA)	0	0	0	0
Non Half Hourly Data Collector (NHHDC)	0	0	0	0
Half Hourly Data Aggregator (HHDA)	0	0	0	1
Half Hourly Data Collector (HHDC)	0	2	0	1
SMRA	1	0	1	0
Half Hourly Meter Operator Agent (HHMOA)	0	0	9	0
Non Half Hourly Meter Operator Agent (NHHMOA)	1	2	8	0
Central Volume Allocation Meter Operator Agent (CVAMOA)	0	0	0	0
Meter Administrator (MA)	0	1	0	0
Supplier (HH/NHH)	16	0	62	0
Unmetered Supplies Operator (UMSO)	1	0	1	0
Total	**19**	**5**	**81**	**2**

Table 17: Qual. /re-Qual. approved in 2014/15 and 2015/16

Supplier Charges

Supplier Charges is a remedial technique that provides a mechanism for applying liquidated damages to Suppliers failing to meet applicable performance levels set out in the BSC. The charges compensate Parties disadvantaged by

those who are unable to meet the defined Standards. Supplier Charges are subject to a national monthly cap. We calculate the cap across the 14 Grid Supply Point (GSP) Groups by its relative annual consumption compared to its total annual consumption for the previous year. We use the Retail Price Index to calculate the revised figures for both the national monthly cap and the individual Supplier cap. There has been an increase in the number of Suppliers entering the market in 2015/16 and that has contributed to some of the increase in the Supplier Charges figure.

The total Uncapped Supplier Charges for 2015/16 was £18,709,483 compared to £8,942,533 in 2014/15. The total Capped Supplier Charges for the year was £6,245,998 compared to £4,352,102 in 2014/15.

Technical Assurance of Metering (TAM)

Technical Assurance of Metering (TAM)

The TAM technique is a detective technique used to provide assurance that Half Hourly Metering Systems (HHMS) are installed and recording consumption accurately. ELEXON contracts a Technical Assurance Agent (TAA) to facilitate the TAM technique.

The TAA presented its annual report for 2015/16 to the Performance Assurance Board (PAB) in May 2016 and to the Balancing and Settlement Code (BSC) Panel in July 2016. We summarise the main findings in ELEXON's 'response to the TAA annual report'.

During the 2015-2016 audit year, the TAA audited a total of 1,583 SVA Metering Systems. The audit is broken down into the following:

- Supplier Volume Allocation (SVA) HHMS where the site is mandatory Half Hourly metered[22]:
  - Total Visits – 1,465:
  - Main Sample[23] – 1,343
  - Specific Sample[24] – 120
  - Targeted[25] – 2
- Central Volume Allocation (CVA) Half Hourly Metering Systems:
  - Total Visits – 118:
  - Main[26] - 117
  - Targeted[27] -1

ELEXON's Response to the Technical Assurance Agent's Annual Report

SVA non-compliances currently affecting the quality of data for Settlement purposes

This year the TAA recorded 20 non-compliances currently affecting Settlement. This compares to 25 for the previous audit year. The reduction can be attributed to a reduced number of major timing issues, which fell from 12 last year to eight this year. The TAA also recorded a reduction in instances of malfunctioning Metering Equipment from previous years.

[22] Measurement Class C.
[23] In total approximately 1% of the SVA Metering System population.
[24] A sample of Metering Systems installed post November 2014 to check whether Commissioning was carried out and whether documentation was available.
[25] Where a non-compliance is suspected.
[26] In total approximately 14.75% of the CVA Metering System population.
[27] Where a non-compliance is suspected.

The TAA reported an increase in occurrences of Metering arrangements that are not reflective of Current Transformer (CT) ratios. The chart below shows the volume of Settlement impacting non-compliances identified by the TAA over the last three audit years.

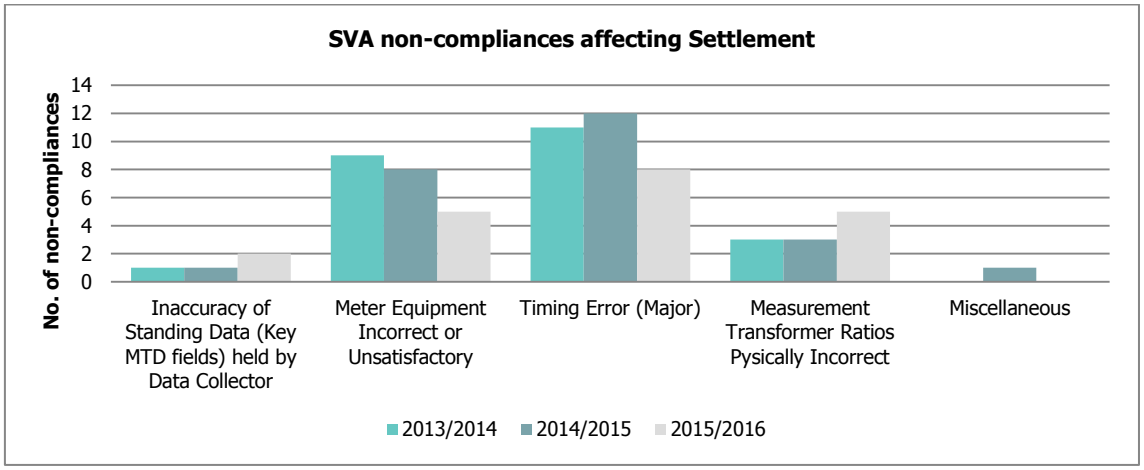


Chart 9: SVA non-compliances affecting Settlement

SVA non-compliances potentially affecting the quality of data for Settlement purposes

The average number of non-compliances raised with the potential to affect Settlement shows no decrease and remains similar to previous years. 84% of these non-compliances were related to missing or incomplete certificates, or Commissioning issues. This coincides with the increases in non-compliances related to physically incorrect measurement transformer ratios. The chart below shows the volume of non-compliances identified by the TAA with the potential to affect Settlement over the last three audit years.

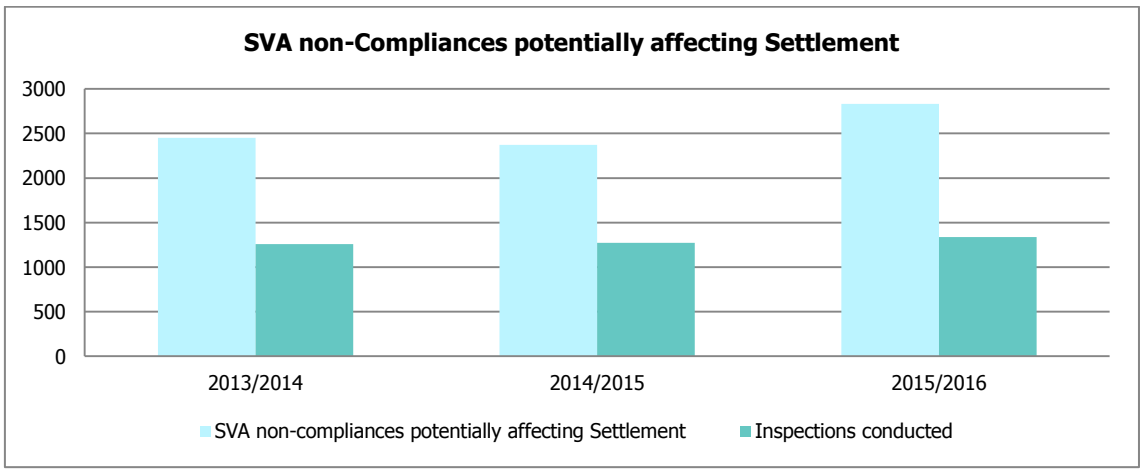


Chart 10: SVA non-compliances potentially impacting Settlement

SVA Specific Sample

The TAA conducted a Specific Sample in 2015/16 to review the impact of the P283[28] modification since its implementation in November 2014. The TAA audited 108 HHMS from the Specific Sample list of Meter Point Administration Numbers (MPANs) provided by ELEXON.

[28] Reinforcing the Commissioning of Metering Equipment Processes.

Of the 108 HHMS audited (where access could be gained), 81 HHMS (75%) had a non-compliance identified for missing, incomplete or incorrect Commissioning records.

The Specific Sample also identified four HHMS with Settlement impacting non-compliances. Three HHMS audited were determined as being energised with meters failing to record data due to a combination of shorted out CTs and/or isolated potential fuses. One additional HHMS was found to have an incorrect CT ratio applied.

All of the Settlement impacting non-compliances raised had associated non-compliances linked to lack of or incomplete Commissioning records.

CVA non-compliances currently affecting the quality of data for Settlement purposes

The TAA reported two Settlement impacting non-compliances. These were a result of outstation time drift and incorrect Meter registration. The time drift occurred due to a reported communications failure and was resolved by installing a new outstation.

There have been nine Settlement impacting non-compliances in the CVA market since 2007. Although the annual numbers are low, the TAA note a small increase in the numbers in more recent audit years. There appears to be no specific root cause for the increase.

CVA non-compliances potentially affecting the quality of data for Settlement purposes

The number of non-compliances with the potential to impact Settlement was less than 300 in the CVA market this year (compared to 376 last year). Improvements have been attributed to reductions in Commissioning and calibration certificate related non-compliances (55 this year compared to 76 last year).

We have noted a steady reduction in certificate related non-compliances over the past three audit years, which is a very positive trend.

A contributing factor to this improvement is National Grid's implementation of a Meter replacement programme making this information more readily accessible.

Key Issues:

Commissioning and Commissioning Records

SVA Market

The TAA, continue to report serious concerns about industry experience in regards to the Commissioning process and the provision of Commissioning records. This year over 70% of the SVA HHMS inspected had no or incomplete Commissioning records. The TAA noted that all Settlement impacting non-compliances raised in the SVA market also attracted Commissioning non-compliances. This suggests that if thorough Commissioning procedures had been followed, the non-compliances could have been avoided.

We note a 4% increase in non-compliances related to Commissioning records from 68% of sites visited in 2014/15 to 72% of sites visited in 2015/16.

CVA Market

We recognise that retrieving Commissioning records for early CVA installations is difficult. There was no requirement prior to Code of Practice (CoP) 4 (pre June 1993) to retain this documentation.

The TAA have worked with ELEXON to develop a process guide that will help Parties to provide evidence to assure correct Metering Equipment setup in the absence of Commissioning records. This development has already brought positive results by resolving 67 outstanding non-compliances via the TAA query process and a further 82 utilising the rectification plan procedure.

Actions:

Having reviewed the findings of the TAA on Commissioning in the 2015/16 audit year, ELEXON has made five recommendations:

1. **Specific Sample**

ELEXON is happy for the TAA to continue to monitor non-compliances related to Commissioning records. Should a second Specific Sample be required, the TAA will audit a selection of SVA HHMS commissioned post November 2014 in the 2017/18 audit year.

2. **Potential Change to the Technical Assurance Agent Management Tool (TAAMT)**

At the February PAB (PAB 181), ELEXON presented the potential benefits and associated cost of splitting Commissioning records non-compliances between Half Hourly Meter Operator Agents (HHMOAs) and Licenced Distribution System Operator (LDSOs). ELEXON will engage with LDSOs on how the changes can be shaped and implemented to achieve the desired outcome. ELEXON will provide an update on this to the PAB at a future meeting.

3. **P283 Technical Assurance of Performance Assurance Parties (TAPAP) Checks**

ELEXON completed the P283 TAPAP checks between September and December 2015. ELEXON found 14 LDSOs, one Independent Distribution Network Owner (IDNO), six HHMOAs and two Suppliers to be non-compliant against P283. We continue to monitor EFR plans from the non-compliant PAPs to ensure Parties carry out Commissioning correctly.

As an extension to the original checks, we have audited a further four IDNOs and six HHMOAs. The findings of these checks will be presented to the PAB at a future meeting.

4. **Timescales to be introduced to P283**

ELEXON has raised a Change Proposal (CP) 1458 to introduce timescales in relation to activities performed during the Commissioning process and the communications obligations introduced under P283. The proposed timescales relate to the LDSO, MOA and Supplier activities and only apply to the SVA market and CT operated Metering Systems. ELEXON will present consultation responses to the Supplier Volume Allocation Group at the September 2016 meeting with a view to implement the changes in November 2016.

5. **Specific Sample on Possible Incorrect CT Ratios**

A common type of non-compliance, which would indicate a site had been commissioned incorrectly, is that of measurement transformers being physically incorrect. During the 2015/16 audit the TAA reported an increase in this type of non-compliance.

The TAA are carrying out a Specific Sample of 100 sites where the CT selected is non-standard according to the Meter Technical Details and therefore more likely to be incorrect.

ELEXON will present the findings of the specific sample to the PAB at a future meeting.

Measurement Transformer Calibration Certificates

Each Metering CoP requires that calibration certificates should be made available to the TAA for audit. Furthermore, in some cases it may be necessary to compensate the Settlement Meter to account for equipment error in order to achieve or improve system overall accuracy. This evidence appears to be no longer readily available to the TAA auditor due to the age of many Half Hourly installations. Without a change in the process for managing and maintaining this information, the TAA predict an increase in non-compliances associated to measurement transformer calibration.

Work with the Technical Assurance of Metering Expert Group (TAMEG) has indicated that MOAs involved with SVA registered Metering Equipment will no longer be compensating meters for individual error but will rely on achieving

overall accuracy by Metering Equipment class, improved Meter errors and where possible the National Measurement Transformer Error Statement (NMTES).

This would imply that non-provision of calibration certificates present a low risk where Metering Equipment is Class CoP compliant.

If our assumptions are correct, even though we will continue to reference NMTES, non-compliance will continue to increase in the absence of any certificates.

Actions:

The TAMEG will continue analysis into the NMTES with a view to proposing a solution to PAB at a future meeting.

Additional TAM Actions for 2015/16

LDSO Attendance at Audits

During the 2015/16 audit year, we issued a letter to Registrants regarding their responsibility to comply with BSCP27 'Technical Assurance of Half Hourly Metering Systems for Settlement Purposes' in affording access to all Metering Equipment including High Voltage (HV) systems.

We recommended that a change be made to the Technical Assurance Agent Management Tool (TAAMT) that will provide greater granularity into the reporting of remote rating plates and issues with access. This change was implemented during the 2015/16 audit year, and has allowed the TAA to record site visits as being "incomplete".

No Access

Throughout the year the TAA visit a number of HHMS where due to varying circumstances they are unable to access the Metering Equipment to complete a TAA inspection.

The process for dealing with 'no access', was changed at the beginning of the 2014/15 audit year. We now send a monthly letter to Registrants letting them know their 'no access' percentage for the month against how many planned inspections they had e.g. 10 planned visits and 1 no access visit equals a no access percentage of 10%.

Our recommendation is to continue this process during the 2016/17 audit year.

Technical Assurance of Performance Assurance Parties

The aim of the Technical Assurance of Performance Assurance Parties (TAPAP) technique is to detect where parties are not meeting the Balancing and Settlement Code (BSC) obligations and to identify any weaknesses in the BSC processes (and other processes as appropriate).

We target Technical Assurance (TA) checks at key market performance and risk areas on an annual basis. The Performance Assurance Board (PAB) approves the checks. We design the TAPAP scope of work to address market issues, including those identified by other PATs such as:

- Error and Failure Resolution (BSCP538);
- Supplier Volume Allocation (SVA) Qualification (BSCP537);
- Technical Assurance of Half Hourly (HH) Metering Systems (BSCP27);
- Performance Assurance Reporting and Monitoring System (PARMS) Techniques (BSCP534); and
- The BSC Audit (BSC Section H).

The scope of work can also cover:

- Gap areas – BSC requirements where minimal assurance is gained by the other Performance Assurance Techniques (PATs) e.g. Disaster recovery arrangements and change control procedures;

- Recently introduced requirements – Any new obligations introduced under the BSC change process may be included within the scope of work for TAPAP to ensure parties fulfil these additional obligations; and
- Market issues – Compliance issues identified by ELEXON, the BSC Auditor, or other Performance Assurance Parties (PAPs) can be included in the scope of work for TAPAP for relevant groups of PAPs.

We publish the scope of work on the TAPAP webpage. The PAB can approve within-period revisions to the scope if necessary based on the output of other PATs.

TAPAP for 2015/16

The scope for 2015/16 was to perform Technical Assurance (TA) checks in line with the P283 Commissioning process.

After the results for the 2014/15 check, the PAB agreed that this needed further investigation. The check in 2014/15 was a general health check on the implementation of P283. To identify any breakdown in the process at an early stage. The check for 2015/16 was a more detailed investigation of the respective responsibilities of each Party/Agent. We focused on each step of the P283 Commissioning process and where a failure to act was found, a non-compliance was assigned against that part of the process and the relevant section of the BSC or Code Subsidiary Document (CSD).

In September-November 2015 we audited:

- Six Half Hourly (HH) Meter Operator Agents (MOAs) with new appointments for HH measurement class C Metering Systems energised on or after 6 November 2014;
- 15 system operators (comprising 14 Licensed Distributions System Operators (LDSOs) and one Independent Distribution Network Operators (IDNOs)) with new equipment installed for HH measurement class C Metering Systems on or after 6 November 2014; and
- Two Suppliers with at least 30 new appointments for HH measurement class C Metering Systems energised on or after 6 November 2014.

The most important elements for the efficient working of the P283 Commissioning process are as follows:

- There must be a well-defined, formalised and agreed process for the Commissioning of Metering Systems;
- There must be good communication between the parties involved;
- There must be good quality information in the investigation of a gap in the Commissioning process;
- There must be adequate expertise to investigate;
- There must be good quality information coming out of the result of the investigation; and
- Involved Parties will be communicated the outcome of the investigation.

Through our review of this process we found specific non-compliances against individual role types. We published the full report on the BSC Website following its presentation to the PAB in December 2015.

What did we find?

The main gap areas or weaknesses in the process highlighted by the checks were;

- Lack of Commissioning or long delays in performing Commissioning by System Operators (LDSO/IDNOs) and MOAs;
- Continued difficulties in communication between System Operators, MOAs and Suppliers;
- Bespoke contractual and internal process arrangements meaning that the process is still not consistent across the industry;

- A clear need for timescales for the P283 process;
- Missing manufacturers Current Transformer (CT) and Voltage Transformer (VT) Calibration Certificates are still an issue;
- Inconsistent Commissioning records across industry from LDSOs; and
- We have observed that the teams that deal with this process are quite small (2-3 full time equivalent (FTE) generally) so there is still a large backlog for many Parties and Party Agents.

Next Steps

There are a number of steps taken to address issues around P283 as outlined below:

- A further set of checks on the remaining MOA and IDNOs, (details at the end of this section).
- P283 Commissioning process is now in scope for the BSC Audit from 2016/17.
- Improving the HH Commissioning process
  - Introduction of timescales for request/receipt of Commissioning information into BSC documentation (in progress, CP1458, implementation date 3 November 2016);
  - Introduction of a new data flow to communicate Commissioning information between MOA, LDSO & Supplier businesses, (in progress);
  - Technical Assurance Agent (TAA) specific sample checks on P283 qualified sites. This will provide both an on-site view of these sites as well as the back office processes investigated in the TAPAP check, (completed in early 2015); and
  - Non-compliant candidates were subjected to the Error and Failure Resolution (EFR) Performance Assurance Technique as a result of this check, (in progress).
- Education
  - ELEXON P283 education day (February 2016).
  - A further education day for the introduction of timescales, (pending CP1458 implementation, 3 November 2016).
  - Introduction of a standard Commissioning forms and support to LDSOs, (in progress, June 2016).
  - ELEXON providing assistance with training requirements where necessary.

All Parties/agents that were audited in September – November 2015 were found to be non-compliant so the Performance Assurance Board (PAB) agreed that further checks are done on the remaining Parties/agents that are responsible for performing P283 Commissioning obligations.

We audited:

- Six HH Meter Operator Agents (MOAs) with new appointments for HH measurement class C Metering Systems energised on or after 6 November 2014; and
- Four system operators (Independent Distribution Network Operators (IDNOs)) with new equipment installed for HH measurement class C Metering Systems on or after 6 November 2014.

These additional checks are an extension of the 2014/15 P283 Commissioning check but we carried out the work in April and May 2016. We reported the findings to the PAB in July 2016.

Trading Disputes

The overall number of Trading Disputes raised during 2015/16 was 40 compared to 79 in 2014/15. Of the 40 Trading Disputes raised, 36 related to Supplier Volume Allocation (SVA) sites and three related to Central Volume Allocation (CVA) sites. One dispute was related to the introduction of two new pricing parameters, De-rated Margin and Loss of Load Probability. The Trading Disputes Committee (TDC) upheld 34 disputes for rectification compared to 39 in 2014/15.

Materiality

The total materiality of upheld trading Disputes was £20.7m. Chart 11 below shows materiality in 2015/16 compared to 2014/15 and 2013/14. The materiality of SVA disputes was estimated at £20.35m, and the materiality of CVA disputes equated to approximately £350k.The TDC upheld three Trading Disputes with a combined value of £19m. The largest was a Settlement Error by a single Half Hourly Data Aggregator (HHDA), which submitted erroneous data to the Supplier Volume Allocation Agent (SVAA). The materiality of this Trading Dispute was £14m. The other two Trading Disputes were due to erroneously large Estimated Annual Consumption/Annualised Advance consumption values being entered into Settlement following the implementation of a new computer system by a single Market Participant. The combined materiality of these two Trading Disputes was £5m.

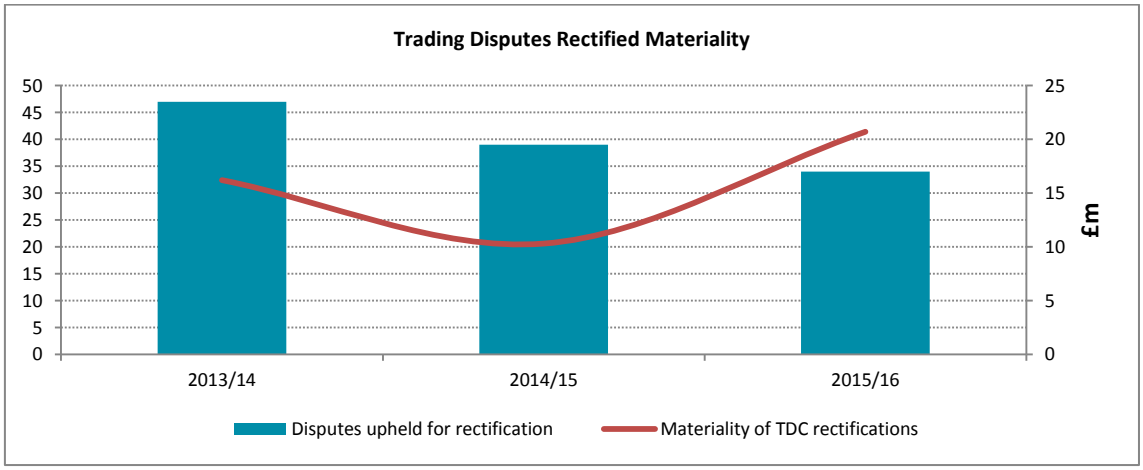


Chart 11: Trading Disputes rectified materiality since 2013/14

Root causes

The root causes of the 34 Trading Disputes upheld included Current Transformer (CT) and Voltage Transformer (VT) issues, data estimation and aggregation, phase failures, incorrect Meter Technical Details (MTD), faulty Metering Systems and a National Grid data issue. Five Trading Disputes were related to the implementation of changes to the BSC in November. One of these was due to a system issue introduced by a HHDA. The remaining four related to validation errors arising from the introduction of new Measurement Classes to support HH Distribution Connection and Use of System Agreement (DCUSA) Tariff Changes.

COST OF DELIVERING THE RISK BASED PERFORMANCE ASSURANCE FRAMEWORK

The cost of delivering the Performance Assurance Framework (PAF) from April 2013 is set out in the table below.

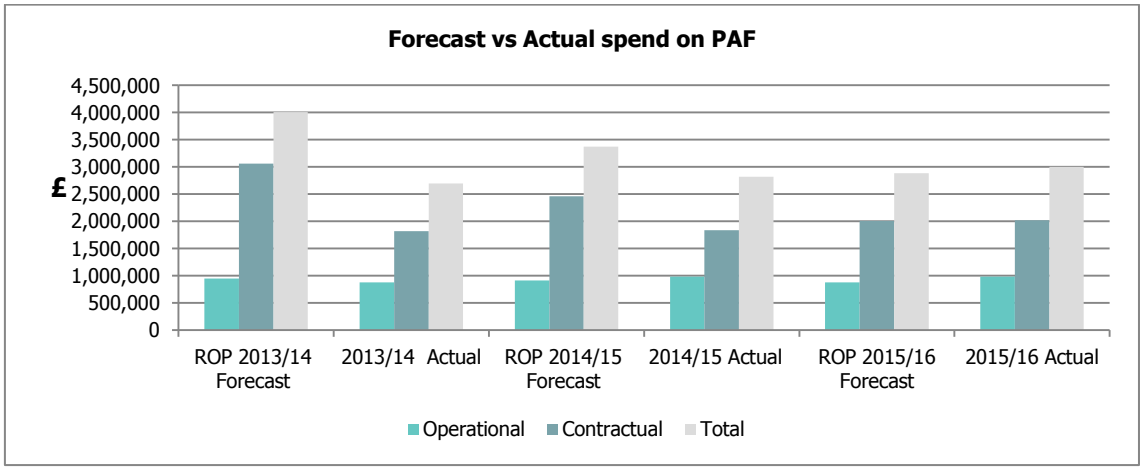


Chart 12: Cost of Delivering PAF

Total Costs

Total actual spend in 2015/16 ~£114k higher than forecast for the Risk Operating Plan (ROP) 2015/16. We provide further details below.

Operational Costs

The operational costs show an increase in expenditure of ~£104k from the ROP 2015/16 forecast. This is because we have included input from Change Management, Market Design and Analysis and Service Management to provide greater clarity on expenditure on Performance Assurance. We forecast the number of staff contributing to PAF activities to be 28 in the ROP 2015/16 whereas actual number of staff contributing to PAF activities in 2015/16 was 32 (or 2.8 Band A FTEs).

Contracted Costs

The contracted costs cover outsourced provision of the following:

- Annual Balancing and Settlement Code (BSC) Audit;
- Delivery of the Technical Assurance of Metering (TAM) by the Technical Assurance Agent (TAA);
- The Qualification Service;
- Support and maintenance for the ATLAS database; and
- Support and maintenance of the Performance Assurance Reporting and Monitoring System software.

The difference between ROP forecasted contractual spend for 2015/16 and actual contractual spend is ~£10k predominantly due to the following:

- The actual spend for the BSC Operational Audit in 2015/16 was ~£66k less than forecast. This is largely due to the 5% contingency not being spent;
- The actual spend for the TAM in 2015/16 was ~59k more than forecast. This is largely due to additional Central Volume Allocation site visits undertaken:
- The actual spend for Qualification and Re-Qualification was ~£25k more than forecast. This is demand led expenditure and reflects more Parties going through Qualification and/or re-Qualification than anticipated; and

- An additional ~£7k not was required on database and system maintenance and meeting attendance. This is a combination of demand led and ad hoc expenditure.

PERFORMANCE ASSURANCE BOARD STRATEGY AND FUTURE CONSIDERATIONS

In addition to the work discussed above we undertook significant amount of work on:

- Change of Measurement Class processes;
- Mandatory Half Hourly Settlement for Profile Classes 5-8; and
- Electricity Balancing Significant Code Review.

During 2016/17 our key focus will be on:

- Business Unit Settlement Risk Rating review;
- Performance Assurance Framework review;
- Competition and Markets Authority review/Introducing zonal transmission losses; and
- Aligning the Balancing and Settlement Code with the European Balancing Project requirements.

We discuss these work streams in more detail below.

Change of Measurement Class (CoMC) risk review

At the October 2015 Performance Assurance Board (PAB) meeting (PAB177), the PAB asked ELEXON to review the Risk Evaluation Register (RER) in relation to CoMC risks.

Our review highlighted the following:

- The potential for amendments to four of the CoMC related risks to make them more clearly inclusive of CoMC events; and
- The potential for three new risks.

The PAB endorsed the changes in March 2016 (PAB182/06).

Mandatory Half Hourly Settlement for Profile Classes 5-8

Supplier Monthly Updates

As part of Modification P322[29] (approved on 24 June 2015), Suppliers were required to submit Supplier Migration Plans (SMPs) by 31 August 2015, for approval by the PAB on 24 September 2015. Suppliers are also required to provide monthly updates, detailing progress against their approved SMP as they migrate Advanced Meters in Profile Classes (PC) 5-8 to Half Hourly (HH) Settlement, from 5 November 2015 to 1 April 2017. Suppliers are also obligated to submit a revised SMP if they become aware that their approved SMP no longer reflects their expected migration pattern.

Cumulative actual migration was ahead of planned migration by 0.80% in March 2016. We believe this was due to two main activities, the first was in February 2016, which we believe was a result of Suppliers migrating MPANs ahead of April contract rounds in order to help smooth the process and secondly, Suppliers are conducting greater volumes of additional CoMC than originally planned.

We publish monthly Supplier migration updates on the BSC Website along with other public PAB papers.

[29] Revised Implementation Arrangements for Mandatory Half Hourly Settlement for Profile Classes 5-8

Electricity Balancing Significant Code Review

In August 2012, Ofgem launched its Electricity Balancing Significant Code Review to look at imbalance prices, in order to address long-standing concerns that it had raised in 2010 within its Project Discovery report. In particular, Ofgem expressed concerns that imbalance prices are not creating the correct signals for the market to balance, which could undermine efficiency in balancing and security of supply.

P305 'Electricity Balancing Significant Code Review Developments' was raised to implement changes to support the review's conclusions ahead of winter 2015/16 and proposed:

- A reduction in the Price Average Reference (PAR) and Replacement PAR (RPAR) values to better reflect the marginal cost of balancing energy for a given Settlement Period;
- A single imbalance price using the existing Main Price calculation;
- Introduction of a Reserve Scarcity Price (RSP) function for Short Term Operating Reserve (STOR) actions to better reflect the prevailing scarcity in the market at the time of their use; and
- Introduction of Demand Control actions into the imbalance price, priced at the Value of Lost Load (VoLL), and an imbalance volume correction process to amend participants' positions to account for such actions.

The Authority approved the P305 Proposed Modification on 2 April 2015 for implementation on 5 November 2015 as part of the November 2015 Release. The Modification places significant new obligations on BSC Parties and Party Agents. As a result of the changes made to the Code Subsidiary Documents (CSDs) to support this Modification we proposed 12 new risks, six CVA and six SVA. We published our proposals as Within Period Revisions to the RER 2016/17 alongside the RER 2017/18 consultation. The response deadline to the consultation was 22 July 2016.

Business Unit Settlement Risk rating (BUSRR) review

The last full BUSRR review was carried out in in March 2012. Following discussions with a number of Suppliers and agents it has become clear that the current BUSRR criteria for a number of the tops Settlement Risks do not accurately reflect the risk versus compliance and as such do not fully reflect the risks a Party's poor performance may pose to Settlement.

Our initial view is that we need to consider amending the BUSRR criteria for five of the seven top Settlement Risks (SR). We took our initial analysis to PAB in April 2016. It agreed with our recommendations to review (in detail) the five Settlement Risks outlined below:

SR0022: The risk that Half Hourly Data Collectors (HHDCs) do not use the correct Meter Technical Details (MTDs) resulting in Meter readings being misinterpreted or not collected

SR0028: The risk that Half Hourly Meter Operator Agents (HHMOAs) make changes to the Metering System and do not inform the Half Hourly Data Collectors (HHDCs) resulting in Meter readings being misinterpreted or not collected

SR0072: The risk that NHHDCs process incorrect Meter readings, resulting in erroneous data being entered into Settlement.

SR0074: The risk that NHHDCs do not collect and/or enter valid Meter readings resulting in old/default data entering Settlement.

SR0081: The risk that HHDCs do not collect and/or enter valid Meter readings resulting in old/default data entering Settlement.

We do not intend to amend the BUSRR criteria at this stage for the following risks:

SR0024: The risk that Non Half Hourly Meter Operator Agents (NHHMOAs) do not provide Meter Technical Details (MTDs) to the correct Non Half Hourly Data Collectors (NHHDCs) resulting in Meter readings being not collected

SR0025: The risk that Half Hourly Meter Operator Agents (HHMOAs) do not provide Meter Technical Details (MTDs) to the correct Half Hourly Data Collectors (HHDCs) resulting in Meter readings being not collected

We will perform further investigation around these particular risks before embarking on any changes.

In order to fully understand the concerns of Suppliers and agents we intend to hold a workshop before recommending any changes. Our review will continue through 2016/17.

Performance Assurance Framework (PAF) Review

The electricity market is set to change significantly over the next decade. Smart metering will have profound impacts on wholesale electricity and the Balancing and Settlement Code. Non-Traditional Business Models (NTBMs) have also become more prevalent and more varied (e.g. 'off the shelf' Suppliers). Their prevalence is likely to increase as initiatives like smart metering create new competitive opportunities inside of wholesale electricity.

The current PAF provides for a flexible, integrated approach to the deployment of assurance techniques. ELEXON and the PAB believe there are opportunities to further enhance the application of the risk-based PAF envisaged in P207[30], to address the challenges of a changing industry. Specific areas of the PAF where we particularly believe this to be the case include the BSC Audit, Market Entry and Exit and the current approach to escalation of non-compliant participants.

To ensure the PAF meets the challenges of a rapidly changing industry and continues to provide value to its stakeholders, a systemic approach to its review is required. 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 and wider considerations of engagement with, ownership of and PAB powers relating to the PAF.

Further details are provided in the BSC Panel paper 255/12 Scope of the Performance Assurance Framework Review. We will report monthly to PAB on the progress of the review.

Competition and Markets Authority (CMA) Review

The Competition and Markets Authority (CMA) Energy Market Investigation concluded that the absence of locational pricing for transmission losses has an adverse effect on competition. Therefore, in line with the CMA's determination, we will introduce a Transmission Loss Factor for each Grid Supply Point Group for each Balancing and Settlement Code Season in order to allocate transmission losses on a geographical basis. The CMA has mandated that the remedy is implemented on 1 April 2018.

The change is being introduced via the Modification P350. We will monitor the progression of this modification for any impact on the Performance Assurance Framework.

European Balancing Project

P344 seeks to align the Balancing and Settlement Code (BSC) with the European Balancing Project TERRE (Trans European Replacement Reserves Exchange) requirements. This is in order to allow the implementation of the project at national level and be compliant with the first tranche of obligations in the European Network Codes (ENCs). The TERRE go live date is scheduled for summer 2018.

The implementation of Project TERRE is expected to impact a number of BSC areas including (but not limited to):

- The calculation of imbalance process;
- The calculation of Trading Parties' Imbalance Volumes;
- The calculation of Trading Parties' Information Imbalance Volumes;

[30]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.

- The rules regarding Interconnectors under the BSC;
- The timing of Balancing Mechanism Reporting Service (BMRS) data publication and/or BSC Settlement Runs;
- Default rules for missing or late TERRE data;
- The publication of information on the BMRS relating to Imbalance Price calculations and GB-related TERRE Product Acceptances;
- Non-delivery charges; and
- Credit calculations.

The BSC Panel considered the initial written assessment at its meeting on 9 June 2016, where it agreed to an initial three month assessment with an interim assessment report to be brought to it at its meeting in September. We will monitor the progression of this modification for any impact on the Performance Assurance Framework.

FURTHER INFORMATION

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