

PAB227/07 – PAF REVIEW UPDATE: EXISTING DATA

MEETING NAME	Performance Assurance Board (PAB)
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Owner/author	Nick Groves
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Purpose of paper	Information
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Classification	Public
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Summary	The paper provides an overview of the opportunities identified to enhance existing data sources that are used to support delivery of the Performance Assurance Framework (PAF).
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1. Summary of findings

1.1 This paper provides an update on the review of existing PAF data sources undertaken as part of the PAF Review. Appendix 1 outlines each of these datasets, their sources and how they are currently used to support delivery of the assurance framework. This work has built on previous findings from the review of existing PAF data sources as presented to the PAB in February 2019 ([217/12](#)), but has focused on exploring opportunities to address the issues identified.

1.2 This paper focuses on enhancements we have identified to existing data sources which we feel are key to improving PAF data related activities. A summary of the key enhancements identified is as follows:

Older PARMS Serials – providing Settlement performance by additional dimensions, e.g. by agent, Meter type, estimation type or other market dimensions of interest

Newer PARMS Serials – moving from a de-central to central reporting mechanism for insights into key Settlement processes upstream from BSC central systems

Data Transfer Network – addressing issues with incompleteness by accessing communications related to key Settlement processes that are not sent over the Data Transfer Network (DTN)

Supplier Meter Registration Service – increasing the frequency of data to provide a view of daily changes in registration data and expanding the scope to also capture Meter details

1.3 Each of the above enhancements is discussed in more detail in section 2 below. We plan to progress the enhancements to the Supplier Meter Registration Service (SMRS) dataset now as it aligns with the wider objectives of the review, does not represent a change of a fundamental nature, and will deliver improvements to our assurance activities in the short to mid-term. The other key enhancements referenced above are of a more fundamental nature and/or need further assessment or development prior to reaching a definitive conclusion. Therefore, we plan to further consider these enhancements as part of the on-going PAF Review activities on the future approach to data and reporting which are due to conclude by mid-2020.

1.4 We have also identified that one existing PAF data source can be removed as we are no longer using it to monitor the industry activity it was obtained for and there are no plans to use it for that purpose in future. This dataset is the monthly extracts we receive from the Electricity Central Online Enquiry Service (ECOES).

1.5 A general theme from the review activities on data and reporting is a preference to obtain data at its most granular/raw level. Our datasets have traditionally been of an aggregated nature, which makes it challenging to identify root causes of errors and to assess the impact of those errors on Settlement accuracy. This has resulted in us being reliant on participants self reporting root causes or the deployment of intrusive auditing techniques to investigate on a random sample basis. With access to more complete granular data, we can reduce reliance on self reporting and intrusive auditing techniques whilst providing assurance to a higher

degree of market coverage and equitable performance reporting.

2. Key enhancements to existing data

2.1 This section provides details on the key enhancements identified for existing PAF data sources.

Older PARMS Serials

- 2.2 As part of our review activities, we have assessed older and newer Performance Assurance Reporting and Monitoring System (PARMS) Serials separately due to each having different sources and reporting mechanisms. The PARMS Serials we are referring to as “older” were defined as they currently are in 2004 and are nearly all reported from BSC central systems. The most commonly recognised older PARMS Serial is SP08, which reports on Supplier Settlement performance in terms of actual vs. estimated data. This Serial provides a high level indicator of Supplier performance and we continue to actively use it to trigger performance investigations.
- 2.3 The main limitation with the older PARMS Serials is the aggregated level on which they are reported. This is due to BSC central systems only holding data at that level. This provides limited opportunity to drill down into issues and identify root causes. Therefore, whilst Serials such as SP08 have been key in identifying issues at a macro level, we are unable to assess the cause of those issues and we have been generally reliant on participants self reporting on root causes.
- 2.4 The key enhancement identified for the older PARMS Serials is to provide additional dimensions on which they can be reported. For example by agent (Data Collector and Meter operator), Meter type, estimation type or other market dimensions of interest. This enhancement is an extension to the proof of concept on separating Non-Half Hourly (NHH) Settlement performance by Meter type ([208/15](#)).
- 2.5 There are two broad options to deliver such an enhancement. The first would be to draw the additional dimensions through to BSC central systems in the consumption files provided by Data Aggregators. This would require changes to BSC central systems, participant systems and industry data flows, and future reporting would be limited to the dimensions selected to be drawn through at the time of change. The second option would be to obtain Metering System level consumption data which would allow performance to be cut by dimensions of interest at the most granular level. Whilst this option would provide more flexibility in terms of providing Settlement performance by different market dimensions in future, it would require harvesting granular consumption data for all Metering Systems.
- 2.6 As the options to enhance this dataset require further assessment in terms of feasibility and benefits before reaching a conclusion, they will be considered as part of the on-going PAF Review activities.

Newer PARMS Serials

- 2.7 The PARMS Serials that we are referring to as “newer” were implemented in July 2011 and are reported by Meter operators and Data Collectors on the performance of other participants within the Supplier hub. These Serials provide insights into key Settlement processes (such as fault resolution) that are upstream of BSC central systems. Suppliers support this reporting by advising the PARMS system which data submissions to expect from their agents.
- 2.8 On-going issues with the accuracy of newer PARMS Serial data has negatively impacted its credibility as an assurance data source. We have routinely identified inconsistent and inaccurate interpretations of the reporting requirements when we have used the data for performance investigations. In addition, as with the older PARMS Serials, the aggregated nature on which the data is reported makes it difficult to drill down into issues and we remain reliant on self reporting of root causes.

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- 2.9 Participants commonly quote the reporting burden associated with the newer PARMS Serials for questionable value added. Whilst this data feeds into elements of our monthly assurance reporting to participants and the PAB, we are not actively using it to trigger performance investigations as previously agreed with PAB.
- 2.10 As we are not currently taking assurance actions based on the data, we considered whether the reporting for these Serials could be switched off as an interim measure until the wider review work concluded thus relieving the reporting burden on participants in the short term. To obtain feedback from participants in this area, we undertook a survey that was open to newer PARMS Serial data providers who are also report consumers. This survey sought to understand the effort industry spends to support the newer PARMS Serials compared to the benefits from the output reports.
- 2.11 Based on the 24 survey responses received, we estimate industry spends approx. 10 FTE each year to support reporting on the newer PARMS Serials. However, despite the majority of respondents believing that there would be no negative impacts on their organisations if the reporting were to cease, the survey confirmed that participants do generally find the pursuant reports useful. Therefore, we concluded that reporting should remain as is until we have assessed the viability of alternatives as part of the wider PAF Review activities which are due to conclude by mid-2020. Appendix 2 provides a more detailed overview of the survey results.
- 2.12 Large elements of the assurance framework seek to ensure that the key processes undertaken by participants to facilitate accurate Settlement occur in line with BSC obligations. The newer PARMS Serials have sought to provide insights into these key processes which are upstream of BSC central systems. However, based on stakeholder feedback to date, it is clear that we need to consider alternative approaches to providing these insights. The de-central reporting mechanism on which newer PARMS Serials is based can be considered as a root cause of the primary issues with the framework, namely the inaccuracy/inconsistency of reporting, aggregated nature of the data and inflexibility to revise reporting requirements. On the face of things, a central reporting approach would resolve these issues. However, to deliver such an approach, we would need access to all the granular transactions between participants related to these key BSC processes. We have access to some of these transactions through the extracts we receive from the DTN, however, there are issues with using this data source in isolation to provide a view of participant performance due to its incompleteness. This point is discussed further in the DTN section below.
- 2.13 The main opportunity for enhancing this dataset requires a fundamental redesign of the reporting mechanism, of which the technical practicalities need to further consideration. Therefore, we will assess this enhancement as part of the on-going PAF Review activities.

Data Transfer Network extracts

- 2.14 We have been using extracts from the DTN to support delivery of the assurance framework for the past five years. We have expanded the scope of the data flows we access on four occasions, whereby we now routinely access 36 data flows sent over the DTN. We currently use this data to support assurance activities such as risk assessments, performance reporting, auditing and ad hoc risk analysis.
- 2.15 The primary issue with the extracts we receive from the DTN is that they do not provide full coverage of the market. The gaps in data are generally for market participants who are vertically integrated and operate as different market roles. By analysing data flow communications between participants (or lack thereof), we have identified 15 organisations who we believe do not use the DTN for some of their communications. The degree of incompleteness varies across processes depending on the market and types of participants involved. For example, a key interface for Settlement processes is between the Meter operator and Data Collector such as the provision of technical details relating to the metering so Meter reads can be interpreted

correctly. Based on analysing data flow communications between Meter operators and Data Collectors and appointment numbers in SMRS, we estimate coverage between these two participants of 85% in the 100 kW HH market, 51% in the sub 100 kW HH market and 65% in the NHH market.¹

- 2.16 Whilst this data provides insights into key Settlement upstream of BSC central systems at the most granular level, we have some concerns around overreliance on this data source particularly from a reporting perspective as its incompleteness means that it cannot provide equitable participant level reporting. All assurance uses of the data consider the completeness of the process under assessment so any gaps can be understood and filled through other means (such as auditing techniques).
- 2.17 To address the primary issue with the completeness of the data would require gaining access to data flow communications that are not sent over the DTN. This could be through direct data provision from those participants who do not use the DTN. However, there are technical complexities to this solution that need to be further understood. For example, we are aware of some participant systems that do not produce the data in the defined Data Transfer Catalogue (DTC) structure. We need to understand the format of those communications and how they could be accessed. Therefore, we will further explore the feasibility of enhancing this dataset as part of the wider PAF Review activities on the future approach to data and reporting.

Supplier Meter Registration Service extracts

- 2.18 We have been receiving snapshots of all the Metering Systems registered in SMRS since the start of the assurance arrangements. We currently use this data to support assurance activities such as risk assessments, performance reporting, auditing and ad hoc risk analysis.
- 2.19 The main limitation with this data source is the fact that it is of a snapshot nature on a quarterly basis. Therefore, when we are undertaking analysis on changes across snapshots and there are multiple changes (e.g. the Supplier changes more than once), we would only observe the latest. This means that any reporting on the volume of changes will be under representing the actual number of changes that occur.
- 2.20 The key enhancement identified for this data source is to obtain it on a more frequent basis to provide a daily view of changes in SMRS, addressing the issue it currently being of a periodic snapshot nature. In addition, we don't currently harvest all the data within SMRS. Since June 2019 following the implementation DTC CP3554², Meter details (e.g. Meter Serial Number, Meter type etc.) are now also stored in SMRS. As part of enhancing this dataset, we plan to extend the scope to also capture the Meter details now held in SMRS.
- 2.21 The enhancements identified would allow us to accurately analyse SMRS updates to identify changes to market dimensions and Settlement Errors. In addition, obtaining the data on a more fluid basis and inclusive of Meter details would support providing a view of Settlement performance by additional market dimensions (e.g. agent and Meter type) in future, dependent on also obtaining Metering System level consumption data.
- 2.22 Preliminary investigations into how this enhancement could be delivered suggest the preferred source to be directly from the ECOES. The proposed data access agreement would be different to that of the monthly extracts of ECOES which we are proposing to cease receiving as outlined in section 3 below. Such an approach would equate to a single data provider and thus streamline the transfer process and reduce the reporting burden on the approx. 17 distinct organisations that act as Supplier Meter Registration Agents (SMRAs) that currently provide SMRS data.

¹ Two items to note on this statement. Firstly, there may be additional relationships/scenarios that aren't obvious from the data. Secondly, the assessment was a snapshot in time, i.e. as appointments move between participants and/or participants decide to change their use of the DTN in future, market coverage could increase or decrease.

² <https://www.mrasco.com/changes/change-tracker/update-of-meter-details-to-mpas/>

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- 2.23 As all future approaches to PAF data acquisition envisage access to Supplier Volume Allocation (SVA) registration data held within SMRS, this enhancement is not dependant on the wider PAF Review activities and therefore is planned to be progressed now. As we further investigate the options to deliver this enhancement, we may propose formalising the data access under the BSC and other relevant industry Codes.

3. Removal of existing data

This section provides details on the existing PAF data source we are proposing to cease assessing.

Electricity Central Online Enquiry Service

- 3.1 We currently receive monthly snapshots from ECOES for all NHH Profile Class 5-8 and HH SVA Metering Systems registered in SMRS. This data was obtained for the sole purposes of monitoring migration activities following Modification P272 in order to validate monthly progress updates provided by Suppliers. However, since mid-2018 as the vast majority of migration activities had completed, we stopped using this data to provide updates to PAB.
- 3.2 As we are limited to using this data for P272 monitoring only and we don't have any plans to use it in near future for that purpose, we are proposing to cease accessing this data. This would save storage space on our live systems, time spent processing and the cost to obtain the data.
- 3.3 If we stopped receiving this data, we would be unable to undertake P272 migration monitoring if requested in the short term. However, the enhancements identified for SMRS snapshots previously discussed would provide an equivalent dataset for any such monitoring in future.

4. Next steps

- 4.1 We will continue to work operationally to deliver the enhancements to existing PAF data sources that can be progressed immediately. For the other more fundamental enhancements identified, we plan to further explore the technical feasibility and benefits as part of the on-going review activities. In parallel, we are assessing which alternative data sources (if any) we might want to access as part of the future approach to data and reporting. We plan to undertake industry engagement to support this work in early 2020.
- 4.2 These review activities are planned to conclude by mid-2020 with a recommendations report that will be presented to the PAB.

5. Recommendations

- 5.1 We invite you to:
- a) **NOTE** the update on the PAF Review activities related to data and reporting.

Appendices

Appendix 1 – Existing PAF data sources

Appendix 2 – Newer PARMS Serial survey results

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APPENDIX 1 – EXISTING PAF DATA SOURCES

The below table outlines each dataset, its sources and how it is currently used to support delivery of the assurance framework.

Dataset	Source(s)	Committee reporting	Participant reporting	Market reporting	Risk assessments	Supplier Charges	Peer Comparison	BSC Audit	TAPAP	EFR	Registration monitoring	Ad hoc analysis
Older PARMS Serials	SVAA, SMRAs & Suppliers	X	X	X	X	X	X			X		
Newer PARMS Serials	Suppliers, MOAs & DCs	X	X				X					
SMRS	SMRAs			X	X			X	X		X	X
DTN	Electralink			X	X			X	X	X		X
Large EAC/AA MEM	NHH DAs	X	X		X			X		X		
Energisation MEM	NHH DAs		X					X				
UMS MEM	NHH DAs & UMSOs		X		X			X	X			
Smart MTD report MEM ³	Electralink, SMRAs & SVAA			X					X			
ECOES	Gemserv											
SVA extracts	SVAA		X					X				X
Annual Demand Ratio	SVAA			X								
GSP Group Correction Factors	SVAA			X								
Transmission Losses	SAA			X								

³ <https://www.elexon.co.uk/about/key-data-reports/smart-meter-technical-detail-report/>

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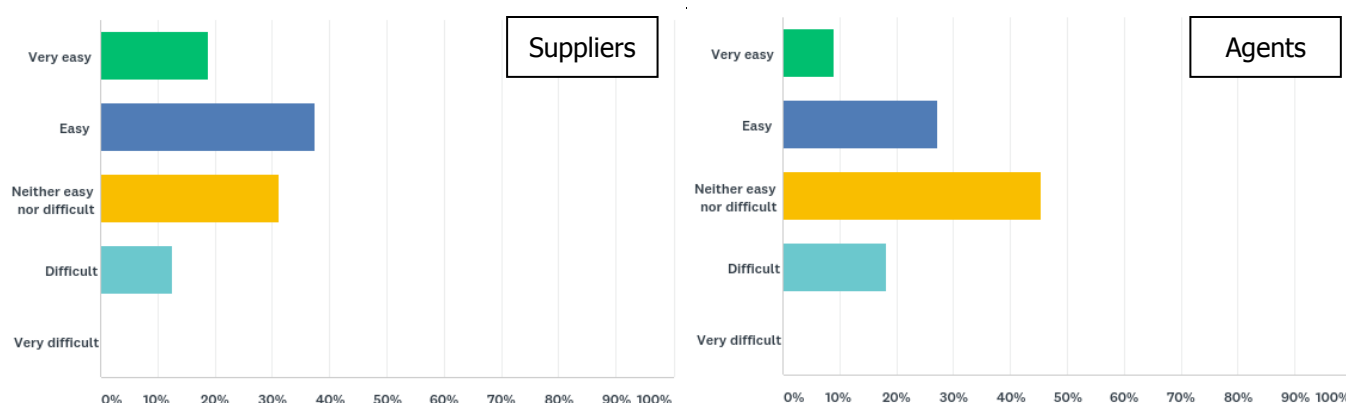
APPENDIX 2 – NEWER PARMS SERIAL SURVEY RESULTS

As part of our review activities, we undertook a survey on newer PARMS Serials to obtain some feedback from participants. This survey sought to understand the effort on participants to support the newer PARMS Serials, how useful they find the pursuant reports and whether there would be any impacts if we switched off the reporting as an interim or enduring measure.

We received responses from 24 organisations in total. We received responses from 16% (16/102) of active Supplier organisations that advise the PARMS system which data submissions to expect from their agents, i.e. Data Provider Information (DPI) file submissions. We received responses from 45% (12/27) of agent (MOAs/DCs) organisations that provide PARMS Serial data. A summary of the findings from the survey and our conclusions are as follows.

PARMS data submission process

We asked Suppliers and agents separately [how easy they find the PARMS data submission process](#). Of the 16 Supplier and 11 agent organisations that responded, below is the breakdown.



As the PARMS data submissions process has been established in its current form for 8 years, participants do not generally find it difficult. The survey suggests that agents generally find the process more difficult than Suppliers. This could be explained by the need for agents to provide various PARMS Serial data submissions/resubmissions for more than one Supplier, and due to the associated Supplier Charges for missing PARMS data (SP01), agents will be chased for any missing data. This may change in future with Modification [P393](#) that is seeking to set the SP01 Supplier Charge to £0.

Effort to provide PARMS data

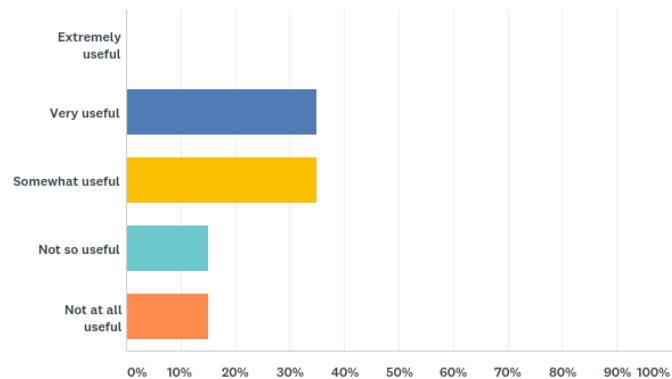
We requested details from each respondent on the [monthly resource effort to support PARMS reporting](#) including raising and responding to any related queries (such as that for missing submissions). Based on the responses received from the subset of the PARMS data providers, of which some provided more detailed responses than others, and making some assumptions of similar effort across the participants that did not respond, we have estimated an industry effort to support current PARMS reporting as follows. We estimate that approx. 6.12 FTE across all Suppliers to manage DPI file submissions and approx. 3.51 FTE across agents that provide PARMS Serial data. Therefore, we estimate an industry effort of approx. 10 FTE to support newer PARMS Serial reporting each year.

The feedback noted that the reporting is mostly automated. However, the majority of this FTE is spent liaising with other parties to deal with queries or backing data requests. This highlights the inefficiency in the current reporting mechanism which we'd hope to address if a new data and report framework was implemented in future.

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Usefulness of PARMS data

We asked Suppliers and agents collectively [how useful they find the PARMS reports](#) that are pursuant to their submissions. Of the 20 Supplier and agent organisations that responded, below is the breakdown.

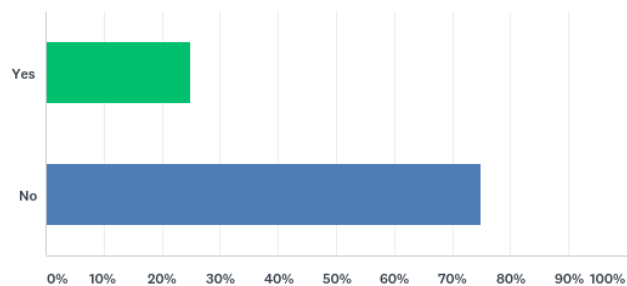


This confirms that despite us not actively using the data from these PARMS Serials to trigger performance investigations, participants generally find the reporting we provide useful. Whilst the detailed comments on this question noted issues with the PARMS data in terms of its quality, timeliness and reflection of risk, a number of respondents noted that it is useful in providing a high level view of trends in performance and processes of which they need to be mindful.

We also asked whether participants requested drilldown data on certain PARMS Serials to investigate any exceptions reported on a Metering System level. Of the 20 that responded, 50% confirmed that they have. Some detailed comments on this question noted that this backing data has enabled them to identify processes issues some of which were Settlement impacting whilst others were not. Other commentary noted that the drilldown data was not helpful and that internal reporting does a better/more frequent job.

Impact if reporting ceased

The final question we asked both Suppliers and agents collectively was [whether there would be any negative impacts on their organisations if we stopped the reporting on newer PARMS Serial data](#) in the short term on an interim or enduring basis. Of the 20 Supplier and agent organisations that responded, below is the breakdown.



Approx. three quarters of respondents noted that there would be no negative impacts in we ceased reporting on new PARMS Serials. Of the quarter that noted an impact some comments provided noted minimal impacts, whilst others noted that whilst not perfect, the reporting is of benefit to them and they may struggle to identify issues if it ceased.