Assessment Report

P454 ‘Removal of BSC obligations to provide BMRS Data via TIBCO and the High Grade Service’

ELEXON

Phase

- Initial Written Assessment
- Definition Procedure
- Assessment Procedure
- Report Phase
- Implementation

This Modification would remove the existing requirement within BSC Section V ‘Reporting’ (and facilitate potential future changes as explained in this report) for the Balancing Mechanism Reporting Agent (BMRA) to provide BMR Service (BMRS) data via the legacy on premise High Grade Service, otherwise referred to as the TIBCO service. This will align with the principle to make the BSC technology and vendor agnostic - not imposing infrastructure or vendor-tied solution to BSC Parties.

Subject to approval, the implementation of P454 will be a document-only change to the BSC and will not result in an immediate technical decommission of the BMRS High Grade Service; this will be considered as a separate workstream once the replacement solution achieves the expected quality standard to fulfil the BMRS service as defined in the BSC.

The P454 Workgroup **unanimously** recommends **approval** of P454

The P454 Workgroup **does not** believe P454 impacts the European Electricity Balancing Guideline (EBGL) Article 18 terms and conditions held within the BSC

This Modification is expected to impact:

- TIBCO Users (All BSC Parties)

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About This Document

You can find the definitions of the terms and acronyms used in this document in the BSC Glossary[1].

This document is the P454 Workgroup's Assessment Report to the BSC Panel. Elexon will present this report to the Panel at its meeting on 9 November 2023. The Panel will consider the Workgroup's recommendations, and will agree an initial view on whether this change should be made. It will then consult on this view before making its final recommendation to the Authority on 15 December 2023.

There are 5 parts to this document:

- This is the main document. It provides details of the solution, impacts, costs, benefits/drawbacks and proposed implementation approach. It also summarises the Workgroup's key views on the areas set by the Panel in its Terms of Reference, and contains details of the Workgroup's membership and full Terms of Reference.
- Attachment A contains the P454 Proposal Form.
- Attachment B contains the draft redlined changes to the BSC for P454.
- Attachment C contains the draft redlined changes to the Code Subsidiary Documents (CSDs) for P454.
- Attachment D contains the full responses received to the Workgroup's Assessment Procedure Consultation.

[1] https://www.elexon.co.uk/glossary/?show=all

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Not sure where to start?

We suggest reading the following sections:

- Have 5 minutes? Read section 1
- Have 15 minutes? Read sections 1 and 7
- Have 30 minutes? Read all except section 6
- Have longer? Read all sections and the annexes and attachments.

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1 Summary

Why Change?

Elexon is currently modernising its technology and building a cloud based solution for its BSC Agents' systems as part of Elexon Kinnect[2].

While Elexon has continued to maintain TIBCO for the current subscribers, the service can no longer be sustained efficiently and economically. The BSC's High Grade Service and TIBCO software, based on 20-year-old legacy systems, present significant barriers for new entrants due to lead time, operational costs, and bandwidth restrictions. As a result there have been no new TIBCO users since 2014. Further, the ageing architecture causes operational issues, limits scaling, and imposes high operational costs to Elexon and on market participants.

Elexon believe the time is right to remove the obligation to provide the unsustainable High Grade/TIBCO service, to reduce costs for Parties and provide them with a modern, resilient, and cost-effective real-time data service. The replacement Balancing Mechanism Reporting Service (BMRS) platform currently labelled as Insights Solution provides several endpoints including a pub/sub real time messaging service, Insights Real-Time Information Service (IRIS)[3]. The technical and architectural considerations for the Insights Solution are being addressed in parallel with this Modification.

Furthermore, explicit reference to the TIBCO in BSC Section V is inconsistent with the concept that the BSC should be agnostic when it comes to specific technologies and vendors that deliver it, and this should be addressed via a BSC Modification.

Recognising the effort in maintaining TIBCO's current implementation and the Elexon drive to optimise costs for industry with a cloud based architecture, Issue 95 'Assessing the continued use of TIBCO service as a source of data for market participants'[4] made a group recommendation to raise a BSC Modification to explore the removal of the obligation for Elexon to provide BMRS data through the High Grade Service.

Solution

This Modification seeks to remove the obligations for the Balancing Mechanism Reporting Agent (BMRA) to provide BMRS data via the High Grade Service. To do this the Workgroup propose modifying BSC Section V 'Reporting', BSC Section D 'Cost Recovery and Participation Charges' and amending the Balancing Mechanism Reporting Agent Service Description. The Communication Requirements Document will also be split into two documents, one for BSC agents (Document A) and the other for the BMRA (Document B). Any formal approval to cease publishing data via the High Grade Service will be sought at a future date determined by the BSC Panel (or delegated authority) which is referred to as 'BMRS Transition Date' in the redlining.

As part of the P454 Assessment Phase, Elexon have clarified to the P454 Workgroup that any cessation of the TIBCO service would only take place following endorsement by the BMRS Change Board and BSC Panel (or delegated authority), who will consider a number of Acceptance Criteria (included in this paper in Section 3). I.e., once the Insights Solution

[2] https://www.elexon.co.uk/operational/kinnect-customer-solution/
[3] https://bmrs.elexon.co.uk/iris
[4] https://www.elexon.co.uk/smg-issue/issue-95/

Elexon Kinnect

Elexon Kinnect is a digital customer-centric platform delivering a smart and flexible central solution for the industry, which will be delivered through a number of releases over the next few years. The modular technology it uses will enable us to implement BSC rule changes more quickly, and provide speedier support for innovation by existing companies and new entrants.

The Elexon Kinnect Insights Solution, which builds on our existing Balancing Mechanism Reporting Service (BMRS) to offer a richer and more detailed data service for GB electricity.

High Grade Service/TIBCO

The BMRS is made available as a High Grade Service and a Low Grade Service.

The TIBCO software provides the mechanism for automated publication of BMRA data as part of the High Grade Service. BMRS data is also made available via the BMRS website.

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fulfils the BMRS service as defined in the BSC. While not intrinsically part of P454, which only seeks to remove the existing requirements in the BSC for the BMRA to provide BMRS data via the High Grade Service/TIBCO, Elexon wish to provide this additional context and clarity on the next steps.

This Modification seeks only to remove the obligation to publish BMRS data via a leased line (High Grade service) using TIBCO as the underpinning technology and does not propose to amend other existing obligations around the content or timeliness of reporting BMRS data once the BMRS Transition Date has been agreed by the BSC Panel (or delegated authority).

To clarify, the High Grade Service of BMRS is a dedicated communications line plus TIBCO software. Whilst Elexon aim to remove the High Grade Service of the BMRS, P454 will not change any other BSC Agent Services. For example, market participants that currently access an Energy Contract Volume Aggregation Agent (ECVAA) Web Service via a dedicated communications line should be able to continue to do so after the BMRS High Grade Service disappears.

Impacts & Costs

Since P454 will be a document-only change to the BSC and not resulting in an immediate technical decommission of the BMRS High Grade Service, the impacts and costs of P454 are expected to be low. This was confirmed via the Assessment Procedure Consultation (APC). Respondents to the consultation did and Workgroup members, however, did highlight the impacts and costs for the decommissioning of TIBCO which Elexon have noted as part of the wider Insight's solution work.

Once P454 is implemented current TIBCO users will not lose access to the Service, however, once the BMRS Transition Date has been agreed by the BSC Panel (or delegated authority), it will inform the cessation of the High Grade Service for BMRS.

Costs Estimates			
Organisation	Implementation (£)	On-going (£)	Impacts
Elexon	<1k	0	Documents
NGESO	0	0	NA
Industry	0	0	NA
Total	<1k	0	

Implementation

The Workgroup recommend that as P454 is a document-only change, it is suitable to implement 5 Working Days (WDs) after Authority approval.

Recommendation

The Workgroup **unanimously agreed** that P454 would better facilitate the achievement of Applicable BSC objective (d) 'efficiency in the BSC arrangements' and should therefore **be approved**. The Workgroup do not believe that P454 will impact the EBGL provisions in the BSC. They believe P454 should be submitted to Ofgem for decision as P454 does not meet the criteria to be a Self-Governance Modification.

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2 Why Change?

What is the issue?

Elexon is currently modernising its technology and building a cloud based solution for its BSC Agents' systems as part of Elexon Kinnect.

At the time of inception in 2001, the BSC recognised the need for access to close to real-time BMRS data and introduced provisions for the 'High Grade Service' (a private Wide Area Network) and licensed software, TIBCO, to enable participants to sign up to the service. The High Grade Service is built on systems which are now over 20 years old. It provides BMRS data close to real-time, and customers wishing to receive TIBCO data require both a High Grade line and a TIBCO license. These requirements have long been recognised as a barrier for new entrants, particularly the lead time, requirement for a physical communications line on premise, operational costs and bandwidth restrictions of the High Grade line.

The ageing architecture has been unable to provide the required scaling to cater for Elexon's users and suffers from sporadic operational issues/unplanned outages as well as being incapable of accommodating industry changes at pace. The legacy architecture severely limits vertical and horizontal scaling and the constraint on bandwidth means users do not always receive the complete data updates[5].

In practice due to the high cost, lead time and network constraints, the TIBCO/High Grade Service is effectively closed to any new subscribers who wish to make use of it.

High operational costs of maintaining the legacy architecture are passed on to all market participants and end consumers. TIBCO users bear additional costs for proprietary software and the required leased network lines. The legacy charging model (applied upon inception of the High Grade Service), mean that Elexon operational costs for TIBCO are not ring-fenced, resulting in all BSC Parties funding the majority of the operational costs.

The current version of TIBCO will run out of support unless a significant technical upgrade is carried out. It is Elexon's view that the TIBCO Service cannot be efficiently implemented onto the new cloud platform and that the only way to continue to fulfil the existing BSC obligation would be to maintain the legacy system alongside the Elexon Kinnect at great cost and complexity.

Elexon commits to provide a resilient, high availability, real time data service through more modern data endpoints as a replacement to the High Grade Service's ageing on-premise infrastructure which can no longer be sustained efficiently and economically. We believe the IRIS is the right long term alternative and will explore this option as part of this Modification.

To not prevent BSCCo from pursuing more cost effective and/or higher quality options of Technology Services for BSC Parties, the BSC in principle should be agnostic when it comes to specific technologies and vendors. One of the aims of P454 is to change the BSC to be vendor agnostic regarding BMRS, therefore, reference to requirements for the TIBCO will be addressed via this Modification.

[5] 2-156 Weeks ahead by BMU is restricted to once daily updates on legacy endpoints.

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Background

Balancing Mechanism Reporting Service

The BMRS is a service provided by the Balancing Mechanism Reporting Agent (BMRA). The BMRS is, amongst other methods, made available as a High Grade Service and a Low Grade Service. The Low Grade Service is free to BSC Parties, whereas provision of the High Grade Service is subject to certain charges as specified in BSC Section D 'BSC Cost Recovery and Participation Charges'. Any Party or any other person can request the High Grade Service. The specification for the BMRS is in the Communication Requirements Document and the High Grade and Low Grade Services must be made available in accordance with that specification. Where the High Grade Service is made available to a person other than a Party, the person must enter into an agreement with Elexon. The person must also agree to pay a one-off administration charge and charges equivalent to those payable by Parties for use of the High Grade Service.

The BMRS was implemented after the New Electricity Trading Arrangements (NETA) went live in 2001 to provide the electricity industry with operational data relating to the Balancing and Settlement Arrangements. Since inception, the BSC has made provision for publication of BMRS data to participants via multiple methods including a High Grade leased line as well as the public internet. When using the High Grade line, BMRS users must subscribe to a licensed software product, TIBCO Rendezvous, which provides a mechanism to consume BMRS data.

TIBCO and Data Push Service (DPS)

Since 2014, the current BMRS has offered a Data Push Service (DPS) as a cost effective alternative to TIBCO and consequentially there have been no new TIBCO subscriptions since this date. The overall number of TIBCO users has also decreased by over 50%, leaving around 20 organisations with active subscriptions.

While Elexon has continued to maintain TIBCO for the current subscribers, the service can no longer be sustained efficiently and economically. The current TIBCO set-up is based upon "on premise" communications hardware and is not readily supported by cloud based architecture, which is part of Elexon's stated business plan. Therefore it would add significant complexity to migrate this to Kinnect in its current form. In addition to this, the legacy architecture will run out of support unless a significant technical upgrade is carried out.

As the TIBCO Service cannot be efficiently implemented on Kinnect the only way to continue to fulfil the TIBCO obligation (as described within the Code) would be to maintain the legacy system. However, the ageing infrastructure is unable to provide the required scaling to cater for our users and suffers from sporadic operational issues/unplanned outages as well as being incapable of accommodating industry changes at pace. The Legacy architecture severely limits vertical and horizontal scaling and the constraint on bandwidth means users do not always receive the complete data updates[6].

As such, there is no zero-change option.

The high operational costs of the legacy infrastructure are passed on to all market participants and end consumers. TIBCO users bear additional costs for proprietary

[6] 2-156 Weeks ahead by BMU is restricted to once daily updates on legacy endpoints.

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software and the required leased network lines. The legacy charging model means Elexon has not ring fenced operational costs for TIBCO, resulting in all BSC Parties funding the majority of the operational costs highlighted in BSC Issue 95.

Insights Solution Realtime Information Service (IRIS):

Elexon's data strategy is to unify data structures across all its endpoints and ease onboarding for all our users through open source protocols, avoiding proprietary licensed software to reduce both central and BSC Parties cost.

Elexon is currently modernising its technology and building a cloud based solution for its BSC Agents' systems as part of Elexon Kinnect. As part of the programme, Kinnect Insights Solution (Insights) is being implemented to deliver all reports and publication capabilities from the legacy BMRS platform by the end of 2023. We believe Insights should replace the legacy BMRS, as noted by feedback from users who trialled the platform and the BMRS Change Board.

The Insights Solution provides three endpoints for accessing data: a website for interactive users, RESTful APIs and a real-time data subscription service referred to as Insights Solution Realtime Information Service (IRIS). The IRIS service, currently in Beta phase, has been available for organisations to sign up to since December 2022 and in total approximately 255 subscribers have signed up so far (August 2023). Interested participants can register to receive the updates on the Insights Solution site[7].

The Insights platform is being developed using Agile principles with each iteration providing fully tested and accepted functionality in a production environment, available to customers as a Beta version. Since launching as a Beta offering to wider industry in June 2022, early adopters[8] have sent in highly positive feedback about performance, functionality and availability of the new platform. It should also be noted that during recent unplanned BMRS outages the Insights solution provided a resilient and available service to Elexon data users averaging 99.98% across all endpoints.

What are RESTful APIs?

A RESTful API is an interface that two computer systems use to exchange information securely over the internet

Issue 95 'Assessing the continued use of TIBCO service as a source of data for market participants'

Recognising the effort in maintaining current implementation and the Elexon drive to optimise costs for industry and enable the benefits of a cloud based architecture, Issue 95 was raised to assess the continued use of TIBCO and High Grade requirements for BMRS data. The BMRS Change Board (BCB) endorsed the progression of this Issue at their meeting[9] on 23 March 2021.

Feedback received during Issue 95

Over the course of Issue 95 meetings, members described their experience that, since implementing TIBCO about 10 years ago, they had found it to be robust and stable, with issues limited to the physical line rather than the software. However, they would be open to

[7] https://bmrs.elexon.co.uk/iris
[8] 2.1 Million hits on APIs and 108 IRIS subscribers in the last 30 days
[9] https://www.elexon.co.uk/meeting/bcb-4/

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a new method, if that method is as fast and stable as TIBCO, acknowledging that TIBCO is expensive and can be difficult to implement.

Issue Group members highlighted the following issues with TIBCO:

- On-premise infrastructure is inefficient and costly to maintain;
- The requirement for a high-grade line presents a barrier to new users;
- It is unscalable - restricting new data being added to the platform;
- It suffers unplanned outages - industry need something more reliable;
- It requires customer licences, leading to more costs for users; and
- The data structures are inconsistent with Data Push and API, and this should be simplified.

During the course of the Issue group meetings Elexon reaffirmed to the group that, should TIBCO be discontinued, an alternative without the identified issues would be developed and made available. In later meetings, prototypes of the IRIS solution were demonstrated, with the group noting the benefits that IRIS seems to offer vs TIBCO and accepting that the current iteration of TIBCO has its limitations and drawbacks.

The group believed there were sufficient grounds to raise a BSC Modification to explore the removal of the obligation for Elexon to provide TIBCO. In principle, the group were provisionally comfortable with the replacement of TIBCO with a viable alternative that meets the industry's needs for reliability and speed of service but note that this will be assessed at a later date, with further cost benefit information to be sourced to present the case for industry at the appropriate time.

The BSC Issue Group concluded in November 2022 with the recommendation to raise a BSC Modification to remove the obligation for Elexon to provide BMRA data through the High Grade Service.

Decommissioning of TIBCO and communication to users

On 16 March 2023 Elexon wrote to current TIBCO users[10] (20 in total) stating our intention to decommission the TIBCO Service and the High Grade line in March 2024. Recipients were informed that development of new cloud platform, Elexon Kinnect will replace the BMRS with the Insights Solution[11]. Insights should deliver a more visual, detailed and customisable data service for all users.

Beyond informing TIBCO users of the reason for decommissioning the TIBCO Service and the High Grade Service, recipients were also requested to join the BSC Modification process and feed back into P454 to change the obligation to provide the BMRS data via the High Grade Service.

[10] https://www.elexon.co.uk/documents/industry-insights/data-flows/letter-to-tibco-users-on-decommissioning-the-tibco-service-and-high-grade-line-in-march-2024/
[11] https://bmrs.elexon.co.uk/

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Desired outcomes

The desired outcome for P454 is to remove the obligations to provide BMRS data via the High Grade Service currently present within the BSC.

Removing the High Grade obligations within BSC will enable Elexon to replace the TIBCO service and reduce the operational costs for all BSC Parties.

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3 Solution

Proposed solution

The proposed solution for P454 is to remove the High Grade Service from the BSC. Section V 'BSC Reporting'[12] will be amended to leave just one grade of service, i.e., the 'Low Grade Service'. As the High Grade Service is also mentioned in BSC Section D 'BSC Cost Recovery and Participation Charges'[13] and Annex D-3, the mention of 'High Grade Service' will be removed. Further changes are required to CSDs 'Balancing Mechanism Reporting Agent Service Description[14]' and 'Communication Requirements Document[15]' to remove the High Grade Service.

The proposed solution includes inputting a 'BMRS Transition Date' to the redlining in Section V, this would be the date that the new systems have met Acceptance Criteria and the Panel (or delegated authority) would decide to switch over to the new solution. Thus providing assurance to industry that the new solution achieves the requirements of the BMRS before the legacy platform is decommissioned.

Note: The Acceptance Criteria have been suggested by the Workgroup but are not a direct artefact of this Modification; rather they highlight the standards (as expected by industry) to which any new systems should reach in order to replace all the legacy BMRS endpoints, including the APIs, website, Data Push Service and TIBCO. Elexon plan to share the Acceptance Criteria with the BSC Panel on 9 November 2023.

Changes to BSC Section V 'Reporting'

Section V 'Reporting' paragraph 2.3 defines the High Grade Service at a high level - as requiring charged services of a dedicated communications line and TIBCO (referencing Annex D-3). The Low Grade Service is the service that's made available without charge. The proposed solution is to:

- Define a "BMRS Transition Date" as the date when BMRA starts providing the BMRS via the new infrastructure (currently known as the Elexon Kinnect Insights Solution). The BMRS Transition Date is to be determined by the Panel (or delegated sub-committee) once the new systems have met some Acceptance Criteria.
- Amend the text to reflect that the requirement, to provide the High Grade Service, applies until the BMRS Transition Date - leaving only a free/no-charge service (currently labelled as the Low Grade Service).

Elexon propose delaying a rename/fuller definition of the single grade of service, (Low Grade Service); i.e., provision of data over the public internet, until sometime after the BMRS Transition Date.

[12] https://bscdocs.elexon.co.uk/bsc/bsc-section-v-reporting
[13] https://bscdocs.elexon.co.uk/bsc/bsc-section-d-bsc-cost-recovery-and-participation-charges
[14] https://bscdocs.elexon.co.uk/service-descriptions/balancing-mechanism-reporting-agent-service-description
[15] https://bscdocs.elexon.co.uk/business-definition-documents/communication-requirements-document

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Changes to BSC Section D 'BSC Cost Recovery and Participation Charges'

BSC Section D, Annex D-3, paragraph 3.3 details the charges payable in respect of the High Grade Service. After the BMRS Transition Date, the High Grade Service (as currently defined) will cease to exist.

Elexon want to allow the provision of the dedicated communications line, and the associated charges, to continue past the BMRS Transition Date. This is because some users might want to continue their dedicated communications line for ECVAA notifications.

Changes to the Balancing Mechanism Reporting Agent Service Description

The Balancing Mechanism Reporting Agent Service Description currently references two grades of service. The aim is to clarify that after the BMRS Transition Date, there will be a single grade of service.

Changes to the Communication Requirements Document

The Communication Requirements Document outlines detailed requirements for Parties communicating with BSC Agents - including the BMRA. Elexon want to:

- Clarify that there is currently only one grade of service applicable for the ECVAA Web Service, although this service is accessible via either the public internet or via a dedicated communications line; and
- Reflect that arrangements for accessing the BMRS will change from the BMRS Transition Date (TIBCO will no longer be provided), though this change need not impact users of other BSC Agent services.

BSC Section O 'Communications Under the Code'[16] allows for multiple Communication Requirements Documents, therefore Elexon propose creating the two Communication Requirements Documents A & B:

- **Communication Requirements Document A** – The existing document with references to the BMRA and different grades of service removed.
- **Communication Requirements Document B** – A new document specifically covering BMRA, the current grades of service, plus recognition of the BMRS Transition Date.

Legal text and redlining

The redlined Legal Text for BSC Section V 'Reporting' and Section D 'BSC Cost Recovery and Participation Charges' is provided as per Attachment B. The changes to CSDs Balancing Mechanism Reporting Agent Service Description and Communication Requirements Document are provided as per Attachment C.

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[16] https://bscdocs.elexon.co.uk/bsc/bsc-section-o-communications-under-the-code

Assessment Procedure Consultation Reponses

Do you agree with the Workgroup that the draft legal text in Attachment C delivers the intention of P454?			
Yes	No	Neutral/No Comment	Other
6	0	0	0

There was unanimous agreement that the draft legal text delivers the intention of P454. There was one comment to note from a respondent who flagged that there does not appear to be an obligation to provide substitute services before the removal of the existing provisions.

As stated above in this section, the TIBCO Service would not be decommissioned until the BMRS Transition date was agreed by the Panel or delegated authority. Therefore, this should provide current TIBCO users with the assurance that TIBCO would not be removed until the Insights solution had met industry standards.

Do you agree with the Workgroup that the amendments to the Code Subsidiary Documents in Attachment C delivers the intention of P454?			
Yes	No	Neutral/No Comment	Other
5	0	1	0

No respondent's disagreed, with all but one neutral response agreeing. One respondent reaffirmed that the redlined CSDs removes protocol-specific requirements which is consistent with P454.

Acceptance Criteria

As part of the P454 Assessment Phase, Elexon have clarified to the P454 Workgroup that any cessation of the TIBCO service (or the other BMRS endpoints) would only take place once the replacement platform's endpoints meet a set of criteria. The Acceptance Criteria, as per the table below, will be shared with the BSC Panel and Industry Stakeholders to measure the quality of the new platform and be accepted as the service of record for provision of BMRS data.

#	Criteria	Description	Priority
1	**Data coverage**	Data available from legacy endpoints accessible on Insights platform	Must have
2	**Latency**	Minimal delay from receipt of data from upstream source to making data accessible on all endpoints within 2 minutes (Target 1 minute)	Must have
3	**Availability**	Uninterrupted service with minimum availability of service of 99.9% but target to meet vendor availability of 99.99%	Must have

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4	**Data accuracy**	Indicative Settlement calculations correctly publish imbalance Settlement data for a Settlement Period based on parameters available shortly after effective that Settlement Period	Must have
5	**Data integrity**	No error or corruption of records while processing upstream data from source, e.g., NGESO data or REMIT data	Must have
6	**Performance**	Functional and responsive to users e.g., average response of APIs (95th percentile) within 4 seconds	Must have
7	**Service support 24/7**	Full-service model with Application supported 24/7	Must have
8	**Information Security**	Application and policies in line with enterprise information security standards	Must have
9	**Incidents**	No outstanding high severity incidents (P1 or P2)	Must have
10	**Documentations**	Documentations available for users to access the endpoints including Schema definitions, implementation guide and developer Portal updated	Should have
11	**Functionality**	Core Functionality of the legacy platform and additional related functionality made available via the replacement service	Should have
12	**Product backlog roadmap**	Future enhancements and capabilities post go live published and updated	Could have
13	**Service Status Notification**	Automated alerting and outage notification capability built in	Could have

Assessment Procedure Consultation Responses

Do you have any comments on the Acceptance Criteria presented in the table in Section 3 of the main Assessment Procedure Consultation document?

Two respondents provided feedback to the Acceptance Criteria.

One stated that all services provided by the existing TIBCO solution should be available within the Insights Solution. Therefore, for 1. Data Coverage – all transactions currently supported today must be covered. Plus, 11. Functionality – the new system needs to support the historic data download function, if not provided in main data coverage.

Another respondent stated that 11. [Core] Functionality of the legacy platform should be a Must Have, rather than a Should Have. Other than deprecated functionality through this and other proposals, or where agreed for deprecation through design consultations with users. They suggested for 6. Performance, they would expect a 20MB API call to have longer internal processing than a 20kB API call. They suggested the latency should be defined relative to the size of the data set thus allowing for more confident percentile target.

They also strongly support the aspiration to target 99.99% uninterrupted service as part of 3. Availability (~8 hours outage per year) and believe the minimum availability should be progressively increased toward this.

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Proposed progression for Acceptance Criteria

While the Acceptance Criteria are not intrinsically part of P454, which only seeks to make the BSC technology agnostic regarding the BMRS, Elexon plan to share the final Acceptance Criteria with the BSC Panel on 9 November 2023.

Post P454, once Elexon are satisfied that the Acceptance Criteria are met, Elexon will go to the BCB and BSC Panel to seek endorsement for the BMRS Transition Date.

Benefits

The primary intent of P454 is to make the BMRA data provision service of the BSC technology and vendor agnostic and not impose infrastructure solutions; the consequential benefits are that this will enable innovation and allow Elexon to capitalise on future technology offerings for benefit of the Industry.

P454 is a critical change to allow Elexon to provide a better service to consumers of market data. The High Grade Service obligation in the BSC currently constrains Elexon to use outdated infrastructure for other services such as Data Push and the BMRS website,

Wider work to retire and replace TIBCO has significant benefits - replacing a service that is used by a minority of BSC Parties (that is nevertheless funded by all BSC Parties) and, in practice, unavailable for anyone wishing to on-board the service with a modern, user-friendly and reliable service which is free for its users.

Alternative solution

The Workgroup did not identify any Alternative Modifications to P454.

Do you agree with the Workgroup that there are no other potential Alternative Modifications within the scope of P454 which would better facilitate the Applicable BSC Objectives?			
Yes	No	Neutral/No Comment	Other
6	1	0	0

All respondents except one agreed with there being no Alternative Modifications to P454. Two provided further comments, one stating that removing protocol-specific references in the BSC is most consistent with the BSC objectives. Another stated that the proposed document change is the best way forward to facilitate the decommissioning of TIBCO and the eventual move to the new system.

One suggestion for an Alternative Modification was received, proposing to extend the lifetime of TIBCO but to target the costs directly to the users of the service rather than socialising them. Elexon considered this option, however, if the High Grade Service obligation was maintained, then this would require on premise infrastructure with the new version of TIBCO running in parallel to the insight's solution, this would be a more inefficient option. It is also noted that Multiple options were explored as part of Issue 95 with P454 being the most suitable outcome. The Alternative Modification was shared with the Workgroup at the third meeting on 17 October 2023 who agreed that this was not a viable option and would be out of scope of this Modification. Therefore, concluding that that the originally proposed solution is the only viable solution to bring forward as part of P454.

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4 Impacts & Costs

Estimated costs of P454

We have defined cost impacts as:

- High: >£1 million
- Medium: £100-1000k
- Low: <£100k

Implementation cost estimates

As P454 is a document-only change to BSC Section V and Section D, plus CSDs 'BMRA Service description' and 'Communication Requirements Document', the total cost of implementation of P454 would be **low** and less than £1k.

Respondents to the APC focused on costs of the decommissioning of TIBCO and transitioning to the Insight's solution. Medium costs were cited by two respondents, one of which stated that P454 would not directly impact their organisation as long as the High Grade Service is maintained. One stated Low cost for transitioning to IRS, but did not mention cost to implement P454 directly. The remaining 3 respondents stated no cost to implement P454.

Ongoing Costs

There are no ongoing costs arising directly from P454, however this Modification will enable the decommissioning of the TIBCO service. This will impact not just TIBCO users, but should bring savings across all BSC Parties as TIBCO costs are split via Charges across all BSC Parties. By replacing and decommissioning the TIBCO service, this should alleviate ~£300,000 annual operational spend including the licenses, the costs to operate, support and maintaining the High Grade infrastructure and TIBCO service. Elexon also estimates one off cost avoidance around £110k for an imminent upgrade.

Consultation responses suggested little or no ongoing costs regarding the decommissioning of TIBCO from their systems and transitioning to the new solution.

P454 impacts

Impact on BSC Parties and Party Agents		
Party/Party Agent	Impact	Estimated cost
None anticipated on implementation	N/A	N/A

Impact on the NETSO	
Impact	Estimated cost
None anticipated	N/A

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Impact on BSCCo		
Area of Elexon	Impact	Estimated cost
None anticipated	N/A	N/A

Impact on BSC Settlement Risks
None anticipated, this is an enabling change which is not expected to impact Settlement in any way. Workgroup views are that P454 will not impact settlement, and no risks were identified in the Assessment Consultation.

Impact on BSC Systems and process	
BSC System/Process	Impact
N/A	N/A

Impact on Code	
Code Section	Impact
BSC Section V	Define BMRS Transition Date in 1.1.2. Removal of High Grade Service in 2.3, subject to the BMRS Transition Date.
BSC Section D	Removing details around charges payable in respect of the High Grade Service in Annex D-3 paragraph 3.3. Subject to the BMRS Transition Date.

Impact on MHHS
There are no impacts on MHHS identified.

Impact on EBGL Article 18 terms and conditions
P454 is not expected to impact the BSC provisions that constitute EBGL Article 18 balancing terms and conditions. None were identified during the Assessment Consultation or by the Workgroup.

Impact on Code Subsidiary Documents	
CSD	Impact
BMRA Service Description	To clarify that after the BMRS Transition Date, there will be a single grade of service
Communication Requirements Document	Split the Communication Requirements Document into two documents. Document A and B respectively. To clarify that there is only one grade of service applicable for the ECVAA Web Service. To reflect that arrangements for accessing the BMRS will change from the BMRS transition date

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Impact on other Configurable Items	
Configurable Item	Impact
None	None identified

Impact on Core Industry Documents and other documents	
Document	Impact
Ancillary Services Agreements	None anticipated at this stage.
Connection and Use of System Code	
Data Transfer Services Agreement	
Distribution Code	
Grid Code	
Retail Energy Code	
Supplemental Agreements	
System Operator-Transmission Owner Code	
Transmission Licence	
Use of Interconnector Agreement	

Impact on a Significant Code Review (SCR) or other significant industry change projects
Ofgem confirmed on 11 April 2023 that P454 is outside of the scope of SCR.

What are the consumer benefit areas?

1) Will this change mean that the energy system can operate more safely and reliably now and in the future in a way that benefits end consumers?

2) Will this change lower consumers' bills by controlling, reducing, and optimising spend, for example on balancing and operating the system?

3) Will this proposal support:

i) new providers and technologies?

ii) a move to hydrogen or lower greenhouse gases?

iii) the journey toward statutory net-zero targets?

iv) decarbonisation?

4) Will this change improve the quality of service for some or all end consumers. Improved service quality ultimately benefits the end consumer due to interactions in the value chains across the industry being more seamless, efficient and effective.

5) Are there any other identified changes to society, such as jobs or the economy.

Assessment Procedure Consultation Responses

Do you agree with the Workgroup's assessment of the impact on the BSC Settlement Risks?			
Yes	No	Neutral/No Comment	Other
6	0	0	0

Do you agree with the Workgroup's assessment that P454 does not impact the European Electricity Balancing Guideline (EBGL) Article 18 terms and conditions (T&Cs) held within the BSC?			
Yes	No	Neutral/No Comment	Other
6	0	0	0

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Respondents agreed unanimously that P454 would not impact the BSC Settlement risks or impact the EBGL Article 18 T&Cs held within the BSC.

Will P454 impact your organisation?				
High	Medium	Low	None	Other
0	2	2	2	1

Two respondents noted a Medium level impact. However, one of which stated that the removal of the obligation to provide the High-Grade Service does not directly impact their organisation as long as Elexon maintain the High Grade Service. Their main concern was about P454 giving Elexon the ability to unilaterally withdraw this service. They also stated that the target date of March 2024 for the decommissioning of TIBCO is not acceptable without agreement with current users. The other respondent citing Medium level impact noted all system changes required for the decommissioning of TIBCO but did not comment specifically on the P454 Modification impacts.

Two responded with Low level impact, with one stating that they use data push, therefore the removal of TIBCO would impact their ability to backfill any data push gaps. They did not comment however on specific impacts caused by P454 itself. The other who stated a low impact, stated that this change would enable a better roll-out of the insight's solution, which is important to their business.

Two stated that there are no impacts to their organisations. One highlighted that general migration to Insights from TIBCO does have impacts on industry and these need to be managed. Another did not provide the extent of impact, but noted that P454 approval will materially impact how they advise energy industry clients on IT strategy and cloud adoption.

Overall, the responses indicate that P454 will not cause significant impacts itself. Respondents focused more on potential impacts caused by the decommissioning of TIBCO and the migration to the new Insight's solution, these have been noted by Elexon.

How much will it cost your organisation to implement P454?				
High (£>1million)	Medium (£100k-1million)	Low (<£100k)	None	Other
0	2	1	3	0

Two respondents stated there would be a Medium cost to their organisations to implement P454. One stating however, that the removal of the obligation to provide the High Grade Service does not directly impact the organisation, so long as Elexon maintain service. They note Elexon's intention of withdrawing the service by March 2024 therefore at a minimum they will monitor the risk of the service being withdrawn and as an action to manage the risk of withdrawal initiate a project to replace the existing solution. The other respondent who noted a Medium impact cited the costs for the decommissioning of TIBCO itself – these have been noted by Elexon.

One noted a Low cost as they are implementing an IRIS solution and continue to use data push. Three respondents said that there would be no cost to their organisations, with one

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stating that there is in fact a “negative cost” as there will be fewer potential protocols to interface with during the transition to Insights.

What will the ongoing cost of P454 be to your organisation?				
High (£>1million)	Medium (£100k-1million)	Low (<£100k)	None	Other
0	0	3	3	0

Three respondents noted Low ongoing costs relating to the ongoing costs from the removal of TIBCO service. The other respondents stated there would be no ongoing costs for their organisations.

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5 Implementation

Recommended Implementation Date

The Workgroup recommends an Implementation Date for P454 of:

- 5 Working Days after Authority decision, as part of a special BSC Release.

Assessment Procedure Consultation Responses

Do you agree with the Workgroup's recommended Implementation Date?			
Yes	No	Neutral/No Comment	Other
5	1	0	1

There were 7 responses to this question with most respondents agreeing. One reaffirmed the suggested implementation date is appropriate as that P454 is a document-only change. Another highlighted approaching deadline for TIBCO renewal, and that industry would be harmed if the Insights solution's development is delayed, therefore P454 should be implemented as soon as possible.

One stated that decommissioning dates are more relevant and that there should be a minimum of 6 months between approval and decommissioning and should be managed directly with those impacted.

One respondent who disagreed felt that P454 would remove the obligation for Elexon to provide the service and were concerned that Elexon could do so unilaterally without agreement from TIBCO users.

How long (from the point of approval) would you need to implement P454?		
0 months	Implemented by March 2024	Other
3	2	1

There were 6 responses to this question, with 3 stating they would not need any time to implement P454. Two respondents stated that they were targeting the deadline of March 2024 to move to the new Insight's solution and did not reference the P454 document-only change.

Another respondent noted that P454 is a facilitative document-only change and therefore there is no time required to implement. They did note however, it will take their organisation a minimum of 6 months to manage the retirement of the High Grade Service/TIBCO, subject to the replacement service meeting the capabilities of the current service.

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6 Workgroup's Discussions

The P454 Workgroup met on 18 July, 5 September and 23 October 2023. The Workgroup agree with the aims and proposed solution for P454 Modification of removing obligations in the BSC of providing BMRS via TIBCO and the High Grade Service. At the third Workgroup on 23 October 2023, the APC consultation responses were considered and discussed.

Service Standards

At the first Workgroup meeting one Workgroup member stated that the BSC should have 'Service Standards' for the replacement BMRS solution such that Elexon could be held accountable for any drop in service. Elexon took this action away to see if this solution was viable and how this could be incorporated into the BSC.

At the second Workgroup meeting one Workgroup member reiterated the previous concern of the first meeting, regarding holding Elexon to account to provide certain Service levels. They asked why change the BSC and remove TIBCO obligations, if there is no current mechanism in the BSC to hold Elexon to account to provide the Service.

The Proposer's Representative followed-up on this Action and informed the Workgroup that to effectively guarantee service levels, Elexon will focus on the contractual arrangements with the Technology Service Provider used for Insights Solution, this mirrors what Elexon currently do for the BMRS Service. They also highlighted that Elexon had investigated the possibility of including standards in the Legal Text and CSDs, however, BSC Section V 'Reporting' supersedes any CSDs and currently removes any guarantees and has no commercial leverage. Elexon's approach is to include all service standards within the future BMRA contracts. For example, the SLAs in the contract should guarantee availability of at least 99.9%.

The Workgroup member was reassured by this and understood the method which Elexon would provide the incentives and commercial leverage to guarantee service levels. Another Workgroup member, reaffirmed their support that they do not think it is reasonable to hold Elexon responsible for guarantee of service [via the BSC].

At the third Workgroup meeting, one Workgroup member queried if there could be some kind of Service Standard and commitment from Elexon on uptime for the new service – they stated the BMR Service has been poor this year. The Proposer's Representative stated Elexon can consider general uptime and noted that SLAs are already presented to the Panel and Elexon will commit to do that moving forward for the new solution.

The Workgroup member, queried if Elexon could report who is at fault for any issues for upstream data and what has caused the fault as it would make debate more productive. The Proposer's Representative highlighted that issues with upstream data would not always be within Elexon's control but should be reported, for example NGESO data outages. However, agreed with the sentiment regarding reporting for general availability and noted Elexon will consider how to report these. Another Workgroup member noted that these types of reports are already available and the poor BM Reporting performance has been discussed at Panel level.

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Acceptance Criteria

A key area raised by the Workgroup at the first meeting was the requirement for Acceptance Criteria, such that the BSC Panel (following engagement with BMRS users) could determine that it was suitable to switch BMRS Service from the legacy application to the new solution, Insights Solution. One Workgroup member highlighted that although there are approximately 20 users of TIBCO, they are a large part of the Market. They would want to see a set of 'no-go or go' set of criteria. The Proposer's Representative noted this as an Action and that it should be discussed with the Panel. The Workgroup member suggested it could be delegated to a sub-committee – just to ensure Elexon demonstrate to industry that these criteria have been met.

At the second Workgroup meeting, the Proposer's Representative presented a list of proposed Acceptance Criteria. One Workgroup member asked if 'Functionality' could be an additional criterion, as they rely on historic message trails and they want to be able to go back to previous messages. They highlighted that there would be complications of writing code for APIs and not knowing what data is missing.

They mentioned that 'Functionality' would be a 'Day 1' acceptance criteria, as they would want to inject it [the new solution] into their architecture. An Action was taken away for Elexon to add in 'Functionality' into the acceptance criteria, forming 13 criteria in total. The Acceptance Criteria can be found as per the table in Section 3.

The Proposer's Representative informed the Workgroup member that the new Insights Solution provides automatic recovery and backfill data up to 3 days if a subscriber has been disconnected but the APIs can be queried for periods extending 3 days. Elexon are also creating a prototype where previous messages should be available.

At the third Workgroup Acceptance Criteria were discussed further. One Workgroup member queried as to why user readiness is not part of the Acceptance Criteria, as this would be the type of information that the BSC Panel would want to see - all projects they had been involved to date has had processes around user readiness. Another Workgroup member disagreed about this criterion being raised, as the transition to the Insight's solution is about an organisation's agility, capability and ability to respond. They noted that Elexon has engaged for many years and enabled data push which was an alternative solution to the High Grade Service. They stated that Insights Solutions has so many benefits which should not be missed and Elexon has been working closely with participants to develop this; the onus is also on participants to engage. The workgroup member also highlighted Industry should not keep paying high costs and be held back by those who are slower to adopt the new solution. Elexon took away an action to consider how user readiness could be reported and supported.

Further feedback to the Acceptance Criteria from the APC was covered in the meeting. APC feedback focused on both 1. Data Coverage (Must have) and 11. Functionality (Should have). Regarding 1. Data Coverage, it was outlined that Elexon are building an archive capability which is being developed until the end of this year for which users will be able to access. For 11. Functionality, Elexon will ensure users will get the data, however, there will be better ways to expose data based on user feedback, therefore should be a "Should have" priority.

Elexon noted that one of the aims of the Insight's solution is to rectify the issues with the on premise infrastructure required for the High Grade Service. They stated Elexon want to be in a place where it can provide data to its customers via the cloud. They reaffirmed that P454 is a document only change which allows Elexon to provide another service that is not

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TIBCO. It should be noted the Acceptance Criteria is wider than the scope of P454, which is a small piece of the puzzle to the wider changes to the Insights solution.

Transition date from BMRS to the new Solution (IRIS)

Note, P454 is a document-only change to make the BSC vendor agnostic for the BMRS and to allow Elexon to implement better technology solutions for consumers of Market data. The Modification itself will not cause current TIBCO users to lose access to the Service, however, once the BMRS Transition Date has been agreed by the BSC Panel (or delegated authority), it will inform the cessation of the High Grade Service. The discussions below are part of the wider impacts of transitioning to the new service, i.e., the decommissioning of TIBCO and the implementation of IRIS.

At the first Workgroup meeting, the Workgroup queried the drivers for the March 2024 target date for switching fully to the new Service and retiring TIBCO. A few Workgroup members highlighted that industry would be focused on winter trading up until and within this period, therefore making the target date potentially difficult for some TIBCO users.

One Workgroup member asked what the plan would be if not all TIBCO users can accommodate the timeline and what the cost would be if the deadline was extended beyond March 2024. Another Workgroup member mentioned how the Insights project is being delivered in an agile approach and that if Elexon do not complete the project by December 2023, they will struggle to complete moving over to the new service by March 2024. An Elexon representative reminded the Workgroup that P454 is an enabling Modification, so P454 itself will not leave users stranded. Also, any changes to TIBCO obligations will need to be considered by the BSC Panel because they are in the BSC.

The Proposer's Representative assured the Workgroup that there would be engagement with the TIBCO users throughout the process from Elexon, to work through a transition plan. The Proposer's Representative addressed the target of March 2024 – this is driven by the licence renewal date with TIBCO, therefore if March 2024 is not achieved then there would be extra cost of renewing the licence. However, the Proposer's Representative informed the Workgroup that if industry do not think March 2024 is achievable, then Elexon will need to look at what is feasible across the board and then work on a plan with BSC Parties.

Further discussions on the transition date were had at the third Workgroup meeting. One Workgroup member cited concern that there is nothing in P454 Modification that stops Elexon unilaterally switching off the TIBCO Service. Another Workgroup member assured them that the Panel would be the authority to ensure that users' interests are being protected. The Proposer's Representative also highlighted that the replacement will not become the service of record until a) the Acceptance Criteria are met and b) the transition period is given to the current users. The Workgroup member who had concerns stated that the main issue is around lack of change control for their organisation.

One Workgroup member believed the other Workgroup member's concerns are to be a different provision to what's in the P454 legal text, i.e., the Workgroup member with concerns wanted an objective decision on when to switch off the service. Elexon clarified that the legal text is currently drafted to states that the Panel will decide the eventual 'BMRS transition date'. The Chair also noted that the Acceptance Criteria will be provided to the Panel and all documentation for the Modification is public and it would incur reputational damage if Elexon were to go against what had been publically stated and committed to.

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The Workgroup member with concerns felt one cannot dissociate between P454 and the decommissioning of TIBCO. They stated that a risk averse company would wait until the new solution is ratified before switching over. Elexon reaffirmed that this is an enabling change and P454 itself is about making the BSC Technology Agnostic. The timing of the change is not necessarily relevant, e.g., it could have been done last year, or before, however it is now a need due to the transition from TIBCO to IRIS.

The Workgroup member sought clarity, as they stated if the Modification is approved in November 2023, then the required 6 month transition period for their organisation will take them to May 2024, which goes beyond the March 2024 deadline outlined by Elexon. The Proposer's Representative stated that March 2024 is the deadline, the view is that the application is there and ready for organisations to use to transition sooner, with the last set of information being added to the new service in Dec 23/Jan 24 time. They reiterated the reason for the March 2024 deadline is due to the licences for TIBCO finishing then.

However, the Proposer's Representative noted that Elexon may need to revisit the deadline, but May 2024 might be a bit too much of a stretch. Another Workgroup member stated they are not sure the deadline [to switch of the High Grade Service/TIBCO] of March 2024 would be viable, as a major player in the market is stating that they cannot meet that timescale. They noted that the organisation had the High Grade Service through no fault of their own as it was the only option for earlier market participants.

The Proposer's Representative felt there needs to be a compromise and to look at the whole market and the impact if the High Grade Service is continued beyond March 2024. A Workgroup member reaffirmed that they won't get sign off from their organisation until they have the ratified solution with a 6 month timescale to implement it. Another Workgroup member expressed that they would not want to be held back by one or two parties who would not be able to make the deadline and pay for costs incurred for maintaining the High Grade Service, when the majority of industry had made the switch.

The Proposer's representative noted that one option that Elexon are looking into is running TIBCO unsupported beyond March 2024, to May 2024. A few Workgroup members responded positively to this. One Workgroup member stated that their organisation successfully ran TIBCO unsupported, therefore there is a potential TIBCO will carry on working unsupported for users beyond March 2024. The Proposer's Representative noted this as an action to explore the possibility of extending the TIBCO service unsupported, thus allowing a buffer for those that may not reach the March 2024 deadline.

The Proposer's representative highlighted that this is also relevant to the BMRS website and data push with 100,000s of users of the BMRS data. Therefore, Elexon will not just take away the service, as the new solution would need to prove itself to be the service of record. The Proposer's representative stated that the feedback from the Workgroup will be presented to the Panel as part of the future workstream to decommission TIBCO, post P454 approval. Plus, Elexon will engage with all users to ensure that they can transition over to the new service.

Workgroup views against Standard ToRs (c) to (f)

The final Workgroup view is agreement that P454 will not impact BSC Settlement Risks with one Workgroup member emphasising that Elexon should not underestimate the value of BMRS reporting to industry. The Workgroup agree that P454 is a document only change and agree with the Implementation Date of 5 WDs after Authority decision. They agree that there are no Alternative Modifications that better facilitate the BSC Objectives and that

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P454 would not be suitable for Self Governance, as it involves the removal of an obligation on BSCCo from the code, which would be most suitable for Ofgem to make a decision on.

Consumer benefits

Consumer benefits were covered in the third Workgroup meeting. The benefits scoped out in the Initial Written Assessment are presented in the table below.

Consumer benefit areas		
#	Consumer benefit	Identified impact
1)	Improved safety and reliability - No impact expected	• Neutral
2)	Lower bills than would otherwise be the case • This change is expected to facilitate the introduction of a replacement for TIBCO as a method for receiving BMRS data. Any new replacement will be free to users and not require a license fee (unlike the status quo) which will reduce the costs that are ultimately borne by the end consumer. A reduction in customer bills could also come about as a result of more parties being able to access real time BMRS data facilitating transparency and consequently facilitate competition by providing accessible, accurate information for informed decision-making, fostering innovation, and ensuring a level playing field for all market participants.	• **Positive**
3)	Reduced environmental damage - No impact expected	• Neutral
4)	Improved quality of service • This change is expected to facilitate the introduction of a replacement for TIBCO as a method for receiving BMRS data. The new replacement will be more seamless, efficient and effective than the current TIBCO set up and improve the quality of service for new and existing users	• **Positive**
5)	Benefits for society as a whole - No impact expected	• Neutral

One Workgroup member felt on the grand scheme of things it is neutral. Another highlighted that market entry is important as the Insight's solution will allow participants to get hold of accurate market data, also, TIBCO for their organisation was administratively burdensome.

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How would the retirement of the BMRS High Grade Service/TIBCO impact your organisation?	
Impacts	No impacts
5	2

***Note: responses to this question do not directly apply to P454, which is a document-only enabling change. However, feedback gained via this question will be included in the future workstream to decommission TIBCO and presented to the BSC Panel**

There were 7 responses to this question, with most stating that there will be impacts. One respondent highlighted that the High Grade Service/TIBCO is the primary method by which they receive updates to BMRS data. The retirement of TIBCO would require them to run a parallel solution which would be tested. Once the new solution meets the required standard, TIBCO would then be decommissioned from their systems.

Another provided the impacts to their systems – they noted however that the changes are not considered to be blockers and have a low level impact to their organisation. Another respondent, noted that they use the Archive to backfill missing data in their data push implementation.

One respondent noted no negative impact but the indirect impact of enabling the Insights solution is of vital importance to their business. Another respondent stated they were not directly impacted but cited that impacts of retiring the service could be significant for existing users, hence it's important that the transition is well managed. Two respondents noted no impacts to their organisation, with one stating a positive impact of allowing them to compete on a more level playing field.

Further discussion on these responses is included in Section 6 'Workgroup Discussions'.

Once the BSC Panel (or delegated authority) is satisfied the Insights Solution conforms to the Acceptance Criteria currently excepted by January 2024, Elexon will support a minimum transition period of 4 weeks before sunsetting the legacy application. Do you have any challenges in achieving the timescales and if so please provide further details and expected timescales?			
Yes	No	Neutral/No Comment	Other
2	4	0	1

***Note: responses to this question do not directly apply to P454, which is a document-only enabling change. However, feedback gained via this question will be included in the future workstream to decommission TIBCO and presented to the BSC Panel**

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There were 7 responses to this question. 4 stated there would be no issues with this time period. One stated that they have already started the transition away from TIBCO with the focus of implementing the IRIS solution, another stated that they have plenty of time and warning. One responded noted that the Insights solution generally has more consistent API data formats to work with than the legacy system and has more modern code samples.

Two respondents stated that there would be challenges to reach this timescale. One highlighted that they had been working to a timeline of March 2024 as reported by Elexon, rather than the 4 week transition period. Another stated that they require a minimum of 6 months to implement the required changes, assuming all of the current High Grade Services are provided. Their view is that a 4 week notice period from January 2024 is not acceptable. For their organisation, if P454 is approved in November 2023 then 6 months would be required to complete the project, meaning Elexon would need to maintain the TIBCO service through May 2024.

Another respondent stated 4 weeks is a very short period and suggested a transition plan are agreed with users on a case-by-case basis with any costs of extending support being recovered from those users rather than wider industry.

Further discussion on these responses is included in Section 6 ‘Workgroup Discussions’.

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7 Workgroup's Conclusions

The Workgroup members **unanimously agree** that P454 would better facilitate Applicable BSC Objective (d) and therefore, should be **approved**. The remaining BSC Objectives, (a), (b), (c), (e), (f) and (g), were all agreed to be neutral.

Does P454 better facilitate the Applicable BSC Objectives?		
Obj	Proposer Representative's Views	Workgroup Members' Views[17]
(a)	• Neutral	• Neutral
(b)	• Neutral	• Neutral
(c)	• Neutral	• Neutral
(d)	• **Positive**	• **Positive** (Unanimous)
(e)	• Neutral	• Neutral
(f)	• Neutral	• Neutral
(g)	• Neutral	• Neutral

Applicable BSC Objective (d)

By making the BSC vendor agnostic, P454 is expected to improve the efficiency of transitioning to newer systems.

P454 will promote provision of BMRS data to industry in the most efficient way. The status quo - continuing to support a legacy system, with increasing costs and a small user base - is not economically efficient given modern low cost alternatives. Nor is it operationally efficient, as the maintenance and change of the TIBCO service is high compared to alternative methods as is the on-boarding process.

Removing the TIBCO requirement from the BSC facilitates the transition to services that are more accessible, more reliable and more cost efficient. The Workgroup agreed that P454 would better facilitate BSC Objective (d).

Assessment Procedure Consultation Responses

Do you agree with the Workgroup's initial view that P454 does better facilitate the Applicable BSC Objectives than the current baseline?			
Yes	No	Neutral/No Comment	Other
7	0	0	0

All respondents agreed that P454 does better facilitate BSC Objective (d), Promoting efficiency in the implementation of the balancing and settlement arrangements.

Self-Governance

The Workgroup agreed that P454 should not be considered as a Self-Governance, on the basis that is removes an obligation from the BSC and therefore impacts the governance arrangements (Self-Governance criterion (a)(v)).

[17] Shows the different views expressed by the other Workgroup members – not all members necessarily agree with all of these views.

What are the Applicable BSC Objectives?

(a) The efficient discharge by the Transmission Company of the obligations imposed upon it by the Transmission Licence

(b) The efficient, economic and co-ordinated operation of the National Electricity Transmission System

(c) Promoting effective competition in the generation and supply of electricity and (so far as consistent therewith) promoting such competition in the sale and purchase of electricity

(d) Promoting efficiency in the implementation of the balancing and settlement arrangements

(e) Compliance with the Electricity Regulation and any relevant legally binding decision of the European Commission and/or the Agency [for the Co-operation of Energy Regulators]

(f) Implementing and administrating the arrangements for the operation of contracts for difference and arrangements that facilitate the operation of a capacity market pursuant to EMR legislation

(g) Compliance with the Transmission Losses Principle

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Therefore, it sensible that Ofgem as the Authority make the decision to approve or reject this proposal.

EBGL Article 18 Terms and Conditions

The Workgroup agreed that P454 would not impact EBGL Article 18 Terms and Conditions.

What are the Self-Governance Criteria?

A Modification that, if implemented:
(a) does not involve any amendments whether in whole or in part to the EBGL Article 18 terms and conditions; except to the extent required to correct an error in the EBGL Article 18 terms and conditions or as a result of a factual change, including but not limited to:
(i) correcting minor typographical errors;
(ii) correcting formatting and consistency errors, such as paragraph numbering; or
(iii) updating out of date references to other documents or paragraphs;
(b) is unlikely to have a material effect on:
(i) existing or future electricity consumers; and
(ii) competition in the generation, distribution, or supply of electricity or any commercial activities connected with the generation, distribution, or supply of electricity; and
(iii) the operation of the national electricity transmission system; and
(iv) matters relating to sustainable development, safety or security of supply, or the management of market or network emergencies; and
(v) the Code's governance procedures or modification procedures; and

(b) is unlikely to discriminate between different classes of Parties.

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8 Recommendations

The P454 Workgroup invites the Panel to:

- **AGREE** that P454 **DOES** better facilitate Applicable BSC Objective (d);
- **AGREE** an initial view that P454 **should not** be treated as a Self-Governance Modification;
- **AGREE** that P454 **DOES NOT** impact the EBGL Article 18 terms and conditions held within the BSC;
- **AGREE** an initial recommendation to the Authority that P454 should be **approved**;
- **AGREE** an initial Implementation Date of **5 Working Days** after Authority decision:
- **AGREE** the draft Legal Text;
- **AGREE** the draft amendments to the Code Subsidiary Documents;
- **AGREE** that P454 is submitted to the Report Phase; and
- **NOTE** that Elexon will issue the P454 Draft Modification Report (including the draft Legal Text) for a 10 Working Day consultation and will present the results to the Panel at its meeting on 14 December 2023.

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Appendix 1: Workgroup Details

Workgroup's Terms of Reference

Specific areas set by the BSC Panel in the P454 Terms of Reference	Conclusion
a) Are the Workgroup comfortable with the removal of BSC obligations to provide BMRS Data via TIBCO and the High Grade Service?	The Workgroup are in favour of the removal of BSC obligations to provide BMRS Data via TIBCO and the High Grade Service. Some Workgroup members requested that Service Standards are included in the BSC. However, the Workgroup are initially comfortable that Service Standards will be provided via the subsequent contractual arrangements between Elexon and the Technology Service Provider.
b) Should this Modification be approved, is it appropriate for Elexon to retire the TIBCO service? If so, what criteria should be met first?	The Workgroup agreed that if this Modification is approved then it is appropriate for Elexon to retire the TIBCO service. However, this is subject to the Acceptance Criteria, agreed by the BCB and the BSC Panel, being met. At the third workgroup meeting, user readiness was also discussed as part of allowing TIBCO to be retired. Elexon have taken this on board as an action to find ways to report and support user readiness.
c) How will P454 impact the BSC Settlement Risks?	The Workgroup agree that P454 would not impact BSC Settlement.
d) What changes are needed to BSC documents, systems and processes to support P454 and what are the related costs and lead times? When will any required changes to subsidiary documents be developed and consulted on?	The Workgroup agreed that P454 is a document only change, costing Elexon <£1k to implement. Documents impacted will be BSC Sections V and D. BMRA service description and Communication Requirements Document. The Workgroup agreed with the implementation date of 5 WD after Authority decision.
e) Are there any Alternative Modifications?	None raised by the Workgroup.
f) Should P454 be progressed as a Self-Governance Modification?	The Workgroup agreed that P454 should not be progressed as a Self-Governance modification.

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Specific areas set by the BSC Panel in the P454 Terms of Reference	Conclusion
g) Does P454 better facilitate the Applicable BSC Objectives than the current baseline?	The Workgroup's unanimously agree that P454 better achieves BSC Objective (d).
h) Does P454 impact the EBGL provisions held within the BSC, and if so, what is the impact on the EBGL Objectives?	The Workgroup believe that the redlining does not impact the EBGL Article 18 Terms and Conditions.

Assessment Procedure timetable

P454 Assessment Timetable	
Event	Date
Panel submits P454 to Assessment Procedure	13 April 23
Workgroup Meeting 1	18 July 23
Workgroup Meeting 2	05 Sept 23
Assessment Procedure Consultation	27 September 23 – 17 October 23
Workgroup Meeting 3	23 October 23
Panel considers Workgroup's Assessment Report	9 November 23

Workgroup membership and attendance

P454 Workgroup Attendance				
Name	Organisation	20 July 2023	05 September 2023	23 October 2023
Ivar MacSween	Elexon *(Chair)*	✓	✓	✓
Jacob Snowden	Elexon *(Lead Analyst)*	✓	✓	✓
Zaahir Ghanty	Elexon *(Proposer's Representative)*	✓	✓	✓
Mark De-Souza Wilson	Elexon *(Market Design)*	✓	✓	✓
Eli Treuhurz	Arenko	×	✓	✓
Jake Dear	Conrad Energy	✓	✓	×
Andrew Ball	Drax	×	×	✓
Guy Sturgess	Drax	✓	✓	✓
Jeff Penrose	Drax	✓	✓	×
Mark Hodder	Drax	✓	×	×
Phil Hewitt	Enappsys	✓	✓	✓
Alice Taylor	NGESO	✓	✓	✓
Anil Kulhar	NGESO	×	×	×

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P454 Workgroup Attendance				
Name	Organisation	20 July 2023	05 September 2023	23 October 2023
Jack Barclay	Outlook Energy	✓	✓	✓
Lee Simpson	RWE	×	×	✓
Paul Coates	RWE	✓	×	✓
Alan Mowatt	SSE	×	×	✓
Andy Colley	SSE	✓	✓	✓
Charles Clarke	Ofgem *(representative)*	×	×	✓
Ebere Ogwuegbu	Ofgem *(representative)*	×	×	✓

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