

Modification proposal:	Balancing and Settlement Code (BSC) P454: Removal of BSC obligations to provide BMRS Data via TIBCO and the High-Grade Service (P454)		
Decision:	The Authority ¹ directs that this modification be made ² .		
Target audience:	National Grid Electricity System Operator (NGESO), Parties to the BSC, the BSC Panel and other interested parties		
Date of publication:	27/02/2024	Implementation date:	Five working days after our decision date

Background

Elexon has been supporting a 20-year-old legacy system, the BSC High-grade service and TIBCO software, used to provide Balancing Mechanism Reporting Service (BMRS) data through a High-Grade communications line service software for BSC subscribers. Elexon has stated this legacy software has significant lead time, high operational costs, and bandwidth restrictions. The high operational costs of maintaining the legacy architecture are being 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) means that Elexon operational costs for TIBCO are not ring-fenced, resulting in all BSC Parties funding most of the operating expenses despite many BSC parties not using TIBCO.

TIBCO was implemented after the New Electricity Trading Arrangements (NETA) went live in 2001. NETA was introduced to provide the GB electricity industry with operational data relating to Balancing and Settlement processes. Elexon argues that the software is no longer fit for purpose because it cannot provide the required scaling to cater to Elexon's users. It

¹ References to the "Authority", "Ofgem", "we" and "our" are used interchangeably in this document. The Authority refers to GEMA, the Gas and Electricity Markets Authority. The Office of Gas and Electricity Markets (Ofgem) supports GEMA in its day to day work. This decision is made by or on behalf of GEMA.

² This document is notice of the reasons for this decision as required by section 49A of the Electricity Act 1989.

suffers from sporadic operational issues/unplanned outages and cannot accommodate industry changes at pace. This is shown in a recent response by NGESO, of a transmission issue that occurred whilst using TIBCO to upload large, zipped files from Elexon. The data was lost and could not be recovered, thereby causing disruption. This resulted in several wasted days for the ESO. The legacy architecture severely limits vertical and horizontal scaling, and the constraint on bandwidth means users do not always receive complete data updates³.

As part of a wider program of technology modernisation, Elexon plans to transition to provide BMRS data to BSC subscribers by using the Insights Realtime Information Service ("IRIS"), a cloud-based Data Push service, which is free to subscribe to, and allows the industry to gain valuable understanding of the enhanced data analytics and insights. IRIS provides substantially the same service as TIBCO, and the widespread uptake of IRIS means that TIBCO has not had any new subscribers since 2014.

Elexon believes that a cloud-based infrastructure will improve operational performance, cause fewer unplanned outages, and reduce maintenance. This will ultimately result in enabling faster transfer of data and better industry data.

The modification proposal

Elexon raised the modification proposal to the BSC Panel on 12 October 2023. P454 seeks to remove the obligation for the Balancing Mechanism Reporting Agent (BMRA) to provide BMRS data via a leased line (High-Grade service) using TIBCO as the underpinning technology.

The current version of TIBCO will run out of support by Elexon on the 31 March 2024, unless a significant technical upgrade is carried out and Elexon pays an estimated license cost of £500k. Elexon believes that the TIBCO Service cannot work efficiently in the new cloud platform, and the only way to continue to fulfil the existing BSC obligation would be to maintain the legacy system in parallel to the Elexon Kinnect service, which will result in increased cost and complexity. Elexon Kinnect is a flexible and scalable digital platform that

³ 2-156 Weeks ahead by BMU is restricted to once-daily updates on legacy endpoints.

enables BSC Parties to carry out tasks and manage accounts online via Insights Solution (IRIS) – to receive, process and publish data.

Panel members agreed that, to ensure BSCCo provides more cost-effective and/or higher quality options of technology services for BSC Parties, the BSC should be agnostic regarding specific technologies and vendors. P454 aims to change the BSC to be vendor-agnostic regarding BMRS. The modification aims to ensure flexibility, meet business' needs, and ensure the best interests of market participants always come first as opposed to being bound by limitations of TIBCO. The proposed replacement, IRIS, is a cloud-based data platform built on the current industry BMRS platform. The IRIS platform will provide parties with a more up-to-date and detailed data service, which Elexon believes will address the shortcomings of TIBCO.

The modification will not amend other obligations around the content or timeliness of reporting BMRS data once the BSC Panel has agreed upon the BMRS Transition Date. The Implementation Date is five working days from approval by the Authority. To do this, the Workgroup proposed modifying BSC Section V 'Reporting', BSC Section D' Cost Recovery and Participation Charges' and amending the Balancing Mechanism Reporting Agent Service Description.

The current version of TIBCO will run out of support due to being an on-premises legacy system which severely limits to vertical and horizontal scaling unless a significant technical upgrade is carried out. Elexon believes that the TIBCO Service cannot work efficiently in their new cloud platform, and the only way to continue to fulfil the existing BSC obligation would be to maintain the legacy system in parallel to Elexon Kinnect at a high cost and complexity due to duplicating the service.

The workgroup members unanimously agree that P454 would better facilitate Applicable BSC Objective (d) - (promoting efficiency in the implementation and administration of the balancing and settlement arrangements) and, therefore, should be approved. The modification will have a neutral impact on the remaining BSC Objectives.

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), referred to as the 'BMRS Transition Date', to be decided five working days from Authority approval.

The proposed solution for P454 is to remove the High-Grade Service from the BSC. Section V 'BSC Reporting'⁴ 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'⁵ and Annex D-3, the mention of 'High-Grade Service' will be removed. Further changes are required to CSD's 'Balancing Mechanism Reporting Agent Service Description'⁶ and 'Communication Requirements Document'⁷ to remove the High-Grade Service.

The proposed solution includes inputting a 'BMRS Transition Date' of March 2024; this would be when the new systems have met Acceptance Criteria, and the Panel would decide to switch to the new solution, thus assuring the industry that the new solution achieves the requirements of the BMRS before the legacy platform is decommissioned.

The Workgroup has suggested the Acceptance Criteria; which are data coverage and functionality. These criteria will allow the industry to assess the new system that will replace the legacy BMRS endpoints, including the APIs, website, Data Push Service and TIBCO. Elexon shared the Acceptance Criteria with the BSC Panel on 9 November 2023.

BSC Panel⁸ recommendation

⁴ <https://bscdocs.elexon.co.uk/bsc/bsc-section-v-reporting>

⁵ <https://bscdocs.elexon.co.uk/bsc/bsc-section-d-bsc-cost-recovery-and-participation-charges>

⁶ <https://bscdocs.elexon.co.uk/service-descriptions/balancing-mechanism-reporting-agent-service-description>

⁷ <https://bscdocs.elexon.co.uk/business-definition-documents/communication-requirements-document>

⁸ The BSC Panel is established and constituted pursuant to and in accordance with Section B of the BSC and [Standard Special Licence Condition C3 of the Electricity Transmission Licence](#).

At the BSC Panel meeting on 9 November 2023, the BSC Panel (the Panel) unanimously considered that P454 would better facilitate the BSC objectives, and the Panel therefore recommended its approval. The Panel unanimously agreed that P454 would better facilitate Applicable BSC Objective (d) and, therefore, should be approved. The remaining BSC Objectives were all agreed to be neutral by the BSC Panel.

Impact Assessment

We considered carrying out an Impact Assessment⁹ (IA), but we believe that the industry has conducted a suitable consultation (or assessment of impacts), and a further IA by Ofgem would not add value. We have decided that no additional IA or consultation is required by Ofgem.

Our decision

We have considered the issues raised by the modification proposal and the Final Modification Report (FMR) dated 14 December 2023. When considering this issue alongside the responses from the industry consultation(s) attached to the FMR¹⁰, we have concluded that:

- implementation of the modification proposal will better facilitate the achievement of the applicable objectives of the BSC¹¹ and
- directing that the modification be made is consistent with our principal objective and statutory duties.¹²

Reasons for our decision

⁹ Under statutory provisions required by S5a of the Utilities Act 2000 - [Utilities Act 2000 \(legislation.gov.uk\)](https://www.legislation.gov.uk/ukpga/2000/31/section/5a) See Ofgem IA Guidance - [Utilities Act 2000 \(legislation.gov.uk\)](https://www.ofgem.gov.uk/consult/condocs/ia/ia_guidance.htm)

¹⁰ BSC modification proposals, modification reports and representations can be viewed on the [Flexon website](https://www.flexon.com).

¹¹ As set out in [Standard Condition C3\(3\) of the Electricity Transmission Licence](https://www.ofgem.gov.uk/consult/condocs/standard-condition-c33).

¹² The Authority's statutory duties are wider than matters which the Panel must take into consideration and are detailed mainly in the Electricity Act 1989.

The energy sector is evolving its data capabilities continually. As a result, some legacy digital infrastructure is to be expected. When a more suitable replacement for a legacy system is made available, as IRIS is considered to be for the TIBCO service, it will facilitate the digitalisation of the sector to replace legacy infrastructure in as timely a manner as practicable.

Codes, and the services provided by Code Administrators or service providers, should not allow for vendor lock-in and should, where possible, be system or platform agnostic. The trend of moving services to cloud rather than on-premises is reflected in this code modification, and we support this direction of travel.

We consider this modification proposal will better facilitate BSC objectives through having a positive impact on objective (d) and a neutral impact on the other BSC objectives.

In coming to our decision, we have considered those companies still using the legacy TIBCO, and the possible impact on their business practices. We are of the view that the impact of this modification is either positive or neutral with the objectives of the BSC, and that the few remaining users of TIBCO can migrate with minimal impact.

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

The aim of P454 is to change the BSC to vendor-agnostic regarding BMRS to ensure flexibility, allowing for agile adaptability to changing needs or innovations. This ensures that solutions are based on the evolving needs of the industry rather than being dependent on a single product, vendor, or platform. This modification is an enabling, document-only change, as it does not require any new services/behaviour change from the BSC user group; instead, it just changes the wording of some of the obligations on how BSC party members should act.

As a document-only change, we understand that P454 does not impact The Electricity Balancing Guideline (EBGL) objectives or EBGL conditions held within the BSC. We consider the modification removes an outdated restriction on Elexon which will enable it to act in the

best interests of its customers by implementing a modernised, scalable, and efficient solution for reporting BMRS data.

We consider that, whilst the modification does not directly replace TIBCO, the reality of this modification is that TIBCO which is a service that is used by a minority of BSC Parties (which all BSC Parties nevertheless fund), will be replaced with an improved service. We expect Elexon to have undertaken a comprehensive tendering/procurement procedure to determine the effectiveness of replacement options before implementing the new IRIS system running in parallel. Elexon stated that TIBCO has the following shortcomings:

- difficulty making changes to the platform, leading to increasingly higher maintenance, licensing, and support costs.
- High cost and time requirements to change the existing platform or deliver new services.
- A decline in operational performance can lead to an increase in the amount of time it takes to fix the BMRS if there is an unplanned outage or problem¹³.

The modification will introduce a more flexible arrangement for the future provision of BMRS data using the new platform, IRIS, and ensure that Elexon, as the current BSCCo, can continue to meet the industry's future needs. We are approving this modification as it will remove barriers that tie Elexon to the provision of BMRS data via TIBCO technology.

Elexon has stated in the Final Modification Report that it is committed to providing a resilient, high availability, real-time data service through more modern data endpoints to replace the High-Grade Service's ageing on-premise infrastructure that can no longer be sustained efficiently and economically as a condition for replacing BMRS Data via TIBCO and the High-Grade Service with IRIS. Elexon believes the IRIS is a suitable long-term substitute for TIBCO and we concur with that belief.

¹³ Kinnect Insights Solution service - Elexon BSC

Decision notice

In accordance with Standard Condition C3 of the Transmission Licence, the Authority hereby directs that modification proposal BSC P454: Removal of BSC obligations to provide BMRS Data via TIBCO and the High-Grade Service be made.

**Liam Bennett****Head of Energy System Digitalisation**

Signed on behalf of the Authority and authorised for that purpose