Initial Authority Led SCR Modification Report

P439 'Enabling BSCCo to undertake development of the EDA-based Data Integration Platform'

This Modification makes changes to the Balancing and Settlement Code (BSC) to enable Elexon, in its capacity as the Market-wide Half Hourly Settlement (MHHS) Implementation Manager, to develop the Event Driven Architecture (EDA) based system for MHHS, which will be known as the Data Integration Platform (DIP).

The proposed changes place specific obligations on the MHHS Implementation Manager to ensure effective and timely development of the EDA-based DIP and a timely transition to an enduring operator. This Modification is concerned only with the development of the DIP and not with its on-going operation.

This is an Authority Led SCR Modification Proposal. It will not follow the standard Modification Procedures but the timetable set by the Authority in accordance with BSC Section F5.3A.

P439 does not impact the European Electricity Balancing Guideline (EBGL) Article 18 Terms and Conditions held within the BSC.

This Modification is expected to impact:

- Elexon, in its capacity as BSCCo and as MHHS Implementation Manager
- Suppliers

ELEXON

Phase

- Initial Report
- Consultation
- Draft Report
- Final Report
- Implementation

Contents

About This Document

Not sure where to start? We suggest reading the following sections:

- Have 5 mins? Read section 1
- Have 15 mins? Read sections 1, 2, 3 and 4
- Have 30 mins? Read all sections
- Have longer? Read all sections and the annexes and attachments
- *You can find the definitions of the terms and acronyms used in this document in the BSC Glossary.*[1]

This is the P439 Initial Authority Led SCR Modification Report, which Elexon will present to the Panel at its meeting on 14April 2022. An Authority Led SCR Modification Proposal does not follow the standard Modification Procedures. Instead it will follow the timetable set by the Authority and the Authority Led SCR Modification Proposal procedure detailed in BSC Section F5.3A[2]. The Panel will consider the Proposal from Ofgem and provide its initial views on whether this change should be made. It will then consult on its views and the redlining before making its final recommendations to the Authority on 12 May 2022.

There are three parts to this document:

- This is the main document. It provides details of the solution, impacts, costs, benefits and proposed implementation approach.
- Attachment A contains the Authority Led SCR Modification Proposal form.
- Attachment B contains the draft redlined changes to the BSC for P439.
- Attachment C contains the letter sent by the Authority to the Panel outlining its approach to this Modification.

[1] https://www.elexon.co.uk/glossary/?show=all
[2] https://www.elexon.co.uk/documents/bsc-codes/bsc-sections/bsc-section-f-modification-procedures/

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1 Summary

Why Change?

An EDA-based DIP is proposed under the MHHS Target Operating Model (TOM). It is proposed by Ofgem that Elexon, as MHHS Implementation Manager, should be responsible for developing the DIP system to ensure MHHS Implementation timeframes can be met. However, Elexon is only permitted to undertake the activities outlined in BSC Section C 'BSCCo and its Subsidiaries'[3] and this does not include the EDA development. The ongoing operation of the EDA will be subject to Ofgem decision and is outside the scope of this Modification Proposal, as the exact contract details, and therefore the updates that would be required to Elexon's vires, are not yet known.

Solution

To implement the solution to this Modification, Elexon's functions and vires as Implementation Manager need be expanded to encompass the development of the EDA-based DIP. The Proposed amendments to BSC Section C can be found in Attachment B.

Impacts & Costs

The only costs expected as a direct result of this Modification are those incurred by Elexon to implement the necessary document-only changes. All other costs related to EDA development are part of the MHHS Implementation Manager costs.

Costs Estimates			
Organisation	Implementation (£)	On-going (£k)	Impacts
Elexon	<1k	0	Documents
Industry	0	N/A	Ongoing costs are already included in the MHHS Programme budget
Total		**0**	

Implementation

This Modification should be implemented **5 Working Days following Authority approval**. This will ensure that there is no undue delay in enabling BSCCo as MHHS Implementation Manager to begin development of the DIP.

Recommendation

The Proposer believes P439 better facilitates the achievement of Applicable BSC Objectives (c) and (d). We invite the Panel to agree with the initial evaluation of the Authority Led SCR Modification Proposal, including the impact on the BSC Objectives, the proposed implementation approach and recommend that the Modification is sent for a 10WD consultation, in line with the timetable Ofgem has set for this Modification.

[3] https://www.elexon.co.uk/the-bsc/bsc-section-c-bscco-subsidiaries/

What is an Authority Led SCR Modification Proposal?

An Authority Led SCR Modification Proposal is one of three routes available to the Authority for giving effect to a SCR. The Authority can direct NGESO to raise a Modification Proposal, it can raise a Modification Proposal itself or it can follow a process that is substantially non-BSC to direct changes to the BSC, as is the case with P439.

2 Why Change?

What is the issue?

MHHS will utilise the potential of smart meters to create a faster, more accurate Settlement process for all market participants. The additional meter readings available from smart meters will result in a big increase in the volume and frequency of metered data that needs to be Settled. The Architecture Working Group (AWG) recommended to Ofgem that 'event driven' reference architecture is developed to support MHHS implementation, based on 'business events' such as new meter readings or changes in registration.

In December 2021, Ofgem published its decision to support the AWG's recommendation[4]. The new architecture will be a hybrid comprising ElectraLink's DTN with minor modifications and a new EDA-based platform to meet the requirements of the MHHS TOM. The EDA-based system will be able to respond more quickly, and at a much higher scale than is possible with the current DTN systems and arrangements. The EDA-based platform will have the potential to process millions of messages per second and be dynamically scalable in response to heavy volumes of data.

Ofgem is in the process of deciding which party should be responsible for the ongoing governance, funding and operation of the EDA-based DIP for MHHS. Until an enduring owner for the service is selected, it is proposed by Ofgem that Elexon, as MHHS Implementation Manager, should be responsible for developing the DIP system to ensure that MHHS Implementation timeframes can be met.

The activities that Elexon are permitted to undertake are outlined in BSC Section C 'BSCCo and its Subsidiaries'. Currently, the activities stipulated in BSC Section C surrounding Elexon's role as the MHHS Implementation Manager do not include provisions for development of the DIP.

Should Elexon be selected as the responsible party for the ongoing operation, funding and governance of the DIP, Elexon's vires within the BSC will have to be expanded further to include this. However, this is currently out of scope for this Modification as the exact contract details, and therefore the updates that would be required to Elexon's vires, are not yet known.

Desired outcomes

The desired outcome from this Modification is to enable BSCCo, in its capacity as MHHS Implementation Manager, to design, build, test, and implement the DIP system before transferring it to an enduring DIP system operator for ongoing operation and governance.

You can find a copy of the Modification Proposal in Attachment A.

[4] https://www.ofgem.gov.uk/publications/decision-reference-architecture-market-wide-half-hourly-settlement-target-operating-model

3 Solution

Proposed Solution

To implement the solution to this Modification, amendments will be required to BSC Section C 'BSCCo and its Subsidiaries'. Proposed legal text for this Modification can be found in Attachment B.

The proposed legal text will amend the provisions for BSCCo as MHHS Implementation Manager, to allow it to:

- Develop the systems and processes that may be necessary to implement the Data Integration Platform;
- Procure a service provider to develop the system;
- Consult with potential enduring operators of the system; and
- Transfer the system to an enduring DIP system operator.

The proposed legal text provides for DIP system development costs to be included as MHHS Implementation Costs.

The proposed legal text also allows for a potential enduring DIP service operator to take over the development of the DIP if directed by the Authority and for the associated costs to remain MHHS Implementation Costs.

How are MHHS Implementation Costs Funded?

P413 'Market-wide Half Hourly Settlement Programme Manager'[1] was approved by Ofgem in April 2021. As a result of this Modification a new Specified Charge, the MHHS Implementation Management Monthly Charge, was established. This charge is payable by each Supplier for each Supplier Volume Allocation (SVA) Metering System for which a Supplier is Registrant on the first day of that month. The charge has been introduced to recover the MHHS Implementation Management costs.

Benefits

There are several benefits of utilising EDA-based DIP for MHHS. This type of system is flexible and extendable, to facilitate future industry changes. An EDA-based DIP could also streamline existing processes and assist other use cases such as faster switching and peer-to-peer trading.

Developing the EDA-based DIP through the MHHS Implementation Manager can help ensure that development of the DIP will align with the MHHS Implementation timetable, and its key milestones that rely on the DIP development.

The proposed Modification would ensure any potential enduring operator of the DIP could take over delivery following Ofgem's decision. Ofgem's consultation on the governance, funding and operation of an Event Driven Architecture closed on 18 February 2022, and Ofgem will take a decision on the enduring operation of the EDA-based DIP following consideration of the consultation responses. An Ofgem decision is expected by May 2022.

Legal Text

BSC Section C 'BSCCo and its Subsidiaries' will be impacted by this Modification, with proposed legal text in Attachment B.

[5] https://www.elexon.co.uk/mod-proposal/p413/

4 Applicable BSC Objectives

Impact of the Modification on the Relevant Objectives:	
Relevant Objective	Identified impact
a) The efficient discharge by the Transmission Company of the obligations imposed upon it by the Transmission Licence	Neutral
(b) The efficient, economic and co-ordinated operation of the National Electricity Transmission System	Neutral
(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	**Positive**
(d) Promoting efficiency in the implementation of the balancing and settlement arrangements	**Positive**
(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]	Neutral
(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	Neutral
(g) Compliance with the Transmission Losses Principle	Neutral

The Competition and Markets Authority (CMA), in its 2016 Energy Market Review findings[6], found that "the absence of a firm plan for moving to Half Hourly Settlement for domestic electricity customers… gives rise to an adverse effect on competition". Successfully implementing MHHS will benefit competition by developing a more effective and flexible energy market, and will encourage increased market entry. MHHS will facilitate the development of new, innovative business models, products and services that consumers can engage with in the future. The Proposer, Ofgem, therefore believes that P439 will better facilitate **Applicable BSC Objective (c)** as it will enable the delivery of the EDA-based DIP, which is central component of delivering MHHS.

The Proposer also believes that P439 will better facilitate the achievement of **Applicable BSC Objective (d)** as the EDA-based DIP will support MHHS Implementation. The implementation of MHHS and the supporting EDA-based DIP will result in a faster and more efficient settlement system and processes.

Ofgem believes that P439 has a neutral impact on all other Applicable BSC Objectives.

[6] https://assets.publishing.service.gov.uk/media/5773de34e5274a0da3000113/final-report-energy-market-investigation.pdf

5 Impacts & Costs

P439 will unlock Elexon's vires to enable it, as the MHHS Implementation Manager, to develop the DIP. As such, the only costs expected as a direct result of this Modification are those incurred by Elexon to implement the necessary document-only changes. All other costs related to EDA development are part of the MHHS Implementation Manager costs.

Estimated central implementation costs of P439

Implementation cost estimates			
Organisation	Item	Implementation (£)	Comment
Elexon	Documents	<1k	Amendments to one BSC Section
	Total	**<£1k**	

Estimated on-going costs of P439

On-going cost estimates		
Organisation	On-going (£k)	Comment
Elexon	0	-
Industry	N/A	Ongoing costs are already included in the MHHS Programme budget
Total	**0**	

P439 impacts

Impact on BSC Parties and Party Agents		
Party/Party Agent	Impact	Estimated impact
Suppliers	Suppliers will be funding the development, however these costs are already included in the MHHS Programme budget	L

Impact on the NETSO	
Impact	Estimated cost
No impact	N/A

Impact on BSCCo		
Area of Elexon	Impact	Estimated cost
Rules Management	Implementing necessary Code change	L

Impact on BSC Settlement Risks
No direct impact on BSC Settlement Risks, as this Modification is simply expanding Elexon's functions and vires as MHHS Implementation Manager.

Impact on BSC Systems and process	
BSC System/Process	Impact
No impact	No impact

Impact on BSC Agent/service provider contractual arrangements	
BSC Agent/service provider contract	Impact
No impact	No impact

Impact on Code	
Code Section	Impact
Section C	Expanding Elexon's functions and vires as MHHS Implementation Manager

Impact on EBGL Article 18 terms and conditions and objectives
It is the Proposer's and Elexon's view that P439 would not impact in BSC provisions that constitute EBGL Article 18 terms and conditions, as listed in Section F Annex F-2. It would also not create any new provisions that could be seen to constitute EBGL Article 18 terms and conditions.

Impact on Code Subsidiary Documents	
CSD	Impact
No impact	No impact

Impact on Core Industry Documents and other documents	
Document	Impact
Ancillary Services Agreements	No impact
Connection and Use of System Code	
Data Transfer Services Agreement	
Distribution Code	
Distribution Connection and Use of System Agreement	
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
P439 is an Authority Led SCR Modification Proposal directed under Ofgem's Electricity Settlement Reform Significant Code Review.

Impact of the Modification on the environment and consumer benefit areas:	
Consumer benefit area	Identified impact
1) Improved safety and reliability	**Positive**
2) Lower bills than would otherwise be the case	**Positive**
3) Reduced environmental damage	**Positive**
4) Improved quality of service	**Positive**
5) Benefits for society as a whole	**Positive**

This Modification is necessary for the successful development and implementation of the EDA-based DIP and the wider MHHS programme.

An EDA-based DIP will enable services to respond to real-world business events more quickly and at a much higher scale than at present. It will support the greater volume of data that will be generated through smart meters and MHHS processes. This allows industry to create more reliable and efficient processes for Settlement, providing an improved quality of service.

MHHS will increase competition between Suppliers, create a more flexible electricity wholesale market, and facilitate the development of new, innovative business models, products, and services. There will be numerous benefits, detailed in the Ofgem Impact Assessment attached to the April 2021 decision to proceed with MHHS[7]. The implementation of MHHS will have a positive impact on the reliability, sustainability, and quality of service in the GB electricity market.

MHHS will also ensure that charges to Suppliers for wholesale electricity more accurately match actual consumption, rather than relying on estimates of consumer usage. This will incentivise Suppliers to offer new tariffs and products that encourage a more flexible use of energy and help consumers to lower their bills. Ofgem estimate that MHHS will deliver net benefits to GB energy consumers in the range of £1.6bn-£4.5bn between 2021 and 2045.

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?

[7] https://www.ofgem.gov.uk/publications/electricity-retail-market-wide-half-hourly-settlement-decision-and-full-business-case

6 Implementation & Progression Timetable

Progression Approach

The normal Modification Proposal progression routes, such as Assessment or Report Phase do not apply as this is an Authority Led SCR Modification Proposal. An Authority Led SCR Modification Proposal must follow the process set out in BSC Section F5.3A, which enables Ofgem to direct the progression and implementation timetable. Ofgem's directed progression timetable for this Modification Proposal is set out on below.

P439 Progression Timeline

Activity	Date(s)
Initial Authority Led SCR Modification Report presented to Panel	14 April 2022
Authority Led SCR Modification Consultation (10WD)	19 April 2022 – 03 May 2022
Draft Authority Led SCR Modification Report presented to Panel	12 May 2022
Final Authority Led SCR Modification Report submitted to Authority	16 May 2022

Recommended Implementation Date

The Proposer suggests that this Modification Proposal, as a Code-only change, should be implemented **5 Working Days after Ofgem approval**.

This will ensure that there is no undue delay in enabling BSCCo as MHHS Implementation Manager to begin development of the DIP following Ofgem decision, and therefore to the implementation and benefits of MHHS.

7 Consultation Questions

We propose that the consultation consist of the following questions:

Questions
Do you agree with the Panel's initial recommendation that P439 should be approved?
Do you agree that the redlined changes in Attachment B deliver the intent of P439?
Do you agree with the Panel's initial view that P439 does not impact the EBGL Article 18 Terms and Conditions related to balancing held within the BSC?
Do you have any further comments on P439?

8 Recommendations

We invite the Panel to:

- **AGREE** with the initial evaluation of the Authority Led SCR Modification Proposal as detailed in this report;
- **AGREE** that P439:
    - **DOES** better facilitate Applicable BSC Objective (d);
- **AGREE** that P439 **DOES NOT** impact the EBGL Article 18 Terms and Conditions related to balancing held within the BSC;
- **AGREE** an initial recommendation that P439 should be **approved**;
- **AGREE** the timetable for implementing the proposed Authority Led SCR Modification Proposal;
- **AGREE** an initial Implementation Date of:
    - 5WD following Authority approval; and
- **AGREE** the draft redlined text in Attachment B.