











BSC Modification Proposal Form		At what stage is this document in the process?
<h1>P439</h1> <h2>Mod Title: Enabling BSCCo to undertake development of the EDA-based Data Integration Platform</h2>		<div>01 Modification</div> <div>02 Workgroup Report</div> <div>03 Draft Modification Report</div> <div>04 Final Modification Report</div>
<p>Purpose of Modification:</p> <p>This Modification makes changes to the Balancing and Settlement Code (BSC) to enable Elxon, 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).</p> <p>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.</p>		
<p>Is this Modification likely to impact any of the European Electricity Balancing Guideline (EBGL) Article 18 Terms and Conditions held within the BSC?</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>		
	<p>This is an Authority Led SCR Modification Proposal. It will 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 Section F5.3A.</p> <p>This Modification will be presented by the Proposer to the BSC Panel on 14 April 2022</p>	
	<p>High Impact:</p> <p>None</p>	
	<p>Medium Impact:</p> <p>Elxon, in its capacity as BSCCo and as MHHS Implementation Manager</p>	
	<p>Low Impact:</p> <p>Suppliers</p>	

Contents		 Any questions?
1	Why Change?	3
2	Solution	4
3	Relevant Objectives	5
4	Potential Impacts	7
5	Governance	10
Timetable		 Any questions? Contact: Jenny Sarsfield  jenny.sarsfield@elexn.co.uk  020 7380 4352 Proposer: Ofgem Proposer's representative: Andy MacFaul  halfhourlysettlement@ofgem.gov.uk Other: Sinead Quinn  halfhourlysettlement@ofgem.gov.uk
The Proposer has directed the following timetable:		
Initial Authority Led SCR Modification Report presented to Panel	14 April 2022	
Consultation (10WDs)	19 April 2022 – 03 May 2022	
Draft Authority Led SCR Modification Report presented to Panel	12 May 2022	
Final Modification Report submitted to Authority	16 May 2022	

1 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, we published our decision to support the AWG's recommendation. The new architecture will be a hybrid comprising ElectraLink's Data Transfer Network (DTN) with minor modifications and a new EDA-based platform to meet the requirements of the MHHS TOM. The EDA-based system would 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 or funding of the DIP.

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.

2 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 A.

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

- include specific details to allow BSCCo 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.

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.

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.

Ofgem's consultation on the governance, funding and operation of an Event Driven Architecture closed on 18 February 2022. Since then, we have been considering the responses carefully. We expect to publish our decision on the enduring operation of the EDA-based DIP later this month. The proposed Modification would ensure that any potential enduring operator of the DIP could take over delivery of the DIP development if required to do so, following Ofgem's decision.

3 Relevant 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

Applicable BSC Objective (c)

In the view of the Proposer this Modification 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. 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.

In its 2016 [Energy Market Review findings](#), the Competition and Markets Authority (CMA) found that “the absence of a firm plan for moving to Half Hourly Settlement for domestic electricity customers is a feature of the market for domestic and small and medium-sized enterprises (SMEs) retail electricity supply in Great Britain that gives rise to an adverse effect on competition through the distortion of Suppliers’ incentives to encourage their customers to change their consumption profile, which overall reduces the efficiency, and therefore the competitiveness, of domestic and microbusiness retail electricity supply.” Our decision to implement MHHS, as set out in our [decision of April 2021](#), effectively remedies this adverse effect on competition.

Applicable BSC Objective (d)

In the view of the Proposer this Modification will better facilitate Applicable BSC Objective (d) as the EDA-based DIP will support MHHS Implementation, which in turn will result in a faster and more efficient Settlement system and processes (as set out in [Ofgem's MHHS Decision Document](#) of April 2021).

4 Potential Impacts

Impacts on Core Industry Documents

Impacted Core Industry Documents			
<input type="checkbox"/> Ancillary Services Document	<input type="checkbox"/> Connection and Use of System Code	<input type="checkbox"/> Data Transfer Services Agreement	<input type="checkbox"/> Use of Interconnector Agreement
<input type="checkbox"/> Retail Energy Code	<input type="checkbox"/> Transmission License	<input type="checkbox"/> System Operator Transmission Owner Code	<input type="checkbox"/> Supplemental Agreements
<input type="checkbox"/> Distribution Code	<input type="checkbox"/> Grid Code	<input type="checkbox"/> Other (please specify)	<input checked="" type="checkbox"/> None

This Modification does not impact on any existing Core Industry Documents.

Impacts on BSC Systems

Impacted Systems				
<input type="checkbox"/> CRA	<input type="checkbox"/> CDCA	<input type="checkbox"/> PARMS	<input type="checkbox"/> SAA	<input type="checkbox"/> BMRS
<input type="checkbox"/> EAC/AA	<input type="checkbox"/> FAA	<input type="checkbox"/> TAAMT	<input type="checkbox"/> NHHDA	<input type="checkbox"/> SVAA
<input type="checkbox"/> ECVA	<input type="checkbox"/> ECVA Web Service	<input type="checkbox"/> Elexon Portal	<input type="checkbox"/> Other (Please specify)	<input checked="" type="checkbox"/> None

This Modification does not directly impact any BSC systems.

Impacts on BSC Parties

Impacted Parties			
<input checked="" type="checkbox"/> Supplier	<input type="checkbox"/> Interconnector User	<input type="checkbox"/> Non Physical Trader	<input type="checkbox"/> Generator
<input type="checkbox"/> Licensed Distribution System Operator	<input type="checkbox"/> National Electricity Transmission System Operator	<input type="checkbox"/> Virtual Lead Party	<input type="checkbox"/> None

This Modification does not directly impact any BSC Parties. Suppliers will be impacted as they will be funding the development, however these costs are already included in the MHHS Programme budget.

Parties have had an opportunity to respond to the Ofgem MHHS Consultation on the governance, funding and operation of an Event Driven Architecture.

Impacts on consumers and the environment

Impact of the Modification on consumer benefit areas:	
Consumer benefit area	Identified impact
<p>Improved safety and reliability</p> <p>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. This allows industry to create more reliable processes for Settlement.</p> <p>MHHS is a key enabler for a smarter, more flexible electricity system and will facilitate the development of new, innovative business models. Using innovation enabled by MHHS to reward consumers for matching their consumption with periods of high generation from renewables such as wind and solar photovoltaics (PV) can help to integrate this generation into the system. This Modification is necessary for MHHS to be successfully implemented and for these benefits to be realised.</p>	Positive
<p>Lower bills than would otherwise be the case</p> <p>MHHS will 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, for example through time of use tariffs, automation, vehicle to grid solutions and battery storage. It will help to reduce cost to current and future consumers, through reducing the need for infrastructure investment and facilitating more efficient use of generation and network assets. We estimate that MHHS will deliver net benefits to GB energy consumers in the range of £1.6bn-£4.5bn between 2021 and 2045. This Modification is necessary for MHHS to be successfully implemented and for these benefits to be realised.</p>	Positive
<p>Reduced environmental damage</p> <p>MHHS will encourage a more flexible use of energy and will create opportunities for the market to develop new products and services, including lowering the barriers for entry for new green energy Suppliers and helping to cost-effectively decarbonise the sector. This Modification is necessary for MHHS to be successfully implemented and for these benefits to be realised.</p>	Positive
<p>Improved quality of service</p> <p>EDA-based DIP enables 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 faster and more efficient processes for Settlement, providing an improved quality of service.</p>	Positive

Impact of the Modification on consumer benefit areas:

The incentives created by MHHS will encourage development of new products and services for consumers, helping them use electricity more flexibly, saving money and reducing their carbon footprint. This Modification is necessary for MHHS to be successfully implemented and for these benefits to be realised.

Benefits for society as a whole

MHHS will increase competition between Suppliers (including innovative new entrants to the market), create a more flexible electricity wholesale market and facilitate the development of new, innovative business models, products and services that consumers can engage with in the future. There will be numerous benefits, some quantifiable and some intangible. We have published an Impact Assessment that sets this out in detail – attached to our [April 2021 decision to proceed with MHHS](#).

Positive

Legal Text Changes

[BSC Section C 'BSCCo and its Subsidiaries'](#) will be impacted by this Modification, with proposed legal text in Attachment A to this Proposal Form.

5 Governance

Self-Governance

<input checked="" type="checkbox"/> Not Self-Governance – A Modification that, if implemented:	
<input checked="" type="checkbox"/> materially impacts the Code's governance or modification procedures	<input type="checkbox"/> materially impacts sustainable development, safety or security of supply, or management of market or network emergencies
<input type="checkbox"/> materially impacts competition	<input type="checkbox"/> materially impacts existing or future electricity consumers
<input type="checkbox"/> materially impacts the operation of national electricity Transmission System	<input checked="" type="checkbox"/> is likely to discriminate between different classes of Parties
<input type="checkbox"/> involves any amendments to the EBGL Article 18 Terms and Conditions related to Balancing; except to the extent required to correct an error or as a result of a factual change	
<input type="checkbox"/> Self-Governance – A Modification that, if implemented:	
Does not materially impact on any of the Self-Governance criteria provided above	

This Modification Proposal should not be treated as Self-Governance. It has an impact on Elexon's activities under the BSC and therefore on BSC governance, and will impact upon Suppliers as they fund the DIP development.

Progression route

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 Page 2.

Does this Modification impact a Significant Code Review (SCR) or other significant industry change projects, if so, how?

This Modification Proposal is linked to Ofgem's SCR on Electricity Settlement Reform, and will be progressed as an Authority Led SCR Modification Proposal.

Does this Modification impact any of the EBGL Article 18 Terms and Conditions held within the BSC?

This Modification will not impact the EBGL Article 18 terms and conditions as BSC Section C 12 is not specified in the mapping given in [Section F Annex F-2](#). It is not anticipated to extend the terms or conditions either.

Implementation approach

The Proposer directs 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.