

P423

Market-wide Half-Hourly Settlement (MHHS) Implementation and Governance Arrangements

01	Modification
02	Workgroup Report
03	Draft Modification Report
04	Final Modification Report

Purpose of Modification:

This Modification makes a number of changes to the Balancing and Settlement Code (BSC) to set out the detailed implementation and governance arrangements that the Authority considers are needed to implement Market-wide Half-Hourly Settlement (MHHS).

These changes place specific obligations on MHHS programme parties to ensure effective and timely implementation of MHHS. These changes also establish the governance framework within which the development and delivery by industry of future changes for MHHS implementation can be made to ensure programme delivery takes place effectively and in a coordinated way.

In particular, they amend the powers and functions of the BSCCo (Elexon) to provide more specific details as to how it will oversee the introduction of MHHS.

The detailed obligations are intended to complement relevant licensees' licence obligations of a 'duty to cooperate' with implementing the outcomes of a Significant Code Review (SCR).

Does this Modification impact any of the European Electricity Balancing Guideline (EBGL) Article 18 Terms and Conditions held within the BSC?

Yes No

	<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 19 August 2021</p>
	<p>High Impact: BSC Parties, Party Agents, BSCCo</p>
	<p>Medium Impact: N/A</p>



Low Impact:
N/A

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Timetable

The Authority directs the following timetable:

Draft Authority Led SCR Modification Report presented to Panel	19 August 2021
Consultation	24 August 2021 - 08 September 2021
Final Authority Led SCR Modification Report presented to Panel	16 September 2021
Final Modification Report submitted to Authority	20 September 2021
Authority decision (target)	30 September 2021

Any questions?

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1 Why Change?

What is the issue?

Currently, generators and suppliers trade electricity in the wholesale market in half-hourly periods, but most customers are settled on a 'non-half-hourly' basis, using usage estimates that are based on profiles of average customers and meter readings. There can be considerable variances between these estimates and actual usage.

Market-wide Half-Hourly Settlement (MHHS) will utilise the potential of smart meters to send accurate signals to suppliers about the cost of serving their customers throughout each day. This will place incentives on suppliers to offer new tariffs and products that encourage more flexible use of energy and help consumers to lower their bills. This will increase competition and innovation in the market and reduce costs, with numerous benefits to consumers and to wider society. We estimate that MHHS will bring net benefits for consumers of £1.6bn-£4.5bn over the period 2021-2045.

We have published [our decision to proceed with MHHS alongside the Full Business Case and Final Impact Assessment \(April 2021\)](#). We have set out our expectation for the transition to full MHHS implementation to be completed by October 2025.

MHHS Implementation arrangements

In our MHHS decision (April 2021), we confirmed that responsibility for management and delivery of the programme would sit with industry, with Elexon acting as Senior Responsible Owner (SRO) for the programme and having responsibility for ensuring the timely and efficient implementation of MHHS.

Successful implementation of MHHS will require a number of changes to operational and governance procedures across the electricity market. These will be managed and implemented by Elexon. These changes are being progressed through modifications to the BSC and to other affected codes – see [Ofgem's update \(12 August 2021\)](#). **This code modification adds the initial required changes to the BSC.**

Desired outcomes

The desired outcome of this modification is to ensure the BSC reflects implementation and governance arrangements that will allow Elexon to effectively manage and oversee the MHHS programme and require Elexon to undertake that programme management in a transparent, consultative and unbiased way. It will also require MHHS programme parties to develop and deliver the changes to their systems and business processes to ensure timely and cost effective implementation and to cooperate with the programme governance and processes, including testing, qualification and migration. This will be done by making a number of changes to the BSC, including:

- Amending Section C of the BSC to specify how the code manager (Elexon) will exercise powers and functions in respect of the governance and operational procedures. In addition, amendments to place detailed obligations on MHHS programme parties, including BSCCo as a MHHS participant.
- Amending Section D of the BSC to clarify how the code manager (Elexon) will recover costs or levy participation charges on signatories in order to pay for these new governance and operational procedures. This builds on the changes already introduced through BSC modification P413 around authorisation for recovery of MHHS Implementation Management Costs.
- Amending BSC Annex X-1 to amend a number of definitions to align with the new governance and operational procedures.

2 Solution

Proposed Solution

We have attached legal text for this modification proposal. See the proposed legal text attached.

It sets out specific details as to how Elexon (BSCCo) shall exercise its powers and functions in relation to MHHS implementation. This modification also places obligations on participants in the MHHS programme to cooperate with the programme governance and processes and to deliver the changes needed to their IT systems and business processes to ensure the efficient and timely implementation of MHHS.

This modification has been developed as part of the Electricity Settlement Reform Significant Code Review (SCR). It has been previously consulted on widely with stakeholders through our [January 2021 Consultation on Programme Implementation Principles](#) and our [April 2021 Consultation on Implementation and Governance Arrangements](#). We have now (August 2021) made our [decision on the final implementation arrangements to apply for MHHS](#).

The changes needed to give effect to MHHS will be developed and managed by the Implementation Manager and will be implemented in the BSC. Such future changes may be via an Ofgem direction using powers granted under the Smart Meters Act 2018, using the ongoing Electricity Settlement Reform SCR process again, or, with Ofgem's approval, through standard BSC modification procedures. This initial set of BSC changes will be progressed in parallel with code changes to other affected codes - the CUSC, the DCUSA, the SEC, and the REC v2.0 (once this is in force) - which will obligate the affected code bodies to modify their codes, systems and processes so that MHHS implementation can take place effectively and in a coordinated way across codes.

Benefits

MHHS is a vital enabler of flexibility. It builds on changes already made requiring half-hourly settlement (HHS) for medium to large non-domestic consumers, and elective HHS for domestic and smaller non-domestic consumers. MHHS will send accurate signals to suppliers about the cost of serving their customers throughout each day. This will place incentives on suppliers to offer new tariffs and products that encourage more flexible use of energy and help consumers to lower their bills, for example time of use tariffs, automation, vehicle to grid solutions and battery storage. Making best use of existing infrastructure should reduce the need for future generation and network investment. This will help decarbonise the sector cost-effectively, which will benefit all consumers and wider society.

This proposal seeks to build a robust and successful implementation structure for MHHS, which will help to facilitate and deliver efficient and timely implementation of the MHHS programme. We have drawn on feedback and lessons learned from other energy market change programmes, to develop a robust set of obligations, governance proposals and assurance principles with the aim of ensuring effective and timely implementation of MHHS, bringing benefits to consumers.

We have published our [decision and Full Business Case \(April 2021\)](#) that outlines the wider benefits of MHHS in detail.

We expect that a successful introduction of MHHS across the whole market will result in a number of benefits to consumers, both quantifiable and unquantified - see the section below on Impacts on consumers and the environment.

We are conducting a Significant Code Review (SCR) and have consulted extensively since launching the Electricity Settlement Reform SCR in July 2017 about what a successful introduction of MHHS would

bring to the market. We made a decision in April 2021 to proceed with transitioning the existing settlement arrangements to MHHS, with an expected end date of October 2025.

The successful introduction of MHHS will require a number of changes to operational and governance procedures across the electricity market. These will be managed and implemented by Elexon. Our proposed modification to the BSC sets out a detailed framework for them to oversee the changes. MHHS programme parties will also be obligated to cooperate with programme governance and processes and to undertake the changes to their systems and processes to achieve a successful timely and cost-effective implementation of MHHS, and our proposed modification to the BSC does this as well.

Separately, other affected code bodies will also be required to modify their codes in order to confirm the new operational and governance procedures that are being added to the BSC. Ofgem will separately be progressing these modifications for the affected codes.

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

This modification will positively impact Relevant Objective (c) as it will facilitate the delivery of MHHS. Having a robust set of implementation and governance arrangements in place will ensure the efficient and timely delivery of the MHHS programme. The successful implementation of the programme will benefit competition by developing a more effective energy market and encouraging increased market entry by new suppliers and others who will offer new and innovative products and services to consumers. 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.

This modification will positively impact Relevant Objective (d) by embedding a robust set of detailed code obligations, governance arrangements and assurance principles in the BSC. These will ensure that all MHHS programme parties are incentivised to deliver the programme in a cost effective, timely and efficient manner. In turn, this will ensure that the transition to the new settlement arrangements from the current arrangements is managed effectively by all the parties. In addition, as mentioned above, the introduction of MHHS will result in a faster and more efficient settlement system.

4 Potential Impacts

Impacts on Core Industry Documents

Impacted Core Industry Documents			
<input type="checkbox"/> Ancillary Services Document	<input checked="" 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"/> Master Registration Agreement	<input checked="" type="checkbox"/> Distribution Connection and Use of System Agreement	<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"/> Transmission License	<input checked="" type="checkbox"/> Other (please specify)

In parallel to this modification, we are separately progressing modifications to the codes - the DCUSA, the CUSC and the SEC - of several other code bodies. The changes to these other codes will formally obligate the affected code bodies to work collaboratively with Elexon using the new operational and governance procedures that are being added to the BSC to implement MHHS. We will be progressing code modification proposals for the other codes in due course.

We also expect to make changes to the REC, once version 2.0 comes into force, which will be no earlier than 1 September 2021.

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"/> ECVAA	<input type="checkbox"/> ECVAA Web Service	<input type="checkbox"/> ELEXON Portal	<input type="checkbox"/> Other (Please specify)	

This modification will not affect BSC systems but insert legal text only. The substantive MHHS changes themselves, eg the design of the future arrangements, will amend the systems and will be the subject of further sets of code changes. This modification provides the first set of code changes that facilitates the making of those substantive changes by having them developed through robust implementation arrangements which it inserts into the BSC legal text.

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 checked="" type="checkbox"/> Licensed Distribution System Operator	<input checked="" type="checkbox"/> National Electricity Transmission System Operator	<input type="checkbox"/> Virtual Lead Party	<input checked="" type="checkbox"/> Other (Please specify) Supplier Agents

This modification will impact all those parties identified as MHHS Participants, as defined in paragraph 12.2.15 of the legal text - see the attached legal text. MHHS Participants will be obligated to facilitate the implementation of MHHS to varying degrees, dependent on their role. A full description of these obligations is provided in paragraphs 12.11 – 12.16 in the attached legal text.

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>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.</p> <p>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.</p> <p>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 decarbonise the sector cost-effectively.</p> <p>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>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. MHHS will also make central settlement processes faster and more efficient.</p> <p>This modification is necessary for MHHS to be successfully implemented and for these benefits to be realised.</p>	<p>Positive</p>
<p>Benefits for society as a whole</p> <p>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.</p>	<p>Positive</p>

Legal Text Changes

We have provided legal text alongside this modification proposal as an attachment. These text changes were drafted and consulted on by Ofgem in April 2021, as part of the Electricity Settlement Reform SCR, and our [final confirmed changes](#) were published on 11 August 2021, as an attachment to our MHHS decision on implementation arrangements.

The legal text in our attachment is marked up against the current version of the BSC.

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 checked="" type="checkbox"/> materially impacts competition	<input checked="" type="checkbox"/> materially impacts existing or future electricity consumers
<input type="checkbox"/> materially impacts the operation of national electricity Transmission System	<input 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 is an Authority led modification in respect of a Significant Code Review and so the Self-Governance route does not apply.

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.

Paragraph 5.3A.2 of Section F of the BSC states that, in response to an Authority Led SCR Modification Proposal, the BSC Panel shall prepare an Authority Led SCR Modification Report. Under the terms of that paragraph, that Report shall include, inter alia, "(d) a timetable for implementation of the Authority Led SCR Modification, including the date with effect from which such modification could take effect." Under the terms of paragraph 5.3A.6 of Section F of the BSC, the timetable for completion of the procedural steps for an Authority Led SCR Modification, shall be set by the Authority in its sole discretion. These are outlined on page two of this modification proposal.

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

This change is being progressed as part of Ofgem's Electricity Settlement Reform Significant Code Review. This is an Authority-led SCR Modification which has been the subject of previous consultation (April 2021).

The April 2021 consultation followed the publication of the MHHS decision to proceed with MHHS implementation. The April 2021 consultation proposed changes to the BSC and other Codes to place obligations on relevant parties and embed appropriate governance arrangements and cross code coordination to facilitate the robust and effective implementation of MHHS.

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

In accordance with paragraphs F5.3A and F2.1.2 of the BSC, in raising this Authority Led SCR Modification Proposal, Ofgem have made an assessment as to whether the proposed changes seek to amend the EBGL Article 18 terms and conditions. We consider that they do not. With reference to our recent discussions with Elexon in relation to the UK EBGL, we also note that Elexon have advised that none of the terms of this Authority Led SCR Modification Proposal seek to amend the UK EBGL Article 18 terms and conditions.

Implementation approach

Subject to considering the recommendation of the Panel, Ofgem has a target to issue its decision by the end of September 2021 – see our proposed timetable on page 2 – in order to ensure the MHHS implementation and governance arrangements are given effect as early as possible. This will provide certainty to industry and wider stakeholders about the framework arrangements for taking the MHHS programme forward, and enable the transition to this next phase of the project to occur at the earliest opportunity. Once Ofgem receives the final modification report, the Authority will seek to issue a decision on this modification proposal as early as possible with a desired target for a decision of 30 September 2021. We require implementation five Working Days after Authority approval.