

This document is classified as **White** in accordance with the Panel Information Policy. Information can be shared with the public, and any members may publish the information, subject to copyright.



DP162

‘SEC changes required to deliver MHHS’

Modification Report

Version 0.1

10 May 2021



About this document

This document is a draft Modification Report. It currently sets out the background, issue, high-level solution requirements and progression timetable for this modification, along with any relevant discussions, views and conclusions. This document will be updated as this modification progresses.

Contents

1. Summary.....	3
2. Issue.....	3
3. Solution	4
Appendix 1: Progression timetable	5
Appendix 2: Glossary	6

Contact

If you have any questions on this modification, please contact:

David Kemp

020 7090 7762

david.kemp@gemserv.com

1. Summary

This proposal has been raised by Richard Vernon from the Data Communications Company (DCC).

As the smart metering rollout continues, there will be more and more premises with Electricity Smart Metering Equipment (ESME) installed capable of recording consumption in each half-hour period. Ofgem's Electricity Settlement Reform Significant Code Review (SCR) has concluded that settling all consumers on a half-hourly basis would bring net benefits of up to £4.5bn by 2045¹. It has therefore concluded that Suppliers should be mandated to settle their customers on a half-hourly basis. Delivering the full solution for market-wide half-hourly settlement (MHHS) will require changes to the Smart Energy Code (SEC) and to the DCC Systems. Ofgem has requested the DCC raise a SEC modification to progress and deliver these changes.

2. Issue

What are the current arrangements?

Generators and Suppliers trade electricity in the wholesale market for each half-hourly period in the run-up to the period of actual consumption. This is based on Suppliers' forecasts of how much energy its customers will consume. The actual amount of energy generated or consumed is then measured, along with any further actions taken by National Grid in real-time to keep the system balanced (the amount of generation at any given time matches the demand from consumers). Settlement reconciles any differences between the electricity a participant buys or sells, and the actual generation or demand realised. Any surplus or shortfall in a participant's position in each half-hour period is subsequently determined through the settlement process, and this difference is charged accordingly. These arrangements are governed and managed under the Balancing and Settlement Code (BSC).

The largest consumers, such as industrial sites, are already required to be settled on a 'half-hourly' basis, and have the metering already equipped to measure consumption in each half-hour period. Suppliers can also choose to settle consumers half-hourly through Ofgem's elective half-hourly settlement work. However, most smaller businesses and households continue to be settled on a 'non-half-hourly' basis. For these consumers, periodic meter reads are taken, usually at intervals of weeks or months. Profiles of average customer usage are then used to allocate the customer's consumption to the half-hourly periods between the meter reads. It is these estimates that are then used in settlement.

Smart Metering Equipment Technical Specification (SMETS) compliant ESME is capable of measuring and recording the amount of energy consumed or exported within every half hour period. This provides an opportunity to improve both the speed and the accuracy of settlement. This can also help to enable new products and services, for example in supporting the use of electric vehicles, heat pumps or making use of smart appliances. These can deliver positive outcomes for consumers through lower bills, reduced environmental impacts, enhanced security of supply and a better quality of service.

¹ Please see Ofgem's [final business case and decision to implement market-wide half-hourly settlement](#) for more details.

What is the issue?

As the smart metering rollout continues, there will be more and more premises with ESME capable of recording the actual consumption in each half-hour period. Ofgem has considered whether the whole electricity market should be settled on a half-hourly basis, and in July 2017 it launched its [Electricity Settlement Reform Significant Code Review](#).

Ofgem's analysis has predicted that settling all consumers on a half-hourly basis would bring net benefits of between £1.6bn and £4.5bn over the period 2021-2045. In April 2021, Ofgem published its [final business case and decision to implement market-wide half-hourly settlement](#), confirming the decision to move forward with MHHS.

During the SCR, Ofgem has developed its target operating model (TOM) for how MHHS should be implemented. Changes to the SEC and to the DCC Systems will be required as part of the full solution. Most of the changes being made to the impacted Codes are being managed by the Code Change and Development Group (CCDG).

However, Ofgem has recognised that the changes required for the SEC and the DCC Systems are technical in nature and therefore should progress under the governance of a SEC modification. High level requirements will initially be defined by Ofgem and then refined via the SEC modification framework. This will allow proper scrutiny of the different options and costs by the SEC Panel, its Sub-Committees, and the wider industry. On 27 April 2021, Ofgem issued a [request to the DCC to raise the SEC modification](#).

What is the impact this is having?

Implementing the full TOM for MHHS will require changes to the SEC and to the DCC Systems. Without these changes, the full MHHS solution cannot be delivered.

Impact on consumers

Ofgem has predicted that settling all consumers on a half-hourly basis would bring net consumer benefits of between £1.6bn and £4.5bn over the period 2021-2045. Ofgem considers that the full benefits will only be realised if all Suppliers are required to settle their consumers on a half-hourly basis².

3. Solution

MHHS TOM – SEC requirements

During the SCR, Ofgem has developed its TOM for how the full MHHS solution should be delivered. The SEC and the DCC Systems changes will need to deliver the requirements set out in the TOM. This modification will cover all the SEC changes required to deliver the MHHS solution, not just those impacting the DCC Systems.

² Domestic consumers can opt out of sharing their half-hourly data for settlement purposes. In this case, the Supplier would settle these consumers using either their daily or monthly consumption and an appropriate load shape to estimate their half-hourly consumption.

Based on the TOM and following initial discussions with the Technical Architecture and Business Architecture Sub-Committee (TABASC), the solution under the SEC and the DCC Systems is expected to cover:

- The introduction of a new User Role for Parties carrying out the Meter Data Retrieval (MDR) service.
- Defining the relevant Service Requests the new User Role will have access to and the associated Target Response Times and testing scenarios.
- The associated security and data privacy arrangements that will apply to the new User Role.
- The User Entry Process requirements for the new User Role.

The full business requirements, the solution to deliver these, and the assessment of the impacts, costs and lead times to deliver the agreed solution will be developed and assessed as part of the Refinement Process. The Smart Energy Code Administrator and Secretariat (SECAS) and the DCC will work closely with Ofgem and Elexon to ensure the SEC changes meet the requirements of the full MHHS solution.

Appendix 1: Progression timetable

This Draft Proposal was raised on 7 May 2021. It will now be presented to the Change Sub-Committee (CSC) and relevant Sub-Committees for assessment of the identified problem statement.

Due to the extensive discussions that have taken place on the issue under the SCR, the Development Stage can be kept short. Each relevant Sub-Committee will be consulted to provide any initial comments on the modification now it has been raised before this proposal is advanced to the Refinement Process in June 2021.

Timetable	
Event/Action	Date
Draft Proposal raised	7 May 2021
Presented to CSC for comment and recommendation	25 May 2021
Problem statement discussed with Sub-Committees	Early Jun 2021
Panel converts Draft Proposal to Modification Proposal	18 Jun 2021

Ofgem is requesting that all changes for MHHS are in place by 1 April 2024. The November 2023 SEC Release is the last scheduled SEC Systems Release that these changes can be included in to meet this deadline. The DCC's initial assessment of the solution has estimated the total lead time at around 18 months. A final decision on this modification will be required no later than May 2022 to allow this modification to be included in this SEC Release.

SECAS will work with the DCC, Ofgem and Elexon during the Development Stage to confirm the most effective Refinement Process timetable to meet these timescales while also allowing SEC Parties sufficient opportunity to input to and assess the solution. To facilitate effective progression, SECAS and the DCC will begin developing the business requirements in parallel with the Development Stage

discussions, so that these are ready for discussion as soon as the modification enters the Refinement Process.

Appendix 2: Glossary

This table lists all the acronyms used in this document and the full term they are an abbreviation for.

Glossary	
Acronym	Full term
BSC	Balancing and Settlement Code
CCDG	Code Change and Development Group
CSC	Change Sub-Committee
DCC	Data Communications Company
ESME	Electricity Smart Metering Equipment
MDR	Meter Data Retrieval
MHHS	market-wide half-hourly settlement
SCR	Significant Code Review
SEC	Smart Energy Code
SECAS	Smart Energy Code Administrator and Secretariat
SMETS	Smart Metering Equipment Technical Specification
TABASC	Technical Architecture and Business Architecture Sub-Committee
TOM	target operating model