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DP256

‘SEC Alignment with DCC SMETS1 MHHS Capacity’

Modification Report

Version 0.1

7 Dec 2023



About this document

This document is a Modification Report. It sets out the background, issue, solution, impacts, costs, implementation approach and progression timetable for this modification, along with any relevant discussions, views and conclusions.

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This document also has one annex:

- **Annex A** contains the redlined changes to the Smart Energy Code (SEC) required to deliver the Proposed Solution.

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1. Summary

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

In April 2021, the Office of Gas and Electricity Markets (Ofgem) issued their full business case, impact assessment and decision on Market-Wide Half Hourly Settlement (MHHS). Ofgem concluded that settling all consumers on a half-hourly basis could bring net benefits of up to £4.5bn by 2045. Therefore, they mandated Suppliers to settle their customers on a half-hourly basis.

[MP162 'SEC changes required to deliver MHHS'](#) was raised and approved to deliver the required changes to the SEC. MP162 will introduce the changes needed to allow Supplier Agents to be able to collect half-hourly meter readings from Electricity Smart Metering Equipment (ESME) for MHHS. However, all the DCC capacity changes that had been agreed under M162 to accommodate the increase in requests, were removed from the scope of this modification, and Ofgem asked that they be delivered as part of business as usual (BAU).

In order to reduce the amount of DCC System traffic required to support MHHS, the DCC are proposing to utilise S1SP data caching, a technical feature which is already in existence. The functionality already exists to action this, so the DCC are proposing codifying this process into the SEC, enabling clarity to SEC parties as to how responses will be processed.

The Proposed Solution is to make a text-only change to the SEC to define how the DCC will process SMETS1 Service Responses. There will be no additional costs to implement this modification other than that already outlined within MP162. Costs are limited to SECAS time and effort. The solution will impact only the DCC. Implementation is targeted for **27 June 2024** (June 2024 SEC Release). This is a Self-Governance Modification.

2. Issue

What are the current arrangements?

In April 2021, Ofgem issued their full business case, impact assessment and decision on MHHS. Ofgem concluded that settling all consumers on a half-hourly basis could bring net benefits of up to £4.5 billion by 2045. As a result of this, it was concluded that Suppliers should be mandated to settle their customers on a half-hourly basis. Following this conclusion, MP162 was raised by the DCC. This modification was approved by The Authority on 28 November 2022 to be implemented as part of the June 2024 SEC release. The solutions that will be introduced by MP162 allowing Supplier Agents to be able to collect half-hourly meter readings from ESME are:

- Create a new User Role for non-Supplier Parties carrying out the Meter Data Retrieval (MDR) service
- Define the Service Requests the MDR User Role will have access to and the associated Target Response Times (TRTs)
- Define the User Entry Process requirements for the MDR User Role
- Define the associated security arrangements that will apply to the MDR User Role

DCC MHHS capacity requirements were removed from the scope of MP162 as Ofgem asked for these to be delivered as part of BAU.

What is the issue?

The MHHS Capacity requirements were separated from the other MP162 MDR requirements by Ofgem and instead the DCC were directed to commence work on the capacity changes needed to deliver MHHS.

The SEC does not set out detailed requirements on how the DCC should effectively manage the service where Service Request (SR) volumes exceed service capacity. To minimise the impact of additional SR volume of MHHS on SMETS1 Service Providers (S1SP), SMETS1 Dual Control Organisation (DCO) systems and SMETS1 Wide Area Network (WAN) Providers, and to maximise the efficient use of the DCC System, the DCC has proposed a data cache solution to be implemented at each of the S1SP's solutions.

The DCC have outlined that processing responses efficiently, specifically that of a 'SMETS1 Data Cache', are a vital part of the DCC being able to support MHHS for SMETS1.

To ensure that the DCC solution is transparent, and aligned with SEC Party expectation, the DCC wish to codify the requirements within SEC Appendix AM 'SMETS1 Supporting Requirements'. This will ensure clarity and transparency for all Parties.

What is the impact this is having?

The DCC believes the MHHS programme will result in an increase in the volume of SRs, as described within the DCC Impact Assessment for MP162 and to be confirmed through the MHHS Programme, from Users for processing through the DCC Total System. This modification to the SEC will align SEC Appendix AM to the DCC MHHS solution.

If this document only change was not made to detail the requirements of the solution, SEC Parties will not have visibility of the process.

Impact on consumers

There is no impact to consumers.

3. Solution

Proposed Solution

To minimise the impact of MHHS on S1SPs, SMETS1 WAN Providers, and the DCO, the DCC will implement a short-lived (up to 25 hours) secure data cache of the response data at the S1SP.

This will only affect the following SRs:

- 4.6.1 'Retrieve Import Daily Read Log'
- 4.8.1 'Read Active Import Profile Data'
- 4.8.3 'Read Export Profile Data'

Once the S1SP retrieves the previous 24 hours (or any missing data in that period) data for these SRs from a specific SMETS1 Electricity Smart Metering Equipment (ESME), the S1SP will cache the data to generate a response for any subsequent Service Request from any Party until the data is deleted (with a frequency of 25 hours).

This reuse of data will minimise traffic to SMETS1 Devices resulting in a lower impact on the SMETS1 WAN Providers, the DCO and S1SPs for additional volumes of the above-mentioned Service Requests.

The technical aspects of this solution are already in place, where the S1SP will cache the data for specific Service Requests. The Proposed Solution therefore is a text only change to include a description in the SEC of how the DCC will process SMETS1 Service Responses to minimise additional traffic associated with increased capacity requirements for MHHS. It requires a change in SEC Appendix AM 'SMETS1 Supporting Requirements' for Users to be informed of the activities that the DCC is performing when delivering the service.

The proposed redlined changes to the SEC required to deliver the proposed Solution can be found in Annex A.

4. Impacts

This section summarises the impacts that would arise from the implementation of this modification.

SEC Parties

SEC Party Categories impacted			
	Large Suppliers		Small Suppliers
	Electricity Network Operators		Gas Network Operators
	Other SEC Parties	✓	DCC

DCC Systems

DCC System changes

There is no impact to DCC Systems as part of this modification, as this is a document only change to incorporate the caching solution into the SEC to ensure efficient use of the System when MHHS is implemented.

DCC System traffic

There is no impact to DCC System traffic as part of this modification. The technical aspects of this solution already exist, this modification will ensure these are utilised in a clear and transparent manner.

SEC and subsidiary documents

The following parts of the SEC will be impacted:

- Appendix AM 'SMETS1 Supporting Requirements'

The changes to the SEC required to deliver the Proposed Solution can be found in Annex A.

Devices

There is no physical impact to current Device behaviour in ESME's. The DCC are proposing a text only change that will define within the SEC how the DCC will process specific SMETS1 Service Responses. Changes impact the S1SPs only, not the Devices themselves.

Consumers

This modification will have no impact on consumers.

Other industry Codes

This modification will have no impact on other industry Codes.

Greenhouse gas emissions

This modification will have no impact on greenhouse gas emissions.

5. Costs

DCC costs

There will be no additional DCC costs to implement this modification. The technical changes to support MHHS are being delivered under MP162. The technical aspects of this modification are already in place.

SECAS costs

The SECAS implementation cost to implement this as a stand-alone modification is one day of effort, amounting to approximately £600. This cost will be reassessed when combining this modification in a scheduled SEC Release. The activities needed to be undertaken for this are:

- Updating the SEC and releasing the new version to the industry.

SEC Party costs

SEC Parties will not incur any costs associated with changes to their systems, processes, or resource.

6. Implementation approach

Recommended implementation approach

SECAS is recommending an implementation date of:

- **27 June 2024** (June 2024 SEC Release) if a decision to approve is received on or before 13 June 2024; or
- **7 November 2024** (November SEC Release) if a decision to approve is received after 27 May 2024 but on or before 24 October 2024

The wider MHHS changes being implemented are due to go live in the June 2024 SEC Release. The technical changes to support the capacity uplift are being delivered in line with this date. Therefore, this modification must be targeted at the same SEC Release.

7. Assessment of the proposal

Sub-Committee input

SECAS has engaged with the Chairs from the Operations Group (OPSG), Technical Architecture and Business Architecture Sub-Committee (TABASC), the Security Sub-Committee (SSC) and the Smart Metering Key Infrastructure Policy Management Authority (SMKI PMA) to confirm what input is required from these forums. SECAS believes the following Sub-Committees will need to provide the following input to this modification:

Sub-Committee input	
Sub-Committee	Input sought
OPSG	No input from OPSG required
SMKI PMA	We do not believe that SMKI PMA will be impacted
SSC	We do not believe that SSC will be impacted
TABASC	No input from TABASC required

Observations on the issue

SECAS engaged members of the Change Sub-Committee (CSC) to ask for their feedback in relation to this proposal being raised. It was explained to members that this SMETS1 strategy to manage MHHS capacity was originally part of the scope for [MP162 'SEC changes required to deliver MHHS'](#), however this was subsequently removed as DCC were requested to focus on the priority elements of the modification (the addition of the MDR User Role).

The DCC require this text amendment change to the SEC to comply with MHHS requirements. It was explained to the CSC that there will be no additional costs to SEC Parties from implementing this proposal. The members advised there were no initial objections based on the information provided.

8. Case for change

Business case

The technical aspects of the solution are already present. The proposed changes to SEC Appendix AM 'SMETS1 Supporting Requirements' will reflect the changes DCC will employ to support MHHS Programme Capacity requirements. The changes will help to meet the direction by Ofgem under DCC Licence Condition 21 and paragraph 12.12(1)(h) of the Balancing and Settlement Code (BSC). Without this modification, it would not be stated within the SEC how the DCC will process SMETS1 Service Responses in line with MHHS capacity requirements.

Views against the General SEC Objectives

Proposer's views

The Proposer believes this proposal will better facilitate SEC Objective (b)¹ on the basis DCC is required to comply with the obligations under the MHHS Programme including ensuring sufficient capacity for the increased volume of MHHS Service Requests.

They also believe this proposal will better facilitate SEC objective (c)² on the basis consumers with SMETS1 Devices would be unable to take advantage of new tariffs if DCC capacity is insufficient to support increased Service Request requirements for MHHS.

Views against the consumer areas

Improved safety and reliability

This modification is neutral against this consumer area.

Lower bills than would otherwise be the case

This modification is neutral against this consumer area.

Reduced environmental damage

This modification is neutral against this consumer area.

Improved quality of service

This modification is positive against the consumer area due to helping the DCC manage their Systems reducing the possibility of SMETS1 SRs being held up during their lifespan.

¹ to enable the DCC to comply at all times with the General Objectives of the DCC (as defined in the DCC Licence), and to efficiently discharge the other obligations imposed upon it by the DCC Licence;

² facilitate Energy Consumers' management of their use of electricity and gas through the provision to them of appropriate information by means of Smart Metering Systems;

Benefits for society as a whole

This modification is neutral against this consumer area.

Final conclusions

The proposed solution is based on the existing software capabilities of SMETS1 Service Providers and will be transparent to the DCC Users. This technical solution was discussed and agreed by Working Group, TABASC and the SSC during the DCC industry engagement process for MP162.

This document only change will define within the SEC how the DCC will process each SMETS1 Device in relation to MHHS capacity requirements.

Appendix 1: Progression timetable

Timetable	
Event/Action	Date
Draft Proposal raised	7 Dec 2023
<i>Modification Report approved by CSC</i>	<i>19 Dec 2023</i>
<i>Modification Report Consultation</i>	<i>Dec 2023 – Jan 2024</i>
<i>Change Board Vote</i>	<i>24 Jan 2024</i>

Italics denote planned events that could be subject to change

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
BAU	Business As Usual
BSC	Balancing and Settlement Code
CSC	Change Sub-Committee
DCC	Data Communications Company
DCO	Dual Control Organisation
ESME	Electricity Smart Meter
MDR	Meter Data Retrieval
MHHS	Market-Wide Half Hourly Settlement
Ofgem	Office of Gas and Electricity Markets
OPSG	Operations Group
SEC	Smart Energy Code
SECAS	Smart Energy Code Administrator and Secretariat
SMETS	Smart Metering Equipment Technical Specification

Glossary	
Acronym	Full term
SMKI PMA	Smart Metering Key Infrastructure Policy Management Authority
SR	Service Request
SSC	Security Sub-Committee
S1SP	SMETS1 Service Provider
TABASC	Technical Architecture and Business Architecture Sub-Committee
TRT	Target Response Time
WAN	Wide Area Network

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DP256 ‘MHHS Capacity’

Annex A

Legal text – version 0.1

About this document

This document contains the redlined changes to the SEC that would be required to deliver this Modification Proposal.

This document contains the changes required to deliver the Proposed Solution.

Appendix AM ‘SMETS1 Supporting Requirements’

These changes have been redlined against Appendix AM version 13.0.

Amend Section 18 as follows:

18.21 Retrieve Import Daily Read Log (SRV 4.6.1)

- (a) The provisions of Clauses 18.17 18.17(b) to 18.17 18.17(c) apply to this Service Request
- (b) Where the target SMETS1 ESME or SMETS1 GSME may record such Daily Read Log (with its SMETS1 meaning) entries after midnight UTC then the SMETS1 Response may contain Timestamps (with their MMC meanings) reflecting the delayed recording.
- (c) Where the SMETS1 GSME takes snapshots at 23:00 UTC during the period of British Summer Time then any log entries for such periods will have such a corresponding 23:00 UTC timestamp.
- (d) The provision of Clause 18.17(e) apply to this Service Request.
- (e) Where the target SMETS1 GSME resets the TariffBlockCounterMatrix (with their Message Mapping Catalogue meaning) before taking a Billing Calendar (with its SMETS1 meaning) snapshot and this is the last day of the billing period then:
 - (i) Outside of British Summer Time the TariffBlockCounterMatrix values (with their MMC meaning) will all be 0; and
 - (ii) During British Summer Time the TariffBlockCounterMatrix will only reflect consumption for 23 of the 24 hours of the day.
- (f) Where, pursuant to Clause 18.21(c), the time period specified in the Service Request includes the Timestamp of 00:00 of the current day and the current day is within BST and the Device processes the Service Request before 23:00 UTC, the target SMETS1 GSME will return a LogEntry with a Timestamp of 00:00 that will reflect the same consumption as recorded where the Timestamp is 23:00 (with their MMC meanings).
- (g) The provisions of Clause Error! Reference source not found. also apply to this Service Request.
- (h) The provisions of Clause 18.17(m) also apply to this Service Request.
- (i) The provisions of Clause 18.17(n) also apply to this Service Request.
- (j) The provisions of Clause 18.17(o) also apply to this Service Request.
- (k) Where the target SMETS1 ESME has an active DSP Schedule (with its DUIS meaning), the S1SP will buffer the Daily Read Log (with its SMETS1 meaning) that only contains entries from the previous day or entries that have not previously retrieved by the S1SP to populate the contents of a SMETS1 Response to any subsequent Service Request from any Party until such time as the DSP Schedule (with its DUIS meaning) is removed. Any data that is cached as a result of this clause will be stored for a maximum period of 25 hours.

18.22 Retrieve Active Import Profile Data (SRV 4.8.1)

- (a) Where the target SMETS1 GSME or SMETS1 GPF does not return any LogEntry (with its MMC meaning) where the StartDateTime is later than the DateCommissioned (with their DUIS meanings) of the target Device, then the S1SP shall return a Response without any LogEntry.
- (b) Not Used.
- (c) Not Used.
- (d) Not Used.
- (e) Pursuant to clause 18.9(d), where the target SMETS1 ESME, has deleted the data from the device, the only LogEntries (with its MMC meaning) returned in the SMETS1 Response will be those after the restriction has been applied unless there has been an active DSP Schedule for this service request that covers part of the ReadLogPeriod (with its DUIS meaning), in which case this data may be returned.
- (f) Where the target SMETS1 GSME does not support the reading of more than 24 hours' worth of data, then the S1SP shall, where the ReadLogPeriod (with its DUIS meaning) is greater than 24 hours, return a SMETS1 Response with LogEntrys (with its MMC meaning) which only include Timestamps (with its MMC meaning) where an active DSP Schedule exists and the last LogEntry (with its MMC meaning) will, in the period of British Summer Time have a Timestamp (with its MMC meaning) of 23:00:00 on the day before the EndDateTime (with its DUIS meaning) and 00:00:00 on the EndDateTime, otherwise.
- (g) The provisions of Clause 18.17(o) also apply to this Service Request.
- (h) Where the target SMETS1 ESME has an active DSP Schedule (with its DUIS meaning), the S1SP will buffer the Profile Data Log (with its SMETS1 meaning) that only contains entries from the previous day or entries that have not previously retrieved by the S1SP to populate the contents of a SMETS1 Response to any subsequent Service Request from any Party until such time as the DSP Schedule (with its DUIS meaning) is removed. Any data that is cached as a result of this clause will be stored for a maximum period of 25 hours.

18.23 Read Reactive Import Profile Data (SRV 4.8.2)

- (a) Not Used.
- (b) Not Used.
- (c) Not Used.
- (d) The provisions of clause 18.22(d) apply to this Service request.
- (e) The provisions of Clause 18.17(o) also apply to this Service Request.

18.24 Read Export Profile Data (SRV 4.8.3)

- (a) Not Used.
- (b) Not Used.
- (c) Not Used.
- (d) The provisions of clause 18.22(d) apply to this Service request.

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- (e) The provisions of Clause 18.17(o) also apply to this Service Request.
- (f) Where the target SMETS1 ESME has an active DSP Schedule (with its DUIS meaning), the S1SP will buffer the Profile Data Log (with its SMETS1 meaning) that only contains entries from the previous day or entries that have not previously retrieved by the S1SP to populate the contents of a SMETS1 Response to any subsequent Service Request from any Party until such time as the DSP Schedule (with its DUIS meaning) is removed. Any data that is cached as a result of this clause will be stored for a maximum period of 25 hours.