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MP235 'Enhanced Meter Data Access for Other Users'

Modification Report

Version 0.4

31 August 2023

Corporate member of
Plain English Campaign
Committed to clearer
communication

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About this document

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

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This document also has one annex:

- **Annex A** contains the Business Requirements for this modification.

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1. Summary

This proposal has been raised by Matt Roderick of n3rgy.

An increasing number of Other Users are offering services which assist Energy Consumers to view and manage their energy consumption. Currently, Other Users are limited in the Service Requests (SR) which they can request from Smart Metering Systems (SMS). The Proposer would like Other Users to be allowed access to 11 additional SRs.

The Proposer believes this will enable Other Users to offer improved services and provide Consumers with increased options to access granular information about their energy usage.

2. Issue

What are the current arrangements?

Various SEC Parties retrieve data from SMS's of Energy Consumers. This is done by sending SRs to the SMS dependent on which type of information they would like to receive. Different SEC Parties are split into different User Roles, dependent on the relationship they have with the Energy Consumer.

Smart Energy Code (SEC) Appendix AD 'DCC User Interface Specification' (DUIS) states which SRs different User Roles can retrieve. Currently, Other Users are limited in the SRs which they can collect from SMS.

Below is a table of 11 selected SRs which Other Users cannot access. The column on the right notes which other User Roles can currently retrieve this information. User Roles are defined as Import Suppliers (IS), Export Suppliers (ES), Gas Suppliers (GS), Registered Supplier Agents (RSA), Electricity Distributors (ED), Gas Transporters (GT) and Other Users (OU), with the Meter Data Retriever (MDR) role becoming effective in June 2024.

Service Requests		
Service Reference Variant	Service Request Name	Eligible User Roles
4.2	Read Instantaneous Export Registers	ES, ED, (MDR)
4.6.1	Retrieve Import Daily Read Log	IS, GS, (MDR)
4.6.2	Retrieve Export Daily Read Log	ES, (MDR)
4.12.1	Read Maximum Demand Import Registers	IS, ED
4.12.2	Read Maximum Demand Export Registers	ES, ED
4.13	Read Prepayment Configuration	IS, GS
4.14	Read Prepayment Daily Read Log	IS, GS
6.2.1	Read Device Configuration (Voltage)	IS, RSA, ED
6.2.5	Read Device Configuration (Instantaneous Power Thresholds)	IS, RSA
6.2.9	Read Device Configuration (Payment Mode)	IS, GS, RSA
7.4	Read Supply Status	IS, ES, GS, RSA, ED, GT

What is the issue?

DUIS details which SRs each User Role can retrieve. Other Users are limited in the Service Requests they can access. As Third Parties are developing products to assist Energy Consumers in managing their usage, the limitations on the SRs they can access is preventing them from offering improved services.

What is the impact this is having?

The current arrangements mean that Other Users are limited in their ability to offer innovative services to Energy Consumers.

Impact on consumers

Energy Consumers can now use independent services to manage and control energy costs through apps or online services. If Other Users have access to additional SRs this will enable consumers to have access to more granular data about their usage patterns, which in turn will assist them in making decisions about their energy usage.

In addition, a growing number of Energy Consumers are installing generation equipment in their homes to help reduce energy costs. If further information is available to Other Users this can be passed onto the Energy Consumer in order they can properly assess the management of their micro-generation infrastructure.

3. Solution

Proposed Solution

The solution to this modification would enable Other Users to access 11 additional SRV's. These are listed in the table below:

Service Requests	
Service Reference Variant	Service Request Name
4.2	Read Instantaneous Export Registers
4.6.1	Retrieve Import Daily Read Log
4.6.2	Retrieve Export Daily Read Log
4.12.1	Read Maximum Demand Import Registers
4.12.2	Read Maximum Demand Export Registers
4.14	Read Prepayment Daily Read Log
4.16	Read Active Power Import
6.2.1	Read Device Configuration (Voltage)
6.2.5	Read Device Configuration (Instantaneous Power Thresholds)
6.2.9	Read Device Configuration (Payment Mode)
7.4	Read Supply Status

The Proposer would like to access these requests with the same Target Response Times (TRT) as existing User Roles are able to.

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

This modification will impact Other SEC Parties as they will have access to more granular data about Energy Consumers' usage. This could assist them in offering an improved, tailored service to Consumers.

DCC System

The DCC performed an initial assessment of this modification and highlighted that this change could potentially lead to an increase in messaging volumes across the DCC System, leading to extra load on the DCC network. Further information about the impact of this modification will be available once the DCC Preliminary Assessment has been returned.

Devices

Devices impacted			
✓	Electricity Smart Metering Equipment	✓	Gas Smart Metering Equipment
✓	Communications Hubs	✓	Gas Proxy Functions
	In-Home Displays	✓	Prepayment Meter Interface Devices
	Standalone Auxiliary Proportional Controllers		Home Area Network Connected Auxiliary Load Control Switches
	Consumer Access Devices		Alternative Home Area Network Devices

5. Assessment of the proposal

Areas for assessment

Data Protection considerations

SECAS believes investigation is needed to fully understand why Other Users have been excluded from the selected Service Requests which the Proposer would like access to.

SECAS will also examine issues relating to SEC Section I 'Data Privacy' regarding the Appropriate Permission needed for Other Users to access this data. SECAS is also investigating how the collection of data will be managed, and whose responsibility it will be to investigate when issues occur.

SECAS will also assess the circumstances when the consumer knows their data has been accessed by an Other User, where they can access this data and their ability to opt-out of this data being collected.

SECAS is also considering this modification alongside another modification raised by the Proposer, [MP234 'Addition of GDPR Principles of Public Task and Legitimate Interests into the SEC'](#). SECAS will investigate any impacts arising from implementation on these modifications on one another.

Sub-Committee input

SECAS has engaged with the Chairs from the Operations Group (OPSG), the 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	Will this modification have any operational impacts?
SMKI PMA	No input sought.
SSC	What are the impacts of changing who can access Service Requests?
TABASC	Will the current architectural arrangements be impacted by allowing Other Users access to additional Service Requests?

Observations on the Issue

Elective Communication Services

The Proposer does not believe this should be progressed as an ECS. This is because at present, Energy Suppliers are the only Party which has access to the data in Energy Consumers SMS. This means they are the only Party who can provide this granular information to Consumers to help them understand and manage their energy usage. In recent years, SEC Parties have created alternative mechanisms which Energy Consumers can use to receive and review their energy data. Allowing Other Users to access this information would allow Consumers to have choice about how they receive their data, as they will no longer be limited to requesting this information from their Supplier.

The Proposer also believes that if this was progressed as an ECS rather than SEC modification then this would only add the Proposer's organisation to the Consumer choice. Whereas raising this as a modification will enable a wider variety of Other User organisations to offer their services which, in turn, will offer more choice to the Consumer.

Discussion Points

Controls on collection of Consumer Data

Change Sub-Committee (CSC) members questioned how the collection of more granular data would be managed, and whose responsibility it would be to investigate issues and errors. They also questioned how the DCC would validate these further SRs. The Proposer clarified that Other Users undergo Privacy Assessments and this would continue to take place if the request to access further requests was granted. Another member also noted that if Other Users are granted further access to SRs then this could impact forecasting and scheduling across the DCC System. They noted these concerns should be considered under [DP228 'Other User Demand Forecasting'](#).

Changes to the Other User Role

At the May 2023 TABASC meeting, one member noted that modification would change the abilities of Other Users. They noted that the original intent of the Smart Metering Implementation Programme (SMIP) separated User Roles for specific reasons, with this modification altering the existing this.

Lack of benefits to Other Users

This modification was also discussed at the March 2023 Working Group when SECAS presented the Proposer's other modification, MP219. Several members highlighted that they did not see the benefits that the wider Other User SEC Party category Users would receive from this modification and believed that this was primarily raised to benefit the Proposer's ability to sell their services. Members also highlighted they believed that this Draft Proposal should be progressed as an ECS with the DCC, rather than through the SEC Modification Process.

GBCS Use Cases

SECAS discussed this modification at a Requirements Workshop with the DCC and other stakeholders in May 2023. At the time the modification included four SR's which would have needed changes to the GBCS Use Cases for Other Users to access this data. These requests have since been removed. Further information is available in the Solution Development section of this report.

Information via the Home Area Network (HAN) or Consumer Access Device (CAD)

SECAS presented this modification to the TABASC in May 2023, noting the Proposers comments that the existing arrangements means that Consumers are limited in who can access their data. In addition, the Proposer believes that allowing Other Users will widen the ability of Consumers to choose who can present their data. The TABASC Chair queried whether the SRs in the scope of the modification were already available on the HAN or via a CAD.

SECAS acknowledges this comment however notes the Proposer would like Other Users to access the data and then offer services, rather than information going straight to the Consumer.

Business Requirements

During the May 2023 TABASC meeting, SECAS presented 15 business requirements, detailing that Other Users should be able to access the requests, with no further information.

The TABASC Chair questioned the business requirements, noting one benefit of this modification would be to allow Consumers to have increased access to their data. The TABASC Chair noted this and suggested the requirements should reflect this and not limit any technical options to delivery of the modification. SECAS agreed that that this modification should indicate the end benefits for the consumer and rather than focus the requirements on a specific solution, the requirements should capture the underlying business need so a broad selection of potential options can be considered.

Following the TABASC meeting, SECAS has refined the business requirements. This includes reducing the scope of the modification to 11 SR's, but also detailing TRT's and expected volumes of traffic across the DCC Network if this modification is implemented.

Operational Impacts

During the May 2023 Operations Group meeting, members noted this modification could have a significant impact on traffic across the DCC Network. Members questioned how the operational impact would be assessed. SECAS noted that as part of the DCC Preliminary Assessment, it is likely that there will be sections which detail the cost of allowing Other Users to access the selected requests, with another piece of information about anticipated traffic volumes included.

Proposers' ability to choose Modification path

During the May 2023 Operations Group meeting, members noted that the Proposer had rejected the idea of this modification being progressed as an Elective Service. Members questioned the extent to which the Proposer chooses the path and solution for the modification, noting that they believed there was not a strong business case to progress this change.

SECAS informed the Operations Group at the July 2023 meeting that under the SEC Modification Process the Proposer has the right to have their modification progressed, no matter the popularity. The purpose of the Refinement Process is to "consider and (to the extent necessary) clarify the likely effects of the Modification Proposal, including to identify the Parties, Party Categories, Energy Consumers and other persons likely to be affected by the Modification Proposal". SECAS noted that it will present the modification to sub-committees to gain feedback and this is passed onto the Proposer, but it is ultimately the Proposer who decides the path and solution the modification takes.

In addition, under CaCop (Code Administrators Code of Practice) principle 6 the Proposer has the right to ensure their modification is developed in the way they intend and will keep control of their solution, with other individuals or workgroups being unable to amend the modification.

Solution Development

When SECAS presented this modification to the TABASC, SSC and Operations Group in May 2023, the business requirements included service requests which would have required changes involving Supplementary Remote Party Data and Encryption for Parties acting in the Other User Role to access. These requests have since been removed from the scope of this modification, however an explanation of their impact is detailed below.

Supplementary Remote Party Data

If these SRs remained in the scope of this modification, new GBCS Use Cases are needed. This will mean changes to ESMEs, GSMEs and Communications Hubs.

Service Requests			
Service Reference Variant	Service Request Name	Electricity Use Case	Gas Use Case
4.1.1	Read Instantaneous Import Registers	ECS17b	GCS13a
4.1.2	Read Instantaneous Import TOU Matrices	ECS17d	GCS13c
4.13	Read Prepayment Configuration	ECS26a	GCS21b
4.18	Read Meter Balance	ECS82	GCS60a

Currently, an Other User has no security credentials on a Smart Metering Device and is considered an Unknown Remote Party (URP) when requesting Great Britain Companion Specification (GBCS) Commands to be executed on Devices. For an “Unknown Remote Party” to execute a GBCS Command on a Device, the Command must be specified in the GBCS as authorised for execution by the Access Control Broker (ACB). This is because the ACB will request the Command on behalf of the “Unknown Remote Party”.

When the DCC receives a SR from a DCC User which is an URP for the targeted Device, the DCC creates a GBCS Command and the ACB becomes the sender for the Command. The DCC will then insert details of the URP as Supplementary Data into the GBCS Command. The Device will then create a GBCS Response which includes the Supplementary Data, and in turn the ACB receives the GBCS Response. The DCC then extracts the Supplementary Data from the GBCS Response and sends the Service Response to the DCC User listed in the Supplementary Data.

Some of the SRVs which the Proposer would like to access map to GBCS Commands which are not available to the ACB. Therefore, to achieve access to the full list of SRs this would require a change to the GBCS as well as an update to Smart Meter device firmware to support those Commands for an “Unknown Remote Party”.

Encryption

For Other Users to access these two Service Requests then changes would be needed to existing GBCS Use Cases, ESMEs, GSMEs and Communications Hubs.

Service Requests			
Service Reference Variant	Service Request Name	Electricity Use Case	Gas Use Case
4.1.1	Read Instantaneous Import Registers	ECS17b	GCS13a
4.1.2	Read Instantaneous Import TOU Matrices	ECS17d	GCS13c

Because of sensitive information, some GBCS Commands require encryption of the data which is sent back via the GBCS Response. For KRPs the receiving Device holds the certificate of the KRP in the Trust Anchor Cell. This certificate is used as part of the process to encrypt the data in the GBCS response.

For URPs the receiving Device does not hold their certificate. The ACB must therefore send the URP certificate as part of the Supplementary Remote Party Data. The receiving Device then uses the certificate in the Supplementary Remote Party Data in the process of data encryption and sends the GBCS Response to the ACB. The DCC will then extract the address of the URP from the Supplementary Remote Party Data and forwards the data to the DCC User. Only the DCC User can decrypt this information as it requires the private key of the DCC User.

For the Other User Role to request and retrieve encrypted data the URP certificate must be supported by the GBCS Command and Responses. This currently is not the case for the following Service Requests and GBCS Use Cases.

Appendix 1: Progression timetable

Timetable	
Event/Action	Date
Draft Proposal raised	14 Feb 2023
Presented to CSC for initial comment	21 Feb 2023
Presented to CSC to become Modification Proposal	21 Mar 2023
Business Requirements Workshop	3 Apr 2023
Business requirements discussed with Working Group	3 May 2023
Business requirements discussed with TABASC	4 May 2023
Business requirements discussed with OPSG	9 May 2023
<i>Business requirements discussed with TABASC</i>	<i>7 Sep 2023</i>
<i>Business requirements discussed with SSC</i>	<i>13 Sep 2023</i>
<i>Preliminary Assessment Requested</i>	<i>14 Sep 2023</i>
<i>Preliminary Assessment Received</i>	<i>4 Oct 2023</i>
<i>Preliminary Assessment discussed with OPSG</i>	<i>27 Oct 2023</i>
<i>Modification discussed with Working Group</i>	<i>6 Dec 2023</i>

Timetable	
Event/Action	Date
<i>Refinement Consultation</i>	13 Dec 2023 – 10 Jan 2024
<i>Refinement Consultation responses discussed with Working Group</i>	7 Feb 2024
<i>Impact Assessment requested at Change Board</i>	28 Feb 2024
<i>Impact Assessment Request</i>	29 Feb 2024
<i>Impact Assessment received</i>	24 Apr 2024
<i>Modification discussed with Working Group</i>	5 May 2024
<i>CSC approves Modification Report</i>	18 Jun 2024
<i>Modification Report Consultation</i>	19 Jun 2024 – 10 Jul 2024
<i>Change Board Vote</i>	24 Jul 2024

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
ACB	Access Control Broker
CACOP	Code Administrator Code of Practice
CSC	Change Sub-Committee
CSP	Communication Service Provider
DCC	Data Communications Company
DUIS	DCC User Interface Specifications
ECS	Elective Communication Service
ED	Electricity Distributors
ES	Export Supplier
ESME	Electricity Smart Metering Equipment
GBCS	Great Britain Companion Specifications
GDPR	General Data Protection Regulation
GS	Gas Supplier
GSME	Gas Smart Metering Equipment
GT	Gas Transporters
IS	Import Supplier
MDR	Meter Data Retriever
OPSG	Operations Group
OU	Other User
RSA	Registered Supplier Agents
SECAS	Smart Energy Code Administrator and Secretariat

Glossary	
Acronym	Full term
SEC	Smart Energy Code
SMKI PMA	Smart Metering Key Infrastructure Policy Management Authority
SMS	Smart Metering System
SR	Service Requests
SSC	Security Sub-Committee
TABASC	Technical Architecture and Business Architecture Sub-Committee
TOU	Time Of Use
TRT	Target Response Times
URP	Unknown Remote Party