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MP235 'Enhanced Meter Data Access for Other Users'

Modification Report

Version 0.3

25 April 2023



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 15 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.

The Smart Energy Code Administration and Secretariat (SECAS) believes this modification should be withdrawn and the Proposer explore the solution as an Elective Communication Service (ECS) directly with the Data Communications Company (DCC).

2. Issue

What are the current arrangements?

Various SEC Parties retrieve data from SMSs 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 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
4.1.1.1	Read Instantaneous Import Registers	IS, GS, ED, GT, (MDR)

Service Requests		
Service Reference Variant	Service Request Name	Eligible User Roles
4.1.2	Read Instantaneous Import TOU Matrices	IS, GS, ED, GT
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
4.16	Read Active Power Import	IS, ED
4.18	Read Meter Balance	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?

The 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 15 additional SRV's. These are listed in the table below:

Service Requests	
Service Reference Variant	Service Request Name
4.1.1	Read Instantaneous Import Registers
4.1.2	Read Instantaneous Import TOU Matrices
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
4.13	Read Prepayment Configuration
4.14	Read Prepayment Daily Read Log
4.16	Read Active Power Import
4.18	Read Meter Balance
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

Five of the 15 SRs involved in this solution have been identified as having impacts on Electricity Smart Metering Equipment (ESME), Gas Smart Metering Equipment (GSME) or Communications Hubs. As such, a second business requirement has been developed removing SRs 4.1.1,4.1.2,4.13, 4.18 and 6.2.1.

When SECAS receives the Preliminary Assessment from the DCC the Proposer will decide whether to include these SRs as the modification progresses. Further explanation about the impact of these SRs is available in the 'Impacts' section of this report.

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.

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

Supplementary Remote Party Data

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”. Below is a table of five SRs which this is applicable for.

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
6.2.1?	Read Device Configuration (Voltage)	ECS26b	N/A

If these SRs remain part of this modification, this means that new GBCS Use Cases are needed. This will mean changes to ESMEs, GSMEs and Communications Hubs.

Encryption

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.

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

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

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 two other modifications raised by the Proposer, [MP219 'Accessing Consumption Data on behalf of SEC Parties'](#) and [DP234 'Addition of GDPR Principles of Public Task and Legitimate Interests into the SEC'](#). SECAS will investigate any impacts arising from implementation on any of these modifications on one another.

Elective Communication Services

Elective Communication Services (ECS) allows SEC Parties to request tailored Service Requests from the DCC outside of those which are offered as standard. SECAS has discussed this modification with the DCC and believes that this request meets the criteria to progress in this way. This would enable the Proposer to receive the Service Requests they seek without the costs for this being incurred by the wider industry to facilitate the DUIS and the GBCS changes required.

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.

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

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'](#).

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.

SECAS discussed this modification at a Requirements Workshop with the DCC and other stakeholders. Members noted the SRs will require changes to the GBCS Use Cases which would mean changes to Devices as well as the DCC. Members questioned whether the selected Service Requests would need to be available as 'on demand' requests or 'scheduled' requests. One member highlighted that when retrieving sensitive data, information is encrypted in such a way that only the request originator can decrypt it. As Other Users are considered to be URPs, the certificate needs to be attached to the request message so the Device can use it for decryption. Because of this, the size

of the message would increase. The member noted that the increased size of Service Requests could have an impact on Communication Services Providers (CSPs).

Appendix 1: Progression timetable

This Draft Proposal will be discussed at the Working Group on 3 May 2023 to gain industry feedback on the business requirements for any solution. This modification will then be presented to the MAY meetings of the OPSG and TABASC to discuss the business requirements for this modification. Following this, SECAS will request the Preliminary Assessment from the DCC. Once SECAS have the Preliminary Assessment this will be presented to the August Working Group meeting.

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
<i>Business requirements discussed with Working Group</i>	<i>3 May 2023</i>
<i>Business requirements discussed with TABASC</i>	<i>4 May 2023</i>
<i>Business requirements discussed with OPSG</i>	<i>9 May 2023</i>
<i>Preliminary Assessment Requested</i>	<i>29 May 2023</i>
<i>Preliminary Assessment Received</i>	<i>30 Jun 2023</i>
<i>Modification discussed with Working Group</i>	<i>5 Jul 2023</i>
<i>Refinement Consultation</i>	<i>10 Jul 2023 – 31 Jul 2023</i>
<i>Refinement Consultation responses discussed with Working Group</i>	<i>2 Aug 2023</i>
<i>Impact Assessment requested at Change Board</i>	<i>23 Aug 2023</i>
<i>Impact Assessment Request</i>	<i>24 Aug 2023 – 23 Oct 2023</i>
<i>Modification discussed with Working Group</i>	<i>1 Nov 2023</i>
<i>CSC approves Modification Report</i>	<i>20 Dec 2023</i>
<i>Modification Report Consultation</i>	<i>January 2024</i>
<i>Change Board Vote</i>	<i>February 2024</i>
<i>Authority decision (anticipated date)</i>	<i>March 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
ACB	Access Control Broker
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
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
URP	Unknown Remote Party