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MP220

'MMC Changes resulting from GBCS v4.1 Device Testing'

Modification Report

Version 1.0

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Corporate member of Plain English Campaign
Committed to clearer communication
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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.

Contents

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 David Walsh from the Data Communications Company (DCC).

During testing, the DCC identified an issue whereby the Parse & Correlate software does not recognise Firmware Distribution Receipt Alerts sent by Home Area Network (HAN) Connected Auxiliary Load Control Switches (HCALCS) Devices. This is because when these Alerts for HCALCS were introduced as distinct from those sent by Electricity Smart Metering Equipment (ESME) Devices, the specific Message Code for HCALCS Devices was not defined in SEC Appendix AF 'Message Mapping Catalogue' (MMC).

The issue with the Parse & Correlate software was an oversight and is therefore considered a defect. This System change will be paid for by the DCC, however this modification is required to correct the MMC document to specify the HCALCS Use Case. This modification is therefore a text-only change and costs will be limited to Smart Energy Code Administrator and Secretariat (SECAS) time and effort to implement the new version of the SEC. This modification will be targeted for implementation in the June 2023 SEC Release and will be progressed as a Self-Governance Modification.

2. Issue

What are the current arrangements?

Following the implementation of SECMP0007 'Firmware updates to IHDs and PPMIDs', the Great Britain Companion Specification (GBCS) v4.1 mapping tables were updated to include a specific Use Case and Message Code for Firmware Distribution Receipt Alerts sent by HCALCS Devices. This is distinct from the Alert sent by ESME Devices in response to the same message. This change was not reflected in SEC Appendix AF 'Message Mapping Catalogue', which defines Device Alert Message Codes for DCC Users.

What is the issue?

During DCC testing of GBCS v4.1 Communications Hub and HCALCS Devices a problem was identified. For Alert Code 0x8F72 'Firmware Distribution Receipt' the GBCS v4.1 mapping tables include three Use Cases with different Message Codes depending on the Device type: ESME, Gas Smart Metering Equipment (GSME) and HCALCS. When the 'Firmware Distribution Receipt Alert (HCALCS)' Use Case was introduced, with a Message Code of 0x012C, this was missed within the original DCC design updates associated with SECMP0007 and GBCS v4.1. The design assumption carried forward was that the Message Code for 'Firmware Distribution Receipt Alert (HCALCS)' was the same as for 'Firmware Distribution Receipt Alert (ESME)': 0x00CE.

HCALCS emulators have been observed to send Device Alerts using the 0x012C Message Code. Both the Data Service Provider (DSP) and the DCC's Parse & Correlate software are not recognising this Message Code as it was not defined in the MMC.

What is the impact this is having?

It has been confirmed that the current version of Parse & Correlate, provided by the DCC to its Users, is not expecting an Alert with the Message Code 0x012C. If an Alert with Message Code 0x012C is received from an HCALCS Device and sent to the DCC's Parse & Correlate software for parsing the Alert, it will result in a 'Parse Error'.

This means that the 'Firmware Distribution Receipt Alert (HCALCS)' Device Alert would not be available to the User. The Firmware Distribution Receipt Alert is usually the trigger in Supplier systems to send Service Request 11.3 'Activate Firmware' to the DCC. If the Alert cannot be successfully parsed for HCALCS, Suppliers may be unable to maintain the correct firmware versions on these Devices.

3. Solution

Proposed Solution

The issue with the Parse & Correlate software is a defect and will be fixed by the DCC. However, as the Device Alert Message Codes are defined in the SEC these will need to be corrected to specify the HCALCS Use Case.

The DCC is proposing changes be made to SEC Appendix AF 'Message Mapping Catalogue' to allow the DCC to update Parse & Correlate to introduce this additional Message Code and allow the Device Alert sent from an HCALCS Device to be parsed successfully for intended recipients. Full proposed legal text changes can be found in Annex A.

This modification will also make two minor changes to SEC Appendix AD 'DCC User Interface Specification (DUIS)'. The first is a housekeeping change to remove a reference to a data item 'UpdateDeviceDetails' only being included in Service Request 8.4 'Update Inventory' when the target Device has a status of 'Pending'. This will no longer be the only applicable status following the implementation of MP125 'Correcting Device Information for the ESME Variant', which has been approved for implementation as part of the June 2023 SEC Release.

The second is the addition of a short clause which clarifies that the newly applicable Device statuses following the implementation of MP125 are only applicable for Service Request 8.4 when the target Device is a Smart Metering Equipment Technical Specification (SMETS) 2+ Device, and not when it is a SMETS1 Device.

These SEC document and associated DCC System updates are recommended to form part of the June 2023 SEC Release and the next uplift of the DUIS and MMC (expected to be v5.2).

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

This modification will introduce the legal text changes required to allow the DCC to resolve the issue with Parse & Correlate.

Suppliers

This modification, combined with the DCC's resolution of its issue with Parse & Correlate, will enable Suppliers to receive Firmware Distribution Receipt Alerts from HCALCS Devices.

DCC System

The DCC Systems and the Parse & Correlate software will be updated to resolve the incorrect design identified in the GBCS v4.1 testing. As this design fault constitutes a DCC defect the updates will be outside the scope of this modification.

SEC and subsidiary documents

The following parts of the SEC will be impacted:

- Appendix AD 'DCC User Interface Specification'
- Appendix AF 'Message Mapping Catalogue'

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

Technical specification versions

The legal text changes to implement this modification will be made against the latest version of the DUIS and MMC. The next planned uplift of these documents is the 29 June 2023 (June 2023 SEC Release) when the versions are expected to be updated from v5.1 to v5.2.

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

This modification will have a minor impact on interactions between Communications Hubs and HCALCS operating on GBCS v4.1 or later. Devices will not require updates as a result of this modification's implementation as the changes are to the DCC's Parse & Correlate software.

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 DCC costs to implement this modification. As this design fault constitutes a DCC defect the DCC costs associated with this change will be incurred separately to this modification.

SECAS costs

The estimated SECAS implementation cost to implement this as a stand-alone modification is half a day of effort, amounting to approximately £300. 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

There will be no cost to SEC Parties to implement this modification, other than operational time and effort to adopt the new SEC Release in which this is implemented with a new version of Parse & Correlate.

6. Implementation approach

Recommended implementation approach

The Change Sub-Committee (CSC) has agreed an implementation date of:

- **29 June 2023** (June 2023 SEC Release) if a decision to approve is received on or before 15 June 2023; or
- **27 June 2024** (June 2024 SEC Release) if a decision to approve is received after 15 June 2023 but on or before 13 June 2024.

This modification will impact the MMC and DUIS. For efficiency, it should be implemented in a scheduled SEC Release along with other MMC and DUIS changes, also minimising SEC Party cost.

7. Assessment of the proposal

Observations on the issue

The TABASC Chair confirmed that they were content there was no need to discuss this modification further with the TABASC as it is simply a correction and should have been implemented as part of a previous change.

The CSC agreed the changes were necessary but questioned how the issue arose and how this could be prevented from happening in future, as it was concerned about the cost of raising modifications to resolve issues which should have been addressed in previous modifications. SECAS advised that all technical specification documents go through rigorous reviews by several industry bodies, but that due to their size and technical complexity mistakes are made. SECAS agreed to review the process but noted that the best prevention may simply be an increased effort.

8. Case for change

Business case

This modification is necessary to allow HCALCS Devices to send Firmware Update Receipt Alerts, which inform Suppliers that Firmware Updates have been successful and instructs them to activate the new firmware version. Although the DCC will need to update the Parse & Correlate software to

resolve the issue, this will be outside the scope of this modification and so the cost is limited to SECAS time and effort to implement the new SEC version.

Views against the General SEC Objectives

Proposer's views

The Proposer believes this modification will better facilitate SEC Objective (a)[1] by helping to ensure that HCALCS Devices can communicate effectively over the DCC System.

Views against the consumer areas

Improved safety and reliability

This modification will have a positive impact on safety and reliability as it will help to ensure Device Firmware is kept up to date and can be maintained by Suppliers.

Lower bills than would otherwise be the case

This modification will have no impact on consumer bills.

Reduced environmental damage

This modification will have no impact on reducing environmental damage.

Improved quality of service

This modification will have a positive impact on quality of service as maintaining up to date firmware reduces issues of Device incompatibility and delivers improvements on previous firmware versions.

Benefits for society as a whole

This modification will have no impact on society as a whole.

[1] Facilitate the efficient provision, installation, and operation, as well as interoperability, of Smart Metering Systems at Energy Consumers' premises within Great Britain.

Appendix 1: Progression timetable

On 20 December 2022 the CSC approved the full Modification Report and agreed that this should proceed to the Report Phase as a Self-Governance Modification. The modification will be presented to the Change Board on 25 January 2023 for the final vote.

Timetable	
Event/Action	**Date**
Draft Proposal raised	8 Nov 2022
Presented to CSC for initial comment	15 Nov 2022
Modification discussed with TSIRS	*16 Dec 2022*
CSC converts Draft Proposal to Modification Proposal	*20 Dec 2022*
Modification Report approved by CSC	*20 Dec 2022*
Modification Report Consultation	*21 Dec 2022 – 13 Jan 2023*
Change Board Vote	*25 Jan 2023*

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**
CSC	Change Sub-Committee
DCC	Data Communications Company
DSP	Data Service Provider
DUIS	DCC User Interface Specification
ESME	Electricity Smart Metering Equipment
GBCS	Great Britain Companion Specification
GSME	Gas Smart Metering Equipment
HAN	Home Area Network
HCALCS	HAN Connected Auxiliary Load Control Switches
IHD	In-Home Display
MMC	Message Mapping Catalogue
PPMID	Prepayment Meter Interface Device
OPSG	Operations Group
SEC	Smart Energy Code
SECAS	Smart Energy Code Administrator and Secretariat
SMETS	Smart Metering Equipment Technical Specification
SMKI PMA	Smart Metering Key Infrastructure Policy Management Authority

Glossary	
Acronym	**Full term**
SSC	Security Sub-Committee
TABASC	Technical Architecture and Business Architecture Sub-Committee
TSIRS	Technical Specifications Issue Resolution Subgroup