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DP158

‘Incorporation of multiple Issue Resolution Proposals into the SEC – Batch 5’

Modification Report

Version 0.3

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About this document

This document is a draft 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 David Walsh from the Data Communications Company (DCC)

Issue Resolution Proposals (IRPs) identify and resolve issues in the Technical Specifications documents of the Smart Energy Code (SEC). The 14 IRPs contained in this document have been confirmed as not being DCC System impacting, nor will they require DCC System testing. The Technical Specification Issue Resolution Sub-group (TSIRS) has requested these be progressed as a Modification Proposal for implementation into the SEC. Implementation of these IRPs will ensure Devices operate as they are intended.

The Proposed Solution is to incorporate these IRPs into the SEC.

This modification will affect Suppliers, Other SEC Parties and the DCC. As these changes are text only to align and add consistency to the Technical Specification there are no DCC costs associated with this change. If approved this modification will be implemented in the November 2021 SEC Release. This is a Self-Governance Modification.

2. Issue

What are the current arrangements?

IRPs identify issues within the SEC Technical Specification documents and put forward a solution to the identified problem. In the early stages of the Smart Metering Implementation Program, the Department for Business, Energy and Industrial Strategy (BEIS) took the lead in developing the SEC Technical Specifications. As part of this, BEIS also took responsibility for receiving and responding to issues raised internally, by the DCC, and by other interested parties. Since its inception, several hundred issues have been raised in relation to Technical Specifications through the TSIRS. In some cases, these queries have been resolved by providing an explanation of the Specifications, whilst others have resulted in proposed amendments to the Specifications in the form of IRPs.

What is the issue?

The IRPs included in this proposal, listed below, require changes to the Great Britain Companion Specification (GBCS) and the Smart Metering Equipment Technical Specifications (SMETS) with initial key impacts identified in the table below.

The individual IRP details can be found on the SECAS website link [here](#) under document name 'DP158 Incorporation of multiple Issue Resolution proposal into the SEC – Batch 5 IRP Details'.

Issue and impact of the IRPs included in this modification					
IRP Number	What is the issue?	What is the Impact?	Impacted Technical Specification	Impacted Users	Devices Impacted
IRP610	Currently, there is inconsistency in the elements which are	The twin element meter in an ESME is unable to measure	GBCS v4.x	None	None

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Issue and impact of the IRPs included in this modification					
IRP Number	What is the issue?	What is the Impact?	Impacted Technical Specification	Impacted Users	Devices Impacted
	included in the Electricity Smart Metering Equipment (ESME) within the GBCS. The twin element meter section within the ESME is missing a measuring element which needs to be included so the consumption of energy is measured accurately.	the consumption of energy accurately.			
IRP615	There is a discrepancy in the command used to capture the value of weekly, daily, and hourly energy consumption between the GBCS and the Great Britain Zigbee (GBZ).	The GBZ consists of a zero-week profile which is causing a misalignment between the Technical Specification.	GBCS v4.x	None	None
IRP618	Currently, the Publish Calendar ZigBee message is on an aggregate Energy Service Interface (EGI) which cannot apply message content to the individual endpoints of a Twin Element meter.	The data pertaining to primary and secondary elements cannot be individually applied to the EGI.	GBCS v4.x	None	None
IRP619	Currently the Wide Area Network (WAN) and Home Area Network (HAN) latency can cause a Device to not receive a General Block Transfer (GBT) message sequentially.	In this instance, resend requests (from the Device) can cause the Device to end up receiving part of a message that has already been processed by the Device. The IRP clarifies the expected behaviour of the Device in this instance.	GBCS v4.x	None	None
IRP621	Currently, an ESME and a Gas Smart Metering Equipment (GSME) receiving a message from the Pre-Payment Interface Device (PPMID) is missing an instruction to follow when authentication checks which are performed on the message fail.	This missing word from the instruction is causing ambiguities in the instance of an ESME or GSME performing an authentication check when the message fails. Adding the missing text will ensure clarity and consistency across the specifications.	GBCS v4.x	None	None

Issue and impact of the IRPs included in this modification					
IRP Number	What is the issue?	What is the Impact?	Impacted Technical Specification	Impacted Users	Devices Impacted
IRP624	Currently, there are Two terms (Common Name term and Supplier Name term) which are missing from the GBCS glossary.	The two missing terms are causing inconsistency and require adding in to the GBCS to correct any potential confusion.	GBCS v4.x	None	None
IRP625	This IRP aims to mandate that, after processing a Top-Up command, the GSME needs only to send details of that Top-Up to the Gas Proxy Function (GPF) and does not need to send details of the latest five Top-Ups.	In doing so, bandwidth and processing time are saved.	GBCS v4.x	None	None
IRP626	Currently, there is an incorrect reference in the GBCS. The IRP aims to correct the 'keyUsage' field of references of the Trust Anchor Cell to be used during a specific mode of credential replacement on the Device.	This is causing a discrepancy; the IRP aims to align GBCS root Certificates with those allowed under the Smart Metering Key Infrastructure (SMKI) Organisation Certificate Policy.	GBCS v4.x	None	None
IRP627	Currently, there is no clarification in the SMETS that GBCS Alert 0x8F33 'Supply Disabled then Armed - Load Limit triggered' is required to be generated and sent.	Without this clarification there is ambiguities in expected Device behaviour and an inconsistency between the SMETS and the GBCS.	ESMETS v5.x	None	None
IRP628	Currently, in the GBCS the flag mandated against each entry in the Unique Transaction Reference Number (UTRN) Counter Cache does not enable or serve any mandated external behaviour.	This IRP proposes the removal of this flag, so implementations are restricted to what is strictly necessary.	GBCS v4.x	None	None
IRP629	There are various points requiring corrections and clarifications which have been identified since baselining GBCS v4.0 Draft 2 and SMETS2 v5.0 Draft 3.	This is an inconsistency, and the intention of this IRP is to add detail and resolution to the points identified, so that organisations wishing to develop Devices against GBCS v4.0 have maximum clarity.	GBCS v4.x ESMETS v5.x	None	None

Issue and impact of the IRPs included in this modification					
IRP Number	What is the issue?	What is the Impact?	Impacted Technical Specification	Impacted Users	Devices Impacted
IRP632	There are various typographical changes (concerning Auxiliary Controller related scripts) in the GBCS v4.0 Draft 2 which require correcting.	These typographical errors are causing inconsistency. No parties are expected to be impacted with this IRP change to amend these typographical errors.	GBCS v4.x	None	None
IRP633	A requirement specified as applying to the Communications Hub Function (CHF) Security Log in the DLMS Device Requirements applies generally to all Companion Specification for Energy Metering (COSEM) based security logs.	The limitation is causing inconsistency and this IRP change is a requirement to apply the requirement more broadly.	GBCS v4.x	None	None
IRP635	There is a typographical error which requires clarifying. This IRP will clarify that the expected response to an error in a 'Join Device' command is a 'Join Device' response, and not an 'Issue Security Credentials' response.	This is causing inconsistency and this typographical change will ensure correct Device behaviour in a specific command instance.	GBCS v4.x	None	None

Please note IRP631 and IRP623 were removed from this batch of IRPs as they contained changes against the GBCS v3.x series. IRP622 was also removed from this batch as IRP627 superseded the changes.

Impact on consumers

The change will benefit consumers as they will have the most up to date Devices according to the Technical Specification.

3. Solution

Proposed Solution

The Proposed Solution is to incorporate these IRPs into the SEC to add clarity and consistency to the Technical Specification.

The proposed redlined changes 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

Breakdown of Other SEC Party types impacted			
	Shared Resource Providers		Meter Installers
✓	Device Manufacturers		Flexibility Providers

Suppliers and Other SEC Parties are impacted as they would potentially require additional firmware for Devices. This would then require further testing from a User perspective. A new firmware version which would require testing would incur costs around testing, piloting, and deployment.

DCC System

There are no impacts on the DCC Systems.

SEC and subsidiary documents

The following parts of the SEC will be impacted:

- Schedule 8 'Great Britain Companion Specification'
- Schedule 9 'Smart Metering Equipment Technical Specifications 2'

- Schedule 11 'Technical Specification Applicability Tables'

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

Technical specification versions

These changes will be applied to the next Sub-Version of the following Technical Specification series at the time the modification is implemented:

- GBCS v4.x
- Electricity Smart Metering Equipment Technical Specifications (ESMETS) v5.x

These changes will also be applied to any new Principal Versions of these documents that subsequently become effective on or before the implementation date.

Consumers

No impacts of Consumers have been identified.

Other industry Codes

No other industry Codes are impacted by this proposal.

Greenhouse gas emissions

This proposal will have no effects on greenhouse gas emissions.

5. Costs

DCC costs

There are no DCC costs to implement this proposal.

SECAS costs

The estimated SECAS implementation costs to implement this modification is two days of effort, amounting to approximately £1,200. 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 proposal.

6. Implementation approach

Recommended implementation approach

SECAS is recommending an implementation date of:

- **4 November 2021** (November 2021 SEC Release) if a decision to approve is received on or before 25 August 2021; or
- **3 November 2022** (November 2022 SEC Release) if a decision to approve is received after 25 August 2021 but on or before 3 August 2022.

As the change impacts Technical Specifications, the modification should be implemented in a SEC Release that included an uplift to the Technical Specifications. Given the change would not be making any material impacts, there is no lead time associated with the Proposed Solution.

7. Assessment of the proposal

Observations on the issue

The proposal was presented to the Change Sub-Committee (CSC) in March 2021 for initial comment. CSC members were supportive of the proposal and provided no further comment. The proposal remained in development stage for further investigation work to be conducted. SECAS presented the proposal to the CSC in May 2021 under the recommendation that the Draft Proposal is converted into Modification Proposal and proceeds to the Refinement Process. The CSC agreed with this approach and provided no further comments.

Views of Sub-Committees

SECAS presented the Draft Proposal to the Technical Architecture and Business Architecture Sub-Committee (TABASC) for feedback. SECAS highlighted the number of IRPs which will be included in this batch for implementation. These IRPs are non DCC System impacting and will not require DCC System testing. These IRPs will require text only changes to the GBCS and SMETS2. The TABASC noted the update and had no further comments.

SECAS also presented the four Security related IRPs (IRP621, IRP626, IRP633 and IRP635) to the Security Sub Committee (SSC) for feedback. The SSC noted the corresponding IRPs are textual changes with no material implication and are to add clarification to the Technical Specification. No objections were received from the SSC members. It was suggested Device Manufacturers should be asked for their opinion. The SSC noted the updates and had no further comments.

Views of the TSIRS

The issues and the solutions have been discussed and agreed upon by the TSIRS. Although the TSIRS is a BEIS led group, various SEC Parties are represented. The TSIRS agreed the solutions and agreed they should be implemented into the SEC.

Support for Change

The TSIRS, the TABASC and the SSC are supportive of the relevant IRPs being implemented.

Business Case

These IRPs add clarity and corrections to the Technical Specifications documents. Device manufacturers are required to follow these Specifications when developing or maintaining their Devices. Therefore, any errors or miscommunication of these Specifications will mean the Device will not work as intended. Implementing these IRPs will benefit the industry as Devices will be performing accurately. It will also add clarity and consistency across the Specification.

Views against the General SEC Objectives

Proposer's views

The Proposer believes that DP158 would better facilitate SEC Objective (a)¹, as these IRPs resolve issues with the Technical Specifications which are the minimum requirements for Device manufacturers.

Views against the consumer areas

Improved safety and reliability

The change is neutral against this area.

Lower bills than would otherwise be the case

The change is neutral against this area.

Reduced environmental damage

The change is neutral against this area.

Improved quality of service

This implementation will have a positive impact as manufacturers will have access to the most up to date Technical Specification which are accurate and consistent. This will enable manufacturers to develop or enhance their Devices using the guidance provided from these specifications. The quality of service their Device provides will benefit their customers as the Devices will operate as they should per the Technical Specification.

Benefits for society as a whole

The change is neutral against this area.

¹ Facilitate the efficient provision, installation, operation and interoperability of smart metering systems at energy consumers' premises within Great Britain.

Appendix 1: Progression timetable

SECAS will present this draft Modification Report to the CSC on 29 June 2021. A Modification Report Consultation (MRC) will then be issued before the Modification is presented to the Change Board for vote under Self-Governance.

Timetable	
Event/Action	Date
Draft Proposal raised	21 Jan 2021
Presented to CSC for initial comment	30 Mar 2021
Presented to TABASC	6 May 2021
Present to CSC for final comment	25 May 2021
Presented to SSC	23 Jun 2021
CSC converts Draft Proposal to Modification Proposal	29 Jun 2021
CSC approves Modification Report	29 Jun 2021
Modification Report Consultation	30 Jun – 19 Jul 2021
Change Board vote	28 Jul 2021

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
ALCS	Auxiliary Load Control Switch
BEIS	Department of Business, Energy and Industrial Strategy
CHF	Communications Hub Function
CSC	Change Sub-Committee
CSP	Communication Service Provider
COSEM	Companion Specification for Energy Metering
DBCH	Dual Band Communications Hub
DCC	Data Communications Company
DLMS	Device Language Message Specification
DUIS	DCC User Interface Specification
EGI	Energy Service Interface

Glossary	
Acronym	Full term
GBCS	Great Britain Companion Specification
GBT	General Block Transfer
GBZ	Great Britain Zigbee
GHz	Gigahertz
GPF	Gas Proxy Function
GSME	Gas Smart Metering Element
HAN	Home Area Network
HCALS	HAN Connected Auxiliary Load Control Switches
IRP	Issue Resolution Proposal
PPMID	Pre-Payment Interface Device
SEC	Smart Energy Code
SECAS	Smart Energy Code Administrator and Secretariat
SMETS2	Smart Metering Equipment Technical Specifications 2
SMKI	Smart Metering Key Infrastructure
SSC	Security Sub Committee
TABASC	Technical Architecture and Business Architecture Sub-Committee
TSIRS	Technical Specifications Issue Resolution Sub-group
TCSO	Trust Centre Swap Out
UTRN	Unique Transaction Reference Number
WAN	Wide Area Network