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DP193

‘Incorporation of Category 3 Issue Resolution Proposals into the SEC – Batch 6’

Modification Report

Version 0.1

23 November 2021



Managed by



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 redlined changes to the SEC required to deliver the Proposed Solution.

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1. Summary

This proposal has been raised by Terry Jefferson on behalf of Energy and Utilities Alliance (EUA).

Issue Resolution Proposals (IRPs) identify and resolve issues in the Technical Specifications documents of the Smart Energy Code (SEC). The Technical Specification Issue Resolution Sub-group (TSIRS) has determined all solutions and 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 Data Communications Company (DCC) has performed an initial assessment of these IRPs and consider them to be non-DCC System impacting and not requiring any DCC System testing. They are therefore expected to have no DCC costs associated with their implementation.

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 (SMIP), 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. The IRP solutions identified have been developed by the TSIRS.

What is the issue?

The individual IRP details for this modification can be found on the Smart Energy Code Administrator and Secretariat (SECAS) website link [here](#) under document name 'DP193 IRP Details'. These documents reflect the issue, background information and details of the solution that has been discussed and agreed at TSIRS. They are an integral part of the SEC modification.

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

IRP634

The SMETS does not currently detail the Device requirements when an Auxiliary Proportional Controller (APC) [n] Limit Period / APC [n] Setting Period is in force, and then a Command to set a new such period is received by the Device.

Additionally, the IRP corrects a typographical error in SMETS, 5.29.1.2 which refers to an APC [n] Limit Period, where it should be an APC [n] Setting Period.

IRP642

Changes to GBCS section 10.2.2.2 implemented in GBCS v3.2 aimed to clarify the timing of the Alert 0x8F69 when establishing a tunnel. However, it did not specify this Alert should only be sent for the first establishment of a tunnel, and not repeated on subsequent tunnel establishments.

IRP644

For Sub-Gigahertz (GHz) Gas Smart Metering Equipment (GSME), ZigBee Smart Energy (ZSE) specifications requires that the GSME does not turn on its Home Area Network (HAN) radio outside of its normal, 30 minute reporting cycle when it knows the Communications Hub is undertaking an energy scan.

The Technical Specifications require that, in normal operation, the GSME turns on its HAN radio (outside of its normal, 30 minute reporting cycle) in three circumstances:

1. When credit runs out and the GSME is in Prepayment Mode.
2. For the User Interface command, 'Check for HAN Interface Commands'.
3. For the User Interface Command 'Find Smart Metering Home Area Network (SMHAN) and Re-establish Communications Links'.

For scenarios 2 and 3, GBCS section 10.6.4 recognise the ZSE restriction, when the Communications Hub is undertaking an energy scan, in stating:

'If bit 25 is set [Energy Scan Pending], the GSME shall disable the SMETS User Interface Commands '4.5.2.4 Check for HAN Interface Commands' and '4.5.2.8 Find Smart Metering Home Area Network and Re-establish Communications Links' until it next turns on its SMHAN radio.'

However, there is no equivalent GBCS requirement to address the first scenario when the Communications Hub is undertaking an energy scan.

What is the impact this is having?

IRP634

The lack of clarity means Devices may act in different ways, either overwriting the existing Command, or waiting until the end of the time period, to implement a new Command. This could lead to delays in being able to adjust the limit of the consumer's energy usage.

IRP642

The lack of clarity within the current specifications allows Devices to send Alerts each time a tunnel is established with the Communications Hub Function (CHF). This in turn could lead to Devices sending unexpected Alerts to Users which could cause confusion.

IRP644

Currently, if a Sub-GHz GSME is in prepayment mode, runs out of credit whilst the Communications Hub is undertaking an energy scan and is not in a non-disablement period then Devices can behave

in different ways. The Device may turn on its HAN radio outside of its 30 minute reporting cycle, in an attempt to communicate with the Communications Hub. However, if the energy scan is still running then the GSME will not receive commands to disable supply. If the GSME does not turn on its radio, then it may disable supply if it cannot retrieve commands, or it may defer any decision until its next scheduled 30 minute wake up.

Either behaviour could result in the consumer unable to add a top up via a Prepayment Meter Interface Device (PPMID). However, it is noted that consumer's will still be able to Add Credit (by entry of the associated Unique Transaction Reference Number (UTRN)) and Activate Emergency Credit on the GSME's User Interface.

A summary of the impacts have been set out in the table below.

Impact of the IRPs included in this modification			
IRP Number	Impacted Technical Specification series	Impacted Users	Devices Impacted
IRP634	ESMETS v5.x	Device Manufacturers Suppliers	ESMEs
IRP642	GBCS v3.x & v4.x	Device Manufacturers Suppliers	GSMEs
IRP644	GBCS v4.x	Device Manufacturers Suppliers	GSMEs

IRP642 is being implemented into the GBCS v3.x series as part of MP143. This modification aims to implement the same change into the GBCS v4.x series.

Impact on consumers

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

Appendix 1: Progression timetable

This proposal was raised on 23 November 2021. SECAS will present it to Change Sub-Committee (CSC) on 30 November 2021 for comments and decision to convert to a modification and enter the Refinement Process. It will then be presented to Technical Architecture and Business Architecture Sub-Committee (TABASC) and Working Group for feedback before being issued for Refinement Consultation.

Timetable	
Event/Action	Date
Draft Proposal raised	23 Nov 2021
Draft Proposal converted to Modification Proposal	30 Nov 2021

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Timetable	
Event/Action	Date
Presented to TABASC for feedback	6 Jan 2021
Presented to Working Group for discussion	2 Feb 2021
Refinement Consultation	7 Feb – 25 Feb 2021
Modification Report approved by CSC	15 Mar 2021
Modification Report Consultation	16 Mar – 6 Apr 2021
Change Board Vote	20 Apr 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
APC	Auxiliary Proportional Controller
BEIS	Department of Business, Energy and Industrial Strategy
CHF	Communications Hub Function
CSC	Change Sub-Committee
DCC	Data Communications Company
ESME	Electricity Smart Metering Equipment
ESMETS	Electricity Smart Metering Equipment Technical Specifications
EUA	Energy and Utilities Alliance
GBCS	Great Britain Companion Specification
GHz	Gigahertz
GSME	Gas Smart Metering Equipment
HAN	Home Area Network
IRP	Issue Resolution Proposals
PPMID	Prepayment Meter Interface Device
SEC	Smart Energy Code
SECAS	Smart Energy Code Administrator and Secretariat
SMETS	Smart Metering Equipment Technical Specifications
SMHAN	Smart Meter Home Area Network
SMIP	Smart Metering Implementation Program
TABASC	Technical Architecture and Business Architecture Sub-Committee
TSIRS	Technical Specifications Issue Resolution Sub-group
UTRN	Unique Transaction Reference Number
ZSE	ZigBee Smart Energy