

SEC Modification Proposal, SECMP0216, DCC CR4833

Incorporation of Category 2 Issue Resolution Proposals into the SEC – Batch 9

Preliminary Impact Assessment (PIA)

Version:	0.1
Date:	31st October, 2022
Author:	DCC
Classification:	DCC PUBLIC

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1 Executive Summary

Two Issue Resolution Proposals (IRPs) have been identified as potential Category 2 defects requiring updates.

There are minimal changes required to implement these as part of a SEC Release. There will be no costs associated with Design, Build, and Pre-Integration Testing (PIT), and no Full Impact Assessment is required as the changes will be included in the post-PIT Change Request associated with the chosen SEC Release.

Modification Benefits

For the IRP640 defect, Device Manufacturers can currently interpret the Technical Specifications in different ways which would return different data on Boost Function Event Logs. SECAS notes that as the maximum length of a Boost Period is eight hours, and the minimum is 15 minutes, the difference in outcome between the two approaches (taking the start time or end time) may not be material as the likelihood is that the Boost Period starts and ends on the same day. The missing detail from GBCS Table 7.3.8 is a defect that needs to be corrected to provide clarity for Device Manufacturers.

With IRP658, there is an increased security risk by forcing a Device to activate outdated firmware rather than move directly to latest firmware. Additionally, where a firmware image has been transferred but not activated and a Change of Supplier occurs prior to activation, the incoming Supplier may be unable to update the firmware as they would be unaware of the image stored on the Device.

2 Document History

2.1 Revision History

Revision Date	Revision	Summary of Changes
31/10/2022	0.1	Initial version

2.2 Associated Documents

This document is associated with the following documents:

Ref	Title and Originator's Reference	Source	Issue Date
1	MP216 Business-Requirements	SECAS	08/09/2022
2	DP216 Problem-Statement	SECAS	08/09/2022

References are shown in this format, [1].

2.3 Document Information

The Proposer for this Modification is Martin Bell. The original proposal was submitted on the 8th September 2022.

The Preliminary Impact Assessment was requested of DCC on 3rd October 2022.

3 Context and Requirements

In this section, the context of the Modification and the requirements are stated. These have been provided by SECAS and the Proposer.

3.1 Context

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 & Industrial Strategy (BEIS) took the lead in developing the Technical Specifications that sit under the SEC. As part of this, BEIS also took responsibility for receiving and responding to issues raised internally, by the DCC, and by other interested industry parties. Since its inception, several hundred issues have been raised in relation to technical specifications under the SEC through the Technical Specification Issue Resolution Sub-Group (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.

BEIS has previously implemented the required IRPs via BEIS-led designations; however, this process has now been handed over to SECAS for changes to be implemented through the Modifications Process. To improve efficiency, it was agreed these changes should be progressed under a single proposal at regular intervals. This will be the fourth batch of these changes.

3.2 Issue

In general, IRPs add clarity and corrections to the Technical Specification documents. Device manufacturers are required to follow these documents for the specifications of their Devices. Therefore, any errors or miscommunication of these specifications will mean the Device will not work as intended. TSIRS have agreed that these are issues and have agreed upon the solutions. Not implementing these solutions would mean that these problems would not be resolved.

3.3 Business Requirements

The Data Communications Company (DCC) has performed an initial assessment of these IRPs and consider them to be non-DCC System impacting but may require DCC System integration testing.

The IRPs included in this proposal, detailed below, require changes to the Great Britain Companion Specification (GBCS). The individual IRP details for this modification are listed following, along with a file with further details.

3.3.1 IRP640, Boost Function Log

The Boost Function Event Log is a single log capable of storing entries for the most recent 25 Boost Periods on an Electricity Smart Metering Equipment (ESME) or a Standalone Auxiliary Proportional Controller (SAPC). There is currently ambiguity as to which of the two date-times (start time or end time) should be used as the selection criteria, for determining which log entries are to be returned. Additionally, there is also missing detail from GBCS Table 7.3.8 for the Boost Function Event Log.

The following file is as provided by BEIS and has not been edited or updated in any way.



IRP640 boost
function log definiti

3.3.2 IRP658, Un-activated Image not preventing a new download

When processing firmware updates, a Device will have its own policy regarding whether it attempts to transfer a Manufacturer image from the Communications Hub. Although the specifications are not intended to be prescriptive in that matter, currently Devices may require a stored image on that Device to be activated before it can process further updates. If this is the case, then in the situation where a new version of firmware is released and distributed but subsequently is discovered to have a security vulnerability or other issue, then there is no means to replace it prior to activation.



IRP658

4 Description of Service Provider Impacts

In order to implement the functionality for the IRPs, small changes are required to some Communication Service Provider (CSP) documentation and Critical Software products.

4.1 CSP North

CSP North have identified there is no impact on them for Design, Build, and PIT.

It is likely that there will be limited integration testing impacts for the following teams:

- Utilities Operations
- Platform Test
- Platform Build

These impacts will be assessed as part of the Release Change Request (also known as the post-PIT CR) for the SEC Release.

4.2 CSP South and Central

CSP South and Central have identified there is no impact on them for Design, Build, and PIT.

There are no integration testing impacts anticipated either.

4.3 Critical Software

The proposed solution approach encompasses the following steps:

1. Update emulators
2. Update modules dependencies
3. Add new system tests.
4. Run regression tests.
5. Run manual tests on NUC.
6. Update documentation.
7. Perform release activities.

All these changes are related to DCC Boxed changes for the SEC Release. These are covered under a separate budget and no charge will be associated with this Modification.

4.4 Emulators

It is possible that the current range of emulators will need to be updated to address these defects as part of the SEC Release. This will be evaluated as part of the post-PIT CR.

5 Implementation Timescales and Approach

The scope under this PIA includes design, development (build), system testing, and performance testing within the PIT environments.

5.1 Release Costs and Charges

The table below details the cost of delivering the changes and Services required to implement this Modification Proposal.

The table below details the cost of delivering the changes and Services required to implement this Modification. For a PIA, only the Design, Build and PIT indicative costs are supplied.

£	Design, Build and PIT	SIT	UIT	TTO	App. Support	Total
Phase ROM	0	n/a	n/a	n/a	n/a	£0

Design	The production of detailed System and Service designs to deliver all new requirements.
Build	The development of the designed Systems and Services to create a solution (e.g., code, systems, or products) that can be tested and implemented. It includes Unit Testing (also referred to as System Testing), Performance Testing and Factory Acceptance Testing by the Service Provider or supplier.
Pre-Integration Testing (PIT)	Each Service Provider tests its own solution to agreed standards in isolation of other Service Providers. This is assured by DCC.
Systems Integration Testing (SIT)	Service Providers' PIT-complete solutions are brought together and tested as an integrated solution, ensuring all SP solutions align and operate as an end-to-end solution. CGI System Integrator is responsible for leading this phase with the Service Providers offering testing support services.
User Integration Testing (UIT)	Users run a range of pre-specified tests in relation to the relevant change. The DCC is responsible for leading this phase with the Service Providers offering testing support services.
Implementation to Live (TTO)	The solution is implemented into production environments and ready for use by Users as part of a live service. The Transition to Operations (TTO) service is subject to implementation costs.
Application Support	Any costs associated with supporting the new functionality.

Based on the existing requirements, there is no expectation of a need for a Full Impact Assessment and once approved and allocated to a SEC Release, the Modification will be considered as part of a post-PIT CR.