

SEC Modification Proposal, SECMP0154, DCC CR4356

Comms Hub Returns SLA Amendment Preliminary Impact Assessment (PIA)

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1 Executive Summary

The Change Board are asked to approve the following:

- Total cost to complete the Full Impact Assessment of £68,236
- The timescales to complete the Full Impact Assessment of 40 days
- ROM costs for SECMP0154, up to the end of Pre-Integration Testing (PIT) of £250,000
- The full functionality is expected to take 6-8 months to complete once the contract is agreed and signed

Problem Statement

Smart Energy Code (SEC) Parties have raised concerns in relation to the Communications Hub removal and return processes whereby it is not possible to process a Comms Hub return and send either Service Request 8.14.3 or 8.14.4 within five Working Days of the removal of the Communications Hub. They believe this Service Level Agreement (SLA) should be extended to 15 Working Days to prevent a breach of the SEC and incurring charges and that changes are needed to the SEC wording to ensure Users are not charged if they process the return within the SLA.

Benefits

SECMP0154 will add functionality to extend the SLA for sending the appropriate Service Request to 15 Working Days. It will also forward a notification of a SR8.3 decommission from the Data Services Provider (DSP) to update Communication Service Provider systems such that communications with, and through, decommissioned Comms Hubs are not sent. This will reduce unnecessary network traffic to Comms Hubs and associated devices that cannot be communicated with.

The total ROM costs to deliver SECMP0154 are £250,000, which includes Design, Build and PIT, and a tolerance of $\pm 25\%$. Performance Measure and Contract changes, which are not evaluated in this PIA, are expected to have a significant impact on this Modification.

2 Document History

2.1 Revision History

Revision Date	Revision	Summary of Changes
28/07/2021	0.25	DCC internal review

2.2 Associated Documents

This document is associated with the following documents:

Ref	Title and Originator's Reference	Source	Issue Date
1	MP154 Modification Report v0.4	SECAS	15/06/2021
2	MP154 Business Requirements v0.1	SECAS	15/06/2021

References are shown in this format, [1].

2.3 Document Information

The Proposer for this Modification is Sasha Townsend on behalf of the DCC. The modification was raised on 18th February, 2021.

The Preliminary Impact Assessment was requested of DCC on 22nd June 2021.

3 Context and Requirements

In this section, the context of the Modification, assumptions, and the requirements are stated.

The requirements have been provided by SECAS, the Proposer, and the Working Group.

3.1 Problem Statement

Smart Energy Code (SEC) Parties have raised concerns in relation to the Communications Hub (Comms Hub, CH) removal and return processes. They have highlighted that it is not possible to process a Comms Hub return and send either one of Service Request 8.14.3 or 8.14.4 within five Working Days of the removal of the Communications Hub. They believe this Service Level Agreement (SLA) should be extended to 15 Working Days to prevent a breach of the SEC and incurring charges and that changes are needed to the SEC wording to ensure Users are not charged if they process the return within the SLA.

3.2 Business Context

During a Communications Hub lifecycle, the Device may end up being removed from a premise and returned to a warehouse due to faults in a unit. If so, then the faulty unit will undergo the removal and returns process to be sent back. The Communications Hub may also be removed from a premise and returned without a fault with a unit.

Following removal of the Communications Hub, the SEC Party notifies the DCC by submitting either SR 8.14.3 'Communications Hub Status Update – Fault Return' or SR 8.14.4 'Communications Hub Status Update – No Fault Return' indicating the appropriate return type, as specified in Appendix AD 'DCC User Interface Specification' (DUIS).

SEC Section F 'Smart Metering System Requirements' 8.9(a) states that SEC Parties are obligated to notify the DCC of returns of Comms Hubs in accordance with SEC Appendix I 'Communications Hubs Installation and Maintenance Support Materials' (CHIMSM). SEC Appendix I 9.3 further states that the SEC Party shall notify the DCC of its removal and intended return within five Working Days of the date of removal using SR 8.14.3 or 8.14.4.

Currently, where a SEC Party does not send the Service Request within five Working Days, the reason for return shall be deemed to be a Comms Hub User Responsibility, as set out in SEC Section F9.6(a).

SEC Parties have raised concerns in relation to this process, highlighting it is not possible to process a Comms Hub return and send either SR within five Working Days of the Comms Hub removal. Due to activities such as the physical unloading and processing of the removed Comms Hub at the respective SEC Party's warehouse, SEC Parties indicated they would require at least 15 Working Days to send one of these Service Requests.

Missing the current timescale means that the SEC Party will be obliged to pay a charge, either the "CH returned and redeployed" (K7.5(o)) or "CH returned not redeployed" (K7.5(p)) charges in SEC Section K 'Charging Methodology'. This is because the SEC currently states that these charges will have to be paid by the SEC Party if it exceeds the five Working Days SLA. This therefore results in a SEC Party potentially incurring a charge when it has followed the guidance as set out in the SEC, but where the DCC needs to process the return and exceeds the currently obligated SLA time. This highlights an issue of additional time being required for the existing CH returns SLA, and that a User can still be charged even if they adhere to the current SLA.

If this issue remains unresolved, it will lead to more SEC Parties incurring the charges, even if the responsibility is with the DCC at that point of the Comms Hub returns process. This change extending the SLA will not impact SEC Parties negatively as any processes built on the five-day SLA will still be valid.

This was supported in a Request For Information issued by the Smart Energy Code Administrator and Secretariat (SECAS) where respondents noted that they have had thousands of Devices that have exceeded the five day returns SLA length. When asked about whether they would benefit from an increase from five Working Days to 15 Working Days for the returns SLA, half the RFI respondents agreed with this and the other half believed it should be extended further. Some of the respondents noted there would be a potential cost saving in the event of the SLA extension, while others noted they believed it wouldn't affect their current operations. Other comments which were noted included whether there was any process for challenging charges under the existing returns process if it was due to a fault rather than no fault for the specific Comms Hub unit.

3.3 Business Requirement

There is one business requirement stated for this Modification.

Requirement 1: Extend the current CH returns SLA from five Working Days to 15.

The DCC Total Systems will need to change part of its processes and systems to accommodate the extension to the SLA so that Users aren't charged until the newly specified SLA time period elapses.

The solution will not change the length of the 90 Working Days required for a return.

The solution will only be used against extending the SLA to 15 Working Days for either SR 8.14.3 'Communications Hub Status Update – Fault Return' or SR 8.14.4 'Communications Hub Status Update – No Fault Return'.

This solution will be applied to Smart Metering Equipment Technical Specifications (SMETS)2 Devices only.

4 Description of Solution

The following sections describe elements of the solution required to meet the business requirement.

4.1 CSP Concerns about Extending the SLA

Currently when a Comms Hub is decommissioned, Service Request 8.3, Decommission Device, is sent to the DSP and the Smart Meter Inventory is updated. There is no subsequent update sent to the CSPs, so the CSP have no visibility of when a Comms Hub was decommissioned.

If there is an increase in the period length where the Communications Service Provider (CSP) is unaware of a CH being removed (between the decommission and the returns SR's being sent) there are risk that:

- CSP network performance will be negatively impacted by an increase in unnecessary traffic related to firmware downloads, scheduled meter reads, etc.
- Performance Measure (PM) 7.4 performance will be negatively impacted by incidents being raised against communications attempted to Comms Hubs which have been removed
- PM 2 performance will be negatively impacted by attempts to firmware download to devices which still appear to be connected to a Comms Hub which has been removed
- PM 1.4 will be negatively impacted by this change, as there is an expectation that more SMWAN connectivity will be lost for greater than 10 days
- Comms Hub firmware download performance will be negatively impacted by attempts to download to Comms Hubs which have been removed
- The disparity between the CSP and the Data Service Provider (DSP) inventories (c140,000 difference) is expected to increase

4.2 DSP Changes

To directly address the above concerns, the DSP will make use of the existing Web Service interface at the CSP SMWAN Gateways to separate and distribute SR8.3-related notifications based on the CSP region, and send them to the relevant CSP using the existing CSP SMWAN Gateway interface with selected changes.

4.3 CSP Changes

With the above change provided by a new notification on the CSP management gateway, the CSP will change the Comms Hub lifecycle status based on the new decommission status. This will enable better alignment of the inventories, and significantly reduce the impacts noted in section 4.1 above.

Other CSP impacts to be assessed as part of the FIA will include:

- Comms Hub Management; the impact to the Firmware Updates and Diagnostics requirements

- Backend Support Systems; the impacts to data and schema changes to Ordering and Logistics, performance measures and service reporting
- Operations; the impacts to Service Processes (including certificate rotation and firmware download), PM reporting, Network Management and Incident Management
- Testing; any SIT and UIT Testing requirements will be fully established in the FIA.

4.4 Current Reporting Solution

It should be noted that DCC monitor Comms Hub returns using a Technical Operations Centre (TOC) report called the Returns Journey.

This report indicates the date of Comms Hub removal when the Comms Hub decommission SR8.3 is sent. This is compared with the date of Fault/Non-Fault SRV8.14.3 or SRV8.14.4 generation respectively to allow DCC to work out compliance with the five day SLA. In this way, the DCC is reporting against the sending of the SR8.3, and NOT the date the Comms Hub was decommissioned. These Remedy Returns do not contain the decommission date, but only the date when the SR8.3 is sent.

No updates to the reporting are expected as part of this Modification.

5 Impact on Systems, Processes and People

This section describes the impact of SECMP0154 on Services and Interfaces that impact Users and/or Parties.

5.1 Technical Specifications

Changes to the CSP SMWAN Gateway Interface Specification, including updates to the existing delivery interface at the CSP SMWAN Gateways to separate and distribute SR8.3-related notifications based on the CSP region and send them to the relevant CSP using the existing will be made for the CSPs.

5.2 Security Impact

There are no material changes to interfaces or the security solution as part of this Modification and therefore a penetration test is not likely to be required. There will not be any changes to the DSP protective monitoring solution as result of this Modification.

A more detailed Security impact will be carried out as part of the Full Impact Assessment.

The implementation will be security assured during the implementation phase. This includes reviewing designs, test artefacts and providing consultancy to the implementation and test teams.

5.3 Request Management

For devices which pass validation, Request Management will form a request to the new CSP SMWAN Gateway interfaces for the notification of the SR8.3 decommission dates, segregated by CSP.

5.4 Infrastructure Impact

The change does not impact the DSP resilience or Disaster Recovery implementation.

5.5 Safety Impact

No impact is expected, but a Safety Impact Assessment will be carried out as part of the FIA.

5.6 Contract Schedules

Subject to further review it is likely that the following contract Schedules may require amendment:

- Schedule 7.1 – Charges and Payment
- CH5 - Communications Hub Maintenance Support Materials

Any potential charges will be assessed as part of the Full Impact Assessment.

5.7 SEC Party Impacts

This is envisaged as a text only change to SEC Parties and extending the SLA will not impact SEC Parties negatively as any processes built on the five-day SLA will still be valid. The solution will not change the length of the 90 Working Days required for a return.

5.8 Legal Text Changes

SEC Section F 'Smart Metering System Requirements' 8.9(a) states that SEC Parties are obligated to notify the DCC of returns of Comms Hubs in accordance with SEC Appendix I 'Communications Hubs Installation and Maintenance Support Materials' (CHIMSM). SEC Appendix I 9.3 further states that the SEC Party shall notify the DCC of its removal and intended return within five Working Days of the date of removal using SR 8.14.3 or 8.14.4.

SECAS will be responsible for updating the associated legal text as part of a SEC Release.

6 Implementation Timescales and Approach

The effort to complete SECMP0154 is estimated at 6-8 months after gaining governance approval and signing the Contract Amendment Note (CAN).

Details of the implementation will be finalised in the FIA.

6.1 Testing and Acceptance

The System Integrator will be required for SIT and UIT testing. Any costs and estimates for this will be included in the Full Impact Assessment.

7 Costs and Charges

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

The Rough Order of Magnitude cost (ROM) shown below describes indicative costs to implement the functional requirements. The price is not an offer open to acceptance. It should be noted that the change has not been subject to the same level of analysis that would be performed as part of a Full Impact Assessment and as such there may be elements missing from the solution or the solution may be subject to a material change during discussions with the DCC. As a result the final offer price may result in a variation.

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 Pre-Integration Testing (PIT) indicative costs are supplied.

	Design, Build and PIT	Days to Create FIA	Cost to Create FIA
DSP	£50,000-150,00	30	£9,396
CSP	150,000	40	£58,928

Table 2: SECMP0154 Standalone Cost

The phases included are as follows.

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.

Based on the existing requirements, the fixed price cost for a Full Impact Assessment is **£68,326** and would be expected to be completed in 40 Working Days.

7.1 Contract Changes

Subject to further review as part of the Full Impact Assessment it is likely that the following contract Schedules may require amendment:

- Schedule 7.1 – Charges and Payment
- CH5 - Communications Hub Maintenance Support Materials

Appendix A: Glossary

The table below provides definitions of the terms used in this document.

Acronym	Definition
CAN	Contract Amendment Note
CH, Comms Hub	Communications Hub
CHIMSM	Communications Hubs Installation and Maintenance Support Materials
CR	DCC Change Request
CSP	Communications Service Provider
DCC	Data Communications Company
DSP	Data Service Provider
DUIS	DCC User Interface Specification
FIA	Full Impact Assessment
PIA	Preliminary Impact Assessment
PIT	Pre-Integration Testing
PM	Performance Measure
ROM	Rough Order of Magnitude (cost)
SEC	Smart Energy Code
SECAS	Smart Energy Code Administrator and Secretariat
SIT	Systems Integration Testing
SLA	Service Level Agreement
SMWAN	Smart Metering Wide Area Network
SP	Service Provider
SR	Service Request
TOC	DCC Technical Operations Centre
UIT	User Integration Testing