

SEC Modification Proposal, SECMP0252, DCC CR5414

Amending the Process for Communications Hub Returns

Full Impact Assessment (FIA)

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1 Executive Summary

The Change Board are asked to approve the following:

- Cost cost to implement SECMP0252 Amending the Process for Communications Hub Returns of **£329,626**, which comprises:
 - £232,006 in Design, Build, and Pre-Integration Testing (PIT)
 - £97,620 in Implementation, including integration testing and deployment
- In addition, an annual operating charge of £24,563 for the first year
- Expected effort of nine months to complete with a target release of November 2025.

Problem Statement

The SEC details the requirements and obligations to enable Parties to return Communication Hubs where a problem is identified prior to installation or after installation and subsequent removal. To return a Communications Hub (Comms Hub), the Party must send a Service Reference Variant (SRV) for each Comms Hub they want to return to the Data Communications Company (DCC), the Comms Hub must in a set state, and only the Responsible Supplier can return Comms Hubs.

The DCC has identified over 65,000 Comms Hubs which are not “on the wall” and are in the possession of non-Responsible Parties which means that Party is unable to decommission the Comms Hub or identify the Responsible Supplier. DCC has identified over £4million of “Lost or Stolen” costs charged to industry over the last three years attributable to such problems. A DCC Returns Workshop and the DCC Supply Chain Working Group provided feedback from industry of issues within the whole process. A new process to address issues now and for the future is required.

In addition, the volumes of Comms Hubs being returned to the DCC will increase to an expected level of 140,000 per month as a result of the 2G/3G Sunsetting and 4G Comms Hubs and Networks programme. Any Comms Hubs that are not in the state of Decommissioned currently cannot be processed either for triage or scrapping.

Storing Comms Hubs in warehouses incur ever increasing costs, and Parties unable to meet Service Level Agreements (SLA) are financially impacted.

Modification Benefits

This Modification provides an alternative method to allow SEC Parties, including non-responsible Parties, to return any Comms Hubs to the DCC in any state, and provides the DCC Service Providers with the ability to deal with that return. There are multiple validations of the Comm Hubs returns as requested by the Security Sub-Committee ensuring simple but secure functionality for the returns.

2 Document History

2.1 Revision History

Revision Date	Revision	Summary of Changes
18/12/2024	0.1	Initial version, for DCC internal review
23/12/2024	0.52	Post review, approved costs
10/01/2025	0.53	Label changed in Use Case 3 sequence diagram

2.2 Associated Documents

This document is associated with the following documents:

Ref	Title and Originator's Reference	Source	Issue Date
1	DP252 Modification Report v0.2	SECAS	05/07/2024
2.	MP252 Business Requirements v0.5	SECAS	02/07/2024
3	SECMP0252 CR5414 - PIA - Amend Process for Comms Hub returns v0.51	DCC	28/08/2024

References are shown in this format, [1].

2.3 Document Information

The Proposer for this Modification is David Lane from SMS PLC. The Modification was raised on October 5th, 2023.

The Preliminary Impact Assessment (PIA) was requested of DCC on 18th July 2024, and submitted on the 6th August with two solution options.

The FIA was requested on 29th October 2024.

3 Context and Requirements

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

The requirements have been provided by DCC, SECAS, the Proposer, and the Working Group, and have been validated by SSC and TABASC.

3.1 Context

Each Communications Hub remains the property of the DCC, and the Responsible Supplier is charged with a rental fee for each one. This rental fee is triggered upon the point of delivery and remains whether the Communications Hub is installed at a property or being held in storage prior to installation. The DCC provides a returns process for Comms Hubs allowing for triage, refurbishment, and reissue while the Comms Hub can either be returned without ever being installed at a property or following a removal. To return a Comms Hub, the Party must send an SRV for each Comms Hub they want to return. In order for the SRVs to complete, each SRV must originate from the Responsible Supplier and the Comms Hub status must be either be 'Decommissioned' in the Smart Metering Inventory (SMI) if it has been installed previously, or returned prior to installation.¹ The commands are SRV 8.14.3 (CommsHubStatusUpdate-FaultReturn) and SRV 8.14.4 (CommsHubStatusUpdate-NoFaultReturn). The criteria state the only Eligible Users which are Import Suppliers, Gas Suppliers, and Registered Supplier Agents (RSA), can return Comms Hubs.

If the Party is not the Responsible Supplier that SRV is rejected, and the Party cannot identify the Responsible Supplier.

3.2 What is the Issue?

DCC has identified over 65,000 Comms Hubs which are 'not on the wall' and are in the possession of non-Responsible Parties. The ownership of a Comms Hub is defined as Confidential Information, which the DCC is therefore precluded from disclosing. This is likely an oversight from when the SEC was drafted, however, the prohibition is clear.

At the DCC Returns Workshop in July 2023 and the DCC Supply Chain Working Group in December 2023, the DCC received feedback from industry of issues with the whole process. There was agreement amongst attendees that the current process does not work well and is inefficient, with attendees noting there have been many issues raised over the last few years in various forums. Attendees felt there was a need for a fit for purpose process to address issues now and for future volumes of Communications Hub returns.

The Proposer has suggested the volume of Comms Hubs will continue to increase and likely at an accelerated rate once there is a move into the 4G Comms Hubs. The volumes of Comms Hubs being returned to the DCC will increase to an expected level of 140,000 per month as a result of the 2G/3G Sunsetting and 4G Comms Hubs and Networks programme. Any Comms Hubs that are not in the state of Decommissioned currently cannot be processed either for triage or scrapping.

¹ Smart Energy Code (SEC) Section F 'Smart Metering System Requirements' and Appendix I 'CH Installation and Maintenance Support Materials' details the requirements/obligations to enable Parties to return Comms Hubs.

3.3 Impact of the Issue

Where the Party in possession of the Comms Hubs is not the Responsible Supplier and the Comms Hub is not “Decommissioned” these Comms Hubs cannot be included in triage, refurbishment, redeployment, or secure disposal. This results in incorrect charges placed on Suppliers for Comms Hubs no longer at a consumer’s premises, nor in the Supplier’s possession. A further complication is that due to the age of some of these stranded Comms Hubs, the current Responsible Supplier may not be the Party who was the Supplier when the Communications Hub was incorrectly removed due to consumers switching Suppliers.

Comms Hubs in non-responsible Parties’ possession are taking up space in their warehouses and incurring ever increasing storage costs. Where they are unable to meet the Service Level Agreement (SLA), there is a financial impact for the Party in possession of the Comms Hub, the Responsible Supplier and indirectly, consumers.

In terms of the point of transition to 4G Comms Hubs in 2025, the DCC suggest they expect c.200-300,000 Communications Hubs to be surplus to requirements.

The SEC would need to be amended to provide the DCC with the authority to provide the Responsible Supplier information to other parties and the DCC Total System significantly updated to follow this path.

3.4 Business Requirements

The business requirements are as follows.

Ref.	Requirement	MoSCoW Rating
1	The DCC shall develop a mechanism whereby SEC Parties, including non-responsible Parties, shall notify DCC when they want to return Communications Hubs	M
2	The DCC shall develop a mechanism to allow non-responsible Parties to return Comms Hubs, where the Comms Hub state in the SMI is ‘Commissioned’ or ‘InstalledNotCommissioned’	M
3	The DCC shall develop a mechanism to check all notified Comms Hubs returns for their current SMI state	M
4	The DCC shall notify SEC Parties whether their request for Comms Hubs return has been accepted or rejected	M
5	The DCC shall notify the Responsible Party of Comms Hubs in the returns process that the DCC has in their possession	M
6	The DCC shall process the accepted Comms Hubs	M
7	The DCC shall develop a mechanism to investigate and charge the responsible Party for the non-compliant returned Comms Hubs	M
8	The DCC shall accept the return of end-of-life Comms Hubs	S
9	The DCC shall develop and provide regular reporting to monitor Comms Hub returns data	S

Note that some of these requirements, and some parts of the requirements, are not DCC Total System impacting, but still require a changed returns process. These process changes

will be implemented by DCC, and those costs and efforts will be covered as Business as Usual.

For **Requirement 1**, SEC Parties can often be in possession of Comms Hubs that have not been decommissioned correctly, and that they are not the current responsible Party for the Comms Hubs. One such scenario is when a Change of Supplier (CoS) process has failed to change the responsible Party, or a current Supplier fails to decommission at point of Comms Hubs removal and subsequently, the Consumer proceeds with a CoS.

The DCC will design a mechanism for SEC Parties to notify the DCC of the Comms Hubs they want to be returned. This notification should have relevant fields to account for how many Comms Hubs will be listed for return and to specify at least the:

- Global Unique Identifier (GUID)
- make and model of any such Comms Hubs
- region of the Comms Hubs

As part of **Requirement 2**, the DCC will need to design a mechanism, or use an appropriate existing mechanism, for Non-Responsible Parties, to return Communications Hubs with SMI states of 'Commissioned' or 'InstalledNotCommissioned'. Currently all SEC Parties are only able to return Comms Hubs with a SMI state of 'Decommissioned'.

For **Requirement 3**, the DCC will perform a validation check to ensure the Communications Hubs intended for return are in the correct SMI state.

Accepted SMI states are 'Commissioned', 'Decommissioned' or 'InstalledNotCommissioned', while those in a 'Pending' state would require explicit permissions by the DCC before being accepted for return. This validation is to denote what the current SMI state of all Comms Hubs which SEC Parties have notified intention to return. The possible Comms Hubs SMI states are 'Pending', 'Commissioned', 'Decommissioned' or 'InstalledNotCommissioned'.

The purpose of checking the current SMI state is to prevent any unnecessary returns of Comms Hubs to the DCC. There are instances where a Comms Hub may still be in the 'Pending' state and without any physical damage. Such Comms Hubs can be redeployed without having to return to the DCC.

DCC will respond by accepting or rejecting all SEC Parties requesting the return of Comms Hubs to meet **Requirement 4**:

- Accepted shall mean that the request will be fulfilled with no amendments to the information provided
- Rejected shall mean that the request requires amendment prior to acceptance

Where a request has been rejected, the DCC shall set out the reasons why the request has been rejected (e.g. invalid GUID provided or too large a quantity of Comms Hubs in a single return request for the region). The SEC Party could then send an amended notification in accordance with Business Requirement 1.

To meet **Requirement 5**, the DCC must notify the Responsible Party² of the status of returned Comms Hubs after they have been processed by the DCC, and advise which were successfully processed for reuse and which will be recycled.

Although **Requirement 6** indicates the need to allow Responsible Parties to return Comms Hubs that have not been decommissioned by the installing Party, the Modification is only a fix for cases where Parties have not followed the correct process. DCC will issue guidance with this Modification stressing the importance that Parties should follow correct process, and not require the manual processes that will be implemented as part of this Modification.

Requirement 7 will be implemented by DCC with changes to the reporting outside the scope of the system changes.

Requirement 8, “The DCC shall accept the return of end-of-life Comms Hubs”, will enable SEC Parties to return Comms Hubs to the DCC during transitional phases. This requirement is a “Should” requirement, as when a Comms Hub does reach end-of-life, they would need to be returned to the DCC. However currently, there is no finalised plan of what SEC Parties are to do with any end-of-life Comms Hubs.

Requirement 9 will allow SEC Parties to see where their returned Comms Hubs are in the process. The reporting is to only include two stages; one upon receipt by the SMETS 2 Communications Service Providers (CSP) of each Comms Hub and another once triage is completed. This is a “Should” requirement, as the DCC has noted there is potential to increase a current Comms Hubs returns report in frequency which should suffice.

3.5 Business Use Cases

Any DCC User can return a Comms Hub to the DCC. At the highest level, there are some scenarios where Comms Hub returns are received by Device Managers for refurbishment where the Comms Hub has not been decommissioned. When this happens, DSP rejects any Unlock command subsequently received. The issue is the system state when they are returned.

Three key Use Cases have been identified:

- | | |
|---------------------------------|--|
| 1. Full Process | For a Comms Hub to be decommissioned, Users carry out a successful SRV 8.3, Decommission Device followed by 8.14.3, CommsHubStatusUpdate-FaultReturn or 8.14.4, CommsHubStatusUpdate-NoFaultReturn to initiate the return of a Comms Hub |
| 2. Comms Hub Not Decommissioned | Omitted or Unsuccessful SRV 8.3 to initiate the return of a Comms Hub such that it is not Decommissioned in SMI |

In total, the above two Use Cases are expected to reach a peak of 140,000 Comms Hub returns per month when 2G/3G Sunsetting is in full swing.

- | | |
|----------------|---|
| 3. File Upload | Comms Hub not decommissioned including:
* MAPs who aren't the Responsible Supplier (8.14.3 and 8.14.4 rejected by DSP) |
|----------------|---|

² Responsible Party is the Party responsible for the ESME and CH

- * Damaged CHs meaning CH is good for disposal only with no 8.14.3/8.14.4 triggered
- * Accidental return of physical device where no 8.14.3 /8.14.4 triggered

One example of the third Use Case is as follows:

1. Supplier A installs a Comms Hub, ESME, and GSME for a customer
2. Customer switches from Supplier A to Supplier B
3. Supplier B contracts to RSA C for removal of the devices
4. RSA C remove the devices without decommissioning (because they cannot)
5. Comms Hub returned to RSA C warehouse
6. RSA C return the Comms Hub to DCC (CSP) and informs the DSP
7. DCC/CSP would place on the bench and request unlock
8. DSP would issue an unlock
9. Comms Hub outcome either disposal or refurbishment; if refurbishment, Comms Hub is put back into circulation
10. DCC review the last time the Comms Hub communicated and the Responsible Supplier
11. DCC ensure billing aligns with that customer.

3.6 Out of Scope

DCC are aware that in many cases, Comms Hubs are returned with the ESME or GSME still associated as part of an incorrectly applied business process. The only way to remove the association with the Comms Hub is to send SR8.3 Decommission for the ESME or GSME device. If as part of the decommission process, Service Users are not sending SR8.3 then those devices remain associated with the Comms Hub, even if this Modification attempts to execute a decommission for the Comms Hub.

The issue cannot be identified by the CSPs supplying the refurbished Comms Hubs, and only surfaces when installing Parties try to use such refurbished Comms Hubs.

DCC have committed to implementing a small Change Request such that when a CSP submit an Advanced Shipping Notification (ASN), the DSP will check for associated devices, and remove any such association. This activity will be carried out as part of a future DSP Maintenance Release, and is not part of the scope for this Modification.

There is a separate and additional Use Case where CSPs are in possession of returned, but not decommissioned, Comms Hubs. These cannot be processed by the changes associated with this Modification, but will need to be added by a separate change initiated by DCC.

Changes to the billing process are not included in this FIA, but the Deemed Removal Date³ will be used as the effective billing date, as defined in Appendix C at the end of this document.

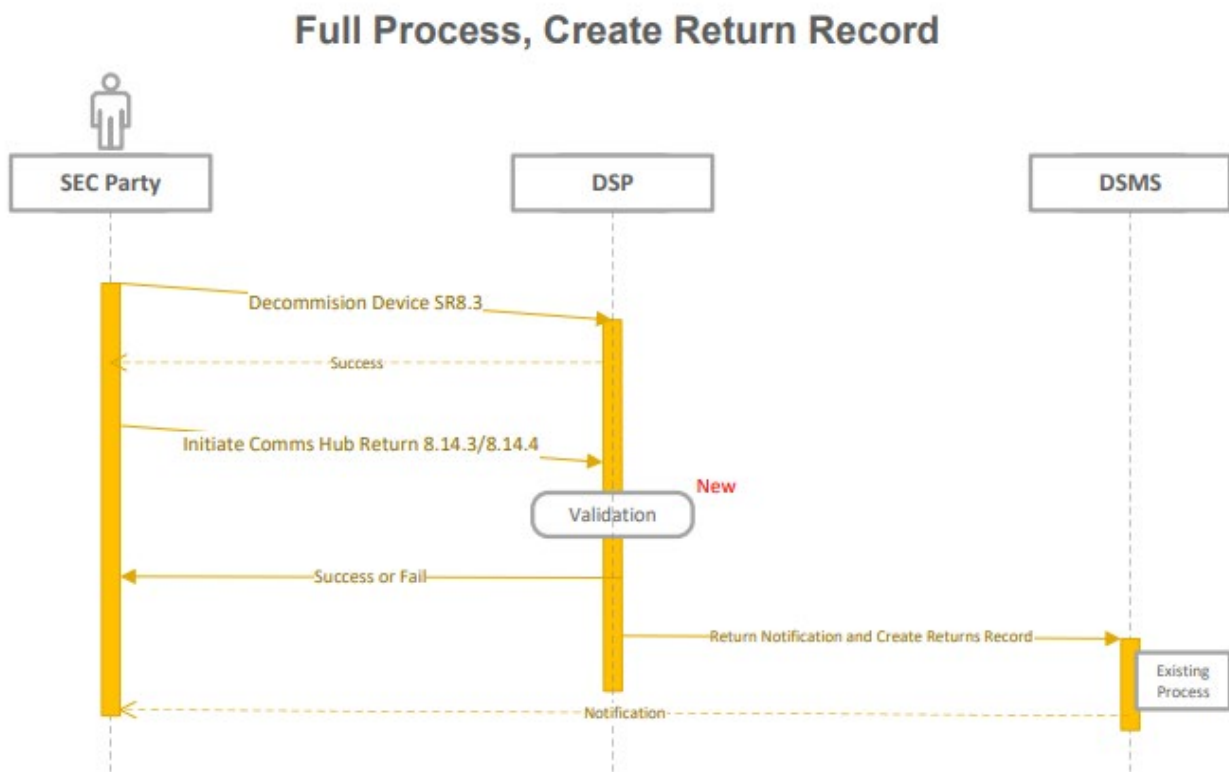
³ The final date on which communication was with the CH returned through the process set out in Appendix C.

4 Description of Solution

There are two Service Providers directly impacted by this Modification; DSP and DCC Service Management System (DSMS), as well as the DS&A Reporting team. The functionality associated with each Service Provider is described in the following sections.

4.1 Use Case Sequence Diagrams and Business Processes

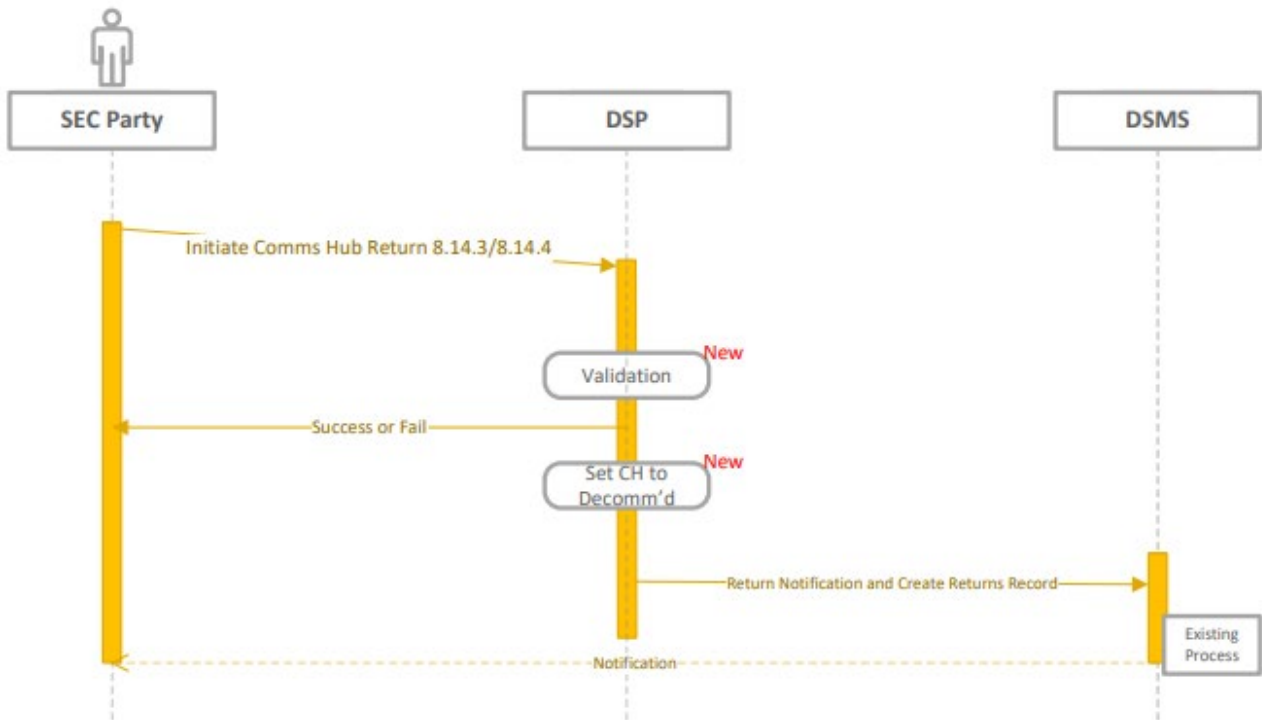
The solution components described in the following sections will be applied to each Use Case. More detail on the validation, alerts, and notifications are provided in subsequent sections.



This sequence diagram describes the DCC preferred process, and is sometimes referred to as the current “happy path”. In this Use Case, SEC Parties are able to send a SR8.3, Decommission Device, and when successful, the Comms Hub status in the SMI is updated to Decommissioned. This process does not apply to all Use Cases associated with Comms Hubs Returns as shown in the following sections.

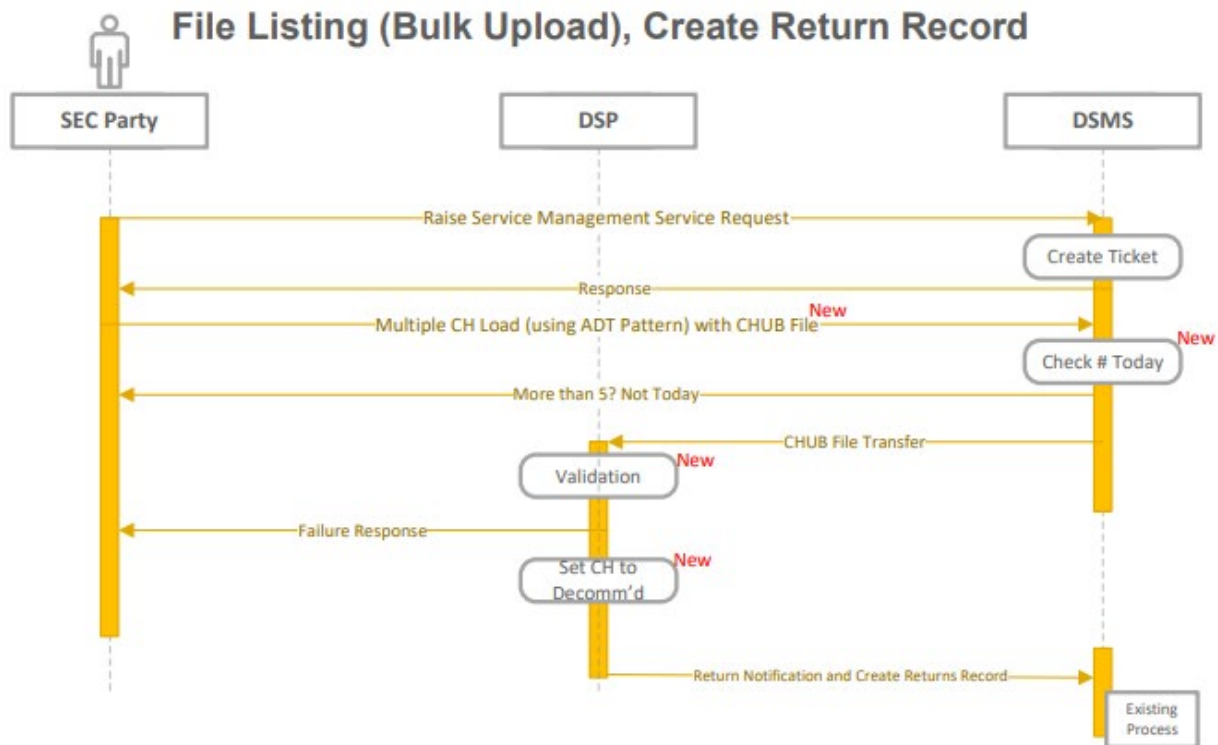
The DSP Validation as described in sections 4.1.1 and 4.1.2 following are consistent with the other two Use Cases for this Modification. In this Use Case, a Comms Hub that is successfully decommissioned by SR8.3 will always pass validation with a Return notification taking place, and a Return Record will be created in the DSMS.

Comms Hub Not Decommissioned, Create Return Record



In this Use Case, the Party holding the Comms Hub prior to return has either not submitted a SR8.3 for that device, or is unable to submit a successful SR8.3 as they are not the Responsible Party. This means that without updates the SMI status cannot be set to Decommissioned.

Once a Party submits a SRV8.14.3 or 8.14.4, and the Comms Hub GUID passes DSP Validation, it is set to a Decommissioned state in the SMI.



The Bulk Upload Use Case requires the User submitting a list of Comms Hubs IDs for processing to create a Service Management Service Request (SMSR) and then to submit a Comms Hub Update Bulk (CHUB) file containing a list of up to 1000 Comms Hubs IDs.

Prior to submission of the CHUB file, the DCC User shall follow the same pattern for ADT files by raising a SMSR via the Self-Service Interface (SSI) to obtain a reference number for use in its submission to DCC, where the reference number is generated by the SSI automatically. The User shall obtain submission approval from their own Second Line support and then sends a CHUB File to the DCC via the DCC's secure delivery method of choice. The User submission must include: (a) the SMSR reference number in the subject line of the submission, and (b) the CHUB file in the required format, digitally signed by a Private Key associated with a File Signing Certificate and provided to an Authorised Responsible Officer (ARO) in accordance with the SMKI RAPP.

The User updates the SMSR from the submission.

Validation and setting the Comms Hub status to Decommissioned follows the same pattern as the previous two Use Cases.

4.2 DSP Technical Solution

The solution for this SECMP0252 will amend the processing of fault and no fault returns Service Requests 8.14.3 and 8.14.4 to provide additional validation and to set Comms Hubs as decommissioned if necessary. There will also be a new capability via the DSP Access Layer to support a file upload for the CHUB file processing.

4.2.1 Validation Carried out by DSP

On receipt of the CHUB file from the DSMS, the DSP shall:

- a) Check cryptographic protection applied to the Comma Separated Variable (CSV) CHUB file and confirm the validity of the Certificate used.
- b) Confirm that the sequence number contained within the CHUB File is greater than the sequence number contained within any previous CHUB File that the DCC has successfully validated and processed in relation to the User ID specified within that CHUB.
- c) Without manually opening the file check that the CHUB file contains only registered Comms Hub GUIDs on the SMI, does not contain more than 1000 Comms Hubs, and check that the format of the CHUB File is correct. Any rejection should stop process and inform the submitter.

The revised processing for SRV 8.14.3 and 8.14.4 will include the following additional behaviour:

1. amend the validation to include a check that the Comms Hub is not still communicating by checking the last communication time of the CHF, GPF, and any ESME which is joined to that Comms Hub.
2. if any last communication time is less than 35 days ago (where this is a configurable value), then the Service Request shall be rejected with a new DUIS Error Code. The parameter for this last communication time as initially set as 35 days (after consultation with SSC) and can be changed through a maintenance release if required.
3. amend the processing so that where the Comms Hub is not decommissioned (and a warning status is returned) then perform the decommissioning steps as per Service Request 8.3. Note that this step will include any DCC Alerts which are normally produced when processing Service Request 8.3.

If all the validation is passed, processing then commences. If a Comms Hub ID fails validation, it is excluded from processing and the DCC User notified. Successful processing is also notified to the DCC User.

4.2.2 DSP Access Layer

The DSP Access Layer has been created to act as a new interface between the DSP and the SSI, SSML, and Service Now functionality. Changes specific to this Modification include additional new element:

- Add the CHUB file type to the API which will pass the file to the DSP Data Management component to perform initial validation
- Add the CHUB file type to the Data Management component to start processing the file.
- Add a new API call to request the CHUB file processing outcome which will contain, for each CHF in the input file, the result of initial validation and, where applicable, the result of the processing

4.2.3 Request Management

Changes to the (Service) Request Management include:

- Amend the strategy code for SRVs 8.14.3 and 8.14.4 to include a check that the Comms Hub is not communicating, which will review the last comms time of communication for each of the CHF, GPF and any ESME on the HAN
- New error code to be added to DUGIDS and DUIS to report failure

4.2.4 Data Management

Changes to this component will include:

- Add a web service in the DSP Access Layer to accept the CHUB file, perform initial validation (signature check, check sender is a supplier, check all entries are EUI-64 format) and then initiate the other validation processes.
- Validation of the file, checking that all entries are for SMETS2 CHFs.
- Add a web service to call Request Management to process the Service Request then convert the ResponseCode from this request into an appropriate status and record that status for inclusion in the outcome report.
- Amend processing of 8.14.3 and 8.14.4 so that where the device is not decommissioned, and call the decommission processing method.
- Add a new report for a given CHUB file to select all records for the file and the validation and processing outcome.
- Add database tables for CHUB files and file records.
- Housekeeping activities will remove data for files [7 days] after uploading.

4.2.5 Technical Specifications

Changes to DUIS and DUGIDS are required to add a new error code for 8.14.3 and 8.14.4, as well as describing the post processing steps to set the Comms Hubs status as Decommissioned.

The proposed DUIS changes are provided below.



DUIS Legal Text
changes for SECMP02

4.2.6 Data Model

While there are no changes to the data model, status values for a Comms Hub will be updated if all validation checks are passed.

4.2.7 Infrastructure Impact

There is no impact to infrastructure as part of this Modification. Additional processing and storage are likely to be required. However, they are not sufficiently large to warrant the procurement of additional compute power or storage.

4.2.8 Other DSP Changes

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

No impact on performance is anticipated, although should be monitored.

No penetration testing will be required, and DSP anticipate no material impact to the DSP security implementation as the solution proposed is making use of pre-set patterns which are security assured.

4.3 DCC Service Management System Changes

Note the Future Service Management (FSM) programme is scheduled to replace the existing DSMS components, including Remedy, the SSI, and SSML with a single solution based around Service Now.

The DSMS function for the Bulk Upload Use Case will function with a SMSR, log any rejected files, and in all cases, create a Returns Record for successful SMI state changes to Decommissioned. For any valid CHUB file(s) submitted as part of a Bulk Upload, the DSMS will upload the file to the DSP an interface as defined within the DSP Access Layer (DAL).

4.3.1 Validation Rules Carried out by DSMS

On receipt of a valid SMSR and CHUB file, the DSMS must check that no more than five CHUB files have been submitted by the same User on the same day. Any rejection should be highlighted on the associated SMSR, and the request halted until rectified (removed) and resubmitted by the DCC User. For the number of files, the ticket raised is updated for querying with submitter.

4.4 Data Science and Analytics Team

New reporting will allow SEC Parties to see where their returned Comms Hubs are in the process. The reporting will include two stages; the first upon receipt by the SMETS 2 Communications Service Providers (CSP) of each Comms Hub in the Decommissioned state, and another once triage is completed. DS&A have noted there is potential to increase a current Comms Hubs returns report in frequency which should suffice and avoid create new reports.

The format and content of the reports as well as the delivery method will be finalised in the Detailed Design stage of the implementation.

5 Implementation Timescales and Approach

The pre-integration phase is expected to take approximately four months up to the end of Detailed Design, Build, and Pre-Integration Testing (PIT). Allowing for post-PIT integration testing, the change will be ready to schedule to a production release after approximately nine months, which allows for a defined period of User Integration Testing (UIT) common to previous Releases, even though there is no stated requirement for functional UIT.

DCC anticipates the change will be implemented in the November 2025 SEC Release.

5.1 DSP Pre-Integration Testing

The PIT testing will include the following:

- Testing a new DAL interface to allow DCC Service Users to submit bulk lists of Comms Hub IDs
- Validation of submitted CHUB files and Comms Hub IDs
- The new outbound interface to deliver validation reports for the file upload mechanism to the Integration Layer.

Automated testing will be used where possible, and no performance testing is required for this change.

5.2 System Integration Testing (SIT)

This SIT response covers only activities and deliverables that are specific to functionality in this Modification. The SIT team will plan, prepare, and execute tests that demonstrate the correct behaviour of the Change, verifying the change to a Decommissioned status in the SMI for validated Comms Hubs IDs.

For each device set required for both DSMS and DSP SIT testing:

- using DSMS to process a bulk return with Comms Hubs uploaded in a file
- uploading a file of Comms Hubs via DSMS that contains at least one Comms Hub that fails validation with a return record is not created for that Comms Hub
- verifying that the outcome report file is sent showing which Comms Hub was not decommissioned and returned.

To carry out the scope of SIT testing, EDML, Toshiba, and 4G Toshiba Comms Hubs will be required, each with ESME, GSME, and PPMID devices, where the Comms Hub needs to be active in order for validation to fail. For the remainder of the testing, dummy Comms Hubs can be used where only the EUI-64 Id is required for the pre-notification and subsequent decommission request.

There is no requirement for SMETS1 devices.

The number of tests and durations for the functional SIT testing is expected to be as follows.

Test Phase	Type	Total Tests	Plan Start	Plan End	Workdays	Envir Avail	Net Days	Re-Test	Total Test	Test per Day
I&C incl Decom.	Automated	83	01/07/2025	14/07/2025	10	85%	9	1.1	91	10.7
I&C incl Decom.	Manual	7	01/07/2025	14/07/2025	10	85%	9	1.1	8	0.9
CHF Returns	Automated	41	01/07/2025	14/07/2025	10	85%	9	1.4	57	6.8
CHF Returns	Manual	53	01/07/2025	14/07/2025	10	85%	9	1.4	74	8.7
Totals/Averages		131	01/07/2025	14/07/2025	10	85%	8.5	1.8	230.6	27.1

5.3 User Integration Testing (UIT)

The scope of UIT testing has been kept to a minimum on the basis that the full new functionality provided for this Modification, including negative tests, will have been thoroughly tested in PIT and SIT. The UIT team will conduct tests to check the availability of the following functionality:

- Send a SR8.14.3 or SR8.14.4 service request to a single CH meter set:
 - for a Comms Hub that is not in the Decommissioned state, to check that the warning message W081401 is generated, the Comms Hub is Decommissioned, the Comms Hub Status is set to Returned and a Returns Record is created in DSMS
 - for a Comms Hub that is Decommissioned, the Comms Hub Status is set to Returned and a Returns Record is created in DSMS
- A CHUB file can be uploaded and processed successfully. The file will contain up to 3 Comms Hubs GUIDs (registered on SMI), all of which will have been off network and not communicating for the past 35 days.

5.4 Transition to Operations

All efforts and costs for these elements of the solution reflect Business as Usual support activities.

Knowledge transfer from the Development team to Application Management Services (AMS team) will be required with a review of the Production system configuration to ensure it can support the expected level of CHUB file processing.

The additional DSP functionality will require ongoing support. Typical incidents anticipated include queries from the DCC and SEC Parties, file signing and processing issues, performing general housekeeping, maintenance and responding to alerts. Consequently, the Contractor has made a conservative estimate that the Change will generate up to two low-complexity calls per month, which are expected to be enduring until 31st October 2026, which is the end of the current Term of the Agreement

6 Costs and Charges

This section indicates the costs for all phases of application development for this Modification. Note these costs assume a release of just this SEC Modification without any other Modifications or Change Requests in the release, and without the regression testing required during the Integration Testing, which is not truly reflective of the post-PIT test costs. A separate estimate of these costs is provided by DCC.

A detailed calculation of the two sets of costs will be carried out through a "Release CR" also referred to as a "Post-PIT CR" when the contents of the targeted SEC Release are finalised.

£	Design, Build, and PIT	Integration Testing, SIT and UIT	TTO	Application ⁴ Support	Total
SECMP0252	£232,006	£86,300	£11,320	£24,563	£329,626

Design	The production of detailed System and Service designs to deliver all 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.
Pre-Integration Testing (PIT)	Each Service Provider tests their own solution to agreed standards in isolation of other Service Providers. This is assured by DCC.
Systems Integration Testing (SIT)	All the Service Provider's PIT-complete solutions for a Release are brought together and tested as an integrated solution, ensuring all SP solutions align and operate as an end-to-end solution.
User Integration Testing (UIT)	Users are provided with an opportunity to run a range of pre-specified tests in relation to the relevant change.
Implementation to Live (TTO)	The solution is implemented into production environments and made ready for use by Users as part of a live service.
Application Support	Each Service Provider has allowed for an increase of two low complexity support cases per month for the duration of eleven months, immediately following the release to Production. This is effectively a running charge, and is not included in the total cost of the change.

This Modification includes changes to DUIS which impact the Design, Build, PIT and integration testing phases. At the point at which the contents of a SEC Release become finalised, if there is

⁴ Not included in the total cost of the Modification, but as an annual charge for running costs

more than one release candidate change including DUIS charges, only one set of charges will be payable, since the DUIS changes required for the individual change will be carried out once only for the release. Such a sharing of costs will result in a reduction of charges for the DUIS components of this Modification in a SEC Release.

6.1 Changes to the Agreement

The DSP contract updates will be agreed and detailed within the Contract Amendment Note (CAN) and will impact the following schedules:

- Schedule 2.1 (the DCC Requirements): update to reflect the addition of new DCC Requirements to enable achievement of the activities and / or deliverables under this CR5414;
- Schedule 3 (the DCC Responsibilities): update to reflect the addition of new DCC Responsibilities to enable achievement of the activities and / or deliverables under this CR5414;
- Schedule 4.1 (Contractor Solution): Solution Design documents will need to be updated as per section 4.1;
- Schedule 6.1 (Implementation Planning): addition of new Milestones; and
- Schedule 7.1 (Charges and Payment): revisions to incorporate the charges and payment applicable for this CR5414.

There will be no updates to any other schedules not listed above as a result of this Change (including Schedule 2.2 (Performance Measures and Monitoring)).

Other Service Providers are not impacted.

Appendix A: Glossary

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

Acronym	Definition		(Identifier)
ADT	Anomaly Detection Threshold	I&C	Install & Commission
AMS	Application Management Support	MoSCoW	MoSCoW represents four categories of initiatives: must-have, should-have, could-have, and won't-have
API	Automated Programming Interface	PIA	Preliminary Impact Assessment
ASN	Advanced Shipping Notification	PiP	Party in Possession
CAN	Contract Amendment Note	PIT	Pre-Integration Testing
CHF	Comms Hub Function	RAID	Risks, Issues, Assumptions, and Dependencies
CH, Comms Hub	Communications Hub	RMA	Returns Material Authorisation
CHUB	Comms Hub Update Bulk (file)	ROM	Rough Order of Magnitude (cost)
CoS	Change of Supplier	RSA	Registered Supplier Agents
CR	DCC Change Request	SEC	Smart Energy Code
CSP	Communication Service Provider	SECAS	Smart Energy Code Administrator and Secretariat
CSV	Comma Separated Values	SIT	Systems Integration Testing
DAL	DSP Access Layer	SLA	Service Level Agreement
DCC	Data Communications Company	SMETS	Smart Metering Equipment Technical Specification
DSMS	DCC Service Management System	SMI	Smart Metering Inventory
DSP	Data Service Provider	SMSR	Service Management Service Request
DUGIDS	DCC User Gateway Interface Design Specification	SR	Service Request
DUIS	DCC User Interface Specification	SRV	Service Reference Variant
DS&A	Data Science and Analytics	SSC	Security Sub-Committee
ESME	Electricity Smart Metering Equipment	SSI	Self-Service Interface
FIA	Full Impact Assessment	SSMI	Self Service Management Interface
FSM	Future Service Management (programme)	TABASC	Technical Architecture and Business Architecture Sub-Committee
GBCS	Great Britain Companion Specification	TTO	Transition to Operations
GPF	Gas Proxy Function	UIT	User Integration Testing
GSME	Gas Smart Metering Equipment		
GUID	Global Unique Identification		

Appendix B: RAID

No Risks, Issues, or Dependencies have been identified for Solution Option B at this time.

Assumptions

Ref	Description	Status/Mitigation
MP252-A1	For Solution B, DCC Upload: a. files will be small (under 1000 CHF's); b. run frequency will be low (up to 100 files per day, each file consisting of up to 1000 CHF's); c. the processing sequence will be similar to that for the CH Stock Transfer file introduced under CR4176, e.g., the file will be processed sequentially, one CHF at a time.	Users will be responsible for the loading of the files into the system.
MP252-A2	Performance testing will not be required as the volumes stated in A1 will not be exceeded.	Accepted
MP252-A3	The functionality of the DSMS will be taken up by the FSM programme.	This will require development, testing, and implementation by the FSM team.

Design Decisions

Ref	Description	Forum
MP252-DSD1	For Solution B, DCC Upload: a. files will be small (under 1000 CHF's); b. run frequency will be low (up to 5 files per day, each file consisting of up to 1000 CHF's); c. the processing sequence will be similar to that for the CH Stock Transfer file introduced under CR4176, e.g., the file will be processed sequentially, one CHF at a time.	SECAS Working Group, October 2 nd , 2024
MP252-DSD2	DCC Users must not be able to open, or tamper with, any lists of Comms Hub IDs submitted by any DCC User.	SSC, 25/9/24
MP252-DSD3	Reject Solution Option A with CSP changes due to complexity, cost, and time to complete	DCC CTO, 9/9/24
MP252-DSD4	Expand scope and Use Cases to cover "Happy Path" and submission without completing 8.3 Comms Hub submission	SECAS Working Group, 2/2/24
MP252-DSD5	Apply validation parameters (SMI status, communications / off network) to all Use Cases	DCC CTO, 20/11/24
MP252-DSD6	Use ADT Pattern for CHUB file submission by Users	SSC, 27/11/24

MP252-DSD7	Set Exclusion Period for Comms Hub off network and not communicating = 35 days. This value is configurable	SSC, 27/11/24
MP252-DSD8	Apply validation parameters (Bulk Upload number of CHUB files, CHUB file format, number of CH IDs) to Bulk Uploads	SSC, 27/11/24

Appendix C: Draft Process for Alternative Returns of Communications Hubs



SECMP0252 CH
returns V0.3.docx