

SEC Modification Proposal, SECMP0304, CR5723

Scheduling Services for SMETS1 Devices (SRV 4.3)

Preliminary Impact Assessment, Legacy DSP Platform

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1 Executive Summary

The Change Board are asked to approve the following for SECMP0304:

- Cost to complete the Full Impact Assessment (FIA) of **£38,520**.
- A timescale to complete the Full Impact Assessment of within 40 Working Days.
- ROM costs for SECMP0304, up to the end of Pre-Integration Testing (PIT) of £ 760,000 to 1,040,000.
- The Data Service Provider (DSP), Secure Software, CGI Instant Energy, and Trilliant Service Providers are impacted by this Modification.

Problem Statement

The Smart Metering Equipment Technical Specification 1 (SMETS1) Service Reference Variant (SRV) 4.3 'Read Instantaneous Prepay Values' can currently only be requested on an 'On Demand' or 'Future Dated' service basis, and as such, Eligible Users must send one of these SRVs to the DCC each time the associated data is required. As SRV 4.3 is not currently eligible for Scheduled Services for SMETS1 services, Service Users cannot use SRV 5.1 'Create Schedule' to schedule SRV 4.3 on a repeating basis. Due to the nature of SMETS1 Device communication, each 'On Demand' and 'Future Dated' request requires at least one SMS text message to be sent.

This Modification seeks to add the SMETS1 version of SRV 4.3 as a Scheduled Mode of Operation.

Modification Benefits

Setting SRV 4.3 to a Scheduled Mode of Operation will significantly reduce SMS-related charges, resulting in cost avoidance. It will also allow SMETS1 Users to schedule SRV 4.3 on a repeating basis and not require individual SRVs to be sent.

2 Document History

2.1 Revision History

Revision Date	Revision	Summary of Changes
25/09/2025	0.1	Initial version, for DCC internal review
29/09/2025	0.2	Review completed, costs updated

2.2 Associated Documents

This document is associated with the following documents:

Ref	Title and Originator's Reference	Source	Issue Date
2	SECMP0304_Requirements_v0.31	DCC	22/09/2025
3	Business Case for SECMP0304	DCC	29/09/2025

References are shown in this format, [1].

2.3 Document Information

The Proposer for this Modification is David Walsh of the Data Communications Company (DCC). The Modification was raised on 9th September, 2025.

The Preliminary Impact Assessment (PIA) for a solution on the existing DSP platform was requested of DCC on 16th September, 2025.

3 Context and Requirements

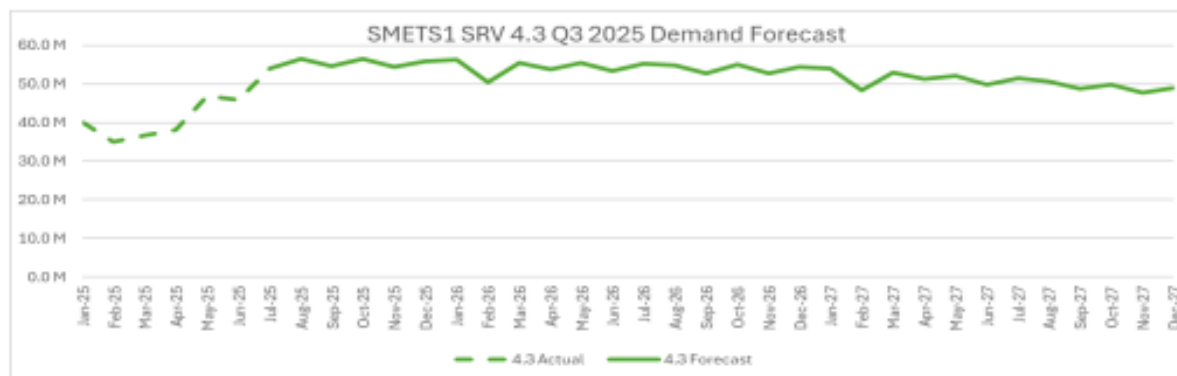
In this section, the context of the Modification, assumptions, and the requirements are stated.

The requirements have been provided by the Proposer.

3.1 What is the Issue?

Smart Energy Code (SEC) Appendix AD ‘DCC User Interface Specification’ (DUIS) defines the individual Service Reference Variants (SRVs) that are eligible for sending as Scheduled Services by Users. For Smart Metering Equipment Technical Specifications 1 (SMETS1), SRV 4.3 ‘Read Instantaneous Prepay Values’ can currently only be requested on an ‘On Demand’ or ‘Future Dated’ service basis¹. As such, Eligible Users must send one of these SRVs to the DCC each time the associated data is required. As SRV 4.3 is not currently eligible for Scheduled Services for SMETS1 services, Service Users cannot utilise SRV 5.1 ‘Create Schedule’ to schedule SRV 4.3 on a repeating basis.

This results in a high volume of ‘On Demand’ or ‘Future Dated’ SRV 4.3s being requested on a regular, repeated basis. Note that a Future Dated Service Request is for a single command execution. The chart below shows the actual and forecasted volumes of SRV4.3s based on the DCC ‘Q3 2025 Demand Forecast’. In the case of SMETS1, SRV 4.3 volumes are forecast to peak in September 2025 in line with the completion of SMETS1 Enrolment and Adoption. This forecast is based on the total volume of SMETS1 Devices migrated to the DCC and the current proportion of prepayment Devices enrolled.



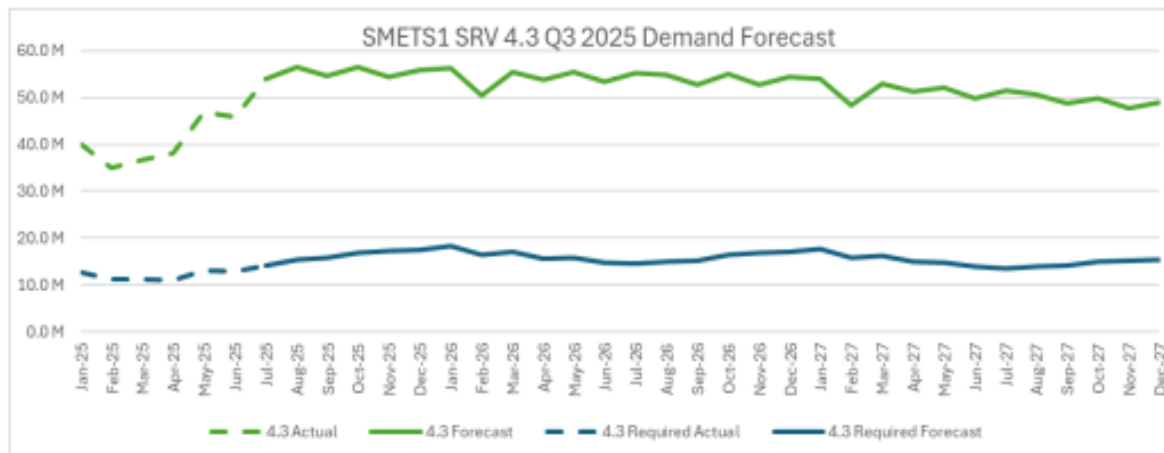
With the completion of the SMETS1 Enrolment and Adoption programme, SMETS1 devices are now at a peak level of about 12million devices, the number of which is expected to slowly decline as we move towards the expected end of life of those devices.

3.2 Impact of the Issue

Due to the nature of SMETS1 Device communication, each ‘On Demand’ and ‘Future Dated’ request requires at least one Short Message Service (SMS) text message to be sent, resulting in a significant cost for DCC and DCC customers. In addition, the running of these SRVs using either the ‘On Demand’ or ‘Future Dated’ service is onerous for DCC Users as a new request must be made on an individual basis.

¹ The “service basis” is termed Mode of Operation in DUIS.

The chart below shows the actual and forecast volumes of SRV 4.3 for SMETS1 based on the DCC 'Q3 2025 Demand Forecast'.



It should be noted that some SRV 4.3s are required after a customer sends Prepayment Top-Up, resulting in an SRV 2.2, TopUpDevice command. Based on initial customer feedback, the chart also shows the volume of 'On Demand' and 'Future Dated' SRV 4.3s that are required to run in these Modes of Operation, with the remaining volume being migrated to Scheduled Mode of Operation. This is based on the following assumptions:

- 1) Any SRV 4.3 not sent immediately following an SRV 2.2 (TopUpDevice) is eligible to be moved to Scheduled Mode of Operation
- 2) Service Users migrate 80% of all eligible SRV 4.3s to Scheduled Mode of Operation.

Based on the assumptions above, around 74% of all 'On Demand' and 'Future Dated' SRV 4.3s can be moved to Scheduled Mode of Operation. Due to the one-to-one mapping between 'On Demand' and 'Future Dated' SRVs and SMS volumes, this will result in significant cost avoidance for DCC and incurred costs to DCC users.

In a separate document, DCC will provide details which is expected to result in cost avoidance in the order of Tens of Millions of Pounds (£) between delivery in November 2026 and SMETS1 End of Life.

Please note that the Department for Energy Security and Net Zero (DESNZ) have recently indicated that SMETS1 Devices are likely to not require replacement until 2033²

3.3 High Level Solution

The Proposed Solution is to update DUIS to allow SRV 4.3 'DCC Scheduled' Mode of Operation. This will enable Eligible Users to setup Scheduled SRV 4.3s to SMETS1 Devices using SRV 5.1. Those schedules will be managed using the existing SRVs 5.1 and 5.2.

As the scheduling capability for SRV 4.3 will be applicable for SMETS1 Devices only, the DSP will implement an error code to notify this validation failure if a Supplier attempts to schedule for SMETS2+ Devices.

² [Smart Metering Policy Framework – Post 2025: consultation](#)

While the solution will decrease the number of SRVs each Supplier will have to send, the impact on network capacity from DSP to the SMETS1 Service Providers (and back) will be minimal.

3.4 Business Requirements

The high-level business requirements are as follows.

Ref	Requirement	MOSCOW
1	Add the Scheduled Mode of Operation to SRV 4.3 'Read Instantaneous Prepay Values'	Must
2	Enable SRV 5.1 'Create Schedule' to schedule SRV 4.3 on a repeating basis	Must
3	Update the SEC to recommend Users to use scheduling Service Requests for SRV 4.3 on SMETS1 Devices when possible	Must
4	Include DUIS Support for Schedulable SRV4.3	Must
5	Enable Management of New Schedules	Must

This solution relates to all cohorts of the Smart Metering Equipment Technical Specification (SMETS) 1 Devices, and will apply to both Electricity Smart Metering Equipment (ESME) and Gas Smart Metering Equipment (GSME).

DCC have also defined a series of Low-Level Requirements based on the requirements above. These will be used for development and testing of the functionality for this Modification. These Low-Level Requirements are included in Appendix B at the end of this document. The Appendix also includes any Rationale for the High-Level and Low-Level Requirements [2].

3.5 Business Case

Business benefits and the basis of the business case are given in detail in document [3].

4 Description of Solution

This PIA has been completed based on the provision of functionality in the DCC Total System to meet the requirements for scheduling and managing schedules for SRV 4.3 and SMETS1 Devices.

Note that no firmware changes to the SMETS1 Devices (Communications Hubs) will be required.

4.1 DSP Changes

Scheduling of Service Requests is carried out by using SRV 5.1. In order for SRV 4.3 to be scheduled, the structure of SRV 5.1 will need to be changed to include SRV 4.3. This requires changes to the DUIS schema.

In addition to the changes to DUIS, there will be a need to amend the DCC Total System to enable creation of SRV 4.3 for delivery to SMETS1 Service Providers (S1SP) after they have been scheduled using SRV 5.1.

The scheduling capability for SRV 4.3 will be applicable only for SMETS1. If a User sends a request to schedule SRV 4.3 for a SMETS2 device, the request will be rejected. A new error code will be introduced in DUIS to notify of this validation failure.

While the existing SRVs 5.1 and 5.2 will be used to manage the SRV4.3 Scheduled Service Requests, no changes to that functionality will be required.

4.1.1 Technical Specifications

DUIS and DCC User Gateway Interface Design Specification (DUGIDS) documentation will be updated to describe that DSP scheduling will be supported for SRV 4.3 for SMETS1. The DUIS schema will need to be modified to add SRV 4.3 to the list of Service Requests accepted by SRV 5.1 for scheduling. The new error code will also be made available in the new version of DUIS. These changes will require a schema uplift, most likely to version 5.5.



DUIS Changes for
SECMP0304.docx

Specific text changes are included in the following file.

Note that it is expected that the SMETS1 Supporting Requirements (S1SR) legal text will require updating. This will be carried out by SECAS.

4.1.2 Request Management

Request Management will be amended to add support for creation of Service Requests on schedule activation of SRV 4.3 and SRV 4.4.3. The processing of SRV 5.1 will be modified to include a validation check to ensure that the scheduling of SRV 4.3 and SRV 4.4.3 is not supported for SMETS2.

4.1.3 Data Management

The Data Management component will be updated to allow SRV 4.3 to be scheduled.

4.1.4 S1SP Interface

The S1SP XML schema used by the S1SP Interface will require uplifting as a result of the changes to SRV 5.1 within the main DUIS schema, since this Service Request is passed to the S1SPs in order for them to maintain details of DSP Schedules for SMETS1 devices.

4.1.5 Security Impact

There will be no significant change to the security design as a result of this change. The functional changes are limited to internal processing and are an enhancement to existing mechanisms.

The implementation will be security assured throughout. This assurance includes reviewing designs, test artefacts, and providing consultancy to the implementation and test teams. A further assessment of Security impact will be carried out as part of the Full Impact Assessment.

4.1.6 Infrastructure Impact

No infrastructure impact is expected from this Modification, beyond the deployment of the revised DUIS to the existing Data Power devices. Network configuration updates will be required at the S1SP Gateways and the incoming F5 controller will need to point to the appropriate DUIS version at the DataPower devices.

4.1.7 Pre-Integration Testing

As part of Pre-Integration Testing (PIT), the Service Providers will validate and verify new behaviour on the DSP, SMETS1, and Critical Software components.

New and updated tests that demonstrate the successful processing of scheduled SRV 4.3 using SRV 5.1, execution and delivery to S1SP for scheduled SRV 4.3, as well as management of SRV 4.3 schedules using SRV 5.2 and 5.3.

Following an initial assessment of this Modification, it has been determined that performance testing is not required on the basis that the solution changes are purely functional.

4.2 CGI Instant Energy

On receipt of a DSP scheduled request, CGI Instant Energy (CGI IE) carries out a validation check to ensure the SRV is applicable to Command Variant 9 and returns an S1SP Alert S1VE12 to the User if the combination is invalid. CGI IE shall develop and test a database update script to add standing data to its "Security Module" component database, to allow SRV 4.3 to be processed as a DSP Scheduled request.

4.2.1 Other Impacts

No security or infrastructure impacts are expected at this stage.

4.2.2 Integration Testing

Integration is expected to be limited to functional regression testing as part of a SEC Release. CGI IE shall carry out performance testing within its PIT performance test environment. No integrated performance testing will be required.

4.3 Secure Software

Changes to handle the Scheduled SRV 4.3 are required for the Secure S1SP processing. Performance testing in PIT will ensure that performance of the Scheduled SRV and other Service Requests are not negatively impacted.

4.4 Trilliant

For S1SP to support receiving and processing scheduled SRV4.3, no processing change is required. This request is non-critical so Trilliant is not required to verify the Command Variant (CV) of the incoming SRV.

Given that this change is impacting all S1SPs and the DSP, it is necessary for a new DUIS schema and DUIS specification to be issued allowing for the SRV to be sent to DSP as scheduled.

Trilliant will need to uplift their solution to the new DUIS schema so the software complies with the latest version. It is expected that the following will need uplifting to the latest versions, as they are inter-related:

- SMWAN Gateway Interface Specification
- SMWAN schema
- DUIS specification
- DUIS schema
- MMC schema

Associated microservices in the Trilliant solution will require some updating.

4.5 Future DSP

DCC anticipates adding the DUIS and DUGIDS changes to the requirements for Future DSP (also referred to as DSP2). There would be no charge for this, and it is anticipated that the additional integration testing would have no impact on the DSP2 integration testing effort as a whole.

4.6 Netcompany

As the DUIS Service Provider, Netcompany will make the required changes to support the changes in DUIS for DSP2. These changes will be the same as those required for as-is DSP, and there will be no charges beyond minimal support during the integration testing and implementation stages.

4.7 Critical Software

Critical Software as the Parse and Correlate Service Provider will make the required changes to support the revised MMC schema definition. Changes will also be required in the GFI tool as well as DCC Boxed, but these are covered as part of the SEC Release costs, and will not be included in final FIA charges.

5 Implementation Timescales and Approach

This Modification will be implemented in a future SEC Release. Design, Build, and PIT is expected to take approximately **three** months to complete after the Contract Amendment Note (CAN) is signed.

The current SECAS forecast for the implementation of this Modification is November 2026. Details of the implementation will be finalised in the FIA.

Implementation of this change is assumed to follow a hybrid of agile and waterfall methodology. The release lifecycle duration will be confirmed as part of the FIA.

5.1 Testing and Acceptance

For each SEC System Release, there is a Post-PIT Change Request that provides the System Integration Testing (SIT) and User Integration Testing (UIT) response for the SEC Release as a whole, covering the testing of individual changes in the scope of the release, as well as activities that are common to all changes in the scope (e.g. test plans, system regression testing, test management and governance). This is not included in this PIA.

5.1.1 System Integration Testing

The CGI System Integrator team will plan, prepare and execute SIT to verify that the change to accommodate SRV 4.3 with the Scheduled Mode of Operation functions as expected.

The scope of testing will likely comprise:

- schedule creation of SRV 4.3, and verifying successful execution and response
- verifying that new schedules can be read with SRV 5.2 and deleted with SRV 5.3
- verifying that functionality is as expected across a number of related business Scenarios, including Meter Reading, Change of Supplier, and Change of Mode
- negative testing, such AS attempting to schedule SRV 4.3 FOR SMETS2 devices

Approximately two hundred and eighty (280) tests will need to be executed to prove this Change. A device set from each of the SMETS1 cohorts will be required. Additionally, for the negative testing, a device set for each of the SMETS2 a Communication Service Providers (CSPs) is anticipated. DCC believes that only one SMETS2 CSP will require testing, and will challenge the scope of SIT as part of the FIA.

The effort required to carry out release-level activities such as governance and DUIS compatibility testing for November 2026 is not included within the scope of this PIA and are expected to be provided under a post-PIT Testing Change Request.

These costs are not included in the Rough Order of Magnitude cost (ROM) figure given following, but are not anticipated to be large, due to the nature of the change.

5.1.2 User Integration Testing

The CGI System Integrator team will plan, prepare and execute UIT to verify that the change to accommodate SRV 4.3 with the Scheduled Mode of Operation functions as expected.

These costs are not included in the ROM figure given following, but are not anticipated to be large, due to the nature of the change.

6 Costs and Charges

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

The ROM shown below describes indicative costs to implement the functional and non-functional requirements defined in section 3.4 and Appendix B. 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. As a result, the final offer price may result in a variation.

6.1 Design, Build, and Testing Cost Impact

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

£ ROM	Design, Build, and PIT
SRV 4.3 Scheduling	£ 760,000 to 1,040,000

Although not included in this PIA, there will be integration testing costs associated with this Modification. If the targeted SEC Release date includes another Modification or Change Request with regression testing, that cost will be shared between the two (or more) changes, and the cost of integration testing for each change will come down.

Based on the existing requirements, the total fixed price cost for a Full Impact Assessment by the DSP and FSM is **£38,520** and would be expected to be completed within 40 Working Days.

7 Risks, Assumptions, Issues, Dependencies, and Clarifications

In the following sections, Required Clarifications, Risks, Assumptions, and Dependencies have been identified.

No Issues have been identified at this time.

Risk

Ref	Description	Mitigation	Status
MP304-R1	Energy Suppliers may need responses from their SRV 4.3s before a certain time of day to incorporate into their own systems, e.g., for reporting.	If this is the case, the mitigation would be to prioritise SRV 4.3 over other Scheduled Service Requests.	Open, require User input

Assumptions

Ref	Description	Status
MP304-A1	Service Users will update their systems to adapt and schedule eligible SRV 4.3 requests accordingly	Open
MP304-A2	As this modification requires a change in User behaviour, DUIS uplift and adapter changes (and the associated costs for doing so), we have assumed an 80% take up of this change by Users. This estimate will be validated in customer engagement sessions.	Accepted
MP304-A3	As this requires a full DUIS uplift, DCC anticipate this change to be implemented by November 2026.	Accepted
MP304-A4	This change impacts all SMETS1 cohorts and associated Service Providers.	Accepted
MP304-A5	Assume that the newly scheduled DSP services for SRV 4.3 will be configured with each Service Provider's default long retry policy. If this assumption is incorrect then DCC must advise the Contractor as to what alternative retry policy is required for this change prior to the FIA stage	Open

Dependencies

Ref	Description	Status
MP304-D1	DCC will confirm which SMETS1 cohort (FOC, MOC, IOC) to test and which SMETS2 cohort (ARQ, VMO2, 4G CHN) ahead of progressing this Change to FIA	Open

Clarifications

In order to help complete the Full Impact Assessment, Service Providers will require clarification on the following points:

1. Confirmation of the Error Code(s) to be used for the new Error code.
2. A likely indication of the new DUIS version number.
3. Agreement on the retry policy for each Service Provider.

Appendix A: Glossary

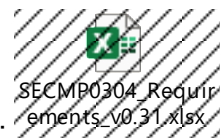
The table below provides definitions of the terms used in this document.

Acronym	Definition
CAN	Contract Amendment Note
CGI IE	CGI Instant Energy
CR	DCC Change Request
CSP	Communication Service Provider
DCC	Data Communications Company
DESNZ	Department for Energy Security and Net Zero
DSP	Data Service Provider
DUGIDS	DCC User Gateway Interface Design Specification
DUIS	DCC User Interface Specification
ESME	Electricity Smart Metering Equipment
FIA	Full Impact Assessment
GBCS	Great Britain Companion Specification
GSME	Gas Smart Metering Equipment
MMC	Message Mapping Catalogue
PIA	Preliminary Impact Assessment
PIT	Pre-Integration Testing
ROM	Rough Order of Magnitude (cost)
SEC	Smart Energy Code
SECAS	Smart Energy Code Administrator and Secretariat
SIT	Systems Integration Testing
SMETS	Smart Metering Equipment Technical Specification
SMS	Short Message Service aka Text Message
SR	Service Request
SRV	Service Reference Variants
S1SP	SMETS1 Service Provider
UIT	User Integration Testing

Appendix B: Low-Level Requirements for SECMP0304

The following Low-Level Requirements have been defined for this Modification.

1. MP304_LLR_001: Add the Scheduled Mode of Operation to Service Reference Variant (SRV) 4.3
2. MP304_LLR_002: Enable SRV 5.1 to schedule SRV 4.3 on a repeating basis
3. MP304_LLR_003: Users should use Scheduled Services for SRV 4.3 when possible
4. MP304_LLR_004: Include DUIS XML Schema support for changing SRV 4.3 to a Schedulable Mode of Operation
5. MP304_LLR_005: Include DUIS XML Schema support for changing SRV 5.1 to support Scheduling of SMETS1 SRV 4.3
6. MP304_LLR_006: Include DUIS XML Schema support for an error if Users attempt to Schedule SRV4.3 for a SMETS2 Device
7. MP304_LLR_007: Enable DUIS XML Schema support for Viewing New Schedules
8. MP304_LLR_008: Enable DUIS XML Schema support for Deleting SRV 4.3 Schedules



The full requirements and supporting rationale are included in this file: