

SEC Modification Proposal, SECMP0246, DCC CR4725

DCC User Access to Metadata via the DCC Self- Service Interface

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 **£9,303**.
- The timescales to complete the Full Impact Assessment of 40 working days.
- ROM costs for SECMP0246, up to the end of Pre-Integration Testing (PIT) of £10,000 - £100,000.

Problem Statement and Solution

The Smart Energy Code Administrator and Secretariat (SECAS) and the User Independent Privacy Auditor (IPA) have raised concerns to the Smart Energy Code (SEC) Panel about a specific function in the Self-Service Interface (SSI), the Meter Read Transaction (MRT) function which allows Users to access metadata for Smart Meters and associated Devices.

To access metadata for a Device, the privacy obligation in SEC Section I 1.4 requires all DCC Users to obtain Unambiguous Consent from the Energy Consumer pertaining to that Device. Currently, compliance with SEC Section I 1.4 can only be verified for Other Users which undergo an annual Privacy Assessment. However, any DCC User can currently access metadata through the MRT function for any Device, including those not in their own Device portfolios. This introduces a risk that open access to the data could be exploited, as access to all Users was never the intention of the MRT function.

Modification Benefits

The potential risk of open access to metadata is that unauthorised DCC Users could view headline data in relation to Service Requests without the Energy Consumer's consent. The level of risk associated with this issue is currently low but if the risk should escalate could represent some risk of associative reputational damage to the Smart Metering Implementation Programme (SMIP). By removing access to the MRT screen, DCC Users will no longer be able to use the MRT function to view the metadata associated with devices not included in their portfolios.

The changes will be local to the MRT and will have no impact on the rest of the SMIP. A DCC User can also use a separate function on the SSI called the Service Audit Trail (SAT) to produce the same report. The SAT has access controls in place to limit Users to view the metadata for Devices only held within their own consumer portfolios.

2 Document History

2.1 Revision History

Revision Date	Revision	Summary of Changes
24/10/2023	0.1	Initial version, for DCC internal review
27/10/2023	0.2	Review complete and published

2.2 Associated Documents

This document is associated with the following documents:

Ref	Title and Originator's Reference	Source	Issue Date
1	MP246 Modification Report - v0.2	SECAS	5/10/2023
2.	MP246 Business Requirements - v0.2	SECAS	9/10/2023

References are shown in this format, [1].

2.3 Document Information

The Proposer for this Modification is James Burney, SSE Networks. The Modification was raised on August 30th, 2023.

The Preliminary Impact Assessment (PIA) was requested of DCC on 16th October 2023.

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 Current Arrangements

SECAS and the User IPA have raised concerns to the SEC Panel in relation to the MRT function within the SSI. This allows DCC Users to see metadata for each Device.

SEC Section H8.16 details the minimum requirements of the Self-Service Interface, and the metadata requirements are detailed under clause H8.16(c). SEC Section H8.16(c) states:

'a record, which (subject to the restriction in SEC Section I 1.4 (User Obligations)) shall be available to all Users:

- (i) *of all 'Read Profile Data' and 'Retrieve Daily Consumption Log' Service Requests in relation to each Smart Meter (or Device Associated with it) that were sent by any User during a period of no less than three months prior to any date on which that record is accessed; and*
- (ii) *including, in relation to each such Service Request, a record of the type of the Service Request, whether it was successfully processed, the time and date that it was sent to the DCC, and the identity of the User which sent it.*

The restriction in relation to SEC Section I 1.4 details the User obligations with regard access to records. SEC Section I 1.4 states:

Each User undertakes that it will not access (pursuant to Section H8.16) or request (pursuant to Section H8.17) the information described in Section H8.16(c), unless:

- a) *the Energy Consumer at the premises at which the relevant Smart Meter is located has given the User Unambiguous Consent to do so and such consent has not been withdrawn; and*
- b) *the information is accessed solely for the purpose of its provision to that Energy Consumer.*

The data outlined in SEC Section H 8.16(c) is available to all types of DCC User via the MRT functionality. Currently, any User can access metadata for any Device, including those not in their own Device portfolios, which was not the intention of the MRT function from its point of inception.

The SAT offers the same service as the MRT function to Users following the implementation of SECMP0141 'SRV Visibility for Devices on SSI'. This expanded the SAT to include visibility of all Users which have sent Service Reference Variants (SRVs) to a Device. The SAT has access controls in place limiting DCC Users to only view metadata for Devices held within their own consumer portfolios, helping to prevent a breach of SEC Section I 1.4. Other types of DCC User using the SAT can only see metadata for SRVs that specific User has sent to each Device, as opposed to all Users.

3.2 What is the Issue?

As any DCC User can access metadata for any Device, there is a risk that this open access could potentially be exploited, with Users having the ability to collate a log of headline data pertaining to Service Requests sent to a Device, whereas they have not gained Unambiguous Consent from the Energy Consumer to access.

Currently, compliance with SEC Section I 1.4 can only be verified for one type of DCC User, Other Users, as they are subject to an annual Privacy Assessment. However, the SEC Panel has confirmed that the intent was never for Other Users to obtain metadata, instead the MRT function was built for Suppliers to see which entities have accessed each Device for Energy Consumer transparency.

3.3 Impact of the Issue

If an Energy Consumer requests access to their metadata, the Supplier can use the MRT function to retrieve a report detailing all headline information relating to a log of Service Requests sent to their Device. There is potential that DCC Users could access Consumer's metadata, despite not having the required consent.

The DCC provides a monthly report to SECAS detailing the number of access requests via the MRT function. This is to monitor the level of potential risk and opportunity that access to metadata could be abused. The level of risk associated with this issue at present is low but could represent some risk of associative reputational damage to the SMIP should the risk factor increase.

There is a risk that Consumption Data relating to a Consumer could be captured by Users which have not obtained Unambiguous Consent. This would be considered a breach of the privacy obligation in SEC Section I 1.4 and as such will be reported by to the SEC Panel where a breach is identified by SECAS.

3.4 Business Requirements

The business requirements are as follows.

Ref.	Requirement	MoSCoW Rating
1	Remove the Meter Read Transaction (MRT) Function from the Self-Service Interface (SSI)	Must

The MRT function within the DCC SSI allows all Users to see metadata for each Device. Metadata is defined in SEC Section H8.16(c) and includes records of Service Requests, their types, processing status, timestamps, and User identities. To access metadata for a Device, the privacy obligation in SEC Section I 1.4 requires all Users to obtain Unambiguous Consent from the Energy Consumer pertaining to that Device.

3.5 Solution Approach

It is known that Suppliers and Network Parties can access the same information as stated under Section H8.16(c) via the SAT function following the implementation of SECMP0141. The SEC Panel are recommending the removal of the MRT function. This would also require an amendment to SEC Section H8.16(c).

4 Description of Solution

The Meter Read Transactions screen was originally developed under CR195. This Modification is to remove the MRT screen from the SSI and SSMI applications. All code specific to this screen will be removed from the application, i.e., removal will be more than simply preventing access to the screen by configuration of Role Based Access Controls (RBAC).

4.1 Security Impact

There will be no significant change to the security design as a result of this change. There are no interface or major changes to functionality meaning there is no requirement for a penetration test or any changes to the existing protective monitoring approach.

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

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

4.2 Technical Specifications

There are no changes any technical specifications.

4.3 Integration Impact

The proposed SIT test execution scope for CR5186 consists of a single test as follows:

- Log in to SSI and verify that the SSI screen with the MRT Function is not accessible

This Modification requires one new scenario and script to be written. The SIT preparation activities will produce the necessary SIT artefacts, i.e., Heatmap, Test Scenario, Test Script, for DCC review and approval. This test will be manual.

It is not thought that this Modification will require User Integration Testing.

An element of regression testing will be carried out as part of the SEC Release that includes this change.

4.4 Infrastructure Impact

No infrastructure impact is expected from this Modification.

5 Implementation Timescales and Approach

This Modification is expected to be implemented in a future SEC Release. Design, Build, and PIT is expected to take approximately three months to complete after the CAN is signed.

Details of the implementation will be finalised in the FIA.

5.1 Implementation Approach

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.

6 Costs and Charges

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

The Rough Order of Magnitude cost (ROM) shown below describes indicative costs to implement the functional and non-functional requirements as assumed above. 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.

Note that solution costs are expected to be similar, and definitely inside the same cost range for either Option A or Option B, although the second option will have a slightly larger cost.

6.1 Design, Build and Testing Cost Impact

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
MRT Access in the SSI and SSMI	£10,000 to 100,000

Although not included in this PIA, it is expected that there will be low integration testing costs associated with this Modification.

Based on the existing requirements, the total fixed price cost for a Full Impact Assessment is **£9,303** and would be expected to be completed in 40 working days.

Appendix A: Glossary

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

Acronym	Definition
CAN	Contract Amendment Note
CR	DCC Change Request
DCC	Data Communications Company
DSP	Data Service Provider
FIA	Full Impact Assessment
IPA	User Independent Privacy Auditor
MRT	Meter Read Transaction
PIA	Preliminary Impact Assessment
PIT	Pre-Integration Testing
ROM	Rough Order of Magnitude (cost)
SAT	Service Audit Trail
SEC	Smart Energy Code
SECAS	Smart Energy Code Administrator and Secretariat
SIT	Systems Integration Testing
SMIP	Smart Metering Implementation Programme
SRV	Service Reference Variants
SSI	Self-Service Interface
UIT	User Integration Testing