

SEC Modification Proposal, SECMP0181

Meter Asset Provider (MAP) Access to Asset-Related Data Held by the DCC

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 (FIA) of £20,000
- The timescales to complete the Full Impact Assessment of 30 days
- ROM costs to deliver SECMP0181 including Design, Build and PIT of between £45,000 and £65,000

Problem Statement

Meter Asset Providers (MAPs) and Meter Manufacturers wish to access smart asset-related data held by the DCC in order to allow them to assess and manage asset health for any smart assets they own. The solution proposes that the DCC Technical Operations Centre will provide reports tailored to each MAP and Meter Manufacturer.

Benefit Summary

MAPs and Manufacturers are currently unable to access DCC held data relating to the assets that they own (MAPs) or that they built (Manufacturers). This limits their ability to manage their asset portfolios effectively and efficiently, leading to increased volumes of faulty Devices due to out of date firmware or failed Device commissioning. MAPs and Manufacturers are seeking access to firmware data and DCC status information which will allow them to work with Responsible Suppliers to help identify and facilitate firmware updates and Device commissioning. This would reduce the risk that Devices provide a diminished smart service to the end consumers.

2 Document History

2.1 Revision History

Revision Date	Revision	Summary of Changes
23/12/2021	0.1	Initial version
19/01/2022	0.4	Internal review

2.2 Associated Documents

This document is associated with the following documents:

Ref	Title and Originator's Reference	Source	Issue Date
1	MP181 Modification Report v0.4	SECAS	13/12/2021
2	MP181 Business Requirements v0.2	SECAS	13/12/2021
3	MP181 Preliminary Assessment Request	SECAS	13/12/2021

References are shown in this format, [1].

2.3 Document Information

The Proposer for this Modification is Lynne Hargrave on behalf of Calvin Asset Management Ltd.

The Preliminary Impact Assessment was requested of DCC on 13th December 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 the Smart Energy Code Administrator and Secretariat (SECAS), the Proposer, and the Working Group.

3.1 Problem Statement

MAPs and Device Manufacturers wish to access smart asset-related data held by the Data Communications Company (DCC). This will allow the MAP or Manufacturer to assess and manage asset health for any smart assets it owns or has manufactured. This will enable MAPs to work with Manufacturers to manage their asset portfolios effectively and efficiently, leading to reduced volumes of faulty Devices due to out of date firmware or failed Device commissioning.

Under the Smart Energy Code (SEC), the inventory data requested by MAPs and Manufacturers is classed as Confidential Information. SEC Section M4.1 prohibits the disclosure of a SEC Party's Confidential Information to any person apart from in specific circumstances set out in SEC Section M4.3.

The Proposer suggests that SEC Section M4.3 should be amended to allow the DCC to release asset-related inventory data to the MAP owning the asset and the Manufacturer who built the Device.

The Modification initially only allowed MAPs to access the dataset. However, following the request of Device Manufacturers, the scope of this proposal will now allow Device Manufacturers to have access to the same dataset, provided that they are the Manufacturer of the asset.

3.2 Business Context and Requirements

The DCC holds data relating to smart assets in the Smart Meter Inventory (SMI). This asset-related inventory data is provided to the DCC by Suppliers, as DCC Users, as part of their role as Parties to the SEC. During the Development Stage, the DCC stated that this inventory is classed as Confidential Information. SEC Section M4.1 prohibits the disclosure of a SEC Party's Confidential Information to any person apart from in specific circumstances set out in SEC Section M4.3. Following a discussion between the DCC and SEC lawyers, it was agreed that the data would not be deemed confidential, provided that the DCC were carrying out 'permitted business'.

3.3 Business Requirements

This solution will be applied to Smart Metering Equipment Technical Specifications (SMETS) 1 and SMETS2+ Devices.

The DCC will provide anonymised league tables for key business processes, identifying average performance per Smart Energy Code (SEC) Party for that Business Process and identifying the positioning on those league tables of only the SEC Party to whom that report is directed. DCC Customer Analytics Reporting will not share any Device Level data with any party other than the target SEC Party. Any SEC Party which is active in DCC Systems can request a new report to be added to the Customer Analytics Reporting suite, or request a change to an existing report, by making a request to a DCC group mailbox, but additional design, build and test costs will be incurred.

Ref.	Requirement
1	The DCC are to provide a service to MAPs and Manufacturers allowing the disclosure of asset-related data
2	MAPs will be requested to provide proof that they are the owner of the asset(s) via SharePoint
3	DCC are to retrieve the dataset requested by the relevant MAP or Manufacturer
4	DCC are to provide the dataset to the relevant MAP or Manufacturer

Requirement 1: The DCC are to provide a service to Meter Asset Providers (MAPs) and Manufacturers allowing the disclosure of asset-related data

During the Refinement Process, SEC Lawyers and the DCC agreed that the service to be provided to MAPs and Manufacturers will be categorised as an Other Enabling Service. The Proposer, after discussions with meter Manufacturers, has requested that the below datasets are made available to the relevant MAP or Manufacturer:

- Global Unique Identifier (GUID)
- Device type, manufacturer and model
- Device firmware version
- Device status
- Communications Service Provider (CSP) region
- Supplier ID and Supplier effective from date
- Communications Hub make, model and firmware version

The data may be provided via an ad-hoc request, or on a regular monthly or quarterly basis as agreed between the MAP or Manufacturer and the DCC (but no more frequently than monthly).

Requirement 2: MAPs will be requested to provide proof that they are the owner of the asset(s) via SharePoint

For the DCC to ensure that it discloses the requested datasets to the asset owner, the MAP will have to provide proof that they are the owner of the asset(s). The Proposer has advised that the most efficient way to provide the DCC with the required proof will be to upload a list of the GUIDs of the assets they are responsible for to the DCC SharePoint. The DCC shall then validate the GUIDs provided before disclosing the data. If two MAPs identify the same GUID, DCC will query and provide no reporting on that GUID until agreement is reached. This is not thought to be a frequent issue i.e. maybe one or two per quarter.

Note that this requirement is not necessary for Meter Manufacturers as their Manufacturer ID will be contained within the Central Products List (CPL) entry for the relevant Device Model.

Requirement 3: DCC are to retrieve the dataset requested by the relevant MAP or Manufacturer

Upon receiving a request from a MAP or Manufacturer to use the service (or monthly / quarterly at the discretion of the MAP or Manufacturer but no more frequently than monthly), the DCC shall carry out the necessary reporting in order to disclose the information to the MAP (provided they have proven to be the owner of the asset) or Manufacturer.

SECAS has been advised that the datasets requested by MAPs and Manufacturers can be obtained via the DCC Technical Operations Centre (TOC).

Requirement 4: DCC are to provide the dataset to the relevant MAP or Manufacturer

Once the DCC has obtained the requested data, the report shall be made available to the relevant MAP or Manufacturer. This may be through the use of DCC SharePoint as a preferred option or potentially through Secure File Transfer Protocol (SFTP). DCC shall also notify the relevant MAP that the data is available.

4 Description of Solution

Following workshops and consultations with Users and analysis of the Requirements above, the DCC TOC have defined a solution.

4.1 The DCC Technical Operations Centre

The DCC TOC is a 24x7x365 capability with an in-depth technical understanding of the DCC systems, process and technology to ensure the DCC service “lights stay on”. This is done by assuring, controlling, monitoring and informing the DCC network.

The TOC is staffed by dedicated DCC sourced system experts and a core network monitoring team and is located at the DCC Brabazon site. The TOC staff are technical experts that understand the DCC systems, processes and technology in sufficient level of detail to be able to provide a 3rd level support capability.

The TOC has four key objectives:

1. Service Visualisation of data sources in near real time to provide an adaptable and configurable Operations Management dashboard.
2. Operations Analytics and/ or intelligence allowing highly accurate monitoring of key DCC KPI's across all data sources, identify anomalies and generate intelligent insights through correlation/ trend analysis – and other statistical analysis models - of data sources to automate root cause identification and provide other useful insights to facilitate DCC in their operational objectives.
3. Capability for proactive alerting of operational metrics, using appropriate algorithms/ logic, that can be triggered through use of configurable thresholds and detection of anomalous behaviour, allowing DCC to pre-emptively address possible incidents.
4. Summary of key infrastructure availability across DCC supply base to provide a high-level view of service availability, subject to appropriate security constraints.

The DCC TOC will be responsible for the design, development, implementation and Business as Usual (BAU) maintenance of the solution for this Modification.

4.2 Solution Constraints and Changes

DCC have reviewed and concluded that the requirements can be met in full and delivered using existing data available in the TOC and subsequently working within the constraints of the current solution should involve no commercial change to the DCC Solution, although there will be a direct impact on support and maintenance.

Should requirements evolve as part of change to the initial requirements subsequent to this PIA, then DCC will need to evaluate principally based upon if it can be delivered from existing data available in the TOC. If further "external" data is identified, it will be separated out with individual DCC Change Requests sent to the relevant Service Providers. If the Working Group decides it wants to go ahead with this external data and associated development, it will be sent out for a FIA. It should be noted that these additional external data requests will also require contractual negotiations between the DCC and the impacted Service Providers, which is expected to take at least six months to complete.

Currently the DCC does not have access to data to allow independent validation of whether a MAP owns a particular device. However the implementation of the Faster Switching programme could provide this data.

The Charging opt in and opt out process is considered out of scope for this document, but will be investigated as part of the FIA.

4.3 Delivery, Testing, and User Acceptance

MAPs will need to ensure a single csv file containing the GUIDs of devices they are responsible for is uploaded to the DCC SharePoint by a fixed date of the month to be agreed for the FIA. This file will be processed by DCC TOC and the resulting report will be delivered back to their own dedicated section in the existing DCC SharePoint site.

It is proposed that the reporting will be delivered by the DCC TOC via a standard delivery mechanism. If not already provisioned, the DCC will provide a SharePoint site for the MAP or Meter Manufacturer which is accessible by Authorised DCC, MAP or Meter Personnel only.

The reports will be generated and results output as a single compressed zip file. This file will contain a single csv file containing the data detailed in Requirement 1. The zip file will be uploaded to the appropriate MAP or Meter Manufacturers dedicated section of the existing DCC SharePoint location on a fixed date of the month or fixed Working Day of the Month to be agreed as part of the FIA.

For Meter Manufacturers, monthly extracts will be produced for all devices relevant to the Manufacturer and will be delivered back to their own dedicated section in the existing DCC SharePoint site.

TOC Development and testing will not follow the PIT, SIT, and UIT pattern associated with a "conventional" SEC Release, and will not require the testing services of the System Integrator or CSPs. Once the Modification is approved, the DCC will compile the report and work with a MAP or Manufacturer as appropriate to validate the results and ensure the output meets the requirements. Once the output is approved, DCC will begin delivery of the report.

5 Impact on Systems, Processes and People

As defined the change included in this document is confined to data already within the DCC TOC, with no expected changes impacting SMETS1 or SMETS2 Service Providers.

5.1 DCC Technical Operations Centre Development and Testing

The full range of activities required to implement these requirements including design, development, testing, and implementation would be performed by DCC in-house contractors and permanent staff. These activities include:

- Deliver Data Model algorithms, build report, test, document, update database, update interfaces and document solution.

The DCC TOC costs for the solution include requirements which only require existing data held in the TOC. No Service Provider contract changes are required.

5.2 Technical Specifications

No change to DUIS, GBCS, or any other Technical Specification is expected.

5.3 Self Service Interface

No Impact has been noted.

5.4 Infrastructure Impact

To meet the requirements in this Modification, no additional infrastructure (database, systems, cloud capability or capacity) is envisaged. Any additional data-marts, data-tables and data warehouse solution costs will be facilitated by economies of scale, and will be absorbed into TOC running costs.

It should be noted that the solution as proposed should not add noticeable traffic or processing to the Smart Metering System or network.

5.5 Application Support

There will be a slight increase in the Full Time Employees (FTEs) required to support, maintain, and deliver the reporting on a monthly basis, but this will be absorbed into the BaU function. It should be noted that these additional, small incremental increases in workload will eventually lead to headcount increases. These services will include:

DCC TOC Reporting Staff	Required to support and maintain the TOC system as Business as Usual, building DCC data throughout month and packaging report in 10 day production cycle
DCC TOC Third Line Support	For Reports requirements: Support and query answering, plus maintenance and optimisation
Operations Support	Covers both Service and Incident Management and is centred on the requirement to provide Commentary. Investigation will be required to identify whether the performance deterioration is as a result of issues with system, Comms Hubs, Meters, Orchestration or areas entirely outside DCC visibility (actions taken by SEC Parties e.g. Staff being taken off work due to training, system issues with customers etc.

5.6 DCC Service Impact

Impacts to DCC Service Design, Service Management and other Application Support functions are likely, and it is expected that further TOC staffing will be required to support the changes in this Modification. These costs will be determined as part of the Full Impact Assessment, and will reflect the complexity and other properties of the solution.

6 Implementation Timescales and Approach

A key factor in planning and delivering this Modification's implementation and release is that the changes are neither part of the Smart Metering System, nor do they impact any Technical Specifications, such that they can be implemented separate from the now-standard SEC Release dates.

6.1 Testing and Acceptance

It is assumed that the change will be implemented and tested as a separate release, and will include testing iteratively during development. The development and testing will not require the testing services of the System Integrator or CSP.

It is likely that selected Service Users would be engaged in the design, development, and test phases for this Modification. A full analysis of the testing methodology will be defined as part of the FIA.

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 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 FIA 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 price may result in a variation.

7.1 Design, Build, and Testing Cost Impact

The table below details the cost of delivering the changes and Services required to implement this Modification. The scope of supply under this PIA includes design, development (build), testing within a selected TOC environment. Activities out of scope of this cost include Application Support and infrastructure improvements.

£	Design, Build and Test
MAP Access to TOC Data	£45,000-65,000

Based on the existing requirements, the fixed price cost for a Full impact Assessment is £20,000 and would be expected to be completed in 30 days.

7.2 Application Support Costs

Although not included in this Modification PIA, DCC TOC believe the Application Support for this change can be added into ongoing reporting work at no additional cost. There may be small charges for other DCC support activities.

Appendix A: Glossary

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

Acronym	Definition
BAU, BaU	Business As Usual
CPL	Central Products List
CSP	Communication Service Provider
CSV	Comma Separated Variable
DCC	Data Communications Company
DSP	Data Service Provider
DUIS	DCC User Interface Specification
FIA	Full Impact Assessment
FTE	Full Time Employees
GBCS	Great Britain Companion Specification
GUID	Global Unique Identifier
MAP	Meter Asset Provider
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
SFTP	Secure File Transfer Protocol
SIT	Systems Integration Testing
SMETS	Smart Metering Equipment Technical Specification
SRV	Service Request Variant
TOC	Technical Operations Centre
UIT	User Integration Testing