

SEC Modification Proposal, SECMP0169 (Future DSP Iteration)

DCC CR5649

Managing the Consumer's Refusal of a Smart Meter

DCC Preliminary Impact Assessment

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1 Executive Summary

The Change Board are asked to approve the following options for a Full Impact Assessment against the Future Data Service Provider (DSP) platform:

- Total cost to complete the Full Impact Assessment of £50,791
- The timescales to complete the Full Impact Assessment of 40 Working Days
- Rough Order of Magnitude (ROM) costs for SECMP0169, from setup up to the end of Pre-Integration Testing (PIT) of between £180,000 and £250,000

Problem Statement

SECMP0169 proposes a set of arrangements to cater for consumers who wish to refuse to have a Smart Meter installed, or who have a Smart Meter but wish to prevent their Energy Supplier from collecting consumption data remotely.

Due to the dwindling number of heritage meters in the supply chain, and Energy Suppliers' obligations relating to the installation and operation of Smart Meters, it is generally not an option to install a heritage meter at these consumers' premises.

SECMP0169 will implement a flag in the DSP system to identify where a Smart Meter is to be restricted from operating in a fully smart mode, meaning that Service Requests to retrieve consumption data will be rejected; while only Critical, Security, and Safety Alerts and Firmware updates will be allowed.

Benefits

The benefits of implementing this Modification will be:

- consistent and clear advice to consumers who wish to refuse a Smart Meter – remote retrieval of consumption data can be prevented
- clarity for Energy Suppliers when dealing with consumers who wish to refuse a Smart Meter – no need to evaluate each case
- continuity of arrangements for the consumer following Change of Supplier (CoS) – the flag in the DSP system is not reset automatically on CoS
- non-essential Device Alerts for consumers requiring privacy of their data will not be forwarded to Suppliers

2 Introduction

2.1 Revision History

Revision Date	Revision	Summary of Changes
13/06/2025	3.01	Third iteration, DSP2 Service Providers
20/06/2025	3.2	Review complete
20/06/2025	3.21	Update of ROM and FIA cost

2.2 Associated Documents

This document is associated with the following documents:

Ref	Title and Originator's Reference	Source	Issue Date
1	MP169 Business Requirements v0.4	SECAS	15/09/2023
2	MP169 Modification Report v0.9	SECAS	21/03/2025

References are shown in this format, [1].

2.3 Document Information

The proposer for this Modification is Emslie Law of OVO.

A second PIA relating to SECMP0169 was provided by DCC, based on a change of requirements.

This third PIA relates to the implementation of this Modification on the Future DSP (also known as the DSP To Be or DSP2). It was requested on 27th May 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 SECAS, the Proposer, and the Working Group.

3.1 Problem Statement

Suppliers are unable to comply with consumer requests to install a smart meter in 'dumb' mode. The SEC does not allow for the Devices on the Smart Metering Inventory to be either installed and not commissioned (this is a transient state and not an enduring one) or to fit the meters without also fitting the DCC provided Communications Hub (as reference above in Gas and Electricity Supply Licence Condition 54.9). There is no concept, by design, of fitting a smart meter in 'dumb' mode.¹

Suppliers are currently either installing heritage meters or installing the Smart Meter in ways that are or will cause problems elsewhere.

Some of the factors that will need consideration as part of any solution are:

Additional Issues with non-communicating meters	
Issue for consideration	Details
Any form of Load (Heating / Hot Water / Electric Vehicle)	Any consumer on an Economy 7 tariff (or similar) arrangement relies completely on the Smart Meter communicating.
Change of Mode (Credit to Prepayment and vice versa)	This explicit part of Smart Metering; Prepayment will not work on a meter in dumb mode (or when not communicating)
Eligibility and non-eligibility	Potential Network Managed sites with no Wide Area Network (WAN) regimes must have communications.
'Dumb' meters will need manual reads	It is likely Suppliers will no longer have meter reading agents, especially for a Smart Meter, so may need the customer to provide reads themselves. Smart Meter displays contain more screens and information and the potential for the customer reading the wrong data is therefore increased. There are billing implications Smart is designed to address
DCC / Distribution Network Operator (DNO) flagging the meter as non-communicating	These will be 'invisible' to the DCC. The DNO currently raise these with the Supplier to 'fix'.
Supplier taking on a meter not recorded in the Smart Metering Inventory (SMI) as Smart	May require meters to be replaced and incur Premature Replacement Charges.
Industry standard	A new way to manage these installs must be standardised across the industry so that Change of Supplier (CoS) is not impacted, and the new gaining Supplier is aware of the customer

¹ Elsewhere in this document, such meters are referred to as Smart Meters that are operating in 'restricted' mode.

	preference and situation. There is currently no flag or state to highlight this.
Availability of Heritage Meters	Such Devices are no longer being made in some circumstances. Stocks are running low.
Supplier Licence Requirements	Supplier Licence requires the Installing Supplier to configure and maintain a tariff on the system
Security and Safety Alerts.	The Smart Metering Solution is designed for these to be provided and sent out. This is part of the Benefits case and solution in place for DNOs.
Critical Alerts	SEC Parties are required to take action on specific critical or mandated Alerts.

3.2 Business Requirements

This Modification and associated changes apply to SMETS2+ Devices only.

Note that DCC have created Low-Level Requirements for this Modification. These are presented in Appendix C.

Ref.	Requirement
1	Suppliers will be able to notify the DCC of the consumer's preference for Smart functionality.
2	A DCC System flag will be created to indicate if communications with a Device have been reduced due to consumer choice.
3	The responsible Supplier will be able to request the addition and removal of the DCC System flag, subject to its adherence with all reasonable steps for Smart installations.
4	Critical, Security and Safety Alerts and Firmware updates will still be sent when communication with a Device has been reduced due to consumer choice.
5	The DCC to amend any reporting for which the success/failure of Service Requests relating to energy consumption is a metric to allow for exceptions where communications have been reduced due to consumer choice.

Table 1 - Business Requirements

Requirement 1: Suppliers will be able to notify the DCC of the consumer's preference for Smart functionality.

At the Working Group meeting in November 2021 the Ofgem representative expressed the view that using Service Reference Variants (SRVs) to notify the DCC could undermine Supplier Licence obligations. The solution was subsequently developed to state that Suppliers should only offer a 'reduction' in Smart functionality once all reasonable steps to install and commission a fully communicative Smart meter have been exhausted. Existing Install and Commissioning processes will be unaffected by the solution; the MP169 solution will simply add an additional, optional step to be taken if a consumer wishes to not have their consumption data retrieved remotely.

Exceptions to this requirement are to be considered through the solution development process. For instance, any consumer on an Economy 7 tariff (or similar) arrangement relies on the Smart meter communicating. Potential Network Managed sites with no Wide Area Network (WAN) must also have communications. In such exceptional cases, where a Smart

meter is refused, this needs to be communicated to the customer and the option of reducing communications removed.

Notification of consumer preference should only be sent after the Smart Meter and Communications Hub have been installed and commissioned. It should also be possible to send them if there is a Change of Tenancy (CoT) and the incoming tenant has different preferences to the outgoing tenant.

The DCC will need to amend its reporting on Supplier obligations to install Smart meters to allow for the scenario where a Supplier has installed and commissioned a SMETS2+ Device which subsequently has reduced communications due to consumer preference.

Requirement 2: A DCC System flag will be created to indicate if communications with a Device have been reduced due to consumer choice.

The presence of a flag in the DCC Total System would prevent consumer preference being lost in a Change of Supplier (CoS). It will also save the new Supplier from wasting time and resource investigating the reason for lack of communication.

This flag could be held in the DCC System, and its presence have the function of suppressing certain Smart functionality. It could also be held outside of the DCC System, for instance in the Priority Service Register. During solution development it was agreed that the most effective option would be for the flag to be applied within the DSP System at Device level.

Requirement 3: The responsible Supplier will be able to request the addition and removal of the DCC System flag, subject to its adherence with all reasonable steps for Smart installations.

Suppliers can appoint Other SEC Parties to collect consumption data on their behalf or to offer data services to consumers. While this Modification will not impact these commercial arrangements, it must be ensured that consumers' data privacy is not undermined by allowing Other SEC Parties to remove the DCC System flag. It is therefore a requirement that only the responsible Supplier can request the addition or removal of the DCC System flag, and its addition can only be requested once the Supplier has completed all reasonable steps to install the Device in a fully communicative state.

Requirement 4: Critical, Security and Safety Alerts, and Firmware updates will still be sent when communication with a Device has been reduced due to consumer choice.

The Smart Metering solution is designed for Security and Safety Alerts to be provided and sent out. This is part of the benefits case and solution in place for DNOs. SEC Parties are also required to act on specific critical or mandated Alerts. Which Alerts require exceptions and the mechanism for allowing them to be sent will be agreed during the solution development process.

Critical Alerts, such as those relating to Certificate updates, are necessary to ensure the security of the DCC System. Firmware updates will also still need to be possible to prevent issues with Device firmware version compatibility, which may result in the need to replace otherwise healthy Devices.

During solution development, it was agreed by Working Group and TABASC that the only messages which should be prevented from sending are those which relate directly to the consumer's consumption.

Requirement 5: The DCC to amend any reporting for which the success/failure of Service Requests relating to energy consumption is a metric to allow for exceptions where communications have been reduced due to consumer choice.

A full list of the affected reporting will be investigated and developed during the Refinement Process. This requirement will need to consider whether the reporting in question requires exceptions for specific Service Requests, related business processes, or for the Devices themselves.

4 Description of Solution

This section describes the overall solution and the impact of SECMP0169 on DCC's Services and Interfaces that impact Users and/or Parties.

4.1 Description of Solution

The proposed solution will impact the Future DSP and FSM Service Providers as well as DCC Data Science and Analytics (DS&A) as follows:

- Create a new boolean 'Restricted' flag within the DSP reference data to hold a flag as to whether a customer had indicated a preference that they do not want their consumption data retrieved remotely for applicable device types
- Provide a mechanism via Future Service Management (FSM) whereby an Energy Supplier can set (or clear) 'Restricted' mode for a Device (noting that when applied to a GSME then this will also apply to the corresponding Gas Proxy Function (GPF) device)
- Amend the DUIS interface to Include the 'Restricted' flag in the response to SRV 8.2, Read Inventory Data.
- Introduce a new business rule that updates to the 'Restricted' flag can only be done via the current Supplier responsible for the meter. This may be changed via either Device Bound Rules microservice or DSP only microservice denoting which SRV is used to set the flag.
- Implement validation within the Device Bound Rules microservice to only allow the 40 named SRVs to be sent to Smart Meters with the flag enabled, covering Critical, Security & Safety Alerts and Firmware updates. All other SRVs will be blocked and if a request has been received a new error code will be returned to the requesting DCC user.
- Any Device Alerts which are restricted by the flag must not be sent to the Service User and the information logged (exact logging to be defined).

The Restricted flag value will be included in Device ESI extracts.

For the DSP application development, this change impacts the low-level design and code to take into account whether a Smart Meter has this new flag activated, also to block SRVs that are not allowed, and returning a new error response code. Other changes include maintaining the reference data as to whether a Device is in Restricted mode or not, including rules to only allow the flag to be updated via the responsible Supplier or a DCC User. The Modification is expected to have an impact upon the following Future DSP components:

1. DSP Microservices: will impact validation activities within Device Bound Rules and (potentially) DSP only microservices.
2. Smart Routing Gateway (SRG): there will be either a new SRV or change to an existing one to allow the new DCC flag to be set/updated requiring updates to the DUIS.XSD validation in the SRG.

4.2 Impact on Reporting

Changes to the current reporting produced by DS&A are required to exclude ESME, GSME, and GPF devices from reports where the Restricted attribute results in Alerts that might otherwise be sent to Users, and SRVs that are stopped at the DSP.

There will be some impact on the existing DS&A reporting, as the output from the DSP will be another Error Response Code that will show up in the SAT data. As there are no specific SEC Obligations or OPR targets for successful execution of SRVs (a request can be rejected/ fail, but still be handled within the Target Response Time) there is no change required, but where DCC report on success or failure (such as in SECMP0242), it would be by reference to specific Response Codes. Changes are required to exclude ESME, GSME, and GPF devices from reports where the Restricted attribute results in Alerts that might otherwise be sent to Users, and SRVs that are stopped at the DSP.

The DS&A team will check any required changes in the FIA, although these have already been assessed in the FIA for CR5717, the existing DSP solution.

4.3 Impact on DCC

DCC will update Service Centre processes and knowledge articles to include verification of, and procedures for dealing with, 'Restricted' devices as part of Incident triage.

4.4 Impact on SEC Parties

SEC Parties will be impacted in the following ways:

- systems and processes for dealing with customers who wish to refuse a Smart Meter and for gaining new customers will need to recognise the need to set and read the 'Restricted' flag
- User Systems will need to be uplifted to use the new DUIS schema

5 Testing Considerations

This section outlines the testing required to complete the Test phases for this SEC Modification. In general, additional test scenarios will be required to prove the capability works as per requirements.

5.1 Pre-integration Testing

During Pre-Integration Testing (PIT), each Service Provider tests its own solution to agreed standards in isolation of other Service Providers.

5.2 Systems Integration Testing

Systems Integration Testing (SIT) is the testing of the DCC Total System, which brings together the components, e.g., DSP and other Service Provider Systems, to allow testing of the end-to-end solution by DCC. SIT is carried out for every DCC System release and incorporates the test and integration of multiple changes.

SECMP0169 will be tested in SIT with support from the Service Providers. The proposed SIT scope is:

- update Devices' 'Restricted' mode

- execute a sample of supported SRVs to 'Restricted' devices
- execute a sample of negative tests for unsupported SRVs to 'Restricted' devices
- verify the following:
 - supported Device Alerts are sent to the Service User for 'Restricted' Devices
 - unsupported Device Alerts are rejected and do not appear on SAT log for 'Restricted' Devices
 - 'Restricted' status is displayed correctly

Note that SIT costs are not included in the ROM costs at the PIA stage.

5.3 User Integration Testing

The proposed User Integration Testing (UIT) test execution scope for SECMP0169 will cover running tests on two SMETS2 meter sets, with one meter set for each of the CSPs, including 4G Comms Hubs. All SRVs tested will use the updated DUIS version associated with the change.

Note that UIT costs are not included in the ROM costs at the PIA stage.

6 Implementation Timescales and Releases

The system changes for this option will need to be packaged as part of a wider release, the timing of which will be dependent on the priority of this SEC Modification relative to other changes also awaiting scheduling for release. It is likely that this change would be scheduled after the completion of the migration from the current DSP to the Future DSP, but as of the date of the PIA submission, the plan for the migration has not been completed.

For the purposes of this Preliminary Assessment, a prudent planning assumption would be that DCC requires a lead time of **four (4) months** from the date of approval, (in accordance with Section D9 of the SEC) to implement the changes up to and including the PIT complete stage.

Implementation timescales will be confirmed as part of the Full Impact Assessment.

7 DCC Costs and Charges

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

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

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

	Design, Build and PIT	Days to Create FIA	Cost to Create FIA
All Service Providers	£180,000 – 250,000	40	£50,791

Table 2: SECMP0169 Standalone Design, Build, and PIT Costs

The phases included are as follows.

Design	The production of detailed System and Service designs to deliver all new requirements.
Build	The development of the designed Systems and Services to create a solution (e.g. code, systems, or products) that can be tested and implemented.
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.

Critical Software have indicated there will be no charges for their work on changes and the FIA associated with this Modification.

DCC is challenging the cost and effort for the FSM Design, Build, and PIT implementation. Costs for producing the FIA will be reviewed also.

Based on the existing requirements, the fixed price cost for a Full Impact Assessment is **£50,541** and would be expected to be completed in 40 days.

Appendix A: Glossary

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

Acronym	Definition
API	Automated Programme Interface
CoS	Change of Supplier
CoT	Change of Tenancy
Comms Hub, CH	Communications Hub
CFR	DCC Change Request
CSP	Communication Service Provider
DAL	DSP Access Layer
DCC	Data Communications Company
DNO	Distribution Network Operator
DSP	Data Service Provider
DUGIDS	DCC User Gateway Interface Design Specification
DUIS	DCC User Interface Specification
ESI	Enterprise Systems Interface
ESME	Electricity Smart Metering Equipment
FIA	Full Impact Assessment
FSM	Future Service Management
GPF	Gas Proxy Function
GSME	Gas Smart Metering Equipment
I&C	Installation and Configuration
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
SMETS	Smart Metering Equipment Technical Specification
SMI	Smart Metering Inventory
SRV	Service Reference Variant
TABASC	Technical Architecture and Business Architecture Sub-Committee
UIT	User Integration Testing
WAN	Wide Area Network

Appendix B: Allowable Service Requests

The configurable list of SRVs allowed to be sent to a device was agreed by TABASC, and is as follows.



SECMP0169 Allowe
SRV when Restrictec

Appendix C: Low Level (Detailed) Requirements

DCC have developed Low Level requirements for this change, which have been used in the solution development.



LLR Details
SECMP0169