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MP169

‘Managing SEC Obligations and the Consumer’s Right to refuse a Smart Meter’

Modification Report

Version 0.6

25 October 2023



About this document

This document is a Modification Report. It sets out the background, issue, solution, impacts, costs, implementation approach and progression timetable for this modification, along with any relevant discussions, views and conclusions. This document will be updated as this modification progresses.

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This document also has three annexes:

- **Annex A** contains the business requirements for the proposed solution.
- **Annex B** contains the second iteration of the DCC Preliminary Assessment.
- **Annex C** contains a list of the Service Requests which will be permitted to Devices which have a Restricted Flag set.

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1. Summary

This proposal has been raised by Emslie Law of OVO Energy.

Currently, Energy Consumers can refuse to have a Smart Meter installed at their property. Suppliers are receiving requests from consumers to have a Smart Meter installed in 'dumb' mode, however there is no way to do this without impacting other obligations within the Smart Energy Code (SEC).

The Proposed Solution to this modification would introduce the concept of a 'Restricted' mode which would be applicable to Smart Metering Equipment Technical Specifications (SMETS)2+ Devices. This would prevent Service Requests which pertain to the Energy Consumer's Consumption Data from being sent to those Devices. This would represent an additional step to the existing 'all reasonable steps' that Suppliers must take to attempt the successful installation of a fully communicative Smart Meter. This would also act as a compromise for those consumers who would otherwise refuse Smart installations due to concerns over data privacy.

The second iteration of the DCC Preliminary Assessment received in September 2023 showed costs between £351,000 and £750,000. The cost of a full Impact Assessment is £16,684.

This modification will have an impact on all SEC Parties that are able to send the relevant Service Requests to Devices. It will have impacts on the DCC System and will proceed as an Authority-Determined modification.

2. Issue

What are the current arrangements?

Currently a consumer has a legal right to refuse a Smart Meter. Some Consumers may not want a Smart Meter due to concerns about radio frequency signals, data privacy or other general concerns. In some instances, consumers are approaching their Supplier to get a Smart Meter installed in 'dumb' mode to allow for the communications to be limited or 'disabled'. However, there is currently no way to do this without impacting other obligations within the SEC.

The Gas and Electricity Supply Licences (Condition 54.9) states:

Where this paragraph applies the licensee must take all reasonable steps to ensure that the Electricity Meter and Communications Hub Function that form part of the SMETS2+ Smart Metering System at the SMETS2+ premises are Commissioned and the SMETS2+ Smart Metering System Enrolled.

In addition, SEC Appendix AC 'Inventory, Enrolment and Decommissioning Procedures' sets out the pre-commissioning and post-commissioning obligations on the Supplier. These include obliging an Installing Supplier to carry out numerous tasks to ensure a Smart Metering System is installed and communicating. This includes placing Smart Metering Key Infrastructure (SMKI) keys and Certificates on the Devices so other Parties can communicate with them. It also includes updating the DCC with the state of the Devices.

What is the issue?

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 (SMI) 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 referenced above in Gas and Electricity Supply Licence Condition 54.9). There is no concept, by design, of fitting a Smart Meter in 'dumb' mode.

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

Some of the factors that will need consideration as part of any solution are listed in the following table:

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 on the Smart Meter communicating.
Change of Mode (Credit to Prepayment and vice versa)	A 'dumb' meter cannot be changed between modes remotely – such a change will need a site visit.
Availability of Heritage Meters	Heritage meters are no longer being made in some circumstances, and stocks are running low.
Supplier Licence Requirements	The Installing Supplier is required to configure and maintain a tariff on the system.
Security and Safety Alerts.	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 Distribution Network Operators (DNOs). These can't be sent if the meter is in 'dumb' mode.
Critical Alerts	SEC Parties are required to act on specific critical or mandated Alerts. These can't be sent if the meter is in 'dumb' mode.
'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 also billing implications that the Smart Metering solution is designed to address.
Eligibility and non-eligibility	Potential Network Managed sites with no Wide Area Network (WAN) and those on specific Radio TeleSwitched regimes must have communications. This is not within the remit of the SEC.
DCC / DNO flagging the meter as non-communicating	The DNO currently raises non-communicating Smart Meters with the Supplier to 'fix'. The DCC may report these as 'not commissioned'.
Supplier taking on a meter not recorded in the SMI as smart	If a Supplier takes on a meter that isn't recorded as 'smart', it may require that meter to be replaced, which will incur Premature Replacement Charges for Suppliers.
Industry standard	A new way to manage installs of Smart Meters set to 'dumb' mode 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 preference and situation. There is currently no flag or state to highlight this.

What is the impact this is having?

There is no concept of a 'dumb' state for a Smart Meter within the SEC. Where a functioning Smart system is installed (and maybe commissioned) in a 'dumb' state, that state is not visible and understood by the industry. Consequently, on a CoS and Change of Tenancy (CoT) there is currently a requirement to 'fix' the install, leading to additional costs, inconvenience and inefficiencies. Currently the consumer's legal right to refuse a Smart Meter cannot be met while still meeting the New and Replacement obligations on the Supplier. This will become increasingly difficult as heritage meters become less available.

Impact on consumers

Currently the consumer's right to refuse a Smart Meter cannot be met as an enduring process unless Suppliers are deliberately not compliant with the SEC and Supply Licence Conditions.

3. Solution

Proposed Solution

The Proposed Solution is to introduce a 'Restricted' mode to be applicable to Devices which are SMETS2+ only. This will mean that there will be a Data Service Provider (DSP) System flag which indicates that a Smart Meter has restricted communications due to consumer choice.

There will also be a mechanism via the Self-Service Interface (SSI)/ Self-Service Management Interface (SSMI) whereby a Supplier can set or clear the 'Restricted' mode for a meter. This will limit the SRVs which can be delivered to and from 'Restricted' Devices.

Communication Service Providers (CSPs) will also introduce reporting functionality to ensure 'Restricted' Devices are not included in relevant monthly performance measures.

This change will introduce an additional step to 'all reasonable steps' which can only be taken after the current all reasonable steps have been exhausted.

This modification introduces an additional step,

Further information about the Proposed Solution can be found in the DCC Preliminary Assessment in Annex B.

4. Impacts

This section summarises the impacts that would arise from the implementation of this modification.

SEC Parties

SEC Party Categories impacted			
✓	Large Suppliers	✓	Small Suppliers
✓	Electricity Network Operators	✓	Gas Network Operators
✓	Other SEC Parties	✓	DCC

Breakdown of Other SEC Party types impacted			
✓	Shared Resource Providers	✓	Meter Installers
	Device Manufacturers	✓	Flexibility Providers

This modification will impact any Party which can send Service Requests to Devices which relate to retrieval of Device Consumption Data.

Suppliers

This modification introduces an additional step, which can be taken after the current all reasonable steps have been taken, for Suppliers to offer to consumers who do not wish to have a Smart Meter installed.

During the Refinement Consultation, Parties noted that Suppliers would need to develop new processes and policies when installing meters in Restricted mode. One change highlighted by several Parties was the necessity to change communications for customers which have a Smart Meter operating in Restricted mode, for data privacy or billing purposes.

As part of the proposed solution, a mechanism via the SSI which will allow Suppliers to set the Restricted mode. During the Refinement Consultation Parties commented that this would require new processes. Although not included in the proposed solution, SECAS questioned Parties on whether they believed the flag should be set via the SSI or via a Service Request, which would come at an increased cost. Parties responded noting that if a Service Request was used they would need to modify their Smart Meter Adaptor functionality.

Due to the alteration to existing arrangements for installing Smart Meters, Suppliers and Meter Installers would need to provide updated training to their meter engineers. Suppliers would also need to alter the training provided to customer service staff, in addition to revising information they provide to Consumers.

DCC System

Changes will be required in the DSP System to ensure that messages relating to consumption data are prevented from processing. There will also be changes to the DCC's reporting to reflect that certain targets will no longer be applicable for processes on Devices with reduced communications.

The expected impacts on DCC Systems and DCC's proposed testing approach can be found in the DCC Preliminary Assessment in Annex B.

SEC and subsidiary documents

The following parts of the SEC are expected to be impacted:

- Appendix AC 'Inventory, Enrolment and Decommissioning Procedures'
- Appendix AD 'DCC User Interface Specification (DUIS)'
- Section H 'DCC Services'

Devices

Devices impacted			
✓	Electricity Smart Metering Equipment	✓	Gas Smart Metering Equipment
✓	Communications Hubs	✓	Gas Proxy Functions
	In-Home Displays		Prepayment Meter Interface Devices
	Standalone Auxiliary Proportional Controllers		Home Area Network Connected Auxiliary Load Control Switches
	Consumer Access Devices		Alternative Home Area Network Devices

There will be no changes to Devices required to implement this modification, however there will be changes to how the DCC interacts with Smart Meters and their associated Communications Hubs and Gas Proxy Functions (GPFs), and how these interactions are reported against by the DCC.

Consumers

This modification will have a positive impact on consumers who do not wish to have a Smart Meter due to data privacy concerns, as it will allow them to receive the other benefits of Smart Metering while respecting their right to refusing to share their consumption data. It will also help to ensure that there are more Smart-capable Devices installed at premises, giving more options to incoming tenants.

The Proposed Solution to this modification will only be applied to credit consumers. This is because the Service Requests which cannot be requested from 'Restricted' Devices would impact many pre-payment processes and therefore would not be workable under the solution.

Other industry Codes

This modification may have an impact on the Retail Energy Code (REC). This will be investigated as part of the solution development.

Greenhouse gas emissions

This modification will reduce the need to maintain replacement stock for heritage meters by increasing the number of Smart-capable meters installed at consumer premises. It will also ensure that consumers who do not want a Smart Meter will have options which don't require Device replacement or scrappage.

5. Costs

DCC costs

The estimated DCC implementation costs to implement this modification is between £351,000 and £750,000.

The breakdown of these costs are as follows:

Breakdown of DCC implementation costs	
Activity	Cost
Design, Build and PIT	£351,000 - £750,000
Systems Integration Testing (SIT)	TBC
User Integration Testing (UIT)	TBC
Implement to Live	TBC
Application Support	TBC

The cost of a DCC Full Impact Assessment is £16,684 and would be completed within 50 working days of the SECAS request. This would show the costs of SIT, UIT and Implementation to Live.

SECAS costs

The estimated SECAS implementation cost to implement this as a stand-alone modification is one day of effort, amounting to approximately £600. This cost will be reassessed when combining this modification in a scheduled SEC Release. The activities needed to be undertaken for this are:

- Updating the SEC and releasing the new version to the industry.

SEC Party costs

SEC Parties will need to amend processes to manage the use of a Restricted flag. These could be manual or automated depending on the choices of the SEC Party. During the Refinement Consultation, one Party noted that if a Service Request was used to set a Device in Restricted mode, this would require changes to their smart meter adaptor would cost between £100,000 and £250,000.

One other respondent to the Refinement Consultation believed that implementation of this modification would lead to costs of over £1,000,000. They commented that MP169 would lead to a reduction in the business benefits gained by Suppliers which arise from installing a Smart Meter.

6. Implementation approach

In the Preliminary Assessment the DCC noted they would require a lead time of 9 months to approve this modification from the date of approval.

Recommended implementation approach

SECAS is recommending an implementation date of:

- **27 June 2025** (June 2025 SEC Release) if a decision to approve is received on or before 25 September 2024: or
- **7 November 2025** (November 2025 SEC Release) if a decision to approve is received after 25 September 2024 but on or before but on or before 6 February 2025.

In the Preliminary Assessment the DCC noted they would require a lead time of 9 months for Design, Build and Pre-Integration Testing. Further time will also be needed for Systems Integration Testing. As the February 2025 SEC Release consists of only SEC documentation changes, the June 2025 SEC Release is the earliest Release which this modification can be implemented as there are DCC-impacting changes as part of the Proposed Solution.

7. Assessment of the proposal

Observations on the issue

Change Sub-Committee views

The Change Sub-Committee (CSC) noted possible cross-Code changes from any solution, highlighting that a change to the D0350 data flow could be needed. Another member agreed this issue needs to be examined and considered this is likely to be a difficult solution to develop. SECAS are investigating this issue and may raise this for discussion at the Cross-Code Steering Group (CCSG).

TABASC views

The Technical Architecture and Business Architecture Sub-Committee (TABASC) questioned how many consumers did not want a Smart Meter. The Proposer reported that it is difficult to calculate a figure as the consumer doesn't always say they don't want a Smart Meter or give a reason but can simply continually cancel appointments. During the Refinement Consultation SECAS will request that Suppliers provide any data they have on the number of refusals they receive.

Solution development

Consumer advice

During the Development Stage the Proposer noted that consumer representative websites were advising consumers who wished to refuse the installation of a Smart Meter, or to replace their existing Smart Meter, to contact their Suppliers to have legacy meters installed. While this is technically possible it is not a sustainable solution; as manufacture of these Devices becomes scarcer the price will increase and this will be borne by the consumer. The websites also advised consumers they can have Smart Meters installed with the Smart functionality 'turned off', which there is no way of doing within the Install and Commissioning procedures in the SEC.

SECAS liaised with the consumer representatives and Ofgem to revise the drafting of this consumer advice to reflect the options available more accurately.

All reasonable steps

Citizens Advice considered that a Supplier would have met its obligation to take 'all reasonable steps' to install a Smart Meter if the customer had refused to have a Smart Meter installed. However, as customers cannot be left without a functioning meter, there are limited options available should a Smart Meter installation be refused.

The TABASC Chair highlighted that including the ability in the SEC to not have communications may conflict with some of the Supply Licence Conditions, and a view from Ofgem should be sought.

Ofgem advised they would not approve any solution which could undermine 'all reasonable steps' to install a Smart Meter in a communicative state.

The Chair of the Operations Group (OPSG) suggested that the SEC is about Smart Metering. Enabling Suppliers to 'turn off' a Smart Meter may be extending the scope of the SEC beyond the original intentions. The Proposed Solution looks only at how communication with Devices may be selectively reduced for consumers who would otherwise refuse Smart Meter installation.

SECAS and the Proposer will develop a Proposed Solution which constitutes an additional step to be taken once 'all reasonable steps' have been exhausted.

Removal of Communications Hubs

During the Development Stage the Proposer noted that some Suppliers are attempting to comply with consumer wishes to have Smart Meters installed in a non-communicative state by not commissioning the Communications Hub or by physically removing the Communications Hub.

The TABASC noted concerns about removing Communications Hubs at a premise where a fully functioning Smart Metering System is already installed, suggesting meters may become 'distressed' if they lost connection to the Communications Hub.

The DCC and its Service Providers highlighted that any solution that involved removing the Communications Hub would prevent any firmware upgrades to Communications Hubs, meters and any other Devices on the Home Area Network (HAN) which would be an area of concern for security. It also confirmed that their systems were set up to identify and report non-communicating meters, but not to identify if this was intentional.

SECAS and the Proposer have developed a Proposed Solution which aligns with the SEC processes for installing and commissioning Communications Hubs, and which does not require their removal. The Proposed Solution will also introduce the ability to discern between Devices which are non-communicating due to a fault or due to consumer choice.

CSP notification of 'Restricted' flags

During the Working Group and TABASC meetings, members queried the need for Business Requirement 5 for "The DSP will notify the CSP when a DCC System Flag has been applied". The TABASC Chair noted that the proposed DSP 'Restricted' flag would reject Service Requests and as such they would never reach the CSP there would be no requirement to notify them of this. The TABASC agreed that this requirement is not necessary. The Proposer notes this issue. SECAS has worked with the Proposer and DCC and agree that a second Preliminary Assessment should take place, removing requirement five from the scope of this modification.

Consumer perception of 'Restricted Mode'

During the April 2023 Working Group meeting members noted that consumers may not understand what the 'Restricted' mode on their Smart Meter was, and that communicating this to consumers could be challenging. Members noted this, but also highlighted that the issue of consumers refusing Smart Metering installs is a problem which needs to be addressed. Another member believed that this modification will help to solve the widespread mistaken belief that a 'dumb mode' exists in Smart Metering. They noted that this will also help improve guidance given by the Energy Ombudsman in its recommendations to Suppliers when resolving escalated customer complaints.

SSI or Service Request

During the Preliminary Assessment SECAS assumed that the mechanism for notification that a Device would be provided by the SSI. During the Working Group several members who are Large Suppliers queried whether a Service Request should be added which Suppliers can use as part of the install and commission process. This would prevent Devices from sending or receiving unwanted messages whilst the installing Party wait for the 'Restricted' update to take effect. The Proposer has acknowledged these comments and added that Parties are unable to enable Machine to Machine interface of the SSI, meaning the changes would need to be done manually. However, the Proposer also notes that this would mean additional cost to the modification.

During the Refinement Consultation two Parties supported the principle of using a Service Request rather than via the SSI. They believed that a Service Request would be more useful as this would allow automation of setting the Restricted flag, rather than the manual intervention required via the SSI. They also noted it would lead to improved reporting of Restricted Devices.

Those Parties who supported using the SSI noted that it would be cheaper than having a new Service Request. These Parties also caveated their responses, noting that without knowing precisely how many Consumers would choose to have their Device in Restricted mode, they could not say whether using the SSI or Service Request would be preferential.

Will a 'Restricted' flag be automatically cleared?

Working Group members queried whether the DSP 'Restricted' flag would automatically be cleared when there was a notification of a CoT or CoS. One member noted that Suppliers can currently send Service Requests to restrict access to information on CoT, suggesting that this functionality could be used in this modification to automatically reset the flag so it was not 'Restricted'. The Proposer has noted these comments and agrees it would be sensible to include this so long as this does not undermine the business case for the modification in any way.

Modification legal text

As this modification is a change to DCC User Interface Specification (DUIS), SECAS has not drafted any legal text. Should the Impact Assessment be requested, the DCC will provide a list of the changes to the SEC as part of the Impact Assessment.

8. Case for change

Business case

In favour of approval

Parties in favour of approval noted that this modification would meet the wishes of Consumers who wish to have a Smart Meter operating in Restricted mode, as well as allowing Suppliers to complete their obligations under all reasonable steps. They added that as the smart functionality can be restored if the Consumer changes their position, this is a useful step for Suppliers. Parties in support also noted that introduction of Restricted mode could lead to an uptake in Smart Meter installs as some Consumer concerns would have been alleviated. In turn, this could lead to a reduction in the pressure on traditional meter stock.

Against approval

Parties noted that fully operational Smart Meters are a key enabler for meeting Government net zero targets, providing benefits to Consumers and the wider energy system. They believed that Devices which can assist in supporting net zero ambitions should not be restricted. In addition, the cost of installing a Device may be undermined if the Consumer is able to eliminate the value which the Device provides, taking away the business case for having a Smart Meter installed.

One Large Supplier noted that this modification could only be applied to SMETS2 credit Devices. They believed this is unacceptable as they would not be able to offer the same service to pre-payment customers as they would with credit customers.

A number of Parties questioned the costs surrounding this modification, noting that this modification would mean SEC Parties paying costs to lose the business benefits they receive when installing a Smart Meter. Rather than approving the modification, one Party commented that it would be useful to educate Consumers on the benefits of Smart Meter, rather than implement this modification.

Many Parties asserted that although this modification may resolve concerns of Consumers on data privacy grounds, it does not resolve the issue of Consumer refusals on the grounds of RF noise. As

the meter is still somewhat communicative, Consumers may also refuse on data privacy grounds if they are unable to determine the distinction of a Device operating in Restricted mode.

One Party also noted that the implementation date of 2025 is a long way away and the Smart Meter rollout should be close to completion by then. They questioned why a modification would be implemented towards the proposed end of the rollout when the majority of Devices had been installed successfully.

Views against the General SEC Objectives

Proposer's views

The Proposer believes that this modification better facilitates SEC Objectives (a)¹ and (g)².

SEC Objective (a)

This modification will facilitate the installation of more Smart-capable Devices. Other than the inability to retrieve consumption data, responsible Parties will be capable of communicating with the Devices via the DCC System and carrying out essential business processes, such as firmware maintenance, which are necessary for the continued interoperability of Devices.

SEC Objective (g)

This modification will better enable Suppliers to adhere to their licence conditions without contravening Install and Commissioning obligations defined in the SEC.

Industry views

During the Refinement Consultation Parties provided differing views on how this modification in relation to SEC objective (a). Supportive Parties noted that this modification would answer some of the concerns Consumers had about Smart Meters and therefore would lead to an increase in the installs. Unsupportive Parties believed this modification would not lead to the efficient interoperability of Smart Meters as it would negate the value of smart metering.

Views against the consumer areas

Improved safety and reliability

This modification will have a positive impact against this consumer area. It will allow Suppliers an additional option for installing Smart-capable Devices at consumer premises where this would previously have been prevented due to the consumer's data privacy concerns. These Devices offer greater safety and reliability than heritage meters, for which there is dwindling stock of replacement parts and decreasing specialist knowledge within the industry.

¹ Facilitate the efficient provision, installation, and operation, as well as interoperability, of Smart Metering Systems at Energy Consumers' premises within Great Britain.

² Facilitate the efficient and transparent administration and implementation of this Code.

Lower bills than would otherwise be the case

This modification will have a neutral impact against this consumer area. However, it will offer an alternative for consumers who may otherwise have to pay for the expensive installation and maintenance of a non-Smart heritage meter.

Reduced environmental damage

This modification will have a positive impact against this consumer area as it will result in fewer Devices being unnecessarily replaced or scrapped when an incoming tenant wishes to have their Smart Meter removed. It will also prevent the need for continued manufacture of heritage meters.

Improved quality of service

This modification will have a positive impact against this consumer area as it will allow consumers to realise the benefits of Smart Metering without the need to compromise on their concerns over data privacy.

Benefits for society as a whole

This modification will have a positive impact against this consumer area as it will help to increase the Smart capability of the energy network with all the attendant benefits, other than the increase in sharing of consumption data. It will allow consumers to exercise their rights to refusal of Smart Meter installations while reducing the onus on Suppliers to contravene best practice under the SEC.

Appendix 1: Progression timetable

Timetable	
Event/Action	Date
Draft Proposal raised	14 Jun 2021
Presented to CSC for initial comment	29 Jun 2021
CSC converts Draft Proposal to Modification Proposal	28 Sep 2021
Business requirements developed with Proposer and DCC	Oct 2021
Modification discussed at Working Group	3 Nov 2021
Modification discussed at Working Group	1 Dec 2021
Business requirements discussed at TABASC	Jan 2022
Business requirements developed with the Proposer	May – Jul 2022
Business requirements discussed with Device Manufacturers	2 Aug 2022
Business requirements discussed at TABASC	4 Aug 2022
Business requirements discussed at SSC	14 Sep 2022
Modification discussed at Working Group	5 Oct 2022

Timetable	
Event/Action	Date
Business requirements discussed with the DCC	14 Nov 2022
Preliminary Assessment requested	28 Nov 2022
Update provided to CSC	20 Dec 2022
Preliminary Assessment returned	10 Feb 2023
Modification discussed at Working Group	5 Apr 2023
Modification discussed at TABASC	6 Apr 2023
Modification discussed at OPSG	11 Apr 2023
Refinement Consultation	7 Jun 2023 – 28 Jun 2023
<i>Modification discussed at Working Group</i>	1 Nov 2023
<i>Impact Assessment Request at Change Board</i>	22 Nov 2023
<i>Impact Assessment Requested</i>	23 Nov 2023
<i>Impact Assessment Returned</i>	24 Jan 2023
<i>Impact Assessment discussed with Working Group</i>	7 Feb 2024
<i>CSC approves Modification Report</i>	20 Feb 2024
<i>Modification Report Consultation</i>	21 Feb 2024 – 13 Mar 2024
<i>Change Board Vote</i>	20 Mar 2024

Italics denote planned events that could be subject to change

Appendix 2: Glossary

This table lists all the acronyms used in this document and the full term they are an abbreviation for.

Glossary	
Acronym	Full term
CCSG	Cross-Code Steering Group
CoS	Change of Supplier
CoT	Change of Tenancy
CSC	Change Sub-Committee
CSP	Communication Service Provider
DCC	Data Communications Company
DNO	Distribution Network Operator
DSP	Data Service Provider
DUIS	DCC User Interface Specification
GPF	Gas Proxy Function
HAN	Home Area Network
OPSG	Operations Group
PIT	Pre-Integration Testing

Glossary	
Acronym	Full term
REC	Retail Energy Code
SEC	Smart Energy Code
SECAS	Smart Energy Code Administrator and Secretariat
SIT	Systems Integration Testing
SMETS	Smart Metering Equipment Technical Specifications
SMI	Smart Metering Inventory
SMIP	Smart Metering Implementation Programme
SMKI	Smart Metering Key Infrastructure
SSI	Self-Service Interface
SSMI	Self-Service Management Interface
TABASC	Technical Architecture and Business Architecture Sub-Committee
UIT	User Integration Testing
WAN	Wide Area Network

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MP169 ‘Managing SEC Obligations and the Consumer’s Right to Refuse a Smart Meter’

Business requirements – version 0.4

Annex A

About this document

This document contains the business requirements that support the solution for this Modification Proposal. It sets out the requirements along with any assumptions and considerations. The Data Communications Company (DCC) will use this information to provide an assessment of the requirements that help shape the complete solution.

1. Business requirements

This section contains the functional business requirements. Based on these requirements a full solution will be developed.

Business Requirements	
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.

2. Considerations and assumptions

This section contains the considerations and assumptions for each business requirement.

2.1 General

This solution will be applied to Smart Metering Equipment Technical Specifications (SMETS) 2 Devices only.

2.2 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 in the event that 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) and those on specific Radio TeleSwitched regimes 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.

2.3 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 System would prevent consumer preference being lost in a Change of Supplier (CoS). It will also prevent 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.

2.4 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 are able to 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.

2.5 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 Distribution Network Operators (DNOs). Smart Energy Code (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 that the only messages which should be prevented from sending are those which relate directly to the consumer's consumption.

2.6 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 as part of the DCC's Preliminary Assessment 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.

3. Glossary

This table lists all the acronyms used in this document and the full term they are an abbreviation for.

Glossary	
Acronym	Full term
CoS	Change of Supplier
CoT	Change of Tenancy
CSP	Communications Service Provider
DCC	Data Communications Company
DSP	Data Service Provider
DUIS	DCC User Interface Specification
SEC	Smart Energy Code
SMETS	Smart Metering Equipment Technical Specifications
SRV	Service Reference Variant
WAN	Wide Area Network

SEC Modification Proposal, MP169 (second iteration)

DCC CR5157

Managing SEC Obligations and the Consumer's Right to Refuse a Smart Meter

DCC Preliminary Impact Assessment

Version:

1.01

Date:

3 October 2023

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DCC

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1 Executive Summary

MP169 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.

MP169 will implement a flag in the Data Service Provider (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: only Critical, Security and Safety Alerts and Firmware updates will be allowed.

The DSP is impacted by this change.

The Change Board are asked to approve one of the following options for Full Impact Assessment:

- Total cost to complete the Full Impact Assessment of £16,684;
- The timescales to complete the Full Impact Assessment of 30 working days; and
- ROM costs for MP169, for setup up to the end of Pre-Integration Testing (PIT) of between £351,000 and £750,000.

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.

2 Introduction

2.1 Revision History

Revision Date	Revision	Summary of Changes
02/10/2023	1.0	Issued to SECAS
03/10/2023	1.01	Minor updates

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	
2	MP169 Modification Report v0.6	SECAS	

References are shown in this format, [1].

2.3 Document Information

The proposer for this Modification is Emslie Law of OVO.

This Preliminary Impact Assessment was requested of DCC on 11 September 2023.

This is the second PIA relating to SECMP0169 provided by DCC, with a change of requirements.

3 Context and Requirements

3.1 Problem Statement

Suppliers are unable to comply with consumer requests to install a smart meter in ‘dumb’ mode which is referred to as restricted mode in the rest of this document. 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) and those on specific Radio TeleSwitched 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 preference and situation. There is currently no flag or state to highlight this.
Availability of Heritage Meters	They are no longer being made in some circumstances. Stocks are running low.

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

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

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

4 Benefits

The Benefits associated with various stakeholders are noted following.

Stakeholder	Benefit
Energy Consumers	Consistent and clear advice to consumers who wish to refuse a Smart Meter – remote retrieval of consumption data can be prevented.
SEC Parties	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 – the flag in the DSP system is not reset automatically.

Table 2 – Benefits

The Business Case will be elaborated as part of the Full Impact Assessment.

5 Impacted Domains

The impacted domains have been identified as follows:

Domain	Impact Summary
DSP	SSI/SSMI DCC User Interface Specification (DUIS) Request Management
DCC	Service Centre

Table 3 – Impacted Domains

6 Impact on DCC's Systems, Processes and People

This section describes the overall solution and the impact of MP169 on DCC's Services and Interfaces that impact Users and/or Parties.

6.1 Description of Solution

6.1.1 DSP Solution

DSP's proposed solution will:

- introduce the concept of a 'Restricted' mode attribute/ flag to applicable device types (SMETS2+ only);
- provide a mechanism via the Self Service Interface (SSI) / Self Service Management Interface (SSMI) whereby a supplier can set (or clear) 'Restricted' mode for a meter (noting that when applied to a GSME then this will also apply to the corresponding Gas Proxy Function (GPF) device);
- add 'Restricted' mode attribute to the following:
 - SSI inventory display of devices;
 - SRV 8.2 (Read Inventory) response; and
 - Device Extracts;
- limit the Service Reference Variants (SRVs) that can be delivered to 'Restricted' devices – the list of allowed SRVs will be configurable;
- amend DUIS interface to add a new ResponseCode to indicate to Service Users where a request has been rejected due to a device being in 'Restricted' mode;
- limit the Alerts that can be delivered from a 'Restricted' device;
- rejected alerts are not to be recorded in the SAT log but will be recorded in a new log solely for the purposes of diagnostics and triage investigations.

6.1.2 Impact on Reporting

There will be minimal impact on reporting, as the output 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 SRs (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. The DCC DS&A team will look at any required changes in the FIA, and this change will be dealt with like any DUIS change that brings in new Errors.

6.1.3 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.

6.1.4 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; and
- User Systems will need to be uplifted to use the new DUIS schema.

6.1.5 Technical Specifications

DUIS changes to:

- add new ResponseCode for "device use is 'Restricted'"; and
- amend SRV 8.2 Read Inventory response to include 'Restricted' indication.

6.1.6 Impact on the SEC

This will be provided as part of the Full Impact Assessment.

6.1.7 Impact on Security

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

7 Testing Considerations

This section outlines the testing required to complete the Design, Build and Test phases for this SEC Modification.

7.1 Pre-integration Testing

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

The design, implementation, Early Automated System Testing (EAST), System Testing, Performance Testing and Factory Acceptance Testing (FAT) phases will operate as a single phase of activity with a single drop into DSP's SIT-B environment.

FAT will consist of a defined subset of EAST tests being observed by DCC within the final one week of testing. The

6.2 exit criteria and defect mask will apply for the Pre-Integration Process.

7.2 Systems Integration Testing

Systems Integration Testing (SIT) is the testing of the DCC Total System, which brings together the components, e.g., DSP and CSP 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.

MP169 will be tested in SIT with support from the CSPs. The change affects SMETS2 only. The proposed SIT scope is:

- update devices to/from 'Restricted' via SSML;
- execute a sample of supported SRs to 'Restricted' devices;
- execute a sample of negative tests for unsupported SRs to 'Restricted' devices; and
- verify the following:
 - that supported device alerts are sent to the SU for 'Restricted' devices;
 - that unsupported device alerts are rejected and do not appear on SAT log for 'Restricted' devices;
 - that 'Restricted' status is displayed correctly on the SSI inventory, SR8.2 and device extracts.

7.3 User Integration Testing

The proposed UIT test execution scope for MP169 will cover running the following test suites on two SMETS2 meter sets, with one meter set for each of the CSPs. All SRVs tested will use the updated DUIS version associated with the change.

The UIT testing for each meter set will comprise:

- Customer Journey 1 - Install and Commission the meter set;
- a selected sample of SRV testing to prove the sending of relevant SRVs is not 'Restricted';
- update devices to 'Restricted' via SSML;
- a selected sample of SRV testing to validate that the device behaviour is now being treated as 'Restricted';
- over-the-air firmware updates to the 'Restricted' ESME and GSME to check the upgrades are successful;
- update devices to not be 'Restricted' via SSML;
- re-run a selected sample of SRVs to validate that the device is no longer being treated as 'Restricted';
- decommission the meter set.

The above testing will be conducted in both the UIT-A and UIT-B test environments and will be undertaken by the UIT Projects team.

8 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.

For the purposes of this Preliminary Assessment, a prudent planning assumption would be that DCC requires a lead time of **6 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.

9 DCC Costs and Charges

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

Implementation costs, MP169							
Phase:	Design	Build	PIT	SIT	UIT	Implementation to Live	Total
DSP	£351,000 - £750,000			Not applicable in PIA			£351,000 - £750,000
Implementation costs – supplementary information							
Implementation cost assumptions	A. Costs are exclusive of VAT and any applicable finance charges B. Majority of the costs above represent labour costs. C. Costs provided for Design, Build and Pre-Integration Testing are quotes provided by the Service Providers and based on current understanding of the requirements. DCC is challenging the technical solutions and costs from the Service Providers to ensure that they represent best value. D. Costs will be refined during future assessments.						
Explanation of Implementation Phases	DCC’s implementation costs are provided by implementation phases. The following describes the purpose of each phase: - Design: The production of detailed System and Service design 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: Each Service Provider tests its own solution to agreed standards in isolation of other Service Providers. This is assured by DCC. - System Integration Testing: All Service Providers’ PIT-complete solutions are brought together and tested as an integrated solution, ensuring all Service Provider solutions align and operate as an end to end solution. - User Integration Testing: Users are provided with an opportunity to run a range of pre-specified tests in relation to the relevant change. - Implementation to Live Costs: The solution is implemented into production environments and ready for use by Users as part of a live service. This service is subject to implementation costs.						

The fixed price cost for a Full Impact Assessment is £16,684 and would be completed in 30 working days.

10 RAID

The risks, assumptions, issues and dependencies below are applicable to both solution options.

Risks

Ref.	Risk Description	Status
MP169-R-001	There is a risk that customers who opt out of smart metering functionality will attempt to block any signals into the CHs which will result in key updates such as firmware updates not occurring. This represents a security risk as the meters and CHs require latest firmware updates to address any security limitations. Firmware versions on 'Restricted' devices should be monitored so that this can be addressed with the customer should there be persistent failures in firmware updates.	Open

Assumptions

Ref.	Description	Status
MP169-A-001	It is assumed that approximately 750 tests will be executed within the proposed SIT scope.	Open
MP169-A-002	It is assumed that this will form part of the June or November 2025 release.	Open
MP169-A-003	It is assumed that there is no requirement for DCC to suppress the transmission of messages inbound via the SMWAN from 'Restricted' Devices. The controls applied to 'Restricted' Devices will be solely in the form of rejection of specific Service Reference Variants and discarding of specific Device Alerts by DSP.	Open

Issues

None identified at this time.

Dependencies

Ref.	Description	Status
MP169-D-001	Prior to accepting a request to produce a Full Impact Assessment, DCC requires direction on whether 'Restricted' is to be modelled as an extra attribute on the Device, or a new Status (like 'Suspended').	Open
MP169-D-002	Prior to accepting a request to produce a Full Impact Assessment, DCC requires the initial list of allowed SRVs and Device Alert Codes.	Open

Appendix A: Glossary

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

Acronym	Definition
CR	DCC Change Request
CSP	Communications Services Provider
DCC	Data Communications Company
DSP	Data Service Provider
DS&A	(DCC) Data Science and Analytics team
DUIS	DCC User Interface Specification
FIA	Full Impact Assessment
GPF	Gas Proxy Function
I&C	Installation and Commissioning
PIA	Preliminary Impact Assessment
PIT	Pre-Integration Testing
RAID	Risks, Assumptions, Issues and Dependencies
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
SLA	Service Level Agreement
SMETS	Smart Metering Equipment Technical Specification
SMI	Smart Metering Inventory
SSI	Self Service Interface
SSMI	Self Service Management Interface
UIT	User Integration Testing