SEC
Smart Energy Code

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Smart Energy Code

MP169

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

Modification Report

Version 0.5

7 June 2023

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Committed to clearer communication
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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 two annexes:

- **Annex A** contains the business requirements for the proposed solution.
- **Annex B** contains the Data Communications Company (DCC) Preliminary Assessment**.**
- **Annex C** contains a list of Service Requests which can be sent to Devices that are operating in Restricted mode.

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1. Summary

This proposal has been raised by Emslie Law from 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 currently 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 to 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 Preliminary Assessment returned from the DCC in May 2023 showed costs between £1,291,600 and £1,690,600. The cost to complete a Full Impact Assessment of this modification will be £131,423.

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 only be taken after the current all reasonable steps have been exhausted, for Suppliers to offer to consumers who do not wish to have a Smart Meter installed.

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 £1,291,600 and £1,690,000 for Design, Build and Pre-Integration Testing (PIT). The breakdown of these costs are as follows:

Breakdown of DCC implementation costs	
Activity	**Cost**
Design, Build and PIT	£1,291,600 and £1,690,000
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 £131,423 and would be completed within 50 working days of the SECAS request. This would show the costs of SIT, UIT and Implementation to Live.

During the Preliminary Assessment, the DCC stated that the inclusion of Business Requirement 5 accounts for over 50% of the quoted costs. The Smart Energy Code Administrator and Secretariat (SECAS) intend to remove this requirement after the Refinement Consultation has concluded.

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. Further views on this will be gained as part of the Refinement Consultation.

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 13 June 2025; or
- **7 November 2025** (November 2025 SEC Release) if a decision to approve is received after 14 June 2025 but on or before 24 October 2025.

SECAS believes that the decision from the Authority should be received in early March 2024. 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. 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 in 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

left the requirement as part of the modification during the Refinement Consultation, so Parties are able to offer formal views. Once the Refinement Consultation has closed, SECAS will work with the Proposer to determine whether the requirement can be removed.

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..

As part of the Refinement Consultation SECAS has asked a question about Parties views on whether the restricted notification should come via the SSI or via a new Service Request.

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.

8. Case for change

Business case

It is important that Suppliers complete all reasonable steps to attempt a Smart Meter installation. As the Smart Meter Implementation Programme (SMIP) continues and the pool of candidates for Smart installations grows smaller, the frequency with which Suppliers encounter consumers who wish to refuse a Smart Meter will increase. In instances where this is due to consumer concerns over data privacy, it will be beneficial to Suppliers and consumers for there to be a workable compromise which

doesn't necessitate the expensive installation of a heritage meter. This modification offers a compromise which would protect the consumer's right to data privacy while allowing Suppliers to comply with their Smart rollout obligations. It would also increase the stock of Smart-capable Devices in the field, so that in the event a consumer decides to move to Smart the functionality can be activated quickly and cheaply, with no need for additional engineering works.

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

Industry views will be updated following the Refinement Consultation.

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.

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.

[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.

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
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

Timetable	
Event/Action	**Date**
Modification discussed at TABASC	6 Apr 2023
Modification discussed at OPSG	11 Apr 2023
Refinement Consultation	7 Jun 2023 – 28 Jun 2023
Modification discussed at Working Group	*2 Aug 2023*
Impact Assessment Request at Change Board	*23 Aug 2023*
Impact Assessment Requested	*25 Aug 2023*
Impact Assessment Returned	*27 Oct 2023*
CSC approves Modification Report	*21 Nov 2023*
Modification Report Consultation	*22 Nov 2023 – 13 Dec 2023*

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
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

Glossary	
Acronym	**Full term**
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