SEC
Smart Energy Code

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Smart Energy Code

MP101
‘Large Gas Meter Displays’

Modification Report

Version 0.3

About this document

This document is a draft Modification Report. It currently sets out the background, issue, 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 one annex:

- **Annex A** contains the redlined changes to the SEC required to deliver the Proposed Solution.

Contact

If you have any questions on this modification, please contact:

Joe Hehir

020 7770 6874

Joe.hehir@gemserv.com

1. Summary

MP101 was raised by Emslie Law from SSE.

The Smart Metering Equipment Technical Specifications (SMETS) sets out the specifications for what is displayed on Gas Smart Metering Equipment (GSME). Large Gas Meters must comply with the display requirements set out in Section 4 of the SMETS.

However, some Large Gas Meters are unable to measure to thousandths of a metre cubed. Equally, due to the greater flow rate, they require more than the five most significant digits to meet the Measuring Instruments Directive (MID) display requirements.

This means the current requirement in the SMETS to have only five digits before a decimal point conflicts with the MID requirement. If Large Gas Meters are not excluded from the SMETS user interface obligations, they will be non-compliant with the MID.

This modification proposes an amendment to the SMETS that would make Large Gas Meters exempt from the requirements for the display of consumption information. It mainly impacts Large Gas Meter manufacturers and have minor impacts on Suppliers and consumers.

2. Issue

Previous discussions on meter display requirements

At the October 2016 Technical Specifications Issue Resolution Sub-Group (TSIRS) meeting, EDF Energy logged an issue (BEIS Issue Log ID TS0649). This was in relation to an inconsistency in display requirements as different manufacturers were interpreting the requirements differently.

As a result, the Department for Business, Energy and Industrial Strategy (BEIS) raised Change Resolution Proposal (CRP) 522 'Meter User Interface display same as consumption import register'. This was to amend future versions of the SMETS to explicitly state that User Interfaces are required to display the value of the energy registers to 'appropriate precision'. CRP522 was implemented in September 2018 as part of the DCC Release 2.

However, SSE did not believe this resolved the issue since there was still flexibility in the number of digits that could be displayed. This would not ensure the consistency they desired. Therefore, it raised SECMP0006 'Specifying the number of digits for device display'.

As part of the progression of the Modification Proposal the Working Group discussed potential conflicts with the MID[1]. It noted the view from the British Electrotechnical and Allied Manufacturers Association (BEAMA), that it did not support the mandating of the number of display digits due to the variation in Consumer use cases. BEAMA added that flexibility may be required for the number of display digits in the future.

Implementation of SECMP0006

SECMP0006 was implemented as part of the November 2018 SEC Release. It amended SEC Schedule 9 'Smart Metering Equipment Technical Specifications 2' to standardise the number of digits used to display Consumption Registration on a User Interface.

For GSME, SECMP0006 required the values stored in the Consumption Register, the Tariff Block Counter Matrix and the Tariff Time of Use (ToU) Register Matrix to be displayed as:

1. A decimal integer number of thousandths of metres cubed, rounded down to the nearest thousandth of a metre cubed;
2. discarding all except the eight least significant decimal digits;
3. exactly eight decimal digits (adding leading zeros if necessary); and
4. the decimal point separator placed between the fourth and third least significant digits.

What is the issue?

The SMETS allows the use of Large Gas Meters at Domestic premises. However, some of these Large Gas Meters are unable to measure to thousandths of a metre cubed. Equally, due to the greater flow rate, they require more than the five most significant digits to meet the MID requirements which states:

[1] Directive 2014/32/EU of the European Parliament and of the Council of 26 February 2014

> *An indicating device shall have a sufficient number of digits to ensure that the quantity passed during 8000 hours at Qmax does not return the digits to their initial values.*

This means the current requirement in the SMETS to have only five digits before a decimal point conflicts with the MID requirement.

How does this issue relate to the SEC?

As described above, the SMETS sets out the specifications in section 4.4.5.1 'Presentation of information on the User Interface' for what is displayed on GSME.

The SMETS also states in Section 4.1 'Overview':

> *Any requirements to Lock, Enable, Disable or Arm Supply set out in this Section 4, only apply to Gas Smart Metering Equipment other than Large Gas Meters installed at Domestic Premises.*

This ensures Large Gas Meters must comply with the display requirements set out in the remainder of Section 4.

What is the impact this is having?

Large Gas Meters must meet the requirements imposed by both the SMETS and the MID. If Large Gas Meters are not excluded from the SMETS obligations for displaying a limited number of digits in the display, they will become non-compliant with the MID.

3. Solution

Proposed Solution

The proposed solution is to make Large Gas Meters exempt from the display requirements for consumption information in the SMETS.

This would be achieved by amending section 4.1 'Overview' of the SMETS to show that Large Gas Meters installed at Domestic Premises are exempt from any requirements for the display of consumption information on the User Interface. An additional amendment would also be made to section 4.4.5.1 'Presentation of information on the User Interface' to add further clarity to the specification. This would explicitly state that section 4.4.5.1, which was implemented by SECMP0006, would not be applicable to Large Gas Meters.

These changes will made against the next Principal Version and Sub-Version of the SMETS. These would be v5.0 and v4.3 respectively.

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

Supplier Parties

This modification is only seeking to amend the requirements for the display of consumption information on the Large Gas Meter display. It will not have any impacts on the way in which Suppliers receive meter reading data.

However, Suppliers may receive queries from consumers asking for guidance on our to interpret the Large Gas Meter display.

Other SEC Parties

Large Gas Meter manufacturers will be impacted by this modification as Large Gas Meters will no longer be required to follow the same standardised SMETS display requirements for GSME. This will ensure that Large Gas Meter manufacturers are not non-compliant with the MID.

DCC System

The DCC has confirmed that this proposal has no impacts on the DCC Systems.

SEC and subsidiary documents

The following parts of the SEC will be impacted:

- Schedule 9 ‘Smart Metering Equipment Technical Specifications 2’

The changes to the SEC required to deliver the proposed solution can be found in Annex A.

Consumers

This modification will have minor impacts on consumers. Although there are currently no SMETS Large Gas Meters installed at Domestic Premises, when they are, they will not follow the same standardised approach to display requirements for consumption information as other GSME. This could be confusing for consumers reading a Large Gas Meter. However, the consumers Supplier should be able to advise accordingly how to interpret the readings on the meter.

Other industry Codes

This modification will have cross-Code impacts on the Supply Point Administration Agreement (SPAA).

Whilst the SPAA has limited interactions with the SMETS, and no interactions with the MID, the SPAA will seek to make a minor clarificatory amendment in line with this modification. This will mitigate any issues encountered with Large Gas Meters installed at Domestic premises.

The SPAA will do this by defining Large Gas Meters in its Code, in alignment with the SEC. It will also exempt Large Gas Meters from the display requirements for consumption information. The SPAA are targeting this change for the June 2020 SPAA Release.

Greenhouse gas emissions

This modification will not have an impact on Greenhouse Gas Emissions.

5. Costs

DCC costs

There are no DCC costs for this modification.

SECAS costs

The estimated SECAS implementation costs to implement this modification is two days of effort, amounting to approximately £1,200. The activities needed to be undertaken for this are:

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

6. Implementation approach

Recommended implementation approach

SECAS is recommending an implementation date of:

- **5 November 2020** (November 2020 SEC Release) if a decision to approve is received on or before 22 October 2020; or
- **4 November 2021** (November 2021 SEC Release) if a decision to approve is received after 22 October 2020 but on or before 21 October 2021.

As this modification impacts a Technical Specification, it must be implemented in a November SEC Release to prevent more than one change to the Technical Specifications in a calendar year. The November 2020 SEC Release is the soonest release this modification can be targeted for. If a decision is not received in time for the November 2020 SEC Release, it will therefore be targeted for the November 2021 SEC Release.

7. Assessment of the proposal

Observations on the issue

Views of SECAS

Part 1 'Specific Requirements Gas Meters' of the MID states that, 'An indicating device shall have a sufficient number of digits to ensure that the quantity passed during 8 000 hours at Q_{max} does not return the digits to their initial values.'

The Smart Energy Code Administrator and Secretariat (SECAS) advised that this creates a problem with, for example, the U16 gas meter where the Q_{max} is 16 cubic meters per hour. 8,000 hours of Q_{max} require more than five digits to display on the meter. If only five digits were used, the display would be perceived to start again at 00,000.000 after 6,250 hours.

SECAS notes that the requirements in the SMETS and the MID do not affect the reading of data for Suppliers using Service Requests. These follow the same rules as domestic meters and the actual value stored by the meter is transmitted. Also, the communications with between a Large Gas Meter and an In-Home Display (IHD) or Prepayment Meter Interface Device (PPMID) is not affected and the full value is shared. Therefore, the DCC Systems are not affected by this issue.

Views of a meter manufacturer

A meter manufacturer agreed with the issue set out in this problem statement. It suggested making Large Gas Meters installed at Domestic Premises exempt from the User Interface requirements in the SMETS.

Views of the Change Sub-Committee

A Change Sub-Committee (CSC) member suggested this Draft Proposal not be expanded to include other potential issues, in case it caused further unintended consequences.

Another member sought clarification whether this change would apply to future Large Gas Meters, as they were not aware of any currently installed. SECAS advised that it was not aware of any SMETS2 Large Gas Meters currently installed at Domestic Premises, but there may be in future.

Solution development

Views of the TABASC

The Technical Architecture and Business Architecture Sub-Committee (TABASC) reviewed the proposed solution in the development stage. At this point, the proposed SMETS wording only included an amendment to section 4.1 of the SMETS. This would include the, 'Presentation of information on the User Interface' in the list of exemptions for Large Gas Meters. However, the TABASC advised that this was too generic and that it should explicitly state that it is referencing the display of consumption information, not the display requirements in general.

SECAS subsequently made amendments to the legal text that aligned with the TABASC's advice.

Views of the Working Group

SMETS amendments

SECAS presented the proposed legal text changes to the Working Group, noting that amendments had been made following on the TABASC's advice. The Working Group unanimously agreed with the changes being made.

The Working Group recommended that the changes be incorporated into the next Principal Version ad Sub-Version of the SMETS. If this modification is implemented in the November 2020 SEC Release, this would SMETS v5.0 and SMETS v4.3 respectively. SECAS agreed to this approach.

Implementation approach

SECAS advised the Working Group that it would target the November 2020 SEC Release for the implementation of this modification. Working Group members questioned how the SPAA's consequential modification would impact this approach, noting SECAS must understand the consequence of the SPAA's changes before proceeding to a decision.

Working Group members also noted the implementation of the Retail Energy Code (REC) as a potential factor, as the SPAA would at some point be incorporated into this.

SECAS subsequently held discussions with the SPAA, who advised that it would target the June 2020 SPAA Release for its changes. This falls before any possible REC impacts on the SPAA.

Support for Change

The Working Group

The Working Group agreed with the rationale outlined in this report and that a modification should be made. When presented with the draft legal text, the Working Group unanimously agreed with the proposed solution.

Energy and Utilities Alliance

The issue outlined in this modification and the proposed solution were shared with the Energy and Utilities Alliance (EUA) during the Development Stage. A small number of EUA members provided feedback, but all those that did unanimously agreed with the proposed solution to exempt Large Gas Meters from the display requirements in the SMETS.

Views against the General SEC Objectives

Proposer's views

Objective (a)[2]

The Proposer believes this modification will facilitate Objective (a) as Large Gas Meter manufacturers will be able to develop meters that are compliant with display requirements in the SMETS as well as the MID.

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

Objective (g)[3]

The Proposer believes this modification will facilitate Objective (g) as the SEC will be aligned with the display requirements for Large Gas Meters in the MID, rather than each of the two Codes contradicting each other.

[3] Facilitate the efficient and transparent administration and implementation of this Code.

Appendix 1: Progression timetable

Following the Working Group meeting on 4 March 2020, the next steps agreed were to issue a Refinement Consultation once the SPAA changes had been confirmed.

Depending on the feedback from the Refinement Consultation, SECAS will present the Modification Report to the Panel with a view to proceeding to the Report Phase.

Timetable	
Action	**Date**
CSC recommendation that Panel convert into a Modification Proposal	28 Jan 2020
The TABASC review the proposed solution	6 Feb 2020
Panel convert Draft Proposal to a Modification Proposal	14 Feb 2020
Check impacts with the SPAA and the EUA	Feb 2020
Working Group review the proposed solution	4 Mar 2020
Update Panel	13 Mar 2020
Refinement Consultation	17 Mar – 7 Apr 2020

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**
BEAMA	British Electrotechnical and Allied Manufacturers Association
BEIS	Department for Business, Energy and Industrial Strategy
CSC	Change Sub-Committee
CRP	Change Resolution Proposal
DCC	Data Communications Company
ESME	Electricity Smart Metering Equipment
EUA	Energy & Utilities Alliance
GSME	Gas Smart Metering Equipment
IHD	In-Home Display
MID	Measuring Instruments Directive
PPMID	Prepayment Meter Interface Device
SECAS	Smart Energy Code Administrator and Secretariat
SMETS	Smart Metering Equipment Technical Specifications
SPAA	Supply Point Administration Agreement
TABASC	Technical Architecture and Business Architecture Sub-Committee
ToU	Tariff Time of Use
TSIRS	Technical Specifications Issue Resolution Sub-Group

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MP101 'Large Gas Meter Displays'

Legal text – version 0.1

About this document

This document contains the redlined changes to the SEC that would be required to deliver this Modification Proposal.

This document contains the changes required to deliver the Proposed Solution.

Schedule 9 'Smart Metering Equipment Technical Specifications 2' (SMETS)

These changes have been drafted against Schedule 9 'Smart Metering Equipment Technical Specifications 2' v4.2.

Changes will apply to the next Principal Version and Sub-Version of the SMETS.

Amend Section 4.1 as follows:

4 Gas Smart Metering Equipment Technical Specifications

4.1 Overview

Section 0 of this document describes the minimum physical, minimum functional, minimum interface, minimum data and minimum testing and certification requirements of Gas Smart Metering Equipment (GSME) that a gas Supplier is required to install and maintain to comply with standard condition 33 of its gas supply licence.

Any requirements to Lock, Enable, Disable or Arm Supply, or regarding the Presentation of consumption information on the User Interface set out in this *Section 0*, only apply to ~~Gas Smart Metering Equipment~~GSME other than Large Gas Meters installed at Domestic Premises.

Amend Section 4.4.5.1 as follows:

4.4.5.1 Presentation of information on the User Interface

This Section *4.4.5.1* does not apply to Large Gas Meters installed at Domestic Premises.

For each of the values currently stored in the *Consumption Register(4.6.5.4)*, the *Tariff Block Counter Matrix(4.6.5.19)* and the *Tariff ToU Register Matrix(4.6.5.20)*, GSME shall be capable of displaying a value calculated from the stored value by:

i. converting the stored value in-to a decimal, integer number of thousandths of metres cubed, rounding the stored value down to the nearest thousandth of a metre cubed;
ii. discarding all except the eight least significant decimal digits so produced;
iii. adding leading zeros (if necessary) so that there are exactly eight decimal digits; and
iv. placing the decimal point separator between the fourth and third least significant digits.