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DP101 'Large Gas Meter Displays'

Modification Report Version 0.1

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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1. Summary

DP101 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 this document.

However, some of the 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 become non-compliant with the MID.

2. Issue

Provisional discussions

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.

At the time EDF 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, they raised [SECMP0006 'Specifying the number of digits for device display'](#).

As part of the progression of the Modification Proposal the Working Group discussed any potential conflicts with the MID¹. 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 the 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 for what is displayed on GSME.

The SMETS also states in Section 4.1:

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 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.

DCC impacts

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

3. 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 re-wording the SMETS as follows to resolve the issue:

4.1 Overview

*Section **Error! Reference source not found.** 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 information on the User Interface set out in this Section 4, only apply to Gas Smart Metering Equipment other than Large Gas Meters installed at Domestic Premises.

This would make Large Gas Meters installed at Domestic Premises exempt from the User Interface requirements in the SMETS. SECAS agrees that this wording would resolve the issue.

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 exempted too much.

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.

Appendix 1: Progression timetable

It is recommended that this proposal proceeds to the Refinement Process.

During the investigation of this Draft Proposal, a meter manufacturer has proposed a solution to the issue, which the Proposer is willing to take forward.

SECAS will present the proposed solution to the Technical Architecture and Business Architecture Sub-Committee (TABASC) on 6 February 2020 and then to the Working Group on 4 March 2020. If neither of the groups raise any material concerns with the solution, the proposal will then proceed to a Refinement Consultation.

Timetable	
Action	Date
CSC recommendation that Panel convert into a Modification Proposal	28 Jan 20
The TABASC review the proposed solution	6 Feb 2020
Panel convert Draft Proposal to a Modification Proposal	14 Feb 20
Working Group review the proposed solution	4 Mar 20
Update Panel	13 Mar 20

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
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
TABASC	Technical Architecture and Business Architecture Sub-Committee
ToU	Tariff Time of Use
TSIRS	Technical Specifications Issue Resolution Sub-Group