

Stage 02: Initial Modification Report

What stage is this document in the process?



SECMP00006:

Specifying the number of digits for device displays

This Proposal recommends amending SMETS2 to include a specification for the number of meter register digits for smart metering device displays.



The recommendation is that this Modification should be:

- progressed as a Path 2: Authority Determined Modification

This Modification Proposal should:

- be progressed through the Refinement Process



Medium Impact:

Changes to SMETS2 are required and will affect Energy Suppliers and Device Manufacturers.

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Any questions?

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About this document

This document is an Initial Modification Report. It has been issued to the SEC Panel to enable the Panel to carry out its initial consideration of the Modification Proposal.

1. Summary of Modification Proposal

This section provides an overview of SECMP0006. For further details on the Modification Proposal please refer to subsequent sections.

Defined Terms and acronyms used in this document are listed for reference in the Glossary (Section 9) of this document.

1.1 Summary of Modification

The Proposer seeks to standardise displayed data items on smart metering devices.

1.2 Proposed Solution

The Modification Proposal recommends that SMETS2 is amended to include a specification for the number of meter register digits for smart metering device displays.

1.3 Impacts

The Proposer has identified that the Modification Proposal will likely impact Suppliers and Device Manufactures.

Impacted SEC Subsidiary Documents include SMETS2¹. Within SMETS2, several sections will be affected: Section 4.4.5 'Display of information'; Section 5.5.4 'Display of information'; and Section 6.4.3 'Information pertaining to the Supply of gas to the Premises'. Other SEC documents may also be impacted and will need investigating during the Refinement Process.

1.4 Targeted Implementation Date

The Modification Proposal targets implementation in a release as soon as possible after DCC Live, and proposes the Modification be considered for Release 2.0 currently scheduled for June 2017

1.5 Release Management and Testing Requirements

This Modification Proposal falls under the Panel's Release Management Policy. The testing requirements will be further informed in the Refinement process and form part of the Working Group considerations.

Implications for Device testing or Assurance Certificates are the responsibility of the relevant SEC Party.

1.6 Proposed progression

This Modification must go through the Refinement Process pursuant to SEC D3.9(c) as it affects the DCC Systems, User Systems and/or Smart Metering Systems.

¹ It is acknowledged that some Subsidiary Documents are not yet designated. However, the DCC and industry are working to a baselined set and references here are to that baseline, where applicable. Similarly, some SEC text and Subsidiary Documents are pending revision, subject to consultation conclusions. It is anticipated that these baselined Subsidiary Documents and any future SEC changes will have been finalised by the time this Modification completes Refinement and the Modification will be applied to the version of the SEC/Subsidiary Document extant at the time of implementation.

Section 6 of this document contains a detailed timetable and the Working Group constitution and objectives.



What's the issue?

SMETS2 does not currently include a specification for the number of meter register digits for smart metering devices to display.

2. Why Change?

What is the issue?

SMETS2 does not currently include a specification for the number of meter register digits for smart metering devices to display. Operational data items such as the Active Import Register and Tariff TOU Register Matrix are not defined in this manner. For example, GB Companion Specification (GBCS) defines for electricity, the Active Import Register as double-long-unsigned. This means unsigned 32 bit integer in DLMS (maximum value 4,294,967,296). For gas, the Consumption Register is defined as UINT48; this means 48 bit unsigned integer in ZigBee (maximum value 281,474,976,710,656). The DCC's Message Mapping Catalogue does not address this. Both examples are xs:decimal which is an unconstrained number. This means that there are approximately 10 significant figures for electricity and 15 significant figures for gas.

The Proposer's view is that the lack of standardisation for these display data items in SMETS2 creates ambiguity for energy suppliers because they will not know how many display digits to expect on a particular device on a Change of Supply / churn event. It is also likely to confuse consumers as different suppliers may be using different configurations.

As it currently stands:

- It will either be up to energy suppliers to define the number of meter register digits in their procurement contracts and for device manufacturers to build their device displays based on that; or it will be up to different device manufacturers to define their device displays as they see fit in the absence of definition in procurement contracts with energy suppliers.
- Consumers will see a change to what they currently see on their meter displays. For example, a single phase electricity meter has always shown its meter readings as five digits. Without some form of standardisation, there could be many different variations for smart meters.
- Different manufacturers will implement solutions on their devices to show variable value lengths or include leading zeros. Scrolling through this will cause additional confusion to consumers.

The impacts captured above will result in a negative consumer experience. This presents a reputational risk to energy suppliers as well as to the Smart Metering Implementation Programme (SMIP) as a whole. This could result in a negative impact on the overall smart metering benefits case. Existing legislation / supply licence conditions requires that consumers are not misled on the provision of energy measurement information. Therefore the provision of simple to understand and consistent information will be key to ensuring that consumers understand their energy usage.

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What's the solution?

Amend SMETS2 to include a specification for the number of digits for devices' display.

3. Proposed Solution

The proposer has identified the following options:

1. Amend SMETS2 to include a specification for the number of digits for devices' display.
2. Keep the status quo (do nothing).
3. Address via energy suppliers' device procurement activities.
4. Amend SMETS2 similar to option 1 but for IHDs only.
5. Amend GBCS to include the specification there instead of SMETS2.
6. Update MID requirements.
7. Change existing industry dataflows.

Recommended Option:

This Modification Proposal recommends option 1 (amend SMETS2 to include a specification for the number of digits for devices' display). The rationale for not recommending the remaining options is as follows:

Remaining Options' Rationale	
Option	Rationale for not recommending option
Option 2 (keep the status quo)	See reasons identified in Section 2.
Option 3 (address via energy suppliers' device procurement activities)	This is unlikely to deliver the required outcome as suppliers will be procuring to differing standards and thus will not succeed in all suppliers adopting a common standard. It does not allow for a consistent approach or for effective enforcement.
Option 4 (amend SMETS2 similar to option 1 but for IHDs only)	This is likely to cause confusion if meters are displaying differently to IHDs and may disengage consumers from these devices. It also does not resolve the issue for meters.
Option 5 (amend GBCS to include the specification there instead of SMETS2)	The GBCS is not an appropriate document to specify asset related functionality, especially display related requirements.
Option 6 (update MID requirements)	The MID is not a meter specification document. It is a guidance document to gain initial high level meter type approval (relating to measurement accuracy) and therefore it is not appropriate. There is also an expectation that European utilities will lobby against any such change to it.
Option 7 (change existing industry dataflows)	This does not relate to display requirements and therefore is not appropriate.

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3.1 Legal Text

The necessary amendments to the SEC and relevant Subsidiary Documents will be prepared during the Refinement Process.

3.2 Applicable SEC Objectives

The below table presents the applicable SEC Objective identified in the proposal and the Proposers view on how the Modification Proposal would better facilitate the achievement of these objectives.

How the Modification Proposal would better facilitate achievement of the SEC Objectives	
General SEC Objectives (C1.1)	Proposers' View
(a) the first General SEC Objective is to facilitate the efficient provision, installation, and operation, as well as interoperability, of Smart Metering Systems at Energy Consumers' premises within Great Britain.	The Modification Proposal will increase standardisation and result in efficiency gains by avoiding unnecessary costs relating to Energy Suppliers' system development and customer service issues as a result of different manufacturer implementations.
(c) the third General SEC Objective is to facilitate Energy Consumers' management of their use of electricity and gas through the provision to them of appropriate information by means of Smart Metering Systems.	The Modification Proposal will improve the consumer experience by having a clear and consistent provision of energy measurement information.
(d) the fourth General SEC Objective is to facilitate effective competition between persons engaged in, or in Commercial Activities connected with, the Supply of Energy.	The proposed will support the Change of Supply process by alleviating the risk of different manufacturer implementations that would have resulted in system development costs and customer billing errors / estimates for Energy Suppliers (given that a customer gained during a CoS event may have a different meter configuration to the gaining supplier's existing procured meters).

4. Impacts & Costs

The following section sets out the initial assessment of the likely impacts arising from SECMP0006. Additional impacts may be identified by the Working Group, in the Refinement Process.

4.1 Impacts

The following is provided as an indication of likely impacts as known at this time. The Refinement Process will further inform the effects of SECMP0006



Are there Impacts?

Yes. This Modification Proposal will impact large suppliers and small suppliers. It will also affect central systems, including User Systems, and Smart Metering Systems.

Material Impact on Greenhouse Gas Emission

There is unlikely to be any material impact on Greenhouse Gas Emissions.

Impact on Parts of Smart Energy Code or SEC Subsidiary Documents

SEC Sections, Schedules of Appendices (Subsidiary Documents) likely impacted

Potential Impact

SMETS2

Within SMETS2, a number of sections will be affected: Section 4.4.5 'Display of information'; Section 5.5.4 'Display of information'; and Section 6.4.3 'Information pertaining to the Supply of gas to the Premises'.

Impact on other Codes and documents

If this Modification Proposal is progressed there should be no impacts to other Codes. However, if it is not progressed, there may be implications for other Codes. That is because an alternative option to addressing the problem is to amend existing industry dataflows (option 7 in Section 3 'Proposed Solution').

Impact on Smart Energy Code Party Categories

Potential Impact

Party Category

- Energy Suppliers are responsible for the procurement and installation of SMETS2 devices in customers' premises and therefore their administrative and operational processes may be impacted by this Modification Proposal.

- Large Suppliers
- Small Suppliers

Impact on DCC Systems (Subject to DCC assessment)	
Area of DCC impacted	Potential Impact
DCC	No.
Data Service Provider (DSP)	To be informed through the Refinement Process
Communications Service Providers (CSP)	To be informed through the Refinement Process
Trusted Provider	To be informed through the Refinement Process

Impact on other Systems	
Area of impact	Potential impact
User Systems	The proposed change impacts SMETS2 devices.
Smart Metering Systems	The proposed change impacts SMETS2 devices.
Other (e.g. Security and PKI)	To be informed through the Refinement Process

4.2 Costs

The costs of implementing SECMP0006 will be identified as it progresses through the Refinement Process. These costs will capture any SEC Party costs (where provided during the relevant consultations).

5. Implementation

The Proposer has requested that this Modification Proposal be implemented in June 2017 as part of SEC Release 2.0.

During the Refinement Process, it may become clearer whether June 2017 is achievable under the implementation timetable. In this event, the Working Group should identify this as part of their deliverables and this has been incorporated into the supplementary considerations in section 6.5 below.

5.1 Modification Testing Requirements

The Panel Release Management Policy notes that, as part of the Panel's considerations of a Modification Proposal and the associated implementation timetable and date, the Panel will consider what testing is required and who will be eligible to participate. SEC H14 requires the DCC to make provision for Modification Proposal implementation testing as part of its Testing Services.

The testing requirements under the Panel Release Management Policy are yet to be fully defined. It is anticipated that this Modification Proposal may require testing consistent with the SEC section T arrangements for:

- i. DCC testing (Systems Integration Testing - SIT); and
- ii. Interface Testing (IT) with a representative number of Users and DCC to demonstrate the capability of the DCC solution to interoperate with User Systems.

In both cases, the approach for SIT and IT will be informed during the Refinement Process, hence SECAS has added this aspect to the considerations of the Working Group (see section 6.5 below).

It is noted that the final testing scope and arrangements will be integrated under the Panel Release Management Policy approach for "R2".



When will the Modification be implemented?

The Modification Proposal is intended to be implemented in June 2017.

6. Progression

6.1 Modification Path

Based on the initial review of the Modification Proposal and subsequent discussion with the Proposer, SECAS recommends that the appropriate Modification Path is: Path 2 - Authority Determined.

6.2 Progression route

The Refinement Process is required for this Modification Proposal as the Proposer has identified that it affects DCC Systems, User Systems, and Smart Metering Systems, which are the SEC criteria for following the Refinement Process (see SEC Section D3.9(c)).

The Refinement Process (SEC Section D6) requires that a Working Group is established by the Panel to undertake the Refinement Process. In outline, the objectives of the Working Group is to:

- Consider the effects of the Modification Proposal on participants, Emissions and Other Energy Codes;
- Evaluate, develop and refine the content of the Modification Proposal, including where the WG considers an Alternative Proposal may be relevant, prepare and submit this into the Refinement Process with the Proposers Modification Proposal;
- Evaluate, and amend if applicable, the proposed implementation timetable of the Modification Proposal including with regard to consistency with the Panel Release Management Policy;
- Obtain and take into account the views of other relevant Sub-Committees (TBSC, SSC,PMA)
- Obtain assessments from the DCC as to the impact and costs;
- Consider the SEC Objectives that may be better achieved if the Modification Proposal was implemented
- Conduct a Consultation(s);
- Consider any representations made to the WG by Parties; and
- Deliver a Modification Report to the Panel in respect of the Modification Proposal.

6.3 Working Group membership requirements

SEC Section D6.3 states out that a Working Group must be at least five members with relevant expert knowledge. Therefore we propose that the Working Group should be made up of:

- The Proposer or a person nominated by the Proposer as a duly authorised representative of the Proposer;
- Working Group members:
 - Who are broadly representative of the Users likely to be affected by the Modification Proposal, so that the Refinement Process is well informed in this case Suppliers and the DCC, although other interested Parties may come forward;
 - With relevant experience and expertise in relation to the subject matter of the Modification Proposal (TBSC expertise need not be duplicated as this may be achieved through co-ordination between the Working Group and TSC);
 - Manufacturer experts (provided by, for example, BEAMA);

- A Chair (see following section);
- A Secretary (provided by SECAS); and
- A Modification Analyst (provided by SECAS).

The Working Group can also be attended by:

- DCC representatives;
- Ofgem representatives;
- DECC representatives; and
- Any interested members from the Technical Sub-Committee (or its Technical and Business Expert Community).

6.4 Convening the Working Group

It is noted that SEC Section D6.3 makes provision for the Panel, with the cooperation of the Parties to establish a standing list of persons with potentially relevant experience who may be willing to serve on Working Groups. As Modification Paths have only recently been enabled such a standing list is not available to the Panel.

Therefore it is recommended that an open invitation is issued at this time, with a view to using this exercise as a means of identifying the constitution of any future standing membership that can be called upon as a Modification Working Group.

Modification Working Group members are required to meet the SEC requirements to confirm in writing to SECCo that they agree to serve on that Working Group and to do so in accordance with this Code.

Working Group Chair

SEC Section D6.4 enables the Panel to request that SECAS provides the chair for the Working Group. While the Modification process beds down, it is proposed that, to facilitate convening the Working Group in the first instance, SECAS provides the Chair. The Working Group, once constituted, may then proceed to appoint a Chair from within its Membership, if that is the majority view of the Members. This optionality would only be available at the first meeting to preserve continuity.

6.5 Working Group Terms of Reference

To meet the requirements set out for Working Group's in SEC Section D6.8-D6.14, standard Terms of Reference are provided in Appendix B. In addition, the following questions have been identified for the Working Group to consider to fully assess the Modification Proposal.

Working Group Terms of Reference – supplementary questions to consider

What is the materiality of the issue?

Are there other deficiencies in the current solution that are addressed by SECMP0006?

Which of the methodologies set out in SECMP0006 is the preferred approach?

What are the detailed changes to the SEC and/or SEC Subsidiary Documents to support this SECMP0006 (and its Alternative(s))?

What are the systems impacts for DCC/User/Smart Meters?
What are the costs and lead times to introduce the solution in this SECMP0006 or its Alternative(s)?
Is the implementation timetable appropriate?
Are Consumers positively or negatively impacted by the Proposed (or any Alternative) solutions and to what extent?
What Modification Implementation Testing is required to implement the Proposed Modification, or any Alternative(s)?
What are the implementation steps and activities required to implement the Proposed (or an Alternative) Solution(s)?
How the views of the relevant Panel Sub-Committee been taken into account
Has the Refinement Process identified any potential reason that this Modification (or its Alternatives) may require EC Notification (noting that the Authority will determine if any such Notification is pursued)

The above is not intended as an exhaustive list and it is expected that the Working Group will identify and address any other considerations that arise during the Refinement Process.

6.6 Timetable

As the Modifications process has only recently been activated, the timetable in Figure 1 below was put together in discussion with the Proposer and SECAS as a good faith estimate. A number of assumptions underpin this timetable:

- The Proposer has requested that the Modification Proposal is implemented in Release 2.0;
- The proposed timetable below has been built around a June 2017 implementation date, noting that the implementation date may need be flexible to accommodate the necessary implementation (and testing) lead times, if the Modification Proposal is approved;
- The proposed timetable includes some assumed timescales for the turnaround of DCC's Impact Assessments and the Authority determination based on the indicative timescales provided by these entities;
- If the changes associated with this Modification require EC Notification, the proposed timetable does not currently capture the three month 'stand-still' during EC notification. This is on the basis that any representations received during the stand-still need not necessarily result in any material change to the notifiable document or agreed solution in any way;
- The timetable has been drawn up based on this Modification Proposal progressing without cancellation or suspension under the *Smart Metering Implementation Programme Guidance on Secretary of State involvement with industry-led*

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modifications to the Smart Energy Code during the transition to enduring governance² document issued by DECC; AND

- The timetable assumes that any Panel Sub-Committee inputs can be fed into the Refinement process at the appropriate time, and this may be subject to alteration.

Modification Timetable	
Activity	Date
Modification Proposal raised	18 February 2016
IMR considered by Panel	11 March 2016
Working Group meetings Indicative activities: - Initial considerations - Legal drafting - Sub-Committee feedback - Alternative(s) identified - Detailed evaluation	March 2016 – May 2016
Working Group Consultation	May 2016
Final Working Group meeting Indicative Activities: - Consultation response summary - WG deliverables met - Assessment for Modification Report	June 2016
Panel reviews Modification Report	17 June 2016
Modification Report phase consultation	June/July 2016
Change Board vote	20 July 2016
Modification Decision by the Authority	August 2016
Implementation	June 2017

Figure 1: SECMP0006 Timetable

6.7 Grouping this Modification Proposal with others

There are a number of Modification Proposals that are currently entering the SEC process that have implications for a similar set of Parties and SEC Subsidiary Documents. It may be possible to bring efficiencies into their Refinement under one Working Group. For example, whilst the underlying content may not be directly related, each solution entails

²Available at: <https://smartenergycodecompany.co.uk/docs/default-source/modifications/decc-sec-modification-guidance-v1-0.pdf?sfvrsn=3>

opening the Technical Specifications. There may be merit in grouping these under the Terms of Reference for a single Working Group so that the implications of changes to the Technical Specifications are consistently understood for the future.

SECAS is of the view that this is entirely consistent with the aim in the SEC of establishing standing Members to serve on Working Groups and will offer both value for money for the Panel budget and a reduction in commitment by Working Group Members who might otherwise have to attend several meetings to progress each Modification discretely.

SECAS considers that there may be potential to group this SECMP0006 with others for consideration by one Working Group and **recommends** that the merits of this are explored further when issuing the invitations for the Working Group.

7. Panel Initial Assessment

The Panel is requested to **NOTE** the contents of this paper for SECMP0006 and, pursuant to SEC Section D3.6, **AGREE** the following as set out in this Initial Modification Report:

- whether to accept the Modification Proposal;
- It is a Path 2 Modification (taking into account the view expressed by the Proposer);
- That it is necessary for the Modification Proposal to go through the Refinement Process as set out in Section 6.2;
- To establish a Working Group with the membership and Working Group Chair as set out in Section 6.3;
- Whether SECMP0006 should be considered together with any other current Modification Proposal(s);
- The supplementary considerations for SECMP0006 to supplement the standard Working Group terms of Reference set out in Section 6.5 and
- The Modification progression timetable set out in Figure 1 of Section 6.6; and
- The potential to group SECMP0006 with other Modification Proposals to gain efficiencies in the Refinement Process across a number of potential changes to the Technical Specifications.

8. Further Information

More Information is available in:

- Attachment **A**: Modification Proposal
- Attachment **B**: standard Working Group Terms of Reference

For further information, please see the [Modification Register](#) page of the SEC website.

Or contact the Code Administrator at secas@gemserv.com.

9. Glossary

The terms listed in the below table are defined in the SEC Section A.

Glossary	
Term	Acronym
Change of Supply	CoS
Communications Service Providers	CSP
Data and Communication Company	DCC
Data Service Provider	DSP
Electricity Network Operator	ENO
Electricity Smart Metering Equipment	ESME
Gas Smart Metering Equipment	GSME
Great Britain Companion Specification	GBCS
In Home Display	IHD
Initial Modification Report	IMR
Interface Testing	IT
Meter Interface Device	MID
Secretary of State	SoS
Smart Energy Code Administrator and Secretariat	SECAS
Smart Energy Code Company	SECCo
Smart Metering Equipment Technical Specification 2	SMETS2
Smart Metering Implementation Programme	SMIP
Systems Integration Testing	SIT
Technical Sub-Committee	TSC

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