

Stage 01: Modification Proposal

What stage is this document in the process?

01	Modification Proposal
02	Initial Modification Report
03	Draft Modification Report
04	Final Modification Report

SECMCP0023:

Correct Units of Measure for Uncontrolled Gas Flow Rate

Currently GBCS limits the values of the Uncontrolled Gas Flow rate to be in whole numbers of m^3 . This modification proposes to change that to allow m^3 with accuracy to 3 decimal places to be specified.

The Proposer recommends that this Modification Proposal should be:



- progressed as a Path 2: Authority Determined

This Modification Proposal should:

- progressed through the Refinement Process

Potential Impact on:



- Suppliers
- DCC
- Gas Meter Manufacturers

SECMCP0023

Modification Proposal

26th October 2016

Version 1.0

Page 1 of 12

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MODIFICATION PROPOSAL FORM V1.0

1. Proposer's Contact Details

Details of Proposer

Name:	Mark Pitchford
Organisation:	RWE npower
Contact Number:	07545 697373
Email Address:	Mark.Pitchford@npower.com

Representative as Point of Contact

Details of Representative's Alternate

Name:	
Organisation:	
Contact Number:	
Email Address:	

2. Modification Proposal Details

Mod Submission Date:	26/10/2016																								
Title of Mod Proposal:	Correct Units of Measure for Uncontrolled Gas Flow Rate																								
Description in Detail of the Proposed Modification:	Use Case GCS24 in GBCS includes the following definition: <table> <thead> <tr> <th>mapping table row #</th> <th>ref.</th> <th>name</th> <th>data type</th> <th>attribute/value/parameter</th> <th>cluster ID</th> <th>command: ID</th> <th>response ID</th> </tr> </thead> <tbody> <tr> <td>1402</td> <td>SMETS 4.6.4.33</td> <td>UncontrolledGasFlowRate: methodInput: threshold</td> <td>UINT16</td> <td>Uncontrolled Flow Threshold 0 - 0xFFFF</td> <td>Metering: 0x0702</td> <td>SetUncontrolledFlowThreshold : 0x0E</td> <td>ZCL Default Response : 0x0B</td> </tr> <tr> <td>1397</td> <td>(GBZ)</td> <td>UncontrolledGasFlowR</td> <td>UINT1</td> <td>Multiplier</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	mapping table row #	ref.	name	data type	attribute/value/parameter	cluster ID	command: ID	response ID	1402	SMETS 4.6.4.33	UncontrolledGasFlowRate: methodInput: threshold	UINT16	Uncontrolled Flow Threshold 0 - 0xFFFF	Metering: 0x0702	SetUncontrolledFlowThreshold : 0x0E	ZCL Default Response : 0x0B	1397	(GBZ)	UncontrolledGasFlowR	UINT1	Multiplier			
mapping table row #	ref.	name	data type	attribute/value/parameter	cluster ID	command: ID	response ID																		
1402	SMETS 4.6.4.33	UncontrolledGasFlowRate: methodInput: threshold	UINT16	Uncontrolled Flow Threshold 0 - 0xFFFF	Metering: 0x0702	SetUncontrolledFlowThreshold : 0x0E	ZCL Default Response : 0x0B																		
1397	(GBZ)	UncontrolledGasFlowR	UINT1	Multiplier																					

SECMPO023

Modification Proposal

26th October 2016

Version 1.0

Page 2 of 12

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		ate: methodInput: adjustmentScaleMultiplier	6	0x0001			
1396	(GBZ)	UncontrolledGasFlowRate: methodInput: adjustmentScaleDivisor	UINT16	Divisor 0x0001			
1867	SMETS 4.6.4.33	UncontrolledGasFlowRate: methodInput: stabilisationPeriod	UINT8	Stabilisation Period 0 - 0xFF			
1868	SMETS 4.6.4.33	UncontrolledGasFlowRate: methodInput: measurementPeriod	UINT16	Measurement Period 0 - 0xFFFF			
1524	SMETS 4.6.4.25	SupplyDepletionState: methodInput: state	ENUM8	SupplyDepletion State 0x03 means supply state is UNCHANGED; 0x00 means supply state is LOCKED	Metering: 0x0702	SetSupplyStatus : 0x0D	ZCL Default Response : 0x0B

The 'UncontrolledGasFlowRate: methodInput: adjustmentScaleDivisor' highlighted above has a value of 0x0001. To allow for a more appropriate value to be set, it should be a hexadecimal value of 0x03E8 which is 1000 in decimal which would effectively allow the threshold value to represent m³ with 3 decimal places accuracy.

All other values in the Use Case remain unchanged.

3. Path Type and Urgency Recommendation

Proposer's recommendations on Path Type (delete as appropriate)

Path 2

Statement for recommended Path Type:

This has been extensively discussed at TSIR and has unanimous support from that group.

The September TBDG meeting agreed that a mod proposal should be raised and that it would be progressed as quickly as possible.

Statement of whether Proposal is intended to be Fast-Track Modification (only Panel may raise this type of modification):

Not Fast Track

Is the Proposal Urgent? (delete as appropriate)

No

Statement of whether Proposal should be treated as an Urgent Proposal:

N/A

4. Modification Impact Assessment

4.1 SEC Objectives

Facilitation of SEC Objectives	Tick
General SEC Objectives (C1.1)	
(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;	☒
(b) the second General SEC Objective is to enable the DCC to comply at all times with the General Objectives of the DCC (as defined in the DCC Licence), and to efficiently discharge the other obligations imposed upon it by the DCC Licence;	☐
(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;	☐
(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;	☐
(e) the fifth General SEC Objective is to facilitate such innovation in the design and operation of Energy Networks (as defined in the DCC Licence) as will best contribute to the delivery of a secure and sustainable Supply of Energy;	☐
(f) the sixth General SEC Objective is to ensure the protection of Data and the security of Data and Systems in the operation of this Code;	☐
(g) the seventh General SEC Objective is to facilitate the efficient and transparent administration and implementation of this Code.	☐
Transition Objective (X1.2)	
X1.2 The objective to be achieved pursuant to Section X: Transition is the efficient, economical, co-ordinated, timely, and secure process of transition to the Completion of Implementation.	☐
Charging Objectives (C1.3) (in respect of the Charging Methodology)	
C1.4 The First Relevant Policy Objective:	☐
(a) applies in relation to Smart Metering Systems installed (or to be installed) at Domestic Premises; and (b) requires the Charging Methodology to ensure that Charges (other than Charges for Elective Communication Services) in respect of such Smart Metering Systems do not distinguish (whether directly or indirectly) between Energy Consumers at Domestic Premises in different parts of Great Britain.	

C1.5 The Second Relevant Policy Objective is that, subject to compliance with the First Relevant Policy Objective, the Charging Methodology must result in Charges that: (c) facilitate effective competition in the Supply of Energy (or its use) under the Electricity Act and the Gas Act; (d) do not restrict, distort, or prevent competition in Commercial Activities that are connected with the Supply of Energy under the Electricity Act and the Gas Act; (e) do not deter the full and timely installation by Energy Suppliers of Smart Metering Systems at Energy Consumers' premises in accordance with their obligations under the Energy Supply Licence; and (f) do not unduly discriminate in their application and are reflective of the costs incurred by the DCC, as far as is reasonably practicable in all of the circumstances of the case, having regard to the costs of implementing the Charging Methodology.	☐
C1.6 The Third Relevant Policy Objective is that, subject to the Compliance with the First and Second Relevant Policy Objectives, the Charging Methodology must result in Charges that: a) facilitate effective competition in the Supply of Energy (or its use) under the Electricity Act and the Gas Act; b) do not restrict, distort, or prevent competition in Commercial Activities that are connected with the Supply of Energy under the Electricity Act and the Gas Act; c) do not deter the full and timely installation by Energy Suppliers of Smart Metering Systems at Energy Consumers' premises in accordance with their obligations under the Energy Supply Licence; and d) (d) do not unduly discriminate in their application and are reflective of the costs incurred by the DCC, as far as is reasonably practicable in all of the circumstances of the case, having regard to the costs of implementing the Charging Methodology.	☐

Statement of how the proposed variation would better facilitate the achievement of the SEC Objectives:

The current granularity of m³ in GBCS for the Uncontrolled Gas Flow Rate threshold value does not allow suppliers to set the value to effectively detect any uncontrolled gas flow on re-enablement of supply. A typical value for this threshold could be 0.05 m³. Therefore, this modification better facilitates the operation of a gas smart meter as it allows for a more appropriate / granular value to be set.

4.2 Impacts

Statement of impact on Greenhouse Gas Emission:

None

Statement of impact on which parts of the SEC would need amending (e.g. proposed legal drafting):

- GBCS
- DUIS
- MMC

Statement of impact on likely changes to other Energy Codes:

Not applicable

Statement of impact on likely Party Categories:

Large Supplier Parties	☒	Small Supplier Parties	☒
Electricity Network Parties	☐	Gas Network Parties	☐
Other SEC Parties	☐		

These commands are supplier facing only but will result in the DCC being affected.

Statement of impact on Consumers:

This will allow suppliers to set appropriate Uncontrolled Gas Flow Rate thresholds on their gas meter which may reduce the risks with enabling the supply.

There may also be impacts on any metering systems that are fitted downstream of the target metering system.

Statement of impact on Central Systems:

DCC Systems	☒	User Systems	☒
Smart Metering Systems and/or Communications Hubs	☒	Other (i.e. on Smart Metering Key Infrastructure, or security)	☐

The modification will involve the addition of new Use Case in GBCS. This will prompt new firmware versions to support the functionality in the device. In addition, there will be a new version of DUIS arising from the changes to GBCS.

5. Proposed Timetable

Proposed Timetable for Modification Proposal:

First available Release slot!

Stage	Start	Finish
Modification Proposal Raised		TBC
Panel reviews Initial Modification Report		11 th November 2016
Refinement Process		November 2016 – February 2016
Modification Report to Panel		March 2016
Change Board vote		April 2016
Authority Decision		May 2016
Implementation		February 2018

6. Additional Information

Additional information:

Uncontrolled Gas Flow Rate, its settings and both the GBCS Use Case and associated DUIS command have been discussed in every single TSIR meeting in 2016.

In an attempt to fix this for DCC Go-Live, BEIS raised CRP449 which was presented to TSIR in May 2016. This was subsequently rejected by manufacturers, and the CRP was withdrawn by BEIS. All of this is documented on the BEIS Huddle site.

Below is the note sent to BEIS (formally DECC) regarding CRP449:

EUA response to DECC:

"UGFR

- 1 EUA confirm they are NOT minded to accept the DECC proposal for CRP449 (Units value for the 'UncontrolledGasFlowRate').
Although we understand the importance to some or all of the utilities of this issue, we do not believe that the correct way is to misuse the ZigBee Standard and more importantly have a "misinterpretation" of one of the well-defined attributes (i.e. units of measure)
- 2 We accept that the message from the Utilities, is that they would like to keep the units of measure at m³/h as this is then consistent
- 3 We therefore believe that the correct change is to change the divisor to 1000, so it effectively represents L/h, while expressed as m³/h.
- 4 It should be noted that standard gas meters which are MID approved, have an accuracy class that would mean only measurements above 40 L/h would be certified as being accurately measured.

SOLUTIONS to try to bring this in for GO LIVE

- 5 We strongly urge the DCC to reconsider their position, and to implement the change of making the divisor as 1000
- 6 We have considered other alternatives as indicated at the TSIR meeting, and the most practical, but not without issues, seems to be as follows:
 - a. Each manufacturer could pre-set the UGFR rate to a suitable value, at manufacture, this would allow the meter to operate as desired by the utilities.
 - b. The utilities would NOT use the set value command until the formal change has happened (release 2)

RISKS

- A) This is not documented and DECC would have to make sure all Gas meter manufacturers get the message (or utilities do this through their procurement method)
- B) IF the gas meter received the command to set the UGFR, this would overwrite what had been pre-set, which hopefully would only be a new correct value, but if not, the figure would be set back to a very large number, and there would be no way back to the pre-set."

Please also be aware that there is an alternative solution that could be progressed to change the units of measure for this field in GBCS to litres. However, this approach has been discounted by suppliers as all other measurements and settings within the gas meter are in M³.

SECMP0023

Modification Proposal

26th October 2016

Version 1.0

Page 10 of 12

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APPENDIX 1: Glossary of Terms

The table below illustrates useful definitions of the terms used in this form. If you require any further information, please contact the [SECAS Helpdesk](#).

Term	Definition
DCC Systems	Means the Systems used by the DCC and/or the DCC Service Providers in relation to the Services and/or this Code (Section A1, SEC Stage 3.0). The Proposer may wish to consider anticipated impacts on the DCC Licensee's enterprise systems (e.g. billing) or the Data Service Provider or Communications Service Providers.
Fast-Track Modifications	Means Modification Proposals (Path 4 Modifications) to correct typographical or other minor errors or inconsistencies to the Code (Section D2.8, SEC Stage 3.0).
General SEC Objectives	Has the meaning given to that expression in Section C1 (SEC Objectives) (Section C1, SEC Stage 3.0). The SEC Objectives are those objectives that the SEC has been designed to achieve.
Greenhouse Gas Emission	Means emissions of Greenhouse Gases, as defined in section 92 of the Climate Change Act 2008 (Section A1, SEC Stage 3.0).
Other Systems	Other systems identified in the section Statement of Impact on Central Systems. The Proposer may wish to consider Prepayment vendors, Electricity Central Online Enquire Service (ECOES), Single Centralised Online Gas Enquiry Service (SCOGES), BSC Settlement Systems, etc.
Path Type	Means the Modification Path to be followed in respect of a Modification Proposal. The type of Path will depend upon the nature of the variation proposed in the Modification Proposal (D2.1, SEC Stage 3.0). The four Modification Paths under the SEC are: • Path 1 Modifications: Authority-led (Section D2.4/D2.5, SEC Stage 3.0) • Path 2 Modifications: Authority Determination (Section D2.6, SEC Stage 3.0) • Path 3 Modifications: Self-Governance (Section D2.7, SEC Stage 3.0) • Path 4 Modifications: Fast-Track Modifications (Section D2.8, SEC Stage 3.0)

SECMPO023

Modification Proposal

26th October 2016

Version 1.0

Page 11 of 12

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Party Category	Means one of the following categories: (a) the Large Supplier Parties collectively; (b) the Small Supplier Parties collectively; (c) the Electricity Network Parties collectively; (d) the Gas Network Parties collectively; or (e) the Other Sec Parties collectively. (Section A1, SEC Stage 3.0).
Smart Metering Systems	Means a system installed at premises for the purposes of the Supply of Energy to the premises that, on the date it is installed, as a minimum; (a) consists of the apparatus identified in; (b) has the functional capability specified by; and (c) complies with the other requirements of, the Smart Metering Equipment Technical Specification that is applicable at the date (Section A1, SEC Stage 3.0). In summary, this includes: • Gas Smart Metering Equipment; • Electricity Smart Metering Equipment; • In Home Display; • Prepayment Interface Device; and • HAN Connected Auxiliary Load Control Switch.
Urgent Proposal	Means a Modification Proposal deemed an Urgent Proposal where the Authority directs the Panel to treat the Modification Proposal as an urgent Proposal (whether following a referral by the Panel pursuant to Section D4.5, or at the Authority's own initiation) (Section D4.5/D4.6, SEC Stage 3.0).
User Systems	Means, in respect of each User (DCC User), the Systems of that User (including, where relevant, those of its Registered Supplier Agent) used in relation to the Services and/or Smart Metering Systems. The Proposer may wish to consider Suppliers; Network Operators; Registration Data Providers; Other DCC Users; Supplier Nominated Agents.