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MP128 'Gas Network Operators SMKI Requirements'

Modification Report

Version 0.2

17 August 2020

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About this document

This document is a Modification Report. It currently 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 one annex:

- **Annex A** contains the redlined changes to the Smart Energy Code (SEC) required to deliver the Proposed Solution.

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1. Summary

This proposal has been raised by Earl Richards from Cadent Gas.

There is a SEC obligation on all Network Parties (which includes Gas Networks and Gas Transporters, collectively known as Gas Network Parties (GNPs) to become Smart Metering Key Infrastructure (SMKI) Subscribers.

GNPs are required by the SEC to place their SMKI Organisation Certificates in the SMKI Repository and to undertake SMKI & Repository Entry Process Tests (SREPT). The Proposer believes this is a very expensive process if the GNP does not have the infrastructure to create and maintain the SMKI Keys and to complete SREPT. They also consider this obligation provides no benefit to GNP since they do not receive Alerts. Consequently, the Proposer feels that GNPs currently have no benefit in becoming Data Communications Company (DCC) Users.

2. Issue

What are the current arrangements?

There is a SEC obligation on all Network Parties (which includes Gas Networks and Gas Transporters) to become SMKI Subscribers. The original policy intent was to include an obligation on GNPs, to ensure that the relevant SMKI Organisation Certificates are held on Devices. This will:

- enable a Supplier to know the correct Network Operator; and
- allow for future changes of status should the GNP want to become a DCC User and carry on with their SEC obligations.

There are also multiple references throughout the SEC to obligations on Network Parties in general and to GNPs in particular.

What is the issue?

GNPs are required by the SEC to place their SMKI Organisation Certificates in the SMKI Repository and to undertake SMKI & Repository Entry Process Tests (SREPT). The Proposer believes this is a very expensive process if the GNP does not have the infrastructure to create and maintain the SMKI Keys and to complete SREPT. They also consider this obligation provides no benefit to GNPs since they do not receive Alerts. Consequently, the Proposer feels that GNPs have no current benefit in becoming DCC users.

What is the impact this is having?

This obligation is incurring a burden of costs for GNPs where they feel there is no benefit and increases the costs and efficiency of smart metering overall. If the current arrangements are not amended, the unnecessary costs and burden on Gas Networks will continue.

3. Solution

Proposed Solution

Optionality:

The solution seeks to provide optionality to Gas Network Parties to place their Organisation Certificate in the SMKI Repository. Based on current arrangements, there appears to be no grounds for a Gas Network Party having a mandatory obligation to place their SMKI Organisation Certificates in the SMKI Repository. However, flexibility must be provided as there may be Gas Party who wishes to do so either now or in the future. Nor can we rule out the possibility that, at some future date, Gas Network Parties may identify a value in becoming a DCC User.

The solution seeks to amend the obligation on Suppliers in SEC Appendix AC Section 5.3(a) to clarify that, where a SMKI Organisation Certificate for a Gas Network Operator or Gas Transporter exists, then they should put it onto the Device post Commissioning.

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

Gas Network Parties are impacted due to the obligations being removed on them having to place their SMKI Certificates in the SMKI Repository. Suppliers will also be impacted as the solution clarifies that Suppliers will be able to place their SMKI Certificates on Devices where Gas Network Parties exist post-commissioning.

DCC System

There is no impact on DCC systems in this modification.

SEC and subsidiary documents

The following parts of the SEC will be impacted:

- Appendix AC 5.3 '5 Post-Commissioning Obligations in relation to SMETS2+ Devices'

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

Consumers

There are no impacts on Consumers in this Modification.

Other industry Codes

There are no impacts on other industry codes in this Modification.

Greenhouse gas emissions

There are no impacts on Consumers in this Modification.

5. Costs

DCC costs

There are no DCC costs for this modification.

SECAS costs

The estimated Smart Energy Code Administrator and Secretariat (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:

- **25 February 2021** (February 2021 SEC Release) if a decision to approve is received on or before 11 February 2021; or
- **24 June 2021** (June 2021 SEC Release) if a decision to approve is received after 11 February 2021 but on or before 10 June 2021.

This is a document only change and it has no impact on DCC Systems; it is a text only change that seeks to remove obligation on Gas Network Parties. The February 2021 SEC Release is the earliest SEC Release this modification could be included in.

7. Assessment of the proposal

Observations on the issue

The Change Sub-Committee (CSC) members agreed the issue was clearly defined. A CSC member had concerns on how the change would affect Suppliers moving forward.

The SMKI Policy Management Authority (PMA) agreed that the GNP obligations were initially included as future proofing, but the benefits expected may no longer be realised. Furthermore, another member outlined there could be increased risks if GNPs are required to have certificates on Gas Smart Metering Equipment (GSME), as GNPs are unable to update certificates if the Device moves to another Network Operator.

The Security Sub-Committee (SSC) agreed that the issue was clearly defined and understood that the obligation was put in place initially as future proofing. They were supportive of making the requirement optional rather than mandatory.

Solution development

The initial solution from the proposer was to change the obligation place in SEC Section X1.11 'Network Parties to become Subscribers'. However, following advice from the SMKI PMA, the solution was developed into focusing on SEC Appendix AC 5.3 'Post-Commissioning Obligations in relation to SMETS2+ Devices'. The solution seeks to amend the obligation on Suppliers in SEC Appendix AC Section 5.3(a) to clarify that, where a SMKI Organisation Certificate for a Gas Network Operator or Gas Transporter exists, then they should put it onto the Device post Commissioning.

Views against the General SEC Objectives

Proposer's views

The Proposer feels this Modification better facilitates SEC Objective (d) by providing optionality for Gas Network Parties to not undergo the SREPT, which the proposer feels would be more cost-efficient.

Appendix 1: Progression timetable

Following the Refinement Consultation the Modification Report will be presented to Panel in October 2020 for approval.

Timetable	
Event/Action	Date
Draft Proposal raised	11 May 2020
Presented to CSC for initial comment	26 May 2020
Panel converts Draft Proposal to Modification Proposal	19 Jun 2020
Solution Development with Proposer	w/c 21 Jun 2020

Timetable	
Event/Action	Date
Presented to SMKI PMA	21 Jul 2020
Presented to SSC	22 Jul 2020
Modification discussed with Working Group	5 Aug 2020
Refinement Consultation	17 Aug – 7 Sep 2020
Modification Report approved by Panel	16 Oct 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
CSC	Change Sub-Committee
DCC	Data Communications Company
GNP	Gas Network Party
GSME	Gas Smart Metering Equipment
SEC	Smart Energy Code
SECAS	Smart Energy Code Administrator and Secretariat
SSC	Security Sub-Committee
SMETS2	Smart Metering Equipment Technical Specification 2
SMKI	Smart Meter Key Infrastructure
SMKI PMA	Smart Meter Key Infrastructure Policy Management Authority
SREPT	SMKI & Repository Entry Process Tests

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MP128 ‘Gas Network Operators SMKI Requirements’

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.

Section B 'Accession'

These changes have been redlined against Section B version 7.0.

Amend Section B as follows:

B2. DCC, USER AND RDP IDENTIFIERS

Panel: Duty to Obtain MA-S Registry Entries

B2.1 The Panel shall obtain one or more MA-S Registry Entries to the extent necessary for the purpose of establishing and issuing EUI-64 Compliant identifiers for use as User IDs, RDP IDs and/or DCC IDs in accordance with the provisions of this Section B2.

ID Allocation Procedure

B2.2 The Panel shall develop and maintain a document to be known as the "**ID Allocation Procedure**", which shall:

- (a) make provision for the Panel to establish and issue Party and RDP Signifiers, each of which must be unique under this Code but which need not be EUI-64 Compliant;
- (b) make provision for the Panel to establish EUI-64 Compliant identifiers by the concatenation of:
 - (i) the assigned value of an MA-S Registry Entry obtained by it; and
 - (ii) a unique extension identifier created by it;
- (c) describe the numbering convention to be used by the Panel for the purpose of creating those unique extension identifiers;
- (d) set out the application procedure to be followed by any Party which wishes to be issued with an EUI-64 Compliant identifier for use as a User ID or DCC ID, or by any RDP which wishes to be issued with an EUI-64 Compliant identifier for use as an RDP ID; and
- (e) set out the procedure to be followed by the Panel in issuing an EUI-64 Compliant identifier to any Party or RDP for such purposes.

B2.3 In developing the ID Allocation Procedure, the Panel shall act in conjunction with the DCC and such other Parties and RDPs as have indicated a wish to be involved, and shall consult with and have regard to the views of all Parties and RDPs.

B2.4 The Panel shall keep the ID Allocation Procedure under review from time to time, and in particular when requested to do so by any Party or RDP, in order to ensure that it remains fit for purpose. Before making any change to the ID Allocation Procedure the Panel shall consult with and have regard to the views of all Parties and RDPs.

Issue of DCC, User and RDP IDs

B2.5 Where:

- (a) the DCC wishes to be issued with an EUI-64 Compliant identifier for use as a DCC ID;
- (b) another Party wishes to be issued with an EUI-64 Compliant identifier for use as a User ID;
or
- (c) an RDP wishes to be issued with an EUI-64 Compliant identifier for use as an RDP ID,

it shall, in accordance with the provisions of the ID Allocation Procedure, apply to the Panel for the issue of that identifier.

B2.6 No Party or RDP may apply to the Panel for the issue of an EUI-64 Compliant identifier other than for one of the purposes specified in Section B2.5.

B2.7 On receiving an application from a Party or RDP in accordance with Section B2.5, the Panel shall issue an EUI-64 Compliant identifier in accordance with the provisions of the ID Allocation Procedure.

Issue of Party and RDP Signifiers

B2.8 The Panel shall issue Party and RDP Signifiers to the Code Administrator from time to time, in accordance with the provisions of the ID Allocation Procedure, for their allocation by the Code Administrator to new Parties pursuant to Section B1.17 (Party Signifiers) and to RDPs pursuant to Section B1.19 (RDP Signifiers).

Record of Signifiers and IDs Issued

B2.9 The Panel shall:

- (a) maintain an up to date record of the Party and RDP Signifiers and the EUI-64 Compliant identifiers issued by it pursuant to this Section B2 (and, where applicable, the mapping between them), and make that record available to all Parties and RDPs; and
- (b) notify the DCC of any EUI-64 Compliant identifier that it has issued to:
 - (i) a Party for use as a User ID and the corresponding Party Signifier of that Party; or
 - (ii) an RDP for use as an RDP ID and the corresponding RDP Signifier of that RDP.

Network Party Subscriber Obligation

B2.10 Each Electricity Network Party shall, as soon as reasonably practicable after its accession to this Code, ensure that it becomes a Subscriber for those Organisation Certificates which pertain to it and that are required by Responsible Suppliers for the purposes of complying with their obligations under Clause 5 (Post-Commissioning Obligations in Relation to SMETS2+ Devices) and Clause 6 (Post Commissioning Obligations in Relation to SMETS1 Devices) of the Inventory Enrolment and Decommissioning Withdrawal Procedures.

Appendix AC 'Inventory Enrolment and Decommissioning Procedures'

These changes have been redlined against Appendix AC version 2.0.

Amend Section 5.3, 6.1 as follows:

5. Post-Commissioning Obligations in relation to SMETS2+ Devices

- 5.1 This Clause 5 applies only to SMETS2+ Devices.
- 5.2 As soon as reasonably practicable (and in any event within 7 days) following the Commissioning of a Communications Hub Function, the DCC shall ensure that:
 - (a) the Communications Hub Function re-generates its Private Keys, and that Device Certificates containing the associated new Public Keys are stored on the Device; and
 - (b) the information from at least one of the Organisation Certificates that comprise the Communications Hub Function's Device Security Credentials is replaced (provided that for such purposes the information from an Organisation Certificate may be replaced with that from the same Organisation Certificate).
- 5.3 As soon as reasonably practicable (and in any event within 7 days) following the Commissioning of a Smart Meter or a Gas Proxy Function, the Responsible Supplier shall, in relation to each such Device, ensure that:
 - (a) the Device Security Credentials which pertain to the Electricity Network Party are those of the Electricity Distributor or ~~Gas Transporter (as applicable);~~
 - i. where available in the SMKI Repository, the Device Security Credentials which pertain to the Gas Network Party are those of the Gas Transporter; or
 - ii. where not available in the SMKI Repository, the Device Security Credentials which pertain to the Gas Network Party are populated with information from the Organisation Certificate Issued to the DCC and referred to in Paragraph L3.23(f) (the DCC (access-control-broker) – digitalSignature Certificate);
 - (b) the Device re-generates its Private Keys, and that the Device Certificates containing the associated new Public Keys are stored on the Device; and
 - (c) in the case of a Smart Meter only, information from at least one of the Organisation Certificates that comprise the Smart Meter's Device Security Credentials is replaced (provided that for such purposes the information from an Organisation Certificate may be replaced with that from the same Organisation Certificate).
- 5.4 As soon as reasonably practicable (and in any event within 7 days) following the Commissioning of a Communications Hub Function, Gas Proxy Function or a Smart Meter, the DCC shall interrogate the Device to ascertain whether the Device's recovery Trust Anchor Cell is populated with Device Security Credentials that pertain to a DCC Recovery Certificate. For Devices Commissioned before Service Release 1.3 (or such later date as may be directed by the SoFS for the purposes of this Clause

- 5.4), the reference to the period of 7 days following Commissioning shall apply as 7 days following Service Release 1.3 (or 7 days following any later date directed by the SofS).
- 5.5 The DCC shall monitor Commands sent to Devices and the associated Responses from Devices and, based on the information available to it, record the information set out in Clause 5.8 in relation to each Device identified in Clause 5.7 (the “**Post Commissioning Information**”).
- 5.6 The DCC shall ensure that the Post Commissioning Information is updated on a daily basis to reflect the most accurate and up-to-date information available to the DCC at the time of the update.
- 5.7 For the purposes of Clause 5.5, the relevant Devices include any Communications Hub Function, Gas Proxy Function or Smart Meter which has an SMI Status of 'commissioned', has been Commissioned for a period of 7 days or more, and in relation to which one or more of the following applies:
- (a) the DCC has failed successfully to carry out the interrogation of the Device pursuant to Clause 5.4;
 - (b) the DCC has successfully carried out the interrogation of the Device pursuant to Clause 5.4 and has identified that the Device's recovery Trust Anchor Cell is not populated with Device Security Credentials that pertain to a DCC Recovery Certificate; and/or
 - (c) the Device has not sent Responses indicating that Commands associated with each of the following Service Requests have been Successfully Executed on the Device (provided that, for the purposes of this paragraph (c), where the Device sends, before Service Release 1.3 (or such later date as may be specified by the Secretary of State for the purposes of this Clause 5.7(c)), a Response to any such Command, the DCC may treat such Command as having been Successfully Executed, without further analysis of the Response):
 - (i) at least two 'Issue Security Credentials' Service Requests;
 - (ii) at least two 'Update Security Credentials (Device)' Services Requests; and
 - (iii) in relation to Communications Hub Functions and Smart Meters only, at least one 'Update Security Credentials (KRP)' Service Request.
- 5.8 For the purposes of Clause 5.5, the Post Commissioning Information to be recorded in relation to each relevant Device shall include:
- (a) the Device ID and Device Type;
 - (b) the date upon which the Device was Commissioned;
 - (c) which of Clauses 5.7 (a), (b), (c)(i), (c)(ii) and/or (c)(iii) applies;
 - (d) other than in the case of Communications Hub Functions, the Responsible Supplier at the time the Post Commissioning Information for the Device was most recently updated;
 - (e) other than in the case of Communications Hub Functions, the Supplier Party that sent the Service Request that resulted in the Commissioning of the Device; and
 - (f) the date on which the Post Commissioning Information for the Device was most recently updated.

- 5.9 As soon as reasonable practicable following the end of each month, the DCC shall, based upon the Post Commissioning Information prevailing at the end of that month, compile and provide (in an electronic format) to the Panel, the Security Sub-Committee and the Authority a report which includes the following information:
- (a) the month to which the report relates;
 - (b) for each Party that is the Responsible Supplier for any Smart Meter or Gas Proxy Function that is listed in the Post Commissioning Information for that month (or was listed in the information for the previous month):
 - (i) the total number of Devices of each Device Type listed in the Post Commissioning Information for that month for which that Party is the Responsible Supplier;
 - (ii) the number of such Devices of each Device Type that have been added since the last monthly report;
 - (iii) the number of such Devices of each Device Type that have been removed since the last monthly report;
 - (iv) the number of such Devices of each Device Type that were listed in the Post Commissioning Information for the previous month and remain listed in the information for the month to which the report relates;
 - (v) the number of such Devices of each Device Type that were listed in the Post Commissioning Information for the previous three months and remain listed in the information for the month to which the report relates; and
 - (vi) the number of such Devices of each Device Type that were listed in the Post Commissioning Information for the previous six months and remain listed in the information for the month to which the report relates; and
 - (c) in respect of Communications Hub Functions:
 - (i) the total number of Communications Hub Functions listed in the Post Commissioning Information;
 - (ii) the number of Communications Hub Functions that have been added since the last monthly report;
 - (iii) the number of Communications Hub Functions that have been removed since the last monthly report;
 - (iv) the number of Communications Hub Functions that were listed in the Post Commissioning Information for the previous month and remain listed in the information for the month to which the report relates;
 - (v) the number of Communications Hub Functions that were listed in the Post Commissioning Information for the previous three months and remain listed in the information for the month to which the report relates; and

- (vi) the number of Communications Hub Functions that were listed in the Post Commissioning Information for the previous six months and remain listed in the information for the month to which the report relates.
- 5.10 As soon as reasonable practicable following the end of each day, the DCC shall, based upon the Post Commissioning Information prevailing at the end of that day, compile and make available to each Supplier Party (via a secure electronic means for a period of at least 30 days following the day to which the report relates) a report which includes the following information in relation to Devices (other than Communications Hub Functions) listed in the Post Commissioning Information for which that Supplier Party was the Responsible Supplier on that day:
- (a) the Device ID and Device Type of each such Device;
 - (b) the date on which the Post Commissioning Information for each such Device was most recently updated;
 - (c) the date upon which each such Device was Commissioned; and
 - (d) which of Clause 5.7 (a), (b), (c)(i), (c)(ii) and/or (c)(iii) applies in relation to each such Device.
- 5.11 Where requested by the Panel or the Authority, the DCC shall, as soon as reasonably practicable following any such request, provide to the Panel and/or the Authority (in an electronic format) copies of the reports referred to in Clause 5.10. Where requested by the Panel or the Authority, DCC shall additionally include in any such report the information referred to in Clause 5.8(e) in relation to each Device included in any such report.
- 5.12 The DCC shall ensure that each report provided under Clause 5.9, 5.10 or 5.11 is clearly marked as being “confidential”.
- 5.13 Where the DCC is aware that:
- (a) either or both of the steps in Clauses 5.2 (a) and/or (b) have not been carried out within 7 days following the Commissioning of a Communications Hub Function; and/or
 - (b) either of Clause 5.7(a) or (b) applies in relation to a Communications Hub Function,
- then the DCC shall raise an Incident in accordance with the Incident Management Policy.
- 5.14 Where, in relation to a Gas Proxy Function or a Smart Meter, a Supplier Party is aware that:
- (a) either or both of the steps in Clauses 5.3 (b) and/or (in the case of Smart Meters only) 5.3(c) have not been carried out within 7 days following the Commissioning of the Device; and/or
 - (b) the DCC has failed successfully to carry out the interrogation of the Device pursuant to Clause 5.4, and the Supplier has (within a period of 14 days following the Commissioning of the Device) also failed to successfully carry out the relevant interrogation,

then the Supplier Party shall not send Service Requests requesting that the DCC sends communications to that Device other than for the purposes of: (i) completing those steps; (ii) replacing the Device Security Credentials held on the Device in response to a change of supplier; or (iii) maintaining an energy supply to the relevant premises.

- 5.15 Where, the Responsible Supplier for a Gas Proxy Function or Smart Meter becomes aware that a Smart Meter or a Gas Proxy Function does not have a recovery Trust Anchor Cell that is populated

with Device Security Credentials that pertain to a DCC Recovery Certificate, then that Responsible Supplier shall (subject to Clause 5.17), as soon as reasonably practicable thereafter: in the case of a Smart Meter, replace the Device; or, in the case of a Gas Proxy Function, replace the Communications Hub of which that Gas Proxy Function forms part.

5.16 Where a Communications Hub is returned to the DCC:

- (a) following its replacement pursuant to Clause 5.13 or 5.15; or
- (b) a Communications Hub is returned following replacement because it was not possible to interrogate the Gas Proxy Function pursuant to Clause 5.14(b),

then the Supplier Party returning the Communications Hub may (under and subject to Section F9 (Categories of Communications Hub Responsibility)) specify the reason for return as being a CH Defect.

5.17 A Responsible Supplier shall not replace a Smart Meter or Communications Hub under Clause 5.15 where the reason that the relevant steps cannot be completed is an inability to communicate with a Device as a result of the SM WAN being unavailable.

General Obligations on DCC

5.18 The DCC shall monitor Responses it receives from Devices in order to determine whether any of the Device Certificates held on each Device have been successfully replaced. On the basis of this information the DCC shall establish and maintain a record of the most up-to-date active Device Certificates for each Device.

6. **Post-Commissioning Obligations in relation to SMETS1 Devices**

6.1 This Clause 6 applies only to SMETS1 Devices.

6.2 As soon as reasonably practicable (and in any event within 7 days) following the Commissioning of a SMETS1 Device, the Responsible Supplier shall ensure that:

- (a) the Device Security Credentials which pertain to the Responsible Supplier are those of the Import Supplier or Gas Supplier (as applicable); and
- (b) the Device Security Credentials which pertain to the Network Party are those of the Electricity Distributor or Gas Transporter (as applicable).

- i. where available in the SMKI Repository, the Device Security Credentials which pertain to the Gas Network Party are those of the Gas Transporter; or
- ii. where not available in the SMKI Repository, the Device Security Credentials which pertain to the Gas Network Party are populated with information from the Organisation Certificate Issued to the DCC and referred to in Paragraph L3.23(f) (the DCC (access-control-broker) – digitalSignature Certificate);

6.3 Where any Party takes an action that results in a change to the information provided under Clause 3.4 it must (prior to doing so, or as soon as reasonably practicable thereafter) contact the Service Desk and notify the DCC of the updated information.

6.4 Where a Responsible Supplier for a SMETS1 CHF replaces the Device (or any component part of the Device that affects the means by which the DCC communicates with it), the Responsible Supplier must ensure that the replacement Device (or replacement parts) are such that that the DCC remains

capable of communicating with that Device (where necessary after updating the information referred to in Clause 6.3 in relation to that Device).

- 6.5 As soon as reasonably practicable (and in any event within 7 days) following the Commissioning of a SMETS1 Device and thereafter at the frequency specified in the SMETS1 Supporting Requirements for the relevant Device Model, the DCC shall ensure that the Private Keys and / or Symmetric Keys, identified as being required by the SMETS1 Supporting Requirements to be replaced for such Device Models, are so replaced.