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MP173 'SMKI & DCCKI Document Set reviews'

Modification Report

Version 1.0

1 December 2021

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About this document

This document is a Modification Report. It sets out the background, issue, solution, impacts, costs, implementation approach and progression timetable for this modification, along with any relevant discussions, views and conclusions.

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This document also two annexes:

- **Annex A** contains the concluding observations and recommendations of the Smart Metering Key Infrastructure (SMKI) Document Set review.
- **Annex B** (attached separately) 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 Gordon Hextall on behalf of the SMKI Policy Management Authority (PMA).

The SMKI PMA carried out a review of the SMKI and Data Communications Company (DCC) Key Infrastructure (DCCKI) Document Sets as required by SEC Section L 'Smart Metering Key Infrastructure and DCC Key Infrastructure' paragraph 1.17. It identified a number of typographical, cosmetic and alignment changes that need to be made due to updated SEC versions since 2014 that had not been fully or accurately reflected throughout the extensive SMKI Document Set.

In addition, the review identified a number of inconsistencies, omissions and improved drafting needed between different parts of the SEC together with standards that need to be amended. This is because they have been superseded or discontinued. Lastly, it has been identified that the SMKI Recovery processes require greater clarity for Subscribers.

The Proposed Solution will address the concluding observations and recommendations of the SMKI Document Set review, each of which can be found in Annex A.

The costs of this proposal are limited to Smart Energy Code Administrator and Secretariat (SECAS) time and effort to implement the changes. This modification will indirectly impact all SEC Parties by giving greater clarity and transparency to the SMKI and DCCKI Document Sets. Also, the SMKI PMA and the DCC will directly be impacted by this modification in respect to the new provisions for a Recovery Key Direction. This modification is targeted for the February 2022 SEC Release. This is a Self-Governance Modification.

2. Issue

What are the current arrangements?

Review of the SMKI and DCCKI Document Sets

The SMKI PMA has an obligation in SEC Section L1.17 to periodically review the effectiveness of the SMKI Document Set (which is defined in SEC Section L9.3) and DCCKI Document Set (which is defined in SEC Section L13.31):

Duties of the SMKI PMA

L1.17 The SMKI PMA shall undertake the following duties:

[...]

- (c) to periodically review (including where directed to do so by the Panel) the effectiveness of the SMKI Document Set (including so as to evaluate whether the SMKI Document Set remains consistent with the SEC Objectives), and report to the Panel on the outcome of such review (such report to include any recommendations for action that the SMKI PMA considers appropriate);*

[...]

- (e) to periodically review the effectiveness of the DCCKI Document Set and to:*

- (i) *notify DCC where it considers that changes should be made to the DCCKI Document Set in order to ensure that DCC meets its obligations under Section G (Security) (such notification to include any recommendation for action that the SMKI PMA considers appropriate); and*
- (ii) *copy any such notification to the Security Sub-Committee and, except to the extent that it is appropriate to redact information for security purposes, to other SEC Parties;*

The SEC Panel approved budgetary expenditure for a review in 2020/21 and the SMKI Specialist was commissioned to undertake a thorough review that concluded at the end of April 2021.

The review also considered specific Request for Comments (RFC) references (RFCs are recognised industry standards) and confirmed whether they continue to be accurate and appropriate.

The review consulted and was advised by a SMKI PMA Working Group that comprised of:

- The SMKI PMA Chair;
- The Technical Architecture and Business Architecture Sub-Committee (TABASC) Representative;
- The Department for Business, Energy and Industrial Strategy (BEIS) Regulatory Expert; and
- The BEIS Security Lead.

What is the issue?

Recommended changes to the SMKI Document Set

The review identified a large number of relatively minor typographical, cosmetic and alignment changes that have arisen due to updated SEC versions since 2014 that have not been fully or accurately reflected throughout the extensive SMKI Document Set. These are considered by the SMKI PMA to be straightforward corrections that need to be made via a Modification Proposal.

The review further identified a number of apparent inconsistencies, omissions or improvements between different parts of the SEC. These apply to standards that have been superseded or discontinued and, in the SMKI Recovery processes, that need clarification for Subscribers. Each of these examples have been considered by the SMKI PMA.

Changes are required to the SMKI Document Set in SEC Appendices A, B, C, D, L, M, N and Q.

Recommended changes to the DCCKI Document Set

As with the SMKI Document Set, there are relatively minor typographical and cosmetic changes proposed to the DCCKI Document Set as well as a number of apparent inconsistencies.

Changes are required to the DCCKI Document Set in SEC Appendices S, T, U, V and W.

What is the impact this is having?

If this issue is not resolved, the SMKI and DCCKI Document Sets will contain a large number of inconsistencies. These vary in nature but include minor typographical, cosmetic and alignment

inconsistencies, as well as apparent inconsistencies and omissions between different SEC documents.

If these continue to remain, it could make it harder for Parties to comply with these documents and make the documents in question harder to maintain, increasing the chance of further inconsistencies occurring in the future.

Impact on consumers

The issue outlined in this proposal does not impact consumers.

3. Solution

Proposed Solution

The Proposed Solution is to implement the changes identified from the SMKI and DCCKI Document Set review. These changes have been identified by the SMKI Specialist and reviewed and recommended by the SMKI PMA Working Group. They have also been reviewed by SECAS and have been shared with and agreed by the DCC who are members of the SMKI PMA.

The concluding observations and recommendations of the SMKI Document Set review can be found in Annex A and the legal text can be found in Annex B.

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

DCC impacts

New provisions will be introduced setting out the procedures for the use of a Recovery Private Key. When directed to do so by the SMKI PMA, the DCC will need to adhere to these provisions.

All other SEC Parties

All Parties will indirectly benefit from this modification as the SMKI and DCCKI Document Sets will have greater clarity and transparency.

DCC System

This modification does not impact the DCC Systems.

SEC and subsidiary documents

The following parts of the SEC will be impacted:

- Section L 'Smart Metering Key Infrastructure and DCC Key Infrastructure'
- Appendix A 'Device Certificate Policy'
- Appendix B 'Organisation Certificate Policy'
- Appendix C 'SMKI Compliance Policy'
- Appendix D 'SMKI Registration Authority Policies and Procedures'
- Appendix J 'Enduring Test Approach Document'
- Appendix K 'SMKI and Repository Test Scenarios Document'
- Appendix L 'SMKI Recovery Procedure'
- Appendix M 'SMKI Interface Design Specification'
- Appendix N 'SMKI Code of Connection'
- Appendix O 'SMKI Repository Interface Design Specification'
- Appendix P 'SMKI Repository Code of Connection'
- Appendix Q 'IKI Certificate Policy'
- Appendix S 'DCCKI Certificate Policy'
- Appendix T 'DCCKI Interface Design Specification'
- Appendix U 'DCCKI Repository Interface Design Specification'
- Appendix V 'DCCKI CoCo and DCCKI Repository CoCo'
- Appendix W 'DCCKI Registration Authority Policies and Procedures'
- Appendix X 'Registration Data Interface Specification'

The changes to the SEC required to deliver the proposed solution can be found in Annex B. Due to the extensive changes, these have been provided in individual documents within a separate zip folder.

Consumers

This modification does not impact consumers/

Other industry Codes

This modification does not impact any other industry Codes.

Greenhouse gas emissions

This modification does not impact greenhouse gas emissions.

5. Costs

DCC costs

There are no DCC costs associated with this modification.

SECAS costs

The estimated SECAS implementation cost to implement this as a stand-alone modification is two days of effort, amounting to approximately £1,200. This cost will be reassessed when combining this modification in a scheduled SEC Release. The activities needed to be undertaken for this are:

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

SEC Party costs

There are no SEC Party implementation costs associated with this modification.

6. Implementation approach

Approved implementation approach

The Change Sub-Committee (CSC) has agreed an implementation date of:

- **24 February 2022** (February 2022 SEC Release) if a decision to approve is received on or before 10 February 2022; or
- **30 June 2022** (June 2022 SEC Release) if a decision to approve is received after 10 February 2022 but on or before 16 June 2022.

This modification should be implemented as soon as possible to ensure the SMKI and DCCKI Documents remain up to date, with any out-dated references to standards removed, along with any typographical errors. This modification does not impact DCC or SEC Party Systems and the February 2022 SEC Release is the soonest possible release this modification could be targeted. If a decision is not received in time the next viable SEC Release would be the June 2022 SEC Release.

7. Assessment of the proposal

Observations on the issue

Change Sub-Committee views

The CSC had no comments on the issue when it was initially presented to it.

SMKI PMA and SSC views

Both the SMKI PMA and some members of the Security Sub-Committee (SSC) fed into the SMKI and DCCKI Document Set reviews and agreed the observations and recommendations should be addressed.

Solution development

Recovery Private Key provisions

Upon review of the Proposer's suggested legal text, SECAS recommended that the new provisions for the 'Further Use of the Recovery Private Key' be moved further up the document so they fell before the definitions. This would maintain the document structure and give the sections a more logical order. The Proposer agreed with the SECAS suggestions.

SMKI RAPP – Organisation Information Form

SEC Appendix D, section 5.1 'Procedure and processes to verify organisational identity' states:

The applicant organisation shall complete the Organisation Information Form, as set out in SMKI RAPP Annex A (A1). In doing so, the applicant organisation shall ensure that:

- a. *the information entered on the form is complete and accurate;*
- b. *the EUI-64 Compliant identifier range for any particular User Role is defined by the applicant organisation such that the range is continuous and does not overlap with the EUI-64 Compliant identifier range for any other User Role, other than where a particular EUI-64 Compliant identifier is allowed to be used for more than one User Role in accordance with H1.5;*

The SMKI Document Set review found that the underlined text was not possible as the Organisation Information Form referred to did not allow the mapping of EUI64 identifiers to User Roles. However, at the time the SMKI Document Set Review's concluding recommendations and observations were submitted to the Panel, a solution had not been found.

The DCC has since agreed with the Proposer to update the form which can be found on the DCC's website. Updates to this require approval from the SMKI PMA. However, the form does not require a Modification Proposal to amend and so this modification is not dependent on it. The updates to the Organisation Information Form are to be discussed at the December 2021 SMKI PMA meeting.

Unresolved observations

Observations 5 and 11 of SEC Appendix L 'SMKI Recovery Procedure' noted in Annex A have not been addressed in the legal drafting and require further investigation by the SMKI PMA and the DCC. These refer to the order of the steps set out in Appendix L, section 5 'Recovery using the Contingency Private Key'. Discussions are underway between the Proposer and the DCC to achieve a resolution for the discrepancies. However, the Proposer wishes to continue to progress this proposal whilst those discussions are ongoing.

The role of SMKI PMA Members in credential revocations

SECAS received comments from a Party on observation 2 of SEC Appendix D noted in Annex A. They believed there to be an unintended conflict created in the SEC with various references to 'SMKI PMA Member' removed. However, they noted that SEC Appendix D section 8.3.3 states that any SMKI PMA Member may request the revocation.

The Proposer noted that the obligations in question are different. SEC Appendix D section 8.3.3 is about which Parties may request the revocation and section 8.3.4 is about the procedure to verify and revoke credentials as explained in the paragraphs immediately after the headings:

- Section 8.3.3: *The following parties may request the revocation of authentication credentials in respect of SMKI Registration Authority Personnel, using the form referred to in Annex A (A7)*
- Section 8.3.4: *The procedure for verification and, where verified, revocation of credentials in respect of a SMKI Registration Authority Manager or member of SMKI Registration Authority Personnel is...*

The Proposer advised that the SMKI PMA monitors the DCC's operational performance in respect of SMKI. If the SMKI PMA becomes aware that the SMKI Registration Authority Manager is persistently failing to meet the SEC obligations or not performing to an acceptable standard, then the SMKI PMA should be able to request revocation of the SMKI Registration Authority Manager credentials.

However, the Proposer agreed the references in section 8.3.4 are consistent with the requirements in section 8.3.3 and that the references to the SMKI PMA Members should be maintained as per the original drafting. As a result, the previously drafted deleted references to 'SMKI PMA Member' in section 8.3.4 were cancelled with the references being maintained.

Revocation of Certificates

SEC Appendix D section 8 'Revocation' sets out the procedures for revoking SMKI Certificates. Since the review of the SMKI Document Set, SEC Section L16 'Supplier of Last Resort' has been added by [MP134A 'Use of SMKI Certificates relating to a SoLR event'](#) which allows the SMKI PMA to delay the revocation of SMKI Certificates during a Supplier of Last Resort (SoLR) event. Therefore, a statement has been added to SEC Appendix D section 8 stating it does not apply where SEC Section L16 applies.

Support for Change

The recommendations and observations of the SMKI and DCCKI Document Set review were agreed and formally approved by the SMKI PMA.

SECAS presented the observations and recommendations from the review of the SMKI and DCCKI Documents Sets to the Panel in June 2021¹. The Panel noted that the SMKI PMA had raised a problem statement to initiate a Draft Proposal to make the changes identified from the review.

SECAS published the draft legal text on its website during the Development Stage and sought any comments from Parties. Minor comments were received from one Party, which the Proposer has incorporated into the legal text in Annex B.

Views against the General SEC Objectives

Proposer's views

*Objective (f)*²

The Proposer believes this modification will better facilitate SEC Objective (f) by clarifying the provisions for the use of a Recovery Private Key as well as updating references to several industry standards that have been superseded or discontinued.

*Objective (g)*³

The Proposer believes that this modification will better facilitate SEC Objective (g) by ensuring the SEC is maintained in line with the SMKI PMA's review of the SMKI and DCCKI Document Sets. This will be achieved by making a number of typographical, cosmetic and alignment changes the documents, as well as several industry standards that have been superseded or discontinued.

Views against the consumer areas

Improved safety and reliability

This modification will be neutral against this consumer benefit area.

Lower bills than would otherwise be the case

This modification will be neutral against this consumer benefit area.

Reduced environmental damage

This modification will be neutral against this consumer benefit area.

Improved quality of service

This modification will be neutral against this consumer benefit area.

¹ SECP_93_1806_12 (**Amber**)

² To ensure the protection of Data and the security of Data and Systems in the operation of this Code.

³ To facilitate the efficient and transparent administration and implementation of this Code.

Benefits for society as a whole

This modification will be neutral against this consumer benefit area.

Appendix 1: Progression timetable

On 30 November 2021, the CSC agreed to convert this Draft Proposal to a Modification Proposal and approve the final Modification Report. A Modification Report Consultation has been issued closing on 7 January 2022. The Change Board vote will then be held on 20 January 2022 under Self-Governance.

Timetable	
Event/Action	Date
Draft Proposal raised	21 Jun 2021
Presented to CSC for initial comment	29 Jun 2021
Legal text consultation	22 Oct 2021 – 12 Nov 2021
CSC converts Draft Proposal to Modification Proposal	30 Nov 2021
Modification Report approved by CSC	30 Nov 2021
Modification Report Consultation	6 Dec 2021 – 7 Jan 2022
Change Board Vote	20 Jan 2022

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
BEIS	Department for Business, Energy and Industrial Strategy
CSC	Change Sub-Committee
DCC	Data Communications Company
DCCKI	Data Communications Company Key Infrastructure
IKI	Infrastructure Key Infrastructure
RFC	Request for Comments
SEC	Smart Energy Code
SECAS	Smart Energy Code Administrator and Secretariat
SMKI PMA	Smart Metering Key Infrastructure Policy Management Authority
SoLR	Supplier of Last Resort
SSC	Security Sub-Committee
TABASC	Technical Architecture and Business Architecture Sub-Committee