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MP139 'MVP and IVP dates for CHTS'

Modification Report

Version 1.0

14 December 2020



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 has two annexes:

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

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1. Summary

This proposal has been raised by Sasha Townsend from the Data Communications Company (DCC).

The SEC contains a number of Technical Specifications. Schedule 11 'Technical Specifications Applicability Tables' (TSAT) specifies the dates in which Devices built to these specifications can be installed (the Installation Validity Period (IVP)) and maintained (the Maintenance Validity Period (MVP)).

There are three issues that the Proposer is looking to address:

- The first issue relates to Communications Hub stock compliant to the Communications Hub Technical Specifications (CHTS) v1.0 and the Great Britain Companion Specification (GBCS) v1.0 & v1.1 being held in volume and unlikely to be installed before the IVP end date of 31 January 2021.
- The second issue relates to CHTS v1.1 / GBCS v2.1 Communications Hubs needing to be installed by 28 February 2021, the GBCS v2.0 Applicability Period end date.
- The third issue focuses on the need to upgrade or replace installed CHTS v1.1 / GBCS v2.1 Communications Hubs (to CHTS v1.3 / GBCS v3.2 Communications Hubs) by 31 May 2021, the CHTS v1.1 MVP end date.

The Proposer believes that Single Band Communications Hubs (SBCH) and Dual Band Communications Hubs (DBCH) will become non-compliant if the current IVP and MVP end dates remain. This will lead to a high risk that Suppliers will have stock that they can no longer install, and therefore will need to be scrapped.

The Proposed Solution is to extend the affected IVP and MVP end dates by 12 months to allow Suppliers holding stocks of these Devices to install them and make the necessary updates before the IVP and MVP end dates.

This modification will not impact DCC Systems and therefore the costs to implement this modification are limited to Smart Energy Code Administrator and Secretariat (SECAS) time and effort. Large Suppliers, Small Suppliers, Device Manufacturers and the DCC will be impacted. This change is targeted for implementation in an ad-hoc SEC Release in January 2021. This is a Self-Governance Modification.

2. Issue

What are the current arrangements?

The SEC sets out the Smart Metering Technical Specifications, including the CHTS and the GBCS. Schedule 11 'Technical Specification Applicability Tables' specifies the dates in which Devices built to these specifications can be installed (the IVP) and maintained (the MVP). The TSAT also specifies the Applicability Period end date for the relevant version of GBCS. This means the date by which Parties should have taken all reasonable steps to ensure a Device is no longer operating on that version of GBCS.

The table titled 'CHTS and Relevant Versions of GBCS' of the TSAT, shown below, set outs the IVP (Installation Start Date and Installation End Date), MVP (Maintenance Start Date and Maintenance End Date) and Applicability start and end dates for CHTS and GBCS.

CHTS and Relevant Versions of GBCS

CHTS Version	Installation Start Date	Installation End Date	Maintenance Start Date	Maintenance End Date	Relevant GBCS Version	Applicability Period Start Date	Applicability Period End Date
1.0	30/09/16	31/01/21	30/09/16	28/02/21	1.1	06/11/17	Not determined
1.1	28/10/18	Not determined	28/10/18	Not determined	2.0	28/10/18	28/02/21
1.1	28/10/18	30/04/21	28/10/18	31/05/21	2.1	28/10/18	Not determined
1.3	29/11/19	Not determined	29/11/19	Not determined	3.2	29/11/19	Not determined

What is the issue?

There are three issues:

Issue 1: Uninstalled CHTS v1.0 Communications Hubs.

This issue relates to Communications Hub stock compliant to CHTS v1.0 and GBCS v1.0 & v1.1 being held in volume and unlikely to be installed before the IVP end date of 31 January 2021.

The DCC Release 1 Communications Hubs across all regions were manufactured to CHTS v1.0 with firmware versions supporting both GBCS v1.0 and GBCS v1.1. Some of these remain in warehouses pending installation. Until they have been successfully installed and commissioned, these cannot be upgraded to a compliant CHTS v1.1 baseline. This means all those held in stock will need to be installed by the IVP end date of 31 January 2021.

Issue 2: Delays in Communications Hub firmware deployment to upgrade from GBCS v2.0 to GBCS v2.1.

This issue relates to the need to upgrade or replace installed CHTS v1.1 / GBCS v2.0 Communications Hubs to CHTS v1.1 / GBCS v2.1 Communications Hubs by 28 February 2021 (the GBCS v2.0 Applicability Period end date). The Proposer believes it will not be possible to achieve this due to delays in CHTS v1.1 / GBCS v2.1 Communications Hub firmware deployment as described below:

CSP North

GBCS v2.0 compliant firmware for the SBCHs in the Communication Service Provider (CSP) North Region was made available on the Central Product List (CPL) in July 2020. Mass Over-The-Air (OTA) updates are due to be deployed from late September 2020, which are anticipated to take several months to complete.

GBCS v2.1 compliant SBCH firmware in the North Region will not be available until March 2021. This date is after the 28 February 2021 Applicability Period end date for CHTS v1.1 / GBCS v2.0. From

March 2021, mass OTA updates will be required to upgrade the production estate onto the GBCS v2.1 compliant firmware, which is anticipated to take several months.

GBCS v2.0 compliant firmware for the DBCHs in the CSP North Region was due on the CPL in August 2020, with the GBCS v2.1 compliant firmware not expected to be available until February 2021 at the earliest.

This means the current GBCS v2.0 Applicability Period end date of 28 February 2021 is not compatible for either Single Band or Dual Band in the CSP North Region. It also means that the CHTS v1.1 / GBCS v2.1 IVP end date will not be sufficient to upgrade or replace these Communications Hubs.

CSP Central & South

DBCHs compliant with CHTS v1.1 and GBCS v2.1 in the Central and South Regions will be made available in production from November 2020. Based on the forecasts provided by Suppliers, it is estimated that installations of GBCS v2.1 compliant DBCHs are extremely unlikely to be completed by the current CHTS v1.1 / GBCS v2.1 IVP end date of 30 April 2021.

Issue 3: Upgrades to CHTS v1.1 / GBCS v2.1 Communications Hubs

This issue relates to the need to upgrade or replace installed CHTS v1.1 / GBCS v2.1 Communications Hubs (to CHTS v1.3 / GBCS v3.2 Communications Hubs) by 31 May 2021 (the CHTS v1.1 Maintenance Validity Period end date). The Proposer believes it will not be possible to achieve this due to delays in CHTS v1.3 / GBCS v3.2 Communications Hub firmware deployment.

Furthermore, due to re-plans of CHTS v1.3 and GBCS v3.2 compliant Communications Hubs firmware, the MVP end date will not be sufficient. This is because the full set of firmware releases across Single Band and Dual Band as well as all three Communications Hub providers will not all be available on the CPL and the existing estates upgraded before the current CHTS v1.1 / GBCS v2.1 MVP end date of 31 May 2021.

What is the impact this is having?

The Proposer believes the current Applicability Period end date for GBCS v2.0 and the IVP/MVP end dates for CHTS v1.1 / GBCS v2.1 means there is a risk that Communications Hubs will be non-compliant with a version of CHTS and GBCS with valid end dates.

Furthermore, if the current IVP end dates remain, there is a high risk that Suppliers will have stock that they can no longer install, which therefore will need to be scrapped. The Proposer also believes there is a high risk that there will be a period where Suppliers can no longer install Communications Hubs due to CHTS v1.3 and GBCS v3.2 compliant Communications Hubs not being available.

3. Solution

Proposed Solution

The DCC is proposing to extend four dates in SEC Schedule 11 by 12 months:

- CHTS v1.0/GBCS v1.1 IVP end date will be extended from 31/01/21 to 31/01/22
- CHTS v1.0/GBCS v1.1 MVP end date will be extended from 28/02/21 to 28/02/22
- CHTS v1.1/GBCS v2.0 Applicability end Date will be extended from 28/02/21 to 28/02/22
- CHTS v1.1/GBCS v2.1 IVP end date will be extended from 30/04/21 to 30/04/22
- CHTS v1.1/GBCS v2.1 MVP end date will be extended from 31/05/21 to 31/05/22.

This will allow Suppliers more time to install or upgrade their currently held stocks of Communications Hubs.

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

Breakdown of Other SEC Party types impacted			
	Shared Resource Providers		Meter Installers
✓	Device Manufacturers		Flexibility Providers

Large Suppliers and Small Suppliers will be beneficially impacted as if this change is not made, they will have stock that they can no longer install or upgrade and will most likely need to be scrapped. During Refinement Consultation it was identified that Device manufacturers may be impacted by incompatibility issues.

DCC System

There is no impact on the DCC Systems.

SEC and subsidiary documents

The following parts of the SEC will be impacted:

- Schedule 11 'Technical Specifications Applicability Tables'

The changes to the SEC required to deliver the Proposed Solution can be found in Annex A.

Consumers

Consumers will benefit from this modification. If the proposed dates are not changed consumers may need to have Communications Hubs replaced. This will involve the inconvenience of a site visit and additional cost to the Smart Metering programme as a whole, which will eventually flow through to the consumer.

There are also potential risks presented to the consumer. Without significant combination testing, a lack of compatibility with older Communications Hubs and newer Devices could negatively impact the consumer experience, as a lack of compatibility affects Home-Area Network stability. This risk is even greater for consumers with a prepayment meter.

Other industry Codes

There are no impacts on other industry Codes from this modification.

Greenhouse gas emissions

There are no impacts on greenhouse gas emissions from this modification.

5. Costs

DCC costs

There are no anticipated DCC costs to implement this modification.

SECAS costs

The estimated the Smart Energy Code Administrator and Secretariat (SECAS) 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.

SEC Party costs

There are no costs to and Party to implement this modification

6. Implementation approach

Approved implementation approach

The Panel has agreed an implementation date of:

- One Working Day after decision.

This is a document only change and needs to be implemented before the first impacted IVP end date, which is 31 January 2021, requiring an ad-hoc SEC Release. Due to the time-critical nature, SECAS is recommending this modification be implemented one working day after the Change Board vote (if approved). This would be before the 10 working day Self-Governance decision referral window closes. If the decision was subsequently referred and overturned, the changes would be backed out of the SEC.

All respondents to the Refinement Consultation supported this approach except Device Manufacturers who were concerned about the risks of making this change (see below).

7. Assessment of the proposal

Observations on the issue

The Change Sub-Committee (CSC) agreed the issue was clear. Members noted the solution seemed self-evident and could theoretically proceed straight to the Report Phase. However, the Proposer queried whether the TSAT should be made Region-specific, which the CSC agreed would need to be discussed in the Refinement Process. Members encouraged this period be kept short so a timely decision on the proposal could be made in light of the first end date approaching.

The Security Sub-Committee (SSC) also stated an interest in the progress of the modification, as it noted that an overextension of IVP and MVP end dates could potentially present security risks. This would particularly be where Issue Resolution Proposals (IRPs) and Change Request Proposals (CRPs) had been implemented in later versions to the technical specifications to resolve security issues.

Solution development

The DCC completed analysis on the levels of stock (CHTS v1.0 and GBCS v1.1) being held by the industry and the 'run down' rates of this stock. It believed that just under one million Communications Hubs in this situation remained uninstalled. It believed 12 months would be the minimum time required for SEC Parties to install this stock. Following the feedback from the SSC, the DCC noted that there may be a security risk if the date is extended any further.

The Working Group agreed with the DCC's proposal to extend the relevant dates by 12 months. The DCC noted the urgency in progressing this modification, due to the imminent IVP and MVP end dates in the TSAT. The DCC noted that if this issue is not addressed, it expects Suppliers will not be able to install their remaining Communications Hub stock by the end of the current dates. Whilst these Communications Hubs could continue to be installed physically, they would not be compliant and would not count towards the rollout targets.

The Working Group agreed that making the TSAT Region-specific would be confusing and did not see any benefit so was not supportive of this. This question was not considered any further under this modification.

Following the Refinement Consultation, Device Manufacturers raised concerns regarding technical compatibility between newer Devices (on Smart Metering Equipment Technical Specification 2 (SMETS2) v4.2) and older versions of Communications Hubs. SECAS verbally discussed potential benefits of extending the MVP and IVP dates by six months instead of 12 in order to mitigate the risk of incompatibility issues. Device Manufacturers and the Technical Architecture and Business Architecture Sub-Committee (TABASC) provided feedback that reducing the length of the extension of dates would have little impact. One TABASC member also stated that it is likely Suppliers also have stocks of Devices on older versions of the technical specifications and it is likely these would be deployed with the older versions of the Communications Hubs they may be holding in stock.

The SSC again highlighted the potential security risks and requested the DCC complete a security risk assessment to enable the SSC to manage the risks going forward. However, the SSC agreed that this modification should not be delayed while waiting for this assessment to be completed.

Support for Change

Three of the Refinement Consultation respondents were Large Suppliers, who agreed that the IVP and MVP end dates should be extended. The other respondent (an Other SEC Party) represented Device Manufacturers. It disagreed with the Proposed Solution as it believed the risks of incompatibility had not been considered.

One respondent noted that the solution is effective as it reflects on the difficulties presented in the current pandemic in trying to meet the obligation of current dates. Another respondent also noted that there would be no lead time or costs to their business to implement this change. However, the benefit of the change would enable them to install Communications Hubs that would otherwise be stranded as they would be rendered non-compliant.

One respondent also noted, whilst they agreed with the implementation approach, it would recommend a quarterly or annual review of the dates set in the TSAT, to ensure the issue did not repeat itself before the next deadline. SECAS noted the recommendation, and the Proposer agreed.

Two respondents questioned if the MVP end date for CHTS v1.0/GBCS v1.1 should also be extended, which was not included in the first draft of the legal text. The Proposer confirmed this should be extended, and the appropriate changes were made to the draft legal text.

Concerns over Device compatibility with older Communications Hubs

The Other SEC Party respondent noted the need for DCC to ensure compatibility of current Devices against older versions and maintaining HAN stability, as this is essential to the Smart Meter Implementation Programme (SMIP) and its reputation. SECAS asked the DCC if any testing has taken place regarding compatibility. The DCC confirmed a small sample of testing had taken place in which older versions of Communications Hubs (CHTS v1.0) proved compatible with three newer versions of Devices (SMETS2 v4.2).

The image below outlines the latest update as of November 2020 of compatibility testing of Communications Hubs vs SMETS2 version4.2/S2 version3.1.

R1 CH vs S2v4.2/S2v3.1 Meter - Status

Below Table Summarizes the current status of testing.

Green – Completed; Blue – In Progress.

R2 Meter Type	Meter Compliant to	Against R1 EDM1 1.38.6	Against R1 WNC 2.19	Against R1 Toshiba 11.31
MM1 ESME	S2v4.2 (R2 Meter)	Completed	Completed	Completed
MM1 GSME	S2v4.2 (R2 Meter)	Completed – Install successful & HAN Stability is good.	Completed – Install successful & HAN Stability is good.	Completed – Install successful & HAN Stability is good.
MM2 GSME	S2v4.2 (R2 Meter) Meter Provided wakes up every 2 mins.	Completed – Install successful & HAN Stability is good.	Completed – Install successful & HAN Stability is good.	Completed – Install successful & HAN Stability is good.

- ☐ In view of this, DCC Guidance Guide at <https://smartenergycodecompany.co.uk/download/26144/> (Sec 2.22.1 & 2.22.2) is updated.
- ☐ Given all R2 CH has entered supply chain, probability of using R1 CH with R2 meter in production should reduce.
- ☐ CSP-N R2 CH in supply chain has “Red dot” visual identifier to help avoid R1 CH installation with R2 Meter if needed.

Following concerns from Device Manufacturers, SECAS presented the issue to the TABASC. TABASC members acknowledged the risks and concerns presented by Device Manufacturers. Members considered the imminent upcoming IVP and MVP end dates, and the risks of not extending the dates versus the risks of incompatibility. It agreed that taking no action to extend the IVP and MVP end dates was unacceptable. It advised that the modification should proceed with a 12-month extension to the dates. The TABASC asked if the DCC could complete further testing to ensure compatibility across a wider variation of Devices and specifically further testing of newer Devices and CHTS v1.1 Communications Hubs, but that this should not hold up the modification.

Security Sub-Committee’s View

Following submission of this Modification Report to Panel the SSC considered the security risk assessment that had been carried out by the DCC. The SSC concluded that the risk of allowing older Communications Hubs to continue to be installed for another 12 months was acceptable, but they would monitor any issues that arose. They agreed that the modification should proceed.

Panel’s view

When this Modification Report was presented to Panel a verbal update was given on the SSC risk assessment and the DCC compatibility testing that had taken place. A Panel member representing Other SEC Parties raised the concern around the issues of compatibility and suggested that additional testing should be undertaken. SECAS highlighted that although limited testing had been completed, no compatibility issues had been identified. In addition, it had been suggested at the TABASC that Suppliers would also have older stocks of Devices since the installation of these too had been affected by social distancing guidelines and a modification [MP123 ‘IVP realignment of SMETS2 v2.0 and v3.1’](#) had previously been raised to extend the IVP of these Devices. The TABASC member believed that Suppliers would deploy older versions of Communications Hubs and older versions of meters together thereby reducing the risk of incompatibility issues. Another Panel member suggested that the extension of these dates and installation of older Communications Hubs and Devices should be monitored by the Operations Group. In addition it was suggested that the DCC

execute timely firmware upgrades following installation and that the Operations Group should also monitor this. Panel agreed this was a sensible precaution and agreed that the modification should proceed.

Business case

This modification has a minimal implementation cost but will prevent Communications Hubs becoming non-compliant and stranded with the probability that they will then be scrapped. Communications Hubs cost around £40, and so, with around one million Communication Hubs affected, this is likely to mean up to £40m worth of Communications Hubs are at risk of being scrapped. Many of these Communications Hubs will become non-compliant due to delays in the firmware being made available and OTA updates taking place which is out of the control of Suppliers.

Views against the General SEC Objectives

Proposer's views

The Proposer believes this modification better facilitates SEC Objective (a)¹ as it will prevent Communications Hubs being scrapped and will help to better facilitate the efficient provision and installation of smart metering systems.

Industry views

Three of the four Refinement Consultation Respondents agreed with the Proposer that this Modification better facilitates SEC Objective (a) as it will better facilitate the efficient provision and installation of smart metering systems by prevent Communications Hubs from being unnecessarily stranded. The other respondent disagreed that it better facilitates SEC Objective (a) as it will have a negative impact on consumer experience and could result in increased Device replacement and commercial disadvantage to Device Manufacturers.

Views against the consumer areas

Improved safety and reliability

There is no impact on the safety and reliability of consumers.

Lower bills than would otherwise be the case

There is no impact on lower bills for consumers.

Reduced environmental damage

There is no impact on the environmental damage.

¹ Facilitate the efficient provision, installation, operation and interoperability of smart metering systems at energy consumers' premises within Great Britain.

Improved quality of service

There is no impact on quality of service.

Benefits for society as a whole

There is no impact on the benefits to society as a whole.

Appendix 1: Progression timetable

This Modification Proposal will be presented to the SEC Panel on 11 December 2020, with the recommendation it proceeds to the Report Phase as a Self-Governance Modification. If the Panel agrees, the Modification Report Consultation will then be issued ahead of the Change Board vote in January 2021.

Timetable	
Event/Action	Date
Draft Proposal raised	18 Aug 2020
Presented to CSC for final comment and recommendations	28 Aug 2020
Panel converts Draft Proposal to Modification Proposal	11 Sep 2020
Modification discussed with Working Group	7 Oct 2020
Refinement Consultation	19 Oct – 30 Oct 2020
Proposed solution discussed with Security Sub-Committee	28 Oct 2020
Proposed solution discussed with TABASC	19 Nov 2020
Modification Report approved by Panel	11 Dec 2020
Modification Report Consultation	14 Dec 2020 – 8 Jan 2021
Change Board Vote	20 Jan 2021
Implementation (if approved)	21 Jan 2021

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
CRP	Change Request Proposal
CSC	Change Sub-Committee
CSP	Central Service Provider
DCC	Data Communications Company

Glossary	
Acronym	Full term
DBCH	Dual Band Communications Hubs
GBCS	Great Britain Companion Specification
HAN	Home-Area Network
IRP	Issue Resolution Proposal
IVP	Installation Validity Period
MVP	Maintenance Validity Period
OTA	Over the Air
SBCH	Single Band Communications Hub
SEC	Smart Energy Code
SECAS	Smart energy Code Administrator and Secretariat
SMETS	Smart Metering Equipment Technical Specifications
SMIP	Smart Meter Implementation Programme
SSC	Security Sub-Committee
TABASC	Technical Architecture and Business Architecture Sub-Committee
TSAT	Technical Specifications Applicability Tables