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Smart Energy Code

MP262

‘Extending the Installation End Date for CHTS v1.0 and GBCS v1.1’

Modification Report

Version 1.3

13 August 2024

Corporate member of
Plain English Campaign
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About this document

This document is a Modification Report. It sets out the background, issue, solution, impacts, 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 Security Sub-Committee (SSC) statement on extending the Installation End Date for Communications Hub Technical Specification (CHTS) v1.0 and Great Britain Companion Specification (GBCS) v1.1. (**GREEN**)

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1. Summary

This proposal has been raised by Paul Bedford from Drax.

The Proposer is aware of approximately 122,000 uninstalled Communications Hubs which are compliant with the CHTS v1.0 and the GBCSv1.1. The Technical Specification Applicability Tables (TSAT) contain an Installation End Date of 30 April 2023 and a Maintenance End Date of 31 May 2023 for these Communications Hubs. These were the final dates established in which these Communications Hubs could be installed and maintained on their respective versions. Any stock remaining after these dates could still be installed, however will not contribute towards Suppliers rollout targets.

The Proposed Solution is to extend the Installation End Date in the TSAT for CHTS v1.0 and GBCS v1.1 to 30 April 2025 to allow installs of these Devices to contribute towards Suppliers rollout targets.

This modification impacts Suppliers, Meter Installers, Other SEC Parties and the Data Communications Company (DCC). Costs are limited to the Smart Energy Code Administrator and Secretariat (SECAS) time and effort. If approved, SECAS are targeting this modification as an ad-hoc SEC Release. This is a Self-Governance modification.

2. Issue

What are the current arrangements?

SEC Schedule 11 'Technical Specification Applicability Tables' contains a table titled 'CHTS and Relevant Versions of GBCS', including the CHTS v1.0 and the Relevant GBCS v1.1. The Installation End Date for this combination was 30 April 2023 and had a Maintenance End Date of 31 May 2023. These dates have already been extended once as part of [MP221 CHTS v1.0 and GBCS 'v1.1 Installation End Date and Maintenance End Date'](#). When MP221 was raised there were approximately 200,000 uninstalled Communications Hubs on these specifications.

MP221 established a three-month extension to the Installation End Date and Maintenance End Date. This timeframe was expected to be sufficient to allow Suppliers to locate and install this stock. Despite this extension, the Proposer's organisation is aware of approximately 122,000 uninstalled Communications Hubs which are compliant with these specifications but not yet installed.

What is the issue?

The dates in the TSAT provide the final date that these Communications Hubs can be installed whilst remaining compliant. Any stock remaining after this time will not be compliant, meaning the installations of these specific versions of Communications Hubs will not count towards any rollout targets. This means that these Devices may be scrapped or returned, incurring a financial and environmental cost.

In the coming years 2G and 3G Communications Hubs will be phased out, to be replaced by 4G Communications Hubs. The introduction of 4G Communications Hubs is anticipated to begin in July 2025. It is also anticipated that the rollout of 4G Communications Hubs will be undertaken slowly to minimise risk. If issues are found with 4G Communications Hubs, then Parties may wish to default to

installing 2G/3G Hubs. As such, extending the Installation End Date would allow Parties to fall back on the remaining stock, whilst having compliant installations.

What is the impact this is having?

As the Installation and Maintenance End dates have passed, any remaining uninstalled stock is non-compliant with the SEC and may need to be returned to the DCC, or worst case scenario may need to be scrapped. This may mean a Supplier could incur a financial and environmental cost. There is also a risk of a Supplier installing these Device even though they wouldn't count towards Suppliers rollout targets. The existing DCC returns process cannot support large volumes of Devices being sent back in a short period. Another modification, [MP252 'Amending the process for Communications Hub returns'](#) is aiming to address the current issues of large volume returns of Communications Hubs to the DCC.

Impact on consumers

Scrapping this remaining stock could result in fewer Energy Consumers gaining access to the benefits of smart metering in the immediate future.

3. Solution

The solution is to extend the Installation End Date for CHTS v1.0 and GBCS v1.1 by 24 months. This would change the date from 30 April 2023 to 30 April 2025.

The changes to the SEC to meet this solution are available in Annex A.

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

Breakdown of Other SEC Party types impacted			
	DCC Other Users		MAPs/ MAMs

Large Suppliers, Small Suppliers and Meter Installers would benefit from this change as they would be able to continue to install Communications Hubs and have the install contribute towards rollout targets.

DCC Systems

DCC System changes

There will be no impacts to DCC Systems.

DCC System traffic

There will be no impacts to DCC System traffic.

SEC and subsidiary documents

The following parts of the SEC will be impacted:

- Schedule 11 'Technical Specification Applicability Tables'

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

Technical specification versions

There are no changes directly to the Technical Specifications, only to the Installation End Dates in the TSAT.

Devices

Devices impacted			
	Electricity Smart Metering Equipment		Gas Smart Metering Equipment
✓	Communications Hubs		Gas Proxy Functions
	In-Home Displays		Prepayment Meter Interface Devices
	Standalone Auxiliary Proportional Controllers		Home Area Network Connected Auxiliary Load Control Switches
	Consumer Access Devices		Alternative Home Area Network Devices

This change will allow Communications Hubs compliant with CHTS v1.0 and GBCS v1.1 to continue to be installed by Suppliers and upgraded by the DCC. There will be no impact to Device behaviour.

Consumers

There will be no direct impact on consumers.

Other industry Codes

There will be no impact on other industry Codes.

Greenhouse gas emissions

There will be no impact on greenhouse gas emissions.

5. Costs

DCC costs

There are no DCC costs to implement this modification.

SECAS costs

The estimated SECAS implementation cost to implement this as a stand-alone modification is one day of effort, amounting to approximately £600. 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

SECAS does not expect any costs to SEC Parties because of this modification being implemented.

6. Implementation approach

Approved implementation approach

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

- **Ad-hoc release** (ten Working Days after decision)

The Installation End Date for CHTS v1.0 and GBCS v1.1 expired on 31 May 2023. As any installs of Communications Hubs on CHTS v1.0 and GBCS v1.1 will not contribute towards Suppliers rollout targets, this modification will need to be implemented as an ad-hoc release once a decision is received.

This modification will need to be implemented as an ad-hoc release once a decision is received. If this modification is approved under Self-Governance, it will be implemented on the after the 10 Working Days referral window following the Change Board's vote. If that decision was subsequently appealed and overturned, the changes would then be backed out of the SEC.

Sub-Committee input

SECAS has engaged with the Chairs of the Operations Group (OPSG), the Technical Architecture and Business Architecture Sub-Committee (TABASC), SSC and the Smart Metering Key Infrastructure Policy Management Authority (SMKI PMA) to confirm what input is required from these forums. SECAS believes the following Sub-Committees will need to provide the following input to this modification:

Sub-Committee input	
Sub-Committee	Input sought
OPSG	Determine if the Proposed Solution is an appropriate period of time to extend the existing End Dates by.
SMKI PMA	No input sought.
SSC	Determine whether there are any security risks by extending these Validity Periods.
TABASC	Determine if this is an appropriate period of time to extend the End Dates by.
TAG	No input sought.
PSC	No input sought.

7. Assessment of the proposal

Observations on the issue

The views of Change Sub-Committee

This modification was presented to the CSC in January 2024. A CSC member asked why the extension of the Installation End Date is required if Communications Hubs will be replaced by a 4G Device in the near future. The Proposer expects to continue to install these Communications Hubs whilst the 4G Communications Hubs roll out is taking place. The extension of the Installation End Date will allow these installations to count towards the Supplier's roll out targets. Once installed, the Devices can remain installed up to 2033 when 2G/3G sunsetting takes place. The Proposer has expressed concerns with the 4G signal strength, due to operating on a higher frequency the signal is weaker than that of lower frequency. The approach the Proposer is suggesting is to allow 2G/3G Devices an extension until 4G reliability is confirmed to allow Parties to fall back on reliable Devices.

A CSC member raised a point that a previous TSAT extension modification had received comments saying that any maintenance of the TSAT should be addressed through a Sub-Committee. SECAS is preparing a TSAT Guidance Note which will explain the why the TSAT should be adhered to. It will also set out the problems that industry will face by Parties not adhering to the dates. Currently, the only method of extension to TSAT end dates is via a SEC modification.

In July 2024, a CSC member stated that the issue lies with Communication Hub stock management and the costs associated with holding non-TSAT compliant Devices. The member noted they were not supportive of the modification, noting that Suppliers hold Devices that can be installed and count towards target. They agreed that the modification should be presented to the Change Board for a decision to vote.

Cost and deployment challenges

In March 2024, this modification was presented to the TABASC. A member raised concerns about the cost of returning rather than redeploying Communications Hubs and questioned the feasibility of re-flashing and reusing Devices without incurring additional costs. The Proposer explained that the DCC are unable to handle the volume of Communications Hubs to be returned to the DCC for re-flashing and reusing. SECAS note that [MP155 'Communications Hub Re-Flash'](#) was withdrawn as the Preliminary Assessment estimated that the implementation of the modification would cost £3.7m resulting in a lack of positive business case.

Installation and rollout targets

The TABASC Chair highlighted the need for the DCC to streamline the returns process for handling what they believe to be a small number of Devices. The Proposer emphasised that their organisation would prefer to have all Communications Hubs count towards rollout targets.

Firmware capability and risks

A TABASC member expressed concerns about the risk of installing older Communications Hub versions with outdated firmware, which may require multiple upgrades to reach up to date firmware. The Proposer clarified that a problem was found with certain Devices and deployment was halted by the DCC due to unsupported firmware.

Upgrading and known defects

A TABASC member requested more information on the challenges associated with upgrading older Communications Hub models, including Communications Hubs with potential and confirmed issues. SECAS presented to the TABASC a breakdown of each firmware version and the associated issues, such as lack of pre-payment support functionality. These Devices were manufactured before pre-payment was an operational service. The Devices had been tested on an emulator which is in a controlled environment which does not reflect a real life situation where there may be delays.

CHTS v1.1 and GBCS v1.0							
Manufacturer	Firmware (Hex)	Firmware (Decimal)	GBCS	CHTS	Stock (April 2024)	Firmware Chronology	Why Devices are not OTA Upgraded
Manufacturer 1	124074DA	1.36.0	1.0	1.0	32	N-Return	Do not install
Manufacturer 1	12407768	1.36.4	1.0	1.0	10	N-Return	Do not install
Manufacturer 1	125083AE	1.37.7	1.1	1.0	6,682	N-7	OTA must be completed within 167 days of I&C

CHTS v1.1 and GBCS v1.0							
Manufacturer	Firmware (Hex)	Firmware (Decimal)	GBCS	CHTS	Stock (April 2024)	Firmware Chronology	Why Devices are not OTA Upgraded
							otherwise continuous reboot occurs
Manufacturer 1	126094D0	1.38.3	1.1	1.0	1,427	N-6	Okay – Takes time to upgrade
Manufacturer 1	1260A11E	1.38.6	1.1	1.0	38,054	N-5	Ok
Manufacturer 1	1270B8CC	1.39.2	1.1	1.0	839	N-4	Will not OTA
Manufacturer 2	000A7200	10.R	1.0	1.0	356	N-Return	Do not install
Manufacturer 2	0B160000	11.2	1.0	1.0	267	N-9	Ok
Manufacturer 2	0B160000	11.24	1.0	1.0	10,380	N-8	Ok
Manufacturer 2	0B1B0000	11.27	1.1	1.0	11,465	N-6	Ok
Manufacturer 2	0B1E0000	11.30	1.1	1.0	33,055	N-5	Ok
Manufacturer 2	0B1F0000	11.31	1.1	1.0	5,782	N-4	Ok
Manufacturer 3	010E0000	1.14	1.0	1.0	4	N-Return	Do not install
Manufacturer 3	02100000	2.16	1.0	1.0	6,970	N-10	OTA must be completed within 167 days of I&C otherwise continuous reboot occurs
Manufacturer 3	02130003	1.19	1.1	1.0	5,895	N-9	Ok
Manufacturer 3	02140003	2.20	1.1	1.0	1,499	N-8	Ok

This table highlights certain firmware versions which are known to experience issues which are documented in the Communications Hub product release note.

Some CHTS v1.0 Device models were made to work with GBCS v1.1. The Data Service Provider (DSP) uses the newest version GBCS associated to the CHTS on the Device Model from the Central Products List (CPL).

Previous TABASC recommendation

Three-month recommendation

When the TABASC discussed [MP221 CHTS v1.0 and GBCS 'v1.1 Installation End Date and Maintenance End Date'](#), it recommended a three-month extension with no further extension. This was to ensure that all Devices on older versions of firmware be installed before the end-date to encourage Parties to move the newer versions.

Installation End Date

During discussions surrounding [MP243 'CHTS v1.1 and GBCS v2.1 Installation End Date and Maintenance End Date'](#) the TABASC had expressed in July 2023 that only the Installation End Date should be extended. The rationale behind this decision is that after installation the DCC will, under all reasonable steps, carry out firmware upgrades to bring Communications Hubs into compliance.

Previous OPSG recommendation

In December 2023 the DCC presented an overview of the TSAT expired Communications Hubs, including three proposed options for resolving the issue. The options were:

1. Customers attempt to locate stock or declare as lost
2. Customers continue to install
3. Customers continue to install and raise a SEC Modification

The DCC described how Communications Hubs could be grouped into three batches, according to the effort required to update them to current standards. The estimated number of affected Communications Hubs as of November 2023:

1. Can be upgraded with a single firmware update (approximately 88,000 Communications Hubs)
2. Can be upgraded with multiple firmware updates (approximately 44,000 Communications Hubs)
3. Can not be upgraded (approximately 1200 Communications Hubs)

During the meeting, an OPSG member suggested that as the Devices have been paid for, the return cost should be lowered. The DCC countered this point, highlighting that Suppliers should be installing older versions before newer versions. The OPSG Chair noted that they understood these specific Communications Hubs had been included in the planning that was taking place regarding continuity of Communications Hubs during 4G rollout.

The OPSG concluded that this should be a Supplier driven process. The Suppliers had the motivations to locate the Communications Hubs and deal with them. It was the responsibility of the Supplier to be compliant with the SEC, and if a SEC Modification were needed, a Supplier should raise it.

Potential security risk

The SSC did not object to the extension for CHTS v1.0 and GBCS v1.1. They did express it is not best practice to install older Devices due to the security characteristics operating on an older version of CHTS and GBCS.

SSC statement for MP262 can be found in Annex B.

Length of End Date extension

The Proposer has suggested extending the CHTS v1.0 and GBCS v1.1 Installation End Date to allow installs from these Devices to contribute towards rollout targets. Suppliers inheriting expired Communications Hubs via Supplier of Last Resort (SoLR) have also played a part in Suppliers being unable to meet the previous extension.

A TABASC member requested more information on the challenges associated with upgrading older Communications Hubs models. They suggested it could include a breakdown of the Communications Hubs on each firmware version and how many upgrades each of those Devices require to be deemed up to date. There are known issues as documented in the Communications Hub release note with multiple firmware versions and only a two Communications Hub models on different firmware versions being able to support pre-payment consumers. The other 14 firmware versions are not guaranteed to support prepay compatibility potentially due to being manufactured before pre-payment was an operational service. This may lead to poor consumer experience.

Ofgem rollout targets

The Change Board queried whether a non TSAT complaint Communication Hub would count towards Suppliers install targets retrospectively should an extension go ahead.

SECAS has contacted Ofgem who confirmed the requirements within the Electricity Supply Licence. The Licence in section 39.22 describes a relevant Smart Metering System. It defines a relevant Communications Hub as being compliant with a version of the CHTS which is within its Installation Validity Period (IVP) on the date of installation. Therefore, if a Communications Hub is installed whilst outside of the IVP the install will not contribute to Suppliers roll out targets.

8. Case for change

Business case

Approval of the modification

Extending the Installation End Date by 24 months will present little security risk. Approval of this modification will also allow these versions of Communication Hubs to count towards install targets. If 4G rollout is slower than anticipated it may be useful for Suppliers to be able to continue to install these Devices.

Against approval of the modification

The TABASC noted the highlighted Devices are not included in the installation targets, but Suppliers could continue installing them as there are no technical or business reasons not to do so¹. The Supplier should then offer an explanation to Ofgem as to why these should be included in their roll out figures. This would maintain the validity of the TSAT tables.

There are known issues between certain firmware versions not being supported after upgrading and due to the age of the Devices there is some concerns on prepayment support capabilities.

Views against the General SEC Objectives

Proposer's views

The Proposer believes this modification better facilitates SEC objective (a)² as it would prevent large numbers of Communications Hubs from expiring and potentially being scrapped.

Views against the consumer areas

Improved safety and reliability

This modification has a neutral impact on safety and reliability.

Lower bills than would otherwise be the case

This modification has a positive impact on lower bills. Without scrapping large numbers of Communications Hubs which do not have a valid Installation End Date, less costs will be passed to Consumers.

Reduced environmental damage

This modification has a positive impact on reducing environmental damage as it reduces the number of Communications Hubs which have been scrapped because of their Validity Periods ending.

Improved quality of service

This modification has a neutral impact on improved quality of service.

Benefits for society as a whole

This modification has a neutral impact on benefits for society as a whole.

¹ The exemption to this is Communication Hubs which are known to have issues which are documented in the in the Communications Hub product release note

² To facilitate the efficient provision, installation, and operation, as well as interoperability, of Smart Metering Systems at Energy Consumers' premises within Great Britain.

Final conclusions

The TABASC have recommended not to extend the Installation End Dates for CHTS v1.0 and GBCS v1.1. The SSC stated that the Devices should be upgraded as soon as possible after being installed due to the security characteristics being outdated. There are no DCC costs and only a minimal SECAS cost to implement.

A CSC member noted that this issue is brought about by poor stock management and not an issue with the SEC itself. They considered the benefits are only around rollout targets and noted the Devices can be installed if the Supplier chooses to.

The view of the Change Board is that MP262 will not facilitate SEC Objective (a), Members of the Change Board who voted to reject, noted the recommendations from the TABASC to not extend the dates when making their decision. It was also noted that having old Communications Hubs and firmware in the system would cause poor system performance.

Appendix 1: Progression timetable

Timetable	
Event/Action	Date
Draft Proposal raised	9 Jan 2024
Presented to CSC for initial comment	16 Jan 2024
Modification discussed with TABASC	7 Mar 2024
Modification discussed with OPSG (offline comments)	12 Mar 2024
Modification discussed with TABASC	2 May 2024
Modification discussed with SSC	8 May 2024
CSC converts Draft Proposal to Modification Proposal	21 May 2024
Modification Report approved by CSC	21 May 2024
Modification Report Consultation	22 May – 13 Jun 2024
Change Board Vote (deferred)	26 Jun 2024
Modification Report approved by CSC	16 Jul 2024
Change Board Vote	24 Jul 2024
<i>Modification referred to CSC</i>	<i>20 Aug 2024</i>

Italics denote planned events that could be subject to change

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
CHTS	Communications Hub Technical Specifications
CPL	Central Products List
CSC	Change Sub-Committee

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Glossary	
Acronym	Full term
CTG	Communications Transition Group
DCC	Data Communications Company
DSP	Data Service Provider
GBCS	Great Britain Companion Specification
IVP	Installation Validity Period
OPSG	Operations Group
OTA	Over The Air
PSC	Privacy Sub-Committee
SEC	Smart Energy Code
SECAS	The 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
TAG	Testing Advisory Group
TSAT	Technical Specification Applicability Tables