

Communications Hubs & Networks

A consultation on proposed changes to the
Communications Hub Supporting Information
(CHSI) to support the introduction of new 4G
Communications Hubs

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1. Introduction and context

1. The Data Communications Company (DCC) is Britain's key enabler to a future smart energy system. DCC is licensed by the Government and regulated by the energy regulator Ofgem to connect smart meters in homes and small businesses across Great Britain to a single secure, digital network. DCC supports the roll-out of second-generation (Smart Metering Equipment Technical Specifications 2 (SMETS2)) smart meters, as well as the migration of existing first-generation (SMETS1) meters onto its network.
2. The Communications Hubs and Networks Programme (CH&N) is a DCC initiative geared towards defining and delivering futureproofed Communications Hubs & Networks in the Central and South regions with an efficient supply chain and a targeted longevity of at least 15 years. To ensure this longevity of smart functionality DCC is developing a solution to allow for the introduction of new Communications Hubs (CHs) which use the 4G network. To achieve this, DCC established the CH&N Programme to assess development and implementation options for a 4G solution.

1.1. Background

3. Smart Energy Code (SEC) Appendix H 'Communications Hub Handover Support Materials' (CHHSM) clause 1.4 requires DCC to publish the Communications Hub Supporting Information (CHSI) on the DCC Website. The CHSI provides:
 - information regarding CH labelling;
 - Advanced Shipment Notification (ASN) file formats;
 - additional graphical information supporting the definition of Significant Metallic Obstruction¹;
 - description of the way in which light emitting diode (LED) indicators depict the operational status of a CH;
 - description of the aerial types DCC make available within the South and Central Regions; and
 - definition of the wait times necessary to initiate reboot functionality and to completely power down the CH.
4. In accordance with SEC Appendix H clause 1.5, DCC is required to undertake reasonable consultation, give due consideration to consultation responses received, and publish a statement of its reason to amend content, prior to publishing a new version of the CHSI.

1.2. Purpose of the consultation

5. The purpose of this consultation is to obtain views on proposed changes to the CHSI to support the introduction of 4G CHs and seek stakeholders' views prior to publishing an updated version of this document.
6. This consultation is expected to impact Large & Small Suppliers and Other SEC Parties including Meter Asset Providers (MAPs).
7. This consultation will close on 27 June 2024 at 17:00.

1.3. Next steps

8. Following the closure of this consultation, we will assess respondents' views, and amend the draft changes to the CHSI. We are aiming publish the updated CHSI and the conclusions report in mid-July

¹ Means a metallic object of such scale and proximity to the Communications Hub that is likely to cause obstruction to SM WAN communications to the Communications Hub.

2024. This report will contain DCC's consideration of the responses to this consultation as well as the updated version of the CHSI. We will publish our conclusions document on our website.

2. Proposed changes to the CHSI

2.1. Introduction of the new 4G Communications Hub Variant

9. The CH&N programme will introduce a new CH Variant, known as the 4G Cellular Communications Hub, which will be available in the central and south geographical regions from July 2025. DCC has previously consulted on the proposed enduring and transitional regulatory changes for these and published its conclusion on 3 November 2023.² In parallel to this consultation, the Department for Energy Security and Net Zero (The Department) published a consultation on proposed changes to the DCC Licence and the Main Body SEC for the 4G CH&N programme.³
10. The changes above will amend the SEC to:
- define “Communications Technology” as being any of 2G/3G mobile, 4G mobile and long-range radio Communications Technologies
 - define a “Region” as a combination of Geographical Region and Communications Technology (now including North, 2G/3G Central, 2G/3G South and 4G Central/South) as well as the definition of the Smart Metering Wide Area Network (SM WAN) to state that multiple Communications Technologies can be provided in the same Geographical Region
 - include the new 4G Cellular Communications Hub
11. DCC has reviewed the CHSI with the view of including the new 4G CH Variant and distinguishing the Regions. We propose to align amendments to the CHSI to the forthcoming changes to the SEC and therefore have drafted changes which include adding the new 4G Central/South Region and the new 4G Cellular CH variant in all sections. We also propose amending the existing requirements for the Central Region and the South Region to distinguish that these apply to the 2G/3G Central and South Regions.

Q1

Do you agree with DCC’s proposal to amend the CHSI to distinguish the requirements for the 2G/3G Central and South Regions and the 4G Central/South Region? Please provide your rationale.

2.2. Labelling and Advance Shipment Notification format

12. DCC can confirm that the labelling format for 4G CHs will not differ from the existing format used for the 2G/3G Central and South and the North Regions. ASNs will continue to be shared in CSV file format for 4G CHs Consignments, as with the existing provisions. DCC therefore propose that the 4G CH Variant is added to the existing provisions in section 3 of the CHSI.
13. Appendix A of the CHSI currently sets out the specification for ASNs including details of the fields in the CSV file. DCC has amended this section to include the field name, format, data requirements and a sample of data in the existing table format. Noting that the 4G CH solution does not require any auxiliary equipment (such as aerials), we have proposed amending the general information section and “aerial sample data” in the “ASN field specification” table to distinguish that this does not apply to 4G Central/South.
14. DCC can confirm that 4G CH ASNs will align to the existing ASNs currently provided for Toshiba Cellular Dual Band CHs (DBCH) in the Central and South Regions. DCC propose amending the specification to include the 4G Central/South Region and the 4G CHs within the existing 2G/3G

² [CH&N Conclusions on its consultation on Transitional and Enduring Regulatory Changes | Smart DCC](#)

³ [Department for Energy Security and Net Zero: Smart Metering Implementation Programme Consultation on changes to the DCC Licence and the Smart Energy Code for the 4G Communications Hubs & Networks Programme » \(smartenergycodecompany.co.uk\)](#)

Central and South Region requirements (unless stated otherwise for Wistron (WNC) CHs). DCC also notes that the “Communications Hub WAN Variant” field will be populated with “4G Cellular DB” for 4G CHs. Furthermore the “SM WAN Identifier” for 4G CH ASNs shall indicate the default 4G WAN provider profile in the eSIM (which is Vodafone) and this will be represented with “4GVF”. DCC proposes that the ASN specification is updated with this information.

15. DCC has also amended Appendix A to include an example of the ASN file for 4G CHs Consignments.

Q2

Do you agree with DCC’s proposed changes to the CHSI for 4G CH labelling and ASN requirements? Please provide your rationale.

2.3. Metallic Obstructions

16. DCC can confirm that the existing requirements for Significant Metallic Obstructions in the Central and South Regions will also apply to 4G CHs in the 4G Central/South Region. DCC has proposed amendments to include the 4G Central/South Region in section 4 of the CHSI.

2.4. CH Status Information

17. Section 5 of the CHSI sets out the operational status of CHs which are indicated by LEDs on the front face of the CH. As with the 2G/3G DBCH, the 4G CH will have five LED indicators. These are (in order they appear):
 - a. Operating state
 - b. SM WAN connection state
 - c. Device power
 - d. Home Area Network (HAN) connection state
 - e. Gas Proxy Function (GPF)
18. Appendix B also sets out a description of the operating state based on the LED behaviours. This includes indicators on the frequency of the LED flashing, the duration of the indication and the appropriate Supplier Party action to be taken for each operational status.
19. DCC can confirm that the flashing frequency indicators for all existing CHs will also apply to the operation of 4G CHs.
20. As with the existing CHs within the 2G/3G Central and South Regions, the LEDs indicate operational states when the CH is seated on an Intimate Communications Hub Interface Specification (ICHIS) compliant host (usually the Electricity Smart Metering Equipment (ESME)) and power is supplied. This is referred to as ‘power-on’ in the CHSI. DCC proposes adding a table for the general power state at power-on and appropriate Supplier Party action. DCC has also proposed including additional clarifications in relation to the 4G CH indicating ‘no power’ and potential solutions, including checking the power supply to the CH.
21. To provide guidance on operational states following successful power on of the 4G CH, DCC also proposes adding tables to the CHSI, to indicate the behaviour for each LED on the 4G CH. This is aligned to the existing provisions and format of the 2G/3G Central and South Regions. We additionally propose including clarifications specific to the HAN LED as this may not pertain to the

CH but the installation of the HAN Devices. This includes where HAN Devices are not whitelisted⁴ on the Communications Hub Function (CHF) Device Log. Furthermore, DCC notes that the HAN LED does not distinguish between sub-GHz and 2.4GHz HAN, and has therefore noted this in Appendix B of the CHSI.

Q3

Do you agree with DCC's proposed changes to the CHSI for CH Status Information and LED behaviour? Please provide your rationale.

2.5. Reset and Reboot

22. Appendix C of the CHSI currently details the procedures and wait timings for undertaking a reset of a CH, including guidance for both soft reboots and hard reboots for each Region. DCC can confirm that the 4G CH procedure aligns to the existing 2G/3G Central and South CHs other than the waiting timings. DCC has proposed including a new line in the table to set out that the wait timings of five minutes apply when rebooting the 4G CH.

Q4

Do you agree with DCC's proposed changes to the CHSI for reset and reboot procedures for the 4G CH? Please provide your rationale.

2.6. Order and Consignment Status

23. Appendix D of the CHSI sets out the terms used for CH Orders and Consignment status in the Order Management System (OMS) for each Region as they vary from the statuses set out in the CHHSM. DCC consulted on proposed changes to the SEC to support the 4G CH forecasting, ordering and delivery service in January 2024.⁵ DCC concluded on its consultation and the changes to the CHHSM in April 2024⁶ and these will be submitted to the Department on 1 August 2024 or within a month thereafter.
24. Whilst DCC notes that the 4G CH forecasting, ordering and delivery service varies from the existing provisions for 2G/3G Central and South CHs, we can confirm that the status for CH Orders and Consignments is aligned with the existing terms for the Central and South Regions. DCC has updated Appendix D to reflect this.

Q5

Do you agree with DCC's proposed changes to the CHSI for order and consignment status for the 4G CH? Please provide your rationale.

3. Housekeeping changes

23. DCC firstly propose amending the CHSI to align the document with other DCC Documents and branding.
24. Section 6 of the CHSI also includes requirements for the installation of Aerial Types for the period up to 30 September 2019 for installation with an ICHIS Host emitting greater than 3.5 decibels (dB) noise interference in the 900MHz frequency band. These requirements were in place to provide further installation requirements, initially up to and including 30 September 2019 but then

⁴ Whitelisting indicates that a Device has been added to the Device Log of a Communications Hub Function but that communications between the Device and the Communications Hub Function may not yet have been established.

⁵ [CH&N Consultation on SEC Changes for the 4G CH Forecasting, Ordering & Delivery Service | Smart DCC](#)

⁶ [CH&N Conclusions on SEC Changes for 4G Communications Hub Forecasting, Ordering & Delivery Service | Smart DCC](#)

extended to 31 March 2022 (known as the “Derogation Period”). During this time parties were permitted to continue to install ESME which exceeded the Radio Frequency Noise limits as set out in the ICHIS. As the Derogation Period has now passed, DCC proposes removing the requirements set out in section 6.2 of the CHSI as they no longer apply to installations with Aerial Types.

25. Finally, DCC has proposed adding additional detail to the existing 2G/3G Central and South Regions CH LED behaviour to distinguish behaviour and operational status for the Gas LED between the Toshiba and WNC CHs.

Q6

Do you agree with the housekeeping changes to the CHSI? Please provide your rationale.

4. Next steps

26. During the consultation we will seek to engage all impacted stakeholder via SEC Sub-Committees and any other bespoke mechanisms as appropriate.
27. Following the closure of this consultation, DCC will consider respondents’ views. Depending on stakeholder responses to this consultation, DCC will amend the CHSI as appropriate and publish an amended version on the DCC Website along with a DCC response document outlining the decision. We are aiming to publish this in Mid-July 2024.
28. Further to the updates to the CHSI, DCC will develop an Installer Training Plan for the 4G CH, in accordance with SEC Appendix I ‘Communications Hub Installation and Maintenance Support Materials’ (CHIMSM). This plan is expected to be published in June 2024 with supporting DCC webinars throughout July, August and September 2024. The plan and webinars are to ensure that parties have sufficient information to enable individuals to carry out 4G CH installation and maintenance activities.

Q7

Do you have any other comments on the updates to the CHSI or the approach to the Installer Training Plan? Please provide your rationale.

5. How to respond

29. Please provide responses by 17:00 on 27 June 2024 to DCC at consultations@smartdcc.co.uk.
30. Consultation responses may be published on our website (www.smartdcc.co.uk). Please state clearly in writing whether you want all or any part, of your consultation to be treated as confidential. It would be helpful if you could explain to us why you regard the information you have provided as confidential. Please note that responses in their entirety (including any text marked confidential) may be made available to the Department for Energy Security and Net Zero (The Department) and the Gas and Electricity Markets Authority (the Authority). Information provided to The Department or the Authority, including personal information, may be subject to publication or disclosure in accordance with the access to information legislation (primarily the Freedom of Information Act 2000, the Data Protection Act 2018 and the Environmental Information Regulations 2004). If The Department or the Authority receive a request for disclosure of the information, we/they will take full account of your explanation (to the extent provided to them), but we/they cannot give an assurance that confidentiality can be maintained in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded by us as a confidentiality request.
31. If you have any questions about the consultation documents, please contact DCC via consultations@smartdcc.co.uk.

6. Attachments

- Attachment 1: CHSI Draft v2.0 – Tracked Changes
- Attachment 2: CHN Changes to the CHSI Response Template