



# Communications Hubs & Networks Consultation on Changes to the Intimate Communications Hub Interface Specification (ICHIS) 2025

A consultation on proposed changes to the Intimate  
Communications Hub Interface Specification to extend the  
noise limit for 4G to cover all UK LTE bands

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# 1. Introduction and context

1. The Data Communications Company (DCC) is Britain's digital energy spine, supporting the transformation of the 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 (SMETS2) smart meters, as well as the migration of existing first-generation (SMETS1) meters onto its network.
2. This document consults on proposed changes to the Intimate Communications Hub Interface Specification (ICHIS) to include the remainder of the 4G 800MHz frequency band and the 4G 700MHz frequency band. The existing 801–811MHz frequency band 3 decibel (dB) noise limit will apply. There is no intent to use these new bands at this time but by updating the ICHIS in advance of when they may be required creates future flexibility. This is an enabling change, and the only associated costs are administrative in nature.

## 1.1. Background

3. The ICHIS document describes the specification for the physical, electrical, and data interface between a Communications Hub (CH) and the Smart Meter or the Communications Hub Hot Shoe. The ICHIS defines the mandatory features required to ensure that an Intimate Communications Hub can be used with any ICHIS compliant Host (the side of an ICHIS interface which provides power and physical mount for a Device). It defines a common interface between the Communications Hub and Electricity Smart Metering Equipment (ESME). The document includes limits for the Radio Frequency (RF) noise that can be radiated to avoid impacts to Communication Service Providers (CSP) coverage and reliability.
4. The Smart Energy Code (SEC) Section H12.5 requires the DCC to keep the ICHIS under review to ascertain whether the specification remains fit for purpose as envisaged by the SEC.
5. In November 2023 DCC consulted<sup>1</sup> on changes to the ICHIS document to support implementation of the Communications Hubs and Networks Programme (CH&N). This consultation concluded<sup>2</sup> in January 2024, with proposed changes being made to the ICHIS document that added a new 4G frequency band (801-811 MHz) with a noise limit of 3dB. The ICHIS document was updated to version 3.0 and can be accessed via the DCC website<sup>3</sup>.
6. The 2023 consultation also asked for views on whether respondents agreed with DCC's intent to include noise limits for 4G Bands other than Vodafone in a future version of the ICHIS. Most respondents to the consultation agreed with the need to future proof the design of the new 4G CH solution and to enable flexibility around potential switching of Mobile Network Operators (MNOs).

## 1.2. Purpose of the consultation

7. The purpose of this consultation is to seek stakeholders' views prior to publishing an updated version of the ICHIS document. These proposed changes to the ICHIS extend the noise limit for 4G to cover all LTE CAT 1 bands used in the UK to allow for maximum future flexibility to switch MNO or contract additional MNOs for roaming purposes.
8. DCC intends to extend the existing  $\leq 3\text{dB}$  for the 801–811MHz frequency band to the remainder of the 800MHz frequency band (791-821 – excluding 801-811) as well as the 700MHz frequency band (758-788).

<sup>1</sup> [CH&N Consultation on changes to the ICHIS | Smart DCC](#)

<sup>2</sup> [CH&N Conclusions on changes to the ICHIS | Smart DCC](#)

<sup>3</sup> [intimate-communications-hub-interface-specification-ichis-v30.pdf](#)

9. This consultation is expected to impact Large and Small Suppliers and Other SEC Parties including Device manufacturers and Meter Asset Providers (MAPs). This consultation will close on Wednesday 30 July 2025 at 17:00.

## 2. Proposed changes to ICHIS

### 2.1. Engagement

10. The majority of respondents to the 2023 ICHIS consultation agreed with the need to future proof the design of the new 4G CH solution and enable flexibility. Respondents noted the benefits of potential roaming capabilities included that it may address geographical areas where existing coverage is intermittent or non-existent and provide for a more robust solution from the perspective of the consumer.
11. In May 2025 DCC presented proposals to introduce new frequency band outputs to the Technical Architecture and Business Architecture Sub-Committee (TABASC). This included our supporting analysis and the output from our testing. The TABASC agreed with DCC's approach, and no actions are outstanding from this session.
12. In June 2025 DCC discussed the proposals that we set out within this consultation with the ICHIS Working Group. This is a DCC led workgroup that allows for open discussion on ICHIS related matters and can include representatives from Device manufacturers, CSPs and energy suppliers. DCC received support for our proposals and no objections or concerns were raised.

### 2.2. Introducing new frequency bands

13. ICHIS Part F2.0 sets out the testing methodology for radiated (wireless) Radio Frequency (RF) interference with Host Devices. DCC is proposing to introduce the following new frequency band to section F2.0 of the ICHIS document:
  - a. Frequency Band 700 (MHz), which operates between 758MHz and 788MHz, with a Mid Frequency of 773MHz.
14. Additionally, DCC is proposing to update the 800MHz band within F2.0 of the ICHIS document to increase the operating range:
  - a. The Start Frequency is changed from 801MHz to 791MHz.
  - b. The End Frequency is changed from 811MHz to 821MHz.
  - c. The Mid Frequency is changed from 806MHz to 810MHz.
15. ICHIS Part F4.5 sets the pass criteria for Hosts testing against each frequency band. DCC propose that the pass criteria for the new frequency bands are consistent with the existing frequency bands as set out in the ICHIS (except for the Fylingdales<sup>4</sup> which currently requires additional testing criteria). DCC is accordingly proposing to update this section to include the proposed frequency updates using the existing definitions of 2 Standard Deviation (SD) and 3SD values as pass criteria.
16. These changes can be found in a track change format within Appendix1. At this time DCC has no plans to use these new bands and are being introduced to provide future flexibility. DCC will need to undertake a process of stakeholder engagement, including clear costs, before procuring the use of these additional 4G bands.

**Q1**

Do you agree with DCC's proposal to amend the ICHIS Part F2.0, Part F4 and Appendix A to include the new frequency bands? Please provide your rationale.

<sup>4</sup> A geographical area identified within the ICHIS that has specific requirements.

## 2.3. Radio Frequency noise limits for new frequency bands

17. As set out in Part F1.1 of the ICHIS, “it is necessary to consider the influence of the Host and Device on one another”. This is achieved by the specification of noise limits applicable to the Host within the ICHIS. Host Devices which emit noise greater than specified limits may impact the receiver sensitivity of the Communications Hub of interest and in turn this may potentially impact Wide Area Network (WAN) coverage.
18. ICHIS noise testing was previously conducted by DCC and assured by Plextek<sup>5</sup> with a qualified 4G Communication Hub Antenna Structure (CHAS). This was conducted against the latest version of ESME for the seven active Device manufacturers included measurements in all the 700MHz and 800MHz bands. The methodology applied in investigating the impact of meter noise for the new 4G bands was comprehensive and capturing 100% of the metering estate. The output of this testing is that all existing and new meter models compliant with the proposed limit, and no further testing is required.
19. DCC therefore propose that the noise limit is set within Appendix B of the ICHIS at  $\leq 3\text{dB}$  for the 700MHz band and proposed additions to the 800MHz frequency band. This aligns with existing limits in place for the 4G 800MHz band today and testing has confirmed that this is suitable for both the 700MHz band and the remainder of the 800MHz band. The 3dB limit was set at the maximum permissible noise from the ESME that ensures the composite noise figure is below MNO specified value and will not therefore adversely impact WAN coverage. There are no impacts to new and existing Devices as a result of introducing these additional frequencies.
20. Providing DCC proposals are supported by respondents, the ICHIS will be updated to set the regulatory RF noise limit requirement for new installations if the additional 4G frequency bands are utilised in the future. The noise performance of current ESME is consistent with the expectations that any future WAN would expect/need to operate with.

Q2

Do you agree with the proposed noise limit of 3dB for the 700MHz and 800MHz bands as set out in the draft ICHIS v3.1? Please provide your rationale.

<sup>5</sup> Plextek is an independent test service procured for RF noise testing

## 3. Next steps

### 3.1. ICHIS Noise Report

21. SECAS maintain an ICHIS noise report<sup>6</sup> that records the ICHIS noise test results submitted by Device manufacturers. Recent review and comparison with the Central Products List (CPL) suggest that the information contained within this report may be outdated and not aligned to recent installs.
22. It is important that this information is kept up to date to support energy supplier operations. We understand that Device manufacture updates to the ICHIS noise report will be discussed within BEAMA (British Electrotechnical and Allied Manufacturers' Association), the UK trade association for manufacturers of energy infrastructure technologies and systems.
23. If Device manufacturers are able to either provide updates for the noise report itself or have any suggestions about how this information could be best managed in the most efficient and pragmatic manner in the future, please contact SECAS directly at [ichisdisputes@smartdcc.co.uk](mailto:ichisdisputes@smartdcc.co.uk).

### 3.2. Conclusions

24. Following the closure of this consultation, DCC will take into account respondents' views and publish our conclusions and next steps. Depending on stakeholder responses to this consultation DCC will publish an amended version of the ICHIS on the DCC Website along with a DCC response document outlining the decision. We propose to publish a new version of the ICHIS from the 1 September 2025 or thereabouts. Additionally, the SECAS ICHIS noise report will also need to be updated to reflect the new ICHIS document.
25. DCC is satisfied that other than the proposed changes, the ICHIS remains fit for purpose.

<sup>6</sup> [ICHIS Noise - Smart Energy Code](#)

## 4. How to respond

26. Please provide responses by 17:00 on Wednesday 30 July 2025 to DCC at [consultations@smartdcc.co.uk](mailto:consultations@smartdcc.co.uk).
27. Consultation responses may be published on our website [www.smartdcc.co.uk](http://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.
28. If you have any questions about the consultation documents, please contact DCC via [consultations@smartdcc.co.uk](mailto:consultations@smartdcc.co.uk).

## 5. Attachments

- Attachment 1: ICHIS Draft v3.1 – Tracked Changes
- Attachment 2: ICHIS Consultation 2025 Response Template