



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

DCC conclusions to 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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Author: consultations@smartdcc.co.uk

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1. Executive Summary

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. On the 18 June 2025 DCC consulted¹ on proposed changes to the Intimate Communications Hub Interface Specification (ICHIS), closing on the 30 July 2025. This is the conclusion to that consultation. Our proposal was to update the ICHIS to include the remainder of the 4G 800MHz frequency band and the 4G 700MHz frequency band and apply the existing 801–811MHz frequency band 3 decibel (dB) noise limit. 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. The only costs associated to this enabling change are administrative.
3. We received three responses to our consultation; all these responses were supportive of the proposed updates to the ICHIS document. We are therefore proposing to make these changes and publish an updated ICHIS alongside this consultation, which will also be available on the DCC website.

¹ <https://www.smartdcc.co.uk/consultations/communications-hubs-networks-consultation-on-changes-to-the-intimate-communications-hub-interface-specification-ichis-2025/>

2. Introduction

2.1. Background

4. The 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. The DCC supports the roll-out and operation of SMETS2 smart meters, as well as the migration and operation of existing SMETS1 meters onto our network.
5. 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 a physical mount for a Device). It defines a common interface between the CH 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' (CSPs') coverage and reliability.
6. 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.
7. In November 2023 DCC consulted² on changes to the ICHIS document to support implementation of the Communications Hubs and Networks Programme (CH&N). This consultation concluded³ 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 website⁴.
8. The 2023 consultation also asked for views on whether respondents agreed with DCC's intent to include noise limits for 4G bands, in addition to the existing Service Provider 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).
9. In June 2025 DCC consulted for 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.
10. This consultation proposed 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).

2.2. Decision

11. DCC will update the ICHIS document to align with the proposals made within our consultation.

² [CH&N Consultation on changes to the ICHIS | Smart DCC](#)

³ [CH&N Conclusions on changes to the ICHIS | Smart DCC](#)

⁴ [intimate-communications-hub-interface-specification-ichis-v30.pdf](#)

3. Consultation Questions & Responses

3.1. Questions

12. DCC asked two questions within the consultation, asking for views on changes to the ICHIS to include new 4G frequency bands and related noise limits.
13. The consultation presented the consultation questions as set out in Table 1.

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.
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.

Table 1 – Consultation questions

3.2. Responses

14. DCC received three responses to the consultation. These were provided by one Large Supplier Party, one Meter Asset Provider (MAP) and a SEC Committee with members that are representative of the wider industry.

3.3. Question 1

15. DCC sought views on the addition of a new frequency band asking: **“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.”**

Respondent Views

16. All respondents were supportive of DCC proposals to amend the ICHIS Part F2.0, Part F4 and Appendix A to include the new 4G frequency bands. All respondents noted that the proposed changes will support future proofing of smart metering arrangements alongside improved network resilience and flexibility.
17. One respondent supported the proposed changes to help ensure continued reliable operation of communications, particularly in the context of any future changes to MNO arrangements.
18. One respondent noted that the ICHIS Noise Report repository may not currently be populated consistently by all ESME manufacturers, acknowledging the lack of a formal requirement to do so, and asked DCC to confirm whether this functionality continues to offer value and to work collaboratively with meter Manufacturers.
- DCC considers the ICHIS Noise Report to be of value to Energy Suppliers by providing information about noise limits that could potentially impede the smart meter installation process and therefore should be retained and updated. DCC regularly runs an ICHIS working group to engage with meter Manufacturers where the ICHIS Noise Report can be discussed.
 - Meter Manufacturers are not required to be a Party to the SEC; therefore, formal requirements cannot be put in place to require them to update the ICHIS Noise Report. DCC can continue to engage with Manufacturers via the ICHIS Working Group and the Devices Team Newsletter to notify of the report purpose and where updates can be provided.

3.4. Question 2

19. DCC sought views on our proposed approach on setting the noise limit asking: **“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”.**

Respondent Views

20. All respondents were supportive of the proposed RF Noise Limits and that these match the existing limits in use for the 4G Vodafone deployment. Reasons why respondents were supportive include consistency, simplification and operational efficiency across the smart metering estate.
21. One MAP provided support and noted the proposed $\leq 3\text{dB}$ noise limit aligns with existing thresholds and has been validated through testing.
22. One Large Supplier Party caveated support for the proposed noise RF Noise Limits, requesting that DCC confirm that all relevant metering equipment has been physically tested and there is test result evidence available and that test evidence must confirm the equipment is fully operational with no unexpected results or non-compliances. Further, that testing includes "noisy" and congested RF environments such as Crowded Meter Rooms (CMRs) to understand RF interference immunity.
- a. DCC can confirm that testing has taken place and that analysis covered 100% of the installed estate. At the time of testing (Jan –Apr 2024) there were a total of 46 different meter models produced by all the SMETS2 meter Manufacturers. The physical testing that was undertaken represented 60% of the installed estate and confirmation from meter Manufacturers that a further 30% were equivalent to those tested. One meter Manufacturer used the 4G Communication Hub Antenna Structure (CHAS) to perform test and supplied test reports which represented a further 7%. Samples for the remaining 3% could not be obtained and was also not found to be equivalent to any meters tested. These older meters were manufactured pre-ICHIS.
 - b. DCC engaged and discussed this testing with the ICHIS working group, the Wide Area Network (WAN)/Home Area Network (HAN) working group and the Technical Architecture and Business Architecture Sub-Committee (TABASC). The analysis based on the results of test conducted and assessment of IPV, DCC provided the below recommendations for the mass roll out of 4G CH:
 - i. Analysis outcome
 - The number of noisy meters with risk of impact to WAN performance is very small: **0.2 % of C&S Meter Estate.**
 - The majority of these meters are old, and have 2G/3G ICHIS noise derogations.
 - IPV has shown 4G CH at noisy meter locations had no issues and performed in line with deployed 4G CH at non- noisy meter sites.
 - ii. Recommendation
 - Based on the very low risk of impact on WAN performance and the results of IPV:
 - DCC do not recommend any further mitigation measures (No flying lead required- installs similar to 2G/3G/LRR).

- If suppliers experience any issue with WAN connectivity, they are invited to raise the usual SR8.14.2 “install and leave” incident and DCC will investigate.

4. DCC Considerations and Next Steps

23. DCC confirms that through this consultation process we have met the requirements detailed within section H12.5 and H12.6 of the SEC (Consultation Regarding ICHIS) and that the updated ICHIS document (v3.1) remains fit for purpose. The updated document will be available on DCC's website.
24. DCC will discuss the outcome of this consultation at the next ICHIS Working Group for any further feedback.

5. Attachments

Attachment 1: Intimate Communications Hub Interface Specification (ICHIS) V3.1