Data Communications Company

Consultation on updates to the Wide Area Network Selection Arrangements

Issued: 30 June 2026
Respond by: 17:00 on 27 July 2026
Contact: consultations@smartdcc.co.uk
Classification: DCC Public

Table of Contents

1. Background and context

1. This consultation sets out and seeks your views on proposed changes to the Wide Area Network (WAN) Selection Arrangements (WANSA) document to provide greater clarity on the parameters used by Virtual WAN (VWAN) Communications Hubs (VWCHs) to determine the WAN communications route to connect to the DCC.

2. We are seeking your responses to the questions set out in this consultation by **17:00 on Monday 27 July 2026**.

1.1. The WAN Selection Arrangements document

3. VWAN enables smart meter installations in areas with no network coverage by securely routing data through the consumer's home internet to the DCC. This is managed by a VWCH, which automatically switches between 4G cellular (the Smart Metering Wide Area Network (SM WAN)) and the home internet (the Virtual WAN) depending on signal strength.

4. The WAN Selection Arrangements document sets out the VWCH configuration settings and associated VWCH logic by which VWCHs will elect to communicate with the DCC via the SM WAN or via the Virtual WAN.

5. The VWCH configuration settings referred to in the WAN Selection Arrangements cover areas such as link quality for the WAN channels which is the amount of time a link quality is bad before it is considered poor enough to switch. The WANSA rules set out how VWCH operational data relating to link quality is used in combination with the settings to determine when switching should occur.

6. The Department for Energy Security and Net Zero (DESNZ) (the Department) consulted on the initial version of the WAN Selection Arrangements in July 2025 and subsequently concluded on it in September 2025. DESNZ anticipated that this document would evolve during the VWAN soft launch period and beyond as DCC refines configuration data items based on live operational experience to find the optimal settings. DESNZ also noted that additional data fields might be introduced over time. Consequently, this consultation presents updated proposals derived from the soft launch insights, establishing the version that will apply from the 4G Release 2 Initial Pallet Validation (IPV) phase.

7. In conjunction with DESNZ, we have shared the impact and scope of these parameters through the Technical and Business Design Group (TBDG) and its respective sub-groups.

2. Proposed changes to the WAN Selection Arrangements

8. This section sets out the proposed changes to the WAN Selection Arrangements.

2.1. Structural and terminology improvements

9. The document has been revised to provide a clearer and more logical structure. This includes separating the content relating to WAN selection logic, link state assessment and configuration parameters into distinct sections. Change have also been made to improve readability through clearer drafting.

10. The document has also been updated to ensure consistent terminology throughout, including:

- Standardisation of the terms:
  - SM WAN interface (cellular connectivity)
  - VWAN interface (virtual WAN connectivity via the internet)

- Alignment with terminology used in the Smart Energy Code (SEC) and SEC Schedule 10 'Communications Hub Technical Specifications' (CHTS)
- Consistent use of defined states such as "viable / not viable" and "good / not good"

11. This improves clarity and reduces ambiguity for stakeholders.

2.2. WAN selection logic

12. Changes have been made to the document to provide a clearer definition of how WAN selection operates. This includes confirmation that only one WAN interface is active at any given time and that the selection of which interface is used is determined by:

- The WANRoutePriority parameter; and
- The link state (viability) of each interface.

13. A key area of enhancement is the treatment of link state assessment. For the SM WAN (cellular) interface, the document now sets out a more structured framework based on three criteria:

- signal quality
- frequency of disconnections; and
- connection availability (including validation of the data path).

14. These criteria are supported by defined monitoring intervals and thresholds, with a clearer explanation of how "good" and "not good" conditions are determined and how these contribute to an overall assessment of viability. The document also makes it clear that all relevant criteria must be satisfied for the interface to be considered viable.

15. For the VWAN interface, the link state assessment has been clarified. Viability is determined based on the receipt of authenticated messages within a defined monitoring interval, supported by a structured heartbeat monitoring approach.

2.3. WAN switching algorithm

16. The document has been updated with an enhanced explanation of WAN switching behaviour (when the VWCH switches from the SM WAN Interface to the VWAN Interface or vice versa). This includes clearer definitions of the conditions under which switching occurs, as well as the operational consequences of a switch. It clarifies how the system handles in-flight activities such as message retries, pending communications and firmware downloads, and confirms that retry attempts will continue over the newly selected WAN interface following a switch.

17. New diagrams in Appendix C of the WANSA provide an overview of the switching algorithm, including while the VWAN interface is active (and SM WAN is the priority route) and while a VWCH is operating over the SM WAN interface (and SM WAN is the priority route).

2.4. Heartbeat monitoring

18. Further clarity has been introduced through the formalisation of 'heartbeat monitoring' across both WAN interfaces. The document explains that 'heartbeat' messages are exchanged continuously, regardless of which interface is currently active, to maintain visibility of link health and to support timely switching decisions. It also introduces configurable parameters governing heartbeat frequency and identifies potential for future optimisation of these parameters to improve operational efficiency.

2.5. VWAN activation during I&C

19. The behaviour of the system during Installation and Commissioning (I&C) has also been clarified. The document sets out that the VWAN interface may be prioritised during commissioning, for example when activated via Inter-PAN processes, irrespective of the viability of the SM WAN interface. It also introduces minimum duration requirements before a switch away from VWAN can occur, ensuring sufficient stability to complete installation activities before normal WAN selection rules are applied. Using the current settings, the earliest transition from the VWAN interface to the SM WAN interface can only occur after six hours.

2.6. VWCH parameters and WAN Interface selection

20. Appendix A of the WANSA has been expanded to strengthen the parameter framework underpinning WAN interface selection. It now provides additional detail on parameter values, permissible ranges and the rationale for their selection, together with an explanation of how these parameters influence switching behaviour. The document also introduces clearer governance principles in relation to the management and potential future adjustment of these parameters.

21. Appendix B of the document now includes a more structured description of expected behaviour under different connectivity conditions, specifically scenarios of good, poor and no cellular connectivity. This provides greater clarity on how WAN selection is expected to operate in practice, including the likelihood and timing of switching between interfaces in different environments.

3. Next steps

22. Following the closure of this consultation, DCC will assess respondents' views and amend the draft changes to the WAN Selection Arrangements as required. DCC will then submit an amended version of this document to the Department that it considers suitable for approval by the Secretary of State.

23. DCC is aiming to provide a report to the Department by no later than August 2026. This report will contain DCC's consideration of the responses to this consultation as well as the proposed updated version of the WAN Selection Arrangements and the proposed date for its publication. DCC will publish its conclusions document on its website.

4. Consultation questions and how to respond

24. We are seeking your views on the following questions?

Q1	Do you agree with DCC's proposed approach to WAN selection and WAN interface switching algorithm? *Please provide any comments you may have on the proposed changes and your rationale for your views.*
Q2	Do you agree with DCC's proposed approach to VWAN activation during I&C? *Please provide any comments you may have on the proposed changes and your rationale for your views.*
Q3	Do you agree with the proposed VWCH parameters as listed in Appendix A? *Please provide any comments you may have on the proposed changes and your rationale for your views.*

Q4	Do you have any further comments on the proposed changes to the WAN Selection Arrangements?

25. Please provide responses using the attached response form by **17:00 on Monday 27 July 2026** to DCC at consultations@smartdcc.co.uk.

26. Consultation responses may be published on our website (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 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.

27. If you have any questions about this consultation, please contact us at consultations@smartdcc.co.uk.

5. Attachments

28. This consultation includes two attachments:

- Attachment 1: Proposed changes to the WAN Selection Arrangements
- Attachment 2: Consultation response template