



Department for
Energy Security
& Net Zero

**Department for Energy
Security & Net Zero**
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The Authority (Ofgem), the SEC Panel, SEC Parties
and other interested parties

9 October 2025

Dear Colleague,

**DESNZ RESPONSE TO CONSULTATION ON THE SECOND VERSION OF THE VIRTUAL WAN
TRANSITION DOCUMENT, THE VIRTUAL WAN INTERFACE SPECIFICATION AND
DOCUMENTATION NEEDED TO SUPPORT THE VIRTUAL WAN KEY INFRASTRUCTURE
(VWKI) AND ON THE DATE OF THEIR INCORPORATION INTO THE SEC**

On 18 August 2025, the Department published a consultation¹ on the second version of the Virtual WAN Transition Document to make changes that allow Virtual WAN Device (VWD) Manufacturers to become subscribers for VWD Certificates and to allow them to access the necessary server side and issuing authority certificates.

To support these arrangements, we also consulted on a suite of SEC subsidiary documents that are needed for the switch-on of the Virtual WAN Key Infrastructure (VWKI) Services and to allow VWD manufacturers to qualify to become subscribers for VWD Certificates. This includes the Virtual WAN Interface Specification, the VWKI Certificate Policy and other VWKI Documents.

Finally, we consulted on a proposed date for incorporation of all of these documents into the SEC, which we are proposing will be 10 October 2025 (or as soon as reasonably practicable within one month thereafter).

We received four responses to the consultation, and our conclusions document is included in Annex 1 to this letter. In light of:

- i) the responses to the consultation;
- ii) the fact that the SMKI Policy Management Authority (SMKI PMA) has approved the VWKI documents and the Certification Practice Statement;
- iii) the fact that Security Sub Committee (SSC) assisted by the Code Administrator has established procedures for VWD Manufacturers to submit statements in relation to VWD Device Models under Section F2.41 of the SEC; and
- iv) the fact that DCC has now notified us that the VWKI Service will be ready to go live on 17 October 2025,

I am now designating/re-designating the following documents for incorporation into the SEC with effect from 17 October 2025:

- SEC Appendix AZ - VWAN Transition Document v2.0

¹ Available [here](#).

- SEC Appendix BA - VWAN Interface Specification v1.0
- SEC Appendix BB - VWKI Certificate Policy v1.0
- SEC Appendix BC - VWKI Registration Authority Policies and Procedures v1.0
- SEC Appendix BD - VWKI and VWKI Repository Code of Connection v1.0
- SEC Appendix BE - VWKI Interface Design Specification v1.0
- SEC Appendix BF - VWKI Repository Interface Design Specification v1.0

The direction letter associated with this designation/re-designation is included in Annex 2 to this covering letter.

Yours faithfully,



James Cosgrove

Deputy Director

Smart Metering Implementation Programme

(An official of the Department for Energy Security & Net Zero authorised to act on behalf of the Secretary of State).

Annex 1: DESNZ Response to consultation on the second version of the Virtual WAN Transition Document, the Virtual WAN Interface Specification and documentation needed to support Virtual WAN Key Infrastructure and the date of their incorporation into the SEC.

Annex 2: Direction letter

Annex 3: SEC Appendix AZ - VWAN Transition Document v2.0

Annex 4: VWAN Interface Specification v1.0

Annex 5: VWKI Certificate Policy v1.0

Annex 6: VWKI Registration Authority Policies and Procedures v1.0

Annex 7: VWKI and VWKI Repository Code of Connection v1.0

Annex 8: VWKI Interface Design Specification v1.0

Annex 9: VWKI Repository Interface Design Specification v1.0

Annex 1: DESNZ RESPONSE TO CONSULTATION ON THE SECOND VERSION OF THE VIRTUAL WAN TRANSITION DOCUMENT, THE VIRTUAL WAN INTERFACE SPECIFICATION AND DOCUMENTATION NEEDED TO SUPPORT THE VIRTUAL WAN KEY INFRASTRUCTURE AND ON THE DATE OF THEIR INCORPORATION INTO THE SEC

1. Introduction

- 1.1. On 18 August 2025, the Department published a consultation² on the second version of the Virtual WAN Transition Document to make changes that allow Virtual WAN Device (VWD) Manufacturers to become subscribers for Virtual WAN Device Certificates (VWD Certificates) and to allow them to access the necessary server side and issuing authority certificates.
- 1.2. To support these arrangements, we also consulted on a suite of SEC subsidiary documents that are needed for the switch-on of the Virtual WAN Key Infrastructure (VWKI) Services and to allow VWD manufacturers to qualify to become subscribers for VWD Certificates. This includes the Virtual WAN Interface Specification, the VWKI Certificate Policy and other VWKI Documents.
- 1.3. Finally, we consulted on a proposed date for incorporation of all of these documents into the SEC, of 10 October 2025 (or as soon as reasonably practicable within one month thereafter).
- 1.4. The consultation asked four questions:
 - Q1: Do you have any comments on the drafting of the VWAN Transition Document v2.0 (draft) in Annex 2 to the covering letter?
 - Q2: Do you have any comments on the VWIS in Annex 3 to the covering letter?
 - Q3: Do you have any comments on any of the VWKI documents in Annexes 4-8 to the covering letter?
 - Q4: Do you have any comments on the proposal to (re)designate the suite of documents above for incorporation into the SEC on 10 October 2025 (or as soon as practicable within one month thereafter)?

2. Comments received

- 2.1. We received four responses to the consultation.
- 2.2. Respondents who answered the specific questions posed were generally supportive of the documentation and of the proposed approach. A number of specific points on the documentation were raised as follows:
- 2.3. One respondent raised the issue of VWDs only operating as single band 2.4GHz devices, suggesting that while at face value this appears sensible, not allowing dual band Virtual WAN devices may limit their installation in larger premises, where the broadband router or VWD may be some distance from the comms hub.
- 2.4. In response to Q2, one respondent questioned the perceived requirement to store both the Root VWKICA and Issuing VWP CA Certificate on the VWD and queried when that had been discussed previously with manufacturers. They suggested that given the absence of

² Available [here](#).

any trust anchor management there should only be a requirement to store the issuing certificate that signed the VWP certificate presented during mTLS.

- 2.5. In response to Q2, one respondent suggested that the need to retry on absence of PUBACK should not be required to continue endlessly. They proposed that should be a finite number of retries or a timeout used to determine that an alternate course of action (such as reset of the connection) is necessary.

Other points raised

- 2.6. One respondent queried whether there is sufficient time between the opening of the UIT phase and the MR2 development to allow changes to any specifications where manufacturers (including of the Communications Hub) may have interpreted the technical documents differently in a way that significantly impacts the Virtual WAN performance.
- 2.7. Finally one respondent made a number of general comments regarding use of VWAN, the reliability of WAN coverage information and the need for live service criteria in advance of Soft Launch and success criteria for Soft Launch.

3. DESNZ Response

- 3.1. The VWD is a high bandwidth device (it communicates frequently) and, as explained in Table 4 of the Virtual WAN Interface Specification, is therefore unsuitable for operation at 868MHz due to duty cycle/bandwidth concerns.
- 3.2. There is a requirement in the VWIS to perform certification path validation (CPV) when establishing the TLS session. This requires checking the certificate chain to the self-signed root CA certificate, therefore both the Issuing VWP CA Certificate and the Root VWKICA Certificate will be required for this operation. The VWIS does not stipulate the manner by which the certificates should be stored, nor where they should be stored. Providing CPV can be performed at the point of establishing the TLS session, that is all that is required. As the CA certificates are static, they can be stored within the VWD. However, there are alternatives, for example, the VWD could use its own secure mechanism to retrieve the CA certificates on the fly, store them temporarily and perform CPV, or it could present its received end-entity VWP certificate and request CPV remotely. In all cases, it is also possible to securely cache the result of the CPV for the associated VWP public key. To reflect this flexibility, the word "stored" has been removed from Section 5.3.1. In all cases, conformance to ETSI 303 645 would require that the certificates are protected from adverse modification however they are stored or obtained by the VWD.
- 3.3. As far as issues such as retry requirements under the Virtual WAN Interface Specification (VWIS) are concerned, we have been in further discussions with the DCC regarding this document. It is recognised that there are a number of areas, such as this, in which further clarification is needed and that the document may need to be further updated in light of matters arising in testing. It is now planned that there will be a further release of VWIS prior to Soft Launch. Prospective changes to VWIS will be shared with VWD manufacturers in the VWAN Sub-Group of the Technical and Business Design Group (TBDG). Thereafter the VWIS will be further updated, if necessary, in light of lessons learned during Soft Launch.
- 3.4. On testing, it is recognised that timescales might be tight, but we do still think there is time for issues to be addressed prior to MR2 if needed. Failing that, issues would need to be addressed after the MR2 release. It is also the case that UIT testing will remain open until at least the MR2 release.
- 3.5. Finally we will be progressing work on the live service criteria for Soft Launch in the near future.

4. Next Steps

- 4.1. With effect from 17 October 2025 DESNZ is today (re)designating the documents upon which we consulted on 18 August 2025. The effect of this is essentially to switch on the VWKI Services from 17 October 2025 such that Virtual WAN Provider and Virtual WAN Device Certificates can be issued by the DCC in advance of Soft Launch.
- 4.2. We are also making a number of consequential changes to the SEC to reflect the vernacular used in relation to VWKI Certificates within the VWKI Certificate Policy (i.e version we consulted on 18 August 2025, which differs slightly to that used in the original SEC drafting). Consequential changes are also being made to reflect the fact that there will not be mechanisms to support the revocation of VWKI Certificates and to correct typographical errors.
- 4.3. Our consultation³ on VWKI-related changes to a number of technical documents (DUI, MMC, GBCS, CHTS and TSAT) scheduled to be made as part of the November SEC Release remains open until 24 October 2025.
- 4.4. We will be issuing a further consultation on the remaining SEC subsidiary document changes to support Soft Launch in November 2025.
- 4.5. An updated version of the table setting out the four phases of change to SEC subsidiary documents is set out below.

³ The document can be found [here](#).

Table 1

Stage	Description	Date of consultation	Date phase goes live	Documents Affected	Comments
1	Principal obligations on DCC to provide VWAN-related Services switched off. Arrangements for ordering VWAN CHs put in place.	28 July 2025. See here .	11 September 2025. See here .	VWAN Transition Document v1.0 WAN Selection Arrangements v0.4 CHTSv1.7 GBCSv4.4 CRP666 version 0_3	Now implemented.
2	Switch on of the VWKI Services to allow VWD Manufacturers to subscriber for VWAN Device Certificates and to access copies of: - The Root VWKICA Certificate; - Issuing VWP CA Certificates; and - VWP Certificates.	18 August 2025. See here .	9 October 2025 – to take effect from 17 October 2025. This conclusions document	VWAN Transition Document v2.0 Virtual WAN Interface Specification v1.0 VWKI Certificate Policy v1.0 VWKI Registration Authority Policies and Procedures v1.0 VWKI Interface Specification v1.0 VWKI Code of Connection v1.0 ⁴ VWKI Repository Interface Specification v1.0 VWKI Repository Code of Connection v1.0 ⁴ VWKI Certification Practice Statement v1.0	The VWKI Documents & Certification Practice Statement has been approved by SMKI PMA.
3	Changes to coincide with the 6 November SEC Release	September 2025. See here . This consultation remains open.	6 Nov 2025	GBCS v4.4 CHTS v1.7 DUIS v5.4 MMC v5.4 TSATv25	The changes to these documents needed to support VWAN are being made to coincide with the 6 November SEC release to reduce costs of implementation.
4	Soft Launch	November 2026	30 January 2026	VWAN Transition Document v3.0 The list of other affected documents is still being finalised, but may include SEC Appendices: E, I, AB, and AC .	

⁴ Please note that it is planned that the VWKI Code of Connection and the VWKI Repository Code of Connection are combined into a single document for Soft Launch.

Annex 2: Direction

This direction is made for the purposes of the smart meter communications licences granted under the Electricity Act 1989 and the Gas Act 1986 (such licences being the “DCC Licence”) and the Smart Energy Code designated by the Secretary of State pursuant to the DCC Licence (such code being the “SEC”).

Words and expressions used in this direction shall be interpreted in accordance with Section A (Definitions and Interpretation) of the SEC.

Pursuant to Condition 22 of the DCC Licence and Section X5 (Incorporation of Certain Documents into this Code) of the SEC, the Secretary of State directs that, with effect from 17 October 2025:

- i) the Virtual WAN Transition Document previously designated and incorporated into the SEC as Appendix AZ is hereby re-designated and incorporated in the form set out in annex 3 to the covering letter of this document;
- ii) the Virtual WAN Interface Specification is hereby designated and incorporated in the form set out in annex 4 to the covering letter of this document as SEC Appendix BA;
- iii) the VWKI Certificate Policy is hereby designated and incorporated in the form set out in annex 5 to the covering letter of this document as SEC Appendix BB;
- iv) the VWKI Registration Authority Policies and Procedures is hereby designated and incorporated in the form set out in annex 6 to the covering letter of this document as SEC Appendix BC;
- v) the VWKI and VWKI Repository Code of Connection is hereby designated and incorporated in the form set out in annex 7 to the covering letter of this document as SEC Appendix BD;
- vi) the VWKI Interface Design Specification is hereby designated and incorporated in the form set out in annex 8 to the covering letter of this document as SEC Appendix BE;
- vii) the VWKI Repository Interface Design Specification is hereby designated and incorporated in the form set out in annex 9 to the covering letter of this document as SEC Appendix BF;

For the avoidance of doubt the re-designation of the Virtual WAN Transition Document shall be without prejudice to anything done under the DCC Licence or the SEC on or after this document being re-designated, or the continuing effectiveness of anything done in this document prior to its re-designation (which shall have effect as if done under the re-designated document).

The following consequential amendments are also made:

- i) In the list of Appendices in the contents section of the SEC, the following text is to be added to the end of the list:
 - “Appendix BA:** Virtual WAN Interface Specification
 - Appendix BB:** VWKI Certificate Policy
 - Appendix BC:** VWKI Registration Authority Policies and Procedures
 - Appendix BD:** VWKI and VWKI Repository Code of Connection
 - Appendix BE:** VWKI Interface Design Specification
 - Appendix BF:** VWKI Repository Interface Design Specification”
- ii) In SEC Section A (Definitions and Interpretation):
 - a) In the definition of VWKI Certificate Policy, replace the words “Appendix [TBC]” with “Appendix BB”.

- b) In the definition of VWKI Registration Authority Policies and Procedures, replace the words "Appendix [TBC]" with "Appendix BA".
- c) Change the definition of "VWKI Code of Connection" to read: "that part of the SEC Subsidiary Document set out in Appendix BD that pertains to connections to the VWKI Services other than to the VWKI Repository."
- d) Change the definition of VWKI Repository Code of Connection to read: "that part of the SEC Subsidiary Document set out in Appendix BD that pertains to connections to the VWKI Repository."
- e) Delete the definition of "VWKI Device Certificate".
- f) Insert (in alphabetical order) a new definition as follows:

Virtual WAN Device Certificate (or VWD Certificate)	has the meaning given to that expression in the VWKI Certificate Policy.
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- g) Delete the definition of "VWAN Provider Certificates".
- h) Insert (in alphabetical order) a new definition as follows:

Virtual WAN Provider Certificate (or VWP Certificate)	has the meaning given to that expression in the VWKI Certificate Policy.
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- i) Replace the definition of "VWKICA Certificates" with the following text: "means the Root VWICA Certificate, the Issuing VWP CA Certificate and the Issuing VWP CA Certificate (where each term is defined in the VWKI Certificate Policy)."
 - j) In the definition of "Virtual WAN Device", replace the words "Virtual WAN Device" with the words "Virtual WAN Device (or VWD)".
 - k) In the definition of "Virtual WAN Provider Service", replace the words "Virtual WAN Provider Service" with the words "Virtual WAN Provider Service (or VWP Service)".
 - l) In the definition of "Compromised", in sub-paragraph h, replace the word "VWICA" with the word "VWKICA".
 - m) Delete the definitions of "VWKI Certificate Revocation List" and "VWKI Authority Revocation List".
- iii) In SEC Sections F2.40, F2.44, L18.44, L18.45 and L18.46, replace all instances of the terms "VWKI Device Certificate" and "VWKI Device Certificates" with the terms "Virtual WAN Device Certificate" and "Virtual WAN Device Certificates" respectively.
- iv) Replace Section L18.39 with the following: "L18.39 not used".
- v) Replace Section F2.44 with the following text:
- "F2.44 The DCC shall:
- (a) only issue VWKI Device Certificates in respect of Device Models listed on the Security Sub-Committee's list of Virtual WAN Device Models;
 - (b) only communicate with Virtual WAN Devices which have VWKI Device Certificates; and

- (c) suspend communications with Virtual WAN Devices of particular Device Models if instructed to so by the Security Sub-Committee or the Panel (even though they have VWKI Device Certificates)."

Annex 3: SEC Appendix AZ - VWAN Transition Document v2.0

Published separately.

Annex 4: SEC Appendix BA - VWAN Interface Specification v1.0

Published separately.

Annex 5: SEC Appendix BB - VWKI Certificate Policy v1.0

Published separately.

Annex 6: SEC Appendix BC - VWKI Registration Authority Policies and Procedures v1.0

Published separately.

Annex 7: SEC Appendix BD - VWKI and VWKI Repository Code of Connection v1.0

Published separately.

Annex 8: SEC Appendix BE - VWKI Interface Design Specification v1.0

Published separately.

Annex 9: SEC Appendix BF - VWKI Repository Interface Design Specification v1.0

Published separately.