



**Department for Energy Security
& Net Zero**
3-8 Whitehall Place
London SW1A 2AW
www.gov.uk/energysecurity

The Authority (Ofgem), the SEC Panel, SEC Parties
and other interested parties

23 April 2025

Dear Colleague,

**SMART METERING IMPLEMENTATION PROGRAMME: CONCLUSIONS ON POLICY
FRAMEWORK FOR SMART METERING SYSTEMS CONNECTED TO THE DCC VIA THE
CONSUMER'S INTERNET CONNECTION AND CONSULTATION ON PROPOSED LEGAL
DRAFTING CHANGES**

On 16 January 2025 the Government issued a consultation¹ on the policy framework for Smart Metering Systems connected to the DCC via the internet.

The consultation closed on 28 February 2025 and 8 responses were received. The majority of the respondents were broadly in favour of the proposals, although several specific points were raised.

Considering the responses, DESNZ has developed changes to licences and the main body of the Smart Energy Code that it believes are needed to support the Virtual WAN Arrangements and the attached Annex 1 explains those proposed changes and invites comments on the drafting. Annexes 2 and 3 include a markup of the proposed legal drafting.

Comments on the proposed legal changes and associated reasons should be submitted to smartmetering@energysecurity.gov.uk by 17:00 on 30 May 2025.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'J Cosgrove'.

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).

¹ <https://smartenergycodecompany.co.uk/desnz-further-conclusions-on-smart-meters-connected-to-the-dcc-via-the-internet-and-further-consultation-on-the-associated-policy-framework/>

Annex 1 Response to the January 2025 Consultation on the Policy Framework for Smart Metering Systems Connected to the DCC via the Consumer's Internet, and Consultation on the proposed changes to Licence Conditions and to the Main Body of the SEC to support the Virtual WAN Arrangements.

Annex 2 Changes to the DCC Licence, Gas and Electricity Supply Licences and the Smart Energy Code (other than Section L) to implement the Virtual WAN Arrangements.

Annex 3 Changes to Section L.

Annexes 2 and 3 are published separately.

ANNEX 1: Response to the January 2025 Consultation on the Policy Framework for Smart Metering Systems Connected to the DCC via the Consumer's Internet, and Consultation on the proposed changes to Licence Conditions and to the Main Body of the SEC to support the Virtual WAN Arrangements

1. Background & structure

- 1.1. The background to this consultation is set out in the covering letter. Section 4 of the 16 January 2025 conclusions/consultation document¹ set out several policy proposals relating to the Virtual WAN Arrangements.
- 1.2. The structure of this document is as follows:
- Section 2 sets out the terminology used in this document for ease of reference.
 - Section 3 summarises the responses to the matters consulted upon in the January 2025 document, and the government conclusions on these matters.
 - Section 4 summarises the proposed changes to licence conditions and to the main body of the Smart Energy Code in order to implement the Virtual WAN Arrangements.
 - Section 5 sets out the next steps and invites comments on the proposed legal drafting changes.

2. Nomenclature

- 2.1. The terminology used in this document is set out in the table below².

Term	Meaning
SMKI PMA	The Smart Metering Key Infrastructure Policy Management Authority – the body that oversees public key infrastructures implemented under the SEC.
soft launch	The initial implementation of the VWAN Arrangements following “go-live”. It is planned that a limited number of Virtual WAN Communications Hubs (VWCHs) will be made available by the DCC in this period.
WAN Selection Arrangements	A document established under the Communications Hub Technical Specifications which sets out the arrangements for how a VWCH selects whether to route messages to the DCC via either the Smart Metering Wide Area Network (SM WAN) or the internet. Any changes to this document will be required to be approved by the SEC Panel.
Virtual WAN Arrangements (VWAN Arrangements)	A general description of the overall arrangements supporting the implementation of the new internet-based communications solution for smart metering. This includes the Virtual WAN Solution, Virtual WAN Devices (VWDs), and Virtual WAN Communications Hubs

² Please note that the meanings included in this table are intended to assist the reader of this conclusions/further consultation document. In legally defining the terms for the purposes of licence conditions and the SEC, the wording may vary from the descriptions set out in the table above.

	(VWCHs) and the supporting changes to the regulatory framework.
Virtual WAN Communications Hub (VWCH)	A Communications Hub that has the capability to connect to a VWD.
Virtual WAN Device (VWD)	A device that can connect to and convey messages between a VWCH and the DCC's VWP interface via the consumer's internet connection.
Virtual WAN Key Infrastructure (VWKI)	A new public key infrastructure overseen by the Smart Metering Key Infrastructure Policy Management Authority (SMKI PMA) that is used to issue certificates to the Virtual WAN Provider and in respect of VWDs for the purposes of securing communications between them.
Virtual WAN Provider (VWP)	A new interface within DCC that will allow messages to be conveyed to and from Smart Metering Systems over the internet, the consumer's internet connection, a VWD and a VWCH. The Virtual WAN Provider will also connect to existing DCC Systems.
Virtual WAN Reliant Premises (VWAN Reliant Premises)	A premises which relies upon an installed VWAN Smart Metering System (SMS).
Virtual WAN Smart Metering System (VWAN SMS)	A Smart Metering System that is capable of communicating with the DCC via the Virtual WAN Solution
Virtual WAN Solution (VWAN Solution)	The technical solution supporting the VWAN arrangements which includes the new DCC capability to route messaging to and from Smart Metering Systems via VWDs over the internet and consumer's internet connection (the VWP), as well as VWDs and VWCHs.

- 2.2. Other capitalised terms in this document have the meaning set out in the Smart Energy Code or conditions of gas and electricity supply licences or of the DCC Licence.

3. Responses to the January 2025 Consultation

- 3.1. 8 responses to the December 2025 consultation were received from the following categories of respondent:
- 1 Device Manufacturer
 - 2 Large energy suppliers
 - 2 Industry Bodies
 - 3 Other.
- 3.2. Several policy proposals were put forward in the consultation. These are set out in turn below along with a summary of the responses received and the government conclusions. Other miscellaneous points raised are also covered.

We proposed that VWCH functionality should be incorporated into 4G Communications Hubs (4G CHs) during 2026 and that 4G CHs without the functionality will be capable of being upgraded over the SM WAN to have it.

- 3.3. The four respondents who commented on this proposal agreed with it, and we propose to proceed with this approach.

We proposed that energy suppliers should be required to offer the consumer a VWAN SMS in circumstances where they plan to install a Smart Metering System at a No-WAN premises (subject to consumer consent to use their internet connection). We also proposed that where a Smart Metering System (SMS) is installed in a No-WAN premises, it will only count towards meeting the supplier's regulatory obligations if the supplier has offered the consumer a VWAN SMS at those premises.

We also proposed that where there is an existing Smart Metering System installed in a No-WAN premises and the consumer requests the use of a VWD (and consents to the use of their internet connection) the supplier³ would be required to install a VWD as soon as reasonably practicable after the consumer request had been made. The supplier would not be permitted to charge a one-off fee for making the site visit or providing the VWD.

- 3.4. One respondent did not currently agree with the proposals stating that the obligations rely on the accuracy of the 4G Coverage Checker and that the Communications Hub rules for when the Virtual WAN Communications Hub would default to the Virtual WAN or the SM WAN had not been defined. Another respondent suggested further engagement with energy suppliers and consumer bodies. Finally, one respondent queried whether the obligation would apply in relation to a property or whether it would be re-triggered by a new owner or tenant.
- 3.5. We can confirm that our proposal would be triggered by a new owner or tenant. However, the current plan is that soft launch⁴ of the VWAN Solution will take place in Q1 2026, with mass availability of VWCHs in Q4 2026. The obligations proposed above would not take effect until mass VWCH availability and as a consequence we accept that it is probably too early to set out the detail of how they would operate now. We will consult nearer to the time of mass VWCH availability on the detail of how these obligations might be structured in supply licence conditions and meanwhile, have not included drafting in the proposed legal changes being put forward in this consultation.

We proposed that the DCC be required to provide a monthly report on the number of premises which are operating using the Virtual WAN Solution and the status of those premises on the SM WAN Coverage Database.

- 3.6. The three respondents that commented on this proposal supported the suggestion, one suggesting that DCC's progress and operational performance should be monitored. We agree that DCC's performance should be monitored by the SEC Panel and its Sub-Committees. We think that precisely what reporting DCC should provide is something that needs to be considered further in light of experience of device operation during the soft launch period and therefore that it is something that we do not wish to hardwire into the SEC at this point in time. We are therefore proposing to make provision for the VWAN Transition Document to be able to specify reporting requirements and that we will make enduring SEC changes to specify reporting requirements prior to mass availability of Virtual WAN Communications Hubs in Q4

³ At dual fuel sites (where different suppliers supply the gas and electricity) this obligation would apply to the Lead Supplier for the Communications Hub at the premises, which is typically the electricity supplier.

⁴ Please see the table in section 2 for a description of soft launch.

2026. We expect the reporting to be used to garner information on deployment and matters relating to the operation of the service.

We proposed that where the consumer agrees to the use of their internet connection in a No-WAN premises, the supplier should be required to establish a connection that enables the exchange of information between the Smart Metering System at the premises and the licensee's Communications System (via a VWD, the consumer's internet connection and the VWAN Provider systems); and

that in the case of a VWD Reliant Premises, the supplier should be required not to act in a manner that compromises the connection between the VWD and the VWCH. In practice, the most direct impact of this would be essentially to prevent the supplier from sending a command that disconnects the VWD from the VWCH.

- 3.7. One respondent supported these proposals but said that the monitoring and enforcement of the obligation was not clear. Another agreed that suppliers should not be responsible for the connection between the VWD and the internet, and a third said that the arrangements should be subject to the same security incident arrangements that apply to the rest of smart metering and that the SSC should have the ability to instruct DCC to suspend the services in whole or in part.
- 3.8. Our view is that, as with other licence conditions, Ofgem will be responsible for monitoring and enforcement of any new licence conditions. We agree that suppliers should not be made explicitly responsible for the maintenance of the connection between the VWD and the internet, since this is under the control of the consumer. We are proposing (please see the next section) that the Security Sub Committee/SEC Panel will have the ability to instruct the DCC to cease communications with VWAN Device Models of a particular type and ultimately, if necessary, to require the revocation of associated security credentials. In addition, the DCC more generally has duties to prevent (or minimise the extent of) any compromise of its systems.
- 3.9. We have proposed changes to the operational licence conditions to reflect these obligations in the proposed new condition 49.20A (electricity) and 43.20A (gas) and the associated definition of "Free of Charge".

We proposed that any VWD functionality should be such that this functionality will:

- **continue to operate on change of supplier (CoS)**
- **not be dependent on additional services (e.g. from the Manufacturer)**
- **be unencumbered by any other functionality of the device.**

We also proposed that VWD Devices should be required to meet the requirements of ETSI 303 645.

As part of this we proposed that the obligation to ensure that this is the case is placed on the DCC User who connects the VWD to the VWCH via the relevant Service Requests.

- 3.10. One respondent stated that clarity was needed on whether the installing supplier needs to secure firmware maintenance capabilities for devices that are subject to Change of Supplier. Another stated that they had no objections to ETSI 303 645 being used as a security assurance standard. However, another strongly disagreed with any proposal to enforce compliance with ETSI 303 645 in full, believing that this was not reasonable or proportionate given the associated risks. One respondent believed that these obligations should apply to any User connecting a VWD to a VWCH. Finally, one respondent stated that an inheriting

supplier must have the ability to communicate via a CoS gained VWD that runs bespoke firmware and potentially have the ability to maintain such a device through a defined firmware upgrade path.

- 3.11. Further to discussions with the Security Sub-Committee, we are proposing a slightly different approach to managing these requirements and which we believe will address the issues raised above, including softening of the requirement to fully comply with ETSI 303 645. As part of the implementation of the VWAN Arrangements, it is being proposed that a new Public Key Infrastructure will be implemented (Virtual WAN Key Infrastructure – or VWKI). Under VWKI, Certificates would be issued to the Virtual WAN Provider (the new part of DCC Systems that provides the interface to Virtual WAN Devices (VWDs) over the internet) and in respect of VWDs themselves. These Certificates would be used to establish a secure connection between the VWD and the Virtual WAN Provider over which smart metering messages could be sent. The Certificates issued in respect of VWDs are referred to as Virtual WAN Device Certificates.
- 3.12. We are now proposing that the Security Sub-Committee will maintain a list of “permissible” Virtual WAN Device Models – which qualify to be issued with a VWAN Device Certificate. We have also sought to clarify the wording slightly, such that in addition to expecting the VWAN functionality of the device to continue to work on change of supplier, the operation of this functionality should not attract ongoing charges from the manufacturer and nor should the manufacturer take any steps to adversely affect the functionality. In order for a VWD Device Model to qualify to be added to the list, the VWD Manufacturer would be required to provide a statement to the Security Sub-Committee stating that:
 - a. the Device Model meets the interface requirements of a Virtual WAN Device as set out in the Virtual WAN Provider Interface Specification;
 - b. the Device Model meets the principles of ETSI 303 645 (or is capable of being upgraded to meet such principles within such time period as the Security Sub-Committee specifies); and
 - c. the VWAN functionality of the Device Model will (i) continue to operate following a change of Responsible Supplier; (ii) is not dependent on any post-installation charges; and (iii) will not be adversely affected by any actions of the VWD Manufacturer.
- 3.13. It should be noted that VWD Device Manufacturers are not expected to fully meet the principles of ETSI 303 645 during the soft launch period and we will work with the Security-Sub Committee (SSC) to make this clear, and if necessary, make changes via the VWAN Transition Document to give effect to this.
- 3.14. If the SSC becomes aware that a VWD Device Model that is on the list does not in practice meet the security related elements of the requirements, the SSC would be able to instruct DCC to discontinue communications with VWDs with that Device Model or, in extremis, instruct DCC to revoke the VWKI Device Certificates that have been issued in respect of that Device Model. It is proposed that similar powers would also be conveyed on the Panel if VWDs do not meet the other (non-security related) elements of these requirements (e.g. the requirement for the device to continue to operate on change of supplier).
- 3.15. We believe that these arrangements shift responsibility for ensuring that these requirements are met to the VWD Manufacturer rather than the SEC Party that is joining a VWD to a VWCH.

- 3.16. The proposed legal changes giving effect to this are set out in section F2 of the proposed revised SEC drafting.

We proposed that where a VWD is faulty or no longer fit for purpose in a premises that relies upon the VWAN for communications with the DCC, the Lead Supplier for the Communications Hub that forms part of the Smart Metering System that relies on the VWD should have an obligation to replace the VWD.

- 3.17. One respondent agreed that the Lead Supplier should be responsible for the replacement obligation but believed also that the drafting needed to address situations in which the consumer accidentally or wilfully damages a VWD.
- 3.18. We are giving further consideration to the detailed implementation of this proposal, including for example how it interacts with any proposals from Ofgem on updates to the Guaranteed Standards of Performance applying in relation to Smart Metering⁵. We will set out further proposals on the detailed implementation of this proposal prior to the commencement of mass rollout of VWCHs, planned for Q4 2026.

We invited views on whether we should propose a standard form of consent and if so, what that standard form of consent should be.

We also proposed that where consent to use the consumer's internet connection for the purpose of connecting to the Virtual WAN Solution is withdrawn it is proposed that the supplier should inform the consumer of the consequences of that withdrawal.

- 3.19. Two respondents stated that any consent wording for the customer should be clear. There were mixed views over whether a standardised form of wording should be developed, with one respondent saying that it could be beneficial and another preferring to use existing consent processes rather than a standardised set of wording.
- 3.20. We recognise that internet connected devices are already connected to some Smart Metering Systems in consumer premises, and that many companies are likely to have their own set of wording for consent to establish this connection, albeit not, at this stage, specifically for VWDs. For the time being, we do not propose to require the use of a standard set of wording for customer consent to use their internet for the purpose of connecting to the Virtual WAN Solution. We will however engage further in discussions with stakeholders on this issue to determine if a standard form of wording is the best approach.
- 3.21. We have included proposed provisions in SEC Section H18 requiring suppliers to notify consumers of the consequences of disconnecting a VWD from their internet. In addition, where a customer will be in Prepayment Mode, the supplier must provide appropriate information to the customer about the consequences of self-disconnection and the steps required to top-up following self-disconnection (condition 28.1(d) of electricity and gas supply licences).

Views were invited on whether, in circumstances where a SEC Party removes a VWD from a consumer premises, or has a VWD that was installed in a consumer premises returned to them, there should be an explicit obligation to cleanse any data (e.g. WiFi password data or potentially other personal data such as consumption data) from the VWD

- 3.22. The two respondents to this question both agreed that existing processes and obligations in this area were sufficient and that not additional provisions were needed.

⁵ <https://www.ofgem.gov.uk/consultation/smart-meter-guaranteed-standards-supplier-guaranteed-standards-performance>

- 3.23. Again, for the time being we accept that no additional explicit obligations are warranted in this area.

We proposed that where a Smart Metering System is reliant on a VWD, suppliers should be required to periodically remind the consumer of this and of the consequences of disconnection of the VWD from the consumer's internet connection. We proposed that this reminder should be at least annually.

In addition, we proposed that suppliers should be required to periodically remind the consumer that they have consented to the use of their internet connection.

- 3.24. Two respondents agreed with the proposals for consumer notification, although one did not support an annual reminder, but instead thought that a reminder every three years would be more appropriate. They also suggested consideration of a central record of consents and that this might prevent consumers from being repeatedly asked to reconfirm their consent. Another respondent suggested that a reminder should be given on change of tenancy and change of supplier.
- 3.25. Whilst new consent will need to be secured from the new tenant on change of tenancy where the VWD will rely on the use of the new tenant's broadband, we do not believe that a reminder of consent needs to be sent on change of supplier. The consent given by the consumer will be consent to use their internet for the purposes of conveying messages to and from smart meters and should not be supplier (or user) specific. We think the fact that the consumer has consented to use of their internet will be manifested in the consumer's maintenance of the connection between the VWD and their internet.
- 3.26. We are not proposing a central record of consents, but equally we are not proposing that consumers should be requested to periodically re-consent. Instead, we are proposing that once given the consent should be assumed to continue until such time as it may be withdrawn and that the consumer should be periodically reminded of their consent.
- 3.27. In light of the comments on the periodicity of the reminder, we propose for now that there is some discretion for suppliers in that periodicity, although we may revisit this and require annual reminders if issues arise. We are proposing that a supplier should explain to the consumer the consequences of disconnecting the VWD from their internet in circumstances where the consumer wishes to withdraw consent. For the purposes of a periodic reminder we propose that:

"each Responsible Supplier for a Virtual WAN Smart Metering System at a Virtual WAN Reliant Premises shall periodically notify the Energy Consumer that there is a Virtual WAN Device connected to the Energy Consumer's internet, and that the Energy Consumer has consented to their internet being used for the purposes of conveying messages to and from the Smart Metering System."

- 3.28. This obligation, and the obligation to notify the consumer of the consequences of disconnection are included in section H18.

We proposed that where a supplier installs a VWD in a Domestic Premises the supplier must unconditionally offer a VWD with at least the minimum functionality required to support the operation of the Smart Metering System over the consumer's internet connection for no up-front charge.

- 3.29. Two respondents agreed with this proposal, none disagreed. We have included drafting to this effect in a new condition 49.20A of electricity supply licence conditions and in condition 43.20A of gas supply licences.

We proposed that operation of VWAN SMSs in Prepayment Mode should not be prohibited in cases where this is either on a voluntary basis or on an involuntary basis. However in both cases, the issues arising in instances of self-disconnection would explicitly, additionally need to be taken into account by the supplier before putting the consumer into Prepayment Mode, and that the consequences must be explained clearly to the consumer, taking into account the specific circumstances of the consumer.

- 3.30. One respondent agreed with this proposal, saying that where a VWD is considered inappropriate for less able to pay customers who frequently disconnect, the DCC should be responsible for ensuring maximum WAN coverage under its contracts. Another respondent suggested that a battery powered PPMID⁶ should be required to be provided at sites where VWD is operated in prepayment mode. A third respondent strongly disagreed with the proposals saying that the risks of tying energy provision to internet connectivity are too great for prepayment customers and that this had been compounded by historic poor performance by suppliers on identifying when prepayment is appropriate for consumers. They also said consumers would be unlikely to be able to make an informed decision about using their home broadband while being informed by their supplier that they are being forced onto prepayment, and that battery powered PPMIDs would not adequately address the concerns they raised. Finally one respondent stated that from their experience, the manual entry of a 20 digit UTRN number can sometimes be an issue, particularly for consumers with literacy issues, dexterity issues or a learning disability.
- 3.31. In light of the responses to the consultation, and in light of the fact that in order to operate a Smart Metering System that relies on the use of a VWD, the consent of the consumer is already needed for broadband use, we are now proposing that Smart Metering Systems relying on VWDs cannot be operated where prepayment has been or is to be installed without the consent of the consumer. We recognise this means, as per current industry arrangements, that if a consumer is in a No-WAN premises, it will be necessary for the supplier to install a traditional prepayment meter if the consumer is to be placed into involuntary prepayment (i.e. installed on an involuntary basis).
- 3.32. Our proposed changes related to prepayment are included in conditions 28.1 and 28.7 (electricity and gas).

We proposed that a No-WAN premises with a Virtual WAN SMS will continue to be considered a No-WAN premises for the purpose of the Statement of Service Exemptions (and so not relieve DCC of its obligations relating to WAN enhancement).

- 3.33. Three respondents agreed with this proposal, and one indicated that they wished to understand more details of the continued exclusion and any future implications based on DCC's obligations.
- 3.34. The implications of not removing from the Statement of Service Exemptions and premises that are supported by a VWD is that such premises will not be excluded from the WAN coverage requirements placed upon the DCC under condition 17 of its licence. This includes the obligations to set out such steps as the DCC has committed to taking with a view to securing eventual provision (by such means as may be technically practicable and at a cost that is not disproportionate) of a Smart Meter Communication Service at those premises.

⁶ Prepayment Meter Interface Device.

We proposed that the subsequent introduction of WAN to what were No WAN premises would result in the VWCH automatically defaulting to using the DCC SM WAN (assuming a sufficiently strong signal) rather than the consumer's broadband.

- 3.35. Three respondents supported this proposal, although two requested additional information. A fourth raised concerns over the ability of a Communications Hub to be able to switch between the SM WAN and the internet, and also sought further information.
- 3.36. We have been further discussing this functionality with the DCC, and it is intended that it will be incorporated into VWCHs. We are proposing that Communications Hubs that would have to meet the requirements set out in a "WAN Selection Arrangements" as a "SEC required document" maintained by DCC (similar to documents such as the Communications Hub Supporting Information, maintained by DCC) and that any changes to this document would need to be approved by the SEC Panel. Details of how the WAN selection arrangements work technically, and how they can be configured will be shared more widely in the near future via the Technical and Business Design Group (TBDG) and its sub-groups.

We proposed that the DCC's costs associated with implementation of the Virtual WAN Solution should be recovered through DCC's Fixed Charges.

- 3.37. All four respondents who responded to this proposal agreed with it, one reserving the right to change position if there were material changes in the solution. This cost recovery position is implicitly delivered by the SEC changes we have made (essentially DCC costs are by default recovered via DCC Fixed Charges, and we have not included any drafting to the contrary).

We invited views on whether there should be an obligation on those SEC Parties connecting VWDs to VWCHs to ensure that devices with VWD functionality are labelled.

- 3.38. Two respondents agreed that VWDs should be labelled, one suggesting that lessons should be learned from the "fibre to premises" rollout by Openreach and their labelling of ONT devices, and the other suggesting that a standard form of wording should be developed. Another respondent said that they did not oppose labelling but believed that it runs the risk of going stale if the system changes.
- 3.39. We will continue to engage with industry on the issue of labelling of VWDs and VWCHs through the VWAN subgroup of the Technical and Business Design Group (TBDG), who have also expressed the need for some sort of permanent mark on the VWCH to distinguish it as a VWCH for mass roll out. We understand the need and may bring forward proposed changes to require this prior to the mass rollout phase. For the time being however, we are not proposing to place any specific requirements on labelling. We understand that the (around) 1,000 VWCHs used in soft launch will be clearly distinguishable as VWCH in any case.

We proposed that VWD manufacturers would be required to become SEC Parties in order to become Eligible Subscribers⁷ for the relevant Certificates⁸ and to access the necessary Certificates from the Repository⁹.

- 3.40. Two respondents agreed with the proposal and a third agreed in principle, although they said that the implications for the unit cost of VWDs needed to be considered. Since we issued the consultation further work has been carried out by the DCC to develop the detail of the arrangements that are to be used to secure the communications link between the Virtual WAN Provider and VWDs. Discussions have been held with the SSC and the SMKI PMA and we understand that there is general support for the use of a new public key infrastructure to underpin the arrangements. Work has also been carried out to understand the relative costs of alternative solution arrangements. We believe that most would-be VWD manufacturers are already SEC Parties, and that the burden of becoming a SEC Party for the purposes of becoming a subscriber for a VWKI Certificate and a relying party for such certificates is not high. DCC is developing the arrangements by which VWD Manufacturers can access the VWKI Service and gain access to the necessary certificates (which we understand may not be directly via the VWKI Repository) and that DCC recognises that the arrangements for doing so should not be overly burdensome for manufacturers.
- 3.41. We have therefore drafted the VWKI Arrangements on the assumption that VWD Manufacturers will become SEC Parties for the purposes of accessing the VWKI Services.

We also included within the consultation a number of “consumer journeys” and invited comments on these.

- 3.42. One respondent raised questions over some of the details of the process that would be involved in a change of tenancy for a consumer with a smart metering system that relies on VWAN, for example whether the consumer would be asked for a final meter read before they cancelled their internet connection. We will continue to develop our “customer journeys” and plan to share further thoughts on these and invite further comments in due course.

Other comments raised

- 3.43. One respondent raised the issue of the “accountability gap” suggesting that consumers, energy suppliers, the ombudsman and regulator currently struggle to understand who is responsible for fixing a smart meter that is not operating in smart mode. Work is ongoing within DESNZ to address the issue of smart meters not operating in smart mode. In the specific case of a smart meter not working because of a faulty VWD, then our proposal is that the Lead Supplier for the Communications Hub to which the VWD is connected would be responsible for “fixing” the device, however as discussed above, we are proposing that any such obligation would be introduced later in 2026 once more information on the operation of the pilot phase of the VWD Arrangements has been garnered.

⁷ An “Eligible Subscriber” is a term used in the SEC to describe a SEC Party who is eligible to become a subscriber for a particular type of certificate. Different types of certificate are available to different types of party. VWAN Manufacturers who become SEC Parties will be able to become Eligible Subscribers for VWKI Device Certificates.

⁸ A “Certificate” is an electronic document asserting a relationship between a public key and an entity such as a device or an organisation.

⁹ A “Repository” is a certificate store.

4. Legal Changes

- 4.1. Annex 2 to the covering letter, which is published alongside this consultation, sets out the proposed changes to conditions of the DCC licence, energy supply licences and the Smart Energy Code (other than Section L) to give effect to the proposals in this document. Annex 3 includes the proposed changes to Section L.
- 4.2. A summary of the proposed changes is as follows:

DCC Licence

- The inclusion of a new Virtual WAN Provider Service in the list of Enabling Services. As part of the changes we have made we have included a change such that the Interoperability Checker Service is also treated as an Enabling Service. This does not affect the obligation to provide the Interoperability Service in any way, and the purpose of the change is solely to make the licence drafting slightly simpler.
- A number of consequential changes to other definitions are proposed, including introducing a definition of the Virtual WAN Provider Service.
- A change to listing the new Virtual WAN Provider Service (and the Interoperability Checker Service) in the list of Enabling Services under condition 6.6 of the licence.
- A change to condition 17 to clarify that the DCC does have to provide an Enrolment Service for Smart Metering Systems installed in premises that are the subject of the Statement of Service Exemptions where the DCC is able to communicate with those Smart Metering Systems via the Virtual WAN Provider Service.
- A new Part E1 in condition 17 which requires the provision of the Virtual WAN Provider Service to Parties on terms that are prescribed by, or are determined in accordance with, the provisions of the SEC.
- The addition of the Virtual WAN Provider Service to the list in condition 20.3 relating to the determination of disputes by the Authority.
- A change to condition 22 to effectively widen the scope of the SEC to make provisions for the Virtual WAN Provider Service.
- A change to condition 30 such that the Virtual WAN Provider Service is included within the Mandatory Business and a consequential change given the revised categorisation of the Interoperability Checker Service as an Enabling Service.

Gas and Electricity Supply Licence Conditions

- The addition of two new definitions to the licences: Virtual WAN Communications Hub and Virtual WAN Device.
- A change to condition 28.1 (gas and electricity) and which deals with the provision of information about prepayment meters such that if the Prepayment Meter will rely upon a Virtual WAN Device for communications with the DCC, the supplier must provide appropriate information to the customer about the consequences of self-disconnection and the steps required to top-up following self-disconnection.
- A change to condition 28.7 (gas and electricity) to prevent the use of a Smart Meter in prepayment mode that relies on a VWD where a consumer has not consented to prepayment.

- A change to condition 49 (electricity) and 43 (gas) to say that where the supplier provides a VWD, it must also ensure that a VWCH is installed in the premises, and connect the VWD to the VWCH. It must also provide the VWD Free of Charge.
- A definition of Free of Charge for these purposes (which essentially means that there is no up-front fee for any individual customer for the VWD, although the licensee can recover the costs from consumers generally via an increment of charges for the electricity or gas supplied). In addition it has the effect that the licensee can charge for an enhanced VWD, but must offer a standard VWD Free of Charge.

The Smart Energy Code (other than Section L)

- Changes to existing definitions and the introduction of new definitions in light of the addition of the Virtual WAN Provider Service, and the proposed new public key infrastructure VWKI.
- A change to section F2 to make provision for the management of VWDs by the Security Sub-Committee, this includes the maintenance of a list of VWD Device Models that qualify to be issued with a VWKI Device Certificate. It also sets out what Manufacturers must do to have a VWD Device Model included on the list, and gives the SSC powers to instruct the DCC to remove VWD Device Models from the list for security reasons (or where the Panel otherwise determines that it is appropriate to do so). The SSC and SEC Panel can also instruct the DCC to suspend communications with VWDs.
- A change to Section H5.4 to make clear that the DCC should commission Communications Hub Functions at premises listed on the Statement of Service Exemptions if the DCC can commission the Communications Hub by using the Virtual WAN Provider Service.
- A change to H8.16 to allow Users to submit a query over the Self-Service Interface to determine in relation to Communications Hub Functions: (i) whether or not there is a Virtual WAN Device connected to the Communications Hub Function; and (ii) if so, whether the Communications Hub Function is using the SM WAN or the Virtual WAN Interface to communicate with the DCC.
- A new H14.59 dealing with Virtual WAN Interface testing.
- A new H18 dealing with the provision of the new Virtual WAN Provider Service and recognising the existence of the Virtual WAN Interface Specification, and additional provisions setting out the responsibilities of Users and Supplier Parties in respect of the Virtual WAN Provider Service.
- A new Section H19 dealing with the Virtual WAN Transition Document – this being the document that the Department proposes to use to gradually switch on the Virtual WAN Provider Service and the associated VWKI Service as part of the implementation programme for Virtual WAN.

Section L

- A change to L1 to expand the role of the SMKI PMA to cover VWKI related documents and the VWKI Services.
- A change to L2.14 to extend the SMKI PMA's power to require the suspension of services to cover the VWKI Services.

- A new Section L18 covering dealing with the VWKI Services. This section is largely modelled on Section L13 which deals with DCC Key Infrastructure, although one difference is that the SMKI PMA has direct aegis over VWKI rather than establishing another intermediate body to carry out the equivalent of the DCCKI PMA Functions.
- The provisions in Section L envisage a separate Certificate Policy, Certification Practice Statement and Registration Authority Policies and Procedures for VWKI as well as additional interface specifications and codes of connection to the VWKI Service and the VWKI Repository Service.

4.3. It is recognised that some of the detailed design of VWKI is still being finalised, including for example the arrangements by which VWD Manufacturers will be able to submit Certificate Signing Requests and access VWKI Certificates. It is possible that some changes may need to be made to the proposed drafting as this detail is finalised, and it is recognised that access to the VWKI Services during the soft launch phase might be controlled via the VWAN Transition Document.

5. Next Steps

5.1. Views are invited on the legal drafting changes set out in Annexes 2 and 3 to the covering letter. These, and associated reasons should be submitted to smartmetering@energysecurity.gov.uk by 17:00 on Friday 30 May 2025.

Annexes 2 and 3 are published separately.