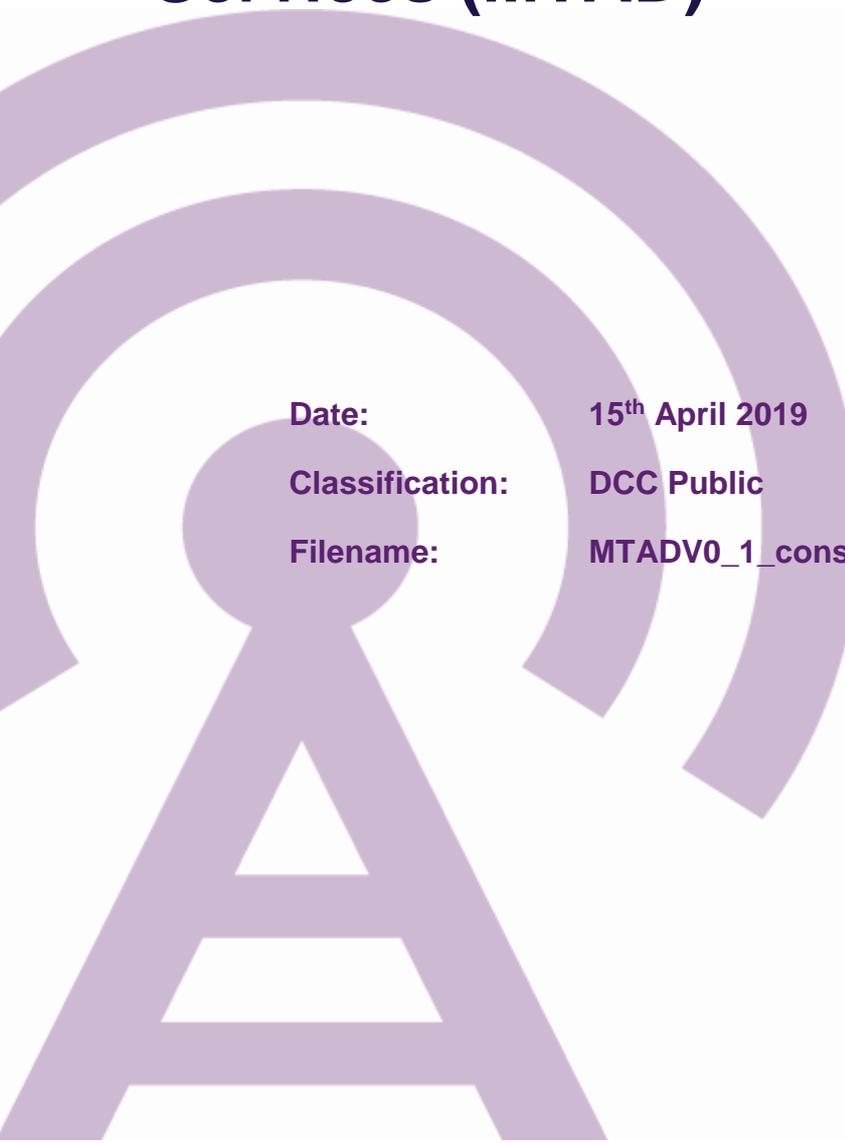


# Consultation on the Migration Testing Approach Document for SMETS1 Services (MTAD)



**Date:** 15<sup>th</sup> April 2019  
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## 1. Introduction and Context

The SEC Variation Testing Approach Document for SMETS1 Services (“SMETS1 SVTAD”) was designated by the Secretary of State on 18 September 2018 and included in the Smart Energy Code (SEC) from version 5.22 onwards as Appendix AK. Under the SMETS1 SVTAD, DCC is required to develop and consult on various approach documents including the Migration Testing Approach Document for SMETS1 Services (‘MTAD’).

The scope of this consultation document is both:

- proposed changes to the SMETS1 SVTAD as provided as Attachment 1; and
- the new MTAD as provided as Attachment 2.

## 2. Background

The MTAD is required under the SMETS1 SVTAD to set out any supplementary rights and obligations involved in Migration Testing. The purpose of Migration Testing is to demonstrate that the individual systems and processes of the modified DCC Total system used to migrate SMETS1 Installations (as described in Appendix AL of the SEC, the SMETS1 Transition and Migration Approach Document ‘TMAD’) can work together and interoperate as required with SMSO and User systems to support the placing of Device Model Combinations (DMCs) on the list of SMETS1 Eligible Product Combinations (‘EPCL’). The intent is that the MTAD will apply to each capability release (IOC, MOC and FOC). However, at this stage, the focus has been IOC and there may be the need for DCC to re-consult on MTAD to support any differences in testing approach for MOC and FOC. It is important to note that there has been stakeholder engagement in the preparation of MTAD via an industry working group that met on a number of occasions, which had the purpose of ascertaining stakeholder’s requirements.

The legal construct within the existing SMETS1 SVTAD assumes a single Test Phase for Migration Testing whereas the approach proposed is more complex and requires consequential changes to the SMETS1 SVTAD. Section 3 describes the proposed approach to Migration Testing based on three test phases by Device Model Combinations (DMC) supported by two key areas of functional testing which are described in the following sections:

Section 4 Migration Solution Testing (Migration ST); and

Section 5 Migration Dormant Meter Readiness Testing (Migration DMRT).

There is also a requirement for DCC to provide a Testing Service related to Migration. Section 6 sets out this new Testing Service described as Migration Testing Services within SMETS1 Device and User Systems Test (Migration DUST). The plans for incorporating the changes to SMETS1 SVTAD in the SEC and approval of the MTAD are set out in Section 7. Section 8 sets out how stakeholders can respond to this consultation.

It is also important to note that Migration Testing will not be required for every subsequent DMC to be placed on the EPCL, rather the DCC is introducing Device Model Combinations Testing (DMCT) into the regulatory framework. DMCT will provide evidence that the DMC can successfully interface with the DCC’s SMETS1 solution as proven via a subset of SRVs being communicated to and from the DMC. Also, DMCT will include a test that each DMC can be migrated into the Modified DCC Total System, using the proven migration solution for each capability release (that was tested under the MTAD regime).

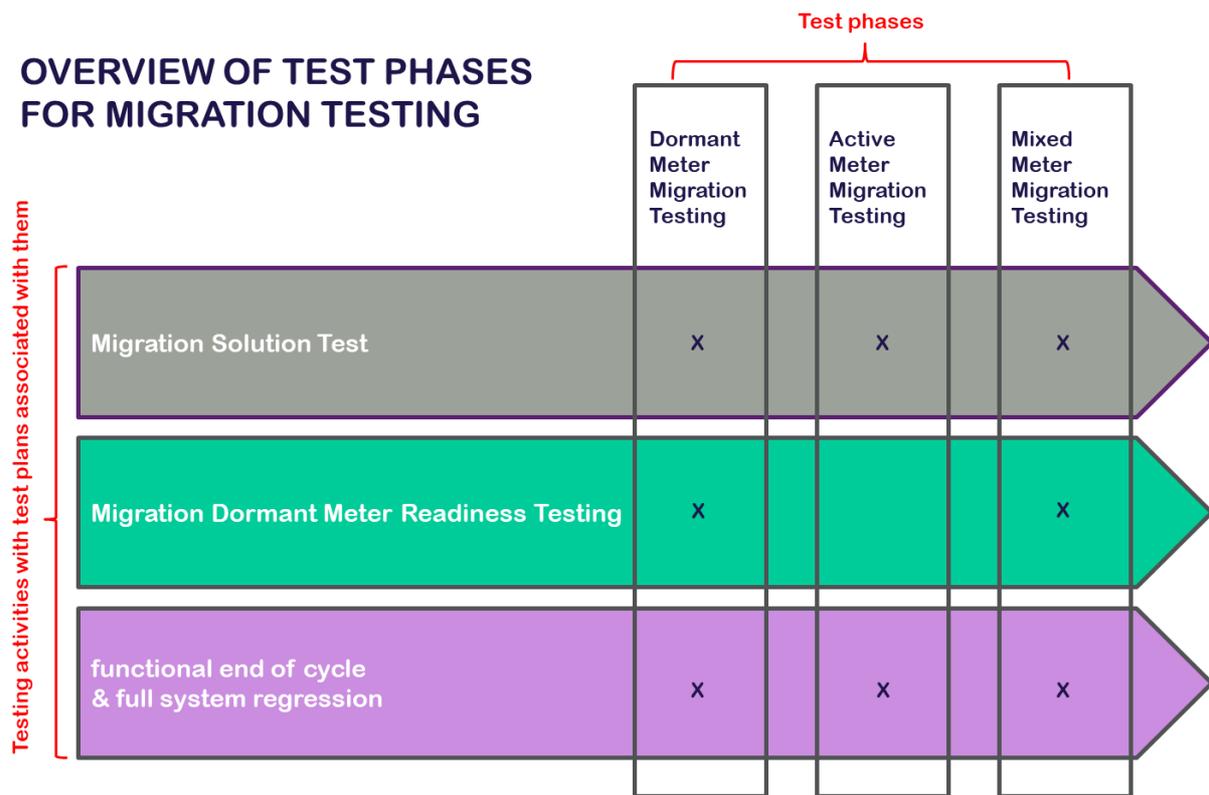
### 3. Approach to Migration Testing

The existing SMETS1 SVTAD is based on a series of Test Phases each with a separate set of entry and exit criteria, with Migration Testing being a single Test Phase. However, the proposed approach to Migration Testing is necessarily more complex than that currently set out in the SMETS1 SVTAD to effectively meet its purpose.

In order to permit the MTAD to include the flexibility required, the definition of Test Phase within the SMETS1 SVTAD will be changed to indicate that MTAD defines three Test Phases (Active Meters Migration Testing, Dormant Meter Migration Testing and Mixed Meter Migration Testing) for each DMC envisaged to be on the EPCL. Each of these three Test Phases have proposed entry and exit criteria specified in the MTAD.

The devices that will be tested within the MTAD are those DMCs that exited SIT (as per the SMETS1 SVTAD) for IOC and those planned in SIT for MOC and FOC. The approach is that for Active Meter Migration Testing, there will be a Migration ST and for Dormant Meter Migration Testing and Mixed Meter Migration Testing there will be both a Migration ST and a Migration DMRT. Finally, in order to complete the relevant test phase there will be a full system regression of the complete DCC system to ensure that inadvertent issues have not arisen. This approach to Test Phases is presented graphically as per Figure 1.

Figure 1 – Overview of Test Phases for Migration Testing



NB Migration DUST is a Testing Service and not a Test Phase

The DCC recognises that stakeholders wish to understand the coverage of Migration Testing and on this basis the MTAD requires that the DCC engage with SEC Panel Testing Advisory Group (TAG) on the breadth and depth testing via a document titled 'Depth and Breadth of Migration Testing' with the scope for disagreements to be referred to the Secretary of State for decision. Similarly, DCC will also be engaging with TAG on the scope of functional end of

cycle regression testing and a full system regression. DCC intends to undertake this engagement activity with TAG in April 2019.

In line with the general approach in the SMETS1 SVTAD, the MTAD captures a set of entry and exit criteria for each Test Phase that will form the basis of DCC's engagement with TAG when considering completion of testing. In the context of the MTAD, where practical the DCC will combine the exit / completion reporting for several Testing Phases into a single document which will be used for TAG & Panel engagement when seeking approval for completion of testing.

Please note that within the TMAD there are provisions for the decommissioning of a Requesting Party or the Commissioning Party (as per Clause 7 of the TMAD) but these are not within the scope of the MTAD as it is a business process rather than an IT system and will be considered within DCC's internal business acceptance testing.

Finally, the MTAD includes provision of a Testing Service related to Migration (described as Migration DUST see Section 6) which was not contemplated when the SMETS1 SVTAD was originally prepared. On this basis, there are changes proposed to SMETS1 SVTAD to provide for Migration DUST.

**MTAD  
Q1**

*Do you have any general comments on the Test Phase approach to Migration Testing and the provision of Migration DUST as presented in the SMETS1 SVTAD? Please provide a rationale for your views. Also, where appropriate please provide detailed comments on the legal drafting in the SMETS1 SVTAD and MTAD.*

## **4. Migration Solution Testing (Migration ST)**

Migration ST tests the migration solution (systems and processes) for both Active Meters and Dormant Meters to show that devices within the existing SMSO system can be migrated into the DCC's regime and supported by the SMETS1 SMSO. Migration ST will utilise test devices procured by the DCC. Migration ST covers the following three areas:

- validation and processing of key files with respect to format and exchange processes covering the various files that are exchanged under the TMAD process as well as the outcome reporting;
- device checking within the migration process covering SIM handover and rollback, checking communications with devices, whitelist and key reading and key rotation; and
- commissioning devices post key rotation based on the outcome files under the TMAD process as well as the commissioning alerts.

Finally, there will be two sets of functional end of cycle regression testing undertaken at the end of Migration ST.

**MTAD  
Q2**

*Do you have any general comments on the approach / scope to Migration ST? Please provide a rationale for your views. Also, where appropriate please provide detailed comments on the legal drafting in the MTAD.*

## 5. Migration Dormant Meter Readiness Testing (Migration DMRT)

Migration DMRT covers the following matters:

- ensuring the testing of the SMSO system that will deliver the configuration update to the Dormant Devices within a DMC has met the DCC's required quality criteria (NB this is an entry criterion to commence Migration DMRT);
- testing the instruction to the SMSO to arrange for the SMETS1 Supporting Requirements configuration (and firmware if necessary) to be applied to Dormant Devices within a DMC; and
- testing that a Dormant Device that has had the S1SR configuration applied through the SMSO update can be migrated successfully and is capable of responding correctly to a broad set of SMETS1 DUIS3 service requests.

Finally, there will be two sets of functional end of cycle regression testing undertaken at the end of Migration DMRT.

The testing of firmware upgrades as part of Migration DMRT isn't considered necessary for IOC as a firmware upgrade is within the existing functionality within the SMSO's production environment for IOC. Furthermore, for each capability release, DCC will not be required to undertake testing related to configuration changes and firmware upgrades where it is not planning use the functionality for that capability release.

The internal DCC processes related to firmware upgrades and configuration changes require testing via DCC's internal business acceptance testing and thus is out of scope for the MTAD.

Migration DMRT does not include testing the configuration package once applied to the Dormant Device beyond testing that it responds correctly to a representative set of SMETS1 DUIS3 service requests. It is important to note that Migration DMRT only applies to Dormant Meters and thus it is up to Responsible Suppliers to undertake testing on the effectiveness of their upgrade process in respect of their Active Meters.

**MTAD  
Q3**

*Do you have any comments on the approach / scope regarding Migration DMRT? Please provide a rationale for your views. Also, where appropriate please provide detailed comments on the legal drafting in the MTAD.*

## 6. Migration Testing Services within SMETS1 Device and User Systems Test (Migration DUST)

Migration DUST is a testing service for Active Meters to allow a Responsible Supplier, Distribution Network Operator, Gas Transporter or adapter provider to test the migration of DMCs. It is important to note that Migration DUST is not intended to be a test of the Migration Solution itself as this assurance comes from the Migration Testing described previously in this document and as such there are no entry and exit criteria for Migration DUST. However, there are some pre-requisites prior to starting to use Migration DUST.

The approach to Migration DUST builds on the general provisions for Device and User System Test within H14 of the SEC and the Enduring Test Approach Document (ETAD)

which is Appendix J of the SEC. Migration DUST will be enabled once the Migration Solution has been deployed into UIT and will allow Testing Participants to:

- test the ability to migrate test devices from an SMSO test environment to the DCC test environment; and
- test their back-office processes, systems and interfaces with the Migration Solution in preparation for optimal live migration of SMETS1 devices.

Furthermore, any test devices migrated via Migration DUST will be made available for Device and User Systems Test services as described in Section H14 of the SEC and ETAD. The MTAD will oblige DCC to maintain a user guide for Migration DUST setting out the details for how Testing Participants will access the service.

DCC shall provide the systems and processes to allow 'operational' testing of the migration process for test Devices in either the DCC's test lab or a remote test lab subject to certain operational criteria, i.e. a Device linked to the DCC's test SMSO migrated into a DCC test environment. DCC will be providing a reasonable number of test devices for the purposes of Migration DUST consistent with the provisions for Device and User Systems Test and, furthermore, Testing Participants will be able to provide their own test devices within Migration DUST.

Once established, the testing starts when a Testing Participant provides a Migration Authorisation as per the Migration Authorisation File (MAF), which is prescribed in the Migration Authorisation Mechanism, (a TMAD child document) along with the necessary registration data to allow the test environment to be configured. In response to the MAF, DCC will provide:

- a Commissioning Outcome File (COF) as detailed in the TMAD;
- various Device alerts; and
- relevant reporting consistent with the Migration Reporting Regime (a TMAD child document).

Migration DUST will allow Testing Participants to test selected exceptions around the validation of the MAF (discussed above) that generate file-based exceptions. Finally, DCC will provide some example file of errors that may occur later in the migration process. These will be based on dummy data.

<b>MTAD Q4</b>	<i>Do you have any comments on the approach to Migration DUST? Please provide a rationale for your views. Also, where appropriate please provide detailed comments on the legal drafting in the MTAD.</i>
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In order to support operational planning, it would be helpful to DCC if stakeholders are able to provide an indication of their expectations for Migration DUST utilisation.

<b>MTAD Q5</b>	<i>To what extent does your firm intend to utilise Migration DUST? Please provide contact details so that the Migration DUST team can contact you to explore your firm's requirements in more detail.</i>
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## 7. Next Steps

Following this consultation which closes at 16:00 on Tuesday 7 May 2019. DCC will take into account respondents' views, and submit the following two documents to the Department of Business, Energy and Industrial Strategy (BEIS):

- i. the amended SMETS1 SVTAD for re-designation in the SEC by the Secretary of State (Attachment 2); and
- ii. the MTAD for approval by the Secretary of State (Attachment 3).

DCC will conclude on this consultation, providing a report to BEIS no later than Friday 17 May 2019. DCC has discussed the designation of the MTAD with BEIS and it is proposed that, subject to timely receipt of the DCC's report and copies of relevant stakeholder responses to this consultation, BEIS will approve the MTAD and re-designate the SMETS1 SVTAD on Friday 24 May 2019 or, if necessary, as soon as reasonably practicable within one month thereafter.

In order to expedite the re-designation of the SVTAD and approval of the MTAD, DCC is also seeking views on behalf of BEIS on the above proposed date for approval / re-designation of these documents as well as the draft direction which is presented in Attachment 1 of this consultation document for stakeholder consideration.

**MTAD  
Q6**

*Do you agree with the proposed approval/re-designation date of Friday 24 May 2019 (or, if necessary, as soon as reasonably practicable within one month thereafter) for the MTAD and SMETS1 SVTAD using the draft direction at Attachment 1?*

## 8. How to respond

Please provide responses in the attached template by 16:00 on Tuesday 7 May 2019 to DCC at [consultations@smartdcc.co.uk](mailto:consultations@smartdcc.co.uk).

In order to support the consultation, the DCC is also organising page turning sessions to explore the detail of the draft MTAD. These are is scheduled for Tuesday 23 April 2019 and Tuesday 30 April 2019. Please email DCC at [consultations@smartdcc.co.uk](mailto:consultations@smartdcc.co.uk) if you wish to attend.

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 of Business, Energy and Industrial Strategy (BEIS) and the Gas and Electricity Markets Authority (the Authority). Information provided to BEIS 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 BEIS 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.

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If you have any questions about the consultation documents, please contact DCC via [consultations@smartdcc.co.uk](mailto:consultations@smartdcc.co.uk).

## **9. Attachments**

- Attachment 1 – Draft Secretary of State Direction
- Attachment 2 – SEC Variation Testing Approach Document for SMETS1 Services
- Attachment 3 – Migration Testing Approach Document for SMETS1 Services
- Attachment 4 – Response Template

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## Attachment 1

This attachment contains the draft direction and designation text that BEIS intend to utilise for approval of the MTAD and re-designation of the SVTAD.

### **Draft Direction and Designation Text**

*This direction is made for the purposes of the smart meter communication 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.*

- a) *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 [DATE], the SEC Variation Testing Approach Document for SMETS1 Services previously designated and incorporated into the SEC as Appendix AK is hereby re-designated and incorporated in the form set out in Annex [XX] to this direction.*
- b) *Pursuant to clause 3.4 of the Appendix AK (SEC Variation Testing Approach Document for SMETS1 Services) to the SEC, the Secretary of State hereby directs that the Migration Testing Approach Document for SMETS1 Services is approved in the form set out in Annex [XX] to this direction.*

*For the avoidance of doubt such re-designation of the SEC Variation Testing Approach Document for SMETS1 Services shall be without prejudice to anything done under the DCC Licence or the SEC on or after this document first being designated, or to the continuing effectiveness of anything done under this document prior to its re-designation (which shall have effect as if done under the re-designated document).*

*This direction is also being notified to the SEC Administrator.*