# Further Testing Consultation

**A consultation on changes to the SEC Variation Testing Approach Document for SMETS1 Services (SMETS1 SVTAD) and the Migration Testing Approach Document for SMETS1 Services (MTAD) covering various SMETS1 testing matters and deployment of firmware upgrades to enrolled SMETS1 devices prior to having completed the PPCT process**

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| **Date:** | **19 December 2019** |
| **Classification:** | **DCC Public** |
| **Respond by:** | **1600 on 17 January 2020** |
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# 1. Introduction and Context

The SEC Variation Testing Approach Document for SMETS1 Services ('SMETS1 SVTAD') is included in the Smart Energy Code (SEC) as Appendix AK[1] and the latest version was re-designated by the Secretary of State on 4 November 2019. 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 Secretary of State approved version 1.2 of the MTAD[2] on 4 November 2019.

This consultation seeks views on a few changes to the SMETS1 SVTAD and the MTAD covering:

- the completion arrangements for testing undertaken to support the process for Device Model Combination Testing (DMCT Process);

- clarification and alignment for exit criteria related to end of cycle testing covering Systems Integration Testing (SIT) and Migration Testing (MT); and

- provisions to allow firmware changes during testing in respect of the DMC being used in testing for the Secure cohort of MOC.

This consultation document is seeking views on:

- the detailed changes to the SMETS1 SVTAD and MTAD; and

- the proposed amendment date for the SVTAD and MTAD.

In June/July 2019, DCC ran a consultation[3] on proposals for a fast track process for SMETS1 Pending Product Combinations Tests (PPCT) and DCC concluded on the consultation[4] on 3 December 2019. This consultation document is also seeking views on a proposal **not** to amend the Service Request Processing Document (SRPD[5]) to support deployment of urgent firmware upgrades to enrolled SMETS1 devices on security grounds prior to the new firmware version having been tested via a fast track process in the context of PPCT.

# 2. SMETS1 SVTAD & MTAD Changes

The SMETS1 SVTAD sets out the rights and obligations for a range of SMETS1 testing matters including SIT and the DMCT Process and also provides the framework for the MTAD which sets out the rights and obligations for MT.

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[1] The current SEC is available via the SECAS website - www.smartenergycodecompany.co.uk/the-smart-energy-code-2/.
[2] The current MTAD is available via the SECAS website - Migration Testing Approach Document for SMETS1 Services v1.2.
[3] https://www.smartdcc.co.uk/customer-hub/consultations/consultation-on-the-enduring-testing-approach.
[4] The conclusion document is available via https://www.smartdcc.co.uk/customer-hub/consultations/dcc-responses/conclusions-on-smets1-pending-product-combinations-tests/.
[5] The Service Request Processing Document is included in the SEC as Appendix AB and the latest version was included in the SEC on 28 July 2019.

DCC is proposing changes to the MTAD and SMETS1 SVTAD in three areas and a separate consultation question is provided for each. These matters are described in the follow sub-sections.

## 2.1    DMCT Completion

When the DCC concluded[6] on the approach to the DMCT Process, DCC indicated that there would be a further consultation on test completion[7] given concerns raised by stakeholders. DCC has now developed our proposals for DMCT test completion.

Whilst DMCT isn't the same as a Test Phase, DCC considers that elements of the exit criteria arrangements for a Test Phase are appropriate for DMCT testing to ensure that if defects were to arise in the testing then the overall number of open defects doesn't continue to rise to an unacceptable level. On this basis (and consistent with the aligned regime for MT and SIT), DCC is proposing to adopt a two part test via:

- Testing Tssues Thresholds for the planned entry on the EPCL in respect of which the tests are being undertaken; and

- aggregate testing issues thresholds for open testing issues that arose from any test phase that could affect the functioning of the DCC solution for the planned entry on the EPCL.

A planned entry on the EPCL will be considered to have completed DMCT testing successfully where all planned tests are executed and open testing issues are within the proposed two part Testing Issues Threshold. A planned entry on the EPCL will be considered to have completed testing unsuccessfully where all planned tests are executed and the open testing issues exceed the proposed two part Testing Issues Threshold or if all planned tests could not be executed (subject to Secretary of State approval). DCC will have the discretion to exclude open Testing Issues from the threshold count where it considers those open issues would not affect the functioning of the DCC solution for the planned entry on the EPCL which is the subject of testing.

Following completion of testing a DMCT Testing Report will be produced for a planned entry on the EPCL. The DMCT Testing Reporting will only be provided to specified Supplier Parties given confidentially concerns. These Supplier Parties will be those that had previously included the DMC in their DMCT submissions to DCC, as this is the readily available data source. Supplier Parties that have received the report will have a right of appeal to the Secretary of State (within a 10 working day period) in relation to the DMCT Testing Report prepared by DCC where they:

a)    disagree with the severity rating that the DCC has assigned to open testing issues, or

b)    consider that excluded testing issues should be included,

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[6] See Amendment to the SMETS1 SVTAD (DMCT Process). DCC conclusions and report to Secretary of State.
[7] See the footnote on Clause 20.28 of the existing SMETS1 SVTAD.

and should their view be upheld, the result of testing (successful or unsuccessful) would change which may lead to further testing depending on the circumstances.

Where the DCC is recommending an entry to the EPCL, which could occur where testing has been undertaken, or could occur where no testing has been undertaken but DCC considers a DMC to be substantively equivalent to another, the DCC will publish a DMCT EPCL Report. In the case of the EPCL Report where testing has been undertaken, this report will be published following the 10 Working Day period (if no appeals are made) or following the resolution of any appeal (where the result is to recommend an EPCL entry). Where successful testing has been undertaken to support the EPCL entry, the final DMCT Test Report shall also be included in the EPCL Report. The DCC may redact elements of each a DMCT EPCL Report published if needed.

The further proposals on test completion has led to a few consequential changes to the drafting. Within the issue resolution element DCC has been given the right to pause / recommence testing as needed.

| FTC Q1 | *Do you have any views on the proposal for DMCT Process test completion? Do you have any detailed comments on the relevant changes to the legal drafting in the SMETS1 SVTAD? Please provide a rationale for your views.* |
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## 2.2 End of Cycle Exit Criteria

DCC has identified[8] that the '2A – End of cycle test run' exit criterion for MT within Table 9.3 of the MTAD does not correctly reflect the approach to counting testing issues for the purposes of determining whether testing should successfully complete. Currently row 2A of Table 9.3 requires that no testing issues are raised during end of cycle testing. DCC considers that this was an error, end of cycle testing is intended to ensure that new issues do not arise.

This matter was discussed with the TAG on 30 October 2019 and the view was expressed that the end of cycle exit criteria for MT should be amended to exclude known issues and allow new issues to be raised subject to the TAG's approval, with disagreements referred to the Secretary of State. Furthermore, DCC proposed that a similar exit criterion for end of cycle is included for SIT within Table 13.1 of the SMETS1 SVTAD.

| FTC Q2 | *Do you have any views on the proposals for the new end of cycle exit criterion for SIT and changes to the end of cycle exit criterion for MT? Do you have any detailed comments on the relevant changes to the legal drafting in the SMETS1 SVTAD and MTAD? Please provide a rationale for your views.* |
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## 2.3 Firmware change for MOC Secure

For the Secure cohort in MOC a single DMC was selected for testing as per the DCC decision paper[9] issued on 8 October 2019. This decision paper highlighted that this

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[8] This matter was highlighted on 30 October 2019 via Alignment of MT and SIT - DCC Conclusions and Report to Secretary of State on changes to changes to the SMETS1 SVTAD and MTAD.
[9] See Conclusions on the SMETS1 MOC SIT: Proposed DMC Selection and Rational for more details.

represents the only firmware available to test. The current SMETS1 SVTAD assumes that firmware versions established at the start of testing would be those that exited SIT. If a device firmware had to be deselected another would be selected in its place after further consultation. A process for such deselection, and selection of replacement firmware versions, is set out in the SMETS1 SVTAD and requires DCC to re-consult stakeholders if a change arises. However, as the selected firmware version for the Secure cohort in MOC has been developed to interoperate with the DCC security controls, DCC has no real alternative to the electricity/gas meter and communications hub firmware versions that it selects. Should such firmware require further changes due to issues arising when testing interoperability with the DCC solution, DCC will have no choice but to de-select it and use a suitable replacement firmware version once available.

In order to accommodate this requirement to use replacement firmware (for the testing set out in the depth and breadth documents), DCC is proposing that the device selection and de-selection rules in Clause 13 of the SMETS1 SVTAD are not applicable to the Device Models of the SMETS1 CH, SMETS1 ESME and SMETS1 GSME related to the Secure DMC in MOC. This would allow for device firmware to be changed to accommodate defect fixes without having to go through the entire device deselection and selection consultation process again. However, there is a process for DCC to advise if the firmware versions do change.

In reviewing these provisions, DCC has determined that it is appropriate to retain the existing drafting for the IOC regime for clarity and there are a few minor changes to support this approach.

| FTC Q3 | *Do you have any views on the proposal for changes to the device deselection rules related to the Secure cohort in MOC and retention of the existing regime for IOC? Do you have any detailed comments on the relevant changes to the legal drafting in SMETS1 SVTAD? Please provide a rationale for your views.* |
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## 3. SMETS1 Pending Product Combinations Tests Security Fast Track

In June/July 2019, DCC ran a consultation[10] on our proposals for a fast track process for SMETS1 Pending Product Combinations Tests (PPCT) where a new DMC arises as a consequence of an urgent firmware upgrade on security grounds. The consultation included proposed changes to the Enduring Testing Approach Document (ETAD) - Appendix J to the Smart Energy Code (SEC) and consequential amendments to the Service Request Processing Document (SRPD) - SEC Appendix AB. The consultation sought stakeholder views on DCC's proposal that a DMC could be prioritised in PPCT where a new DMC arises as a result of the need for an urgent firmware upgrade on security grounds. The proposed consequential changes to the SRPD included a new clause (Clause 6.6 of the SRPD) which was considered necessary where a new Device Model arose in respect of enrolled SMETS1 Smart Metering Systems due to the deployment of an urgent firmware fix but where the

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[10] https://www.smartdcc.co.uk/customer-hub/consultations/consultation-on-the-enduring-testing-approach.

resultant DMC was not yet on the EPCL as it had not completed PPCT. DCC concluded on the fast track PPCT consultation[11] on 3 December 2019.

As part of that consultation process a respondent raised a concern about the implementation of DCC's proposed changes to the SRPD and how, in relation to SEC Section H5.9 if a DMC version is not listed on the EPCL a firmware upgrade to a "non-EPCL" version can be applied. DCC clarified in its conclusions document that a Supplier may only upgrade the firmware version of a Device Model to a firmware version that is a Central Products List (CPL) entry as the Data Service Provider (DSP) validates SRV 11.1 & 11.3 to check that firmware version matches an existing CPL entry (rather than checking against an EPCL entry). However, in the case of SMETS1, entries on the CPL are only made when the Device Model forms part of a Device Model Combination on the EPCL. If the firmware version is not already on the CPL, the SRVs 11.1 & 11.3 receive an error "E110101".

In response to the comments raised to the SRPD changes in the consultation, DCC has undertaken further analysis on this matter and is consulting on our different approach to that proposed in the original consultation.

DCC considers that processing Service Requests to allow urgent firmware upgrades to DMCs that have not completed fast tracked PPCT, and therefore not on the EPCL, introduces operational risk. Furthermore, it is DCC's view that it is not economic or efficient to implement these system changes to remove the DSP validation step that would otherwise fail for such urgent firmware upgrades. Thus, in response to the concerns raised, DCC is proposing to retain the existing drafting in the designated SRPD and not to include Clause 6.6 that was proposed. It is DCC's view that this does not materially impact the intent of our proposed amendments to introduce a fast track process for PPCT to address material security vulnerabilities.

DCC is seeking views through this consultation on DCC's position to retain the existing drafting in the designated SRPD and not enable urgent firmware changes to be deployed to enrolled SMETS1 devices prior to the firmware having been tested for interoperability of the DCC Solution in PPCT.

| FTC Q4 | *Do you have any views on the proposal not to amend the SRPD with regards to a security fast track process for PPCT? Please provide a rationale for your views.* |
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## 4.    Document Changes

In additional to a limited number of typographical and formatting changes, there are a number of proposed changes to the SMETS1 SVTAD and MTAD as set out in Figure 4.1. The clauses references relate to the proposed new drafting within SMETS1 SVTAD and MTAD.

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[11] The conclusion document is available via https://www.smartdcc.co.uk/customer-hub/consultations/dcc-responses/conclusions-on-smets1-pending-product-combinations-tests/.

**Figure 4.1 - Overview of Drafting Changes**

| No. | Reference | Description of Change | Rationale for Change |
|---|---|---|---|
| 1. | SMETS1 SVTAD Table 1.1 | Amend definition of reports to include two new reports and Testing Issues Thresholds | To reflect approach to completion. |
| 2. | SMETS1 SVTAD Clause 20.18 | Clause moved up in within Clause 20. Made specific to DMCT. | Move to provide drafting clarity and confirmed this are specific to DMCT. |
| 3. | SMETS1 SVTAD Clause 20.21 | Statement that DCC may pause and recommence resting as needed. | Added for clarity as wasn't explicit. |
| 4. | SMETS1 SVTAD Clause 20.26 | Statement on testing continuing removed. | Covered by the new Clause 20.18. |
| 5. | SMETS1 SVTAD Clause 20.28 to Clause 20.29 | Testing Issues Threshold regime included for DMCT. | DMCT successful completion is where open testing issues to exceed a permitted two part threshold. |
| 6. | SMETS1 SVTAD Clause 20.30 to Clause 20.32 | Rules for a DMCT Testing Report based on DMCT being 'successful' or 'unsuccessful' on the basis of a planned entry on the EPCL. | 'successful' and 'unsuccessful' assessed against the two part Testing Issues Thresholds and whether all testing completed. |
| 7. | SMETS1 SVTAD Clause 20.33 | Reporting for DMCT ''successful'. | Content for a draft DMCT Testing Report where 'successful'. |
| 8. | SMETS1 SVTAD Clause 20.34 | Reporting for DMCT 'unsuccessful' | Content for a draft DMCT Testing Report where 'unsuccessful'. |
| 9. | SMETS1 SVTAD Clause 20.35 to Clause 20.37 | Issuing of draft DMCT Testing Report and appeal regime. | Gives a 10 working day window for the decision on a draft DMCT Testing Report to be a referred to BEIS for final decision. |
| 10. | SMETS1 SVTAD Clause 20.38 to Clause 20.40 | Issuing of a DMCT EPCL Report | Publication of the report where an entry is to be added to the EPCL based on the final DMCT Testing Report or a prior DMCT EPCL Report. |

| No. | Reference | Description of Change | Rationale for Change |
|---|---|---|---|
| 11. | MTAD Table 9.3 | Updated MT exit criteria for end of cycle testing. | To allow new defects to be raised (subject to the TAG approval with right to refer to the Secretary of State). |
| 12. | SMETS1 SVTAD Table 13.1 | New SIT exit criteria for end of cycle. | Aligned to MT exit criteria for end of cycle testing. |
| 13. | SMETS1 SVTAD Clause 13.3 and Clause 13.4 | Not applying de-selection rules for MOC Secure DMCs. Retaining the existing regime for IOC | To permit firmware to change during testing for the Secure DMC being used in SIT and MT for MOC. |
| 14. | SMETS1 SVTAD Clause 13.5 | Reference to FOC removed | Change covered by Clause 13.10 to Clause 13.12. |
| 15. | SMETS1 SVTAD Clause 13.10 to Clause 13.12 | Not applying de-selection rules for MOC Secure. | To permit firmware to change during testing for the Secure DMC being used in SIT and MT for MOC. |

# 5.    Next Steps

Consistent with Clause 4.2 of the SMETS1 SVTAD, DCC will take into account respondents' views, and prepare a conclusions report for the Department of Business, Energy and Industrial Strategy (BEIS) to conclude on this consultation. The conclusions report will set out a summary of responses received and detail on how DCC have addressed any concerns raised. Unless the Secretary of State directs otherwise, DCC is proposing to amend the SMETS1 SVTAD and the MTAD pursuant to the provisions for it to do so within Clause 4.2 of the SMETS1 SVTAD utilising the draft notification text presented in Attachment 1 on Friday 31 January 2020.

| FTC Q5 | *Do you agree with the proposed amendment date of Friday 31 January 2019 (or, if necessary, as soon as reasonably practicable within one month thereafter) for the SMETS1 SVTAD and the MTAD using draft notification at Attachment 1?* |
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# 6.    How to respond

Please provide responses in the template (Attachment 6) by **16:00 on Friday 17 January 2020** to DCC at consultations@smartdcc.co.uk. This template may be submitted in PDF or similar format rather than Microsoft Word format if preferred.

Consultation responses may be published on our website 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.

If you have any questions about the consultation documents, please contact DCC via consultations@smartdcc.co.uk.

# 7. Attachments

- Attachment 1 – Draft Notification Text

- Attachment 2 – SEC Variation Testing Approach Document for SMETS1 Services V1.5 (clean)

- Attachment 3 – SEC Variation Testing Approach Document for SMETS1 Services V1.5 (changed marked against V1.4 i.e. current enforce version)

- Attachment 4 – Migration Testing Approach Document for SMETS1 Services V1.3 (clean)

- Attachment 5 – Migration Testing Approach Document for SMETS1 Services V1.3 (changed marked against V1.2 i.e. current enforce version)

- Attachment 6 – Response Template

# Attachment 1

This attachment contains the text that DCC plans to use for notification of a change to the SMETS1 SVTAD and MTAD.

**Draft Notification Text**

*Words and expressions used in this notification shall be interpreted in accordance with*

*Section A (Definitions and Interpretation) of the SEC.*

*Pursuant to Clause 4.2 of the SMETS1 SVTAD, DCC notifies that, with effect from [DD MMM*

*YYYY] that the SMETS1 SVTAD and the MTAD are hereby modified and approved pursuant*

*to the SMETS1 SVTAD in the form set out in Annex [AAA] and Annex [BBB] of this*

*notification.*

*For the avoidance of doubt such modification of the SMETS1 SVTAD and MTAD shall be*

*without prejudice to anything done under the DCC Licence or the SEC on or after this*

*document first being approved, or to the continuing effectiveness of anything done under*

*these documents prior to their modification (which shall have effect as if done under the*

*modified documents).*

*This notification is also being sent to the SEC Administrator.*