

Conclusions

SEC Variation Testing Approach Document for the Communications Hub and Network Arrangements

Date: 26.07.21

Classification: DCC Public

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1. Background and context

The Network Evolution Programme (NEP) is a Data Communications Company (DCC) initiative geared towards defining and delivering the organisation's future operating capability. It comprises four sub-programmes, including a Communication Hubs & Networks programme, which is geared towards defining and delivering future-proof Communications Hubs & Networks (CH&N) with an efficient supply chain and a targeted longevity of at least 15 years.

Maintaining Smart functionality over the longer term will require the introduction of new CHs which use the newer 4G network. DCC has stood-up the CH&N Programme to assess options for and then implement a chosen solution to achieve this. On 29 January 2021 DCC was Directed in accordance with Condition 13B of the DCC Licence to produce an implementation plan for two elements of the 'Network Evolution Arrangements', including for CH&N. As part of the plan, the DCC needs to develop and define the testing arrangements for the programme, with support and input from stakeholders and testing experts.

2. Introduction

On 30 April, the Secretary of State directed the DCC to develop a draft SEC Variation Testing Approach Document (SVTAD) in respect of those variations to the SEC that are being considered to enable the introduction of the CH&N Arrangements – the 'CH&N SVTAD'. Any SEC Variation Testing Approach Document developed by the DCC needs to be submitted to the Secretary of State in accordance with the requirements of Section X11.6 of the SEC, following consultation with SEC Parties and the TAG.

On 11 June 2021 DCC issued a consultation on a draft CH&N SVTAD seeking views from SEC Parties and the SEC Panel's Testing Advisory Group (TAG) ahead of its submission to the Secretary of State for approval and designation into the SEC. The consultation also sought views, on behalf of the Secretary of State, on the date for designation of the SVTAD, which would bring it into legal effect.

3. Questions asked and comments received

DCC asked two questions in its consultation, as follows:

Q1	Do you agree with the proposed SVTAD for the CH&N Arrangements? Please indicate any areas of disagreement and the reasons for them.
Q2	Do you agree with the proposed designation date of 30 July 2021 for the SVTAD for the CH&N Arrangements (or, if necessary, as soon as reasonably practicable within one month thereafter)?

We received 4 responses, with 3 from Energy Suppliers and one from a regulated co-operative of Energy Suppliers. TAG did not respond formally noting that it had been sufficiently consulted already through DCC presenting its proposals to TAG, and accepting feedback received. DCC has assessed these responses and we set out our conclusions in light of the feedback received below. As well as answering the questions posed directly, several respondents also provided general comments in relation to the CH&N programme. DCC has assessed these, and we also include our response to them in this section.

3.1. Question 1: Do you agree with the proposed SVTAD for the CH&N Arrangements? Please indicate any areas of disagreement and the reasons for them

Three respondents agreed with the proposed SVTAD, with two of these setting out points for DCC to consider. One respondent neither agreed nor disagreed with the question, instead setting out a range of points in relation to the document. We consider each of these points raised below.

Mandated User Testing

The SVTAD sets out the process DCC would need to follow to propose mandated testing for users, which would require both industry consultation and approval by the Secretary of State. One respondent stated that DCC must ensure that reasonable timelines are provided for parties to be ready for testing. DCC agrees that reasonable timelines must be provided in the event that user testing is mandated, and we have stated in our delivery plan that we will review this requirement at the programme control points. DCC will discuss any proposed changes to approach with industry. It is our view that the requirements in the SVTAD related to mandated testing (if required) are fit for purpose.

Supporting documentation to the SVTAD

A respondent noted their view that the documents supporting the SVTAD should be structured and scrutinised in a standard and defined way, similar to how SMETS1 documentation has been developed and refined over time. We agree that providing stakeholders with a clear and unambiguous view of documentation hierarchy, so that they can scrutinise them effectively, is very important, and we intend to facilitate this through the provision of diagrams setting out document architecture. The CH&N SVTAD

document structure will include two types of subsidiary testing documents, Testing Approach Document(s) and Testing Coverage Document(s). These will set out the lower-level testing detail that will be finalised as the design baseline is finalised, with the higher-level obligations being set out in the SVTAD. As we have stated previously, we will be working with TDEG and the TAG to develop and refine the contents of these documents that sit below the SVTAD.

Scope of testing – Network testing and Production Proving

Several respondents stressed the importance of testing across the different networks that will underpin the CH&N Arrangements, and, depending on the chosen solution, testing the ability to switch between networks, noting the impacts on consumers in remote geographical areas in the event of any network issues. Linked to this one respondent stated that, given the differences between DCC's test infrastructure and its Production environment, they would like to see DCC taking responsibility for the test scope and criteria (in agreement with TAG), with suppliers and other parties identifying premises and running the tests.

DCC's planned approach is that testing for SBCH provision will be with the one WAN provider we will select to provide this capability, over their 4G and 2G-fallback networks. Regression testing will be undertaken against the current Communications Service Providers as this is what is required to support CH&N delivery. For DBCH, DCC will be testing with the WAN Service Provider across both 4G and 2G bands, with regression testing carried out against the SBCH WAN and current CSPs. This test approach is subject to the TAG approval through their sign-off of the Test Approach Document and Testing Coverage Document which are governed under the SVTAD.

We agree that network performance on the production platform is critically important, including switching between WAN providers if this forms part of the CH&N solution. As part of our procurement, we are committed to delivering a robust set of performance management metrics which will include service availability, and fully expect these to drive service providers' performance to ensure coverage across geographical areas.

We are currently considering how we can demonstrate and validate real-world deployment scenarios in lab conditions and would welcome discussions with the testing expert community on how we can do this and factor it into the Testing Coverage Document (which is a subsidiary document to the CH&N SVTAD). In terms of activity outside of the test environment, we are considering whether and how requirements are captured in the regulatory framework. At this stage of CH&N delivery, noting the ongoing discussion and negotiation with bidders at this stage of the procurements, we are not proposing that provisions relating to the network coverage are added to the SVTAD or its subsidiary documents.

DCC does not consider that Production Proving sits within the scope of the SVTAD (in the same way that Production Proving provisions in the SEC are not set out within the general Testing obligations), as this is an activity that is undertaken in the production environment, rather than a test environment. DCC will continue to develop its approach regarding business and operational readiness on the production platform, and we will seek stakeholders' view as we do so.

Finally, we note that we would also expect that real-world scenarios will be an important component of Initial Pallet Validation, on which we will continue to engage our customers and stakeholders to ensure that this phase of the programme is as beneficial as possible.

Scope of testing – device interoperability

A number of respondents raised the risk of device interoperability, stating concerns over the use of 'stubs' as opposed to real meters, and noting that testing should demonstrate that new CHs provided under the programme interoperate with no new issues with equipment already installed in consumers' premises. One respondent suggested that on this basis the testing objective defined in section 2.9 of the SVTAD did not give proper protection for smart metering equipment already functioning successfully in the production environment.

DCC acknowledges that interoperability issues caused by the new Communications Hub is a risk that must be mitigated as fully as possible. DCC's testing approach, and its 'shift-left' strategy provides the framework of this risk mitigation. DCC will develop its CHs in accordance with the design specifications in the SEC and is aiming to test as comprehensively as possible, with as many devices as is possible, but in a way that is not economically inefficient. Whilst it is not practical or efficient to test all combinations of devices, DCC is proposing to utilise real devices within its testing as early as practically possible and is developing the device selection methodology to define this, which we will continue to shape through discussion with testing experts and which will be approved by TAG. The devices selected as a result of that methodology will also be listed in the TCD which is approved by TAG.

In the event that any Testing Issues arise, we would expect that where these related to DCC devices and systems, DCC will take responsibility for their resolution. If testing uncovers new, as yet unseen Testing Issues with meters and other devices, it would be the responsibility of assigned SEC Parties to resolve these, as well as any incidents which would manifest themselves in the production environment. In each case the process for supporting and resolving Testing Issues uncovered as part of the CH&N testing undertaken pursuant to the SVTAD will be set out in a Testing Approach Document, including a process for escalation where the TAG does not agree with DCC's determination of how they should be resolved. DCC has not amended the testing objective, which has been scoped on this basis. As we have previously stated, we will continue to support energy suppliers' interoperability testing undertaken as part of the SMDA scheme.

3.2. Question 2: Do you agree with the proposed designation date of 30 July 2021 for the SVTAD for the CH&N Arrangements (or, if necessary, as soon as reasonably practicable within one month thereafter)?

3 respondents agreed with the designation date. The final respondent cited concerns over the SVTAD delivery timeline but stated that they did not object to the designation date on the proviso that DCC provided a clear timetable for delivery of design artefacts for testing.

DCC will recommend that the Secretary of State designates this document on 30 July 2021 or, if necessary, as soon as reasonably practicable within one month thereafter. DCC acknowledges that the timeframe for processing consultation responses is relatively short, but notes this was set based on DCC's experience of managing responses to specialist SEC subsidiary documentation where the number of respondents is relatively small, and whose views are often already understood through their participation in TAG.

DCC can confirm that it will provide to TAG a timetable for delivery of the design artefacts on which testing will depend.

3.3. Other comments from respondents

A number of respondents provided general comments that were not directly related to the content of the SVTAD or the questions asked in the document. These included:

The need for testing against the AltHAN solution. We agree this is important, and will continue to engage bilaterally with AltHAN, as well as with industry stakeholders generally via DCC's Testing Design Expert Group (TDEG) to ensure the appropriateness of the testing required.

DCC's requirements to test the life expectancy of devices provided. DCC does not intend to specifically test the longevity of CH life as part of the testing under the SVTAD. As part of DCC's procurement we are seeking contractual protection to ensure that Communications Hubs have an adequate life expectancy, but the precise terms remain subject to discussion and negotiation with bidders at this stage of the procurements.

Ensuring CHs support customers' in-life services to energy consumers. We consider that DCC's approach to CH deployment and upgrades will not adversely affect consumers' experience. As DCC has stated in its conclusions on its delivery plan for the CH&N Arrangements, we have built control points into the plan that we will use to assess and update stakeholders on our finally procured solution.

4. Post consultation document changes

Overall, the responses received relate to the scope and coverage of testing that will be described in the lower-level testing documents, as well as how these will be governed. DCC has made a number of minor text changes to clarify and remove unnecessary text in the SVTAD. These include:

- Clearer definitions for PIT, including testing stages within PIT and sub-systems being tested.
- Removal of unused definitions and tertiary document references.
- Clarificatory changes covering the approval of PIT sub-system testing documentation.

All of these changes are shown as tracked in the red-line version of the SVTAD that is issued alongside this conclusions document and submitted to the Secretary of State.

5. Why DCC considers the SVTAD for the CH&N Arrangements to be fit for purpose

DCC is confident that the revised draft CH&N SVTAD submitted to the Secretary of State reflects and addresses the relevant comments made by respondents and, where necessary, takes into account the consultation feedback.

It is DCC's view that it has met its SEC obligation to consult with parties and to address the points raised.

DCC considers that the CH&N SVTAD is defined to a sufficient level of detail for designation into the SEC and includes an overarching framework which sets out clearly and unambiguously parties' rights and obligations which are consistent / and aligned with the rest of SEC requirements.

6. Next Steps and Approval of the CH&N SVTAD

DCC has submitted to BEIS the SVTAD for CH&N Arrangements that it considers suitable for designation into the SEC, along with this document, which sets out why DCC considers the draft to be fit for purpose; copies of the consultation responses received.

DCC expects that BEIS will designate the SVTAD on 30 July 2021 or as soon as reasonably practicable within one month thereafter