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MP138 'DCC Service Testing in ETAD'

Modification Report

Version 1.0

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About this document

This document is a Modification Report. It sets out the background, issue, solution, impacts, costs, implementation approach and progression timetable for this modification, along with any relevant discussions, views and conclusions.

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This document also has three annexes:

- **Annex A** contains the redlined changes to the Smart Energy Code (SEC) required to deliver the Proposed Solution.
- **Annex B** contains the Data Communications Company (DCC) Great Britain Companion specification (GBCS) for Industry (GFI) Provision and Allocation Policy.
- **Annex C** contains the Refinement Consultation responses.

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1. Summary

This proposal has been raised by Richard Collard on behalf of the DCC.

The scope of SEC Appendix J 'Enduring Testing Approach Document' (ETAD) was initially to ensure DCC Users had appropriate provisions to undergo the User Entry Process Testing (UEPT). However, the ETAD does not include all the Testing Services that the DCC offers.

The DCC has been working with Device Manufacturers to understand their testing needs and develop additional Testing Services.

The Proposed Solution is to add four Testing Services to the ETAD. This modification has an impact on the DCC in regard to finance and charging. There are no costs to SEC Parties as a result of this change.

Some minor housekeeping changes have also been included in this modification. These are typographical errors and changing erroneous references to 'the Technical Architecture and Business Architecture Sub-Committee' (TABASC) to 'the Panel'. SEC Section C6.4 allows the Panel to delegate to any Sub-Committee any of its duties, powers and functions as the Panel may specify. These changes bring these references into line with the rest of the SEC.

This is a Self-Governance Modification and is targeted for implementation in the November 2021 SEC Release.

2. Issue

What are the current arrangements?

Testing Services

A recent review of interoperability change commissioned by the Department of Business, Energy and Industrial Strategy (BEIS) included a recommendation to update the SEC testing approach documentation to include Device Manufacturer related Testing Services and validate with industry to ensure that these services are fit for purpose.

The initial ETAD was designed to deliver support to DCC Users to qualify through entry process testing and to operate freely within the User Integration Testing (UIT) environment. However, there has been increasing recognition amongst industry of the value of providing Testing Services to Device Manufacturers who are not DCC Users. The DCC has therefore been in discussion with industry, particularly Device Manufacturers, to help shape the Testing Services that the DCC offers.

Charging

SEC Section K 'Charging Methodology' enables Testing Participants (which can include Device Manufacturers) the option to currently pay for "additional testing support" (SEC Section K7.5(i)). The "additional testing support" charge is an Explicit Charge and is based on the cost of one consultant

per day. Testing Participants may request additional testing support in accordance with SEC Section H14.33 to understand and resolve issues associated with:

- the DCC Total System and the results of such Testing Participant's Device and User System Tests.
- the Systems of the Testing Participant that are (or are intended to be) User Systems.
- communications between the DCC and any Device or between Devices which comprise (or which the Testing Participant intends will comprise) a Smart Metering System.

What is the issue?

The ETAD does not currently include three existing Testing Services and one new Testing Service that the DCC offers. The Explicit Charging statement does not cover charging for these new Testing Services.

In addition, the DCC proposes that the ETAD is reviewed for misalignments and amended accordingly. For instance, obligations in relation to GFI are currently in SEC Section X9 'Interim Device and User System Testing'. It is proposed that this be removed and included within the ETAD as Section X is expected to be removed from the SEC in due course and the ETAD is an enduring document.

The Testing Services within scope of this modification are summarised in the below table:

Existing Testing Services not currently in the ETAD		
Testing Service	Customers	Description
Interoperability and Innovation Events	Device Manufacturers	Occasionally (and at its discretion), the DCC hosts Interoperability and Innovation Events. These developmental events provide Device Manufacturers with a platform to test connectivity, interoperability, interchangeability and functionality between Home Area Network (HAN) Devices. These events often provide Device Manufacturers with access to real life Communications Hubs.
Great Britain Companion Specification (GBCS) for Industry (GFI)	Device Manufacturers, Suppliers	<p>This is a free tool developed by the DCC. It comprises of software and a ZigBee HAN interface to simulate the DCC and Communications Hubs for testing HAN Commands and Responses with:</p> <ul style="list-style-type: none"> • Electricity Smart Metering Equipment (ESME) • Gas Smart Metering Equipment (GSME) • In-home Displays (IHDs) • Prepayment Meter Interface Devices (PPMIDs) • Consumer Access Devices (CADs) • HAN Connected Auxiliary Load Control Switches (HCALCSs) <p>The tool allows Users to emulate sending and receiving GBCS messages to help identify any potential differences between how Parties have interpreted the Technical Specifications in comparison with the DCC interpretation. The tool has the capability to emulate a</p>

Existing Testing Services not currently in the ETAD		
Testing Service	Customers	Description
		Communications Hub to enable testing with real Smart Metering Devices.
Wired Instrumented Test Communications Hub (ITCH)	Device Manufacturers	<p>Wired ITCH is a Communications Hub used in test environments that allows Device Manufacturers to send Wide Area Network (WAN) Commands from a GFI through a wired interface. This is required as Device Manufacturers do not have the ability to send Commands to the DCC for delivery over the WAN. A Wired ITCH can be used with emulators and real-life ESME/GSME.</p> <p>Device Manufactures are able to order Wired ITCH in accordance with SEC Section F10.</p>

New Testing Services not currently in the ETAD		
Testing Service	Customers	Description
Radio Frequency (RF) Noise	Device Manufacturers	<p>The DCC previously worked with the industry to develop the RF Noise requirements in the Intimate Communications Hub Interface Specification (ICHIS) and the associated test specification. Following industry consultations in 2018, the DCC funded a temporary central test lab facility, provided by Plextek, to support testing to the ICHIS test specification. The DCC provided funding to support the eight-meter testing to ICHIS 2.0 in Quarter 3 2019.</p> <p>The DCC reviewed the need for an enduring central lab facility with the ICHIS Working Group and Energy Suppliers through Q3 and Q4 2019. The DCC has concluded an enduring central test facility is required to enable Device Manufacturers to test their Devices and ensure they meet the ICHIS, so they do not impact the WAN or HAN performance.</p> <p>A general RF testing capability was procured as part of the DCC's Brabazon House testing facilities in 2019 as it was required for network technology tests. The DCC is migrating the test facility from the temporary appointed sub-contractor (Plextek) to DCC Brabazon House; this is expected to conclude in Q3 2020.</p>

What is the impact this is having?

The Proposer believes the impact of not amending the ETAD to include the existing and new Testing Services would misalign with current DCC processes. By adding these Testing Services to the ETAD, appropriate charging arrangements would be reflected in the SEC for the RF Noise Testing Service, whilst also giving greater clarity to the other Testing Services the DCC offers.

Impact on consumers

There is no impact on consumers.

3. Solution

Proposed Solution

The Proposed Solution seeks to add the new and existing Testing Services set out above to the ETAD to provide greater clarity to SEC Parties and wider industry on the Services available to them.

The DCC considers that the current arrangements around the Explicit Charge for Testing Services are not currently fit for the purpose of charging for these Testing Services. Therefore, the solution will provide greater oversight on what Testing Services are available and the charging arrangements around them.

Interoperability and Innovation Events

These events are held on occasion. The DCC does not currently charge for these and are not proposing any Explicit Charges for these.

GFI

There will be a new Explicit Charge for GFI; this will be in accordance with a new GFI provisions and allocation policy produced by the DCC. This means that Parties will only be charged for GFI tools if they have exceeded their allocation. The GFI Provisions and Allocation Policy can be found in Annex B.

Wired ITCH

Device Manufactures are able to order Wired ITCH in accordance with SEC Section F10. The DCC currently have an Explicit Charge for Wired ITCH set out in SEC Section K. The DCC proposes to move the references into the ETAD for clarity and consistency.

RF Noise Testing

Following industry consultations in 2018, the DCC funded a temporary central test lab facility, provided by Plextek, to support testing to the ICHIS test specification. The initial set up costs have been through price control and socialised across Users via DCC Fixed Charges.

The DCC currently fund the monthly maintenance costs to ensure the continuity of a Central Lab Facility with up-to-date Test Procedures, as specified from ICHIS Working Group. Parties pay Plextek directly for test days used.

The Charging Statement will not feature the '*RF Noise Testing*' charge unless it is designated in the SEC. If this continues to be the case, the DCC would continue to fund the maintenance charges with Plextek and be unable to recover any charges from Device Manufacturers. The Proposed Solution is

to ensure that, via a new Explicit Charge, meter manufacturers will be charged a day-rate that reflects the costs incurred by the DCC for resource and materials of using the facility at Brabazon House. DCC Users can book the service for no additional charge.

The DCC would cease to pay the monthly maintenance charges to Plextek once the service has been fully set up in Brabazon House. The avoidance of monthly maintenance fees to Plextek and a setup fee included within the day rate will mitigate further setup costs (£65,000) within the first eight months.

The setup costs that have previously been socialised across DCC Users (and have been through price control) would be balanced over a two-year period from the avoidance of monthly maintenance fees combined with the setup fee included within the day rate. The charge for the setup fee could be given back to DCC Users through a rebate mechanism.

4. Impacts

This section summarises the impacts that would arise from the implementation of this modification.

SEC Parties

SEC Party Categories impacted			
✓	Large Suppliers	✓	Small Suppliers
	Electricity Network Operators		Gas Network Operators
✓	Other SEC Parties	✓	DCC

Breakdown of Other SEC Party types impacted			
	Shared Resource Providers		Meter Installers
✓	Device Manufacturers		Flexibility Providers

This modification impacts SEC Parties positively due to the greater clarity provided within the ETAD of Testing Services available to them. In addition, there is an impact on Parties around GFI testing and RF Noise testing in respect to the charging arrangements. Suppliers are impacted by this modification, as they have a responsibility to ensure their meters are RF Noise compliant.

DCC System

There are no impacts on DCC Systems in this modification.

SEC and subsidiary documents

The following parts of the SEC will be impacted:

- Section H 'DCC Services'
- Section K 'Charging Methodology'

- Schedule 7 'Specimen Enabling Services Agreement'
- Appendix J 'Enduring Testing Approach Document'

The changes to the SEC required to deliver the proposed solution can be found in Annex A.

Consumers

There is no impact on consumers from this modification.

Other industry Codes

There is no impact on other industry Codes from this modification.

Greenhouse gas emissions

There is no impact on greenhouse gas emissions from this modification.

5. Costs

DCC costs

There are no DCC costs to implement this change.

SEC Party costs

There were two respondents to the Refinement Consultation both of whom stated that they would not incur any costs in the implementation of this modification.

SECAS costs

The estimated SECAS implementation costs to implement this modification is two days of effort, amounting to approximately £1,200. The activities needed to be undertaken for this are:

- Updating the SEC and releasing the new version to the industry.

6. Implementation approach

Agreed implementation approach

The Change Sub-Committee agreed an implementation date of:

- **4 November 2021** (November 2021 SEC Release) if a decision to approve is received before 21 October 2021; or
- **24 February 2022** (February 2022 SEC Release) if a decision to approve is received after 21 October 2021 but on or before 10 February 2022.

This is a document only change and it has no impact on DCC Systems; it simply seeks to clarify the Testing Services DCC offer in the ETAD. The modification also seeks to clarify charging arrangements of some Testing Services. The November 2021 SEC Release is the earliest SEC Release this modification could be included in.

7. Assessment of the proposal

Observations on the issue

The DCC informed the Change Sub-Committee (CSC) that a charging element may need to be introduced for RF noise testing within the SEC, or alternatively, the existing method of charging would need to be reviewed. A CSC member questioned whether the Testing Advisory Group (TAG) has provided views on this proposal and whether this will be presented to it in the future. SECAS noted that the TAG had not provided any input at that point, however, it was subsequently discussed as part of the Refinement Process.

Solution development

Working Group members also raised a concern that there was duplication between this modification and [MP111 'Smart Metering Device Assurance \(SMDA\) Budget Amendments'](#). The DCC clarified that this modification is not a duplication of MP111. Testing Services will be carried out in DCC Test Laboratories by Device Manufacturers and is specific to the issue of RF Noise. It was further explained that the SMDA Scheme is independent and looks more at the interoperability of Devices rather than individual functionality tests such as RF Noise. SECAS and the DCC agreed that the clarification should be noted within the modification to clarify there is no duplication with MP111.

During solution development the DCC encountered issues on the RF Noise element of the modification due to COVID-19. The DCC advised that an internal issue within its Test Laboratories needed to be resolved, as the issue within its labs interfered with frequencies. The DCC explained that workers were unable to access their labs due to COVID-19 restrictions, therefore, solution development was delayed until February 2021.

The TAG was initially concerned around the set-up costs for the RF Noise Frequency testing but the DCC highlighted that the setup costs that have previously been through price control and socialised across DCC Users. For this reason, the DCC proposed that DCC Users would pay no additional charge for this service.

The Working Group supported the change, however, felt clarity is required to show the modification is focused on individual functionality and not focused on interoperability. One member queried if the modification would make the Testing Services discussed mandatory or voluntary. The DCC advised the Testing Services would be voluntary. It added that this modification would introduce a new Explicit Charge for RF Noise testing. Currently RF Noise, GFI and interoperability testing is not charged by the DCC. (The DCC currently have an Explicit Charge for Wired ITCH set out in SEC Section K.)

There were two respondents to the Refinement Consultation, both were Large Suppliers. One was supportive of the modification. The other, whilst supportive, raised some concerns around the set-up costs. They requested that the DCC confirm that there would be no additional cost implications in relation to these additional services for SEC Parties now or in the future. The DCC has confirmed this is the case and no additional costs would be charged to SEC Parties for these services through Fixed Charges. The ongoing maintenance will be reviewed annually and will be included in the Explicit Charges, which will be managed through the Charging Statement review process. The DCC believed that this did not need to be included in the legal text but should be made clear in this Modification Report.

In addition, the Supplier questioned if these changes were needed since all these tests were already offered by the DCC and the charges were not changing (except in the case of RF noise testing and GFI allocations). The DCC believed this change provides further clarity around the arrangements for Testing Services.

The DCC specifically requested respondents' feedback on whether the costs recovered should be rebated to those who bore the initial set up costs. One respondent believed they should, and the other did not.

Support for Change

The CSC supported this change and recommended that the modification be discussed at TAG for further clarity.

The Working Group supported the change once the points raised had been clarified and the two respondents to the Refinement Consultation were supportive, although one had additional comments as set out above.

Views against the General SEC Objectives

Proposer's views

The Proposer believes this modification will better facilitate:

- SEC Objective (a)¹ as it provides industry on greater oversight of Testing Services available to them; and
- SEC Objective (b)² as it will enable the DCC to comply with its obligations, by providing further clarity around the arrangements of Testing Services.

¹ Facilitate the efficient provision, installation, and operation, as well as interoperability, of Smart Metering Systems at Energy Consumers' premises within Great Britain

² Enable the Data Communications Company to comply at all times with the General Objectives of the Data Communications Company (as defined in the Data Communications Company Licence), and to efficiently discharge the other obligations imposed upon it by the Data Communications Company Licence

Industry views

One Refinement Consultation respondent believed that since these tests are already available from the DCC this change offers only a minimal improved facilitation of the Objectives set out in this report. Initially the Proposer had suggested that this modification would also better facilitate SEC Objective (e)³ but following the Refinement Consultation agreed that this should be removed.

Views against the consumer areas

Improved safety and reliability

The increased provision of testing will help increase the safety and reliability of Devices and Smart Metering Systems for consumers.

Lower bills than would otherwise be the case

This modification will be neutral against this area.

Reduced environmental damage

This modification will be neutral against this area.

Improved quality of service

This modification will improve quality of service, as Testing Services enable the improvement of quality of devices, by ensuring industry to remains compliant with the quality of Devices.

Benefits for society as a whole

This modification will be neutral against this area.

Appendix 1: Progression timetable

This Modification will now be issued for Modification Report Consultation followed by Change Board vote on .

Timetable	
Event/Action	Date
Presented to CSC for initial comment	28 Jul 2020
Presented to CSC for final comment and recommendations	25 Aug 2020
Panel converts Draft Proposal to Modification Proposal	11 Sep 2020

³ Facilitate innovation in the design and operation of energy networks to contribute to the delivery of a secure and sustainable supply of energy.

Timetable	
Event/Action	Date
Modification discussed with Working Group	7 Oct 2020
Modification discussed with TAG	24 Feb 2021
Modification discussed with TAG	28 Apr 2021
Modification discussed with Working Group	5 May 2021
Refinement Consultation	17 May – 7 Jun 2021
Modification Report presented to Panel	18 Jun 2021
Modification Report Consultation	30 Jun – 19 Jul 2021
Change Board Vote	28 Jul 2021

Appendix 2: Glossary

This table lists all the acronyms used in this document and the full term they are an abbreviation for.

Glossary	
Acronym	Full term
BEIS	Department of Business, Energy and Industrial Strategy
CAD	Consumer Access Device
CSC	Change Sub-Committee
DCC	Data Communications Company
ESME	Electricity Smart Metering Equipment
ETAD	Enduring Testing Approach Document
GBCS	Great Britain Companion Specification
GFI	Great Britain Companion Specification for Industry
GSME	Gas Smart Metering Equipment
HAN	Home Area Network
HCALCS	Home Area Network Connected Auxiliary Load Control Switch
ICHIS	Intimate Communications Hub Interface Specification
IHD	In-Home Display
ITCH	Instrumented Test Communications Hub
PPMID	Prepayment Interface Device
RF	Radio Frequency
SEC	Smart Energy Code
SMDA	Smart Meter Device Assurance
TAG	Testing Advisory Group
UIT	User Integration Testing
UEPT	User Entry Process Testing
WAN	Wide Area Network