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# DP172

## ‘Reduced CPA & CPL requirements for innovation and Device field trials’

### Modification Report

Version 0.1

18 June 2021



## About this document

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This document is a draft Modification Report. It currently sets out the background, issue, and progression timetable for this modification, along with any relevant discussions, views and conclusions. This document will be updated as this modification progresses.

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## 1. Summary

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This proposal has been raised by Eric Taylor from SMETS Design Ltd.

Innovation in Smart Metering, as in other technical and engineering domains, relies on the use of a minimum viable product (MVP) field trial or live usage trial. These are used to show the value of the proposal or solution and refine the product and solution designs. Typically, this happens before manufacturers commit to the full costs of final volume product, the final detailed design and certifications.

Currently, the requirements of the Smart Energy Code (SEC) are designed around the mass deployment of Devices and offer no leeway to support MVP trials on the live Data Communications Company (DCC) network. The biggest cost and risk blocker for the introduction of a new or modified Device type, or an innovative Device usage are the Commercial Product Assurance (CPA) arrangements.

The Proposer believes that this is preventing manufacturers from being able to invest confidently to bring innovative products to market. It is also impacting consumers where Devices have been rolled out on a mass scale with potential defects that could have been uncovered in a limited volume product trial on the live DCC network.

## 2. Issue

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### What are the current arrangements?

#### Central Products List

The DCC uses the Central Products List (CPL) to manage the Devices it can communicate with. If a Device is not listed on the CPL, the DCC cannot add it to the Smart Metering Inventory (SMI) and therefore cannot communicate with it. Only once a Device has met the requirements set out in SEC Appendix Z 'CPL Requirements Document' can it be added to the CPL. The CPL is a list of Device Models that are either:

- Smart Metering Equipment Technical Specifications (SMETS) 2 Devices which have received all relevant Assurance Certificates; or
- SMETS1 Devices which have been notified by the DCC and have been included as entries on the SMETS1 Eligible Products Combination list.

#### Smart Metering Assurance Certificates

There are three types of Assurance Certificates, each issued by a different Assurance Certification Body. The technical specifications of each product relevant to that Physical Device Type determines which Assurance Certificates are required to add the Device to the CPL. These are Zigbee Alliance Certificates, Device Language Message Specification (DLMS) Certificates and CPA Certificates.

The Assurance Certification Body for the CPA scheme is the National Cyber Security Centre (NCSC).

## What is the issue?

Innovation in Smart Metering (or in any technical or engineering domain) relies on the use of MVP in a field trial or live usage trial. These are used to show the value of the proposal or solution and refine the product and solution designs. Typically, this happens before manufacturers commit to the full costs of final volume product, the final detailed design, and full product certifications.

The biggest cost and risk factor for the introduction of a new Device Type or innovative Device usage are the CPA requirements. These are designed around the mass deployment of devices and offer no leeway to support limited MVP trials on the live DCC network.

This live trial facility has always been needed in SMETS2 Smart Metering but has never been provided in a way that is required for commercially driven innovation to occur. This is the normal way that progress is made in any technology, but the SEC arrangements (listed above) require the full investment of a complete final volume product before any field trial can be undertaken.

The Proposer believes that, as well as suffocating innovation, this restriction has already caused cost and problems for the Smart Metering Implementation Plan (SMIP). Devices have been deployed at high volume in the live network with issues that normally would have been easily spotted during a limited volume live field trial. These are cases where Over-The-Air (OTA) updates have not been able to resolve these issues, where a combination of OTA and Device restarts have been required, or on-site visits. The Proposer believes that had there been the opportunity to trial, then final designs would not have been committed to prior to receiving this important design feedback from real world use.

There is no test environment which can simulate the real live usage of a Device on the live network with real Users and which meets the needs of commercially led innovation.

## What is the impact this is having?

The Proposer believes the high threshold required to trial innovation on the live DCC network and prove the value of a new use cases based on the existing smart metering arrangements and the existing technical specifications is prohibiting industry-led innovation.

This absence of commercially driven innovation will affect the DCC's ability to meet its second enduring General Objective<sup>1</sup>, as set out in the DCC's Licence, and find ways to re-use the smart metering systems for anything other than dual fuel metering. This denies the DCC the ability to offer other revenue generating services based on such commercially driven innovation which might reduce the overall costs to DCC Users.

Manufacturers are incurring higher costs as they must develop their product to a higher threshold to evaluate their Devices in the field. There is then potential to spend again prior to mass deployment to resolve something which could have easily been spotted if normal Good Industry Practice was used as described above. This also risks reputational damage to the Device Manufacturer, the Device operator and the SMIP, which could have been avoided if a limited volume MVP live field trial were undertaken.

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<sup>1</sup> The Second Enduring General Objective of the Licensee is to carry on the Mandatory Business in the manner that is most likely to facilitate: (a) effective competition between persons engaged in, or in Commercial Activities connected with, the Supply of Energy under the Principal Energy Legislation; (b) such innovation in the design and operation of Energy Networks as will best contribute to the delivery of a secure and sustainable Supply of Energy under the Principal Energy Legislation; and (c) the reduction (by virtue of benefits arising from the provision of Value Added Services) of the charges payable for Mandatory Business Services.

## Impact on consumers

The continued mass deployment of Devices without live field trials can lead to Devices containing issues that could have easily been spotted in a real-world soak test. This negatively impacts the consumer by giving them a poor experience of the Devices at the start of volume deployment, as well as the inconvenience of possibly having multiple site visits.

## Appendix 1: Progression timetable

This proposal was raised 18 June 2021. SECAS will present this Draft Proposal to the Security Sub-Committee (SSC) and the Change Sub-Committee (CSC) for initial comment, before presenting it to the other relevant Sub-Committees.

Timetable	
Event/Action	Date
Draft Proposal raised	18 Jun 2021
Presented to CSC for initial comment	29 Jun 2021
Modification discussed with SSC	14 Jul 2021
Modification discussed with Operations Group	26 Jul 2021
Presented to CSC for final comment and decision	27 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
CPA	Commercial Product Assurance
CPL	Central Products List
CSC	Change Sub-Committee
DCC	Data Communications Company
DLMS	Device Language Message Specification
MVP	Minimum Viable Product
NCSC	National Cyber Security Centre
OTA	Over-The-Air
SEC	Smart Energy Code
SMETS	Smart Metering Equipment Technical Specifications
SMI	Smart Metering Inventory
SMIP	Smart Metering Implementation Plan
SSC	Security Sub-Committee

Glossary	
Acronym	Full term
TABASC	Technical Architecture and Business Architecture Sub-Committee