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# MP222

## ‘CPL submission efficiency improvements’

### Modification Report

Version 0.3

15 March 2023

Corporate member of  
Plain English Campaign  
Committed to clearer  
communication

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## About this document

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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This document also has two annexes:

- **Annex A** contains the business requirements for the solution.
- **Annex B** contains the redlined changes to the Smart Energy Code (SEC) required to deliver the Proposed Solution.

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## 1. Summary

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This proposal has been raised by Martin Bell from the Energy and Utilities Alliance (EUA).

The Data Communications Company (DCC) uses the Central Products List (CPL) to manage the Devices it can communicate with. If a Device is not listed on the CPL, a User cannot communicate with it other than to update the firmware to a version that is on the CPL.

At present, a Device Manufacturer can add a new Device to the CPL without any Supplier intervention. However as soon as the same Device requires a change to hardware or firmware, it must have Supplier endorsement before it can be updated on the CPL. Where there is no Supplier endorsement for a new Device hardware or firmware version, the Device Manufacturer cannot progress with the CPL submission. Hence a product that has gone through rigorous Certified Product Assurance (CPA) and other relevant assessments cannot be listed or used.

This modification proposes to remove the requirement for Supplier Parties to have to endorse hardware/firmware revisions to pre-existing CPL-listed Device Models. It will also allow Manufacturers to submit Hash Images directly as part of the CPL submission.

This modification does not intend to alter the processes for adding new Communications Hub Device Models to the CPL or associate these with a Hash Image. This modification relates to Smart Metering Equipment Technical Specifications (SMETS) 2 Devices only.

This is a Self-Governance modification and will impact Suppliers and Device Manufacturers. There are no DCC-associated implementation costs. Implementation is targeted for the June 2023 SEC Release (29 June 2023).

## 2. Issue

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### What are the current arrangements?

#### What is the Central Products List?

The DCC uses the CPL to manage the Devices it can communicate with. If a Device Model is not listed on the CPL, a User cannot communicate with it other than to update the firmware to a Device Model version that is on the CPL. Only once a Device Model has met the requirements set out in the SEC Appendix Z 'CPL Requirements Document' can it be added to the CPL.

The CPL is a list of Device Models that are either:

- SMETS2 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 (for clarification this modification does not impact SMETS1 Devices)

SEC Section F 'Smart Metering System Requirements' defines the CPL and is supplemented by the CPL Requirements Document. Suppliers may use the information contained within the CPL to make efficient decisions when choosing products that may be available, which includes updated products. However, Suppliers are not obligated to use the CPL for this purpose.

### **Validating CPL entries**

The CPL Requirements Document requires the Panel to check that a CPL submission is valid before being added to the CPL. Each time a new Device (whether it be a new hardware or firmware version) is added, a new version of the CPL entry is created. In practice this is carried out by the Smart Energy Code Administrator and Secretariat (SECAS) on behalf of the Panel.

SECAS validates whether the CPL submission has the required Assurance Certificates (CPA, ZigBee, Device Language Message Specification (DLMS)) / Companion Specification for Energy Metering (COSEM) and whether the Device Model details are unique (to avoid duplicated entries).

### **Adding Device Models to an existing CPA certificate**

Additional Device Models can be added to an existing CPA certificate: The DCC (for Communications Hubs) and the Supplier (for all other Devices) can notify the Panel in order to list these Device Models on the CPL (the Manufacturer is not able to do this). The DCC or the Supplier can only do this in accordance with the relevant CPA Assurance Maintenance Plan and must retain the evidence of having acted in accordance with the terms of the relevant CPA Assurance Maintenance Plan. The Panel or the Authority can request this evidence.

### **Supplier testing of a Device**

For any new or updated product that is intended for CPL inclusion, Manufacturers take the Device through intensive pre-defined CPA approval activities which demonstrate that the security functions of the Device meet the Security Characteristics as defined by the National Cyber Security Centre (NCSC) standards.

This differs from Supplier testing, which is focused more on ensuring the Device integrates into the Supplier's individual smart metering solution, for example when the Supplier runs its individual business processes and sends relevant Service Requests. To summarise, current Supplier testing of any metering Device is bespoke to the individual Supplier business requirements.

The CPL submission will then be submitted by the Manufacturer, supported by the Supplier's endorsement. SECAS will then process the submission and publish a new version of the CPL.

Once the new version has been added to the CPL, Suppliers are under no obligation to take a new Device Model release if they have not tested it. Hence in reality there is no difference between a new or updated product being submitted to the CPL. However, having releases ready with fixes that the Manufacturer has already taken through CPA and other required CPL submission criteria (ZigBee / DLMS as required) will be beneficial to the efficient deployment of fixes, including operational and potentially security fixes by avoiding the challenge of delays in finding Supplier resource to do this.

### **Associating a Device Model with a Hash Image**

Currently, a Supplier must present the Hash Image to SECAS for CPL submission; it cannot be the Manufacturer. A hash enables an updated firmware version to be paired to the correct Device when an update is carried out. Upon receipt of a Manufacturer Image, the Device calculates the Hash. If the Hash Image it calculates differs from that which is listed on the CPL, it is an indication that the

firmware provided to the Device is not what the Supplier intended. Therefore, it will reject the update firmware activation commands.

Newly CPL-registered Device Models that may not initially contain a hash can be installed, commissioned, and used by the Supplier. When a Supplier chooses to update its Devices, the Device Model on the CPL that will feature the firmware upgrade will require a hash. The Hash Image is created by the Device Manufacturer.

## What is the issue?

### Supplier endorsement

At present, a Device Manufacturer can add a new Device to the CPL without any Supplier endorsement. However, under current arrangements, a Device Manufacturer is not permitted to update an existing CPL-registered Device without the endorsement of a Supplier. Where there is no Supplier endorsement for a new Device hardware or firmware version, the Device Manufacturer cannot progress with the CPL submission, hence a product that has gone through rigorous CPA and other relevant assessments cannot be listed or used.

Furthermore, SEC Appendix Z (Section 5.2) refers to Suppliers following a CPA Assurance Maintenance Plan when a new firmware or hardware version is being submitted for CPL inclusion. However, in practice, Manufacturers manage this process, with the oversight of the Security Sub-Committee (SSC) and the NCSC, not Suppliers.

The Device Manufacturer compiles and keeps all relevant evidence that it has acted in accordance with the terms of the relevant CPA Assurance Maintenance Plan, should the Panel or the Authority request this. This obligation is the responsibility of the Supplier, however Suppliers fully devolve this responsibility of creating CPL updates in line with this process through the relevant Device Manufacturer.

### Efficiencies identified with obtaining a Hash Image

The Proposer believes that as the Device Manufacturer creates the Hash Image for its Device, and provided the Device is CPA approved, there should be no reason why the Device Manufacturer cannot submit the Hash Image for the CPL submission as it is responsible for the necessary regulatory approvals to achieve this. Whilst initially it was envisaged that the Supplier would monitor Manufacturers' CPA Assurance Maintenance Plans, the reality is that Suppliers have fully devolved this to Manufacturers and hence this proposal is ensuring that processes are aligned.

## What is the impact this is having?

Not having a Supplier endorsement in place is stopping updated products coming to the GB Smart Metering market, hence unnecessarily delaying fixes (operational and potentially security fixes) and potentially stifling competition, as well as procurer's choice. This is likely to increase as new initiatives and industry challenges arise. In theory, a Manufacturer could design a Device featuring new technology, however without a Supplier's endorsement, that Device is unlikely to be purchased and installed as it cannot be updated.

During the Device lifecycle, Manufacturers must take products through operational fixes and issue resolutions. Suppliers may have other priorities which impact their ability to test these changes until

the point they decide to use the changed Device. The Proposer believes that such circumstances should not hold up CPL submissions.

Furthermore, the inability to be able to immediately update existing in-stock Devices post-Installation and Commission, means that the original CPA listed Device is unlikely to be procured and used.

### **Impact on consumers**

If Device updates cannot be added to the CPL, Suppliers may be left with Devices that are delivering sub-optimal performance and Manufacturers are restricted in their ability to communicate the availability of important fixes which could result ultimately in meter removal.

## **3. Solution**

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### **Proposed Solution**

The Proposed Solution is to remove the requirement for a Supplier Party to provide endorsement/approval for a firmware or hardware revision to a SMETS2 Device that is currently listed on the CPL. This will result in a more efficient process when making updates available to pre-existing CPL-listed Devices.

By removing the Supplier endorsement from a Manufacturer's CPL submission, the Manufacturer is solely responsible for the CPA Assurance Maintenance Plan. They will provide the documentation to the CPL submission process directly and fulfil any questions that might arise without unnecessary delay. For clarity, this does not force the Supplier to deploy the update but is designed to enable a Supplier to do this more quickly and take advantage of available certified firmware without undue delay. This modification will not impact the current CPA certification process.

The Proposed Solution will also enable the Manufacturer (provided they are a SEC Party) to submit the Hash Image, without it having to be submitted via a Supplier Party, as is the current process.

This is a proposed governance change and will not impact DCC Systems.

For clarity, SEC Appendix Z 'CPL Requirements Document' will be amended to state that Supplier Parties and Manufacturers who are SEC Parties can submit CPL submissions, however if a Manufacturer creates a submission, the Supplier Party endorsement will not be required. If the Manufacturer is not a SEC party, they will have to abide by the current obligations.

### **MP168 'CPL Security Improvements'**

SECAS has investigated the potential link that MP222 will have with [MP168 'CPL Security Improvements'](#). MP168 seeks to add a further level of security to CPL submissions by validating that the correct individual has signed the CPL submission using the DCC Infrastructure Key Infrastructure (IKI) token. This will be validated against the Certificate Revocation List (CRL).

If MP222 is approved, the Supplier Party representative will no longer be required endorse a Manufacturer's CPL submission and would not be required to sign the submission. When developing the Proposed Solution with the SSC, it was agreed that Supplier Parties will still be able to submit CPL submissions. This means that if both modifications are implemented, Supplier Parties and

Manufacturers will require DCC IKI tokens to sign CPL submissions that include Hash Images. The SSC approved of this additional security check.

## 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

Device Manufacturers will be impacted by this change as they will be responsible for submitting firmware and or hardware revisions for pre-existing CPL-listed SMETS2 Devices directly to SECAS without Supplier Party endorsement.

Supplier Parties will be impacted by this change as they may no longer have a role in SMETS2 CPL submissions.

The DCC will experience no impact as, once completed, the updated CPL is uploaded into its system using the existing business as usual (BAU) process.

### DCC System

This modification will have no impact on the DCC System.

### SECAS

This modification will not result in further work for SECAS, however the team that process CPL submissions will need to be aware that the modification has been implemented.

### SEC and subsidiary documents

The following parts of the SEC will be impacted:

- Appendix Z 'CPL Requirements Document'

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

### Consumers

This modification will have a positive impact on consumers as updates that include fixes to installed Devices will be made available more quickly than the current process allows.

### Other industry Codes

This modification will have no impact on other industry Codes.

### Greenhouse gas emissions

This modification may result in new technologies being implemented into the smart infrastructure that will allow consumers to better manage their energy usage and therefore reduce greenhouse gas emissions.

## 5. Costs

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### DCC costs

This modification has no associated DCC costs.

### SECAS costs

The estimated SECAS implementation cost to implement this as a stand-alone modification is one day of effort, amounting to approximately £600. This cost will be reassessed when combining this modification in a scheduled SEC Release. The activities needed to be undertaken for this are:

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

### SEC Party costs

SEC Party costs will be obtained through the Refinement Consultation.

## 6. Implementation approach

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### Recommended implementation approach

SECAS is recommending an implementation date of:

- **29 June 2023** (June 2023 SEC Release) if a decision to approve is received on or before 15 June 2023; or

- **2 November 2023** (November 2023 SEC Release) if a decision to approve is received after 15 June 2023 but on or before 19 October 2023.

This is a document only change and therefore the next SEC Release this could be implemented in is the June 2023 SEC Release. There should be either no or minimal impacts on SEC Parties and therefore can be implemented in the June SEC Release. If however, Parties state during the Refinement Consultation that they require a particular lead time, SECAS will adjust the implementation approach accordingly.

## 7. Assessment of the proposal

### Areas for assessment

#### Sub-Committee input

SECAS has engaged with the Chairs from the Operations Group (OPSG), the Technical Architecture and Business Architecture Sub-Committee (TABASC), the SSC and the Smart Metering Key Infrastructure Policy Management Authority (SMKI PMA) to confirm what input is required from these forums. The key points can be found below:

Sub-Committee input	
Sub-Committee	Input sought
OPSG	The OPSG Chair has requested that updates are provided offline.
SMKI PMA	No anticipated SMKI impacts from this proposal.
SSC	Are there security implications from removing Supplier endorsements from CPL submissions? SECAS presented the Proposed Solution to the SSC, who approved of the modification. The SSC also advised that MP168 will likely compliment this change.
TABASC	How will this proposal impact the smart metering technical and/or business architecture? This has been discussed with the TABASC Chair, and with the Proposed Solution likely to be a governance change, there will be no technical and/or business architecture changes. The TABASC Chair will be kept up to date as the modification progresses.

### Observations on the issue

#### Views of the Change Sub-Committee

SECAS presented the Draft Proposal to the Change Sub-Committee (CSC) for initial comments in November 2022. A Manufacturer representative commented that it can take up to two weeks to get a Supplier to send their supporting statement to SECAS to allow the CPL inclusion to be processed. They added that this delay can cause major inconvenience if the update to the Device includes an urgent fix.

### **Initial SSC discussions**

SECAS sought initial views from the SSC while in the Development Stage. The SSC commented that there is a difference between a new Device model and one that is already installed. It stated that Suppliers can choose to purchase the new Device model based on the results of the testing carried out prior to CPL inclusion, whereas the Supplier is not obliged to purchase a new firmware version for the installed Device.

SECAS informed the SSC that it would return to the Sub-Committee once solutions have been put forward and have been discussed with the Working Group.

### **Support from a Large Supplier party**

When presented at the SEC Working Group, a Large Supplier representative stated that they acknowledge the issue and approve of the Proposed Solution. A Device Manufacturer representative also commented that they experience liaising with many Suppliers as part of BAU CPL submissions, and are also supportive of the Proposed Solution. During the Working Group discussion, a member asked whether the modification had any DCC System impacts. SECAS confirmed that this modification will not result in any DCC System impacts as MP222 is a governance change. The Proposer added that they believed that the Proposed Solution will not negatively impact Parties, as the process will become more direct and efficient.

## **Solution development**

### **Security enhancements**

SECAS presented the straw man solution to the SSC in order to understand if there was any security compromise. The SSC noted the issue and business requirements that the Proposed Solution must adhere to. The SSC suggested that CPL submissions should be limited to Supplier Parties and Device Manufacturers. This will bolster security as this will limit who can submit new Devices to the CPL. Furthermore, the SSC added that provided MP168 is implemented, the two modifications will compliment each other and will mean that MP222 poses no increased risk to smart metering security. The SSC approved of the Proposed Solution. The Proposer and SECAS have since restricted the new change further to Device Manufacturers that are SEC Parties.

## **8. Case for change**

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### **Business case**

This modification will result in a more efficient CPL submission process. Enabling Manufacturers to be able to submit firmware and hardware revisions to existing Devices, without Supplier Party endorsement, will allow for additional functionality and fixes to be made available in a more time efficient manner. This will reduce the time for fixes and improvements to be available for deployment with operational, security and consumer benefits and allow Suppliers to focus on testing activities.

## Views against the General SEC Objectives

### Proposer's views

The Proposer believes that this modification better facilitates SEC Objective (a)<sup>1</sup>, as the efficiency improvements to the CPL submission process will provide improvements to the provision, operation and interoperability of smart metering systems.

The Proposer also believes that this modification will better facilitate SEC Objective (c)<sup>2</sup>, as the Proposed Solution will enable fixes and enhancements to consumers' smart meters that will enable them to better manage their energy usage.

Furthermore, the Proposer believes that this modification will better facilitate SEC Objective (d)<sup>3</sup>, as the proposed CPL submission efficiencies will mean that Manufacturers that are not affiliated with a Supplier will be able to provide firmware and hardware revisions to their Devices.

### Industry views

Industry views will be gathered during the Refinement Consultation.

## Views against the consumer areas

### Improved safety and reliability

This modification will offer improvements to the reliability of Devices, as firmware updates that include fixes to issues will be able to be implemented in a more efficient manner than the current process allows.

### Lower bills than would otherwise be the case

This modification will have a neutral impact on the cost of consumers' energy bills.

### Reduced environmental damage

This modification will have a positive impact on the reduction of environmental damage, as the Proposed Solution will allow Manufacturers who are not currently endorsed by a Supplier, to update their Devices. This will mitigate against the potential removal of these Devices.

### Improved quality of service

This modification will facilitate and improved quality of service as firmware updates will be made available more quickly, which Suppliers will be then able to roll out to their customers.

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<sup>1</sup> Facilitate the efficient provision, installation, operation and interoperability of smart metering systems at energy consumers' premises within Great Britain.

<sup>2</sup> Facilitate energy consumers' management of their use of electricity and gas through the provision of appropriate information via smart metering systems.

<sup>3</sup> Facilitate effective competition between persons engaged in, or in commercial activities connected with, the supply of energy.

## Benefits for society as a whole

This modification will have a positive impact on society as the efficiencies to the CPL submission process will enable updates to Devices including fixes and additional functionality to be made available in a timelier manner.

## Appendix 1: Progression timetable

Following the Working Group and SSC discussions, SECAS will issue the Refinement Consultation to obtain further feedback from SEC Parties.

Timetable	
Event/Action	Date
Draft Proposal raised	7 Nov 2022
Presented to CSC for initial comment	15 Nov 2022
Presented to Sub-Committees for initial comment	Nov – Dec 2022
CSC converts Draft Proposal to Modification Proposal	20 Dec 2022
Business requirements developed with the Proposer	Dec 2022
Proposed Solution developed with the Proposer	Dec 2022
Legal text developed with the Proposer and SEC Lawyer	Jan 2023
Modification discussed with Working Group	1 Feb 2023
Modification discussed with the SSC	22 Feb 2023
<i>Refinement Consultation</i>	<i>15 Mar 2023 – 5 Apr 2023</i>
<i>Modification Report approved by CSC</i>	<i>18 Apr 2023</i>
<i>Modification Report Consultation</i>	<i>19 Apr – 10 May 2023</i>
<i>Modification approved by Change Board</i>	<i>31 May 2023</i>

## 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
BAU	Business as usual
COSEM	Companion Specification for Energy Metering
CPA	Certified Product Assurance
CPL	Central Products List
CRL	Certificate Revocation List
CSC	Change Sub-Committee
DCC	Data Communications Company

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Glossary	
Acronym	Full term
DLMS	Device Language Message Specification
EUA	Energy and Utilities Alliance
IKI	Infrastructure Key Infrastructure
OPSG	Operations Group
SEC	Smart Energy Code
SECAS	The Smart Energy Code Administrator and Secretariat
SMETS	Smart Metering Equipment Technical Specifications
SMKI PMA	Smart Metering Key Infrastructure Policy Management Authority
SSC	Security Sub-Committee
TABASC	Technical Architecture and Business Architecture Sub-Committee