Smart Energy Code

# MP081

# 'Alignment of DUIS and CHISM to reflect current DCC Processing'

## Modification Report

### Version 1.0

## About this document

This document is the Modification Report for [MP081 'Alignment of DUIS and CHISM to reflect current DCC Processing'](). It provides detailed information on the background, issue, solution, costs, impacts and implementation approach. It also summarises the discussions that have been held and the conclusions reached with respect to this Modification Proposal.

## Contents

This document also has one annex:

- **Annex A** contains the redlined changes to the Smart Energy Code (SEC) required to deliver the proposed solution.

# 1. Summary

At the Data Communications Company (DCC) Design Release Forum, and internal DCC review regarding incident resolution activity, a need for clarification of the DCC processing within the SEC has been highlighted. This clarification would align the SEC to reflect current DCC processing, mitigating possible issues arising due to DCC Users misunderstanding of the DCC Systems, and would prevent reoccurrence of already known issues.

This Modification Proposal seeks to align Appendix I 'CH Installation and Maintenance Support Materials' and Appendix AD 'DCC User Interface Specification' to reflect the processes the DCC currently perform.

This proposal will not impact on any SEC Parties, and implementation costs are limited to Smart Energy Code Administrator and Secretariat (SECAS) time and effort to update the SEC documentation. If approved, this proposal is targeted for the February 2020 SEC Release.

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## 2. Background

### Clarification of DCC processing

Following assurance at the DCC Design Release Forum with Customers, and an internal DCC review regarding incident resolution activity, a need to include clarification in the SEC around DCC processing was identified. This clarification should provide a detailed explanation of current DCC processing and align the SEC to reflect this. The DCC is concerned that points of detail that are not currently described could adversely affect User understanding of DCC Systems.

### What is the issue?

Without clarification of the current DCC Systems, Customers would observe unexpected behaviour and unsuccessful System responses. In some instances, incidents may occur due to lack of User understanding. If not amended, this is likely to lead to DCC Incidents which could otherwise be avoided.

The need for clarification of DCC processing description has been identified in two SEC Appendices: Appendix I 'CH Installation and Maintenance Support Materials' (CHISM) and Appendix AD 'DCC User Interface Specification' (DUIS).

Already there have been recorded issues due to lack of a defined unconfirmed Wide Area Network (WAN) Variant in table 3 in CHISM Annex E. The lack of information about the DCC Systems in DUIS have yet to create issue. However, it has been identified that if Service Request 8.14.2 does not accurately reflect the DCC Systems, then there is potential for Customer confusion. Furthermore, Local Delivery will not work without Service Request 6.15.1 and Service Request 6.21 on the Service Request Response List for Service Request Responses.

# 3. Solution

## Proposed Solution

**CHISM**

When a User sends Service Request 12.1 'Request WAN Matrix' to receive Smart Metering Wide Area Network (SM WAN) Coverage, in most cases they will receive an Availability Date and WAN Variant. However, in an exception case, the Communications Service Provider (CSP) for the South and Central regions may respond to a SM WAN Coverage request (CSPM-S1 or CSPM-S2) with an Availability Date for coverage but without being able to confirm the WAN Variant that will need to be used. The Data Service Provider (DSP) will take this data and returns the Availability Date and the value of the unconfirmed WAN Variant in the response to Service Request 12.1 'Request WAN Matrix'. WAN Variant will require an amendment to table 3 in CHISM Annex E, where it is defined as a space for CSP South & Central.

**DUIS**

### Unit error correction

There has been an incorrect unit of measurement identified in Table 59 'Gas Threshold Matrix'. Data Item 'Block Threshold' has a Unit that needs to be changed from 'kWh' to 'Wh'.

### Additional Service Requests for Organisation Certificate tracking

In the event of a Local Command delivery, the DCC requires the delivery of a number of responses to those locally delivered commands via Service Request 8.13 'Return Local Command Response'. For the DCC to track Organisation Certificates held on Devices in the case of local delivery of Service Request 6.15.1 and Service Request 6.21, these two Service Requests will need to be added to the list of Service Request Responses in DUIS Section 3.8.112.2 (Service Request 8.13).

### Changes to Service Request 6.24.2

Additional information is needed under DUIS Section 3.8.77 'Retrieve Device Security Credentials (Device)' due to changes to DCC System Processing. This will describe the process where the DCC will check the contents of a response and update the Inventory and SMKI Repository if needed.

### Changes to Service Request 8.14.2

Under the description of Service Request 8.14.2 'Communications Hub Status Update – Install No SM WAN' it has been identified that text should be added to better define current DCC System Processing. This would correct the Smart Metering Inventory so that a Communications Hub fitted in a 'no WAN Install' scenario can be correctly identified.

## Legal text

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

# 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 |

No SEC Parties will be affected by the implementation of this modification, but will benefit from the clarity it provides.

## DCC System

There are no impacts on the DCC Systems as the proposed solution aligns the SEC to reflect the current DCC processes.

## SEC and subsidiary documents

The following parts of the SEC will be impacted:

- Appendix I 'CH Installation and Maintenance Support Materials'

- Appendix AD 'DCC User Interface Specification'

## Other industry Codes

There are no impacts on any other industry Codes.

## Greenhouse gas emissions

There are no impacts on greenhouse gas emissions.

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# 5. Costs

## DCC costs

There are no DCC costs associated with 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.

## SEC Party costs

There are no SEC Party costs expected to be incurred in implementing this modification.

# 6.    Implementation approach

## Recommended implementation approach

SECAS is recommending an implementation date of:

- **27 February 2020** (February 2020 SEC Release) if a decision to approve is received on or before 13 February 2020; or

- **25 June 2020** (June 2020 SEC Release) if a decision to approve is received after 13 February 2020 but on or before 11 June 2020.

The Proposer is seeking for this modification to be implemented as soon as possible. The February 2020 SEC Release is the next available SEC Release that this change can be included in.

# 7. Conclusions

## Benefits and drawbacks

The Proposer has identified the following benefits and drawbacks in implementing this modification:

### Benefits

- Clarification of the DCC processing within the SEC will mitigate any potential issues that may arise from the lack of DCC Users' understanding of the DCC Systems.

### Drawbacks

- The Proposer has not identified any drawbacks to this modification.

## Proposer's rationale against the General SEC Objectives

### Objective (a)[1]

The Proposer believes that MP081 will better facilitate SEC Objective (a) it will mitigate potential issues which could cause unexpected behaviour and unsuccessful System response.

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[1] a) Facilitate the efficient provision, installation, operation and interoperability of smart metering systems at energy consumers' premises within Great Britain;

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# Appendix 1: Glossary

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

| Glossary | |
|---|---|
| **Acronym** | **Full term** |
| CH | Communications Hub |
| CHISM | CH Installation Maintenance and Support Materials |
| CSP | Communications Service Provider |
| DCC | Data Communications Company |
| DSP | Data Service Provider |
| DUIS | DCC User Interface Specification |
| SEC | Smart Energy Code |
| SECAS | Smart Energy Code Administrator and Secretariat |
| SM | Smart Metering |
| WAN | Wide Area Network |

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# MP081 'Alignment of DUIS and CHISM to reflect current DCC Processing'

# Annex A

# Legal text – version 1.0

## About this document

This document contains the redlined changes to the SEC that would be required to deliver this Modification Proposal.

These changes have been drafted against SEC Version 6.17.

# Appendix I 'CH Installation and Maintenance Support Materials'

## Add the following to CHISM Annex E3

### E.3       Communications Hub WAN Variant Values

E3.1   For the purpose of providing WAN Technology values for use with the 12.1 RequestWANMatrix Service Request as detailed in APPENDIX AD 'DCC User Interface Specification', Communications Hub WAN Variant values are listed in table 3

**Table 3; Summary of all Communications Hub WAN Variants for use with Service Request 12.1**

| WAN Variant (DCC 1.3) | WAN Variant (DCC 2.0) | CSP Region |
|---|---|---|
| Standard 420 | 420 | CSP North |
| Variant 450 | 450 | CSP North |
| Cellular | Cellular | CSP South & Central |
| Cellular+Mesh | Cellular+Mesh | CSP South & Central |
| No Coverage Intended | No Coverage Intended | N/A |
| " " Space | " " Space | CSP South & Central |

**To note: on Table 3, " " Space above, CSP South & Central will respond to a SMWAN Coverage request (CSPM- S1 or CSPM-S2) with an Availability Date for coverage but without confirming the WAN Variant that will need to be used.**

# Appendix AD 'DCC User Interface Specification Version 3.0'

## Amend the following in DUIS Section 3.8.1.2

GasThresholdMatrix Definition

| Data Item | Description / Allowable values | Type | Mandatory | Default | Units |
|---|---|---|---|---|---|
| BlockThreshold | Threshold between one block and the next. Up to 3 can be defined to match the corresponding prices. | sr:GasThresholdType<br><br>minOccurs = 1<br><br>maxOccurs = 3<br><br>(xs:unsignedLong) | Yes | None | ~~k~~Wh |
| Index (Attribute of BlockThreshold) | Provides an ordering for the BlockThreshold elements.<br>Unique and consecutive numbers starting at 1. | sr:range_1_3<br>(xs:positiveInteger from 1 to 3) | Yes | None | N/A |

*Table 1 : GasThresholdMatrix (sr:GasThresholdMatrix) data items*

## Add the following new DUIS Section 3.8.77.4

### 3.8.77.3 Specific Validation for this Request

No specific validation is applied for this Request, see clause 3.2.5 for general validation applied to all Requests.

### 3.8.77.4 Additional DCC System Processing

Upon receipt of the successful Response from the Device, the DCC shall check the contents of the response against the Device Certificate details held in the Inventory and will automatically update the Inventory and the SMKI Repository if that Response indicates a different set of Device Certificates are in use on the device.

## Add the following to DUIS Section 3.8.106.3

### 3.8.106.3 Specific Validation for this Request

For this Request, the general Authorisation Checks as defined below shall not be carried out.

- a Response Code of E5 as defined in clause 3.2.4 "Verify that the Service Request or Signed Pre-Command is applicable to the Device status"

| Response Code | Response Code Description |
|---|---|
| | |

| E081401 | The Device Type of the Device being notified is not CHF |
|---------|--------------------------------------------------------|
| E081402 | The install date & time supplied is a future date |
| W081401 | The CHF Device status is not 'InstalledNotCommissioned', which is the only valid status compatible with this Service Request. <br><br> Note: Status of the Device for the CHF and the associated GPF will be updated to InstalledNotCommissioned if it is still in the Pending State |

## Add the following to DUIS Section 3.8.104.2

### *3.8.112.2 Specific Data Items for this Request*

ReturnLocalCommandResponse Definition

| Data Item | Description / Values | Type | Mandatory | Default | Units |
|-----------|---------------------|------|-----------|---------|-------|
| OriginalRequestID | Concatenation of BusinessOriginatorID, BusinessTargetID and OriginatorCounter, separated by ":" in the original Service Request RequestID | sr:RequestIDType <br><br> See **Error! Reference source not found.** | Device GBCS Response is not a Device Alert: <br> Yes <br><br> Otherwise: <br> N/A | None | N/A |
| DeviceGBCSResponse | Contents of the response to be returned to DCC – Contents will depend on the original command <br><br> Valid Set <br><br> • See Table below if the GBCSPayload contains a Response <br><br> • See Table below if it contains a Device Alert | xs:base64Binary | Yes | None | N/A |

*Table 2 : ReturnLocalCommandResponse (sr:ReturnLocalCommandResponse) data items*

The following table lists the Service Requests Responses and Device Alerts needed by the DCC Systems from Users via the return Local Command Response Service Request if these are collected from execution of Local Commands on Devices. Note that a HHT will receive all Alerts / Responses from all HAN Devices whilst it is connected; these may or may not be related to the execution of Local Commands.

| Service Request Responses |
|---------------------------|
| 3.2 - Restrict Access For Change Of Tenancy |
| 6.8 - Update Device Configuration (Billing Calendar) |
| 6.15.1 – Update Security Credentials (KRP) |

| |
|---|
| 6.15.2 - Update Security Credentials (Device) |
| 6.21 – Reqest Handover of DCC Controlled Devices |
| 6.23 - Update Security Credentials (CoS) |
| 8.7.1 - Join Service (Critical) |
| 8.7.2 - Join Service (Non-Critical) |
| 8.8.1 - Unjoin Service (Critical) |
| 8.8.2 - Unjoin Service (Non-Critical) |
| 8.11 – Update HAN Device Log |
| 8.12.1 - Restore HAN Device Log |
| 8.12.2 - Restore Gas Proxy Function Device Log |
| 11.3 - Activate Firmware |

### Add the following new DUIS Section 3.8.114.4

#### 3.8.114.3     Specific Validation for this Request

No specific validation is applied for this Request, see clause 3.2.5 for general validation applied to all Requests.

#### 3.8.114.4     Additional DCC System Processing

Where the CHF Device status is 'Pending' and response code W081401 is returned, the DCC shall update the CHF Device status to 'InstalledNotCommissioned'.  If the GPF Device status is also 'Pending' the DCC shall update the GPF Device status to 'InstalledNotCommissioned'