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Paper Reference:	TABASC_50_0602_13
Action:	For Discussion

New Draft Proposals and Modification Proposals

1. Purpose

This paper provides a summary of the new Draft Proposals raised and the Draft Proposals that have converted to Modification Proposals in the last month. Copies of the draft or approved problem statements for each proposal are attached to this paper.

We seek any initial comments the Technical Architecture and Business Architecture Sub-Committee (TABASC) may have on these proposals at these stages in the framework, and agreement on which proposals they will want to provide further input on as they progress.

2. New Draft Proposals

This section lists the new Draft Proposals submitted in the last month and which have entered the Development Stage. At this point in the process, we are focused on assessing and clarifying the issue identified, the impacts this is having (including the impact of doing nothing), and the context of this issue within the SEC. Solutions will not be discussed until the Change Sub-Committee has agreed the problem statement has been fully defined.

Please note that as there was no TABASC meeting in January some of these have already been considered by Panel and converted to Modification Proposals (MPs). In addition, we are streamlining our documentation and moving away from the Problem Statement Document and will instead be populating the Modification Report from the beginning. As we are currently in the process of this transition some Appendices are still in Problem Statement form and some are in Modification Proposal form.

We invite any views from the TABASC on the issue identified under each proposal, the impacts this may be having, and any areas the Proposer may need to consider further as part of developing their problem statement.

[DP098 'Incorporation of multiple Issue Resolution Proposals into the SEC - Batch 3'](#)

DP098 has been raised by Paul Saker of EDF Energy. The Lead Analyst from SECAS is Bradley Baker.

This Draft Proposal looks to incorporate 21 non-DCC System impacting IRPs into the SEC's technical specification documents, which are listed in TABASC_50_0602_21 - DP098 Non-System Impacting

IRPs paper for TABASC decision this month.

MP099 'Incorporation of multiple Issue Resolution Proposals into the SEC - Batch 4'

MP099 has been raised by Chun Chen of the DCC. The Lead Analyst from SECAS is Jordan Crase.

This Draft Proposal looks to incorporate two DCC Systems impacting IRPs into the SEC's technical specification documents, which are tabled below.

IRP number	IRP title
IRP571	Historic Data when Device does not know the time
IRP586	Modify use cases so ESME GSME & GPF behave in the same way (exclusion options)

The final problem statement containing the information provided by the Proposer can be found in Appendix A.

DP100 'Service Response Traffic Management'

DP100 has been raised by Terry Underwood of Utiligroup. The Lead Analyst from SECAS is Harry Jones.

There are currently no proposals offering management when the DCC Systems have suffered an outage or restriction and are then restored. In these scenarios, Service Responses will be queued while the DCC Systems are restricted and then be sent to the Users when DCC systems come back online. User's adapter systems will receive all of these Service Response messages at once, irrespective of priority.

The draft problem statement containing the information provided by the Proposer can be found in Appendix B.

MP102 'Power Outage Alerts triggered by an OTA firmware upgrade'

MP102 has been raised by Matthew Alexander of SSEN. The Lead Analyst from SECAS is Adam Lattimore.

Currently, there is no obligation in the SEC to require an over the air (OTA) firmware update not to generate a Power Outage Alert (POA). There are also no means of identifying or suppressing erroneous POAs associated with an OTA firmware update from the 500,000 ESMes in service where this issue can't be addressed.

The final problem statement containing the information provided by the Proposer can be found in Appendix C.

MP103 'DCC SOC2 Assessments'

MP103 has been raised by Gordon Hextall on behalf of the SSC. The Lead Analyst from SECAS is Adam Lattimore.

Currently, SEC Section G requires the DCC to undertake an annual Systems Organisation Controls (SOC) 2 assessment, however, this is a financial audit tool from the US and is not aligned with the SEC.

The final problem statement containing the information provided by the Proposer can be found in Appendix D.

MP105 'Sending SR11.2 to Devices in Suspended State'

MP105 has been raised by Chun Chen of the DCC. The Lead Analyst from SECAS is Joe Hehir.

Once a firmware entry is removed from the Central Products List (CPL), the Smart Metering Inventory (SMI) status for the impacted Devices will be set to a 'Suspended' state. While the Device is in a 'Suspended' state, only a Critical Service Request can be sent to those Devices, only Non-Critical SRs on the exemption list will be accepted.

SR11.2 'Read Firmware Version' is not on the exemption list and will currently be rejected by the DSP when the Device is in a 'Suspended' state. If the SR11.3 'Activate Firmware' response for successful firmware activation is not received by the DSP, the Device will remain in the 'Suspended' state even though the new firmware is now activated on the meter. There is no other recoverable method unless another new firmware update takes place.

The final problem statement containing the information provided by the Proposer can be found in Appendix E.

DP106 'CHISM update for Unknown WAN Variant'

DP106 has been raised by Chun Chen of the DCC. The Lead Analyst from SECAS is Bradley Baker.

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. This results in " " (Space) being returned as the WAN variant, which has been identified by a customer as potentially confusing. Therefore, a change in the wording has been requested.

The modification report containing the information provided by the Proposer can be found in Appendix F.

DP107 'SMETS1 Validation of SRV 6.15.1'

DP107 has been raised by Gemma Slaney of Western Power Distribution. The Lead Analyst from SECAS is Jordan Crase.

To send a Critical Command to a SMETS1 Device, the user must be the owner of the relevant certificate on the Device and the owner of the Device in the RDP data. If a Network Operator updates the Network Operator Certificate with another in error, this error cannot be corrected.

The modification report containing the information provided by the Proposer can be found in Appendix G.

DP108 'SSI Job Type Role for SRO/ARO'

DP108 has been raised by Mari Toda of the DCC. The Lead Analyst from SECAS is Joe Hehir.

There are several procedures that only Senior Responsible Officers (SROs) or Authorised Responsible Officer (AROs) are empowered to undertake with or by request of the DCC. However, the Self-Service Interface (SSI) currently has no restrictions available to limit access to these processes/requests to SROs and AROs only. For example, Anomaly Detection Threshold forecast submissions.

The modification report containing the information provided by the Proposer can be found in Appendix H.

DP109 'ADT and Exit Quarantine file delivery mechanism'

DP109 has been raised by Gary Fairclough of the DCC. The Lead Analyst from SECAS is Harry Jones.

SEC Appendix AA 'Threshold Anomaly Detection Procedures' currently requires the Anomaly Detection Threshold (ADT) File and Exit Quarantine files to be provided to the DCC by email. DCC is of the opinion that it would be a more secure process to provide this information via a business as usual process using Self-Service Interface (SSI), albeit retaining the ability to invoke email as a delivery method in a disaster recovery situation.

The modification report containing the information provided by the Proposer can be found in Appendix I.

DP110 'Aligning SEC Appendix D with DCC Processes'

DP110 has been raised by Gordon Hextall on behalf of the SMKI PMA. The Lead Analyst from SECAS is Ali Beard.

During a recent audit carried out in June 2019 under SEC Appendix C 'SMKI Compliance Policy'. The DCC and the SMKI PMA have agreed changes that should be made to SEC Appendix D.

The modification report containing the information provided by the Proposer can be found in Appendix J.

DP111 'SMDA Budget Amendments'

DP111 has been raised by Terry Jefferson on behalf of the EUA. The Lead Analyst from SECAS is Harry Jones.

Following the National Audit Office's (NAO) 23rd November 2018 report "Rolling Out Smart Meters", BEIS commissioned an independent review into Device interoperability on change. The report was published in October 2019, with one of the recommendations being that "Energy suppliers and the Smart Metering Device Assurance (SMDA) Board should review the SMDA funding model to ensure SMDA can provide long-term test assurance". Following this recommendation, amendments should be suggested to the SMDA funding model.

The modification report containing the information provided by the Proposer can be found in Appendix K.

3. Updates to Existing Proposals

This section lists the existing Proposals that have had actions taken or progressed to a stage where TABASC's input would be beneficial to the Proposer to consider ahead of a solution, consultation or requesting an assessment from DCC.

We invite any views from the TABASC on the issue identified under each proposal and any areas the Proposer may need to consider further during the Refinement period of the Modification process.

DP101 'Large Gas Meter Displays'

DP101 has been raised by Emslie Law of SSE. The Lead Analyst from SECAS is Joe Hehir.

The implementation of [SECMP0006 'Specifying the number of digits for device display'](#) resulted in amendments to the Smart Metering Equipment Technical Specifications (SMETS) 2 to standardise the number of digits used to display Consumption Registration on a User Interface. However, some Large Gas Meters are unable to measure to thousandths of a metre cubed. Equally, due to the greater flow rate, they require more than the five most significant digits to meet the Measuring Instruments Directive (MID) requirements. This results in the SMETS conflicting with the MID requirements.

We request that the TABASC reviews the suggested legal text for the Proposal and confirms whether the proposed change would address the issue and is consistent with the technical and business architecture. This input would be appreciated before the Proposal is taken to Panel on 14 February 2020.

The modification report containing the information provided by the Proposer can be found in Appendix L.

MP077 'DCC Service Flagging'

MP077 has been raised by Paul Saker of EDF Energy. The Lead Analyst from SECAS is Harry Jones.

The Preliminary Assessment has been returned, which can be found in Appendix M. The DCC have amended the solution as the business requirements specified the development of a new Service Flag state of "N" for Non-Active to inform where a Device has been installed but not commissioned/set to active. Instead, the DCC have included the 'N' Flag due to already having one internally which they suppress, and will create an altogether new Service Flag 'I' for Installed. The rationale was due to requiring two Service Flags that could differentiate between InstalledNotCommissioned and Decommissioned. Additionally, with MP077 now no longer wishing to include Suspended, Recovery/Recovered in the Flag States, this changes the output of the solution. This was due to the potential of a large quantity of Devices changing Service Flag at once if a popular model ends up in these states, and with the MRA confirming they can only handle 20,000 updates by file in a single instance, this would lead to a staggered approach. This has also raised the question of whether the SEC needs to be amended to fit what the Service Flags are capable of at current, or whether the Service Flag model needs to be amended to fit what is currently outlined in the SEC. The Preliminary Assessment cost up to Pre-Integration Testing has an indicative cost of £75,000.

MP077 is scheduled to be discussed at the Monthly Working Group meeting on 5 February 2020. There, it will highlight the main changes from the original business requirements to the returned solution, whether this solution sufficiently addresses the issue raised and whether or not it should

proceed to a Refinement Consultation and/or a request for an Impact Assessment for approximately £9,300.

SECAS will provide a verbal update following the outcomes of this Working Group meeting to inform the TABASC of the next steps in MP077's refinement.

MP096 'Power Outage Alerts'

MP096 has been raised by Del Kang of the DCC. The Lead Analyst from SECAS is Bradley Baker.

When a power outage occurs, the equipment is designed to automatically restore power within three minutes. The DCC are unable to meet the Power Outage Alert (POA) response timescales set out in the SEC of 60 seconds following the initial three minutes. Below are the timescales currently being achieved by the DCC:

Telefonica:

- Up to 5000 Alerts. Will start delivering after 2 minutes but the last alert won't be delivered until after 4 minutes.
- Up to 20,000 Alerts. Will start delivering after 2 minutes but the last alert won't be delivered until after 7 minutes (5000 per minute)

Arqiva:

- Up to 5000 Alerts. Will start delivering after 0 seconds and c80% will be sent in 45 seconds but the other 20% could take up to 11 minutes and 45 seconds to be delivered.

The DCC have estimated that the cost to renegotiate with the SPs and make technical changes (even if possible) would be in the region of £300m.

Therefore, the viable solution options are:

- a) to change the timescales for the POA in agreement with DNOs, or
- b) to change the SEC to reflect the current achievable timescales

The CSC considered this Draft Proposal at its meeting on 2 January 2020. The CSC were keen that the work already done on this issue is not lost and asked the DCC to confirm the estimated costs provided.

4. Recommendations

The TABASC is requested to:

- **DISCUSS** the proposals in this paper;
- **AGREE** whether the legal text is suitable for MP101; and
- **PROVIDE** any views or comments.

Harry Jones

SECAS Team

30 January 2020

Attachments:

- **Appendix A:** MP099 final problem statement
- **Appendix B:** DP100 draft problem statement
- **Appendix C:** MP102 final problem statement
- **Appendix D:** MP103 final problem statement
- **Appendix E:** MP105 final problem statement
- **Appendix F:** DP106 modification report
- **Appendix G:** DP107 modification report
- **Appendix H:** DP108 modification report
- **Appendix I:** DP109 modification report
- **Appendix J:** DP110 modification report
- **Appendix K:** DP111 modification report
- **Appendix L:** DP101 modification report
- **Appendix M:** MP077 Preliminary Assessment

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DP099 ‘Incorporation of multiple Issue Resolution Proposals into the SEC – Batch 4’

Problem statement – version 1.0

About this document

This document provides a summary of this Draft Proposal, including the issue or problem identified, the impacts this is having, and the context of this issue within the Smart Energy Code (SEC).

Proposer

This Draft Proposal has been raised by Chun Chen from DCC.

What is the issue or problem identified?

Issue Resolution Proposals

Background



Issue Resolution Proposals (IRPs) identify issues within the SEC Technical Specification documents and put forward a solution to the identified problem. In the early stages of the Smart Metering Implementation Program, BEIS took the lead in developing the Technical Specifications that sit under the SEC. As part of this, BEIS also took responsibility for receiving and responding to issues raised internally, by the DCC, and by other interested industry parties. Since its inception, several hundred issues have been raised in relation to technical specifications under the SEC through the Technical Specification Issue Resolution Sub-Group (TSIRS). In some cases, these queries have been resolved by providing an explanation of the specifications, whilst others have resulted in proposed amendments to the specifications in the form of IRPs.

Processing of IRPs

BEIS has previously implemented the required IRPs via BEIS-led designations; however, this process has now been handed over to SECAS for changes to be implemented through the Modifications Process. To improve efficiency, it was agreed these changes should be progressed under a single proposal at regular intervals. This will be the fourth of these proposals.

How does this issue relate to the SEC?

The IRPs identify issues in the SEC Technical Specification documents. The IRPs included in this proposal, listed below, require changes to the Great Britain Companion Specification (GBCS) with initial key impacts identified by SECAS in the table below.

Proposed IRPs							
IRP number	IRP title	Impacted Technical Specification	IRP document	Impacted Users	Devices Impacted	Complexity	Notes
IRP571	Historic Data when Device does not know the time	GBCS	 IRP571 Historic Data when Device does not	<ul style="list-style-type: none"> Gas Suppliers 	<ul style="list-style-type: none"> GSME ESME 	Low	Limited / no impact on GS.
IRP586	Modify use cases so ESME GSME & GPF behave in the same way (exclusion options)	GBCS	 IRP586 Modify use cases so ESME GSME	<ul style="list-style-type: none"> Gas Suppliers 	<ul style="list-style-type: none"> GPF 	Middle	Impact on Users. Impact on GPF.

What is the impact this is having?

What are the impacts of doing nothing?

These IRPs add clarity and corrections to the Technical Specifications documents. Device manufacturers are required to follow these documents for the specifications of their Devices. Therefore, any errors or miscommunication of these specifications will mean the Device will not work as intended. The industry group TSIRS have agreed that these are issues and have agreed upon the solutions. Not implementing these solutions would mean that these problems would not be resolved.

What are the views of the industry?

Views of the DCC

The initial views of the DCC at this stage, subject to formal IA, is that these two IRPs plus the four IRPs identified by [SECMP078 'Incorporation of multiple Issue Resolution Proposals into the SEC - Part 2'](#) are the only DCC System impacting IRPs of those published and approved by TSIRS at end of October 2019 and not yet incorporated into the GB technical specifications.

Views of SEC Parties

The issues and the solutions have been discussed and agreed upon by the TSIRS. Although TSIRS is a BEIS led group, various SEC Parties are represented.

The views of Parties regarding implementation of these IRPs will be gathered during the Refinement Process.

Views of the Change Sub-Committee

The Change Sub-Committee (CSC) agreed that this Draft Proposal clearly outlines an issue that will need to be resolved. It recommends to the SEC Panel that this Draft Proposal is converted to a Modification Proposal and goes to the Refinement Process.

The CSC believes that this should be able to catch up and be combined with [MP078 'Incorporation of multiple Issue Resolution Proposals into the SEC - Part 2'](#), if the DCC can deliver the DCC System changes required in time.

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DP100 ‘Service Response Traffic Management’

Problem statement – version 0.5

About this document

This document provides a summary of this Draft Proposal, including the issue or problem identified, the impacts this is having, and the context of this issue within the Smart Energy Code (SEC).

Proposer

This Draft Proposal has been raised by Terry Underwood from Utiligroup.

What is the issue or problem identified?

Service Responses in wider traffic management

Service Responses are received by Users after a Service Request is sent by that User. Currently, two Modification Proposals have been raised to assist with traffic management of the Data Communications Company (DCC) Systems: these are [SECMP0062 'Northbound Application Traffic Management - Alert Storm Protection'](#) and [SECMP0067 'Service Request Traffic Management'](#). The current proposals only cover Alerts and Service Requests, where both will be throttled if an abundance of either threatens to overload the DCC Systems. Both of these modifications look at traffic management preventing a DCC Systems outage.

How does this issue relate to the SEC?

There are currently no proposals offering management when the DCC Systems have suffered an outage or restriction and are then restored. In these scenarios Service Responses will be queued while the DCC Systems are restricted and then be sent to the Users when DCC Systems come back online. Users' adapter systems will receive all of these Service Response messages at once, irrespective of priority.

The SEC does not currently specify how Service Response should be released after an outage or restriction. This means User systems may receive all messages at once and the priority messages will have to wait to undergo processing rather than being treated as priority. Changing the SEC so that the DCC has a clear and transparent means of providing prioritisation and traffic management for Service Responses can help. Areas of the SEC that will likely be affected by any potential solution include:

- SEC Appendix AD 'DCC User Interface Specification' (DUIS);
- SEC Section H 'DCC Services'; and
- SEC Section A 'Definitions and Interpretations'.

This will be due to having to explicitly detail where the DCC is providing a means of Service Response prioritisation and/or throttling in the SEC, and any accompanying terminology that will be created for SEC Section A. Further analysis will be undertaken in the Development Stage and in the Refinement Process when business requirements are devised.

What is the impact this is having?

User issues with Service Responses

The Proposer has encountered issues with the current process and has presented these to the Operations Group, who have confirmed that other User Systems have experienced the same issues. In particular, Adapter systems in general being required to process an abnormal volume of queued traffic (e.g. Service Responses and Alerts) once released by the DCC. They have requested that there should be an element of control to the release of all outbound DCC traffic. In the absence of a planned coordination or outbound traffic management, responses are sent at once, irrespective of importance. This kind of activity means that important messages cannot be prioritised for processing, causing potential end-consumer impact by delays to time-critical processes.

The Proposer suggests that where there has been a necessity to look into inbound traffic management to protect the DCC Systems from an outage, investigations should take place into outbound traffic management when the DCC Systems are restored or have an abnormal volume of traffic. This way, it can provide an element of control over outbound traffic, ensuring that time-critical messages can be prioritised. Messages such as Install & Commission and Prepayment could therefore be prioritised over messages such as Alerts, the latter being throttled and placed at the back of a queue.

What are the views of the industry?

Views of the DCC

The views of the DCC will be gathered as part of the Development Stage.

Views of SEC Parties

The views of Parties will be gathered during the Development Stage.

Views of Panel Sub-Committees

The Operations Group have stated they hold a high interest in the Draft Proposal and its future developments.

Views of the Change Sub-Committee

The views of the Change Sub-Committee will be gathered during the Development Stage.

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DP102 ‘Power Outage Alerts triggered by an OTA firmware upgrade’

Problem statement – version 1.0

About this document

This document provides a summary of this Draft Proposal, including the issue or problem identified, the impacts this is having, and the context of this issue within the Smart Energy Code (SEC).

Proposer

This Draft Proposal has been raised by Matthew Alexander from Scottish and Southern Electricity Networks (SSEN).

What is the issue or problem identified?

What are Power Outage Alerts used for?

Power Outage Alerts (POA) are intended to identify when the incoming power supply from a Distribution Network Operator (DNO) to a customer's premise fails for a period greater than three minutes. Such POAs are used by DNOs to improve customer service by becoming aware of power outages sooner than relying on the customer to phone in, and to develop a faster more complete view of the premises affected and hence enable them to restore supply to affected customer more efficiently and more quickly.

In order to achieve this, a DNO needs to be confident that the POAs it receives are genuine and actually relate to supply interruptions to customers' premise.

What is the issue?

Experience has shown that implementing an Over the Air (OTA) firmware updates on some Electricity Smart Metering Equipment (ESMEs) generates a POA. This is because when some ESMEs activate a new firmware version it results in an interruption of the power supply to the Communications Hub (CH) (power to the CH is supplied by the ESME). If the power supply for the CH is interrupted for more than three minutes, then the CH must send a POA (the AD1 Alert).

The Data Communications Company (DCC) then sends the AD1 Alert to the relevant DNO, who can't tell whether there is a real issue with the power to the premises or whether it was just a firmware upgrade to the ESME. As DNOs need to respond to each POA, a POA initiated by an OTA firmware update will cause a DNO to put in place systems to check every POA to establish if it relates to a genuine power outage.

This issue was previously highlighted in industry forums and resolved by current ESME manufacturers agreeing that all future OTA firmware updates would be designed so as not to initiate a POA event (the ESME must not cut the CH power supply for three or more minutes during a firmware upgrade to prevent the CH from sending the AD1).

OTA firmware upgrades have been required to implement this change – however this agreement should be seen as being an interim solution until an enduring obligation is implemented through this modification. A new ESME manufacturer may be unaware or not comply with such an agreement.

Alongside this, there are still a set of ESMEs, approximately 500,000, that will continue to initiate a POA when an OTA firmware update is implemented. This issue cannot be resolved retrospectively for those 500,000 ESMEs already installed – these devices will continue to generate a POA on OTA firmware updates for the duration of their life. Ultimately these 500,000 ESMEs would need to be replaced to resolve the problem. During this time, there is currently no solution that can stop POAs from being forwarded to the relevant DNO unnecessarily.

In summary there are two issues:

1. There is no obligation in the SEC to require an OTA firmware update not to generate a POA.
2. There is no means of identifying or suppressing erroneous POAs associated with an OTA firmware update from the 500,000 ESMEs in service where this issue can't be addressed.

How does this issue relate to the SEC?

The Proposer has stated that there will need to be amendments to the Smart Metering Equipment Technical Specifications (SMETS) (SEC Schedule 9) and the GB Companion Specification (GBCS), (SEC Schedule 8). At the moment there is no specific text in the device specifications (SMETS or GBCS) prohibiting a POA from being issued during an OTA firmware upgrade. Nor is there a mechanism to suppress POAs from being generated incorrectly when an OTA firmware update is processed by a device that cannot be modified to inhibit their creation.

What is the impact this is having?

As DNOs need to respond to each POA, the issue of a POA initiated by an OTA will require a DNO to put in place systems to check every POA to establish if it relates to a genuine power outage. This could require the DNO to develop and implement systems that would automatically check the energisation status of each meter from which POA is received to confirm that the POA is genuine, or in the worst case, send a member of staff to site to investigate the reported POA.

What is the impact of doing nothing?

There are two significant impacts if this issue is not addressed:

- DNOs will either need to check the energisation status of each meter from which POA is received, or
- DNOs will need to send a member of staff to site to investigate.

Both these options will result in the DNO incurring additional costs.

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DP103 ‘DCC SOC2 Assessments’

Problem statement – version 1.0

About this document

This document provides a summary of this Draft Proposal, including the issue or problem identified, the impacts this is having, and the context of this issue within the Smart Energy Code (SEC).

Proposer

This Draft Proposal has been raised by Gordon Hextall on behalf of the Security Sub Committee (SSC).

What is the issue or problem identified?

What are SOC2 assessments?

Currently, SEC Sections G9.2-G9.7 requires the Data Communications Company (DCC) to undertake an annual Systems Organisation Controls 2 (SOC) 2 assessment to gain independent assurance of its compliance with the SEC security obligations and the security controls in place at DCC and its Service Providers.

Section G9.2 requires that the SOC2 assessment covers:

- (a) all security risk assessments undertaken by the DCC in relation to itself and any DCC Service Providers;*
- (b) the effectiveness and proportionality of the security controls that are in place in order to identify and mitigate security risks in relation to the DCC Total System; and*
- (c) the DCC's compliance with:*
 - (i) the requirements of Condition 8 (Security Controls for the Authorised Business) of the DCC Licence;*
 - (ii) the requirements of Sections G2 and G4 to G6 or any CPA Certificate Remedial Plan;*
 - (iii) such other requirements relating to the security of the DCC Total System as may be specified by the Panel (having considered the advice of the Security Sub-Committee) from time to time."*

SOC2 is a USA security audit standard that originates from the earlier USA SAS70 financial audits. As such it has proved difficult to align with the SEC security obligations. SOC2 provides no calibration of findings (i.e. observations are binary and are not related to risk or impact); this requires a great deal of subsequent investigation and follow-up.

Equally, since it is a fixed audit framework it is inflexible and therefore has proven extremely difficult to adapt to the DCC and its Service Providers. This leads to unnecessary and costly procedures e.g. for Assertion Statements from Service Providers. SOC2 does not provide the SSC with an equivalent assurance of DCC security compliance as User Security Assessments provide for Users.

The DCC is currently subject to the third such SOC2 assessment and the SSC considers that an alternate assessment methodology will provide greater value and assurance to the SSC and to Users.

What is the impact this is having?

The SOC2 Assessment is a burdensome assessment which provides no benefit to the DCC nor the SSC and does not provide adequate assurance for the wider Users who are dependent on the DCC meeting its SEC security obligations. Unnecessary cost is incurred in both undertaking the assessment and in complying with an assurance framework that does not relate to the SEC provisions.

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DP105 ‘Sending SR11.2 to Devices in Suspended State’

Problem statement – version 1.0

About this document

This document provides a summary of this Draft Proposal, including the issue or problem identified, the impacts this is having, and the context of this issue within the Smart Energy Code (SEC).

Proposer

This Draft Proposal has been raised by Chun Chen from the Data Communications Company (DCC).

What is the issue or problem identified?

Background

Once a firmware entry is removed from the Central Products List (CPL), the Smart Metering Inventory (SMI) status for the impacted Devices will be set to be in a 'Suspended' state. While the Device is in a 'Suspended' state, only a Critical Service Request (SR) can be sent to those Devices, and any Non-Critical SRs will be rejected by Data Services Provider (DSP) with an E5¹ error.

As an exception, the following Non-Critical SRs will be allowed if the Device is 'Suspended':

- SR11.1 'Update Firmware'
- SR6.23 'Update Security Credentials (CoS)'; and
- SR2.2 'Top Up Device' with a Command Variant value of 2 (only for Smart Metering Equipment Technical Specifications (SMETS) 1 Devices).

This means SR11.2 'Read Firmware Version' will be rejected by the DSP E5 validation, when the Device is in a 'Suspended' state.

What is the issue?

The scenario in which this causes an issue is if the SR11.3 'Activate Firmware' response for successful firmware activation is not received by the DSP. In this scenario the Device will remain in the 'Suspended' state even though the new firmware is now activated on the Device. There is no other recoverable method unless another new firmware update takes place.

To get around this, SR11.2 would need to be added to the exception list. This would allow the SMI status to be updated based on the SR11.2 response while the Device is in the 'Suspended' state.

How does this issue relate to the SEC?

Any changes to how SR11.2 is handled would necessitate a change to the DCC User Interface Specification (DUIS) and to the DCC/DSP Systems, requiring a modification to do so.

¹ Failed Authorisation – Invalid Device Status

What is the impact this is having?

What is the impact of doing nothing?

Without the required addition of SR11.2 into the exception list, there will be a small percentage of Devices that cannot be recovered from the 'Suspended' state if the SR11.3 response is not received by the DSP.

Currently the only way to resolve this is for a Service User to carry out another firmware update, which is a waste of time and effort.

What Device types are impacted?

SECAS notes that Electricity Smart Metering Equipment (ESME), Gas Smart Metering Equipment (GSME), Prepayment Meter Interface Device (PPMIDs) and Home Area Network (HAN) Connected Auxiliary Load Control Switches (HCALCSs) could all be suspended on the CPL. However, SR11.2 is only applicable to ESME and GSME.

Should SR11.2 support be required for PPMIDs and HCALCSs, a separate Draft Proposal would be needed. Or alternatively, this added functionality to SR11.2 could be provided via [SECMP0007 'Firmware updates to IHDs and PPMIDs'](#). However, this Draft Proposal is not dependant on SR11.2 being expanded to include PPMIDs and HCALCSs.

This proposal will not apply to In-Home Displays (IHDs) as they are not listed on the CPL.

What are the views of the industry?

Views of SEC Parties

A Large Supplier expressed its support for the proposed change as this will enable better management of Devices to avoid unnecessary removal and/or inconvenience to the customer.

Views of the Change Sub-Committee

The Change Sub-Committee agreed that the issue identified under this proposal is clearly defined and understood. It recommended that this Draft Proposal is ready to be converted to a Modification Proposal and that it should proceed to the Refinement Process.

The Change Sub-Committee had no other comments.

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DP106 'CHISM update for Unknown WAN Variant'

Modification Report Version 0.1

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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Contact

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1. Summary

This Draft Proposal was raised by Chun Chen from the Data Communications Company (DCC).

For a User to obtain a Smart Metering Wide Area Network (SM WAN), they must send Service Request 12.1 'Request WAN Matrix'. The Data Service Provider (DSP) will then provide an Availability Date and WAN Variant in response. WAN Variants are listed in table 3 of SEC Appendix I 'Communications Hub Installation and Maintenance Support Materials (CHISM)' Annex E. In the exception case where the Availability Date for SM WAN Coverage is known, but the WAN Variant is not, with the implementation of [MP081 'Alignment of DUIS and CHISM to reflect current DCC Processing'](#), the DSP for the South and Central regions returns " " (Space).

2. Issue

What are the current arrangements?

When a User sends Service Request 12.1 'Request WAN Matrix' to receive 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. On receipt of this data, the DSP returns the Availability Date and the value of the unconfirmed WAN Variant in the response to Service Request 12.1 'Request WAN Matrix'.

The WAN variant returned by the DSP is defined by table 3 in Smart Energy Code (SEC) Appendix I 'Communications Hub Installation and Maintenance Support Materials' (CHISM) Annex E as below:

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

With the pending implementation of [MP081 'Alignment of DUIS and CHISM to reflect current DCC Processing'](#), the “ “ Space is used by the CSP for the South and Central regions (Arqiva) to indicate the unconfirmed WAN Variant.

During a customer engagement design discussion, it was highlighted by a customer (SSE) that the “ “ Space is confusing and they would prefer a more meaningful response. The suggested wording is to use “Unknown”.

The proposed change will require an update to the SM WAN coverage database managed by the CSP for the South and Central regions.

What is the issue?

The WAN Variant “ “(Space) is confusing. Comments have been received by a Large Supplier that this response lacks meaning. A more suitable term should be used to identify the scenario where an Availability Date can be provided but the WAN Variant cannot. This affects South and Central regions only.

In order to implement the functionality required, the table 3 in CHISM Annex E must be amended. This is a CHISM documentation change as well as a change for the CSP for the South and Central regions.

What is the impact this is having?

As a result of the agreed solution of [MP081](#), when a User sends Service Request 12.1 'Request WAN Matrix' to check the SM WAN Coverage, " " (Space) is returned as WAN variant in the exception case that an Availability Date for coverage is confirmed but without being able to confirm the WAN Variant that will need to be used. This has been highlighted as a potential cause of confusion for the customer.

Appendix 1: Progression timetable

As the proposed solution requires amendments to the current CSP systems, this proposal must enter the Refinement Process so that the DCC can complete a Preliminary Assessment as well as an Impact Assessment. This will result in a fully defined solution which will be of a benefit to the industry.

Timetable	
Action	Date
CSC recommendation that Panel convert into a Modification Proposal	28 Jan 20
Panel convert Draft Proposal to Modification Proposal	14 Feb 20
Discuss business requirements with the Proposer	21 Feb 20
Request a DCC Preliminary Assessment	24 Feb 20
Discuss at Working Group	1 Apr 20
Update Panel on progress	17 Apr 20

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
CHISM	Communications Hub Installation and Maintenance Support Materials
CSP	Communication Service Provider
DCC	Data Communications Company
DSP	Data Service Provider
SEC	Smart Energy Code
SM WAN	Smart Metering Wide Area Network
WAN	Wide Area Network

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DP107 'SMETS1 Validation of SRV 6.15.1'

Modification Report Version 0.1

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About this document

This document is a Modification Report. It currently sets out the background, issue, and progression timetable. It also summarises any relevant discussions, views and conclusions with respect to this Modification Proposal. This document will be updated as this Proposal progresses.

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This document also has two annexes:

- **Annex A** Progression Timetable
- **Annex B** Glossary

1. Summary

To send a Critical Command to a SMETS1 Device, the user must be the owner of the relevant certificate on the Device and the owner of the Device in the RDP data. The certificates are held by proxy by the DSP and S1SP, where the DSP will perform the additional validation against the RDP data when a Critical Command is sent to a SMETS1 Device.

If an incorrect Network Operator Certificate is placed by proxy on a SMETS1 Device in error, the correct certificates cannot be sent to replace the incorrect one. This is as the Service Request to update the Certificate (SRV 6.15.1) is a Critical Command, therefore it will be rejected if:

- The Device owner sends SRV 6.15.1 as they are not the owner of the (wrong) Network Operator Certificate; and
- The owner of the (wrong) Network Operator Certificate sends SRV 6.15.1 as they are not the owner of the Device as validated using the RDP data.

2. The Issue

Current arrangements

Critical Commands in Smart Metering Equipment Technical Specifications 2 (SMETS2) do not have any Registered Data Provider (RDP) validation and therefore in order to send Service Reference Variant (SRV) 6.15.1 'Update Security Credentials (KRP)' to update the certificates on a device, the only requirement is that you are the owner of the certificate.

For SMETS1 devices, the Network Operator Certificates are held by proxy within the Data Service Provider (DSP) and SMETS1 Service Provider (S1SP) and there is an additional RDP validation step to Service Requests including the Service Request used to update the Network Operator Certificates. The DSP will validate these Critical Commands against the RDP data. If you are not the owner of the MPAN your request is rejected.

What is the issue?

If an incorrect Network Operator Certificate is placed by proxy on a Device (stored in the S1SP and DSP) in error, the correct certificates cannot be sent to replace the incorrect one. If the owner of the certificates tries to send the correct Network Operator certificates, their request would be rejected as they are not the Network Operator for that MPAN.

There is the potential that a Network Operator (the correct Network Operator, according to the RDP data, and the owner of the certificates currently associated with the meter) could send another Network Operator's certificates to be stored in the DSP and S1SP. The Service Request sent in order to do this would be accepted and the certificates updated. However, if this were to happen there is currently no mechanism for either Network Operator involved to correct the certificates due to the RDP validation.

The additional validation on SMETS1 Critical Service Requests are defined in SEC Appendix AB 'Service Request Processing Document' (SRPD) section 6.1:

- (f) *subject to Clause 6.2, in the case of Non-Critical Service Requests and SMETS1 Critical Service Requests, confirm (using the Registration Data, the Device ID within the Service Request, and the relationship between the Device IDs and the MPRNs or MPANs in the Smart Metering Inventory) that the User sending the Service Request is a User that is or will be an Eligible User for that Service Request:*
 - (i) *for all times within any date range requested;*
 - (ii) *where there is no such date range, at the specified time for execution; or*
 - (iii) *where there is no date range and no date for execution is specified, at the time at which the check is being carried out;*

This has been raised at Technical and Business Design Group (TBDG) Enrolment and Adoption (E&A) Subgroup and discussion had with the Data Communication Company (DCC) and it was agreed to raise as a SEC Modification.

DP107 was raised by Gemma Slaney on 13 January 2020 to resolve this issue.

Impact of issue

The impact is currently low due to the way that SMETS1 Devices are migrated and the Network Operator Certificates validated on migration, coupled with the fact that not all Network Operators are currently using Appendix AD 'DCC User Interface Specification' version 3.0/3.1 (DUI3). However, there is the potential that in the future the problem could become much larger.

For SMETS2 devices, if the incorrect Network Operator Certificates are placed on the device, the owner of the certificate would be able to send the relevant Service Request to the device to correct the certificates.

Annex 1: Progression Timetable

This Proposal will go to the Change Sub-Committee (CSC) for initial discussion. It is then expected that it will be taken to the SEC Sub-Committees to comment before returning to the CSC.

Annex 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
CSC	Change Sub-committee
DCC	Data Communication Company
DSP	Data Service Provider
DUIS	DCC User Interface Specifications
E&A	Enrolment and Adoption
S1SP	SMETS1 Service Provider
SMETS	Smart Metering Service Provider
SRPD	Service Request Processing Document
SRV	Service Reference Variant
TBDG	Technical and Business Design Group

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DP108 'SSI Job Type Role for SRO/ARO'

Modification Report Version 0.2

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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Contact

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1. Summary

This proposal was raised by Gary Fairclough from the Data Communications Company (DCC).

The access specifications for the Self-Service Interface (SSI) can be found in SEC Appendix AH 'Self Service Interface Access Control Specification'. There are several procedures that only Senior Responsible Officers (SROs), or Authorised Responsible Officers (AROs) are empowered to undertake with or request of the DCC. However, the Appendix AH currently has no restrictions available to limit access to these processes/requests to SROs and AROs only.

Therefore, anyone who has access to the SSI could in theory submit requests on behalf of an SRO or ARO for which only an SRO or ARO should have access to.

The DCC believes that by creating a Job Type Role specifically for SRO and ARO profiles, it can restrict access to non-authorised DCC Users from requests they are not empowered to submit and/or information deemed not relevant to their roles.

2. Issue

What is the SSI?

The SSI allows authorised Users, using supported web browsers, to perform a range of self-service functions including raising and monitoring the status of incidents, viewing Smart Metering Inventory (SMI) data and accessing external systems.

Appendix AH specifies how the SSI access rights permitted by the SEC are applied in practice and defines the information available to Users.

What are the current arrangements?

SROs

An SRO is an individual that is nominated to become a SRO by anyone of the following:

- A Director;
- Company Secretary; or
- Chief Information Security Officer (CISO).

SRO's are nominated for a SEC Party or DCC Service Provider, the Smart Metering Key Infrastructure Policy Management Authority (SMKI PMA) or the SEC Panel.

Once an individual has become a SRO, the SRO may at any time nominate individuals to become Authorised Responsible Officers and to access SMKI Services and/or SMKI Repository Services.

AROs

The DCC can only permit AROs to act on behalf of a Party, the SMKI PMA, the Panel or DCC Service Provider for the purposes of accessing SMKI Services and/or SMKI Repository Services.

An ARO may be authorised to act on behalf of a Party or DCC Service Provider to be an Authorised Subscriber for Organisation Certificates, Device Certificates or both, following SMKI and Repository Entry Process Tests. All AROs are also permitted to access certain SMKI Repository Services on behalf of the organisation that they represent.

Functional Components

A Functional Component is a specific item or set of functionalities provided by the SSI which is subject to the access controls set out in Appendix AH.

When a DCC User requests access to a Functional Component, it must advise the Job Type Role for which it is applying for. The DCC must then ensure that the Job Type Role identified by the DCC User is authorised to access the Functional Components requested by the DCC User.

What is the issue?

There are several procedures that only SROs, or AROs are empowered to undertake with or request of the DCC. However, Appendix AH currently has no restrictions available to limit access to these

processes/requests to SROs and AROs only. For example, there are no restrictions to submit Anomaly Detection Threshold data to a SRO or ARO.

What is the impact this is having?

There are several procedures in the SSI that only SROs, or AROs are empowered to undertake with or request of the DCC. However, Appendix AH currently has no restrictions available to limit access to processes/requests SROs and AROs only.

There is a low risk that an individual that has access to the SSI who is not an SRO or ARO, could submit requests on behalf of an SRO or ARO.

The DCC believes that by creating a Job Type Role specifically for SRO and ARO profiles, it can restrict access to non-authorised DCC Users from requests they are not empowered to submit and/or information deemed not relevant to their roles.

Appendix 1: Progression timetable

This proposal will go to the Change Sub-Committee (CSC) on 28 January 2020 for initial discussion. It will then be reviewed by the Security Sub-Committee (SSC) on 12 February 2020.

It will then be returned to the CSC for a decision on the subsequent progression.

Timetable	
Action	Date
CSC provide initial views on the proposal	28 Jan 20
SSC review the issue outlined in the Modification Report	12 Feb 20
CSC recommendation that Panel convert into a Modification Proposal	25 Feb 20
Panel convert Draft Proposal to a Modification Proposal	13 Mar 20

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
ADT	Anomaly Detection Thresholds
ARO	Authorised Responsible Officer
CISO	Chief Information Security Officer
CSC	Change Sub-Committee
DCC	Data Communications Company
SSC	Security Sub-Committee
SMI	Smart Metering Inventory
SMKI	Smart Metering Key Infrastructure
SRO	Senior Responsible Officer
SSI	Self-Service Interface

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DP109

‘ADT and Exit Quarantine file delivery mechanism’

Modification Report

Version 0.1

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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Contact

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1. Summary

This proposal was raised by Gary Fairclough from the Data Communications Company (DCC).

Smart Energy Code (SEC) Appendix AA 'Threshold Anomaly Detection Procedures' currently requires the Anomaly Detection Threshold (ADT) File and Exit Quarantine files to be provided to the Data Communications Company (DCC) by email. The DCC is of the opinion that it would be a more secure process to provide this information via a business as usual process using Self-Service Interface (SSI), albeit retaining the ability to invoke email as a delivery method in a disaster recovery situation.

2. Issue

What are the current arrangements?

Users are required to raise DCC Service Management service requests to obtain a reference number for submitting an ADT file. These are required by Users to provide the DCC with their service request forecasts and any trends to indicate heavy demand for any specific service requests. As such, these ADT files form a crucial part of the DCC's traffic management and forecasting for maintaining the most efficient use of the DCC Systems.

The SEC explicitly states that email is the delivery method required for Users submitting their ADT files to the DCC. The following sections in Appendix AA either state email as the only delivery method, or refer to an action required prior to an email being sent:

- Section 3.1
- Section 3.4
- Section 3.4(a)
- Section 4.7
- Section 4.7(a)
- Section 4.13
- Section 4.13(a)
- Section 6.1

What is the issue?

The SEC details that ADT and Exit Quarantine files can only be sent via email, which prevents alternative methods of delivery being used. Users are obligated to do this, for example in SEC Appendix AA Section 4.7 it states "Each User shall investigate and resolve the ADT exceeded event. Each User shall provide an email to the Service Desk indicating the action to be taken on each of the quarantined communications".

With the current arrangements, this results in emails being the single means of sending ADT and Exit Quarantine files. The DCC believes there are more secure methods available to sending these files. The ADT and Exit Quarantine files must be securely delivered due to these being data records that contain information private to both a User and the DCC. Failure to do so would be classed as a data breach.

Additionally, ADTs provide protection to the electricity network by specifying the maximum number of Critical commands expected. This ensures there are no unexpected or malicious surges or reductions in power on the National Grid.

What is the impact this is having?

The DCC believes that the using email to provide ADT Files and subsequent updates is not as secure as the Self-Service Interface (SSI) and there are potential scenarios where this process could result in a breach of Security, either by malicious activity or human error. If the ADT and Exit Quarantine files

aren't securely delivered, then it allows the potential for unauthorised persons being able to access private data. If these data breaches occur, it could undermine the security and commercial image of the DCC's business processes. The suggested additional benefits by the Proposer are a single system for the delivery of files, resulting in less effort for end Users and DCC.

Appendix 1: Progression timetable

The timetable for DP109 is for the Draft Proposal to be presented at the next CSC for initial viewing. It will then proceed to the Panel Sub-Committees for comment and question whether members will be impacted by changing the delivery method as suggested in the proposal. After the views of the Sub-Committees have been received, and comments have been taken from SEC Parties and from DCC to determine the impacts to their systems (if any), it will be returned to the CSC for decision. If recommended for progression as a Modification Proposal, it will be taken to the next Panel meeting for conversion.

Timetable	
Action	Date
Taken to CSC for initial discussion	28 Jan 20
Presented to Sub-Committees for initial input	4 – 18 Feb 20
Taken to CSC for decision	25 Feb 20
Taken to Panel for conversion to Modification Proposal	13 Mar 20

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
ADT	Anomaly Detection Threshold
CSC	Change Sub-Committee
DCC	Data Communication Company
SEC	Smart Energy Code
SECAS	Smart Energy Code Administration and Secretariat
SMKI PMA	Smart Metering Key Infrastructure Policy Management Authority
SSC	Security Sub-Committee
SSI	Self-Service Interface
TABASC	Technical Architecture and Business Architecture Sub-Committee

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DP110

‘Aligning SEC Appendix D with DCC Processes’

Modification Report

Version 0.1

About this document

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1. Summary

This proposal has been raised by Gordon Hextall on behalf of the Smart Metering Key Infrastructure (SMKI) Policy Management Authority (PMA).

During a recent audit carried out in June 2019 under Smart Energy Code (SEC) Appendix C 'SMKI Compliance Policy', the auditor identified non-compliances where the Data Communications Company (DCC) internal processes did not conform to the processes set out in SEC Appendix D 'SMKI Registration Authority Policies and Procedures' (SMKI-RAPP).

The DCC and the SMKI PMA have agreed changes that should be made to SEC Appendix D. The resulting changes agreed by the DCC and the SMKI PMA will ensure that the independent assurance is satisfied.

SEC Appendix D now requires amendments so that it is aligned with the processes agreed by the DCC and SMKI PMA.

2. Issue

What are the current arrangements?

SEC Appendix C requires the DCC to submit to a SMKI Independent Assurance Scheme, approved by the SMKI PMA. The scheme approved by SMKI PMA and meeting the requirements set out in SEC Appendix C is 'tScheme'.

The most recent audit was carried out in June 2019 and the auditor identified non-compliances where the DCC internal processes did not conform to the processes set out in SEC Appendix D 'SMKI Registration Authority Policies and Procedures'.

At the request of the SMKI PMA, the DCC was asked to investigate the discrepancies. and make recommendations to the SMKI PMA for changes to the SEC, for example, where the original SEC processes have been replaced by a more efficient process.

What is the issue?

During live operations, the DCC has evolved the processes set out in SEC Appendix D to operate more efficiently. The SMKI Independent Assurance Scheme has identified discrepancies between the SEC defined processes and the actual DCC practices.

On 17 December 2019, the DCC presented the SMKI PMA with the changes that it proposed to be made to the SEC Appendix D. SMKI PMA members went through each proposed change and made some amendments. The resulting changes are acceptable to the DCC and to the SMKI PMA and will ensure that the independent assurance is satisfied.

SEC Appendix D now requires amendments so that it is aligned with the processes agreed by the DCC and SMKI PMA.

What is the impact this is having?

If these changes are not made, the discrepancy between the obligations in the SEC and the DCC actual live practices would persist. There will be no impact on SEC Parties as these practices are already in use.

Appendix 1: Progression timetable

The proposed timetable for DP110 is for the Draft Proposal to be presented at the next Change Sub-Committee (CSC) meeting for decision and to Panel in February for conversion to a Modification Proposal. If the Panel agrees it should become a modification proposal it should then proceed directly to the Report Phase, as it has been discussed and agreed by the DCC and the SMKI PMA.

In order to do this, the draft legal text must be approved by Panel. The Smart Energy Code Administrator and Secretariat (SECAS) is preparing the draft legal text, which will be published on the SEC Website ahead of the Panel meeting for comment.

Timetable	
Action	Date
CSC review the issue	28 Jan 20
Panel convert Draft Proposal to Modification Proposal	14 Feb 20
Modification Report Consultation	17 Feb – 6 Mar 20
Change Board vote	25 Mar 20

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
DCC	Data Communications Company
SEC	Smart Energy Code
SMKI	Smart Metering Key Infrastructure
SMKI PMA	SMKI Policy Management Authority
SMKI-RAPP	SMKI Registration Authority Policies and Procedures

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DP111 'SMDA Budget Amendments'

Modification Report Version 0.1

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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1. Summary

This Draft Proposal was raised by Terry Jefferson on behalf of the EUA.

Following the National Audit Office's (NAO) report on "Rolling Out Smart Meters", the Department for Business, Energy and Industrial Strategy (BEIS) commissioned an independent review into device interoperability on change. The report was released in October 2019, with one of the recommendations being that energy suppliers and the Smart Metering Device Assurance (SMDA) Board should review the SMDA funding model to ensure SMDA can provide long-term test assurance. Following this recommendation, amendments should be suggested to the SMDA funding model.

2. Issue

What are the current arrangements?

The current SMDA funding model is suffering due to a number of issues, including delays within the overall programme, a number of issues within the DCC Communication systems and the volume of devices being submitted into the Scheme. In addition, SMDA is a 'not for profit' Scheme, currently relying on a mix of limited Energy Supplier Members plus Manufacturers and Meter Asset Providers (MAPs) for membership funding.

Following the NAO report dated 23 November 2018 on "Rolling Out Smart Meters"¹, BEIS commissioned an independent review² into device interoperability on change. The report was released in October 2019, with one of the recommendations being that "Energy suppliers and the SMDA Board should review the SMDA funding model to ensure SMDA can provide long-term test assurance."

What is the issue?

Whilst its importance is recognised by all regulatory bodies and included in areas such as the Joint Industry Plan³, the Scheme is not a mandated requirement. The funding model therefore does not represent the whole GB market, leaving current funding capabilities significantly reduced. As such, a more viable model that takes account of the whole of the industry and relevant beneficiaries is required to ensure the longevity of the Scheme and the security of operations of devices for consumers on CoS.

As outlined in the BEIS Review, "Based on the feedback from energy suppliers there is only a low level of test assurance for equipment they inherit on CoS where the device models may be different to those they are installing. Large energy suppliers all pointed to SMDA as providing them with necessary interoperability on change test assurance." Energy Suppliers rely solely upon the SMDA Scheme to demonstrate interoperability on CoS, therefore supporting the longevity of the SMDA Scheme aligns with SEC objective (a)⁴.

What is the impact this is having?

Not addressing the current funding deficiencies puts the SMDA Scheme at risk of not being able to continue to provide testing capabilities, due to the minimal level of funding coming through. This raises the risk against all Energy Suppliers and consumers of interoperability on change being impacted, particularly in light of the responses provided by the Suppliers in the BEIS Review as outlined above.

¹ <https://www.nao.org.uk/report/rolling-out-smart-meters/>

² 'Review of Smart Metering assurance for device interoperability on change' Report Commissioned by UK Government Department for Business, Energy & Industrial Strategy - Confidential

³ BEIS Joint Industry Plan - Confidential

⁴ Facilitate the efficient provision, installation, operation and interoperability of smart metering systems at energy consumers' premises within Great Britain

Appendix 1: Progression timetable

The suggested timetable for DP111 is for the Draft Proposal to receive comments from SEC Parties to gauge initial reactions to the issue. Following this, it will be presented at the next Change Sub-Committee (CSC) for initial viewing, and if well received will be asked for decision. If recommended for approval, it will be taken to the next Panel meeting for conversion to a Modification Proposal on 14 February 2020 and enter the Refinement Process.

Timetable	
Action	Date
Initial comments from SEC Parties	W/B 20 Jan 20
Taken to CSC for decision	28 Jan 20
Taken to Panel for conversion to Modification Proposal	14 Feb 20

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	Government Department of Business, Energy and Industrial Strategy
CoS	Change of Supplier
CSC	Change Sub-Committee
MAPs	Meter Asset Providers
NAO	National Audit Office
SEC	Smart Energy Code
SMDA	Smart Meter Device Assurance

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DP101 'Large Gas Meter Displays'

Modification Report Version 0.2

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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1. Summary

DP101 was raised by Emslie Law from SSE.

The Smart Metering Equipment Technical Specifications (SMETS) sets out the specifications for what is displayed on Gas Smart Metering Equipment (GSME). Large Gas Meters must comply with the display requirements set out in Section 4 of this document.

However, some of the Large Gas Meters are unable to measure to thousandths of a metre cubed. Equally, due to the greater flow rate, they require more than the five most significant digits to meet the Measuring Instruments Directive (MID) display requirements.

This means the current requirement in the SMETS to have only five digits before a decimal point conflicts with the MID requirement. If Large Gas Meters are not excluded from the SMETS user interface obligations, they will be non-compliant with the MID.

2. Issue

Provisional discussions

At the October 2016 Technical Specifications Issue Resolution Sub-Group (TSIRS) meeting, EDF Energy logged an issue (BEIS Issue Log ID TS0649). This was in relation to an inconsistency in display requirements as different manufacturers were interpreting the requirements differently.

As a result, the Department for Business, Energy and Industrial Strategy (BEIS) raised Change Resolution Proposal (CRP) 522 'Meter User Interface display same as consumption import register'. This was to amend future versions of the SMETS to explicitly state that User Interfaces are required to display the value of the energy registers to 'appropriate precision'. CRP522 was implemented in September 2018 as part of the DCC Release 2.

At the time EDF did not believe this resolved the issue since there was still flexibility in the number of digits that could be displayed. This would not ensure the consistency they desired. Therefore, they raised [SECMP0006 'Specifying the number of digits for device display'](#).

As part of the progression of the Modification Proposal the Working Group discussed any potential conflicts with the MID¹. It noted the view from the British Electrotechnical and Allied Manufacturers Association (BEAMA), that it did not support the mandating of the number of display digits due to the variation in Consumer use cases. BEAMA added that flexibility may be required for the number of display digits in the future.

Implementation of SECMP0006

SECMP0006 was implemented as part of the November 2018 SEC Release. It amended SEC Schedule 9 'Smart Metering Equipment Technical Specifications 2' to standardise the number of digits used to display Consumption Registration on a User Interface.

For GSME, SECMP0006 required the values stored in the Consumption Register, the Tariff Block Counter Matrix and the Tariff Time of Use (ToU) Register Matrix to be displayed as:

1. A decimal integer number of thousandths of metres cubed, rounded down to the nearest thousandth of a metre cubed;
2. discarding all except the eight least significant decimal digits;
3. exactly eight decimal digits (adding leading zeros if necessary); and
4. the decimal point separator placed between the fourth and third least significant digits.

What is the issue?

The SMETS allows the use of Large Gas Meters at Domestic premises. However, some of these Large Gas Meters are unable to measure to thousandths of a metre cubed. Equally, due to the greater flow rate, they require more than the five most significant digits to meet the MID requirements which states:

¹ [Directive 2014/32/EU of the European Parliament and of the Council of 26 February 2014](#)

An indicating device shall have a sufficient number of digits to ensure that the quantity passed during 8000 hours at Qmax does not return the digits to their initial values.

This means the current requirement in the SMETS to have only five digits before a decimal point conflicts with the MID requirement.

How does this issue relate to the SEC?

As described above, the SMETS sets out the specifications in section 4.4.5.1 for what is displayed on GSME.

The SMETS also states in Section 4.1:

Any requirements to Lock, Enable, Disable or Arm Supply set out in this Section 4, only apply to Gas Smart Metering Equipment other than Large Gas Meters installed at Domestic Premises.

This ensures Large Gas Meters must comply with the display requirements set out in the remainder of Section 4.

What is the impact this is having?

Large Gas Meters must meet the requirements imposed by both the SMETS and the MID. If Large Gas Meters are not excluded from the SMETS obligations for displaying a limited number of digits in the display, they will become non-compliant with the MID.

DCC impacts

The DCC has confirmed that this proposal has no impacts on the DCC Systems or its products.

3. Assessment of the proposal

Observations on the issue

Views of SECAS

Part 1 'Specific Requirements Gas Meters' of the MID states that, 'An indicating device shall have a sufficient number of digits to ensure that the quantity passed during 8 000 hours at Q_{\max} does not return the digits to their initial values.'

The Smart Energy Code Administrator and Secretariat (SECAS) advised that this creates a problem with, for example, the U16 gas meter where the Q_{\max} is 16 cubic meters per hour. 8,000 hours of Q_{\max} require more than five digits to display on the meter. If only five digits were used, the display would be perceived to start again at 00,000.000 after 6,250 hours.

SECAS notes that the requirements in the SMETS and the MID do not affect the reading of data for Suppliers using Service Requests. These follow the same rules as domestic meters and the actual value stored by the meter is transmitted. Also, the communications with between a Large Gas Meter and an In-Home Display (IHD) or Prepayment Meter Interface Device (PPMID) is not affected and the full value is shared. Therefore, the DCC Systems are not affected by this issue.

Views of a meter manufacturer

A meter manufacturer agreed with the issue set out in this problem statement. It suggested re-wording the SMETS as follows to resolve the issue:

4.1 Overview

Section 4 of this document describes the minimum physical, minimum functional, minimum interface, minimum data and minimum testing and certification requirements of Gas Smart Metering Equipment (GSME) that a gas Supplier is required to install and maintain to comply with standard condition 33 of its gas supply licence.

Any requirements to Lock, Enable, Disable or Arm Supply or regarding the Presentation of information on the User Interface set out in this Section 4, only apply to Gas Smart Metering Equipment other than Large Gas Meters installed at Domestic Premises.

This would make Large Gas Meters installed at Domestic Premises exempt from the User Interface requirements in the SMETS. SECAS agrees that this wording would resolve the issue.

Views of the Change Sub-Committee

A Change Sub-Committee (CSC) member suggested this Draft Proposal not be expanded to include other potential issues, in case it caused further unintended consequences.

Another member sought clarification whether this change would apply to future Large Gas Meters, as they were not aware of any currently installed. SECAS advised that it was not aware of any SMETS2

Large Gas Meters currently installed at Domestic Premises, but there may be in future. Therefore, any legal text for this proposal should apply to the next Principal Version of the SMETS.

Identifying any cross Code impacts

The Supply Point Administration Agreement (SPAA) were notified of the issue set out in this proposal and asked if there were any impacts on it as a Code. The SPAA advised that this may require a change in the SPAA to clarify that SMETS2 Large Gas Meters installed at domestic premises would be exempt from the standardised digits requirement.

Appendix 1: Progression timetable

It is recommended that this proposal proceeds to the Refinement Process.

During the investigation of this Draft Proposal, a meter manufacturer has proposed a solution to the issue, which the Proposer is willing to take forward.

SECAS will present the proposed solution to the Technical Architecture and Business Architecture Sub-Committee (TABASC) on 6 February 2020 and then to the Working Group on 4 March 2020. If neither of the groups raise any material concerns with the solution, the proposal will then proceed to a Refinement Consultation.

Timetable	
Action	Date
CSC recommendation that Panel convert into a Modification Proposal	28 Jan 20
The TABASC review the proposed solution	6 Feb 2020
Panel convert Draft Proposal to a Modification Proposal	14 Feb 20
Working Group review the proposed solution	4 Mar 20
Update Panel	13 Mar 20

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
BEAMA	British Electrotechnical and Allied Manufacturers Association
BEIS	Department for Business, Energy and Industrial Strategy
CSC	Change Sub-Committee
CRP	Change Resolution Proposal
DCC	Data Communications Company
ESME	Electricity Smart Metering Equipment
GSME	Gas Smart Metering Equipment
IHD	In-Home Display
MID	Measuring Instruments Directive
PPMID	Prepayment Meter Interface Device
SECAS	Smart Energy Code Administrator and Secretariat
SMETS	Smart Metering Equipment Technical Specifications
SPAA	Supply Point Administration Agreement
TABASC	Technical Architecture and Business Architecture Sub-Committee
ToU	Tariff Time of Use
TSIRS	Technical Specifications Issue Resolution Sub-Group

SEC Modification Proposal, SECMP0077, DCC CR1249

DCC Service Flags

Preliminary Impact Assessment (PIA)

Version:	0.26
Date:	30th December, 2019
Author:	DCC
Classification:	DCC PUBLIC

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1 Document History

1.1 Revision History

Revision Date	Revision	Summary of Changes
30/12/2019	0.26	Initial version, internal DCC review

1.2 Associated Documents

This document is associated with the following documents:

Ref	Title and Originator's Reference	Source	Issue Date
1	MP077-Business-Requirements-v0.1	SECAS	27/11/2019

References are shown in this format, [1].

1.3 Document Information

The Proposer for this Modification is Paul Saker of EDF Energy. The original proposal was submitted in June 2019.

The Preliminary Impact Assessment was requested of DCC on 9th November 2019.

The SECAS provided text following combines references to "Device Status" and "DCC Service Flag". For consistency the term "DCC Service Status" has been used for the solution definition instead of "DCC Service Flag" for consistency with Smart Metering Inventory (SMI) terminology. However the Modification title and requirements have been left with the term DCC Service Flag.

2 Context and Requirements

In this section, the context of the Modification, assumptions, and the requirements are stated.

The SEC Definitions, issue statement, and requirements following have been provided by SECAS and the Proposer.

2.1 SEC Definitions of Service Flags

The following definitions are specified in the Smart Energy Code (SEC).

A Smart Metering System (SMS) is defined as a Communication Hub (CH) with one Commissioned meter and any available PPMID or IHD devices. One CH and Electricity Smart Metering Equipment (ESME) for electricity or one CH and Gas Smart Metering Equipment GSME for gas are the minimum configurations. Note that the SEC explicitly distinguishes between a SMS for electricity and gas.

The DCC Service Flag and the current state associated with the SMS is communicated to the appropriate Meter Point Administration Service (MPAS) for electricity meters and XOSERVE for gas meters.

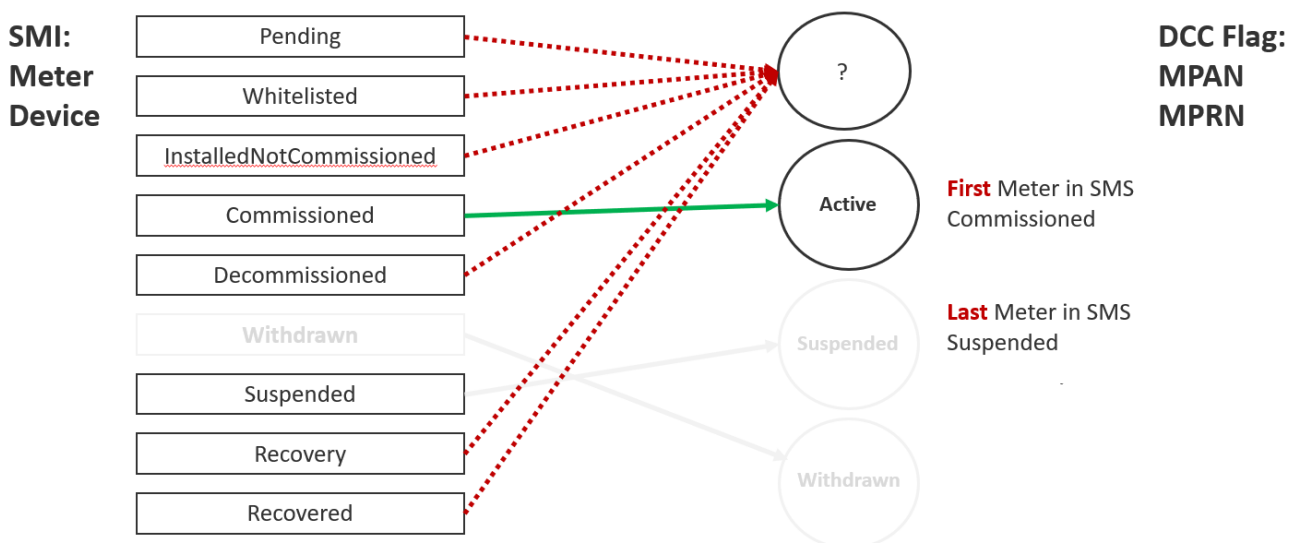
There are three possible status flags; Active (A), Suspended (S), and Withdrawn (W). Once the ESME (or GSME) is Commissioned the SMS has the status of "Active".

The SEC does not indicate what happens if the LAST meter of a SMS is removed (in the sense of removed from the Certified Products List (CPL), it may still be physically at the premises). In analogy to the creation of the SMS, the SMS ceases to exist. In such a case the SMS state should be set to "Suspended".

2.2 Current State

The "Active" state is applicable when a SMS is commissioned. According to Suppliers and DNOs, the "Active" state is retained even when all meters are physically removed from the premises; this is perceived as being an issue when it comes to assess whether a Smart Metering Services are possible. In the sense of the SEC there is no longer a functional SMS at the premises.

SMI Device States can be mapped to the Service Flag states as shown following.



Most of the SMI states do not map to the DCC Service Flag, which makes it difficult for the DNOs and Suppliers to track status.

2.3 What is the Issue?

The industry needs a simple and reliable mechanism for identifying cases where smart devices are, or are not, present at a location. This information is necessary for suppliers to establish whether there is a smart metering system they can communicate with at that location, and for distributors to correctly handle alerts. Issues have been identified in the current process where the Service Flagging is incomplete which could hinder the switching process for some consumers with smart meters.

2.4 Business Requirements for this Modification

This section contains the considerations and assumptions for each business requirement as provided by the Proposer and SECAS.

Req.	Requirement
1	DCC to implement a method of understanding if there is a Device currently at a premises.
2	DCC to have a reliable source of information on the state of DCC Service Flags.
3	DCC to implement a new Service Flag state of "N" for Non-Active to inform where a Device has been installed but not commissioned or set to Active.

Table 1: Business Requirements for SECMP0077, CR1249

2.4.1 Requirement 1: Implement a method of understanding if there is a Device currently at a premises

This requirement obligates the DCC to implement a means of identifying Devices at premises. Currently, the means of identifying Devices is through noting whether a Smart Metering System (SMS) is active or not. This doesn't account for Devices that may have been removed from the SMS or that don't deliver all of the smart functionality. Therefore, a more granular approach is required as part of the Modification Proposal's solution.

Note that SECAS have separately provided the following supporting information for this requirement:

A clarification on how the DCC Service Flag state "Suspended" currently works is required.

According to DNOs and Suppliers the DDC Service Flag state "Suspended" has not been observed in the live system. This may be because the conditions for this state haven't been met in the live system.

When the last meter on the SMS has been Suspended in SMI, then the state of the DCC Service Flag must be set to "Suspended". This state will require all meters to be in the Suspended state.

2.4.2 Requirement 2: To have a reliable source of information on the state of DCC Service Flags

This requirement obligates the DCC to provide reliable and consistent updates on the state of Service Flags. At the moment, there are Service Flags that have been set to SMS that are inaccurate. SEC Parties have noted that this inaccuracy has made the switching process of Smart Meters and other Devices harder to complete. It also may result in

Suppliers mis-selling a service to consumers if the Service Flag misinforms the Supplier of which services they can provide to the consumer. With reliable information of DCC Service Flags being an integral part of Ofgem's Switching Programme plans, this is required as part of the Modification Proposal's solution.

Note that SECAS have separately provided the following supporting information for this requirement:

The Withdrawal of devices has been removed from the SEC; in DUIS the corresponding Service Request 8.5 has been modified so that no DCC user is entitled to use this Service Request. As a consequence it is not possible for devices to enter the SMI status of "Withdrawn". The DCC Service Flag "Withdrawn" is not possible since it would require that all meters are set to the SMI state "Withdrawn".

The DCC Service Flag state "Withdrawn" must be removed.

2.4.3 Requirement 3: To implement a new Service Flag state of "N" for Non-Active to inform where a Device has been installed but not commissioned/set to Active

This requirement obligates the DCC to create a new DCC Service Flag state of "N" for Non-Active. The three current states of the DCC Service Flagging are the following:

- "A" for Active;
- "W" for Withdrawn; and
- "S" for Suspended.

SEC Parties have identified that after a SMS is fully operational, the flag is set to A. However, the flag state has not changed on these systems, despite having had Devices removed from the system – meaning these should have been changed to either W or S. The proposed N flag would be used to distinguish between Devices that were installed in a premises, but not fully operational. Until it can deliver the full range of functionality and then set to A, the Device will be set to N.

Note that SECAS have separately provided the following supporting information for this requirement:

The SEC doesn't currently specify what state the DCC Service Flag should be set to for most of the SMI states which haven't been covered in the previous slides.

The suggestion is to add a new state to the DCC Service Flag called "Non-Active" abbreviated as "N". This state will be used to indicate whether all meters on the SMS are in one of the following SMI states:

- *InstalledNotCommissioned*
- *Decommissioned*
- *Recovery*
- *Recovered*

Note that meters on the SMS can have different SMI states; they don't need to be in the same state for the DCC Service Flag "Non-Active" to apply.

3 Description of Solution

The solution requested by SECAS is to provide clarity in SEC Appendix X 'Registration Data Interface Specification' to describe the DCC Service Flag process. As part of this, the "W" for Withdrawn DCC Flag will be removed from the SEC and an "N" for Non-Active Flag will be introduced. The "N" Flag will cover the state for devices in a Smart Metering System (SMS) which are installed but yet to be commissioned, decommissioned or in a state of recovery. The Modification also requests clarification of the DCC Service Flag states.

3.1 Requirements Review

The DCC and Service Providers have reviewed the requirements and noted the following.

3.1.1 Terminology and Definitions

The SEC Modification request and requirements in the above sections combines references to "Device Status" and "DCC Service Flag". Instead of the latter, the term "DCC Service Status" will be used in this Preliminary Impact Assessment for technical consistency with Smart Metering Inventory (SMI) terminology.

For clarity, these are two different statuses with different purposes:

1. **Device Status** refers to an individual Device, which may be a Smart Meter or other Device Type. Examples of Device Status include Pending, Commissioned, Decommissioned, Suspended and Recovery.
2. **DCC Service Status** refers to a Meter Point (sometimes referred to as a MPxN), which may be a Meter Point Administration Number (MPAN) or Meter Point Registration Number (MPRN).
 - Within DSP, the DCC Service Status is changed to Active when it is first associated with a Commissioned Smart Meter. At that point the change in status is communicated to the relevant Registration Data Provider (RDP) via an outgoing data flow (D0350 for electricity and the DXI equivalent for gas).
 - There is an additional status Withdrawn that was intended for use when the Service Opt-Out Service Requests were used.¹ Since those Service Requests are no longer available via DUIS the "Withdrawn" status is not valid. In the current implementation, the DCC will never inform the RDPs of a change in DCC Service Status after changing it to Active.
 - The flows to the RDPs also support a DCC Service Status of Suspended, but as it is not possible to suspend a MPxN (only a device) this status is also never used currently.

The statuses are communicated in different ways:

1. Device Status is made available to DCC Service Users via the functions in Self Service Interface (SSI) screens and the DUIS Service Request 8.2 Read Inventory.

¹ The status "Withdrawn" applies if the last meter of a SMS has been opted out of the DCC Smart services. The Service Request (SR) 8.5 is currently set such that it cannot be used by any DCC User. In this sense, Withdrawn would be used to indicate if a Supplier is no longer Smart; however, BEIS have officially stated that Withdrawn is not a valid state.

2. DCC Service Status is not made available to DCC Service Users by the DCC directly, e.g. it is not included in SSI screens or DUIS Service Requests. The status is available via industry Registration Data processes D350 and DXI.

Note that DSP has already implemented an additional DCC Service Status N meaning "Not Active", which is maintained within DSP SMI, but as this is not currently a valid value in Registration Data flows and therefore cannot be exported.

A SMS is said to be "Decommissioned" if it is removed from the wall. This is a relatively frequent occurrence.

The Device Statuses of "Recovery" and "Recovered" relate to putting a new certificate on a device. The update from this action is not sent to the DNOs but is a separate DCC Status Update.

In the case of an Install and Leave scenario, where a supplier does not complete the installation, then a SMS can be set to state of "Suspended".

3.1.2 DCC Service Status Rules

Existing DSP rules for changing a DCC Service Status from Active to Not Active are based on the decommissioning of Smart Meters and take into account circumstances of the same Meter Point (MPxN) being allocated to more than one Smart Meter. Hence, in a case where one Smart Meter is being decommissioned while another Smart Meter with the same MPxN remains Commissioned, the DCC Service Status would not be set to Not Active. Checks are also made for cases where a Meter Point association was made in error and is corrected using SRV 8.4 Update Inventory. The current rules are:

1. The starting position in DSP for Meter Points which have never had a Smart Meter operated via DCC is that DCC Service Status is null.
2. The DCC Service Status becomes A (Active) when:
 - a Smart Meter has been associated with a Meter Point (SRV 8.11 Update HAN Device Log) and the Smart Meter's Device Status becomes Commissioned (SRV 8.1.1 Commission Device).
 - when a Meter Point (that is not A already) is linked to a Commissioned Smart Meter (by SRV 8.4 Update Inventory).
3. The DCC Service Status becomes N (Not Active) when:
 - a Smart Meter associated with the Meter Point is decommissioned (SRV 8.3 Decommission Device), except where the Meter Point is still associated with another Smart Meter;
 - a Smart Meter associated with the Meter Point is unlinked from a commissioned device (SRV 8.4 Update Inventory), except where the Meter Point is still associated with another Smart Meter.

3.2 DSP Solution Overview

As requested, the proposed DSP solution would implement changes to outgoing Registration Data flows for electricity and gas to add a Not Active status ('N'). This depends on revised interface specifications being agreed with the industry.

However the DCC and DSP propose that the DSP's current rules for using the Not Active DCC Service Status should continue to be used, rather than adding the additional status changes proposed in the Modification. This is for several reasons:

- The Modification requirements suggest some changes to Device Status that should be temporary rather than irrevocable, e.g. Recovery (which can be mitigated by updating SMKI Organisation Certificates on the Device).
- Some of the proposed changes could result in large numbers of Meter Points needing to have their DCC Service Status flag changed at the same time (e.g. the MPANs and MPRNs associated with every Smart Meter in some types of SMKI Recovery incident, or a corresponding Smart Meter's Firmware Version suspension or Recovery status). Changes to the Recovery status could also affect the performance of the Recovery operation due to having to undertake additional functionality when the focus should be on recovering the Devices.
- Continuing to use the current rules would be quicker and cheaper than changing them.

It should be noted that the existing rules differ from the Modification requirements stated above, notably that the setting in Smart Meters of Device Statuses "InstalledNotCommissioned", "Recovery" and "Recovered" do not contribute to the changing of DCC Service Status in related Meter Points.

DSP's current implementation for supplying outgoing data to RDPs for DCC Service Status has a database query which returns flags that have changed to status A but for which the status change has not yet been notified to the RDP. The current implementation includes recording that a change has been notified to the RDP.

This approach would be extended in the proposed DSP solution for this Modification to cover status changes to N. Note that Meter Points for which the DCC has never supported Smart Metering service will be recorded with null DCC Service Status, so would not be picked up by this query, i.e. only Meter Points which have been Active previously and then become Not Active would be identified.

Two DSP feature switches will be introduced to enable the new functionality, one for Gas and one for Electricity at the appropriate point for each. It is assumed that the new functionality will be enabled only when all RDPs for a given fuel type are in a position to receive the new DCC Service Status, i.e. there will be no need for DSP to enable the new feature for electricity on a per RDP basis, since with more than 20 electricity RDPs that would make the solution more complex.

In ESI reports, Meter Point Registration Extract and Meter Point Extract only include those with DCC Service Status "A", and it is assumed that will continue to be the case, so this change does not impact those data extracts.

3.2.1 Rationale for DSP Solution

As noted above, the DSP proposed solution does not match exactly the changes described in the Modification requirements. The commercial benefit of proceeding with the DSP proposed solution rather than the approach described in the CR is that the DSP solution will achieve the aim of the Modification via a far more efficient route, as it is a relatively small enhancement of existing functionality. As the scale of change in the DSP solution is low, the implementation and integration impact is small, resulting in a lower forecast price and duration.

3.3 Other Solution Impacts

Two other areas of the overall smart metering system solution are likely to be impacted.

- The Ofgem Switching Programme, as Central Switching Solution (CSS) will assume the responsibility for providing RDP updates to DSP.
- Changes to the Registration Data outgoing flows from the DSP for electricity and gas to add a Not Active status ('N'). This depends on revised interface specifications being agreed with the industry.

These impacts will be fully assessed as part of the Full Impacted Assessment (FIA), if the revised approach is approved and the FIA requested.

4 Impact on DCC Systems, Processes and People

This section describes the impact of SECMP0077 on DCC Services and Interfaces that impact Users and/or Parties.

4.1 System Components

The following DSP system components are affected by this change:

- Data Management
- Registration Data interfaces outgoing from DSP to RDPs, both electricity and gas
- Reference data to define the two new feature switches

4.2 Security Impact

The implementation will be security assured during the implementation phase. This includes reviewing designs, test artefacts and providing consultancy to the implementation and test teams.

A more detailed security impact will be carried out as part of the Full Impact Assessment.

At this stage, a penetration test and updates to protective monitoring are not thought to be required.

4.3 Technical Specifications

No changes to DUIS, GBCS, or any other Technical Specification is expected.

Changes to industry flows as detailed above are anticipated.

4.4 Integration Impact

An appropriate level of Systems Integration and User Integration Testing (SIT and UIT) will be carried out prior to progressing the release of this change to the Production environment.

Testing of the changes to the Registration Data interfaces between the DSP and RDPs will be required.

4.5 Infrastructure Impact

There will be no change to the infrastructure design as a result of this change.

The change does not impact the DSP resilience or Disaster Recovery implementation.

4.6 Application Support

No changes to Application Support are expected.

4.7 Service Impact

No material impact is expected for the DSP Operations team and no changes to SLAs are expected.

4.8 Safety Impact

No impact is expected, but a full Safety Impact Assessment will be carried out as part of the production of the Full Impact Assessment (FIA).

4.9 Contract Schedules

No changes to contracts are expected, this will be evaluated for the FIA.

5 Implementation Timescales and Approach

Notwithstanding in which release this change is implemented, based on the currently stated requirements, the elapsed time for DSP implementation will be between 1 and 3 months from project initiation through to PIT complete.

The release lifecycle duration will be confirmed as part of the FIA. As currently planned, the standard ongoing major release model will provide drops to the production environment in June 2021.

5.1 Implementation Approach

Implementation of this change is assumed to follow a waterfall methodology. The release lifecycle duration will be confirmed as part of the FIA.

When the proposed new functionality goes live, all Meter Points with DCC Service Status of N in the DSP Inventory will be identified by the first run. This performance risk has been considered; research on Production data shows that at the time of this PIA (November 2019), there are approximately 45,000 Meter Points with DCC Service Status N spread across all the RDPs out of approximately three million live Smart Meters. It is assumed that these numbers are not large enough to justify introducing a batching approach for the initial catch-up, and that it should be possible for them all to be notified to RDPs using the same approach as the subsequent incremental changes. However, this should be reviewed nearer the time of implementation in case the position changes substantially.

5.2 Testing and Acceptance

It is assumed that the change will be implemented and tested as part of a major release, and will include release based regression testing in SIT and UIT. Changes to the RDPs will be tested during UIT.

6 Costs and Charges

The table below details the cost of delivering the changes and Services required to implement this Modification Proposal.

The scope of supply under this PIA includes design, development (build), system testing, and performance testing within the PIT environments.

The Rough Order of Magnitude cost (ROM) shown below describes indicative costs to implement the functional requirements as assumed now. The price is not an offer open to acceptance. It should be noted that the change has not been subject to the same level of analysis that would be performed as part of a Full Impact Assessment and as such there may be elements missing from the solution or the solution may be subject to a material change during discussions with the DCC. As a result the final offer price may result in a variation.

6.1 Design, Build, and Testing Cost Impact

The table below details the cost of delivering the changes and Services required to implement this Modification. For a PIA, only the Design, Build and PIT indicative costs are supplied.

£	Design, Build and PIT	SIT	UIT	TTO	App. Support	SP Total
Phase ROM	75,000	n/a	n/a	n/a	n/a	75,000

Design	The production of detailed System and Service designs to deliver all new requirements.
Build	The development of the designed Systems and Services to create a solution (e.g. code, systems, or products) that can be tested and implemented. It includes Unit Testing (also referred to as System Testing), Performance Testing and Factory Acceptance Testing by the Service Provider or supplier.
Pre-Integration Testing (PIT)	Each Service Provider tests its own solution to agreed standards in isolation of other Service Providers. This is assured by DCC. This phase also includes regression testing across all Comms Hub products
Systems Integration Testing (SIT)	All the Service Providers PIT-complete solutions are brought together and tested as an integrated solution, ensuring all SP solutions align and operate as an end-to-end solution. The System Integrator is responsible for leading this phase with the Service Providers offering testing support services.
User Integration Testing (UIT)	Users are provided with an opportunity to run a range of pre-specified tests in relation to the relevant change. The DCC is responsible for leading this phase with the Service Providers offering testing support services.

Implementation to Live (TTO)	The solution is implemented into production environments and ready for use by Users as part of a live service. The Transition to Operations (TTO) service is subject to implementation costs.
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Application Support	Any costs associated with supporting the new functionality.
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Based on the existing requirements, the fixed price cost for a Full Impact Assessment is **£9,358** and would be expected to be completed in 30 days.

7 Risks, Assumptions, Issues, and Dependencies

In the following sections, Risks, Assumptions, Issues, and Dependencies have been identified.

It is possible that further RAID will be established as part of the Working Group reviews and the FIA.

7.1 Risks

None at this time.

7.2 Assumptions

Ref.	Area	Description	Accept
MP77-AD01	Volume	When the new functionality goes live, all Meter Points where the DCC Service Status is N in the DSP Inventory will be picked by the first run. It is assumed that these numbers are not large enough to justify introducing a batching approach for the initial catch-up, and that it should be possible for them all to be notified to RDPs using the same approach as the subsequent incremental changes. However, this should be reviewed nearer the time of implementation in case the position changes substantially.	
MP77-AD02	SEC Change	The Modification requirements include requesting SEC changes to clarify some status meanings and it is assumed that SECAS will be responsible for making appropriate changes, though DSP can advise on definitions to support changes considered.	
MP77-AD03	Requirement	This solution proposes the use of DSP's existing implementation of DCC Service Status N, which has the consequence that the Modification's requirements that DCC Service Status N should be used in association with Meter Points where a corresponding Smart Meter has Device Status "InstalledNotCommissioned", "Recovery" or "Recovered" will not be met. It is assumed that SECAS will accept this prior to progressing to FIA.	
MP77-AD04	RDP	Assume the new feature will be enabled only when all RDPs for a given fuel type are in a position to receive the new DCC Service Status, i.e. there will be no need for DSP to enable the new feature on a per RDP basis	
MP77-AD05	Data Flow Change	DCC will coordinate changes to electricity and gas data flows with the industry	
MP77-AD06	Reports	Assume it will continue to be the case that ESI data extract reports Meter Point Registration Extract and Meter Point Extract will only include DCC Service Status "A", i.e. those with DCC Service Status "N" are not included	
MP77-AD07	Switching	Integration with CSS is not in the scope of this Modification. If that position changes then a Change Request governing DSP's CSS adaptation will need to be raised or amended.	

7.3 Issues

None at this time.

7.4 Dependencies

Ref.	Area	Dependency	Impact
MP77-DD01	Reg Data Flows	Implement changes to outgoing Registration Data flows for electricity and gas to add a Not Active status ('N'). This will depend on revised interface specifications being agreed with the industry.	Med

Appendix A: Glossary

The table below provides definitions of the terms used in this document.

Acronym	Definition
CH	Communication Hub
CPL	Certified Products List
CR	DCC Change Request
CSP	Communication Service Provider
DCC	Data Communications Company
DNO	Distribution Network Operators
DSP	Data Service Provider
DUIS	DCC User Interface Specification
ESME	Electricity Smart Metering Equipment
FIA	Full Impact Assessment
GBCS	Great Britain Companion Specification
GSME	Gas Smart Metering Equipment
IHD	In Home Display
MPAN	Meter Point Administration Number
MPAS	Meter Point Administration Service
MPRN	Meter Point Registration Number
MPxN	Generic term for Meter Point (Number)
PIA	Preliminary Impact Assessment
PIT	Pre-Integration Testing
PPMID	PrePayment Meter user Interface Device
RDP	Registration Data Provider
ROM	Rough Order of Magnitude (cost)
SEC	Smart Energy Code
SECAS	Smart Energy Code Administrator and Secretariat
SIT	Systems Integration Testing
SMETS	Smart Metering Equipment Technical Specification
SMI	Smart Metering Inventory
SMKI	Smart Meter Key Infrastructure
SMS	Smart Metering System
SP	Service Provider
SR	Service Request
SRV	Service Request Variant
SSI	Self Service Interface
TTO	Transition to Operations
UIT	User Integration Testing