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Action:	For Decision

MP078 DCC Impact Assessment

1. Purpose

[MP078 'Incorporation of multiple Issue Resolution Proposals into the SEC - Part 2'](#) is currently undergoing the Refinement Process. The Data Communications Company (DCC) has provided its Full Impact Assessment. We seek the Technical Architecture and Business Architecture Sub-Committee's (TABASC) input on the following questions before we present the final Modification Report to the Change Sub Committee (CSC):

- Has the DCC's response materially changed since the Preliminary Assessment? If it has, is this a beneficial or detrimental change?
- Does the updated draft legal text fully and accurately deliver the technical solution?
- Is this level of testing appropriate for this modification?

This paper provides a high-level summary of the key points. The DCC Impact Assessment can be found in Appendix A, the legal text in Appendix B and the Modification Report in Appendix C.

2. Summary of MP078

Issue Resolution Proposals (IRPs) are agreed between the Department of Business, Energy and Industrial Strategy (BEIS) and Industry at the Technical Specification Issue Resolution Sub-group. They are then passed to the Smart Energy Code Administrator and Secretariat (SECAS) for inclusion in the SEC. MP078 was raised to incorporate three IRPs into the Smart Energy Code (SEC). This section summarises the key points of this Modification Proposal. More information is available in the draft Modification Report in Appendix C.

2.1 What is the issue?

IRP550 and IRP604

IRP550 addresses a situation whereby the Gas Smart Metering Equipment (GSME) receives a message from the Communications Hub known as GCS20r it reports the event configuration back to the Communications Hub, which in turn sends a Service Response to the DCC User. However, there are no instructions in the Technical Specifications (GBCS) on what response the GSME should give if it cannot send the information (for instance if it does not have the data). This in turn means no Service Response will be received by the DCC User requesting the information.

IRP604 addresses a typographical error within IRP550.

IRP 603

Currently In Home Displays (IHDs), Prepayment Meter Interface Devices (PPMIDs) and Consumer Access Devices (CADs) on the Home Area Network (HAN) can request security log information from the GSME or Electricity Smart Metering Equipment (ESME) and can display this information to the consumer.

2.2 What is the Proposed Solution?

As part of the IRPs, TSIRS develop the legal text to deliver the solution. They have provided amendments to the Great Britain Companion Specifications (GBCS), Smart Metering Equipment Technical Specifications (SMETS) and the Communications Hub Technical Specifications (CHTS) that will deliver the required changes. The proposed legal text can be found in Appendix B.

IRP550 and IRP604

The proposed change is to allow the GCS20r Response to contain a ZigBee Default Response (as an Alternate Response) to signal any failures.

IRP 603

The proposed change is to make explicit instruction that the ESME and GSME (via the Gas Proxy Function (GPF) of the Communications Hub) shall not share security log information with Devices over the HAN.

3. DCC Impact Assessment

The DCC has now completed its Impact Assessment of the Proposed Solution. Its response can be found in Appendix A, with the draft legal text in Appendix B.

DCC solution

CSP South and Central has confirmed that there will be no Communications Hub firmware updates required as part of this modification as updates have either already been applied or are scheduled without the need for the modification. However, Device emulators will be impacted as they do not support the changes proposed.

CSP North has identified their Communications Hub will require updates to reject the getEventLog command with a ZigBee status of 0x7E – NOT_AUTHORIZED. When the GSME publishes an event to the GPF, it uses the event control bits within the command to denote whether the event should be published to all bound HAN devices. Where a publishEvent command is received from the GSME

containing an event with log id of 0x04 (Security Log), the Communications Hub will now disregard the setting of event control bit 0 and will not publish the event to bound devices.

There will also be a requirement to develop additional testing stubs to support the testing because real Devices will not send the required commands.

Testing considerations

The DCC's Service Providers have indicated varying levels of testing to safely deploy these changes.

During PIT, Communications Service Provider (CSP) South and Central will design, build and system test changes to test tooling required to assure the solution in the PIT environment. By using the Firmware Management Policy (FMP) delivery approach, no additional Communications Hubs, test hardware or software needs to be procured.

The functional testing will be limited to one cycle of testing in Pre-Integration Testing (PIT) with both Toshiba and WNC Single Band Communications Hub (SBCH) and Dual Band Communications Hub (DBCH) operating on GBCS 3.2 and 4.x firmware. CSP South and Central has costed for three weeks of System Integration Testing (SIT).

In comparison, CSP North will carry out PIT using real Devices, with emulators used to validate the specific IRP603 fix functionality. They require two cycles of PIT, with four weeks for each test cycle with each Communications Hub Variant. This same testing approach will be conducted again to assure SIT.

DCC implementation costs

Breakdown of DCC costs				
Design and Build	PIT	SIT	Implementation to Live	Total
£580,643	£1,306,073	£727,257	£20,000	£2,633,973

It is noted that the DCC has continued to challenge their Service Providers over the costs of this modification during this Impact Assessment that was first issued in May 2021. These costs are reflective of those discussions. The explicit breakdown per Service Provider can be found in Annex A the DCC Impact Assessment **RED**.

4. Implementation approach

This modification is targeted for the November 2022 SEC Release. This modification requires an estimated eight-month DCC lead time including SIT, therefore a final vote on whether to implement this change is required by the Change Board by the end of February 2022 to meet this Release.

5. Questions for the TABASC

We seek the TABASC's view on the following questions to feed into the Modification Report before we proceed with the Report to the CSC and then on to Change Board vote:

- Has the DCC's response materially changed since the Preliminary Assessment? If it has, is this a beneficial or detrimental change?

- Does the updated draft legal text fully and accurately deliver the technical solution?
- Is this level of testing appropriate for this modification?

6. Next steps

We will also be seeking comments from the Working Group in early December 2021. Following this, we will present the final Modification Report to the CSC on 21 December before the Change Board votes on the modification on 26 January 2022.

7. Recommendations

The TABASC is requested to:

- **PROVIDE** views and comments on the questions set out in this paper.

Kev Duddy

SECAS Team

25 November 2021

Attachments:

- **Appendix A:** MP078 DCC Impact Assessment Response
 - **Annex A:** MP078 DCC Impact Assessment (**RED**)
- **Appendix B:** MP078 Legal Text
- **Appendix C:** MP078 Modification Report