



DCC Response to its Consultation on changes related to PPMIDs and CHs

DCC response to its consultation on changes to the SEC
relating to SMETS1 PPMIDs and the memory size limitation
on Communications Hubs

Date: 30 September 2021

Author: consultations@smartdcc.co.uk

Classification: DCC Public

Table of Contents

1. Introduction and Context	3
2. Consultation Questions & Responses.....	3
2.1. Questions	3
2.2. Responses.....	4
3. Analysis of Responses	4
3.1. General.....	4
3.2. Question 1 (Bilingual Prepayment Meter Interface Device).....	4
3.3. Question 2, 3 and 4 (Bilingual Prepayment Meter Interface Device)	5
3.4. Question 5 (Bilingual Prepayment Meter Interface Device).....	7
3.5. Question 6 (Size limitation for Firmware)	7
3.6. Question 7 (Secure Third-Party PPMIDs)	8
3.7. Question 8 (Secure Third-Party PPMIDs)	9
3.8. Question 9 (Meta Data Issue)	9
3.9. Question 10 (Meta Data Issue).....	10
3.10. Question 11 (Unsupported PPMIDs)	11
3.11. Question 12 (Designation).....	11
4. Conclusions.....	11
5. Next Steps.....	12
6. Attachments	12

1. Introduction and Context

A number of energy suppliers have installed first generation smart devices (known as SMETS1 devices) in consumers' premises across Great Britain. SMETS1 devices installed by one energy supplier, however, are not always interoperable with and supported by the systems used by another supplier. The Data Communications Company (DCC) has developed a plan and designed a solution for the incorporation of such devices into its national network. It provides important shared benefits for industry and consumers and the ability for SMETS1 consumers to maintain their smart services following a decision to switch suppliers.

On 27 July 2021 DCC consulted¹ on issues relating to the migration and operation of SMETS1 PPMIDs on the DCC System. This document sets out the DCC response to this consultation.

Section 2 of the document sets out the questions that were posed in the consultation.

Section 3 sets out a brief summary of the issue that was set out in the consultation, a summary of the responses that were received and then a DCC response to those comments.

Sections 4 and 5 set out DCC's conclusions and next steps.

2. Consultation Questions & Responses

2.1. Questions

The consultation presented the consultation questions as set out in Table 1.

PPMIDs Q1	Do you have any comments on the tactical solution proposed by DCC to enable the migration of bilingual PPMIDs? Please could you provide detailed comments on the impact to you.
PPMIDs Q2	Do you consider that an enduring solution should be developed and further consulted upon by the DCC under BEIS transitional governance to enable operation of bilingual PPMIDs on the DCC System?
PPMIDs Q3	Do you consider that should a Party wish to pursue an enduring solution, it should be raised by them as a Modification Proposal under Section D of the SEC? Please provide details of your preferred outcome?
PPMIDs Q4	If an enduring solution is developed, do you think it should be done using BEIS transitional governance or a modification proposal under Section D of the SEC and how do you think an enduring approach would be best implemented? Please provide a rationale for your views.
PPMIDs Q5	Do you have any comments on the proposed SEC changes? Please provide rationale for your views.
PPMIDs Q6	Do you have any comments on the proposed changes to the S1SR? Please provide rationale for your views.

¹ <https://www.smartdcc.co.uk/customer-engagement/smets1-consultation-on-changes-related-to-ppmids-and-chs/>

PPMIDs Q7	Should DCC progress a change to the Secure S1SP to support the upgrade of firmware to third party PPMIDs? If so, would you like it to form part of the November 2022 Release or be done in a shorter timeframe with an increased cost due to testing?
PPMIDs Q8	Do you have any comments on the proposed changes to the S1SR? Please provide rationale for your views.
PPMIDs Q9	Would you like DCC to progress these changes. If so, would you like it to form part of the November 2022 Release or be done in a shorter timeframe with an increased cost due to testing?
PPMIDs Q10	Do you have any comments on the proposed changes to the S1SR? Please provide rationale for your views.
PPMIDs Q11	Do you have any comments on the proposed changes to the S1SR? Please provide rationale for your views.
PPMIDs Q12	Do you agree with the proposed re-designation date of 10 September 2021 (or, if necessary, as soon as reasonably practicable within one month thereafter) for the updates to the S1SR CPL Requirements Document and SEC Section A changes using draft notification at Attachment 1?

Table 1

2.2. Responses

DCC received eight written responses to the consultation. DCC has provided the Secretary of State with each written response that it received. One respondent provided general feedback, with all the remaining respondents providing a response to each question.

3. Analysis of Responses

DCC has analysed the feedback provided and views of stakeholders. Subject matter experts within DCC have reviewed every response.

3.1. General

DCC received one general response that did not directly answer the questions. The respondent sought better understanding of the costs involved as well as the costs that would be incurred by Users of the DCC Systems.

DCC sets out its views on the costs that DCC would bear in the consultation document for Bilingual Prepayment Meter Interface Device, Secure Third-Party PPMIDs and Meta Data Issue. DCC did not ask for specific details on the costs that would be incurred by Users and no details were provided by the respondents. Please note the conclusions that have been made in this document have a bearing on these costs.

3.2. Question 1 (Bilingual Prepayment Meter Interface Device)

DCC has established that some models of PPMID can work as both a SMETS1 device and a SMETS2+ device, which is also referred to as a “bilingual device”. The consultation set out that the regulations do not currently permit devices to be both SMETS1 and SMETS2+ and DCC Systems are unable to process commands to any device type that is both SMETS1 and SMETS2+.

In the consultation, DCC proposed a tactical solution that will allow a Supplier Party to use a bilingual PPMID device as part of either a SMETS1 or a SMETS2+ installation. It would involve creating a distinct entry in the Central Products List (CPL) for both the SMETS1 entry and the SMETS2+ entry with a differentiating firmware version, which would enable SMETS1 and SMETS2+ entries to be separately identifiable. Included within the consultation were the proposed amendments to the SEC that would enable this tactical solution to be used.

DCC sought views on the proposed tactical solution with the following question: “*Do you have any comments on the tactical solution proposed by DCC to enable the migration of bilingual PPMIDs? Please could you provide detailed comments on the impact to you.*”

Seven respondents responded to this question. Six of the respondents supported the tactical solution.

Four of the six were explicit in their support of the tactical solution. Two of these respondents agreed with the DCC that there would be logistical complications that will flow from the tactical solution. Two respondents were explicit that the tactical solution should be implemented as soon as possible with one of these respondents indicating that they were disappointed at the length of time taken to implement a tactical solution.

The remaining two respondents indicated support for the tactical solution in so far as there was a need to have a solution as soon as possible. One of these respondents emphasised that there could be complications to the supply chain and logistics for Energy Suppliers. One of these respondents also noted that there would be additional complications for Manufacturers since they will have to develop two separate listings.

The seventh did not indicate whether they supported the proposed changes but sought clarity on why DCC is unable to make a judgement on the tactical solution and indicated that Manufacturers load CPL details and that they would be best place to continue to do so.

DCC Response.

DCC notes that there has been general support for the tactical solution.

DCC recognises that some respondents only support a tactical solution as a short -term step and due to the speed with which it can be introduced. DCC also understands the frustration of others that we have not introduced these changes sooner, however, there is a need to adhere to due process for making regulatory changes.

DCC notes the response relating to complications for Manufacturers and has engaged with them on this issue. Ultimately, we consider, in line with the majority of responses, that any additional complications are acceptable for the benefits of the change.

DCC agrees that Manufacturers are best placed to load CPL details and expects Manufacturers to continue to do so. DCC has been engaging with Manufacturers on these proposed changes.

As there has been general support for the tactical solution, DCC concludes that the amendments to the SEC to support the tactical solution should be progressed and is recommending this to the Secretary of State.

3.3. Question 2, 3 and 4 (Bilingual Prepayment Meter Interface Device)

In the consultation, DCC set out that it had assessed the impact of bilingual PPMIDs and considered that an enduring solution would be capable of being delivered to deal with this issue which would remove the need to use the tactical solution in the future. This approach would require both SEC changes and changes to DCC Systems and that if stakeholders supported an enduring solution, DCC could develop the DCC System changes and regulatory changes that

would be required for an enduring process. DCC provided a preliminary cost estimate and a possible date of implementation of November 2022. DCC sought views from industry as to whether an enduring solution should be developed and, if so, what process this should take by asking the following questions:

“Do you consider that an enduring solution should be developed and further consulted upon by the DCC under BEIS transitional governance to enable operation of bilingual PPMIDs on the DCC System?”

“Do you consider that should a Party wish to pursue an enduring solution, it should be raised by them as a Modification Proposal under Section D of the SEC? Please provide details of your preferred outcome.”

“If an enduring solution is developed, do you think it should be done using BEIS transitional governance or a modification proposal under Section D of the SEC and how do you think an enduring approach would be best implemented? Please provide a rationale for your views.”

Seven respondents responded to these questions.

Five respondents supported the implementation of an enduring solution.

One respondent indicated that it did not feel it would benefit from the development of an enduring solution and therefore did not consider it a priority. One respondent was of the view that as the tactical solution would be implemented, an enduring solution was not necessary as the processes and procedures would be in place for the tactical solution which would allow for the operation of bilingual PPMIDs.

Three of the respondents supported the implementation of the enduring solution via the BEIS governance route. Three respondents supported the implementation of an enduring solution via the SEC modification route. One respondent did not express an opinion on which governance route should be followed.

Two respondents indicated that an enduring solution should be implemented as soon as possible. One respondent was of the opinion that an enduring solution should be implemented in the quickest and most cost-effective manner. Three respondents raised concerns about the costs and the need to scrutinise the costs associated with the enduring solution.

DCC Response

DCC notes that there were five respondents that supported the implementation of an enduring solution with another that indicated that it was not a priority but did not oppose the development of an enduring solution. One respondent indicated that due to the costs involved to implement the tactical solution, it did not make sense to then develop an enduring solution.

Based on the responses that have been received, DCC acknowledges that a majority of the respondents support the development of an enduring solution.

There was not, however, clear support for the manner in which an enduring solution should be progressed.

The responses primarily emphasised costs and speed of developing an enduring solution as key factors. In order to balance these two key factors and given the overall support for developing an enduring solution, DCC will raise a SEC modification to progress the enduring solution at the earliest point. DCC will oversee the progress of the modification closely through the process ensuring that industry continue to have an opportunity to influence and shape the solution.

3.4. Question 5 (Bilingual Prepayment Meter Interface Device)

DCC provided proposed regulatory drafting for the tactical solution and sought views with the following question: *“Do you have any comments on the proposed SEC changes? Please provide rationale for your views.”*

Seven respondents responded to this question.

Three respondents agreed with the proposed SEC changes.

A respondent considered that not all of the main body SEC changes are required for the tactical solution. A respondent indicated that there was a typographical error in the definition of Device Model. This respondent further indicated that there were issues with the drafting of Section 18.63(d) and 18.65(e) and the manner in which these clauses are reflected in the embedded DMVES in the amended S1SR. This comment was reiterated by the respondent in its responses to questions 6 and 10.

A respondent sought clarity on how the changes would be made without a SEC modification in terms of Section D.

A respondent did not think that the proposed changes to the main body of the SEC are required for the tactical solution.

DCC Response

DCC acknowledges that the proposed changes to the interpretation being the addition of Section A2.13 are not required for the tactical solution and were included in error. DCC is accordingly not going to submit this change to BEIS for designation.

DCC agrees that the proposed definition of Device Model had a typographical error in that the words “its model” were repeated and has amended this definition accordingly.

The tactical solution creates a situation where the firmware listing in the CPL is different for the SMETS1 and SMETS2+ versions of the PPMID. The current regulations do not provide for the tactical solution where there is a different firmware listing on the CPL and the proposed changes to the main body of the SEC and subsidiary documents make provision for the tactical solution. DCC agrees that the proposed definition of Device Model had a typographical error in that the words “its model” were repeated and has amended this definition accordingly.

The concerns raised in relation to Sections 18.63(d) and 18.65(e) relate to the question on size limitation for firmware. Accordingly, please see the DCC Response to question 6 for further details on these two clauses.

These changes will be made by BEIS designating the changes into the SEC in terms of their powers under Section X of the SEC.

3.5. Question 6 (Size limitation for Firmware)

DUIS does not place any limit on the size of a firmware upgrade image that may be sent to a SMETS1 device. However, all devices will have limits on the amount of storage that is available for a firmware image due to no value being present in the SMETS1 specification, but this will vary from one Device Model to another. As a result, where a firmware image is too large for the Communications Hub, it will not be possible to upgrade the firmware on any device on the HAN. This is an issue that has always been present, which requires a change to the S1SR to make provision for the possibility that firmware upgrades may fail. DCC sought views on this issue with the following question: *“Do you have any comments on the proposed changes to the S1SR? Please provide rationale for your views.”*

Seven respondents responded to this question.

A respondent asked that DCC provide clear feedback on the limitations of all devices.

A respondent indicated that it did not understand why there was an issue relating to the upgrade of firmware on PPMIDs as upgrades were possible prior to enrolment. The respondent considered that DCC should be working with Manufacturers to ensure that this remains possible.

A respondent highlighted issues with Section 18.63(d) and that 18.65(e) is not correctly reflected in DMVES.

A respondent stated that they accept the proposed changes to the S1SR.

Three respondents said that they had no comments on the proposed changes to the S1SR.

DCC Response

This issue arises as a result of what can be described as the interchangeability of devices. Initially, the manner in which SMETS1 Installations were installed was defined in such a way that there were specific combinations of devices that operated with each other. As time has passed, Suppliers have started to interchange PPMIDs. As the Communications Hubs have different size limitations, where an upgrade of the PPMID is attempted, the size limitation on the Communications Hub might impact the ability to upgrade the firmware on the PPMID. This is accordingly an existing issue that is coming to the fore as different PPMIDs are being added to existing installations.

These issues have always been present as a result of the interchangeability of devices as described above. Manufacturers have historically dealt with the impact of the size limitation of the firmware by ensuring that the firmware images are capable of being accepted by the Communications Hub. DCC is working with Manufacturers on the issues of the size limitation of firmware upgrades. The proposed changes address the issue that a firmware upgrade may not be successful due to this issue.

The limitations on Devices that DCC is aware of are set out in the S1SR and DMVES.

The changes to DMVES related to 18.63(d) would have been too complicated to add to the main body of the S1SR. Accordingly, DCC has added new annexes that address these issues, these are the three new annexes which each address different behaviours.

DCC acknowledges that 18.65(e) is not correctly reflected in DMVES. DCC will issue a new version of DMVES and the S1SR to address these issues.

Please note that the issues relating to 18.63(d) and 18.65(e) were raised in responses to other questions. Where these have been raised, DCC has not addressed them directly as they are dealt with here.

3.6. Question 7 (Secure Third-Party PPMIDs)

Secure does not currently hold any details of third-party Devices that are attached to Secure Installations and they are not migrated into the DCC System. Post migration a third-party Device can be added to the DCC Inventory using the relevant SRV commands. The DCC's Secure S1SP solution does not support the upgrade of firmware to third party PPMIDs. DCC sought to establish from Suppliers whether DCC should develop a solution that would allow for the upgrade of firmware to third-party PPMIDs that are attached to Secure Installations. DCC sought views on the following question: ***“Should DCC progress a change to the Secure S1SP to support the upgrade of firmware to third party PPMIDs? If so, would you like it to form part of the November 2022 Release or be done in a shorter timeframe with an increased cost due to testing?”***

Seven respondents provided a response to this question.

Three respondents supported the change and four did not. One of those who opposed the proposal confirmed this after their consultation response following further engagement. Of those that opposed, most cited concerns that this was of limited benefit for the costs involved.

DCC Response.

DCC notes that most respondents were not in support of this change, with only one Supplier providing support.

DCC notes the view that it may only provide benefit to certain Suppliers and potentially in limited circumstances. DCC remains of the opinion that the proposed solution will ultimately be of benefit to all Suppliers as it will allow third party devices that are attached to a Secure Installation to have their firmware upgraded including those that churn.

However, given the lack of support and the costs involved, DCC confirms that it is not justifiable at this time to commit these costs for this change and will not therefore recommend proceeding with this proposed change.

3.7. Question 8 (Secure Third-Party PPMIDs)

DCC proposed changes to the S1SR that any attempt to upgrade the firmware of a third-party PPMID that is attached to a Secure Installation will fail. DCC sought views on changes to the S1SR with the following question: ***“Do you have any comments on the proposed changes to the S1SR? Please provide rationale for your views.”***

Seven respondents responded to this question.

The respondents either agreed with the content of the S1SR or did not have any comments. One respondent sought to understand whether Annex D would be removed if the changes to the Secure S1SP was made to enable firmware upgrades to third party devices.

DCC Response

As there were no objections, DCC will be making the changes to the S1SR as they are required to address the current device specific behaviours until this issue is resolved.

As the solution is not being progressed, there is currently no need to consider any further changes that might be made to Annex D commensurate with a solution change.

3.8. Question 9 (Meta Data Issue)

Different fields from the metadata are required to process firmware upgrades for all Devices joined to Communication Hubs provided by each of the Communications Hub manufacturers. As a result of the extra metadata, when a hash value is generated for a firmware image, the firmware image is locked to a specific Communications Hub manufacturer with the result that the firmware image is unworkable for Communications Hubs provided by other manufacturers. As a result of this, a firmware upgrade of the PPMID will only succeed for one Communications Hub manufacturer and fail for all others. DCC sought views on resolving this issue, asking the following question: ***“Would you like DCC to progress these changes. If so, would you like it to form part of the November 2022 Release or be done in a shorter timeframe with an increased cost due to testing?”***

Two respondents supported this proposal.

One respondent offered no opinion on the proposal as they were not going to be impacted by the change due to the small number of impacted installations.

Four respondents raised concerns about the costs that were related to the proposed changes. Some of these respondents acknowledged the need to make the change but were concerned that the costs do not justify the proposed change. On this basis three respondents did not support the change. One respondent sought an alternative option to resolve this issue.

Respondents also indicated that DCC should have addressed this issue earlier in the process and that these costs would therefore not have arisen.

DCC Response

DCC became aware of this issue once it started to investigate the ability of the DCC Systems to support bilingual PPMIDs. The issue arises due to the interchangeability as set out in the DCC response to Question 7 above, with the proposed changes being required to allow for the interchangeability of devices. These changes will allow for the upgrading of PPMID firmware on PPMIDs irrespective of the device-set to which it is attached.

To enable this functionality, the metadata issue outlined in the consultation document needs to be addressed which requires the meta-data to be supplied via a different route. The proposed solution will create a process across all device-sets.

The interchangeability of devices has not been tested. However, the SMETS1 field has developed to the point that interchangeability of devices is an occurrence that DCC has to contend with and DCC would therefore have to test this to ensure that interchangeable PPMIDs work as part of the DCC System. The proposed costs included the need to do this testing which was not previously done nor required.

DCC is of the view that there are no possible alternative arrangements that could address this issue.

As a result of the lack of support for the change, DCC will not be progressing this change.

3.9. Question 10 (Meta Data Issue)

DCC sought views on the following question on changes to the S1SR as a consequence of the issue outlined in question 9: ***“Do you have any comments on the proposed changes to the S1SR? Please provide rationale for your views.”***

Seven respondents responded to this question.

A respondent indicated that they were not supportive of the proposed changes relating to the meta data issue and therefore could not support the proposed changes to the S1SR.

A respondent sought to understand alternative possibilities.

Two respondents did not comment on the proposed changes.

Two respondents agreed with the changes.

One respondent had a comment on the drafting of Clauses 18.63(d) and 18.65(e) in relation to DMVES.

DCC Response

The proposed changes to the S1SR are due to the inability to upgrade firmware on all PPMIDs as set out in the consultation. The behaviour that the S1SR changes are addressing are existing

behaviours to provide clarification that there is a potential failure when an upgrade to the PPMID is attempted. Question 9 sets out a solution to the Metadata issue which would remove this existing behaviour. The comment relating to Clauses 18.63 and 18.65(e) has been dealt with in question 6 above.

DCC will be making these changes as they are required for the current device specific behaviours.

3.10. Question 11 (Unsupported PPMIDs)

DCC sought views on the following question: *“Do you have any comments on the proposed changes to the S1SR? Please provide rationale for your views.”*

Seven respondents responded to this question.

Six respondents responded to this question stating that they did not have any comments on the proposed changes. One respondent noted a contradiction between the consultation document and the S1SR drafting.

DCC Response

DCC acknowledges that the consultation drafting was incorrect and that the S1SR drafting included with the consultation correctly reflects the proposed wording for the device specific behaviours.

3.11. Question 12 (Designation)

DCC sought views on the designation of the changes to the regulatory framework with following question: *“Do you agree with the proposed re-designation date of 10 September 2021 (or, if necessary, as soon as reasonably practicable within one month thereafter) for the updates to the S1SR CPL Requirements Document and SEC Section A changes using draft notification at Attachment 1?”*

Seven respondents responded to this question.

Six respondents agreed with the proposed designation date. One respondent noted that it was imperative that DCC properly consider the responses. While another considered that DCC should implement the changes as soon as possible. One respondent provided a “no comment” to this question.

DCC Response

DCC has considered the responses to the consultation and is looking to implement the regulatory changes as soon as possible in line with the responses from industry.

4. Conclusions

DCC is of the opinion that it has had appropriate input from Industry on the changes that are proposed in this consultation.

For the reasons set out in Section 3.3 above DCC will be raising a SEC modification proposal to progress a solution that will enable bilingual PPMIDs to operate on the DCC System.

As set out in the consultation response, DCC will not be progressing the proposed changes relating to the capability to support firmware upgrades on Third Party PPMIDs that are used in conjunction with the Secure S1SP solution, or the solution for the Metadata issue.

DCC has, where necessary, addressed the comments that have been received from industry and made changes to the consequential Main Body SEC Changes, S1SR, CPL Requirements Document, and DMVES. DCC does not believe that the views expressed result in fundamental amendments to the consequential Main Body SEC Changes, CPL Requirements Document, S1SR and DMVES, as such, further consultation is neither necessary nor appropriate.

It is DCC's view that it has met its SEC obligations.

The consequential Main Body SEC Changes, CPL Requirements Document, and S1SR revisions are in line with the overall solution design for the SMETS1 Service and other relevant documents.

DCC considers that:

- the consequential Main Body SEC Changes, CPL Requirements Document, and S1SR are defined to a sufficient level of detail for re-designation into the SEC;
- the consequential Main Body SEC Changes, CPL Requirements Document, and S1SR provide an overarching framework which sets out clearly and unambiguously parties' rights and obligations which are consistent and aligned with the rest of the SEC requirements in relation to SMETS1 Services; and
- the consequential Main Body SEC Changes, CPL Requirements Document, and S1SR are materially complete, and the content is technically accurate.
- In summary, DCC considers that the consequential Main Body SEC Changes, CPL Requirements Document, and S1SR are fit for purpose.

5. Next Steps

DCC will submit its conclusions this consultation on regulatory changes related to PPMIDs and CHs on 30 September 2021 and provide an updated version of the consequential Main Body SEC Changes, CPL Requirements Document, and S1SR to the Secretary of State. DCC anticipates that the Secretary of State will re-designate the consequential Main Body SEC Changes, CPL Requirements Document, and S1SR on 05 October 2021.

DCC will raise a SEC modification to progress an enduring solution for bilingual PPMIDs.

6. Attachments

Attachment 1: SEC Appendix AM – SMETS1 Supporting Requirement

Attachment 2: SEC Appendix AM Annex A – Device Model Variations to Equivalent Steps

Attachment 3: Section A – Definitions and Interpretation

Attachment 4: Appendix Z – CPL Requirements Document