

James Cosgrove  
Deputy Director & Head of Delivery  
Department for Energy Security and Net Zero

*By email only*

02 April 2025

Dear Jim,

**RE: DCC's Recommendations following the February 2025 SMETS1 Supporting Requirements<sup>1</sup> (S1SR) consultation**

DCC recently consulted on the below proposed amendment to the S1SR<sup>2</sup>:

1. **SMETS1 Device behaviour**, including corrections to a formatting error that caused mis-alignment between the S1SR and the Device Model Variations to Equivalent Steps Matrix (DMVESM) and Device behaviour that are not yet incorporated into the S1SR, including additions to support Market-wide Half Hourly Settlement; and
2. **SMETS1 Device configuration** changes to require DCC to develop and deploy technical solutions for SMETS1 Devices to resolve issues related to Alert storms and the incorrect return of half hourly data.

DCC received 9 responses to the consultation and on 2<sup>nd</sup> April 2025, DCC published its conclusions. This letter sets out our recommendations on the above stated proposals:

- **SMETS1 Device behaviour** - DCC received four responses to this part of the consultation, all of which supported the proposals, and none of which raised any further points. On this basis DCC recommends to the Secretary of State that DCC's proposed amendments should be implemented, including through their designation into the S1SR. Further details are provided in Appendix A.
- **SMETS1 Device configuration** – DCC received seven responses to this part of the consultation, all but one which supported the proposals. One respondent did not state if they agreed or not with the proposal but noted a concern regarding cost socialisation. DCC considers that the cost of the solution (~£455k), and the benefits it provides, justify this socialisation. On this basis DCC recommends to the Secretary of State that DCC's proposed amendments should be implemented, including through their designation into the S1SR. Further details are provided in Appendix B.

<sup>1</sup> <https://smartenergycodecompany.co.uk/documents/sec-subsidary-documents/sec-appendix-am-annex-a-device-model-variations-to-equivalent-steps-matrix-v12-2/>

<sup>2</sup> [SMETS1 Supporting Requirements | Smart DCC](#)

**Next steps**

The proposed changes to the S1SR regarding Device behaviour will provide clarity to Parties on the functioning and management of the SMETS1 Devices they operate. We recommend that the Secretary of State designate these proposed changes into the S1SR.

The changes to the S1SR regarding L&G SMETS1 ESME Devices will enable DCC to deliver a solution to Alert storms which can negatively impact DCC service provision and allow for a correction to Half Hourly data returns in support of Market-wide Half Hourly Settlement. We recommend that the Secretary of State designate these proposed changes into the S1SR.

We have separately provided copies of the consultation responses received and have also provided an updated version of the S1SR and DMVESM that we consider are appropriate for the Department to designate.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'Arik Dondi'.

Arik Dondi  
**Arik Dondi**  
Head of Regulatory Compliance, DCC

## Appendix A

### DETAIL OF PROPOSED AMENDMENTS TO THE S1SR CONCERNING DEVICE BEHAVIOUR

The S1SR contains clauses that explain SMETS1 Device behaviour where that behaviour does not align to GBCS. The behaviours and their description relate to specific SMETS1 Devices. Annex A 1 of the S1SR is the Device Model Variations to Equivalent Steps Matrix (DMVESM) which identifies the specific SMETS1 Device (or Devices) that each S1SR clause relates to. The proposed changes in this consultation cover both amendments to S1SR clauses and amendments to the DMVESM.

#### S1SR formatting error

DCC has identified a formatting error at clause 18.5 of the S1SR, which we believe was implemented during the change from version 11 to version 12. The error occurred at clause 18.5p where the sub-clauses related to it were assigned their own clause reference (18.5q, 18.5r, etc). These sub-clauses should have been referenced i, ii, and so on.

This formatting error resulted in subsequent clauses being assigned incorrect references, which in turn resulted in a disconnect between the S1SR clauses and the DMVESM. This disconnect has not been reported by Users and we are not aware that this has caused any negative impact. Correcting the error is considered necessary to ensure that the disconnect does not cause any issues or confusion in the future.

We have reviewed the S1SR for similar formatting errors and disconnection with the DMVESM. We have not identified any further errors or disconnects between the S1SR and the DMVESM that require resolving.

We proposed that the clause references are corrected to those in S1SR version 11 to ensure that they align to the DMVESM.

This proposal received support from all consultation respondents.

#### Additional Device behaviour for inclusion in the S1SR

The Device Issues Recommendation Forum (DIRF) is technical group attended by DCC and SEC Parties that considers SMETS1 Devices specific issues, including whether they are suitable for inclusion in the S1SR. Through that engagement the additional meter behaviour has been highlighted that does not align to GBCS and is not yet described in the S1SR

This behaviour is considered suitable for inclusion into the S1SR by DIRF and we proposed to add this device behaviour to the S1SR. We also proposed an addition that related specifically to a solution for the collection of half Hourly data in support of the Market-wide Half Hourly Settlement programme.

We consider that the addition will allow Parties to understand the behaviour of their devices better and manage them more effectively.

The Device behaviour and the S1SR additions related to the following specific SRVs:

- Honeywell ESME SRV 1.1.1 (Update Import Tariff) – specify the day and month

- Secure ESME GSME SRV 2.1 (Update Prepayment Configuration) – prepayment part-penny updates
- Itron ESME SRV 6.8 (Update Device Configuration (Billing Calendar)) – incorrect billing period on PPMI
- Secure ESME SRV 6.12 (Update Device Configuration (Instantaneous Power Threshold)) – power thresholds
- Secure CHF SRV 11.1 (Update Firmware) – firmware updates to CHF
- Secure ESME SRV 4.2 (Read Instantaneous Export Registers) – half hourly data

The consultation responses received supported the proposals.

## **Recommendation**

The proposed changes resolve misalignment between the S1SR and the DMVESM and provide additional information on the behaviour of SMETS1 Devices where that behaviour does not align to expectations, and those set out in GBCS.

The proposed changes will provide clarity to Parties on the behaviour of the Devices they operate and allow them to manage those Devices more efficiently.

Consultation responses provided Parties support for the proposals. DCC consider that the proposed change should be designated into the S1SR as soon as possible.

## Appendix B

### DETAIL OF PROPOSED AMENDMENTS TO THE S1SR CONCERNING DEVICE CONFIGURATION

DCC identified two issues specifically related to L&G SMETS1 ESME Devices and proposed changes to the S1SR that would require their configuration to be amended which would resolve those issues. We have identified two issues and proposed configuration requirements to resolve each one.

Since the proposed changes to meter configuration related to one specific SMETS1 Device (L&G ESME) we first proposed a new definition that would group those Devices into their own category.

#### Generation of unnecessary Alerts

During the British Summer Time (BST) to Greenwich Mean Time (GMT) clock change in October 2023 the volume of unnecessary Alerts generated resulted in a Category 1 incident (INC000001103865). The Incident impacted all ESME and GSME Devices across the FOC and Initial Operating Capacity (IOC) estate due to shared Service Providers. The Incident impact lasted for 19 hours during which time FOC On-Demand success performance reduced to 9% and IOC On-Demand success reduced to 11%. This reduced performance impacted all traffic across the network which could have resulted in failed top-ups and increased customer contacts to Supplier Parties.

Investigations showed that unnecessary Alerts are generated during every change from BST to GMT and vice versa. During each change between BST and GMT each FOC ESME Device generates two alerts. We can therefore expect each change between BST and GMT to result in the generation of at least ~4.6 million Alerts (plus a large volume of retries where they fail due to system demand) over a short time period.

The Alerts generated are non-mandated GBCS Alerts. They are not sent to any DCC User or utilised by the S1SP. Their generation and transmission across the network utilise network capacity but return no benefit to DCC Users. These Alerts generated during changes between BST and GMT result in a significant increase in Demand over a short time-period, but where that demand is not driven by true or useful network traffic.

DCC consider that the best option to fully mitigate the ongoing risk of future incidents related to changes between BST and GMT, and to help reduce regular day-to-day traffic on the network, is to target a solution on the root cause of the issue. DCC proposed that the Alert configuration of FOC ESME Devices be amended so that those Alerts that are not described in GBCS or utilised by the S1SPs are prevented from being sent across the communication network. This change would significantly reduce the network demand seen during changes between BST and GMT by removing the generation of ~4.6 million unused Alerts. It would therefore remove the cause of the Category 1 Incidents seen in the past and the cause of service disruption.

We consider that this change would also reduce demand on the network and improve resilience at other times since these Alerts will not be sent across the network at any point. In addition, the increased capacity delivered to manage the unnecessary HAN Alerts will be retained and improve resilience further. The change will not impact how Parties operate or interact with their FOC Devices since these Alerts are not currently used.

We proposed amendments to define Alerts not mandated in GBCS or utilised by the S1SP, and configuration changes that would result in those Alerts not being sent across the DCC Network.

#### Incorrect return of half hourly data

Following an incident raised by an Energy Supplier in January 2024, it has now been established that all ~2.3 million L&G SMETS1 ESME Devices in the FOC cohort, operated on the DCC network, are not configured in alignment to DUIS requirements, specifically related to half hourly data. This configuration results in incorrect half hourly data being provided from FOC ESME Devices following the issue of SRV 4.8.1 (Read Active Import Profile), 4.8.2 (Read Reactive Import Profile) and 4.8.3 (Read Export Profile). These SRVs return the maximum demand equivalents for half hourly period rather than total import or export values which would be required for half hourly billing and settlement.

The Devices are configured as they were prior to migration to DCC when they were operated through SMSO. Meter configuration was not a requirement of the testing prior to migration. This topic has been discussed at the July 2024 Technical and Business Design Group (TBDG) where an action was taken for DCC to develop and consult on the proposals set out in our consultation.

DCC investigations suggest that all FOC ESME Devices return incorrect data for SRV 4.8.2 and 4.8.3 due to incorrect load profiles on the Devices. For SRV 4.8.1 our investigations show that a subset of FOC ESME Devices provide incorrect data due to incorrect load profiles on the Devices. DCC is unable to identify the individual Devices that this applies to and cannot determine the precise number of Devices impacted.

Parties should consider how they use this data, particularly for billing purposes or half hourly tariffs and may wish to review consumer billing where they have concerns that incorrect half hourly data has been used. In addition, if the data from these meters is used for half hourly settlement those calculations will be incorrect and have potentially negative consequences for Supplier Parties.

We have engaged with the Elexon Market Half Hourly Settlement programme to ensure they are aware of the issue and that below we propose the implementation of a DCC led technical solution, which will help support the realisation of the Programs benefits.

DCC proposed an amendment to the S1SR with the addition of a configuration table detailed in Annex G ii. Where meters are configured in this manner correct data will be returned following the issue of SRV 4.8.1, 4.8.2 and 4.8.3.

#### Implementation of configuration changes

Through discussions at TBDG two options for amending the configuration to resolve the error which returns incorrect data have been identified and the same options can be considered for the non-mandated Alert issue. These are:

- a) Responsible Supplier Parties complete the configuration change for the meters they operate through the use of an SRV to be developed and made available by DCC
- b) DCC completes the configuration change on behalf of Parties via the S1SP, through a tested and controlled rollout across the FOC estate

Discussions at TBDG provided support for a S1SR amendments to require the configuration change and for DCC to implement those changes on behalf of Parties.

A Supplier Party led deployment through a new SRV would require a GBCS and DUIS update which would come at additional cost for Parties, and which may also require alignment to other DUIS updates which could delay deployment. Supplier Parties would need to manage the deployment across the ~2.3 million FOC ESME Devices which may come with additional costs. In addition, Parties would need to consider the complications resulting from customer switches and how best to ensure those Devices are captured, presenting a risk of some Devices not being updated.

We consider that an implementation led by DCC via the S1SP will allow for a managed rollout where Supplier Parties will not need to manage their own deployment, and the complications highlighted above. This approach would not require a DUIS update and so avoids some additional cost, complexity and the need to align deployment to a DUIS update. DCC can complete deployment in a controlled, gradual implementation which will not be complicated by customer switches, reducing the risk that some devices aren't captured by the update.

DCC would attempt to update all FOC ESME Devices to correct the half hourly data error and will monitor and report on progress towards completion.

For both issues DCC would make best efforts to update all FOC ESME Devices, but it should be noted that there may be some instances where an update cannot be made, such as to non-communicating Devices.

Our initial investigation suggests that an eight-month period is required to design, build, test and deploy the solutions. Once more detailed timelines are understood DCC will share those details through the SEC Operations Sub-Committee and ensure they are kept informed on progress and implementation.

Considering the benefits of a DCC managed implementation versus the complexities of a Supplier manage implementation, and TBDGs support for a DCC led implementation for half hourly data correction, we proposed amendments that would require DCC to implement the FOC ESME Device configuration changes.

#### Cost to implement DCC delivered configuration update

The one-off cost estimations for DCC to develop and implement the solutions to reconfigure FOC ESME Devices are provided below, these will be confirmed through a full impact assessment:

- To remove HAN Alerts not mapped in GBCS which are causing incidents during changes between BST and GMT (4.1.2), is estimated to be ~£307K
- To correct the data returned for half hourly data (4.1.3), is estimated to be ~£455K

#### **Recommendation**

The proposed changes would resolve the root cause of Alert storms seen during changes between BST and GMT and reduce the likelihood of future incidents and service disruption.

The proposals would also resolve the issues of incorrect half hourly data return and resolve issues related to customer service, billing and settlement.

Consultation responses provided Parties support for the proposals. One respondent did not comment on the technical aspects of the solution but noted the cost socialisation, DCC consider the costs to be justifiable given the impact the issues can have.

DCC consider that the proposed change should be designated into the S1SR as soon as possible.