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‘MP273 ‘User Demand and Network Traffic Insights’

Modification Report

Version 0.4

13 October 2024



About this document

This document is a draft Modification Report. It currently sets out the background, issue, solution, impacts, costs, implementation approach 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 proposal has been raised by Gav Parrott of the Data Communications Company (DCC).

The Smart Energy Code (SEC) does not place any obligation on DCC Users to provide details of their planned network demand. As a result of this, the DCC does not have visibility of all the anticipated network demand from DCC Users.

This lack of visibility creates a risk that a DCC User could significantly increase network demand with insufficient notification to the DCC, risking the performance of the network and the service experience of all Users.

The Proposer is looking to introduce an obligation for DCC Users to provide insights on their future plans that impact network traffic demand. This change is needed to address new use cases that present increased traffic demands and changes in behaviour by established Users. This will help reduce the risk of unexpected increases, or where insufficient time has been given for DCC Service Providers to be able to scale to meet that demand.

This modification is targeted for implementation in the February 2025 SEC Release.

2. Issue

What are the current arrangements?

Following the implementation of [MP116 'Service Request Forecasting'](#) there are no longer SEC obligations for DCC Users to provide demand assumptions or share details of their future plans with the DCC, however these insights are still requested from DCC Users where possible.

What is the issue?

The DCC has historical data on which to base estimates recognising that until recently, there has been broadly linear growth driven by the Smart Meter roll out and SMETS1 migration. This has changed since 2023, with emerging new Users and new use cases, with far steeper growth in network demand.

The DCC does not currently have visibility from all DCC Users of their future plans and the anticipated network demand this will drive. Quarterly Demand Forecasts in 2024 have shown a high degree of variation and this has put increasing pressure on Service Providers ability to scale in a timely manner with significant associated costs.

Increasing capacity is not an automated process, and the DCC needs to understand and accurately forecast future growth profiles to ensure it continues to scale the capacity of all necessary network components across multiple Service Providers to meet that demand.

The lead-time to increase capacity varies depending on several factors:

- Scale of growth
- Time to implement
- Nature of the changes needed

- Whether they are within the architecture and design of the end-to-end system i.e. there are limitations on how far some solutions can scale

If demand exceeds design constraints of the system, a design change may need to be developed and lead times could be significant.

The DCC has seen new use cases in the last year from Other Users increasing from less than 1% to 8% in December 2023, and more recently Network Operators, whose traffic share is forecasted to increase from 1% in 2023 up to 40% in 2026.

The DCC has a wealth of insight on previous usage, however it is far less predictable for new Users and new use cases. This makes it much more difficult for the DCC to maintain robust assumptions without gaining more insights from DCC Users.

Usage of the DCC network is growing strongly with Communication Hub (CH) numbers forecast to increase by 38% and total monthly Service Requests (SRs) per CH by 130% over the period December 2023 to December 2026. The DCC must also plan appropriately for incremental costs of demand growth to ensure accuracy with its financial business planning.

What impact is this having?

A DCC User could significantly increase network demand with little or no notification to the DCC, risking the performance of the network and the service experience of all Users. There is a risk that DCC Users could experience reduced network performance because of unplanned or significant changes to demand on the network that DCC have not had visibility of in order to scale the network accordingly.

The DCC is seeing large variances in network forecasts from certain User groups from quarter to quarter, and this creates uncertainty for the DCC and Service Providers when capacity scaling. This could result in spending inefficiently. In addition, if network demand is higher than forecast, the performance of the network is at risk and therefore the experience of all DCC Users.

With emerging use cases and a lack of clarity on how they will be used and when, the assumptions DCC has to make in the network in order to produce a quarterly network forecast for its Service Providers becomes less certain. Having accurate and timely user insights will allow DCC to plan ahead with its Service Providers and select the most appropriate method or solution to address a forecast increase in traffic.

Impact on consumers

Any risks to the performance of the network could result in a poor Consumer experience resulting in connectivity issues.

3. Solution

Proposed Solution

The Proposed Solution is to implement a SEC obligation on DCC Users to provide quarterly insights and plans relating to their forecast traffic including new use cases, increased roll out, and innovations. This would incorporate the introduction of a standardised template, expected to be a Microsoft forms template.

The DCC would require users to provide lead-times for increased levels of usage and/or new traffic patterns, with the exception for Users submitting less than 1 million SRVs per month. If significant changes to the initially reported traffic volumes were due to occur (+/- 10%, Users would be required to provide insight into these volumes to the DCC. All SEC Parties would be impacted by this SEC obligation.

4. Impacts

This section summarises the impacts that would arise from the implementation of this modification.

SEC Parties

SEC Party Categories impacted			
✓	Large Suppliers	✓	Small Suppliers
✓	Electricity Network Operators	✓	Gas Network Operators
✓	Other SEC Parties	✓	DCC

Breakdown of Other SEC Party types impacted			
✓	Shared Resource Providers	✓	Meter Installers
✓	Device Manufacturers	✓	Flexibility Providers
✓	DCC Other Users	✓	MAPs/ MAMs

DCC Systems

DCC System changes

This modification has no impact on the DCC System.

DCC System traffic

This modification has no impact on the DCC System.

SEC and subsidiary documents

The following parts of the SEC will be impacted:

- Section H 'DCC Services

Consumers

This modification will have no impact on Consumers.

Other industry Codes

This modification will have no impact on other industry Codes.

Greenhouse gas emissions

This modification will have no impact on greenhouse gas emissions.

5. Costs

DCC costs

There are no DCC System costs to implement this modification.

SECAS costs

The estimated SECAS implementation costs to implement this modification is one day of effort, amounting to approximately £600. This cost will be reassessed when combining this modification in a scheduled SEC Release. The activities needed to be undertaken for this are:

- Updating the SEC and releasing the new version to the industry.

SEC Party costs

Information on SEC Party costs will be collated after the Refinement Consultation closes and responses have been collated.

6. Implementation approach

Recommended implementation approach

SECAS is recommending an implementation date of:

- **27 February 2025** (February 2025 SEC Release) if a decision to approve is received on or before 13 February 2025; or
- **26 June 2025** (June 2025 SEC Release) if a decision to approve is received after 13 February 2025 but on or before 12 June 2025.

As this is a text-only change, the modification can be implemented ten Working Days following decision. Given the current modification timetable, the next possible release this modification can be included in is the February 2025 SEC Release.

7. Assessment of the proposal

Areas for assessment

Why is this modification needed?

Following the implementation of [MP116 'Service Request Forecasting'](#) there are no longer SEC obligations for DCC Users to provide demand assumptions or share details of their future plans with the DCC. Although the DCC has a wealth of insight on previous usage, it is far less predictable for new Users and new use cases. This makes it much more difficult for the DCC to maintain robust assumptions without gaining more insights from DCC Users. The DCC is seeing large variances in network forecasts from certain User groups from quarter to quarter, and this creates uncertainty for the DCC and Service Providers when capacity scaling is needed and to what extent. This could result in spending too early and therefore inefficiently or if network demand is higher than forecast, risking the performance of the network and therefore the experience of all DCC Users.

Sub-Committee input

SECAS has engaged with the Chairs from the Operations Group (OPSG), the Technical Architecture and Business Architecture Sub-Committee (TABASC), the Security Sub-Committee (SSC) and the Smart Metering Key Infrastructure Policy Management Authority (SMKI PMA) to confirm what input is required from these forums. SECAS believes the following Sub-Committees will need to provide the following input to this modification:

Sub-Committee input	
Sub-Committee	Input sought
OPSG	Operational impacts from introducing obligated forecasting
SMDASC	We do not believe this modification will have any SMDA impacts
SMKI PMA	We do not believe this modification will have any SMKI impacts

Sub-Committee input	
SSC	We do not believe that this modification will have any security impacts
TABASC	System impacts from introducing obligated forecasting
TAG	We do not believe this modification will have any TAG impacts

Observations on the issue

Views from the Working Group

Members of the group expressed concerns that the proposed solution may not address the problem as MP116 stated that Users were unable to forecast accurately. It was also suggested that the DCC lack information on a sub-set of Users so an obligation on all Users is not required.

Views from the TABASC

Members suggested that the low volume threshold for Service Requests could be substantially raised and suggested that the DCC review this. Questions were also raised whether (+/-10%) threshold on submissions was also too low and needed to be re-thought.

Views from the Operations Group

Members acknowledged the problem that the DCC lacks insight and information from Users in order to scale the network effectively however they did not feel that the proposed solution was the right one as this approach has already been proven to be ineffective. It was the feeling of some group members that the existing monthly service reviews that the DCC conducts provide sufficient opportunity for engagement and insight.

The Operations Group took an action to raise at Panel the issue of suitable engagement with Other Users and their Users as this was deemed to be the main issues and had also already been highlighted by the Privacy Sub-Committee.

Solution development

Low user thresholds

The TABASC noted the 15,000 SRV per month threshold suggested by the Proposer for Users to submit demand forecasts. They commented that there is a total volume of approximately 2.25 billion SRVs sent per month, adding that the proposed threshold could be increased significantly.

Following a re-assessment by the DCC this threshold has now been increased to 1 million SRVs per month. Based on current data only 23% of Users would be required to complete quarterly submissions under the obligation.

8. Case for change

Views against the General SEC Objectives

Proposer's views

The Proposer believes that this modification will better facilitate SEC Objective (b)¹ as it will enable the DCC to operate more effectively and efficiently in terms of cost management for scaling the network.

Industry views

The Sub-Committees acknowledge the problem but do not believe that the proposed solution is the best approach or that it will deliver the required objective.

Views against the consumer areas

Improved safety and reliability

This modification will be neutral against safety and security for consumers.

Lower bills than would otherwise be the case

This modification will be neutral against this consumer benefit area.

Reduced environmental damage

This modification will be neutral against this consumer benefit area.

Improved quality of service

This modification will have an indirect positive impact against this consumer benefit area as the DCC will have the required insight to be able to scale the network accordingly and ensure that there are no performance risks for Users.

Benefits for society as a whole

This modification will be neutral against this consumer benefit area.

¹ Enable the DCC to operate more effectively and efficiently in terms of cost management for scaling the network.

Appendix 1: Progression timetable

Timetable	
Event/Action	Date
Draft Proposal raised	1 Oct 2024
Present to CSC for initial comment	15 Oct 2024
Modification discussed with TABASC	7 Nov 2024
Modification discussed with OPSG	12 Nov 2024
Refinement Consultation	13 Nov – 4 Dec 2024
<i>CSC approves Modification Report</i>	<i>17 Dec 2024</i>
<i>Modification Report Consultation</i>	<i>18 Dec 2024 – 8 Jan 2025</i>
<i>Change Board Vote</i>	<i>22 Jan 2025</i>

Italics denote planned events that could be subject to change

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
CH	Communication Hub
CSC	Change Sub Committee
DCC	Data Communications Company
OPSG	Operations Group
SEC	Smart Energy Code
SECAS	The Smart Energy Code Administrator and Secretariat
SMDASC	Smart Metering Device Assurance Sub-Committee
SMKI PMA	Smart Metering Key Infrastructure Policy Management Authority
SR	Service Request
SSC	Security Sub-Committee
TABASC	Technical Architecture and Business Architecture Sub-Committee
TAG	Testing Assurance Group