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‘MP273 ‘User Demand and Network Traffic Insights’

Modification Report

Version 0.7

8 April 2025



About this document

This document is a Modification Report. It sets out the background, issue, solution, impacts, costs, implementation approach and progression timetable for this modification, along with any relevant discussions, views and conclusions.

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This document also has one annex:

Annex A contains the full responses received to the Refinement Consultation.

Annex B contains the redlined changes to the Smart Energy Code (SEC) required to deliver the Proposed Solution.

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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 Ad-hoc SEC Release. There are no costs associated with this modification outside that of SECAS implementation costs. This modification is a Self-Governance modification.

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 Smart Metering Equipment Technical Specifications (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 Provider 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 (SR) 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 all DCC Users to provide quarterly insights and plans relating to their forecast traffic including new use cases, increased roll out, and innovations. This is to be done using a standardised Microsoft Forms template. Submission is only required if a User is expected to have a greater than 5% impact on total DCC traffic, or a greater than 10% impact on the total traffic of a particular DCC Communication Service Provider (CSP) (e.g. Arqiva, VMO2, etc). Under these conditions, it would be very rare for a User to have to make a submission due to the large numbers involved. The quarterly submission process outlined above and the applicable thresholds will be specified in the 'Traffic Management Mechanism Document'. Any changes to this document will need to be prepared and consulted upon by the DCC and approved by the Panel. This approach will ensure that only those changes that are likely to impact network capacity requirements are notified to the DCC, allowing the DCC to optimise cost and customer experience, to the benefit of all Users. The DCC will provide visibility of the latest 10% and 5% thresholds on a quarterly basis (presented to OPSG) and will also, on request, provide Users with their latest traffic figures so they can assess the impact of any proposed changes relative to the thresholds. The next step following a notification of a significant demand change would be a bilateral discussion with the particular User (e.g. at a Service Review). Demand insights are to be included as an item on the Agenda for Service Reviews at least once per month or in line with existing frequency.

New Users to the DCC network will need to provide a 12-month traffic forecast which will be reviewed quarterly in Service Reviews with that User.

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

All DCC Users

The Proposed Solution will implement a SEC obligation which will require all DCC Users to provide quarterly insights and plans relating to their forecast traffic including new use cases, increased roll out, and innovations.

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

SEC parties have indicated that they would be likely to incur costs as a result of this Modification these would arise from delays incurred to project work as a result of having to align with quarterly forecast submissions. Other costs mentioned would come from the need to produce new reports and the FTE required to do so sighting potential costs of £100k-200k.

6. Implementation approach

Recommended implementation approach

SECAS is recommending an implementation date of:

- **Ad-hoc SEC Release**

As this is a text-only change, the modification can be implemented one Working Day following decision.

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
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.

When presented with the amended solution 15 January 2025 Working Group unanimously agreed that they felt that it addressed the identified problem, there was also unanimous agreement that new joiners to the DCC should provide traffic forecasts for an initial period.

Views from the TABASC

Members suggested that the low volume threshold for SRV 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.

The DCC have responded to the points raised in the Refinement Consultation and as a result are assessing the proposed solution during December 2024.

The DCC produced an amended proposal that was presented to Working Group 15 January 2025. The new proposal included a total DCC traffic threshold split by DCC and CSP instead of the previous SRV threshold. Other amendments included no requirement to take any action in the result of no significant traffic increases and greater emphasis being placed on bilateral engagement through existing Service Reviews. A new requirement was for New Users joining the DCC to provide traffic forecasts for the first 24 months. The feasibility of this was questioned and it has now been revised to 12 months reviewed in quarterly service reviews.

The DCC have inferred what would happen in the event that a DCC User was to exceed the thresholds stated in the Traffic Management Mechanism Document but it will not form part of the Legal Text. The DCC may exercise the option to throttle traffic in the event that a DCC Users traffic levels are greater than the stated thresholds and likely to impact capacity levels.

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.

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

Refinement Consultation respondents were unanimous in the view that they felt that the proposed solution would not resolve the identified issue, stating a belief that user forecasting had already been proven to be ineffective.

Respondents highlighted that they felt there was already a viable resolution available through the use of the DCC monthly service status meetings. There was also a view that the proposed (+/-10%) threshold on submissions was too low and needed to be re-thought.

Respondents unanimously rejected the notion that MP273 would better facilitate the general SEC objectives and actually felt that it would go against SEC objective (e) facilitate such innovation in the design and operation of Energy Networks (as defined in the DCC Licence) as will best contribute to the delivery of a secure and sustainable Supply of Energy.

Respondents unanimously believed that this Modification should not be approved.

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.

Appendix 1: Progression timetable

Timetable	
Event/Action	Date
Draft Proposal raised	1 Oct 2024
Present to CSC for initial comment	15 Oct 2024

Timetable	
Event/Action	Date
Modification discussed with TABASC	7 Nov 2024
Modification discussed with OPSG	12 Nov 2024
Refinement Consultation	13 Nov – 4 Dec 2024
Second Refinement Consultation	26 Feb 2025 – 19 March 2025
<i>Modification discussed with TABASC</i>	<i>3 April 2025</i>
<i>CSC approves Modification Report</i>	<i>15 April 2025</i>
<i>Modification Report Consultation</i>	<i>21 April 2025 – 5 May 2025</i>
<i>Change Board Vote</i>	<i>28 May 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
CSP	Communication Service Provider
DCC	Data Communications Company
MAMs	Meter Asset Managers
MAPs	Meter Asset Providers
OPSG	Operations Group
SEC	Smart Energy Code
SECAS	The Smart Energy Code Administrator and Secretariat
SMDASC	Smart Metering Device Assurance Sub-Committee
SMETS	Smart Metering Equipment Technical Specifications
SMKI PMA	Smart Metering Key Infrastructure Policy Management Authority
SR	Service Request
SRV	Service Reference Variant
SSC	Security Sub-Committee
TABASC	Technical Architecture and Business Architecture Sub-Committee
TAG	Testing Assurance Group