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MP253

'Traffic Management for Price Cap Update Events – User Actions Required'

Modification Report

Version 1.0

18 September 2024

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Committed to clearer communication
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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 four annexes:

- **Annex A** contains the redlined changes to the Smart Energy Code (SEC) required to deliver the Proposed Solution.
- **Annex B** contains the proposed Code Required Document, the 'Price Cap Instructions Document' (PCID).
- **Annex C** contains the responses received to the first Refinement Consultation.
- **Annex D** contains the responses received to the second Refinement Consultation.

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1. Summary

This proposal was initially raised by Utilita Energy and was then adopted by David Rollason of the Data Communications Company (DCC) on 2 November 2023.

Since October 2022, Ofgem has revised its Energy Price Cap on a quarterly basis. These revisions require Energy Suppliers to adjust their tariffs accordingly, with any changes being effective from the first calendar day of the quarter. These events are required to update the tariffs of all installed Smart Meters and result in high volumes of Service Requests (SRs) being sent by Suppliers across the DCC Total System. This increased traffic peak has caused both major incidents and significant increases in retry volumes and failure rates, which have ultimately resulted in the application of some price changes being delayed for both prepay and credit consumers. The majority of incidents leading to this issue occurred in 2023. There have been fewer incidents and issues that have arisen in 2024, largely due to increased DCC resources attributed to these events, alongside 2024 Price Cap Update Events (PCUEs) regularly taking place on non-working days which has the effect of reducing System traffic.

There are no formal rules or requirements in the SEC on how Users should behave in such high volumes of traffic events. Therefore, there is no standard process for the execution of such industry-wide PCUEs, either within the Supplier community or through DCC systems. The DCC collaborated with Users during the summer of 2023 to agree an approach in relation to PCUEs. The aim was to limit the impact of these events, and therefore User 'guidance' was drafted by the DCC, and endorsed by the SEC Panel, to Users in July 2023. This guidance was not enforceable, meaning the guidance could be ignored or abused.

If delays to the processing of messages continue during a PCUE, consumers could be affected. If tariff or price changes to a Device are delayed, and tariff details are not amended to the correct values, the possibility of a consumer being charged incorrectly for their consumption increases. The DCC would like to place the current 'guidance' issued during a PCUE into a Code Required document called the 'Price Cap Instructions Document' (PCID) and place an obligation on Users to follow the instructions.

This modification would impact Suppliers, the DCC and Other SEC Parties. Costs would be limited to that of Smart Energy Code Administrator and Secretariat (SECAS) implementation costs. Suppliers have noted potential large consequential costs, depending on the specifics of the instructions. This modification is targeted for the November 2024 SEC Release and will be progressed as a Self-Governance Modification.

2. Issue

What are the current arrangements?

Since October 2022, Ofgem has revised its Energy Price Cap on a quarterly basis. These revisions require Energy Suppliers to adjust their tariffs accordingly, with any changes being effective from the first calendar day of the quarter. These events are required to update the tariffs of all installed Smart Meters. These events result in high volumes of SRs being sent by Suppliers across the DCC Total System.

A Supplier may send Service Reference Variant (SRV) 1.2.1 '*UpdatePrice*' to a Device, looking to change aspects such as Tariffs and Standing Charge. Suppliers typically do this in bulk, causing an influx of SRs being sent to the DCC Total System, possibly leading to DCC Total System capacity breaches and queuing of messages when combined alongside the activity of other DCC Users.

The SEC Panel has previously endorsed non-mandatory guidance written by the DCC to Users in anticipation of these events. This guidance has been centred on how to support the DCC manage system traffic during these events with recommendations of 'best practice' when sending system messages. This may include the practice of scheduling requests for the future to help alleviate the stress on the DCC System.

There have been various incidents that have occurred during PCUEs in 2023 relating to performance of SRs. During the January 2023 PCUE the high volume of traffic passing through the DCC System caused 1.6m errors to be returned to DCC Users when trying to process requests. During the July 2023 PCUE, there were two major incidents. Both incidents were caused by higher than anticipated volumes of requests being submitted which resulted in significant delays over several hours.

During the summer of 2023, the DCC worked with Users to agree an approach to limit the impact of PCUEs and issued User guidance. Though there was general agreement on the requirement and the approach, most Users did not follow the agreed process.

System performance during 2023 PCUEs is shown below as part of Table 1:

Cohort	April 2023		July 2023		October 2023	
	Devices targeted	Success rate	Devices targeted	Success rate	Devices targeted	Success rate
Overall Performance	17.2m	91%	19.7m	93%	20.4m	95%
CSP N	2.7m	93%	2.9m	93%	3.1m	93%
CSP C&S	8.5m	95%	9.0m	96%	9.4m	96%
IOC	1.7m	98%	2.0m	97%	2.2m	97%
MOC	2.5m	76%	3.2m	93%	3.0m	98%
FOC	1.7m	78%	2.5m	81%	2.8m	90%

Table 1: Price Cap Update Event Success Rates in April, July, and October 2023

During 2024, there has been significantly fewer incidents and issues occur as a result of a PCUE. The DCC have noted this may be due to PCUEs taking place on non-working days, and more resource being attributed by the DCC to manage the fluctuating system traffic.

System performance during 2024 PCUEs is shown below as part of Diagram 2:

Cohort	January 2024		April 2024		July 2024	
	Devices targeted	Success rate	Devices targeted	Success rate	Devices targeted	Success rate
Overall Performance	21.6	95.8%	20.6m	95.6%	21.3m	95.7%
CSP N	3.3m	93.3%	3.2m	93.3%	3.3m	93.1%
CSP C&S	9.8m	96.1%	9.6m	97.1%	10.0m	97.3%
IOC	2.3m	96.4%	2.0m	95.0%	2.1m	95.5%
MOC	3.2m	98.0%	2.9m	96.1%	3.1m	97.8%
FOC	3.0m	91.(%	2.8m	90.7%	2.8m	91.0%

Table 2: Price Cap Update Event Success Rates in January, April and July 2024

During 2023, PCUE performance averaged at a 93% success rate. During 2024 so far, PCUE performance averaged at a 95.7% success rate, indicating a clear increase in performance success of 2.7% across a larger number of Devices impacted. However, the remaining 4.3% equates to a total of 2.8m Devices that were unsuccessful in their message attempts.

What is the issue?

There are no formal rules, or requirements in the SEC, on how Users should process such high volumes of traffic. Therefore, there is no standard process for the execution of such industry-wide price events, either within the Supplier community or through DCC systems. As such, the mass running of these quarterly price events across the entire Supplier community, focused predominantly on a single day for a six-hour period, has resulted in unpredictable and uneven peak traffic patterns into DCC systems. These behaviours have in turn caused issues in DCC systems and has led to more DCC resource being diverted to PCUEs.

What is the impact this is having?

This increased traffic peak has caused both major incidents and significant increases in retry volumes and failure rates, which have ultimately resulted in the application of some price changes being delayed for both prepay and credit consumers.

When periods of high traffic occur within the DCC System, there is a possibility that Supply impacting SRs could be adversely impacted. Each SR will have an associated Target Response Time (TRT), which is the expected time it will take the DCC process the SR from its original source.

Impact on consumers

Consumers whose Devices are impacted by SRs sent during periods of high traffic within the DCC System could be affected in multiple ways. One example could relate to the tariff or price changes to a Device, as if these details are not amended to the correct values, the possibility of a consumer being charged incorrectly for their consumption increases. Another example could be a DCC User attempting to send a Supply impacting SR, such as SRV 2.2 '*TopUpDevice*', a delay in the SR being processed could lead to the Supply suffering from temporary loss of power.

3. Solution

Proposed Solution

The DCC would like to place the current 'guidance' issued during a PCUE into a Price Cap Instructions Document (PCID) and place an obligation into the SEC on Users to follow provided instructions. Should these instructions require changes in readiness for future PCUEs, the proposed amendments would be consulted upon by DCC before seeking approval from the SEC Panel. If Users were unable to adhere to certain instructions, they must contact the DCC one month in advance of the relevant PCUE to establish alternative instructions.

The redlined changes to deliver the Proposed Solution can be found in Annex A, and the PCID can be found in Annex B.

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

Suppliers would be required to follow DCC instructions during a specified time period, outlined in the PCID, so as to be compliant with the proposed SEC obligation.

This should result in improved DCC Services which would positively impact Users. If fewer messages are passing through the DCC Total System during peak periods, queues are less likely to form, reducing the likelihood of needing to re-submit messages in the event of message failures or timeouts.

DCC Systems

There are no changes required to the DCC Total System as part of this modification. The aim of the Proposed Solution is to circumnavigate the need to buy more expensive infrastructure within the DCC to cope with demand and focus on trafficking SR volumes effectively.

SEC and subsidiary documents

The following parts of the SEC will be impacted:

- Section A ‘Definitions and Interpretations’
- Appendix AB ‘Service Request Processing Document’
- New Code Required Document - Price Cap Instructions Document (PCID)

The changes to the SEC required to deliver the Proposed Solution can be found in Annex A, and the new PCID can be found in Annex B.

Devices

There will be no impact to Device behaviour from this modification.

Consumers

SRs impacting Consumers would be less likely to fail when submitted through the DCC System during a PCUE as a result of decreased traffic volumes. If non-essential SRs are no longer competing for DCC System Capacity, the likelihood of processing success rises, and the need of SR resubmission decreases.

Other industry Codes

There will be no impact on other industry Codes as a result of this modification.

Greenhouse gas emissions

There will be no impact on greenhouse gas emissions as a result of this modification.

5. Costs

DCC costs

There will be no DCC costs as a result of this modification.

SECAS costs

The estimated SECAS implementation cost to implement this as a stand-alone 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

There is the potential for SEC Parties to incur costs as part of the Proposed Solution. The DCC intend to instruct Users to future date some of their SR traffic, which may not be possible for some Users. It is known certain DCC Users utilise Adapters that only allow for on-demand messages to be sent, so these Users would be unable to comply without system development taking place. This is also likely to affect Other Users. One respondent to the first Refinement Consultation (a Large Supplier) identified a potential cost in excess of £1m would be required to meet the requirements of the proposed SEC obligation.

6. Implementation approach

Approved implementation approach

The Change Sub-Committee (CSC) has agreed an implementation date of:

- **7 November 2024** (November 2024 SEC Release) if a decision to approve is received on or before 24 October 2024; or
- **Ad hoc release** (15 Working Days post decision) if a decision to approve is received after 24 October 2024.

Following implementation, DCC Users affected by the PCID would have a period of nine months to ensure their internal processes and systems enable compliancy with instructions outlined in the PCID before the SEC obligation becomes legally binding. Users are encouraged during the initial nine months to endeavour to follow the instructions outlined within the PCID.

7. Assessment of the proposal

Observations on the issue

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), the Testing Advisory Group (TAG), the Smart Meter Device Assurance Sub-Committee (SMDASC), the Privacy Sub-Committee (PSC) 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	Define process for managing Price Control Events and review proposed governance process
PSC	We do not believe this has any privacy impacts
SMDASC	We do not believe this has any Device impacts
SMKI PMA	We do not believe this has any SMKI impacts
SSC	We do not believe this has any security impacts
TABASC	Review impacts to business process and architecture
TAG	We do not believe this has any testing impacts

Solution Development

Code Required Document

During the December 2023 Working Group, the DCC outlined their Proposed Solution to members. The DCC confirmed that to avoid having to raise a SEC modification every time changes are required, they would like to implement a Code Required Document enabling changes to be made outside of the modification process. This document would be owned by the DCC and would be consulted upon and approved by the SEC Panel.

SEC Governance and potential consequences

In November 2023, SECAS held a Webinar for SEC Parties to discuss this modification proposal, and gain perspective in relation to the Proposed Solution. Attendees were generally supportive of the modifications intent but were keen to see the proposed DCC instructions. Attendees also queried two aspects tied to the solution.

One attendee questioned who the DCC will consult with to establish, and then develop instructions for Users. The DCC stated they would present any proposed changes to Users, and following feedback received, would look towards gaining feedback from Sub-Committees such as the OPSG and TABASC. Once the proposed changes are finalised, these would be presented to the SEC Panel for approval, and the proposed Code Required Document, the PCID, would then be updated.

Another member questioned how the obligation within the SEC will be enforced. The SEC currently doesn’t include anything that would penalise a User for ignoring the Proposed Solution. As the

Proposed Solution is non-system impacting, there would be nothing preventing undesired SRs being sent during Price Control Events. The DCC do not intend to introduce consequences for non-compliance as part of this modification. MP224 'SEC Performance Assurance Framework' proposes to implement a Performance Assurance Framework within the SEC to manage SEC obligations. MP253 may eventually be impacted by this framework.

DCC License Obligations

One member of the Working Group questioned if Ofgem were aware of this modification proposal. The member stated that the DCC are obligated to manage DCC Total System traffic at all times. SECAS confirmed Ofgem have been made aware of the modification proposal but had not indicated a stance on the modification proposal to date. The DCC confirmed the intent is to manage high peaks of traffic coming into the System, specifically from PCUEs, without needing to buy more infrastructure for infrequent events. Members of the Working Group were overall supportive of the Proposed Solution.

Change Process Timescales

Members of the Working Group queried how much notice would be given to Users to implement requirements of the DCC instructions. The DCC advised that if Users are unable to meet the instructions within the PCID, they would be required to notify the DCC one month prior to each PCUE to agree alternative instructions until the User is in a position to be compliant with the SEC obligation. One attendee (a Large Supplier) advised it could take up to one year to make the necessary internal system changes required to facilitate the modification.

Implementation Approach

Members of both the TABASC and Working Group highlighted that if MP253 is implemented with an immediate expectation for DCC Users to follow the instructions, this would result in SEC non-compliance. The TABASC did not recommend this course of action as a result. The TABASC advised moving the implementation date either to a later date, or to consider a future implementation clause within the legal text. The DCC therefore made an amendment to the legal text, implementing a nine month future implementation clause.

Legal Text

The Working Group raised concerns in relation to the proposed legal text. It was noted that implementing the modification without a period of ‘preparation’ allowing DCC Users to make the required changes to facilitate the instructions the DCC would be issuing for a PCUE. One attendee (a Large Supplier) advised it could take up to one year to make the necessary internal system changes required to facilitate the modification. Following this feedback, the DCC carried out multiple workshops with the Large Supplier to further understand their concerns. As a result of these discussions, the DCC made amendments to the proposed legal text and PCID, requiring a second Refinement Consultation. The DCC have removed a clause in the proposed legal text indicating SEC Parties affected by the PCID would still be in breach of the SEC obligation despite following a DCC requirement of notifying and agree alternative instructions during a PCUE. Alongside this, the DCC have refined the instructions for Users within the PCID.

Following the August 2024 Working Group, it was identified that if MP253 were to be implemented in November 2024 with an immediate expectation for SEC Parties to follow the obligation, this would result in several SEC Parties becoming non-compliant with the SEC. Working Group members identified this would be unfair on the affected Parties, as no period of time has been allocated to amend internal systems and processes.

As a result of this and feedback from the TABASC, the DCC have inserted a clause into the proposed legal text stating that SEC Parties affected by the Proposed Solution of MP253 would have nine months from the point of implementation before they would be obligated by the SEC to be compliant.

First Refinement Consultation

Feedback was provided relating to concerns the impact this modification could have to internal systems of DCC Users, as well as negative impacts other aspects of industry performance for example 'Guaranteed Standards of Performance' (GSOP). One respondent (a Large Supplier) highlighted a potential cost in excess of £1m to implement changes within their system to facilitate the DCC's future scheduled messaging instructions.

The DCC have subsequently held workshops with Parties who provided some of these comments and have proposed amendments to the legal text and PCID, which led to a second Refinement Consultation prior to returning to the Working Group.

Second Refinement Consultation

The majority of respondents in the second Refinement Consultation believed that MP253 should be approved and implemented. However, one respondent (a Large Supplier) felt that the amendments made to the proposed legal text changes were insufficient to justify the implementation of MP253. The respondent noted performance during 2024 PCUE's has improved steadily since 2023 and felt that obligating DCC Users to comply with instructions was unnecessary.

8. Case for change

Business case

The DCC collaborated with DCC Users during the Summer of 2023 in an attempt to mitigate potential incidents during a PCUE but found that DCC Users have not followed the requested actions. As there is no SEC obligation or mandate in place to enforce these instructions, the DCC System, and potentially consumers, have suffered because of higher-than-expected traffic volumes.

The DCC has specific performance targets to achieve in relation to the processing of SRs, and if traffic volumes exceed the capacity of the DCC System, the likelihood of achieving said targets decreases. The DCC has advised to effectively manage the current high volumes of traffic received during PCUEs without implementing an obligation upon SEC Parties, more DCC System infrastructure would be needed, carrying significant costs and development impacts.

There is the potential for SEC Parties to incur costs as part of the Proposed Solution. The DCC intend to instruct the relevant DCC Users to future date some of their SR traffic, which may not be possible for some DCC Users.

Views against the General SEC Objectives

Proposer's views

The Proposer believes this modification will better facilitate General SEC Objective (a)[1] as it will support efficient operation of Smart Metering Systems by managing DCC Total System traffic and reducing demand. This includes the re-submission of failed or expired messages.

The Proposer also believes this modification will better facilitate General SEC Objective (c)[2] by ensuring tariffs are updated in a timely manner. It therefore helps consumers to better manage their energy use, particularly important Pre-Payment consumers.

Industry views

SECAS received six responses to the initial Refinement Consultation. Three Parties were in favour of implementing the modification, with the remaining three Parties recommending rejection of the modification.

Those in favour of the modification felt that the modification better supported SEC objectives (a) and (c).

SECAS received five responses to the second Refinement Consultation. Four Parties were in favour of the modification, with the remaining respondent recommending rejection of the modification.

Those in favour of the modification felt that the modification better supported SEC objectives (a), (b)[3] and (c).

Views against the consumer areas

Improved safety and reliability

It is expected there will be a neutral impact in relation to improved safety and reliability.

Lower bills than would otherwise be the case

It is expected there will be a neutral impact in relation to the cost of bills.

Reduced environmental damage

It is expected there will be a neutral impact in relation to environmental damage.

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[1] facilitate the efficient provision, installation, and operation, as well as interoperability, of Smart Metering Systems at Energy Consumers' premises within Great Britain

[2] facilitate Energy Consumers' management of their use of electricity and gas through the provision to them of appropriate information by means of Smart Metering Systems

[3] enable the Data Communications Company to comply at all times with the General Objectives of the Data Communications Company (as defined in the Data Communications Company Licence), and to efficiently discharge the other obligations imposed upon it by the Data Communications Company Licence

Improved quality of service

It is expected there will be a positive impact on quality of service. The DCC will be more likely to hit their performance targets during periods of peak demand if DCC Users are able to future date or hold off submitting SRs that are unrelated to PCUEs. This will also allow for messages relating to PCUEs to process swiftly benefitting Users and Consumers alike.

Benefits for society as a whole

It is expected there will be a neutral impact in relation to society as a whole.

Appendix 1: Progression timetable

Timetable	
Event/Action	**Date**
Draft Proposal raised	5 Oct 2023
CSC converts Draft Proposal to Modification Proposal	17 Oct 2023
Modification discussed with SEC Panel	28 Nov 2023
Modification discussed with Working Group	6 Dec 2023
Refinement Consultation	13 Mar 2024 – 2 Apr 2024
Modification discussed with Working Group	3 Apr 2024
Second Refinement Consultation	10 Jul 2024 – 24 Jul 2024
Modification discussed with OPSG	*22 Jul 2024*
Modification discussed with TABASC	1 Aug 2024
Modification discussed with Working Group	7 Aug 2024
Modification Report approved by CSC	17 Sep 2024
Modification Report Consultation	18 Sep – 9 Oct 2024
Change Board Vote	23 Oct 2024

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**
CSC	Change Sub-Committee
CSP	Communication Service Provider
DCC	Data Communications Company

Glossary	
Acronym	**Full term**
FOC	Full Operating Capability
GSOP	Guaranteed Standards of Performance
IOC	Initial Operating Capability
MAM	Meter Asset Manufacturer
MAP	Meter Asset Provider
MOC	Middle Operating Capability
OPSG	Operations Group
PCID	Price Cap Instructions Document
PCUE	Price Cap Update Event
PSC	Privacy Sub-Committee
SEC	Smart Energy Code
SECAS	Smart Energy Code Administrator and Secretariat
SMDASC	Smart Meter Device Assurance Sub-Committee
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 Advisory Group
TRT	Target Response Time