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DP208 ‘Northbound Prioritisation of N56 Alerts’

Modification Report

Version 0.1

9 June 2022

Corporate member of
Plain English Campaign
Committed to clearer
communication

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About this document

This document is a draft Modification Report. It currently sets out the background, issue 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 Emslie Law from OVO Energy.

When a consumer requests a Prepayment top up at a shop, the request is sent via the Responsible Supplier to the Data Communications Company (DCC). The DCC responds by sending an N56 Alert, which contains the Unique Transaction Reference Number (UTRN) required to process the consumer's payment. Simultaneously, the consumer's funds are 'held' by the Payment Service Provider (PSP), ready to transfer to the Supplier's bank account.

If the UTRN is not returned to the shop within 30 seconds of the initial request, the transaction will time out. When the consumer sees that their transaction has failed, they will likely make further attempts to request a top up, resulting in further funds being held by the PSP and thereby making them unavailable for use by the consumer until such time as the PSP refunds them. This can take between three to ten days.

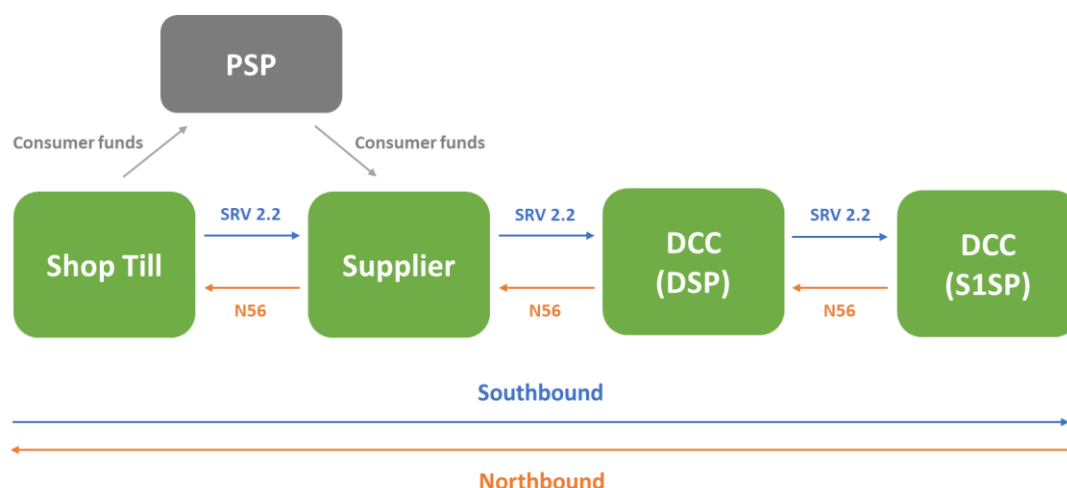
The DCC is aware that while the majority of Prepayment top up requests are processed and N56 Alerts returned to the Supplier within the necessary timeframe of 16 seconds, there are instances where this part of the process is taking too long. The Proposer seeks to introduce a method of prioritising N56 Alerts within the DCC System to ensure that they are returned with enough time for the other parts of the process to be completed before the 30 second time limit, thereby preventing consumer funds from being withheld.

This modification will be DCC System-impacting and is expected to be progressed as a Self-Governance Modification.

2. Issue

What are the current arrangements?

When a consumer attempts to purchase a Prepayment Meter top up from a shop, the process follows the below pathway:



When Service Reference Variant (SRV) 2.2 'Top Up Device' is generated, the PSP, which is not a Smart Energy Code (SEC) Party, 'holds' the consumer funds in preparation to transfer to the Supplier's bank account. The N56 Alert contains the UTRN. Receipt of the UTRN by the shop till is the endpoint of the process and allows the PSP to transfer the consumer funds to the Supplier's bank account. If the entire process is not completed within 30 seconds, the transaction times out. The top up will not be successful and the funds used by the consumer in the attempt will be released back to the consumer by the PSP. However, this release may take several days to clear.

What is the issue?

SEC Appendix E 'DCC User Interface Services Schedule' gives the Target Response Time (TRT) for SRV 2.2 'Top Up Device' as 16 seconds. If this TRT is met for the part of the process which takes place within the DCC System, the overall process should be completed within the 30 seconds necessary to succeed. However, this is only an indicative time and there is currently no mechanism within the DCC System to ensure that SRV 2.2 is processed and the N56 Alert returned to the Supplier ahead of other, less urgent, system messages.

What is the impact this is having?

The Proposer has encountered instances where the process is failing to complete in the necessary timescales. The DCC has found that while the majority of SRV 2.2 messages it receives result in the N56 Alert being sent to the Supplier within the 16 second TRT, there are instances where this stage of the process (which takes place within the DCC System) is taking longer than it should due to system constraints.

As the UTRN is not returned to the Supplier via the N56 Alert, the PSP is unable to release the consumer funds and the Supplier is unable to vend to the consumer. This issue could potentially affect any Prepayment consumer attempting top ups at a shop, and any Supplier to Prepayment consumers.

Impact on consumers

When the SRV 2.2 is generated, the PSP 'holds' the consumer's funds in preparation to send to the Supplier's bank account. If the top up is not successful, the funds are still in a 'locked' state within the consumer's bank account, meaning they have no access to this money until the PSP releases it. As this can take several days to be processed, the consumer is not only unable to access their own money but have also not succeeded in topping up the energy allowance on their Prepayment Meter. The consumer will likely re-attempt the top up, meaning more money leaves their account.

Prepayment consumers are statistically more likely to be those on low or unreliable incomes. In April 2022, Citizens Advice Bureau stated that approximately 1,300 people were going without Prepayment supply that month, up from 162 people in April 2021¹. In May 2022, the Chief Executive Officer (CEO) of E.ON estimated that by October of the same year as many as 40% of E.ON's eight million customers could descend into 'fuel poverty'², meaning that over 10% of their income would be spent on energy bills. For energy consumers at risk of fuel poverty, a failed Prepayment top up attempt

¹ <https://www.bbc.co.uk/news/business-61270970>

² <https://www.bloomberg.com/news/articles/2022-05-22/fuel-poverty-looms-for-many-as-uk-wavers-on-windfall-tax-plan>

which results in funds being withheld for several days could have enormous consequences on their ability to make ends meet.

3. Assessment of the proposal

Areas for assessment

As part of the solution for [MP162 'SEC changes required to deliver MHHS'](#), the Technical Architecture and Business Architecture Sub-Committee (TABASC) had requested the DCC demonstrate how it could prevent the additional system traffic incurred by the market-wide half hourly settlement (MHHS) changes from disrupting business-as-usual (BAU) system traffic. SECAS will engage with the DCC and the Proposer to assess whether the part of the solution to MP162 which relates to a Northbound traffic 'buffering' mechanism may provide a logical basis to address the issue this modification seeks to resolve.

The DCC noted that Suppliers can send different Command Variants of SRV 2.2:

1. Request UTRN only;
2. Send Top Up to Device only;
3. Request UTRN and Send Top Up to Device.

A Supplier may be able to bypass the identified issue by using different Command Variants. For example, if Command Variant 2 is used, credit will be applied to the Device and the Supplier would need to subsequently retrieve funds from the consumer. SECAS will discuss this with the Proposer and seek industry views on whether this could provide a workaround to the issue, and whether this method would have negative consequences of its own.

Further views on the necessary areas for assessment will be captured following discussions with the Change Sub-Committee (CSC) and the Sub-Committee Chairs.

Sub-Committee input

SECAS will engage with the Chairs from the Operations Group (OPSG), the 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	Whether the benefits of the modification could be better delivered by changes to the DCC or Supplier processes, without the need for a technical solution.
SMKI PMA	No input required.
SSC	Whether introducing prioritisation of the relevant system messages has any security implications.
TABASC	The potential challenges to changing the technical architecture of the Prepayment top up process.

Observations on the issue

During initial discussions of the issue, SECAS queried whether this could be resolved without the need for a SEC modification, either by changes to Supplier and PSP processes or by lengthening the time-out limit on the transaction. The Proposer advised that they had engaged the PSP in discussions to this end, but that as the transaction timeframe is applied to all financial transactions, not just those pertaining to the energy industry, any changes were unfeasible.

SECAS suggested that in the event that the transaction times out, the PSP could send notification to the Supplier so that credit can be applied to the meter and the consumer funds taken at a later date. The Proposer advised that the PSP would not be able to complete this process without receipt of the UTRN, so it would not address this issue.

Appendix 1: Progression timetable

SECAS will present the Draft Proposal to the CSC on 21 June 2022 and request that it be approved for conversion to a Modification Proposal and progressed to the Refinement Process. It is SECAS's view that this modification should be treated as a high priority, due to the fact this is a known issue with disproportionate impact on vulnerable consumers.

Timetable	
Event/Action	Date
Draft Proposal raised	9 Jun 2022
Business requirements developed with Proposer and DCC	13 Jun 2022
Presented to CSC for initial comment	21 Jun 2022
CSC converts Draft Proposal to Modification Proposal	21 Jun 2022
Modification developed further with Proposer and DCC	Late Jun – early Jul 2022
Business requirements discussed with OPSG	12 Jul 2022
Business requirements discussed with Working Group	3 Aug 2022
Business requirements discussed with TABASC	4 Aug 2022
Preliminary Assessment requested	8 Aug 2022
Preliminary Assessment returned	26 Aug 2022
Update provided to CSC	20 Sep 2022

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
BAU	Business as usual
CEO	Chief Executive Officer
CSC	Change Sub-Committee
DCC	Data Communications Company
MHHS	Market-wide half hourly settlement
OPSG	Operations Group
PSP	Payment Service Provider
SEC	Smart Energy Code
SECAS	Smart Energy Code Administrator and Secretariat
SMKI PMA	Smart Metering Key Infrastructure Policy Management Authority
SRV	Service Reference Variant
SSC	Security Sub-Committee
TABASC	Technical Architecture and Business Architecture Sub-Committee
TRT	Target Response Time
UTRN	Unique Transaction Reference Number