

Consultation

Consultation on proposed changes to the Power Outage & Power Restoration Alerts Delivery Management Document

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1. Introduction and Context

1. The Data Communications Company (DCC) is Britain's digital energy spine, supporting the transformation of the energy system. DCC is licensed by the Government and regulated by the energy regulator Ofgem to connect smart meters in homes and small businesses across Great Britain to a single secure, digital network. DCC supports the roll-out and operation of second-generation (SMETS2) smart meters, as well as the migration and operation of existing first-generation (SMETS1) meters onto the network.

1.1. Background

2. SEC MP096¹ was implemented in October 2022 and included the implementation of the Power Outage and Power Restoration Alerts Delivery Management Document (DMD). The modification also included the introduction of Code Performance Measure (CPM) 3a to report on Power Outage Alerts (AD1) and Performance Indicators (PIs) on and Power Restoration Alerts (8F35 / 8F36).
3. The DMD describes how DCC will manage the delivery of AD1, and 8F35/8F36 and includes the methodology by which DCC will report on their performance against Target Response Times (TRTs). The DMD requires that 95% of all delivered alerts are within the agreed Target Response Time (TRT).
4. SEC H3.14B requires DCC to review the DMD on an annual basis and consult with Parties on any proposed changes. It also requires that Network Parties views are considered before any proposals on amendments are consulted on more widely. Any changes to the DMD require SEC Panel approval before implementation.
5. DCC began reporting on CPM 3a and the PIs related to PO and PR Alerts in April 2023 and have reviewed the performance achieved to date, as well as considering the management and reporting of Alert performance.
6. In summer 2023 DCC engaged with Network Parties to consider potential amendments to the DMD and issued Network Parties a pre-consultation proposal document in October 2023.
7. DCC is now consulting with all Parties to formally describe the proposed changes to the DMD and gather wider feedback before presenting to SEC Panel to request approval for any changes.
8. The closure date of this consultation is 8th December.

2. Review of 2022 – 2023 Performance.

9. Performance of the relevant measures is presented in the tables below. Presented are the measures as calculated as described in the DMD and where devices impacted by clock drift have been removed.

2.1. Second or Third Generation Cellular Technology Performance Review

¹ Modification » (smartenergycodecompany.co.uk)

10. Second or third generation (2G/3G) cellular technology is the technology used in the Communication Service Provider (CSP) Central and South (C&S) Regions.
11. The following data provides the calculated performance for AD1, 8F35 and 8F36 for a CSP system predominantly deploying second or third generation cellular technology. The data was calculated as described in the DMD, including the exclusions reasons detailed in Section 3 of the same document.

2.1.1. Power Outage Alerts – AD1 Alerts Performance

12. The following table provides the performance reported against CPM 3a on the delivery of AD1. The TRT, as described in the DMD, is set at 491 seconds and the minimum service level target is that 95% of AD1 Alerts should be processed within that timeframe. The target has not been met in any of the reported months.

CSPCS AD1	Month	Percentage of alerts delivered within the target SLA	Percentage of alerts delivered within the target SLA (with Time Clock Drift excluded)
M1	Jul-22	92.7%	92.4%
M2	Aug-22	92.6%	92.4%
M3	Sep-22	93.2%	92.9%
M4	Oct-22	93.3%	93.1%
M5	Nov-22	93.4%	92.9%
M6	Dec-22	92.9%	92.3%
M7	Jan-23	93.0%	92.3%
M8	Feb-23	92.0%	91.6%
M9	Mar-23	90.1%	89.4%
M10	Apr-23	89.0%	88.0%
M11	May-23	90.8%	89.7%
M12	Jun-23	93.6%	93.0%
M13	Jul-23	92.5%	91.4%
Target SLA		491 Seconds	

13. DCC consider that the failure to meet the target is driven by the behaviour of one type of Communications Hub (CH) variant. When the performance of this CH variant is removed from the data the TRT is met 95% of the time. An internal DCC Problem has been raised to begin investigation of the issues related to this CH variant.

2.1.2. Power Restoration Alerts – 8F35/8F36 Alert

14. The following table provides the performance reported against Performance Indicators reporting on the delivery of 8F35 and 8F36 alerts. The target TRT for these alerts, as described in the DMD, is set at 90 seconds and the minimum service level target is that 95% of 8F35/8F36 Alerts should be processed within that timeframe. The target has not been met in any of the reported months.

CSPCS 8F35-36	Month	Percentage of alerts delivered within the target SLA	Percentage of alerts delivered within the target SLA (with Time Clock Drift excluded)
M1	Jul-22	90.6%	89.6%

M2	Aug-22	90.1%	90.2%
M3	Sep-22	91.8%	92.1%
M4	Oct-22	90.2%	90.2%
M5	Nov-22	88.4%	90.3%
M6	Dec-22	89.0%	90.8%
M7	Jan-23	88.5%	90.7%
M8	Feb-23	89.5%	91.0%
M9	Mar-23	86.8%	88.5%
M10	Apr-23	88.5%	90.2%
M11	May-23	87.0%	89.1%
M12	Jun-23	82.1%	84.8%
M13	Jul-23	84.8%	87.2%
Target SLA		90 Seconds	

15. There are significant differences in the performance of this measure between meter manufactures. The cause of the different performance levels between manufacturers is unknown and remains under investigation. The same manufactures are seen to impact the performance across different regions.
16. Some meter manufactures consistently meet the TRT while others consistently fail to meet the TRT.

2.2. Long-Range Radio Technology Performance Review

17. Long-range radio technology is the technology used in the Communication Service Provider (CSP) North (N) Region.
18. The following data provides the calculated performance for AD1, 8F35 and 8F36 for a CSP system predominantly deploying long-range radio technology. The data was calculated as described in the DMD, including the exclusions reasons detailed in Section 3 of the same document.

2.2.1. Power Outage Alerts – AD1 Alerts

19. The following table provides the performance reported against CPM 3a on the delivery of AD1. The TRT, as described in the DMD, is set at 425 seconds and the minimum service level target is that 95% of AD1 Alerts should be processed within that timeframe. The target has been met in most months unless the data impacted by clock drift has been removed where the target has not been met.

CSPN AD1	Month	Percentage of alerts delivered within the target SLA (with Time Clock Drift devices)	Percentage of alerts delivered within the target SLA (with Time Clock Drift excluded)
M1	Jul-22	95.6%	92.4%
M2	Aug-22	97.7%	92.4%
M3	Sep-22	97.4%	92.9%
M4	Oct-22	96.9%	93.1%
M5	Nov-22	96.2%	92.9%

M6	Dec-22	98.0%	92.3%
M7	Jan-23	94.6%	92.3%
M8	Feb-23	95.6%	91.6%
M9	Mar-23	97.7%	89.4%
M10	Apr-23	96.6%	88.0%
M11	May-23	97.6%	89.7%
M12	Jun-23	96.9%	93.0%
M13	Jul-23	96.6%	91.4%
Target SLA		425 Seconds	

20. The TRT has been achieved in the vast majority of reporting months, only failing to meet the target on one occasion.

2.2.2. Power Restoration Alerts – 8F35/8F36 Alert

21. The following table provides the performance reported against Performance Indicators reporting on the delivery of 8F35 and 8F36 alerts. The target TRT for these alerts, as described in the DMD, is set at 344 seconds and the minimum service level target is that 95% of 8F35/8F36 Alerts should be processed within that timeframe. The target has not been met in any of the reported months.

CSPN 8F35-36	Month	Time of the 95th Centile in Seconds (with Time Clock Drift devices)	Time of the 95th Centile in Seconds (with Time Clock Drift excluded)
M1	Jul-22	93.9%	93.7%
M2	Aug-22	94.3%	94.2%
M3	Sep-22	94.8%	94.9%
M4	Oct-22	92.9%	93.0%
M5	Nov-22	93.4%	93.8%
M6	Dec-22	94.0%	94.4%
M7	Jan-23	93.2%	93.5%
M8	Feb-23	89.2%	89.5%
M9	Mar-23	93.2%	93.5%
M10	Apr-23	93.0%	93.2%
M11	May-23	93.0%	93.3%
M12	Jun-23	91.3%	91.6%
M13	Jul-23	92.8%	93.2%
Target SLA		344 Seconds	

22. There are significant differences in performance of this measure between meter manufactures. The cause of the different performance levels between manufacturers is unknown and remains under investigation. The same manufactures are seen to impact the performance across different regions.

23. Some meter manufactures consistently meet the TRT while others consistently fail to meet the TRT.

24. In the above table of performance February 2023 was impacted by significant BCDR Testing activity and hence the increased time period for that months performance.

2.3. Ongoing investigation

25. The picture of performance across the CPM and Performance Indicator is complex. Differences in the Wide Area Network technology can impact the performance achieved, as too can the CH and meter.
26. DCC is investigating the differences in performance to better understand where issues arise and where improvements might be made. As such DCC is not proposing any amendments to the TRT at this time.

3. Data Exclusion

3.1. Current exclusions

27. The DMD provides for the exclusion of data where that data may result in an inaccurate calculation of real-world performance. The details of the exclusions can be found in the DMD published alongside this document, they include large power outages; ESME/CH generated abnormal volumes; duplicate alerts; and undelivered alerts during periods of maintenance. DCC considers that there is no evidence for the removal of these exclusions and does not propose any amendment.

3.2. Time clock drift

28. Time clock drift occurs when the meter and the CH clock no longer align to the actual current time and can impact the calculated performance of the CPM and Performance Indicator. The greater the drift between the device clock and the actual time results in an increasingly inaccurate calculation. Clock drift was not included in the original list of exclusions since it was considered that the issue would soon be resolved, that has not proven to be the case.
29. While work is ongoing to investigate and improve time clock drift impacted devices, this paper does not investigate the cause and resolution of time clock drift.
30. Time clock drift impacted installations differ in volume over time as meters and CHs become unaligned and where Supplier Parties take action to realign the two, often over a short period where high numbers of installations are corrected. At the beginning of October Time clock drift in Supplier portfolios ranged from less than 1% of installations up to 23% of installations.
31. The difference in WAN solution across CSPs may also impact the prevalence of clock drift since the CSPN solution allows for, and requires, the CH clock to be updated on a regular basis where the CSPC&S does not. At the beginning of October round 14% of installations were impacted by time clock drift in each CSP.
32. The current methodology requires that time clock drift installations be included in the calculation of the CPM and Performance Indicator. However, in May 2023 SEC Operations Sub-Committee support the removal of the data so that more accurate reporting was produced which would allow for improved knowledge of real world performance.
33. The tables above show calculated data where time clock drift impacted installations are included in the calculation and where they are excluded from the calculation. DCC consider that excluding time clock drift impacted installations results in improved accuracy

of reporting and that the exclusion should be formalised with the details of the table below added to the DMD.

Type	Definition	Impact	Rationale
Time Clock Drift	Where the timing on the CH and/or Meter is out of sync with the actual current time.	Both technology types. Both Alert types.	CH or Meters which are impacted by Time Clock Drift report a false generation time which makes the alert data untrustworthy. This could have the effect of either showing better or worse performance depending on the direction of the time stamp drift. DCC and its customers are therefore unable to trust the timestamp within the alert and due to this metric being a timebound measure, it is proposed that devices impacted by time clock drift are added to the exclusions list.

4. Consultation questions

Question one

Do you agree with the proposal to formally add time clock drift to the list of accepted exclusions when calculating performance under the DMD? Please provide a rationale for your response.

5. Next Steps

34. These are the next steps following the consultation closure on 8th December.
35. DCC will review consultation feedback and engage with SEC Operations on the proposal to gather additional views. The proposal and Party feedback will be provided to SEC Panel to request their approval for any changes.

6. How to respond

36. Please provide responses by 17:00 on 8th December to DCC at:
consultations@smartdcc.co.uk
37. Consultation responses may be published on our website www.smartdcc.co.uk. Please state clearly in writing whether you want all or any part, of your consultation response to be treated as confidential. It would be helpful if you could explain to us why you regard the information you have provided as confidential. Please note that responses in their entirety (including any text marked confidential) may be made available to the Department of Business, Energy and Industrial Strategy (BEIS) and the Gas and Electricity Markets Authority (the Authority). Information provided to BEIS or the Authority, including personal information, may be subject to publication or disclosure in accordance with the access to information legislation (primarily the Freedom of Information Act 2000, the Data Protection Act 2018 and the Environmental Information Regulations 2004). If BEIS or the Authority receive a request for disclosure of the information we/they will take full account of your explanation (to the extent provided to them), but we/they cannot give an assurance that confidentiality can be maintained in all circumstances. An automatic

confidentiality disclaimer generated by your IT system will not, of itself, be regarded by us as a confidentiality request.