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# MP102A 'Power Outage Alerts triggered by an OTA firmware upgrade'

# Annex C

# Refinement Consultation responses

## About this document

This document contains the full non-confidential collated responses received to the MP102A Refinement Consultation.

## Question 1: Do you agree with the solution put forward?

| Question 1 | | | |
|---|---|---|---|
| **Respondent** | **Category** | **Response** | **Rationale** |
| **Western Power Distribution** | Networks Party | Yes | The proposed solution appears to meet the business requirement by providing clarity for future Devices to ensure that spurious Power Outage Events are not created and notified to Users. |
| **Electricity North West Limited** | Networks Party | Yes | Experience has shown that when electricity Suppliers implement an Over the Air (OTA) firmware update on some Electricity Smart Metering Equipment (ESMEs) it generates a Power Outage Alert (POA). This is because when some ESMEs activate a new firmware version it results in an interruption of the power supply to the Communications Hub (CH) (power to the CH is supplied by the ESME). If the power supply for the CH is interrupted for more than three minutes, then the CH must send a POA (the AD1 Alert).<br>By virtue of Licence Regulations DNOs have a responsibility to their customers to investigate the root cause of the Power Outage Event. This causes increased costs for the DNO and can result in poor customer service feedback as the customer has not actually lost mains power at any point and any contact from the DNO is both unnecessary and confusing for the customer.<br>By making it an explicit requirement that an OTA firmware upgrade does not trigger a POA then it will reduce numbers of false alerts, improve data quality and improve customer service by allowing network operators to act upon reliable outage information and take action to correct genuine loss of power supply to customer properties. |
| **Scottish and Southern Electricity Networks** | Networks Party | Yes | SSEN believe the proposed solution of amending SEC sections to apply obligations against devices, will ensure future Devices do not generate outage alerts resulted from an OTA. |

| Question 1 | | | |
|---|---|---|---|
| **Respondent** | **Category** | **Response** | **Rationale** |
| **E.ON** | Large Supplier | Yes | The solution shall ensure ESMEs do not drop DC power to the Comms Hub for more than three minutes during a firmware OTA and therefore the AD1 will not be generated. SECAS should note our comments on the legal text. |
| **Northern Powergrid** | Networks Party | Yes | The solution will reduce the volume of Power Outage Alerts that are not related to supply interruptions arising from an outage of the Electricity Distributor's assets, which will enable the Electricity Distributor to offer better customer service and minimise abortive visits to customers' premises. |
| **Kaifa Technology UK Ltd** | Other SEC Party | No | We have already mitigated for this issue. |
| **Scottish Power** | Large Supplier | No | The business requirement is straightforward and we agree that an AD1 Power Outage Alert should never be generated as a result of a Device OTA. However, the solution as proposed is focussed entirely on the ESME and GSME without any reference to the potential for erroneous behaviour from either the Comms Hub or the CSP backend systems:<br>(1) The ESME will, depending on manufacture, have either no power variation on Device OTA <u>or</u> a one-minute outage while it reboots on the new firmware. An ESME reboot of one minute should not generate an AD1 alert, so cannot properly be fixed by a SMETS2 change. We have been informed by affected Manufacturers that to have no power variation on the firmware activation would require a fundamental hardware and firmware redesign, with potentially long lead times.<br>(2) It has been observed that an ESME reboot of one minute can cause the Comms Hub to reboot. This should not generate an AD1 as the Comms Hub power is not out for more than three minutes. If the Comms Hub is out for more than three minutes as a result of a one-minute outage on an ESME, this needs to be addressed through a change in CHTS not SMETS2. It could be argued that the |

| Question 1 | | | |
|---|---|---|---|
| **Respondent** | **Category** | **Response** | **Rationale** |
| | | | Comms Hub should not reboot at all for power fluctuations of less than three minutes, but that again needs to be addressed through CHTS.<br>(3) If the Comms Hub is out for less than three minutes, then the CSP backend systems should not generate an AD1 alert. In the past this was not the case and the CSPs have been working on improving this behaviour. If a Comms Hub outage of less than three minutes causes the CSP backend to generate an AD1 alert, that needs to be addressed as a CSP defect and not a SMETS2 change.<br>In summary the proposed SMETS2 change requires ESME and GSME Manufacturers to assume responsibility for something that might actually arise from the erroneous behaviour of the Comms Hub and/or CSP backend systems. |

## Question 2: Will there be any impact on your organisation to implement MP102A?

| Question 2 | | | |
|---|---|---|---|
| **Respondent** | **Category** | **Response** | **Rationale** |
| **Western Power Distribution** | Networks Party | Yes | As a Network Operator we are currently witnessing a lot of problems with Power Outage Alerts being generated on an OTA. This can result in us spending unnecessary time and resource investigating these events, and even dispatching engineers to site, as we have no knowledge that they have been generated by an OTA. This modification will ensure that this problem stops going forward as new Devices are built. |
| **Electricity North West Limited** | Networks Party | No | MP102A will impact Device Manufacturers and Suppliers who have the responsibility to procure compliant Devices. There is no implementation impact to ourselves but the change will result in higher data quality, less false alerts and improved customer service. |
| **Scottish and Southern Electricity Networks** | Networks Party | No | No comment. |
| **E.ON** | Large Supplier | No | Device impacting change. |
| **Northern Powergrid** | Networks Party | No | No comment. |
| **Kaifa Technology UK Ltd** | Other SEC Party | No | We have already mitigated for this issue. |
| **Scottish Power** | Large Supplier | No | No comment. |

## Question 3: Will your organisation incur any costs in implementing MP102A?

| Question 3 | | | |
|---|---|---|---|
| **Respondent** | **Category** | **Response** | **Rationale** |
| **Western Power Distribution** | Networks Party | No | No comment. |
| **Electricity North West Limited** | Networks Party | No | There is no implementation impact to ourselves but the change will result in higher data quality, less false alerts and improved customer service. |
| **Scottish and Southern Electricity Networks** | Networks Party | No | No comment. |
| **E.ON** | Large Supplier | No | No Supplier system changes required so no costs will be incurred by us. |
| **Northern Powergrid** | Networks Party | No | Implementation of MP102A should reduce Electricity Distributors' costs. |
| **Kaifa Technology UK Ltd** | Other SEC Party | No | We have already mitigated for this issue. |
| **Scottish Power** | Large Supplier | No | No comment. |

## Question 4: Do you believe that MP102A would better facilitate the General SEC Objectives?

| Question 4 | | | |
|---|---|---|---|
| **Respondent** | **Category** | **Response** | **Rationale** |
| **Western Power Distribution** | Networks Party | Yes | We believe that this modification better facilitates SEC Objective (a) by ensuring efficient operation of the Smart Metering Systems at Energy Consumer's premises. |
| **Electricity North West Limited** | Networks Party | Yes | The proposal supports the first General SEC Objective to facilitate the efficient provision, installation, and operation, as well as interoperability, of Smart Metering Systems at Energy Consumers' premises by ensuring that all Devices operate in a consistent manner.<br>The proposal supports the fifth General SEC Objective to facilitate such innovation in the design and operation of Energy Networks (as defined in the Data Communications Company Licence) as will best contribute to the delivery of a secure and sustainable Supply of Energy; this is only possible if accurate data quality (alerts) is available from the smart meter Device. |
| **Scottish and Southern Electricity Networks** | Networks Party | Yes | SSEN believe this Modification would better facilitate SEC objective (a) by better facilitating the efficient operation and interoperability of smart metering systems at energy Consumers' premises within Great Britain. |
| **E.ON** | Large Supplier | Yes | E.ON believe the proposer should of included this as part of the consultation. In our view, this modification better facilitates the following SEC objective: (e) the fifth General SEC Objective is to facilitate such innovation in the design and operation of Energy Networks (as defined in the Data Communications Company Licence) as will best contribute to the delivery of a secure and sustainable Supply of Energy; |
| **Northern Powergrid** | Networks Party | Yes | The intent of the Power Outage Alert is that the alert is generated for genuine supply interruptions where the Electricity Distributor needs to take action. This modification would better meet this requirement. |

| Question 4 | | | |
|---|---|---|---|
| **Respondent** | **Category** | **Response** | **Rationale** |
| **Kaifa Technology UK Ltd** | Other SEC Party | Yes | Reducing the number of false positives will be beneficial. |
| **Scottish Power** | Large Supplier | Yes | There will be fewer false AD1 power outage alerts to the DNOs, therefore better facilitating Objective (a) through the more efficient operation of Smart Metering Systems. |

## Question 5: Noting the costs and benefits of this modification, do you believe MP102A should be approved?

| Question 5 | | | |
|---|---|---|---|
| **Respondent** | **Category** | **Response** | **Rationale** |
| **Western Power Distribution** | Networks Party | Yes | No comment. |
| **Electricity North West Limited** | Networks Party | Yes | As described above. |
| **Scottish and Southern Electricity Networks** | Networks Party | Yes | As this Modification will provide an enduring solution for future Devices, SSEN believe this modification should be approved. |
| **E.ON** | Large Supplier | Yes | The SECAS costs are reasonable to make the changes. |
| **Northern Powergrid** | Networks Party | Yes | The solution will reduce the volume of Power Outage Alerts that are not related to supply interruptions arising from an outage of the Electricity Distributors assets, which will enable the Electricity Distributor to offer better customer service and minimise abortive visits to customers' premises. |
| **Kaifa Technology UK Ltd** | Other SEC Party | Yes | Reducing the number of false positives will be beneficial. |
| **Scottish Power** | Large Supplier | Not in current form | The proposed solution wrongly places the burden of fixing potentially erroneous Comms Hub and CSP backend behaviour on the ESME and GSME Manufacturers. |

## Question 6: How long from the point of approval would your organisation need to implement MP102A?

| Question 6 | | | |
|---|---|---|---|
| **Respondent** | **Category** | **Response** | **Rationale** |
| **Western Power Distribution** | Networks Party | N/A | As this modification updates the specification for Devices we will not need to implement any changes. |
| **Electricity North West Limited** | Networks Party | N/A | No comment. |
| **Scottish and Southern Electricity Networks** | Networks Party | N/A | SSEN would not need to complete any activities as part of the implementation. |
| **E.ON** | Large Supplier | N/A | No supplier changes required. |
| **Northern Powergrid** | Networks Party | N/A | There are no implementation activities required for an Electricity Distributor. |
| **Kaifa Technology UK Ltd** | Other SEC Party | N/A | We have already mitigated for this issue. |
| **Scottish Power** | Large Supplier | N/A | No comment. |

## Question 7: Do you agree with the proposed implementation approach?

| Question 7 | | | |
|---|---|---|---|
| **Respondent** | **Category** | **Response** | **Rationale** |
| **Western Power Distribution** | Networks Party | Yes | No comment. |
| **Electricity North West Limited** | Networks Party | Yes | Splitting MP102 will help speed the change in manufacturing and prevent more Devices being manufactured and installed in customer properties which are susceptible to this issue (Part A). It is however vital that part B is also developed further to address the large volumes of Devices already installed which are contributing to false POAs. |
| **Scottish and Southern Electricity Networks** | Networks Party | Yes | SSEN feel the progression timetable and implementation dates are adequate. |
| **E.ON** | Large Supplier | Yes | We agree that this should be implemented as soon as reasonable. |
| **Northern Powergrid** | Networks Party | Yes | The modification, if implemented, will prevent OTA firmware upgrades generating POAs for new Devices. |
| **Kaifa Technology UK Ltd** | Other SEC Party | Yes | Nothing to add. |
| **Scottish Power** | Large Supplier | No | We believe any relevant considerations on CHTS and CSP backend behaviour also need to be assessed to know what form the solution should take. |

## Question 8: Do you agree that the legal text will deliver MP102A?

| Question 8 | | | |
|---|---|---|---|
| **Respondent** | **Category** | **Response** | **Rationale** |
| **Western Power Distribution** | Networks Party | Yes | We feel that the proposed legal text is clear in clarifying that both the meter and the CH reboot must be considered together to ensure that there are no scenarios where a spurious alert might be generated. |
| **Electricity North West Limited** | Networks Party | No comment | No comment. |
| **Scottish and Southern Electricity Networks** | Networks Party | Yes | SSEN believe the proposed legal text delivers the obligations required. |
| **E.ON** | Large Supplier | No | We would like to suggest an alteration to the wording as the current use of the word 'spurious' describes a false alert, where in fact it is a genuine alert as the Communications Hub would have lost power for over three minutes. We would suggest just removing the word 'spurious' in the four instances that it is used.<br>The legal text is not explicit in regards to firmware OTA upgrades. While the current wording does say 'all other operating conditions', it may be beneficial to call out '(including during a firmware upgrade)' after this to specifically address the problem.<br>The legal text refers to SMETS2 v4.2, but not SMETS2 v5.0, so this also needs to be considered with the changes. |
| **Northern Powergrid** | Networks Party | No | Whilst we agree with the intent of the legal text we believe that changes to the proposed legal text are required to implement the business requirement, as per the change tracked version of the legal text that forms part of our consultation response. Specifically: |

| Question 8 | | | |
|---|---|---|---|
| **Respondent** | **Category** | **Response** | **Rationale** |
| | | | i) Provisions need to be made for CH OTA and a revision to the CHTS is required.<br>ii) The term 'mains power failure' is not specific enough. SMETS uses the term<br>'Supply' and the concept of a 'supply outage' which correctly refers to the supply of electricity to the premises. Consistency of the terminology would be good.<br>iii) The requirements for three phase meters need to be more specific.<br>iv) The requirements for a hot shoe in a Gas First installation need to be more specific. |
| **Kaifa Technology UK Ltd** | Other SEC Party | Yes | I put yes here but not qualified to comment. |
| **Scottish Power** | Large Supplier | No | See above. |

## Question 9: Please provide any further comments you may have

| Question 9 | | |
|---|---|---|
| **Respondent** | **Category** | **Comments** |
| **Western Power Distribution** | Networks Party | No comment. |
| **Electricity North West Limited** | Networks Party | No comment. |
| **Scottish and Southern Electricity Networks** | Networks Party | No comment. |
| **E.ON** | Large Supplier | No comment. |
| **Northern Powergrid** | Networks Party | No comment. |
| **Kaifa Technology UK Ltd** | Other SEC Party | No comment. |
| **Scottish Power** | Large Supplier | While we believe the underlying business requirement needs to be addressed, the proposed solution will not do this. Given that redesign of ESME hardware and firmware may have a long lead time, consideration should also be given to the most appropriate SMETS version to incorporate any such change in. |