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DP302 'Supplier Alerts for ENOs'

Modification Report

Version 0.1

9 September 2025

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 Ben Elmy from UK Power Networks.

Electricity Network Operators (ENO) carry out network alterations to ensure the infrastructure is operating as it should. While the list of alterations is not exhaustive, it includes a number of changes that could lead to incorrect polarity at consumer premises following the completion of work. ENOs currently rely on Supplier contact to determine whether there are any issues reported following Network alterations, which slows the remedial process.

Three Supplier Alerts – *0x81B8 'Incorrect Polarity'*, *0x81B7 'Incorrect phase sequencing'* and *0x81BB 'Reverse Current'* – could provide ENOs the necessary Data to determine whether there are any issues, allowing them to act sooner and more efficiently. These Alerts are currently only available to Suppliers, but the potential solution would look at allowing ENO visibility of the Alerts as well.

2. Issue

What are the current arrangements?

Smart Meter Installation

During Electricity Smart Meter Equipment (ESME) installations, a Supplier will utilise Alerts *0x81B8 'Incorrect Polarity'*, *0x81B7 'Incorrect phase sequencing'* and *0x81BB 'Reverse Current'* to determine whether the meter was correctly installed and thus expected to operate as it should. While these Alerts are non-mandated, they are paramount to installations.

If any of the mentioned Alerts are triggered upon installation, the Supplier would be able to take remedial action as soon as possible to minimise any impact on consumers.

Incorrect Polarity

Incorrect Polarity is the incorrect connection of live and neutral wires in electrical circuits, leading to current flowing in the opposite direction. This can cause equipment damage or equipment to become live in consumer premises.

Incorrect phase sequencing

The phase sequencing in ESMEs refers to the order in which voltages in a three-phase electrical system reach their maximum values. Typically, the phase sequence is represented as Red, Yellow, Blue (RYB) where each phase reaches a maximum value 120 degrees after the previous phase, with R reaching its maximum value first and B reaching its maximum value last, 240 degrees later.

Incorrect phase sequencing in ESMEs would therefore be the incorrect sequencing of RYB, leading to malfunctions.

Reverse Current

Reverse current is the flow of electrical current in the opposite direction of its intended operation. This can cause increased power dissipation and potential damage to internal circuitry, power supply components, cables and connectors.

Network Alterations

ENOs carry out network alterations to ensure its infrastructure is operating as it should. There are a number of network alterations at a consumer premise service level and at the low voltage level that could lead to incorrect polarity for consumers.

The list of alterations is not exhaustive, but it includes updating/changing a network service cut-out, repairing an underground low voltage mains cable, changing an electricity pole on the overhead network or replacing a secondary transformer on the low voltage network.

What is the issue?

Following network alterations, issues with reverse polarity or incorrect phasing could be missed, which could lead to issues on consumer premises.

ENOs do not currently have access to the same non-mandated Alerts mentioned above, which impacts the ability to act on an issue quickly and efficiently.

Notifications of these Alerts would allow ENOs to review work undertaken in the area and identify any potential safety concerns raised by their work.

If ENOs do not have access to Data that alerts them to these issues following network alterations, remedies take longer to be actioned. ENOs are required to contact Suppliers to obtain the information on whether any of the abovementioned Alerts were triggered following network alterations, which would lengthen the resolution process.

Having no access to these Alerts also leads to multiple site visits, which causes further disruption and possible frustration to consumers.

What is the impact this is having?

Depending on the Alert that is triggered following network alterations, consumers premises are impacted differently. For example, in the case of reverse polarity, this could manifest itself in the form of erratic performance of appliances. Reverse current can lead to damage to internal circuitry and power supply components. Lastly, incorrect phase sequencing could lead to three-phase meters to turn in the opposite direction, leading to equipment damage.

All these issues are safety concerns for consumers, and should be addressed as soon as possible, making the need for ENOs to have access to these Alerts a necessary solution.

Impact on consumers

Without a solution in place, this issue has a negative impact on consumers. Cross-polarity and incorrect phasing issues could lead to safety issues inside consumer premises. However, if ENOs have access to Data that alerts them of an issue, these can be solved quickly and efficiently.

3. Assessment of the proposal

Areas for assessment

May 2025 Issues Group Discussion

An Issues Group member queried the non-mandated but vital aspect of the issue put forward, as it indicates this should have been raised sooner. They went on to add that significant costs will be associated with a non-mandated Alert solution. As a representative for ESME Manufacturers, the Issues Group member highlighted that there will likely be implications for firmware and potential hardware changes to enable these non-mandated Alerts.

The Proposer clarified their position both in the Issues Group meeting as well as during a subsequent call with the ESME Manufacturer representative that the Solution is not intended to make the Alerts mandated, but to simply allow visibility of these Alerts to ENOs. The Issues Group member advised the status of these Alerts should be checked against current meters.

Mandated or Non-Mandated Alerts

Mandated Alerts described in SEC Schedule 8 'Great Britain Companion Specification (GBCS)' are Alerts that Manufacturers must include in their Devices. Non-mandated Alerts are Alerts that a Manufacturer can choose whether to include in their Device manufacturing or not.

The Proposer has expressed that the primary objective of the modification would be for ENOs to have access to the Alerts. Mandating the Alerts could be a subsequent modification, if ENOs see the benefits from receiving the Alerts. Benefits from receiving the Alerts in the first instance could also solidify the business case for mandating in future.

Sub-Committee input

SECAS will engage with Chairs from the Operations Group (OPSG), the Privacy Sub-Committee (PSC), the Smart Meter Device Assurance Sub-Committee (SMDASC), the Technical Architecture and Business Architecture Sub-Committee (TABASC), the Security Sub-Committee (SSC), the Smart Metering Key Infrastructure Policy Management Authority (SMKI PMA) and the Testing Advisory Group (TAG) 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	Impacts on operations from the potential solution of the modification.
PSC	No input required.
SMDASC	No input required.
SMKI PMA	No input required.
SSC	No input required.

Sub-Committee input	
TABASC	Impact on business architecture from the potential solution of the modification.
TAG	No input required.

Appendix 1: Progression timetable

Timetable	
Event/Action	Date
Draft Proposal raised	9 Sep 2025
Presented to Change Sub-Committee (CSC) for initial comment	16 Sep 2025
CSC converts Draft Proposal to Modification Proposal	16 Sep 2025
Business requirements developed with Proposer and DCC	<i>Sep 2025 – Nov 2025</i>
Business requirements discussed with TABASC	<i>6 Nov 2025</i>
Business requirements discussed with OPSG	<i>11 Nov 2025</i>
Modification discussed with Working Group	<i>3 Dec 2025</i>
Preliminary Assessment requested	<i>4 Dec 2025</i>
Preliminary Assessment returned	<i>Jan 2026</i>
Modification discussed with Working Group	<i>Feb 2026</i>
Modification discussed with TABASC	<i>Feb 2026</i>
Modification discussed with OPSG	<i>Feb 2026</i>
Refinement Consultation	<i>Mar – Mar 2026</i>
Impact Assessment costs approved by Change Board	<i>Apr 2026</i>
Impact Assessment requested	<i>Apr 2026</i>
Impact Assessment returned	<i>Jun 2026</i>
Modification discussed with Working Group	<i>Jul 2026</i>
Modification Report approved by CSC	<i>Jul 2026</i>
Modification Report Consultation	<i>Jul – Aug 2026</i>
Change Board Vote	<i>Aug 2026</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
CSC	Change Sub-Committee
ENO	Electricity Network Operator

Glossary	
Acronym	Full term
ESME	Electricity Smart Meter Equipment
GBCS	Great Britain Companion Specification
OPSG	Operations Group
PSC	Privacy Sub-Committee
RYB	Red, Yellow, Blue
SMDASC	Smart Meter Device Assurance Sub-Committee
SECAS	The Smart Energy Code Administrator and Secretariat
SMKI PMA	Smart Metering Key Infrastructure Policy Management Authority
SSC	Security Sub-Committee
TABASC	Technical Architecture and Business Architecture Sub-Committee
TAG	Testing Advisory Group