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MP230 ‘Review the SLA for delivery and completion for SMETS1 firmware’

Annex D

Firmware processing prioritisation and capacity management – version 0.1

About this document

This document contains information applicable to the solution of this modification. It sets out the Data Communications Company (DCC) methodology of prioritising and managing larger firmware images for Smart Metering Equipment Technical Specification (SMETS1) Electricity Smart Metering Equipment (ESME).

1. Large SMETS1 Firmware updates

1.1 Expectation of update

Ofgem licensing conditions mandate that licensees maintain Smart Metering Systems to meet technical specifications within the Maintenance Validity Period. As there are no new versions of SMETS1 technical specifications, Service Users are not obliged to upgrade firmware. However, should defects become apparent that require a device firmware update, then Service Users can update these Devices.

The intent of the modification is to maintain the 5 day SLA for completing updates.

1.2 Process overview

The DCC system can handle a maximum of 12,000 larger SMETS1 firmware (>750kB) images a day.

In cases where a Service User identifies that they are in possession of 500 or more large firmware images which require upgrades, the firmware upgrade process begins with Service Users completing a SMETS1 bulk firmware approval form hosted by the DCC Service Desk. The Service User completes and submits the form. The DCC then specifies a schedule with the Service User that is suitable for the Service User and the DCC capacity.

1.3 Capacity management

Large SMETS1 firmware upgrades are scheduled within specific periods to optimise system performance and stay within infrastructure capacity limits. These constraints are in place to ensure that the success rates of Service Requests are not affected.

Among approximately 50 Service Users, five Service Users currently have a portfolio with more than 500 Devices that could require larger firmware updates. In future, these numbers will fluctuate to a degree with more SMETS1 Devices being Enrolled to the DCC System, and some Devices being exchanged for SMETS2 Devices.

1.4 Sequential processing

Scenarios may occur where there is more than one Service User who wishes to agree a delivery schedule with the DCC Service Desk, although this historically has been rare. On the rare occasion where multiple Service Users with large populations requests a firmware update slot at the same time, then its usual for the Service User who requested the firmware to go first as they will have the image first and have completed testing first and so will be ready first. Subsequently if other Service Users put in requests in similar time frames the DCC will make the decision on batch sizes and order based on meter population, capacity utilisation and timing of requests.

1.5 Security related firmware updates

The DCC handles Emergency related firmware updates differently from larger firmware updates. For security updates, an incident is raised and prioritised. Prior to any updates, a safety test is carried out to ensure the Device would not be impacted negatively. The urgency of the update depends on the incident's priority level, with the option to halt other firmware traffic to prioritise security updates for swift processing.

Security-related firmware updates would be managed on a case by case basis depending on the severity and specifics of the incident.