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MP235 ‘Enhanced Meter Data access for Other Users’

Annex A

Business requirements – version 0.2

About this document

This document contains the business requirements that support the solution(s) for this Modification Proposal. It sets out the requirements along with any assumptions and considerations. The Data Communications Company (DCC) will use this information to provide an assessment of the requirements that help shape the complete solution.

1. Business requirements

This section contains the functional business requirements. Based on these requirements a full solution will be developed.

Business Requirements	
Ref.	Requirement
1	Allow Parties acting in the Other User Role to access 15 additional Service Reference Variants.
2	Allow Parties acting in the Other User Role to access 10 additional Service Reference Variants.

This document contains requirements for multiple solution options, and an assessment for each option is to be provided. The table below summarises the requirements that make up each solution option:

Solution Options		
Option	Req. 1	Req. 2
Option 1	✓	
Option 2		✓

2. Considerations and assumptions

This section contains the considerations and assumptions for each business requirement.

2.1 General

This solution will be applied to SMETS1 and SMETS2 Devices.

2.2 Requirement 1: Allow Parties acting in the 'Other User' Role to access 15 additional Service Reference Variants.

This requirement seeks to allow Parties acting in the 'Other User' Role access to the 15 Service Reference Variants listed below.

Service Requests	
Service Reference Variant	Service Request Name
4.1.1	Read Instantaneous Import Registers
4.1.2	Read Instantaneous Import TOU Matrices
4.2	Read Instantaneous Export Registers
4.6.1	Retrieve Import Daily Read Log
4.6.2	Retrieve Export Daily Read Log
4.12.1	Read Maximum Demand Import Registers
4.12.2	Read Maximum Demand Export Registers
4.13	Read Prepayment Configuration
4.14	Read Prepayment Daily Read Log
4.16	Read Active Power Import
4.18	Read Meter Balance
6.2.1	Read Device Configuration (Voltage)
6.2.5	Read Device Configuration (Instantaneous Power Thresholds)
6.2.9	Read Device Configuration (Payment Mode)
7.4	Read Supply Status

2.3 Requirement 2: Allow Parties acting in the ‘Other User’ Role to access 10 additional Service Reference Variants.

This requirement seeks to allow Parties acting in the ‘Other User’ Role access to the 10 Service Reference Variants listed below.

Service Requests	
Service Reference Variant	Service Request Name
4.2	Read Instantaneous Export Registers
4.6.1	Retrieve Import Daily Read Log
4.6.2	Retrieve Export Daily Read Log
4.12.1	Read Maximum Demand Import Registers
4.12.2	Read Maximum Demand Export Registers
4.14	Read Prepayment Daily Read Log
4.16	Read Active Power Import
6.2.5	Read Device Configuration (Instantaneous Power Thresholds)
6.2.9	Read Device Configuration (Payment Mode)
7.4	Read Supply Status

3. Solution options

This section outlines the solution options for this Modification Proposal. It provides detailed information on the two variants of the proposed solution for the business requirements.

3.1 Solution 1

The first solution relies on business requirement 1 which includes all 15 Service Request Variants (SRV) the Proposer would like to be able to retrieve.

3.2 Solution 2

The second solution relies on business requirement 2 which includes 10 Service Request Variants. Five Service Request Variants included in Business Requirement 1 have been removed as there are issues related to Supplementary Remote Party Data and Encryption. Inclusion of these five variants has been identified as having impacts on Great Britain Companion Specification (GBCS), Electricity Smart Metering Equipment (ESME), Gas Smart Metering Equipment (GSME) and Communications Hubs. As these are likely to increase the cost of the modification substantially, the Proposer will decide whether to choose solution 1 or 2 once the Preliminary Assessment is returned.

Supplementary Remote Party Data

The issue of Supplementary Remote Party Data relates to SRV's 4.1.1, 4.1.2, 4.13, 4.18 and 6.2.1.

Currently, an Other User has no security credentials on a Smart Metering Device and is considered an Unknown Remote Party (URP) when requesting GBCS Commands to be executed on Devices. For an URP to execute a GBCS Command on a Device, the Command must be specified in the GBCS as authorised for execution by the Access Control Broker (ACB). This is because the ACB will request the Command on behalf of the URP.

When the DCC receives a SR from a DCC User which is an URP for the targeted Device, the DCC creates a GBCS Command and the ACB becomes the sender for the Command. The DCC will then inset details of the URP as Supplementary Data into the GBCS Command. The Device will then create a GBCS Response which includes the Supplementary Data, and in turn the ACB receives the GBCS Response. The DCC then extracts the Supplementary Data from the GBCS response and sends the Service Response to the DCC User listed in the Supplementary Data.

Some of the SRVs which the Proposer would like to access map to GBCS Commands which are not available to the ACB. Therefore, to achieve access to the full list of SRs this would require a change to the GBCS as well as an update to Smart Meter Device firmware to support those Commands for an URP.

Encryption

The issue of Encryption relates to SRV's 4.1.1 and 4.1.2.

Because of sensitive information, some GBCS Commands require encryption of the data which is sent back via the GBCS Response. For KRP's (Known Remote Parties) the receiving Device holds

the certificate of the KRP in the Trust Anchor Cell. This certificate is used as part of the process to encrypt the data in the GBCS response.

For URPs the receiving Device does not hold their certificate. The ACB must therefore send the URP certificate as part of the Supplementary Remote Party Data. The receiving Device then uses the certificate in the Supplementary Remote Party Data in the process of data encryption and sends the GBCS Response to the ACB. The DCC will then extract the address of the URP from the Supplementary Remote Party Data and forwards the data to the DCC User. Only the DCC User can decrypt this information as it requires the private key of the DCC User.

For the Other User Role to request and retrieve encrypted data the URP certificate must be supported by the GBCS Command and Responses.

Glossary	
Acronym	Full term
ACB	Access Control Broker
DCC	Data Communications Company
ESME	Electricity Smart Metering Equipment
GBCS	Great Britain Companion Specification
GSME	Gas Smart Metering Equipment
KRP	Known Remote Party
SRV	Service Reference Variant
URP	Unknown Remote Party