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MP162 ‘SEC changes required to deliver MHHS’

Annex A

Business requirements – version 1.1

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.

Interaction with the MHHS solution

This Modification Proposal forms part of a wider solution to deliver market-wide half-hourly settlement (MHHS). This will include other elements such as changes to Balancing and Settlement Code (BSC) systems, changes to Smart Energy Code (SEC) Parties’ systems, and different ways of working. The solution delivered under MP162 will therefore need to meet the requirements of the wider solution as set out in the MHHS target operating model (TOM) to form a single, integrated 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	A new DCC User Role will be created for MDR Users
2	MDR Users will need to accede to the SEC and undergo UEPT
3	There shall be Access Control for MDR Users
4	The applicable Service Requests will have extended on-demand TRTs when submitted by MDR Users
5	Only Eligible Users shall have access to retrieve specified data
6	The end-to-end security arrangements for half-hourly settlement will be put in place
7	An MDR User will not be subject to the SEC privacy arrangements

Following the [Authority's decision to send back MP162](#), the MP162 solution is limited to the creation of the new User Role and does not cover the DCC's approach to managing Scheduled requests or the additional capacity that would be required for MHHS. Assessment of these latter items are the subject of a [separate request from the Authority](#).

2. Considerations and assumptions

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

2.1 General

This solution will be applied to Smart Metering Equipment Technical Specifications (SMETS) 1 and SMETS2 Devices.

The key elements of the solution are as follows:

- The DCC Systems shall be able to accept Service Requests from a new Meter Data Retrieval (MDR) User Role to retrieve Import consumption data (Half-Hourly Intervals, Daily Consumption totals and Register Reads) and, where configured, Export generation data (Half-Hourly Intervals, Daily Consumption totals and Register Reads) from specified SMETS1 and SMETS2+ Electricity Smart Metering Equipment (ESME) enrolled within the DCC Systems.
- All Service Requests received from MDR Users will use the existing DCC User Gateway and be subject to Access Control authentication against the identity of the MDR User stored and provided to the DCC within Industry Registration Data. This is to ensure that only registered MDR Users can retrieve the relevant Import consumption and/or Export generation data from each ESME.

- All authenticated data requests from Suppliers and MDR Users shall be retrieved from each ESME using Data Service Provider (DSP) scheduling services wherever possible. Users will be required set up a schedule for all applicable Service Requests submitted for MHHS purposes, and only use On-Demand requests if the scheduled request fails. Any On-Demand requests will be carried out in line with the Target Response Times (TRTs) specified in Requirement 4.
- Where data is successfully retrieved from both SMETS1 and SMETS2+ ESME, this data shall be returned across the Smart Metering communication networks and these Service Responses shall be returned to the requesting User for use in the wider Settlements purposes.

2.2 Requirement 1: A new DCC User Role will be created for MDR Users

The DCC will create a new DCC User Role for an MDR User.

The DCC shall support the introduction of a new SEC User Role of 'Meter Data Retriever' (or 'MDR') for Meter Data Retrieval Agents (MDRAs) to support the introduction of MHHS.

The Identity of the new MDR Party will be added to Industry Registration Data with a Market Participant Identifier (MPID) and an associated Effective From Date (EFD) and Effective To Date (ETD)¹ for each Meter Point Administration Number (MPAN). It is assumed that a change of MDRA will take effect at 00:00 on the relevant Settlement Day and that the outgoing MDRA will not be able to access data for Settlement Days on or after the EFD for the incoming MDRA.

It is assumed that each MPAN will always have an associated MDRA within the registration data, regardless of whether the MDRA is the Supplier itself or an external third-party agent.

It is assumed that for an MDRA registration completed prior to the relevant EFD, the current and the future MDRA and the relevant EFDs will both be included within the registration data.

This new mapping of MDR Party to MPAN Registration data is expected to be passed to the DCC to use via the new Central Switching Service (CSS) Interface. Relevant data extensions will be added to these interfaces. The expectation is that changes to the registration data needed for MHHS will be delivered through a consequential Retail Energy Code (REC) Change Proposal progressed in association with the MHHS programme.

2.3 Requirement 2: MDR Users will need to accede to the SEC and undergo UEPT

Any market participant operating as an independent MDRA will be required to accede to the SEC under the 'Other SEC Party' Party Category.

An MDR User will be required to undergo appropriate User Entry Process Testing (UEPT) for the role. New Test Scenarios will be defined for MDR Users undertaking the User Entry Process.

Suppliers will have a choice of either appointing themselves as the MDRA, or an external third-party agent under commercial arrangements for each of their registered MPANs.

A Supplier who elects to appoint itself as its own MDRA for its own customers will not need to register under the MDR User role and may continue to use the Import Supplier or Export Supplier User Role

¹ The current TOM does not include a requirement for the ETD to be provided in the registration data. Including an ETD will align with existing registration data received by the DCC. Without this, additional processing will be required by the DCC to determine who is the active MDRA.

to collect its metered data as applicable. A Supplier that wishes to operate as an MDRA for another Supplier will need to register in and use the new MDR User Role for that purpose.

Any Supplier agent operating as an MDRA on behalf of a Supplier will be required to accede to the SEC under the 'Other SEC Party' Party Category if it has not already done so. It will also be required to register as a DCC User in the new MDR User role.

2.4 Requirement 3: There shall be Access Control for MDR Users

An MDR User will only be allowed to submit the following Service Requests to support half-hourly settlement:

Valid Service Requests for an MDR User			
DCC SR ref.	Service Request name	On Demand?	DCC Scheduled?
4.1.1	Read Instantaneous Import Registers	Yes	No
4.2	Read Instantaneous Export Register Values	Yes	Yes
4.6.1	Retrieve Import Daily Read Log	Yes	Yes
4.6.2	Retrieve Export Daily Read Log	Yes	Yes
4.8.1	Read Active Import Profile Data	Yes	Yes
4.8.3	Read Export Profile Data	Yes	Yes
4.17	Retrieve Daily Consumption Log	Yes	Yes
5.1	Create Schedule	Yes	No
5.2	Read Schedule	Yes	No
5.3	Delete Schedule	Yes	No
8.2	Read Inventory	Yes	No

More information on how these Service Requests would be used for half-hourly settlement can be found in Section 3.

Service Request Variant (SRV) 4.1.1 shall only be available to MDR Users for SMETS1 Devices. The MDR User will not be able to request this SRV for SMETS2 Devices. Suppliers may continue to use SRV 4.1.1 for both SMETS1 and SMETS2 Devices as currently, and extend its use for MHHS purposes, if required.

SRV 4.2 shall be added to the list of available scheduled services for SMETS1 and SMETS2 Devices.

The DCC shall perform Access Control for any Service Requests send by any MDR User to authenticate and authorise that the Service Request is send from a valid SEC Party and that the User is an Eligible User for the Service Request being sent and is authorised to access the relevant Device.

The DCC shall validate and authorise the MDR User sending each Service Request against Industry Registration Data to check that the MDR User is the registered MDRA for the MPAN associated with the Device ID on the corresponding Settlement Day(s) that the Service Request is targeted for.

The DCC shall validate the Identity of the MDRA requesting data from an ESME using the Industry Registration Data in the same manner as the existing Registered Supplier Agent (RSA) User Role Validation Check.

2.5 Requirement 4: The applicable Service Requests will have extended on-demand TRTs when submitted by MDR Users

The relevant Service Requests will be subject to longer on-demand TRTs when submitted by MDR Users.

The TRTs for the relevant Service Requests are shown in the table below:

TRTs for Eligible Users for MHHS data retrieval Service Requests								
DCC SR ref.	SR sent by existing User Roles				SR sent by 'MDR' User Role			
	SMETS2		SMETS1		SMETS2		SMETS1	
	Scheduled	On Demand	Scheduled	On Demand	Scheduled	On Demand	Scheduled	On Demand
4.1.1	N/A	30 secs	N/A	16 secs	N/A	N/A	N/A	24 hrs
4.2	24 hrs	30 secs	24 hrs	16 secs	24 hrs	24 hrs	24 hrs	24 hrs
4.6.1	24 hrs	30 secs	24 hrs	16 secs	24 hrs	24 hrs	24 hrs	24 hrs
4.6.2	24 hrs	30 secs	N/A	N/A	24 hrs	24 hrs	N/A	N/A
4.8.1	24 hrs	5,600 secs	24 hrs	16 secs	24 hrs	24 hrs	24 hrs	24 hrs
4.8.3	24 hrs	30 secs	24 hrs	16 secs	24 hrs	24 hrs	24 hrs	24 hrs
4.17	24 hrs	30 secs	N/A	N/A	24 hrs	24 hrs	N/A	N/A
5.1	N/A	24 hrs	N/A	24 hrs	N/A	24 hrs	N/A	24 hrs
5.2	N/A	24 hrs	N/A	24 hrs	N/A	24 hrs	N/A	24 hrs
5.3	N/A	24 hrs	N/A	24 hrs	N/A	24 hrs	N/A	24 hrs
8.2	N/A	30 secs	N/A	30 secs	N/A	30 secs	N/A	30 secs

The current SMETS1 TRT of 16 seconds for SR 8.2 is an anomaly. The process for reading Device details from the Smart Metering Inventory (SMI) is the same for both SMETS2 and SMETS1 Devices with processing of such requests limited to the DSP systems. This TRT will be amended to 30 seconds for all Users as part of this modification for alignment with other DCC-Only Service Requests.

Import Suppliers and Export Suppliers may continue to use the existing Service Requests and associated TRTs for data requests that are not sent for the MHHS Service and where existing non-extended TRTs for On-Demand services are required.

2.6 Requirement 5: Only Eligible Users shall have access to retrieve specified data

Suppliers and MDR Users will be required to be Eligible Users for each of the Service Requests that allow existing Users to retrieve Interval or Register Read Consumption and Generation data sets from ESME.

This requirement has been based on assumptions made by the DCC against the MHHS TOM.

This modification will define the data that is required from the registration system to enable this Requirement 5. The expectation is that any changes needed to the registration system for MHHS will be delivered through the consequential REC Change Proposal raised in association with the MHHS programme

To support the DCCs demand and capacity management processes, where an Eligible User wishes to retrieve consumption data or generation data from an ESME for the purposes of supporting MHHS,

the User shall ensure that all first attempts to retrieve a new data set from each target ESME device shall be made using Scheduled Services.

Where either:

- the use of Scheduled Services fails to return the required data to the requesting Eligible User; or
- Scheduled Services are not possible to retrieve the required data,

then an Eligible User may use On Demand Services to request (or re-request) the required consumption data or generation data to ensure that the required data is successfully retrieved from each target ESME.

The DCC shall monitor the proportion of On-Demand Service Requests and Scheduled Service Requests submitted by each User for each of the Schedulable Service Requests listed in Section 2.4. Where the DCC identifies a disproportionate increase in the volume of On-Demand Service Requests submitted relative to the volume of Scheduled Service Requests, the DCC shall contact the relevant User to understand the reasons for this and shall also inform the Panel and/or the Operations Group.

There is no further reporting specifically linked to the MP162 solution required.

2.7 Requirement 6: The end-to-end security arrangements for half-hourly settlement will be put in place

The existing User Security Assessment for a Supplier will be used for any Supplier operating as its own MDRA.

MDRAs who are not Suppliers will need to undergo an initial Full User Security Assessment, unless they have already undergone an equivalent assessment as an Other User, which will form part of the User Entry criteria in SEC Section H1.10(c). The MDRA will then be required to adhere to the same SEC Section G 'Security' obligations as an Other User and will need to have annual User Security Assessments as defined in SEC Section G8.40.

MDR Users will need to declare relevant Anomaly Detection Thresholds (ADTs) in line with the existing provisions for this.

2.8 Requirement 7: An MDR User will not be subject to the SEC privacy arrangements

MDR Users will not be subject to Privacy Assessments as they will have been appointed by the Supplier who will be responsible for managing the privacy risk through their Supplier Licence obligations.

Any Supplier operating as its own MDRA will, as now, not need to undergo a Privacy Assessment.

3. Service Requests to support half-hourly settlement

The table below sets out more information around the Service Requests that will be used in support of half-hourly settlement:


Service Requests to support MHHS						
Meter type	Measurement quantity	Data type (settlement)	Data required (settlement & validation)	No. of readings	Data availability	DCC SR ref.
SMETS2	Active Import	Settlement Period level data	Active Import Profile data	48 per Settlement Day	13 months	4.8.1
			And Daily Consumption Log	1 per Settlement Day	731 days	4.17
			OR Import Daily Read Log	1 per Settlement Day	31 days	4.6.1
SMETS2	Active Export	Settlement Period level data	Active Export Profile data	48 per Settlement Day	3 months	4.8.3
			And Export Daily Read Log	1 per Settlement Day	31 days	4.6.2
SMETS1	Active Import	Settlement Period level data	Active Import Profile data	48 per Settlement Day	13 months	4.8.1
			OR Import Daily Read Log	1 per Settlement Day	14 days	4.6.1
SMETS1	Active Export	Settlement Period level data	Active Export Profile data	48 per Settlement Day	3 months	4.8.3
			And Total Active Export Register	Snapshot readings	Continuous	4.2

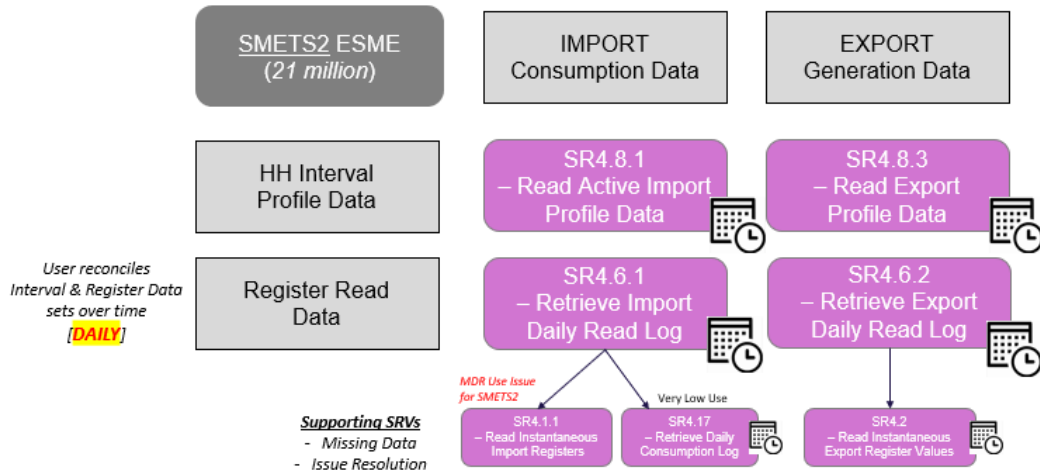
Service Requests to support MHHS						
Meter type	Measurement quantity	Data type (settlement)	Data required (settlement & validation)	No. of readings	Data availability	DCC SR ref.
SMETS2	Active Import	Register readings	Daily Consumption Log	1 per Settlement Day	731 days	4.17
			OR Import Daily Read Log	1 per Settlement Day	31 days	4.6.1
			OR Active Import Register	Snapshot readings	Continuous	4.1.1
SMETS2	Active Export	Register readings	Export Daily Read Log	1 per Settlement Day	31 days	4.6.2
			OR Active Export Register	Snapshot readings	Continuous	4.2
SMETS1	Active Import	Register readings	Import Daily Read Log	1 per Settlement Day	14 days	4.6.1
			OR Total Active Import Register	Snapshot readings	Continuous	4.1.1
SMETS1	Active Export	Register readings	Total Active Export Register	Snapshot readings	Continuous	4.2

The DCC has set out the following expected use cases for SMETS2 and SMETS1 ESME:

Anticipated SMETS2 usage


DAILY Data Retrieval from SEC party User Roles (IS, ES or MDR)

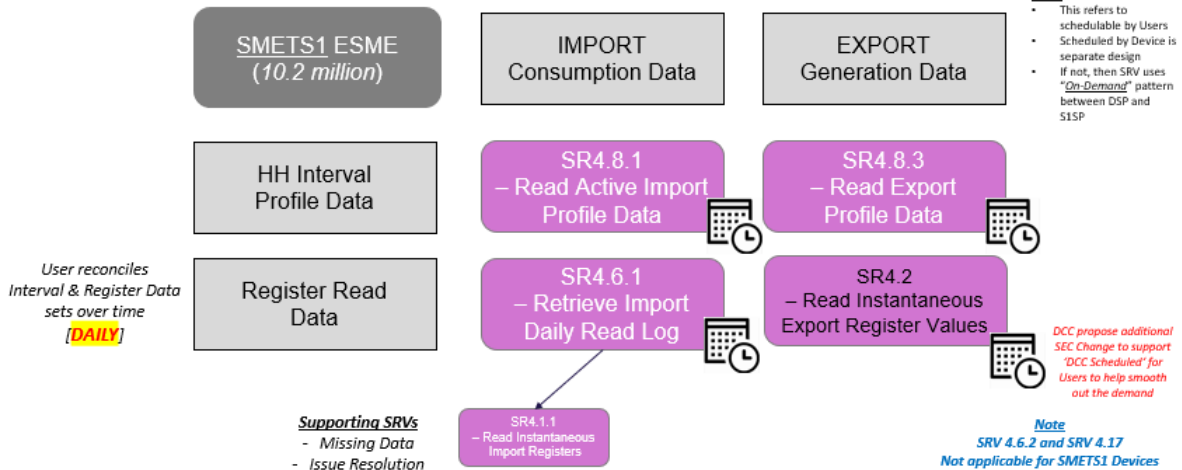
 SRV = DCC Scheduled



Anticipated SMETS1 usage

DAILY Data Retrieval from SEC party User Roles (IS, ES or MDR)

 SRV = DCC Scheduled



Appendix 1: Glossary

This table lists all the acronyms used in this document and the full term they are an abbreviation for.

Glossary	
Acronym	Full term
ADT	Anomaly Detection Threshold
BSC	Balancing and Settlement Code
CSS	Central Switching Service
DCC	Data Communications Company
DSP	Data Service Provider
EFD	Effective From Date
ESME	Electricity Smart Metering Equipment
ETD	Effective To Date
MDR	Meter Data Retrieval
MDRA	Meter Data Retrieval Agent
MHHS	market-wide half-hourly settlement
MPAN	Meter Point Administration Number
MPID	Market Participant Identifier
RSA	Registered Supplier Agent
SEC	Smart Energy Code
SMETS	Smart Metering Equipment Technical Specifications
SMI	Smart Metering Inventory
TOM	target operating model
TRT	Target Response Time
UEPT	User Entry Process Testing