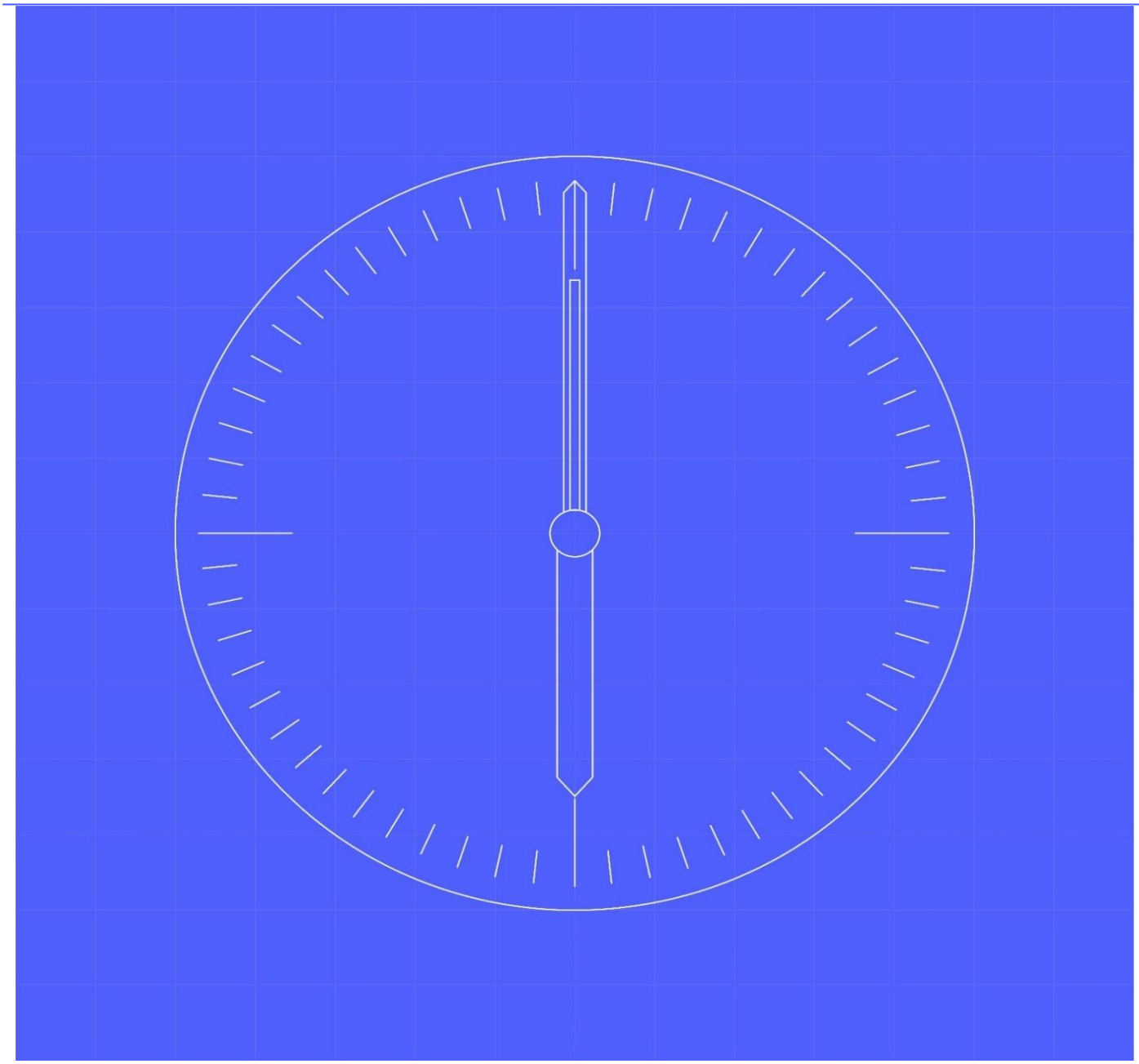
MHHS PROGRAMME
Industry-led, Elexon facilitated

MHHS impacts to BSC-owned DTN Market Messages



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1 Contents

1.1 Change Record

Date	Author	Version	Change Detail
21/07/2023	Matthew McKeon	0.5	Initial draft for internal review

1.2 Reviewers

Reviewer	Role
Derek Weaving	Market Design Advisor, Elexon

2 Request Overview

The Market-wide Half-Hourly Settlement (MHHS) Programme has published the end-to-end design artefacts that will underpin the operation of the MHHS Target Operating Model. A supplementary design artefact 'MHHSP-DES196 - D-Flow and Interface Mapping v1.0' was approved by the Design Advisory Group (DAG) in July 2023, setting out the impact of MHHS on messages sent over the Data Transfer Network (DTN).

The changes to DTN messages as a result of the implementation of the new MHHS arrangements can be broken down into two broad categories:

- Generic changes impacting all messages such as adding scenario variants to cover the new MHHS services (i.e. Data Services where previously flows were sent or received by Data Collectors);
- Specific changes to DTN messages and data items as a result of new or amended MHHS data items and the use of these messages within new or revised business processes.

DTN messages are defined in the Energy Market Data Specification, with each Scenario Variant assigned a Meta Data Owner responsible for the governance and maintenance of the message. Therefore, messages that are impacted could be subject to REC, BSC, DCUSA or SEC governance.

Following a consultation in March 2023, this document summarises the changes to BSC-owned messages, and its output will be fed into the interface drafting for all impacted DTN messages.

This document is intended to serve as a complement to DES-196, setting out the lower-level detail of new Scenario Variants of existing flows, and the content of new ECS Reports that will be sent over the DTN.

Changes required to REC-owned DTN flows can be found in the outputs from the REC MSAG meeting on 15 June 2023, available on the REC Portal. (https://recportal.co.uk/web/msag/solution-documents)

3 Solution Statement

3.1 Approach Outline

The MHHSP and code bodies have developed a generic approach which will be applied to DTN messages. These are set out below, and respondents are requested to confirm their support for these assumptions, or highlight any specific areas of disagreement with the associated rationale.

1. Different market role codes will be used for Smart and Advanced Data Services. The SDS will use a different role code identifier to the existing NHHDC and the ADS will use a different code to the HHDC.
2. Where existing DTN messages are sent to or received by the NHHDC, additional variants will be added to cover the Smart Data Service for transition, with the NHHDC variants removed at the end of transition.
3. Where existing DTN messages are sent to or received by the HHDC, additional variants will be added to cover the Advanced Data Service for transition, with the HHDC variants removed at the end of transition.
4. New, separate Market Role codes will be allocated to the Smart and Advanced Metering Service, and where messages are sent to or received from the MEM, additional variants will be added to cover the Smart and Advanced Metering Service at go-live, with MEM variants removed at the end of transition.
5. Annual Consumption values will be available for migrated Metering Systems from the start of migration and EAC and AA values will be retained alongside Annual Consumption until the end of transition.
6. References to Market Domain Data (MDD) within DTN flows will be amended to Industry Standing Data (ISD) where that Data Item will continue to be in ISD in the MHHS design. The D0269 and D0270 will be retained for distributing 'old world' MDD only, with new ISD published via subscription.

7. References to Meter Register Id and Register Reading for migrated Metering Systems, where a reading is to be used to estimate consumption for Settlement purposes, will relate to the total cumulative register on the meter. This will be added as a data item value rule within the relevant DTN messages.
8. DUoS Tariff Id will be an alias of Line Loss Factor Class Id (J0147) at go-live, so that the J0147 within messages can be referred to as either depending on usage. The desired outcome is that, where the J0147 is passed through the legacy arrangements, it will continue to be referred to as LLFC Id to avoid requiring extensive renaming of non-impacted flows. Where it is passed through MHHS arrangements (e.g. in DIP messages), it will be referred to as DUoS Tariff Id. Once the transition to MHHS is complete, the J0147 will be renamed to DUoS Tariff Id in all enduring messages.
9. The D0265 will continue to be produced until the end of transition to support the old arrangements, with LLF data grouped at LLFC Id level. For the new arrangements, LLF data will be reported at LLF Id level using REP-005 in ISD and an equivalent to the D0265 at LLF Id level published on the Elexon Portal.
10. Changes required to reflect market participant roles removed by MHHS are not required until the end of the transition period as those roles will continue to operate for non-migrated Metering Systems.

Optional HH consumption Dataflows

11. The primary interface for the transfer of UTC Period Consumption data will be Data Integration Platform (DIP) Interface IF-021 / PUB-021 'UTC Settlement Period Consumption Data'. However, new Scenario Variants will be created for the D0275 and D0379 flows for use by optional bilateral agreement.

Asset Metering Dataflows

12. Messages sent to or received by the Asset Metering Virtual Lead Party (AMVLP) in accordance with BSCP602 and BSCP603 will not be replaced by DIP interfaces and AMVLPs will continue to use DTN messages for agent appointments and exchanging consumption data because Asset Metering Systems are not registered in SMRS. References to Asset Metering Market Roles will remain unchanged.

    HHDC activities in respect of Asset Metering will continue unaffected at MHHS Go-Live. The D0390 will continue to be sent by HHDCs until the end of transition, at which point consideration will be given to whether the HHDC evolves into an Asset Metering only role.

    Other Asset Metering D-flows will continue to be sent from/to MEM and HHDC as now. An HHDC or SVA MOA acting in that capacity will continue to service AMSIDs and a decision will be made post-transition when boundary Metering Points are migrated and only AMSIDs are serviced by those roles.

EMR Dataflows

13. Complete set of existing EMR notification flows are now captured on the Go-Live Change (BSC) tab where new SVs from/to SVAA replace existing SVs sent from/to HHDAs. Final metered consumption report to SVAA (D0357) will be replaced by MHHS REP-020.

ECS Reports

14. ECS Reports have been defined under their future names of Daaaa, Dbbbb, etc. rather than as the flow they will replace, as this created ambiguity as to whether these reports are new or modified. The detail of these reports is set out in section 3.3 and the attachments to this document.

3.2 Specific Changes to BSC-owned DTN Messages for MHHS go-live

The DTN messages listed below will be used in enduring MHHS processes, and so will be replicated for use by new MHHS participants through the creating of new scenario variants. *The list of Scenario Variants below is taken directly from DES-196, and the only change is to substitute EMDS sender and recipient names for MHHS role names.*

D0001 - Request Metering System Investigation

- Used under MHHS: Yes for Advanced and Traditional Meters
- Change to data flow name: No
- Change to data flow contents: No
- New Scenario variant(s) required: Yes

The following new Scenario Variant(s) are required at go-live:

- Advanced Data Service to Electricity Advanced Meter Equipment Manager
- Advanced Data Service to Electricity Supplier
- Distribution Network Operator to Advanced Data Service
- Distribution Network Operator to Smart Data Service
- Electricity Supplier to Advanced Data Service
- Electricity Supplier to Electricity Advanced Meter Equipment Manager
- Electricity Supplier to Electricity Smart Meter Equipment Manager
- Smart Data Service to Electricity Smart Meter Equipment Manager
- Smart Data Service to Electricity Supplier

D0002 - Fault Resolution Report or Request for Decision on Further Action

- Used under MHHS: Yes for Advanced and Traditional Meters
- Change to data flow name: No
- Change to data flow contents: No
- New Scenario variant(s) required: Yes

The following new Scenario Variant(s) are required at go-live:

- Advanced Data Service to Distribution Network Operator
- Advanced Data Service to Electricity Supplier
- Electricity Advanced Meter Equipment Manager to Advanced Data Service
- Electricity Advanced Meter Equipment Manager to Electricity Advanced Meter Equipment Manager
- Electricity Advanced Meter Equipment Manager to Electricity Supplier
- Electricity Smart Meter Equipment Manager to Smart Data Service
- Electricity Smart Meter Equipment Manager to Electricity Supplier

D0003 - Half Hourly Advances

- Used under MHHS: Yes for Advanced Meters
- Change to data flow name: No at go-live, could be renamed after transition
- Change to data flow contents: No
- New Scenario variant(s) required: Yes

The following new Scenario Variant(s) are required at go-live:

- Advanced Data Service to Distribution Network Operator
- Advanced Data Service to Electricity Advanced Meter Equipment Manager
- Advanced Data Service to Electricity Supplier
- Electricity Supplier to Advanced Data Service

D0004 - Notification of Failure to Obtain Reading

- Used under MHHS: Yes for Advanced and Traditional Meters
- Change to data flow name: No
- Change to data flow contents: No
- New Scenario variant(s) required: Yes

The following new Scenario Variant(s) are required at go-live:

- Advanced Data Service to Electricity Supplier
- Smart Data Service to Electricity Supplier
- Data Retriever to Smart Data Service

D0005 - Instruction on Action

- Used under MHHS: Yes for Advanced and Traditional Meters
- Change to data flow name: No
- Change to data flow contents: No
- New Scenario variant(s) required: Yes

The following new Scenario Variant(s) are required at go-live:

- Advanced Data Service to Electricity Advanced Meter Equipment Manager
- Distribution Network Operator to Advanced Data Service
- Electricity Advanced Meter Equipment Manager to Advanced Data Service
- Electricity Supplier to Advanced Data Service
- Electricity Supplier to Electricity Advanced Meter Equipment Manager
- Electricity Supplier to Electricity Smart Meter Equipment Manager

D0008 - Meter Advance Reconciliation Report

- Used under MHHS: Yes for Advanced Meters
- Change to data flow name: No at go-live, could be renamed after transition
- Change to data flow contents: No
- New Scenario variant(s) required: Yes

The following new Scenario Variant(s) are required at go-live:

- Advanced Data Service to Distribution Network Operator
- Advanced Data Service to Electricity Supplier

D0010 - Meter Readings

- Used under MHHS: Yes for Advanced and Traditional Meters
- Change to data flow name: No
- Change to data flow contents: No
- New Scenario variant(s) required: Yes

The following new Scenario Variant(s) are required at go-live:

- Advanced Data Service to Distribution Network Operator
- Advanced Data Service to Electricity Advanced Meter Equipment Manager
- Advanced Data Service to Electricity Supplier
- Distribution Network Operator to Advanced Data Service
- Distribution Network Operator to Smart Data Service
- Electricity Advanced Meter Equipment Manager to Advanced Data Service
- Electricity Advanced Meter Equipment Manager to Distribution Network Operator
- Electricity Advanced Meter Equipment Manager to Electricity Supplier
- Electricity Smart Meter Equipment Manager to Smart Data Service
- Electricity Smart Meter Equipment Manager to Distribution Network Operator
- Electricity Smart Meter Equipment Manager to Electricity Supplier
- Smart Data Service to Distribution Network Operator
- Smart Data Service to Electricity Supplier
- Electricity Supplier to Smart Data Service
- Electricity Supplier to Electricity Advanced Meter Equipment Manager
- Electricity Supplier to Electricity Smart Meter Equipment Manager

D0051 - Affirmation of Half Hour Data Retrieval Method and Associated Details

- Used under MHHS: Yes for Advanced Meters
- Change to data flow name: No at go-live, could be renamed after transition
- Change to data flow contents: No
- New Scenario variant(s) required: Yes

The following new Scenario Variant(s) are required at go-live:

- Advanced Data Service to Electricity Supplier

D0214 - Confirmation of Proving Tests

- Used under MHHS: Yes for Advanced Meters
- Change to data flow name: No
- Change to data flow contents: No
- New Scenario variant(s) required: Yes

The following new Scenario Variant(s) are required at go-live:

- Electricity Advanced Meter Equipment Manager to Advanced Data Service
- Electricity Advanced Meter Equipment Manager to Distribution Network Operator
- Electricity Advanced Meter Equipment Manager to Electricity Supplier

D0275 - Validated Half Hourly Advances

- Used under MHHS: Yes by optional bilateral agreement alongside IF/PUB-021
- Change to data flow name: No
- Change to data flow contents: No
- New Scenario variant(s) required: Yes

The following new Scenario Variant(s) are required at go-live:

- Advanced Data Service to Electricity Supplier
- Electricity Supplier to Advanced Data Service
- Smart Data Service to Electricity Supplier
- Electricity Supplier to Smart Data Service

D0290 - Instruction to Read Meter

- Used under MHHS: Yes for Traditional Meters
- Change to data flow name: No
- Change to data flow contents: No
- New Scenario variant(s) required: Yes

The following new Scenario Variant(s) are required at go-live:

- Smart Data Service to Data Retriever

D0354 - Metering System Reporting Notification

- Used under MHHS: Yes for EMR Metering Systems
- Change to data flow name: No
- Change to data flow contents: No
- New Scenario variant(s) required: Yes

The following new Scenario Variant(s) are required at go-live:

- Electricity Supplier to Supplier Volume Allocation Agent

D0355 - Metering System Reporting Confirmation

- Used under MHHS: Yes for EMR Metering Systems
- Change to data flow name: No
- Change to data flow contents: No
- New Scenario variant(s) required: Yes

The following new Scenario Variant(s) are required at go-live:

- Supplier Volume Allocation Agent to Electricity Supplier

D0356 - Metering System Reporting Rejection

- Used under MHHS: Yes for EMR Metering Systems
- Change to data flow name: No
- Change to data flow contents: No
- New Scenario variant(s) required: Yes

The following new Scenario Variant(s) are required at go-live:

- Supplier Volume Allocation Agent to Electricity Supplier

D0379 - Half Hourly consumption values from smart meters specified in UTC

- Used under MHHS: Yes by optional bilateral agreement alongside IF/PUB-021
- Change to data flow name: Reference to smart meters in flow name could be removed
- Change to data flow contents: No
- New Scenario variant(s) required: Yes

The following new Scenario Variant(s) are required at go-live:

- Advanced Data Service to Electricity Supplier
- Electricity Supplier to Advanced Data Service
- Smart Data Service to Electricity Supplier
- Electricity Supplier to Smart Data Service

D0388 - UMS Inventory

- Used under MHHS: Yes for Unmetered Supplies
- Change to data flow name and/or contents: No
- New Scenario variant(s) required: Yes

The following new Scenario Variant(s) are required at go-live:

- Unmetered Supplies Operator to Unmetered Supplier Data Service

D0389 - UMS Response

- Used under MHHS: Yes for Unmetered Supplies
- Change to data flow name and/or contents: No
- New Scenario variant(s) required: Yes

The following new Scenario Variant(s) are required at go-live:

- Unmetered Supplies Data Service to Unmetered Supplies Operator

3.3 Reports from the Supplier Volume Aggregation Agent sent over the DTN

The following Reports from the Supplier Volume Allocation Agent (SVAA) are delivered over the DTN to BSC Parties. *The existing data flows cannot be amended to create new Scenario Variant(s)* for MHHS because their content and group structure needs to be amended to account for new and removed data items.

These successor reports are defined in Artefact **MHHSP - ERI011B - ECS Reports - External v5.3**. SVAA will continue to produce the existing DTN message reports for aggregations performed under the old settlement arrangements and will use the successor reports listed below for aggregations under the MHHS arrangements.

Daaaa - Electricity Supplier Half Hourly Demand Report (equivalent to **MHHS-REP-D0081**)

Dbbbb - Electricity Supplier Settlement Header Report (equivalent to **MHHS-REP-D0266**)

Dcccc - GSP Group Consumption Totals Report (equivalent to **MHHS-REP-D0276**)

Ddddd - Electricity Supplier BM Unit Report (equivalent to **MHHS-REP-D0296**)

During the transition to MHHS, SVAA will generate reports for both old and new arrangements, such that all migrated Metering Systems are captured in the new reports and non-migrated Metering Systems in the existing reports.

Detailed definitions of reports Daaaa to Ddddd have been attached to this summary document. These have been drafted in anticipation of outstanding DIN-475 being approved.

Four reports related Demand Disconnection Events to be progressed later.

4 Next Steps

Following DAG review, this document and solution attachments will be uploaded to the MHHS Programme Collaboration Base (at a location to be confirmed) to aid cross-referencing with DES196.

After a two-week review period, these documents will be updated as appropriate, and presented at the next DAG for approval to become baselined attachments alongside DES-196.