MHHS PROGRAMME
Industry-led, Elexon facilitated

MHHS impacts to BSC-owned DTN Market Messages v1.5

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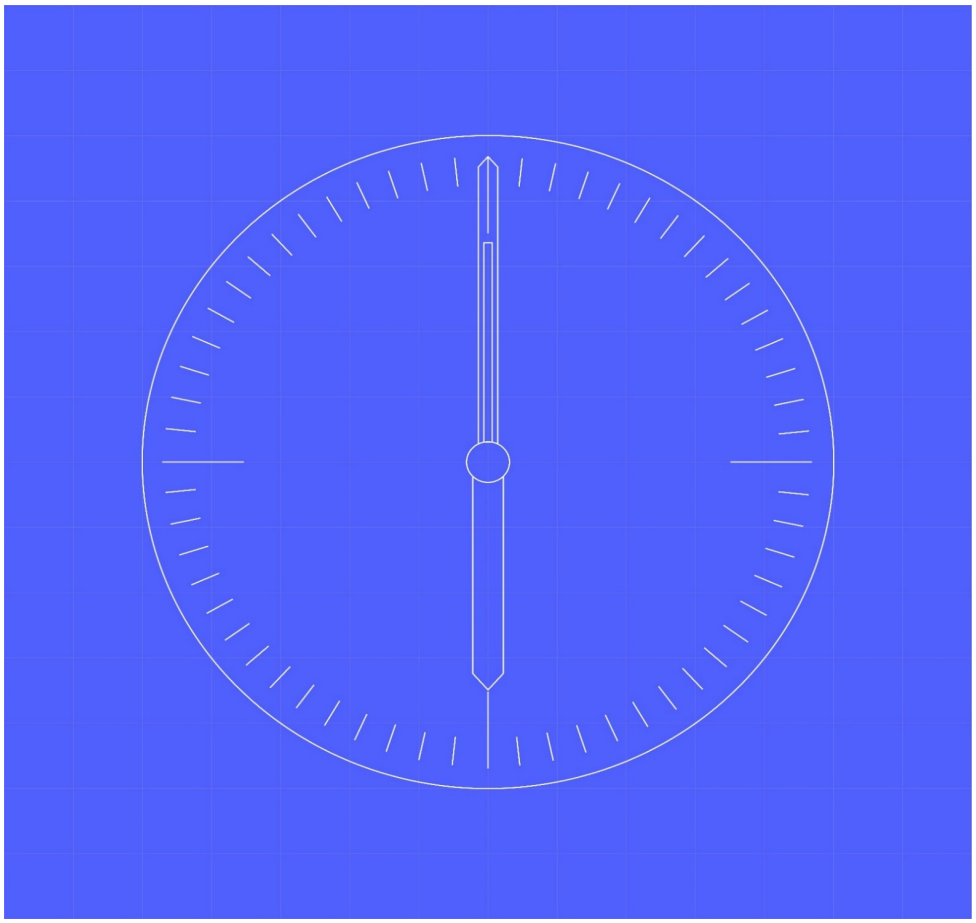

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1 Contents

1 Contents **1**

1.1 Change Record 2

1.2 Reviewers 2

2 Request Overview **3**

3 Solution Statement **3**

3.1 Approach Outline 3

3.2 Specific Changes to BSC-owned DTN Messages for MHHS go-live 5

3.3 Reports from the Supplier Volume Aggregation Agent sent over the DTN 10

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1.1 Change Record

Date	Author	Version	Change Detail
21/07/2023	Matthew McKeon	0.5	Initial draft for internal review
06/10/2023	Matthew McKeon	1.0	Baselined draft following consultation
22/01/2024	Matthew McKeon	1.1	Updated for Interim Release 7
31/10/2024	Matthew McKeon	1.2	Updated for Interim Release 8.5
24/01/2024	Matthew McKeon	1.3	Updated for Interim Release 8.7
07/02/2025	Matthew McKeon	1.4	NHHDR to MRS Market Role name change
18/03/2025	Matthew McKeon	1.5	Updated for Interim Release 8.10

1.2 Reviewers

Reviewer	Role
Derek Weaving	Market Design Advisor, Elexon
Tamsyn Robertson	MHHS Design SI Team
Steven Bradford	MHHS Design SI Team
Robert Short	MHHS Design SI Team

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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 were developed separately by the MHHS Stakeholder Advisory Group (MSAG), and can be found in the 'REC Solution Documents' area on the MHHS website.

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 accessed via URL.

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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 a downloadable file at LLF Id level published on the Elexon Portal.
10. The existing MDD Market Role Code 6 (Non Half Hourly Data Retriever) will be renamed in all relevant existing and new DTN flows and ISD to “Meter Reading Service”.
11. 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

12. 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

13. 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

14. Complete set of existing EMR notification flows are captured on the Go-Live Change (BSC) tab where new SVs from/to SVAA replace existing SVs sent from/to HHDAs. Final metered consumption (D0357) will be sent from SVAA to CFD and CM Settlement Service Providers.

Commented [MHHS1]: DIN-1166 (CR059)

ECS Reports

15. ECS Reports have been defined under their enduring names of D0397, D0398, D0399 and D0400 for standard Reconciliation Runs, and D0401, D0402, D0403 and D0404 for Demand Disconnection Events as these are approved new messages with different structures to the old reports they are adapted from.

    The detail of these reports is set out in section 3.3 and DTC format definitions can be found in the ‘BSC Solution Documents’ area on the MHHS website and Collaboration Base. .

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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 and/or 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
- Smart Data Service to Electricity Smart Meter Equipment Manager
- Smart Data Service to Electricity Supplier
- Meter Reading Service to Smart Data Service

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

- Used under MHHS: Yes
- 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:

- 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 Smart Meter Equipment Manager
- Electricity Smart Meter Equipment Manager to Electricity Supplier

D0003 - Half Hourly Advances

- Used under MHHS: Yes
- 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

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D0004 - Notification of Failure to Obtain Reading

- Used under MHHS: Yes for Advanced and Traditional Meters
- 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:

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

D0005 - Instruction on Action

- Used under MHHS: Yes
- 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:

- 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
- Smart Data Service to Electricity Smart Meter Equipment Manager
- Electricity Smart Meter Equipment Manager to Smart Data Service
- Electricity Supplier to Advanced Data Service
- Electricity Supplier to Smart 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
- 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:

- Advanced Data Service to Advanced Data Service
- 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 Advanced Meter Equipment Manager to Electricity Advanced Meter Equipment Manager
- 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
- Electricity Smart Meter Equipment Manager to Electricity Smart Meter Equipment Manager

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

Commented [MHHS2]: DIN-1146

D0012 - Confirmation of the Inclusion of the Metering Point in the Reading Schedules

- Used under MHHS: Yes by optional bilateral agreement for Traditional Meters
- 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:

- Smart Data Service to Electricity Supplier

D0036 - Validated Half Hourly Advances for Inclusion in Aggregated Supplier Matrix

- Used under MHHS: No, aside from one-off sending of consumption history on migration
- 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:

- Half Hourly Data Collector to Advanced Data Service

Commented [MHHS3]: DIN-1183

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 and/or 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 and/or 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

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D0290 - Instruction to Read Meter

- Used under MHHS: Yes for Traditional Meters
- 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:

- Smart Data Service to Meter Reading Service

D0294 - Confirmation of BM Unit Allocation

Commented [MHHS4]: DIN-1165 (CR043)

- Used under MHHS: Yes for Supplier BM Unit Allocation
- 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:

- Supplier Volume Allocation Agent to Electricity Supplier

D0295 - Rejection of BM Unit Allocation

Commented [MHHS5]: DIN-1165 (CR043)

- Used under MHHS: Yes for Supplier BM Unit Allocation
- 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:

- Supplier Volume Allocation Agent to Electricity Supplier

D0297 - Notification of BM Unit Allocation

Commented [MHHS6]: DIN-1165 (CR043)

- Used under MHHS: Yes for Supplier BM Unit Allocation
- 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:

- Electricity Supplier to Supplier Volume Allocation Agent

D0354 - Metering System Reporting Notification

- Used under MHHS: Yes for EMR Metering Systems
- 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:

- 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 and/or 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

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D0356 - Metering System Reporting Rejection

- Used under MHHS: Yes for EMR Metering Systems
- 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:

- Supplier Volume Allocation Agent to Electricity Supplier

D0357 - Half Hourly Metered Data for EMR

Commented [MHHS7]: DIN-1166 (CR059)

- Used under MHHS: Yes for EMR Metering Systems
- 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:

- Supplier Volume Allocation Agent to Contract for Difference Settlement Services Provider
- Supplier Volume Allocation Agent to CM Settlement Services Provider

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

- Used under MHHS: Yes by optional bilateral agreement
- 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

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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 Design Artefact **MHHSP - ERI011B - ECS Reports - External**. 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.

- **D0397 – MHHS Electricity Supplier Half Hourly Demand Report** (equivalent to **MHHS-REP-D0081**)
- **D0398 – MHHS Electricity Supplier Settlement Header Report** (equivalent to **MHHS-REP-D0266**)
- **D0399 – MHHS GSP Group Consumption Totals Report** (equivalent to **MHHS-REP-D0276**)
- **D0400 – MHHS Electricity Supplier BM Unit Report** (equivalent to **MHHS-REP-D0296**)
- **D0401 - MHHS Aggregated Disconnected DUoS Report** (equivalent to **MHHS-REP-D0369**)
- **D0402 - MHHS Supplier Half Hourly Demand Disconnection Report** (equivalent to **MHHS-REP-D0370**)
- **D0403 - MHHS GSP Group Demand Disconnection Totals Report** (equivalent to **MHHS-REP-D0373**)
- **D0404 - MHHS Supplier BM Unit Demand Disconnection** Report (equivalent to **MHHS-REP-D0374**)

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.

3.4 Additional data item valid set value(s) to support MHHS migration

The Migration Design has also identified the need to add an additional value to the enumerations of the J0107 ‘Rejection Reason Code’ data item in the D0203 ‘Rejection of Changes to Metering Point Details’ dataflow.

An additional enumeration value of 62 with the description ‘MHHS Forward Migration in Progress or Completed’ to allow SMRS to reject changes to the Metering System data in Registration if an MHHS migration has been initiated.

Further such valid set values to support MHHS migration have been added to the ‘REC Solution Documents’ area.

All Solution Documents relevant to BSC and REC-owned DTN flow changes can be found on the MHHS website.

3.5 Additional solution documents added for Interim Release (IR) 8.7

Additional BSC solution documents have been added for IR8.7 to fulfil DIN-1165 and DIN-1166.

- **D0294 - Confirmation of BM Unit Allocation - IR8.7 - v1.0**
- **D0295 - Rejection of BM Unit Allocation - IR8.7 - v1.0**
- **D0297 - Notification of BM Unit Allocation - IR8.7 - v1.0**
- **D0357 - Half Hourly Metered Data for EMR - IR8.7 - v1.0**

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