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Improvements to EMDS drafting of MHHS Market Messages and Data Items

Committee
Supplier Volume Allocation Group

Date
07 July 2026

Classification
Public

Document owner
Click and type

Paper number
Click and type

Purpose of paper
Information

Summary

This paper sets out several proposed improvements to that way that Market-wide Half Hourly Settlement (MHHS) Market Messages and Data Items are defined in the Energy Market Data Specification (EMDS), based on learnings and reflections by BSCCO, REC Code Manager and the MHHS Programme since the new arrangements and associated code documents went live in September 2025 (MHHS Milestone M8).

1. Introduction

1.1. Following implementation of Market-wide Half Hourly Settlement (MHHS) at Milestone 8 (M8) on 22 September 2025, Code Bodies have gained deeper operational experience of how new Data Integration Platform (DIP) messages and data items have been documented in the Energy Market Data Specification (EMDS).

1.2. Based on this experience, BSC and REC have identified several enhancements and minor corrections that would improve the useability and robustness of interface drafting in EMDS as the definitive legal definition of messages and data items. This information paper sets out the issues identified and recommendations for how solutions can be progressed in line with future MHHS Milestones, using a coordinated cross-code approach.

1.3. In some cases, the changes relate to how the EMDS catalogues data items and how it holds new supplementary metadata attributes associated with data items sent through DIP interface messages, rather than being material changes to the structure of an interface message or data item. Specifically referencing metadata attributes that were not present in MHHS design artefacts DES138 ‘Interface Catalogue; and ERI011B ‘ECS Reports – External’ and were not added to the EMDS at MHHS go-live.

Where this is the case, the vehicle for progression could be an ‘EMDS only’ change proposal progressed by REC, given its understood immateriality to parties, to ensure that data aligns between the technical definition within MHHS Swagger and the legal definition within the EMDS.

Where any of the existing attributes of a data item are amended, this will first require a Change Proposal (CP) progressed through the code owner for that data item, before passing to the REC Code Manager to implement.

1.4. This paper describes at a high level the suggested updates and improvements to definitions of MHHS market messages and data items in EMDS, grouped into short-, medium- and long-term activities, using learnings acquired during the MHHS Codes Workstream and collaboration with REC Code Manager.

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2. Short term proposals where impact to participants is low and changes are straightforward

The first ‘bundle’ of improvement proposals contains the three ‘quick wins’ below that will improve the quality and completeness of the MHHS data item definitions and can be implemented quickly:

2.1. EMDS interface corrections from deferred Design Issue Notifications (DINs)

During the MHHS Programme’s design phase, several DINs were raised against the core interface and data item artefacts. These were assessed as minor or cosmetic in nature and were not implemented in the M8/M10 design due to low materiality. In most cases, the DIP’s Swagger reference document was correct.

After MHHS go-live, these DINs were re-reviewed by Code Bodies, primarily the BSC as it owned most affected messages and data items. The majority were found to impact only peripheral text and clarifications in the relevant artefacts; however, some were carried into EMDS and for these BSCCo has concluded that they should be corrected in EMDS via a BSC CP, as these minor errors are not present in DIP Swagger.

This CP will soon be raised at the July Supplier Volume Allocation Group (SVG) and issued for industry review with a target EMDS release date of November 2026. Itemised detail of these 20 changes will be set out in the CP attachment – the majority relate to descriptions of data items or adding expected Enumeration Values.

Further DINs may be progressed in later CPs where a more targeted or material change is required, but the above CP will be sufficient for the near term EMDS minor corrections and enhancements.

2.2. “De-merging” data items which are currently assigned both a J- and DI- reference

MHHS Design Artefact ‘DES138 – Interface Catalogue’, which was the primary source for Data Integration Platform (DIP) interfaces, was used as the basis for EMDS documentation.

In DES138, where a data item sent in DIP messages was the same as an existing DTC J-item (Jnnnn), a cross reference was used to show the items as linked across the two messaging mechanisms.

The result of this approach is that 122 data items appear in EMDS as ‘merged’ DI and J items with the same properties. This has not caused any issues since go-live, but on reflection this approach creates additional restrictions that could be a barrier to further evolution of MHHS data items. For example, for some items the enumerations are slightly differentiated between values that apply in legacy processes and those that apply in MHHS. By merging the definitions, the effect is for enumerations to appear in a single merged set.

Similarly, where data items used in DIP messages have additional DIP-specific attributes (Data Classification, DataType, Nullable and YAML Name), these are not applicable to data items used in DTN messages. The existence of merged records in EMDS creates ambiguity as to which item and catalogue those additional attributes apply.

The recommendation is therefore to ‘de-merge’ these data items into two distinct yet identical records, one for DTC and one for DIP. The original EMDS data item should be restored to the J-item DTC reference and a new EMDS reference created for the DIP DI-reference. This will require some updating of DIP messages to contain the new standalone DI-reference without the J-item linkage.

Analysis of the 122 data items shows that 46 have a DI- reference in DES138 that was never implemented in any DIP messages and therefore can be removed and reverted to the J-item reference alone.

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As this change will make no material content or structural change to any of the relevant messages, it can be implemented in any planned EMDS release, subject to an appropriate impact assessment. Where an impact is identified, the responsible or lead code will progress a change proposal through standard governance.

2.3. Population of null YAML Names for data items with DI-reference above DI-300

When MHHS Data Items are encoded into DIP messages, the name of the item is rendered differently to its name in the DIP Swagger Data Catalogue. The YAML name is the format that the data item name should be encoded in messages (e.g. Metering Point Postcode is entered as 'meteringPointPostcode') and therefore is useful to parties to be recorded as an attribute against each data item used in DIP messages.

DES138 provided a YAML Name for all DIP data items, and these have been populated into EMDS. However, the supplementary Design artefact ERI011B 'ECS Reports – External' did not provide YAML Names, meaning that these are null in EMDS for items above DI-300.

An extract of YAML Names from DIP Swagger has been obtained for all data items in EMDS where it is currently null. These can therefore be updated in a straightforward way against those items, providing a stronger, more robust link between EMDS and DIP Swagger.

As this change will not modify any existing EMDS attributes other than populating a field that is currently null, it is the view of this paper that it should constitute an EMDS Housekeeping CP rather than a material change progressed under other codes. Currently participants have to source the YAML Names from Swagger.

This initiative should be applied after the de-merging described in the previous section, as a YAML Name is a DIP feature and should not need to be associated with a DTC J-item. While this item is not part of the data item set used to produce the DTC Database, its presence could be confusing to parties referencing EMDS.

3. Medium term Change Proposals to be initiated after the short-term ones have been applied

3.1. Side-by-side comparison and reconciliation between DIP Swagger and EMDS

A suggested activity by industry parties, most recently through the MHHS Expert Group, is a comprehensive review of the two interface and data catalogues containing DIP interfaces, DIP Swagger and EMDS. Industry codes support this activity; but it should not be initiated until the near-term improvements are complete.

In particular, the de-merging of data items into separate, independent catalogues and population of missing YAML Name data is an enabler of this activity. Otherwise, in cases where there is misalignment in data item definitions, it may not be possible to correct EMDS without impacting the linked J-item and therefore DTC.

3.2. Incorporation of obfuscated values into data item enumerations for certain items

The MHHS Design of the DIP introduced the ability to obfuscate certain commercially sensitive information published to recipients. This feature extends to a limited number of data items, however it presents a challenge of how to record this in EMDS as it has no existing functionality to do this. It is not practicable to include obfuscation mask values like 'x' or 'xxx' as a valid enumeration as it is only valid for a recipient, not the sender.

Similar conventions have been adopted to obfuscate data and MPID values using a standard approach, but there is no means to record this against the item definition. Data items that are obfuscated within a message should also be captured within the message definition in EMDS, but there is currently no means to show this.

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This paper proposes that obfuscated values are looked at in more detail by the relevant codes and a preferred solution brought to the MHHS Expert Group to gauge the appetite from parties to add this information to EMDS. The reference information for obfuscations can be found in the archived DES138.

4. Longer term functionality enhancements that will require EMDS development

In addition to the improvements set out above, some more aspirational useability features have been identified to enhance EMDS but will require a development budget from REC. These are listed below for completeness but will be elaborated with more detail nearer the time.

4.1. Introduce 'Equivalent Data Items' either in main attributes table, or as a new list below the definition, before 'In Market Messages' to allow

Rather than use a merged data item record to show that a data item exists across local catalogues, a better approach would be to create an additional relationship table to list all data items that are aliases of each other. The DTC used to have a version of this, but it was not carried across to EMDS in its expanded scope.

This would be a powerful addition that would show where data items across catalogues are equivalent and enable more data items to be associated in this way. However, populating this table for all such data items across EMDS will be a substantial task and will need to be planned over several months with BSC support.

4.2. Addition of hyperlinks into Equivalent Data Items table and 'In Market Messages' table to allow one-click navigation to the relevant message or item definition

Where EMDS has supplementary tables below the definition of a data item, such as the existing 'In Market Messages' table, the references to other market messages provides only the 'long' "MM" message reference but no name, description or means of navigating to it. It would significantly improve the usefulness of this table if the message (or data item) numbers could hyperlink directly to the message or item definition.

An alternative, less material approach could be to add the Market Message Name (or Data Item Name) into the relevant table for easier recognition, as the long DI-references in EMDS are not easily memorisable.

4.3. Moving the mastering of the BSC's SVA Data Catalogue to EMDS

Another future initiative under consideration by BSCCo is to move the mastering of the SVA Data Catalogue to EMDS, where BSC retains ownership of the additional 'P-flow' messages and data items, but does not need to maintain the underlying relational database directly. Elexon believes that there are benefits of consolidating all SVA interfaces into EMDS, making it the 'single source of truth'. However, further analysis is still being done for this, and it will be facilitated by a BSC CP progressed on a timeline agreed with REC.

5. Conclusion

This paper is being presented to the relevant stakeholder groups for initial discussion and to gain endorsement for initiating these activities. It envisages REC (RTS) leading much of the activity, with support from the other codes where a supporting CP is needed, and DIP Manager to support the reconciliation activity in 3.1.

Attachments

For more information, please contact: Matthew McKeon, Senior Market Design Advisor, Elexon

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