# THE REC DATA SPECIFICATION

Overview

The Retail Energy Code (REC) Data Specification describes the Data Items and Market Messages that are used by energy industry parties to send and receive information. The Data Specification contains not only REC owned items but also messages and data items governed under the Balancing and Settlement Code (BSC), Distribution, Connection and Use of System Agreement (DCUSA) and Smart Energy Code (SEC). This page provides details on using the Data Specification.

1. Accessing the Data Specification

The REC Data Specification is available to view within the Energy Market Architecture Repository (EMAR) Digital Navigator, which can be accessed through the REC Portal by following the directions below:

Firstly, click on the link here that will automatically direct you to the REC Portal home page.
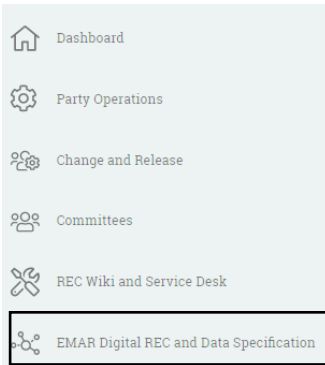
Then, select the Digital REC and EMAR button through the REC Portal dashboard, you will then be navigated to a new landing page.

On the landing page select the Digital Navigator button.

By clicking on the Digital Navigator, you will automatically be re-directed to its home page.

Please note, registration within the REC Portal is **not** required to access the Digital Navigator, Data Specification and Codes Schedules. However, pre-registration is required should parties wish to access the IBM Jazz dashboard (required to ensure the correct level of access is provided to parties)

2. Navigating the Data Specification in the Digital Navigator

The Digital Navigator home page will display two rows as shown below, where you are given an option to select between the Code Schedules and Data Specification as well as the Dashboard and Detailed Search. Note: Your selected option will turn into a darker green.
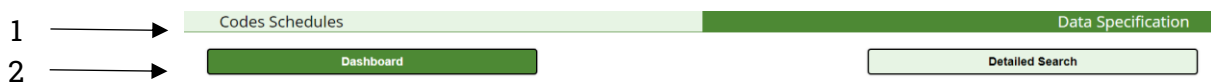
2.1 Data Specification Dashboard

2.1.1 Dashboard overview

The Data Specification dashboard contains six different categories:

Data Specification Catalogue: This contains the Full REC Data Specification in two different formats – Access and HTML. Here, you will be able to view all the different

Market Messages, Scenario Variants and Data Items. Note: It is advised to use the Detailed Search Function to search the above. (Shown in subsequent steps)

Data Specification Documents: In this category you will be able to locate multiple documents that outline specific rules and information related to the Data Specification build. This includes documents such as Technical Specifications, Rules for various API's and, how addresses should be populated.

Data Access Matrices: This defines what type of data different categories of organisation have access to. For more guidance, click here

Meter Product Data Table: This details gas Meter and Converter attributes. You can find more information here

Guidance Documents: The Legacy DTC additional information exists as it contains useful additional legacy DTC information for the creation of new flows.
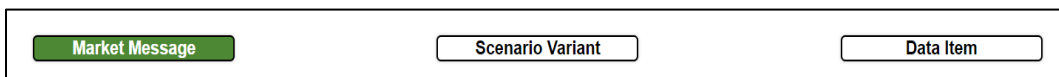
Data Specification Pre-Release information: Any upcoming versions of the Data Specification will be available to view here

2.2   Data specification detailed search
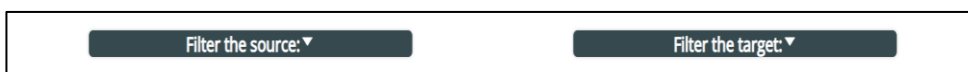
2.2.1 Detailed search overview

The Detailed Search function provides you with an easier way to search for either Market Messages, Scenario Variant and, Data items. There are 3 levels of filtering your search as shown below.

1   You will first need to select either one of the three options available. **Note:** Once you have selected an option, scroll down to the bottom of the page to view a list of all the items that are within the selected category.

Market Message	Scenario Variant	Data Item

2   **Note:** The next two steps are optional

If you are looking for a specific Market Message or Scenario Variant, you will be given the choice to filter the source (where it is coming from) to the target (the intended receiver). Simply click on to the tab to display the list of available options.

Filter the source: ▼	Filter the target: ▼

3   If you know the specific reference number of either the Market Message, Scenario Variant or Data item, you can input it into the search box below.

Text Search
Search

2.2.2 Market Messages

Once you have selected a Market Message you will be automatically directed to its cover page which will tell you about the flow and include:

- a description of the Market Message,

- the version number,

- any notes associated to that specific Market Message and,

- a list of all the data items included within the selected Market Message

To view the content of a Market Message in more detail, you will have to scroll down and select a scenario variant. Note: If you have previously filtered a source and target, you will still have to select a scenario variant.

The Scenario Variants table details which industry parties can send and receive this message. Each combination of source and target has a unique reference number, called the Scenario Variant. This table also details the "Owner", i.e. the code under which changes are governed.

2.2.3 Flow Structure

After selecting a Scenario Variant, you will be directed to a page where the flow structure will be displayed (e.g., shown below). The table sets out how the flow is structured. Each group represents a line within the Market Message file. For example, the first group (reference ZPD) would sit under the header row and contain the Settlement Date, Settlement Code, Run Type Code, Run Number and GSP Group data items.

Note: You can find out more about data flow structures in the 'Data Transfer Handbook' (for DTN messages) and 'Gas User File Design Specification' (for RGMA and legacy SPAA messages); these are published by ElectraLink. For messages sent over IX, the UK Link Manual provides flow structure information. See section 5 for further information.

Group ID	Group Description	Range	Condition	L1	L2	L3	L4	L5	L6	L7	L8	Data Item Name	Data Item Rule
ZPD		1 - 1		G									
				1								Settlement Date	
				1								Settlement Code	
				1								Run Type Code	
				1								Run Number	
				O								GSP Group	
RDT		1 - 1		G									

Modality   Cardinality   Levels

of instances is referred to as the cardinality. For more information on the range please refer to here.

Levels: Presents the relationship between each of the data items within a Group.

To view the data items in more detail, simply click on the name. For more information on Data Items please refer to section 2.2.5

2.2.4 Scenario Variant

Once you have selected a Scenario Variant you will be automatically directed to its Flow Structure (See 2.2.3).

2.2.5   Data Item

Once you have selected a Data Item you will be automatically directed to its cover page which will include:

- Logical length – this is the number of characters required within a data item without any additional allowable symbols. For example, -99.99 has a logical length of four.

- Decimal length – this is the number of characters required to be present following a decimal point character. For example, -99.99 has a decimal length of two.

- Physical length – this is the total length of a data item including space for a decimal place or negative sign, if required. For example, -99.99 has a physical length of six.

- Data Type – all data items must conform to a certain format. Within the Data Specification, the data types are text and symbol character fields (string), true/false indicators (boolean), or numeric characters (number).

- Data Type Format Rule – within the allowed Data Types, data items must be further defined through a set of rules. The Data Specification contains a number of format rules which govern character sets and formats that are permissible within each Data Type. For example, certain character sets that are required to be used for transferring information over the Data Transfer Service (edifact level B DTS variant), or format rules that determine if an item is specified as a datetime, e.g. YYYYMMDDhhmmss.

- Data Item Owner – the 'owner' is the regulatory Code that manages changes to the Data Item. Should any change be made to the data item, it must be approved in accordance with the processes under the 'owner' code.

As shown below.

Market Message Id	Local Catalogue Reference	Market Message Name
MM00001	D0001	Request Metering System Investigation
MM00004	D0086	Notification of Change of Supplier Readings
MM00013	D0002	Fault Resolution Report or Request for Decision on Further Action

Additionally, it will also consist of the Data Enumerations. The enumerations table lists the valid values for the data item, and their description.

Enumeration Value	Enumeration Description
01	Site occupied
02	Site not occupied
03	Meter system energised
04	Meter system de-energised
05	Equipment/meter damage

Lastly, at the end of the page you will be able to find a list of Market Messages that contain that specific Data Item.

Local Catalogue Reference	J0024
Description	A code identifying either nature of checks made/to be made on metering equipment during a site visit or identifying reason for failure to obtain readings.
Logical Length	2
Logical Decimal Length	0
Physical Length	2
Data Type	String
Data Type Format Rule	Edifact Level B DTS Variant
Data Item Owner	Balancing and Settlement Code Company
Notes	This Data Item defined to summarise illustrative set of outcomes. Valid value 42 should be used by Distributors to notify Import Suppliers of sites capable of Export.

By selecting a Market Message, you will be directed to its cover page. Please refer to section 2.2.2 to learn more about the Market Message.

3   Downloadable HTML, Access, and SQL database files

An HTML and Access format file is available as a download from the Data Specification Dashboard under Data Specification Catalogue. Once downloaded, the file can be opened in the html viewer of your choice (this is usually a web browser) or in Access. The html file contains all Market Messages and Data Items that are included within the REC Data Specification catalogue.

The file is a replica of the information held on the Digital Navigator and will be updated concurrently with the most recent Full REC Data Specification.

Data Specification Catalogue

DTC Data Specification - Access Format (v3.3.0)

Full REC Data Specification - Access Format (v3.3.0)
Full REC Data Specification - HTML Format (v3.3.0)

Data Specification Model

Performance Assurance Report Catalogue (PARC)

Standards Definition Document
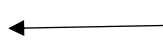
Click on your preferred method of viewing the Full REC Data Specification and it will automatically

SQL Database Access

The February 2023 (v3.3.0) was the **final** 'full REC' version to be released in the MS Access format. To view the 'machine readable' versions of the full REC Catalogue going forward, parties will need to download and install the SQL Database bacpac v3.5.0 to access the same level of data.

The bacpac file and a guidance document is available within the Data Specification dashboard in the below section.

Guidance Documents

Legacy DTC Additional Information (Annex C)

REC SQL Database - Guidance

Data Specification Pre-Release Information

DTC Access Format

Data Spec HTML v3.5.0

SQL Database bacpac v3.5.0

Viewing the Meter Product Data

Please visit here for further information on the latest Meter Product Data (MPD) and Response Codes.

Guidance on Meter Product Data can be found: here

4   Changes

Where an Approved Change Proposal will require a change to the Data Specification, the Code Manager will issue a pre-release setting out the proposed changes. You will be able to find pre-release information in the Data Specification Dashboard under "Data Specification Pre-Release Information".

We will also issue a notification to Parties when a new pre-release is published.

Each pre-release will include details of what is to change and an access database that you can use to automatically load the changes into your systems.

5 Common Questions

What are the Market Message Reference Numbers and Legacy References?

The REC Data Specification brings together a number of industry message catalogues that were previously defined in separate documentation. Each of these used their own unique reference system. For example, the DTN messages used D numbers such as the D0001 flow and the RGMA used letters, such as the ONJOB flow. These are described as the 'legacy' or local catalogue reference numbers.

To enable a single database to be created that brings all these messages together, the Market Message Reference was created. This enables us to give each message a unique identifier within the Data Specification.

The legacy references are also displayed in the data specification and there is no intention to remove them.

Is there an Access Database containing the data flows, like that provided under the MRA?

Yes, you can find a database containing all Market Messages and Data Items on the EMAR Dashboard. This can be used to automatically load the data specification items into your systems.

How do I find the RGMA Baseline?

The RGMA Baseline was a Supply Point Administration Agreement (SPAA) document. Under REC, the information that was contained in this document is set out within the Metering Operations Schedule. You can access this schedule via the schedules tab within the Digital Navigator. 'Schedules' tab of the EMAR Dashboard.

How does flow version control work?

Each flow has a version number, which you can see in the message header. For example, this flow is at version 001:

MM00001 - D0001 - 001 - Request Metering System Investigation

Where a significant change is made to a message (for instance if a new group is added to a message) then it might be decided that the flow should be incremented to a new version. For minor changes, the version number will remain the same.

How are mandatory/non-mandatory fields shown?

Mandatory fields are indicated with a '1', whilst optional (or non-mandatory) fields are indicated with a '0'. Some Market Messages also contain conditional fields, that are indicated with a 'C'. These fields should be populated as described in the associated condition.

How do I submit a Data Specification Change?

If the data item or message you are seeking to change is governed under another code, you should raise the change with that code. You can check the responsible code using the owner field on the Data Item or Market Message page.

If it is a REC owned item, then a REC Change Proposal must be raised to amend the data item. You can get support to raise a REC Change Proposal by messaging enquiries@recmanager.co.uk.

Where can I find the OSENQ / RSENQ file formats and processes?

These are part of the REC Data Specification. They are the Market Messages with the Owner "Gas Central Data Services Provider".

What special characters are valid in the DTN Market Messages?

ElectraLink, as operator of the DTN, publishes a User File Design specification document which details which special characters can be used within DTN flows.

Why are older flows not visible in the latest version of the Data Specification?

If certain flows from an older version of the data specification is removed in newer versions, they will not be visible. Therefore, information held in the databases will only be those that are operational. This is with the exception of flows that were removed from the DTC prior to REC go-live.

Are Trailing Zeros Enforced?

Trailing zeroes are enforced due to the need to match the defined decimal length.

The decimal length indicates how many digits must be present following the decimal point.

Where are the file header and footer structures defined?

The header and footer structures are defined by the transmission method rather than the data specification and are not unified in the REC Data Specification.

For flows sent over the DTN, the structures are detailed for in the DTS Transfer Handbook available on the Electralink website: here

For flows sent over IX, this is defined in the the UK Link Manual, under the UK Link Standard Guide (UKLBD3 – Section 5) documentation.

Note: The UK Link Manual is not a REC document. It can be accessed: **here**

Will the DTC Access format be withdrawn?

The DTC Access format was introduced If we ever do transition away from the DTC format, we will engage with industry appropriately in order to understand impacts and ensure that risks are mitigated for users.

6   Distribution list

If you would like to receive email updates on the REC Data Specification, such as when a pre-release is published, email enquiries@recmanager.co.uk to be added to our "Data Specification Distribution List".

7   Additional Information

If you require further support on the REC Data Specification, please contact the REC Service Desk on: enquiries@recmanager.co.uk