



NETA Interface Definition and Design: Part 1

Interfaces with BSC Parties and their Agents

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|-----------------------|--|
| Synopsis | This document contains the definition and design of all interfaces between the BSC Service Systems and other Systems. It includes the specification of file formats and structure of electronic files. Part one only contains details for interfaces which involve BSC Parties and their Agents. |
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1. Introduction

1.1 Purpose

1.1.1 Summary

This document is Part 1 of the Interface Definition and Design.

The scope of the document is, for each BSC Service System provided, the definition and design of all interfaces between the BSC Service System and other Systems.

The scope of Part 1 is limited to the definition and design of interfaces between the BSC Service System and the BSC Parties and their Agents.

Note that, subsequent to the introduction of P62, any of the following terms can represent a Licensed Distribution System Operator (LDSO) or any Party which distributes electricity.

- Distribution Business
- Distribution System Operator
- Public Distribution System Operator (and abbreviation PDSO)
- Distribution Company
- Public Electricity Suppliers (PES), as operators of a distribution network
- Distributor, as operator of a distribution network.

1.2 Scope

1.2.1 The Scope of this Document

This document describes the interfaces relevant to five of the seven BSC Service Systems. The interfaces relating to the Funds Administration Agent service are described separately in the FAA Interface Definition and Design. The services within the scope of this document are: BSC

| | |
|-------|--|
| BMRA | Balancing Mechanism Reporting Agent |
| CDCA | Central Data Collection Agent |
| CRA | Central Registration Agent |
| ECVAA | Energy Contract Volume Aggregation Agent |
| SAA | Settlement Administration Agent |

The remaining five are termed here the Central Services.

1.2.2 Types of Interface

Interfaces between the Central Services and other systems which are not part of the Central Services are termed **External** and are the main subject of the Interface Definition and Design. These interfaces are of two kinds:

- **Party** interfaces – BSC Parties and Agents, including ECVNA, MVRNA, IA, IEA, SMRA and MOA. These interfaces are covered in Part 1 (this document).
- **System** interfaces – to other BSC services: FAA, SVAA, the National Electricity Transmission System Operator (NETSO) and BSCCo Ltd. These interfaces are covered in Part 2 (a separate document).

External interfaces which do not connect to a Central Service, e.g. FAA to Bank, are not included in the Interface Definition and Design.

The interfaces with BSC Parties and Agents will need a wider forum of agreement than the other interfaces, and will be tested in Market Interface Testing (MIT). The Interface Definition and Design is therefore divided into two separate parts for these two interface types. The two parts will be issued independently and will therefore have different version numbers.

1.3 NETA Interface Overview

1.3.1 Introduction

The approach to the interface definition process adopted in this document is a layered top down structure. The highest layer is the business need for the interface to exist. This business transaction is supported by successive lower layers working down via the logical and physical design to the communications protocol and the physical format and media for the data transfer. This is summarised in the table below.

| Layer | Defined in Section | Source/Based on |
|-----------------------------|--------------------|--|
| Business Process Definition | 1.3.2 | Business Process Model |
| Logical Flow Definition | 1.3.3 & 2.2 | Industry practice |
| Physical Message Definition | 1.3.4 | Industry practice (with MV90 for meter data) |
| Data Transfer Protocol | 1.3.5 | FTP over TCP/IP |

1.3.2 The Business Process Level

A Business Process can be represented by a **‘transaction’** – a message or sequence of messages that fulfil a business function, for example ‘submit report request’ leads to ‘report sent’ or ‘error message – not available’. Each of these messages can be defined as a logical **‘flow’** to meet the requirement. The flow can be classified by its characteristics at the business level:

- Originating Party

- Destination Party
- Initiating event (e.g. user request, another flow, timer expires)
- Frequency in unit time
- Data content at the business level.
- **Mechanism:** Electronic Data File Transfer or Manual
- Volume – frequency * mean message size
- Validation rules.

Flows are given unique identifiers. The same flow can be sent by more than one originator and to more than one party and as a result of different initiating events. These origin/destination/initiation cases are called here different '**instances**' of the same flow. The same flow can have internal and external instances.

1.3.3 Logical Message Definition

The next step is to define the flow contents at the logical level. This defines what each flow will contain in terms of fields, their attributes and how the fields are grouped within the flow. At the same time, the rules for which fields and groups are optional or mandatory and whether and how often groups can be repeated need to be specified.

To do this, a naming convention and layout standards have been set for those flows so that the information can be presented in a consistent and unambiguous form. The format is based on industry practice, and is similar to that used by the industry to support the Supplier Volume Allocation settlement process.

1.3.4 Physical Message Definition

The Logical Message definition encompasses all the data visible at the user level and is closely aligned to the database design as the flows populate the database and/or are derived from their contents. Physical file formats define, for flows that are transferred electronically, the data representation and control information. Similarly to the logical definition, a naming convention and layout standards have been defined so that the information can be exchanged and validated in a consistent and unambiguous form. The definitions are again based on industry practice.

Details of the physical file format are specified in section 2.2

1.3.5 Data Transfer Protocols

This section only applies to flows which employ the electronic data file transfer mechanism.

Details of the proposed protocols for data transfer are in [COMMS]. For each flow, data transfer will be via FTP over TCP/IP unless specified otherwise.

1.4 Summary

Part 1 of the Interface Definition and Design covers interfaces with BSC Parties and Agents, and is organised as follows:

- Section 2 describes common interface conventions, in particular defining the approach to interfacing via file transfer.
- Section 3 gives a summary of the interfaces, organised by BSC agent and by corresponding party.
- Sections 4 to 7.24.3 define the interfaces to each of the BSC Agents.

Part 2 of this document contains interfaces where the only parties involved are within the Central Volume Allocation system, i.e. interfaces between the following services / systems:

- BMRA
- CDCA
- CRA
- ECVAA
- FAA
- SAA
- NETSO
- SVAA
- BSCCo Ltd

Note that parts 1 and 2 of the Interface Definition and Design are issued separately and will therefore have different issue numbers.

1.5 References

1.5.1 BSC Documents

| | |
|---------|---|
| [SD] | Draft Service Descriptions for Central Data Collection, Energy Contract Volume Aggregation, Central Registration, Balancing Mechanism Reporting, Settlement Administration, |
| [BPM] | RETA Business Process Models: |
| | Top Level Processes |
| | Central Registration |
| | Aggregate and Check Contract Volume |
| | Balancing Mechanism Reporting |
| | Central Data Collection and Aggregation |
| | Calculate Settlement Debits and Credits |
| | Indicative Reporting Requirement |
| | Entity Relationship Model |
| [COMMS] | Communications Requirements Document |

1.6 Abbreviations

| | |
|-----------|---|
| BM | Balancing Mechanism |
| BMRA | Balancing Mechanism Reporting Agent |
| BMU | Balancing Mechanism Unit |
| BSC | Balancing and Settlement Code |
| WDCALF | Working Day Credit Assessment Load Factor |
| NWDCALF | Non-Working Day Credit Assessment Load Factor |
| CDA | Central Design Authority |
| CDCA | Central Data Collection Agent |
| CRA | Central Registration Agent |
| ECV | Energy Contract Volume |
| ECVAA | Energy Contract Volume Aggregation Agent |
| ECVN | Energy Contract Volume Notification |
| ECVNA | Energy Contract Volume Notification Agent |
| ECVNAA | Energy Contract Volume Notification Agent Authorisation |
| ENTSO-E | European Network of Transmission System Operators for Electricity |
| FAA | Funds Administration Agent |
| FPN | Final Physical Notification |
| FTP | File Transfer Protocol |
| GMT | Greenwich Mean Time |
| GSP | Grid Supply Point |
| IA | Interconnector Administrator |
| IEA | Interconnector Error Administrator |
| ISO | International Standards Organisation |
| LAN | Local Area Network |
| MAR | Meter Advance Reconciliation |
| MDP | Maximum Delivery Period |
| MDV | Maximum Delivery Volume |
| MEL | Maximum Export Limit |
| MIDP | Market Index Data Provider |
| MIL | Maximum Import Limit |
| MOA | Meter Operator Agent |
| MPAN | Meter Point Administration Number |
| MVR | Meter Volume Reallocation |
| MVRN | Meter Volume Reallocation Notification |
| MVRNA | Meter Volume Reallocation Notification Agent |
| MVRNAA | Meter Volume Reallocation Notification Agent Authorisation |
| NETSO | National Electricity Transmission System Operator as the holder of the Transmission Licence and any reference to “NETSO”, “NGESO”, “National Grid Company” or “NGC” in the Code or any Subsidiary Document shall have the same meaning. |
| NETA | New Electricity Trading Arrangements |
| NWDBMCAEC | Non-Working Day BM Unit Credit Assessment Export Capability |

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|-----------|---|
| NWDBMCAIC | Non-Working Day BM Unit Credit Assessment Import Capability |
| PTFF | Pool Transfer File Format |
| QPN | Quiescent (final) Physical Notification |
| RETA | Revised Electricity Trading Arrangements |
| SAA | Settlement Administration Agent |
| SECALF | Supplier Export Credit Assessment Load Factor |
| SMRA | Supplier Meter Registration Agent |
| SVAA | Supplier Volumes Allocation Agent |
| TAA | Technical Assurance Agent |
| TCP/IP | Transport Control Protocol/Internet Protocol |
| WAN | Wide Area Network |
| WDBMCAEC | Working Day BM Unit Credit Assessment Export Capability |
| WDBMCAIC | Working Day BM Unit Credit Assessment Import Capability |

2. Common Interface Conventions

2.1 Interface Mechanisms

This section outlines the different interface mechanisms used.

2.1.1 Manual

Some interfaces employ a manual mechanism. This means that the information is delivered by mail, by a telephone call, by email, or by fax from one person to another. (Perhaps in an electronic file attached to an email or written to a floppy disc)

All incoming manual flows are required to have been initiated by an Authorised Signatory. The flow will contain the Authorised Signatory Name and Password plus:

- for flows submitted by post or fax, the signatory's signature is required;
- for those flows which are submitted by email, the sending email address must be that registered for the signatory.

Where applicable, the sender will have read the information from a computer screen or printed it out before sending it. Similarly, where applicable, the recipient enters the information into a computer system, probably via a data entry screen-based interface.

More details of the manual mechanism are given where appropriate for a particular flow.

2.1.2 Electronic Data File Transfer

The majority of non-manual interfaces use electronic file transfer. A data file is created on the source system, and is then copied to a predetermined directory on the destination system. The mechanism for the network copy is described in [COMMS].

A common format is used for data files transferred between the Central Services and the BSC Parties and their Agents. This is specified in Section 2.2.

2.1.3 Meter System Interface

The MV-90 interface is used to interact with meter systems. (This is defined in the CDCA Design Specification Appendix A.)

2.1.4 BMRA Publishing Interface

A TIBCO messaging interface running over IP is used for providing screen-based data for BMRA users.

2.2 Data File Format

A common format is used for data files transferred electronically between the Central Services and the BSC Parties and their Agents.

These files use the ASCII character set. They consist of:

- Standard header
- Collection of data records using standard format
- Standard footer

The file format is similar to the Data Transfer Catalogue file format defined for use in Supplier Volume Allocation. The difference is that the format defined for Central Volume Allocation has the following enhanced features:

- sequence number added to the header;
- Party Ids in the header longer than the 4 character Pool Participant Ids;
- Role Codes in the header longer than the 1 character Pool Participant Role Codes;
- Message Role (Data/Response) added to the header;
- free-format message type allowed

The components of the file are specified below:

2.2.1 File Header

The file header will be a record containing the following fields:

| AAA-File Header | | | |
|-----------------|---------------------|----------|--|
| Field | Field Name | Type | Comments |
| 1 | Record Type | Text(3) | = AAA |
| 2 | File Type | Text(8) | 5 character type plus 3 character version |
| 3 | Message Role | char | 'D' Data or 'R' Response |
| 4 | Creation Time | datetime | Date/Time file was created. Specified in GMT. (For Response messages this field contains the Creation Time of the message being replied to) |
| 5 | From Role Code | Text(2) | |
| 6 | From Participant ID | Text(8) | |
| 7 | To Role Code | Text(2) | |
| 8 | To Participant ID | Text(8) | |

| AAA-File Header | | | |
|-----------------|-----------------|---|--|
| 9 | Sequence Number | integer(9), rolling over from 999999999 to 0 | A separate Sequence Number is used for each From Role Code / From Participant ID / To Role Code / To Participant ID combination. NB numbers used must be contiguous so recipients can detect missing files. See section 2.2.8 for more details of the use of Sequence Number. (For Response messages this field contains the Sequence Number of the message being replied to) |
| 10 | Test data flag | Text(4) | Indicates whether this file contains test data =OPER or omitted for operational use, other values for test phases |

Either field 6 or field 8 will be the Participant ID of the Central Systems in every case.

The possible values for role code are

'BM' (BMRA)
 'BC' (BSCCo Ltd)
 'BP' (BSC Party)
 'CD' (CDCA)
 'CR' (CRA)
 'DB' (Distribution Business)
 'EC' (ECVAA)
 'EN' (ECVNA)
 'ER' (Energy Regulator)
 'FA' (FAA)
 'IA' (Interconnector Administrator)
 'MI' (Market Index Data Provider)
 'MO' (Meter Operator Agent)
 'MV' (MVRNA)
 'PA' (BSC Party Agent)
 'PB' (Public - also used for files made available for shared access)
 'SA' (SAA)
 'SG' (BSC Service Agent)
 'SO' (NETSO)
 'SV' (SVAA)

This is a subset of the domain 'Organisation Type' defined in section 2.2.11.9, containing only those organisation types which send or receive electronic data files. Considering flows to BSC Parties: when a party receives a file because it is a Distribution Business, the To Role Code will be 'DB'; when it receives a file because it is an Interconnector Administrator, the To Role Code will be 'IA'; in all other cases, the To Role Code will be 'BP'.

Message Role is used for handling receipt acknowledgement, and is further described in Section 2.2.7.

2.2.2 File Footer

The file footer will be a record containing the following fields:

| ZZZ-File Footer | | | |
|-----------------|--------------|-------------|--|
| Field | Field Name | Type | Comments |
| 1 | Record Type | text(3) | = ZZZ |
| 2 | Record count | integer(10) | Includes header and footer |
| 3 | Checksum | integer(10) | Although type is shown as integer(10) the value is actually a 32-bit unsigned value and hence will fit in an “unsigned long” C variable. |

The value of Checksum is defined according to the following sequence:

- initialise to zero
- consider each record in turn (including header but excluding trailer)
- Break each record into four byte (character) sections (excluding the end of line character), padded with nulls if required, and exclusive OR (XOR) them into checksum.

The algorithm for this is illustrated by the following ‘C-like’ pseudo code.

```

num_chars = strlen (record_buffer)
FOR (i = 0; i < num_chars;)
    value = 0
    FOR (j = 0; j < 4; i++, j++)
        IF i < num_chars
            value = ((value << 8 ) +
                    record_buffer[i])
        ELSE
            value = value << 8
        END IF
    ENDFOR
    checksum = checksum XOR value
ENDFOR

```

The checksum value is a 32 bit value. This is treated as an unsigned integer and appears in the file footer as integer(10).

2.2.3 Record Formats

Each record in the file is presented as follows:

<record type><field separator><field>[...]<field separator><record delimiter>

Where:

- record type : 3 characters
- record delimiter : Line Feed (ASCII 10)

- field separator: “|” (ASCII 124)

NB field separator will thus appear at end of record (i.e. after last field), prior to the linefeed

A record of n fields will have $n+1$ field separators.

Data fields are presented as follows:

| type | Rules |
|---------------|--|
| integer (n) | optional leading “-” for negative numbers no leading zeros maximum n digits <i>field may have “-” and from 1 to n digits</i> |
| decimal (n,d) | maximum n digits maximum d digits after decimal point maximum (n-d) digits before decimal point leading “-” required for negative numbers no trailing zeros no leading zeros other than where $-1 < \text{value} < 1$, then number may start with “0.” To clarify, the value 0.123 can be represented as: 0.123 or .123, but not: 00.123 (an invalid leading zero) or 0.1230 (an invalid trailing zero) Valid representations of zero are: 0 0.0 .0 0. -0 -0.0 -.0 -0. but not as a decimal point with no digits. |
| text (n) | up to n characters field may not contain field separator no leading spaces no trailing spaces |
| boolean | T or F |
| date | YYYYMMDD |
| time | HHMM |
| timestamp | HHMMSS |
| datetime | YYYYMMDDHHMMSS |
| char | single character |
| null | if a field is no longer needed in a future version of a flow, then its data type will be defined to be null, meaning that its value is always null |

Text and char fields may contain only the following characters:

| Character | ASCII | Character | ASCII | Character | ASCII |
|-----------|-------|-----------|-------|-----------|--------|
| space | 32 | + | 43 | @ | 64 |
| ! | 33 | , | 44 | A-Z | 65-90 |
| " | 34 | - | 45 | [| 91 |
| # | 35 | . | 46 | \ | 92 |
| % | 37 | / | 47 |] | 93 |
| & | 38 | 0-9 | 48-57 | ^ | 94 |
| ' | 39 | : | 58 | _ | 95 |
| (| 40 | ; | 59 | a-z | 97-122 |
|) | 41 | = | 61 | { | 123 |
| * | 42 | ? | 63 | } | 125 |

Optional fields are permitted to have nothing between the field separators.

2.2.4 File Types, Record Types and Repeating Structure

The structure of records and their nesting rules are specified using tables. The tables are defined in the NETA Interface Definition and Design Part 1 spreadsheet. The following explains the meaning of data in those tables.

Each interface (flow) may be represented by more than one physical message type (sub-flow) indicated by multiple file types in the physical file format spreadsheet e.g. CRA-I014 has multiple file types R0141, R0142 etc. The file type is made up of three parts: the first character identifies the system ('B' (BMRA), 'C' (CDCA), 'R' (CRA), 'E' (ECVAA), or 'S' (SAA)); the second to fourth characters are taken from the number within the flow name; the final character identifies the sub-flow id.

These tables are not provided for most manual flows. Where it is useful to provide this information for a manual flow, a note is provided in the "Physical Details" section of the logical definition of the flow.

Nesting is indicated by use of L1, L2 etc. Items at L2 make up a group at L1, items at L3 make up a group at L2 etc.

| Id | Row Type | Flow version / range | L1 | L2 | L3 | L4 | data type | valid set | item name/group description (comments) |
|-----------|--------------------|-----------------------------|-----------|-----------|-----------|-----------|------------------|------------------|--|
| C0011 | F (File Type) | | | | | | | | <u>Title of Flow (plus sub-flow number where appropriate)</u> |
| ABC | R (Record Type) | | | | | | | | record type appears as the first field in an electronic file. Record types are unique across all file types. |
| N0001 | D (Data Item) | | | | | | | | Each data item is assigned a Data Item Id. The Data Item Id is used for all occurrences of the same Data Item. |

| Id | Row Type | Flow version / range | L1 | L2 | L3 | L4 | data type | valid set | item name/group description (comments) |
|----|----------|----------------------|----|----|----|----|---------------|-----------|--|
| | | 1-* | | | | | | | range indicates how many occurrences of this record type may appear at the current level. (comment may further refine the repeating rules) 0-* indicates unlimited repeat (optional record type) 1-* indicates unlimited repeat with at least one instance of the record type 1 indicates the record type appears exactly once 2 indicates the record type appears exactly twice 46-50 is a special case meaning 46, 48 or 50 (but not 47 or 49) - this applies to the number of Settlement Periods in a Settlement Day (which might be a clock change day) |
| | | | G | | | | | | G indicates that this is a repeating group i.e. a record type |
| | | | | 1 | | | | | 1 indicates that this is a data item within a record type |
| | | | | O | | | | | O indicates that this is an optional data item within the record type (in electronic files, this means that the field may be empty) |
| | | | | | | | | | |
| | | | | | | | | | Data items and nested record types must appear in the order stated. |
| | | | | | | | | | L1, L2... define the nesting structure. |
| | | | | | | | | | |
| | | | | | | | text(9) | | this field will contain a text string with up to 9 characters |
| | | | | | | | integer(n) | | this field will contain an integer with an optional leading “-“ followed by up to n digits |
| | | | | | | | decimal | | this field will contain a real number |
| | | | | | | | decimal (n,d) | | this field will contain a real number. There will be an optional leading “-“ followed by up to d digits after the decimal point and up to (n-d) before the decimal point |
| | | | | | | | char | | this field will contain a single character |

| Id | Row Type | Flow version / range | L1 | L2 | L3 | L4 | data type | valid set | item name/group description (comments) |
|----|----------|----------------------|----|----|----|----|-----------|--------------|---|
| | | | | | | | boolean | | this field will contain a single character T or F |
| | | | | | | | date | | this field will contain a date YYYYMMDD |
| | | | | | | | datetime | | this field will contain a date and time YYYYMMDDHHMMSS |
| | | | | | | | | valid set id | the field's values are constrained to be within the definition of the identified valid set - see section 2.2.11 |

Different versions of flows are documented in the tables as follows. On the 'File Type' record, the flow version / range field indicates the version of the flow (a blank entry indicates version 1). For example, the records shown below define version 1 and version 2 of flow E0221.

| Id | Row Type | flow version / range | L1 | L2 | L3 | L4 | data type | valid set | item name/group description (comments) |
|-------|----------|----------------------|----|----|----|----|-----------|-----------|--|
| E0221 | F | | | | | | | | <u>ECVAA-I022: Forward Contract Report</u> |
| ... | ... | | | | | | | | |
| E0221 | F | 002 | | | | | | | <u>ECVAA-I022: Forward Contract Report (version 2)</u> |
| ... | ... | | | | | | | | |

2.2.4.1 The Tabs of the Spreadsheet

There is one tab for each of the Central Systems with which the BSC Parties and Party Agents communicate via electronic data file transfer: *CRA*, *ECVAA*, *CDCA* and *SAA*. The *Response* tab reproduces the structure of the ADT record given in section 2.2.7 below in spreadsheet format. The *Valid Set* tab reproduces the information given in section 2.2.11 below in spreadsheet format. The *Flow Role* tab lists which From Role Codes and To Role Codes can validly appear in the header for each File Type. The *Groups* tab is the master definition of each Record Type; the record type definitions in the *CRA*, *ECVAA*, *CDCA* and *SAA* tabs are copied from there. The *Items* tab is the master definition of each item; the item definitions in the *CRA*, *ECVAA*, *CDCA* and *SAA* tabs are copied from there. The *Valid Sets*, *Flow Role*, *Groups* and *Items* tabs in the IDD Part 1 spreadsheet encompass the contents of the IDD Part 1 and IDD Part 2 spreadsheets.

2.2.5 File names

Files delivered to and sent from NETA must have names which are unique *across all Central Systems* within any month. The following convention for filenames is proposed, and is in use by the Central Systems:

characters 1-2: Sender role

characters 3-14: Unique identifier (alphanumeric, e.g. may be a sequence number)

(This convention is sufficient for the Central Systems to uniquely identify all incoming files, because these systems move incoming files into a directory whose name identifies the sending participant id. If incoming files have filenames longer than 14 characters, then the Central Systems will truncate the filenames on receipt).

The filenames do not include an extension.

Where files are placed in a shared (read only) area for multiple users to download, the file name will contain meaningful fields to easily allow identification.

2.2.6 Unstructured File Format

To allow for flexibility, an unstructured file format is also defined. This could be used for:

- Ad hoc data transfers and text reports
- Newly defined messages which have not yet been allocated formal file formats

The unstructured file format will contain the following elements:

1. Standard header record with File Type set to UNSTR001
2. Any ASCII text, with the proviso that no lines may begin with 'ZZZ'.
3. Standard trailer record

2.2.7 Response Messages

As described in [COMMS], participants have a choice between two methods of receiving files from the Central Systems: either the Central Systems push files to the participant systems ('Push Method'), or the participant systems pull files from the Central Systems ('Pull Method'). For the Push Method, the Central Systems consider that a data file has been successfully delivered when the FTP 'push' returns a success code. For the Pull Method, the participant systems indicate that they have successfully pulled a file by deleting it from the source directory.

Note the web submission service will allow an agent to create a notification file within the system, and in reply, receive a response to this on a web screen. The web service will therefore not send a file based response to a web submitted notification.

There is only one method available for sending files to the Central Systems: participant systems push the files to the Central Systems. Participant systems should use the FTP 'push' success code to determine that the file has been successfully sent.

The remainder of this section applies to electronic data files sent both to and from the Central Systems.

When a system receives a data file, it must reply by sending a response file. The purpose of the response file is to indicate whether the data file has been validated as being syntactically correct.

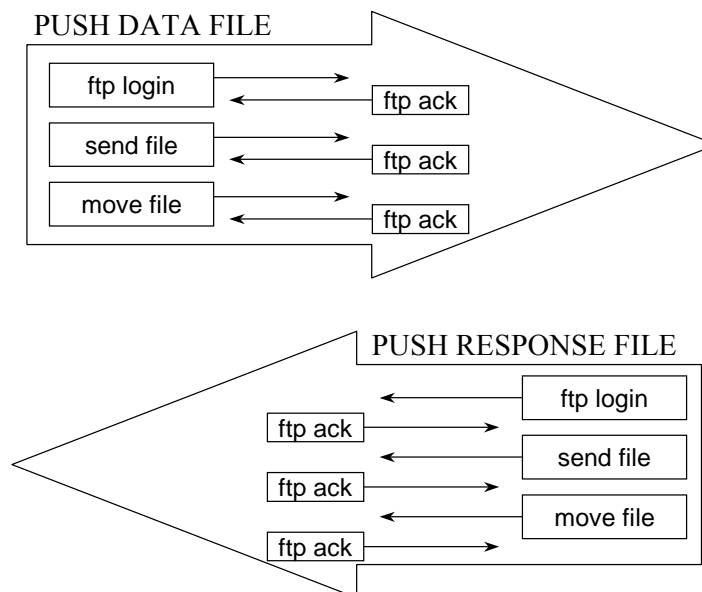
The Message Role field in the header record is used for differentiating a response file from a data file. A data file is sent with the message role set to *data*. The response file comprises the header as received, with from/to participant and role reversed and message role set to *response* (see section 2.2.1), followed by the ADT record(s) and a standard trailer record (ZZZ). There may be more than one ADT record if multiple problems are found with the file.

| ADT-Acknowledgement Details | | | |
|-----------------------------|---------------|----------------|--|
| Field | Field Name | Type | Comments |
| 1 | Record Type | Text(3) | = ADT |
| 2 | Received Time | datetime (GMT) | Time that the message being acknowledged was received by the receiving party |
| 3 | Response Time | datetime (GMT) | Time that the response message was generated by the receiving party |
| 4 | File Name | text(14) | Name of file this response relates to |
| 5 | Response Code | integer(3) | A code indicating the nature of the acceptance / rejection |
| 6 | Response Data | text (80) | Any data that gives additional information in fixing the problem |

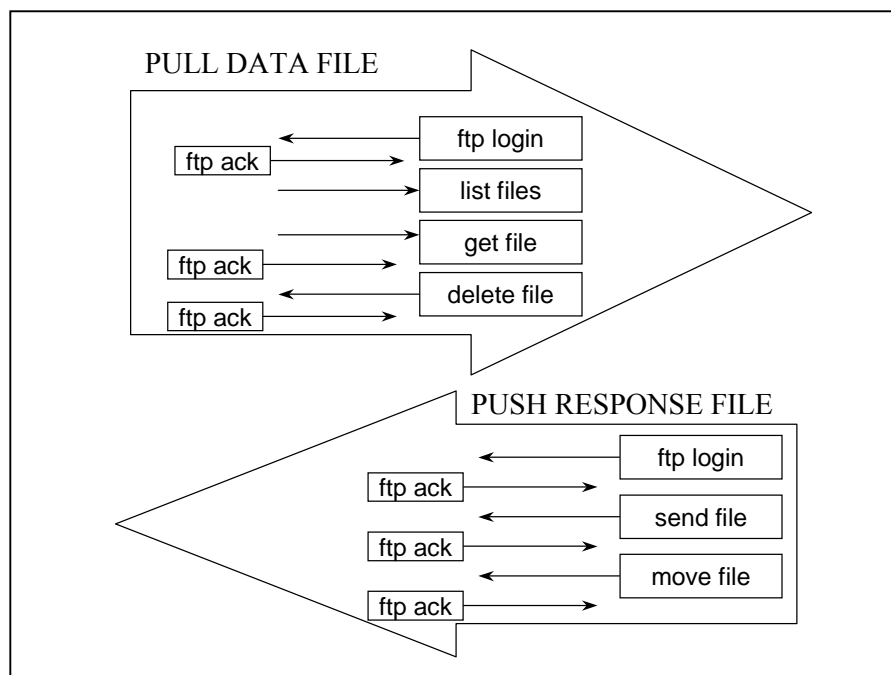
The possible values for the Response Code with the meaning and the appropriate action are:

| Response Code | Meaning | Appropriate Action |
|----------------------|---|--|
| | NACK codes | file is rejected |
| 1 | Syntax Error in Header Record | Correct and resend. |
| 2 | To Participant details in header record are not correct for the actual recipient. | Correct and resend. |
| 3 | Unexpected Sequence Number in Header record. | See section 2.2.8 |
| 4 | Syntax Error in Body. Error Data field contains line number where error detected. | Correct and resend. |
| 5 | Syntax Error in Footer Record | Correct and resend. |
| 6 | Incorrect Line Count in Footer Record | Correct and resend. |
| 7 | Incorrect Checksum in Footer Record | Correct and resend. |
| | ACK codes | file has arrived and been accepted |
| 100 | File received | none - file has arrived and its contents have passed the validation checks covered by the NACK response codes |
| 101 | Duplicate file received | ensure files are not being resent unnecessarily - a file has arrived with a header identical to one already received |

The diagram below illustrates an exchange of files using the push mechanism, where a data file is sent via FTP, and then at a later time, the response file is sent back. Each file transfer consists of an FTP session where the file is first copied to the remote system, and then renamed to a separate directory on the remote system, where it can be accessed for processing.



The diagram below illustrates an exchange of files using the pull mechanism, where a data file is retrieved via FTP, and then at a later time, the response file is sent back as before. The file retrieval consists of an FTP session where the file is detected, copied from the remote system, and then deleted on the remote system.



2.2.7.1 Positive Acknowledgement (ACK Message)

A file must be checked for any of the conditions covered by response codes in the range 1-99. If all the checks pass then an ACK message must be sent.

Standard Receipt Acknowledgement Messages are not explicitly listed in the interface definitions which follow, except where they have been allocated an interface name in the URS - in this case, a section is included which contains only a reference back to this section, 2.2.7.

Receipt acknowledgement does not imply acceptance of the contents of the message.

2.2.7.2 Negative Acknowledgement (NACK Message)

This section applies to electronic data files sent both to and from the Central Systems.

In some cases it may be possible for an addressee to detect a failed message transmission. In this case a message may be returned to the sender with message role set to *response*.

Standard Negative Acknowledgement Messages are not explicitly listed in the interface definitions which follow.

When a system receives a NACK message, it should alert the operator of the system, informing him of the contents of the ADT record. The operator should read the Response Code field contained in the ADT record (defined in section 2.2.7) and take the appropriate action.

2.2.7.3 Response to response messages

On receipt of a response message, no response is sent.

2.2.7.4 Application Rejection and Acceptance

When a message has been received (and the receipt acknowledged as described above), the content of the message may be accepted or rejected during processing. The approach adopted to this is up to each individual application:

- Rejection of a message may cause a message to be sent to the sender indicating the identifier of the message being rejected, and the reasons for rejection. The way in which rejections are dealt with will be described in the application specifications. In some cases, the Rejection message may be transmitted by a manual mechanism rather than as an electronic data file. Where a rejection message has been identified, it is listed as an interface in this document.
- Acceptance of a message will not normally be signalled to the sender. In cases where this is required, a message is explicitly defined for the purpose.

2.2.8 Use of Sequence Numbers

The Central Systems expect each data file from a BSC Party in a certain role to have a sequence number for each Central System role in the file header which increments each time a file is sent. In the following processing rules, greater / less than comparisons will be implemented to cater for when a sequence number wraps round through 0. Note that sequence numbers start from 1.

If the received file has a sequence number less than the next expected, and the header is not identical to the file already received with that sequence number, the system generates an out-of-sequence response for the file.

If the received file has a sequence number greater than the next expected, the Central Systems will save the file, but will not process or acknowledge it until:

- a) the missing file(s) arrive and the file becomes the next expected sequence and so is processed as normal (and an appropriate response sent according to the validation rules);
- b) more than [n] (configurable) files have subsequently arrived all of which are flagged as out-of-sequence. The system generates an out-of-sequence response for the file;
- c) more than [t] (configurable) minutes have elapsed since the file arrived. The system generates an out-of-sequence response for the file;
- d) an operator manually sets the next expected sequence number to be greater than that of the file.

An out-of-sequence response is a response message with response code 3 and the expected sequence number in the Response Data field of the ADT record of the response message. It is up to the sender of the original file to correct the problem and send back a file with the correct sequence number.

The Central Systems will not process any subsequent files sent until a file with the expected sequence number is received. The sender will have to resend any such files after the sequence number problem has been corrected.

There is no automatic process by which the Central Systems will alter the value of the next expected sequence number which it holds (either up or down), apart from the normal increment when a file is successfully received. The only method by which a BSC Party or Agent can achieve a change in the value of the next expected sequence number held by a Central System will be by manual agreement.

The rules for updating the next expected sequence number in the case of a NACK being generated are as follows:

- if a file is rejected because of problems with the HEADER the sequence number is not "used up" and so the next expected sequence number remains unchanged (NACK codes 1,2,3);

- if a file is rejected because of problems with the BODY or TRAILER (record count, checksum), the sequence number is used up and the next expected sequence number is incremented (NACK codes 4,5,6,7).

2.2.9 Time

All data items with data format datetime are in GMT.

Settlement Periods are integers defining a half hour period within a Settlement Day. These start at midnight *local* time, and are numbered sequentially from 1 to 46/48/50.

2.2.10 The CRA Encryption Key

In flow CRA-I012, the CRA system sends out an Encryption Key. How this is used is explained in [COMMS]. This flow is **not** sent electronically.

2.2.11 Valid Sets

This section defines the Valid Sets referred to in the repeating structure tables.

Note also that BSC Party Ids and BSC Party Agent Ids may contain only characters from this restricted set:

- A-Z
- 0-9
- - (dash)

BM Unit Ids, GSP Ids, GSP Group Ids, Interconnector Ids, Joint BMU Unit Ids and Metering System Ids may contain only characters from this restricted set:

- A-Z
- 0-9
- - (dash)
- _ (underscore)

2.2.11.1 Action Code

One of the values:

‘Change’ (New or updated record)

‘No Action’ (Record unchanged)

‘Delete’ (record deleted)

Note: The Action Code field is used in CRA reports to indicate changes since the previous issue of the report, which could include the application of several

registration requests. The Action Description field is a free format text field used in registration requests to allow the participant to identify the reason and nature of the change to the CRA operator.

2.2.11.2 Activity

One of the values:

- 'A' (Changing Authorisations)
- 'B' (Accept / Reject Data Estimation)
- 'C' (Site Witness of Meter Readings and on-site Meter Readings)
- 'D' (Work on Metering Systems)
- 'E' (Submitting SVA Entry Process Requests)
- 'EA' – Discontinued (Raise / Agree Standing Data Changes)
- 'F' (BM Units)
- 'G' (Metering System Registrations and MOA Appointment)
- 'H' (Metering System Technical Details and Proving Tests)
- 'I' – Discontinued (TA Site Visit Acceptance)
- 'J' (Party Registration / Changes)
- 'K' (Submit / Terminate ECVNAA or MVRNAA)
- 'L' (Submitting Aggregation Rules)
- 'M' (Amend Report Requirements)
- 'N' (Banking Details Registration / Changes)
- 'O' (Query / Dispute Process)
- 'P' (Submitting CVA Line Loss Factors)
- 'Q' (Registration & Deregistration of Trading Units)
- 'R' (Metering Dispensations applications)
- 'S' (Party Withdrawal)
- 'T' (Transfer of Metering Systems between SMRS and CMRS)
- 'U' (Party Agent Registration & Changes to Details)
- 'V' (Transmission of Reports to all Parties)
- 'W' (Submitting SVA Standing Data Changes)
- 'X' (Submitting SVA Line Loss Factors)
- 'Y' (Submitting MDD Change Reports)
- 'Z' (Manage ECVAA Web Service access)
- 'ZA' (Register LDSO TSO Boundary Point)
- 'ZB' (Signing the SAD and the Qualification Letter and delegating authority for the signing of other Qualification related documentation)
- 'ZC' (A delegated person acting as the signing authority for that company's Annual Statement of Qualified Status process, re-Qualification Letter and any other documentation relating to Qualification)

2.2.11.3 Alarm Code

One of the values:

Interval Status Codes:

- 'PO' (Power outages)
- 'SI' (Short intervals)
- 'LI' (Long intervals)
- 'CR' (CRC checksum errors)
- 'RA' (RAM checksum errors)
- 'RO' (ROM checksum errors)
- 'LA' (Data missing)
- 'CL' (Clock errors)
- 'BR' (Recorder hardware resets)
- 'WT' (Watchdog timeouts)
- 'TR' (Time resets)
- 'TM' (Test mode)
- 'LC' (Load control)

Channel Status Codes:

- 'AD' (Added interval)
- 'RE' (Replaced data)
- 'ES' (Estimated data)
- 'OV' (Data overflow)
- 'HL' (Data out of limits)
- 'XC' (Excluded data)
- 'PY' (Parity error)
- 'TY' (Energy type change)
- 'LR' (Alarm error)
- 'DI' (Harmonic distortion)

2.2.11.4 BM Unit Type

One of the values:

- 'T' (directly connected to the Transmission network)
- 'E' (Embedded)
- 'G' (GSP Group, default BM unit for a supplier)
- 'I' (Interconnector User)
- 'S' (GSP Group, Specific BM unit identified by a supplier)
- 'V' Secondary BM Unit

2.2.11.5 Certification/Accreditation Status

One of the values:

- ‘1’ (applied for certification)
- ‘2’ (completed certification return)
- ‘3’ (certification report completed)
- ‘4’ (accredited)
- ‘5’ (accreditation removed)

2.2.11.6 Estimation method

One of the values:

- ‘A’ (Generation: Main meter data missing or incorrect in Primary and Secondary Outstations, Check meter data available – copied from Primary Check)
- ‘D’ (Demand: Main meter data missing or incorrect, Check meter data available – copied from Primary Check)
- ‘E’ (Demand: Main meter data missing or incorrect, Check meter not fully functional, but Main meter or Check meter register advance available – profiled using Meter Reading Estimation Tool)
- ‘I’ (Demand: Main meter data missing or incorrect, Check meter not fully functional, Main meter and Check meter register advance NOT available – profiled using Trend)
- ‘J’ (Generation: Main meter data missing, or incorrect, in Primary Outstation, Secondary Outstation main meter data available – substituted from Secondary Main)
- ‘K’ (Generation: Main and Check meter data missing or incorrect in Primary and Secondary Outstations, data estimated to zero awaiting confirmation of generation)
- ‘L’ (Demand; Primary Main meter data missing, or incorrect, Secondary Outstation Main meter data available – substituted from Secondary Main)
- ‘M’ (Demand: Main meter data missing or incorrect, data copied from suitable settlement period(s))
- ‘N’ (Validation Failure: Main meter data deemed correct)
- ‘U’ (Used party’s own reading)
- ‘X’ (Used different estimation method)

2.2.11.7 I/E Flag

One of the values:

‘I’ (Import)

‘E’ (Export)

2.2.11.8 L/S Flag

Either ‘L’ (Lead) or ‘S’ (Subsidiary). This is used in the Forward Contract Report (ECVAA-I022) to indicate whether the recipient of the report was the lead or subsidiary Party specified in a reported MVRNA Authorisation.

2.2.11.9 Main / Check Indicator

One of the values:

‘M’ (Main)

‘C’ (Check)

2.2.11.10 Measurement Quantity

One of the values:

‘AE’ (Active Export)

‘AI’ (Active Import)

‘RE’ (Reactive Export)

‘RI’ (Reactive Import)

2.2.11.11 Meter Reading Status

One of the values:

‘A’ (Valid)

‘B’ (Invalid)

‘C’ (Unavailable)

‘D’ (Substituted from Secondary Outstation Meter Data)

2.2.11.12 Multi-day Flag

One of the values:

‘M’ (Multi-day)

‘S’ (Single day)

Note that this flag is not used in any current report.

2.2.11.13 Organisation Type

One of the values:

‘BM’ (BMRA)
‘BC’ (BSCCo Ltd)
‘BP’ (BSC Party)
‘CD’ (CDCA)
‘CR’ (CRA)
‘DB’ (Distribution Business)
‘EC’ (ECVAA)
‘EN’ (ECVNA)
‘ER’ (Energy Regulator)
‘FA’ (FAA)
‘HA’ (Half Hourly Data Aggregator)
‘HC’ (Half Hourly Data Collector)
‘HP’ (Helpdesk)
‘IA’ (Interconnector Administrator)
‘IE’ (Interconnector Error Administrator)
‘MA’ (Meter Administration Agent)
‘MI’ (Market Index Data Provider)
‘MO’ (Half Hourly Meter Operator Agent))
‘MS’ (Supplier Meter Administration Agent)
‘MV’ (MVRNA)
‘NA’ (Non Half Hourly Data Aggregator)
‘NC’ (Non Half Hourly Data Collector)
‘NO’ (Non Half Hourly Meter Operator Agent)
‘PA’ (BSC Party Agent)
‘SA’ (SAA)

‘SG’ (BSC Service Agent)
‘SM’ (SMRA)
‘SO’ (NETSO)
‘SV’ (SVAA)
‘TA’ (TAA)
‘TG’ (Trading Party - Generator)
‘TI’ (Trading Party - Interconnector User)
‘TL’ (Transmission Loss Factor Agent)¹
‘TN’ (Trading Party - Non-physical)
‘TS’ (Trading Party - Supplier)
‘VP’ (Virtual Lead Party)

2.2.11.14 Party Sequence

Either ‘1’ or ‘2’. This is used in the Forward Contract Report (ECVAA-I022) to indicate whether the recipient of the report was the first or second Party specified in a reported ECVNA Authorisation.

2.2.11.15 P/C Flag

One of the values:

‘P’ (Production)
‘C’ (Consumption)

2.2.11.16 P/C Status

One of the values:

‘P’ (Production)
‘C’ (Consumption)

2.2.11.17 Point Type

One of the values:

‘BG’ (Gensets connected to TS; boundary point)
‘BS’ (Station Transformer connected to TS; boundary point)

¹ TLFA functionality was added for the Introduction of Zonal Transmission Losses on an Average Basis (P82), but will not be used.

‘BD’ (Demand sites connected to TS; boundary point)
‘BI’ (Interconnector with other TS from TS; boundary point)
‘BE’ (Embedded > 50MW; boundary point)
‘BO’ (Other embedded; boundary point)
‘BT’ (Interconnector with other TS from DS; boundary point)
‘SG’ (Grid Supply Points; system connection point)
‘SD’ (Interconnector between Distribution Networks; system connection point)

2.2.11.18 Price Derivation Code

One of the values:

‘A’ (SBP = Main price; SSP = Reverse Price)
‘B’ (SSP Capped to SBP)
‘C’ (SSP Defaulted to SBP)
‘D’ (SBP & SSP Defaulted to Market Price)
‘E’ (SSP & SBP Defaulted to Zero)
‘F’ (SSP = Main Price; SBP = Reverse Price)
‘G’ (SBP Capped to SSP)
‘H’ (SBP Defaulted to SSP)
‘I’ (SBP & SSP Defaulted to Market Price)
‘J’ (SSP & SBP Defaulted to Zero)
‘K’ (SSP & SBP Defaulted to Market Price)
‘L’ (SSP & SBP Defaulted to Zero)
‘N’ (SSP Defaulted to Main price; SBP = SSP)
‘P’ (SBP Defaulted to Main price; SSP = SBP)

2.2.11.19 Registration Status

One of the values:

‘S’ (Successful Registration)
‘P’ (Registration Pending)

2.2.11.20 Registration Type

One of the values:

‘PY’ (BSC Party)
‘PA’ (BSC Party Agent)
‘SA’ (BSC Service Agent)
‘BM’ (BM Unit)

‘EI’ (Interconnector)

‘TU’ (Trading Unit)

‘BP’ (Boundary Point/System Connection Point)

‘MS’ (Metering System)

‘GG’ (GSP Group)

‘GS’ (GSP)

‘MI’ (Market Index Data Provider)

2.2.11.21 Run Type

One of the values:

‘II’ (Interim Initial)

‘SF’ (Initial Settlement)

‘R1’ (First Reconciliation)

‘R2’ (Second Reconciliation)

‘R3’ (Third Reconciliation)

‘RF’ (Final Reconciliation)

‘D’ (Dispute)

‘DF’ (Final Dispute)

(Multiple dispute runs for the same Settlement Date are distinguished using run number.)

2.2.12 Example File Formats

The first example is based on CDCA-I0041. A file defined like this in the spreadsheet:

| | | | | | | | | | | | |
|-------|---|-------|---|---|---|--|--|--|---------------|----------|--|
| C0411 | F | | | | | | | | | | CDCA-I041: Interconnector Aggregation Report |
| AIV | R | 1-* | G | | | | | | | | Interconnector Aggregation Report |
| N0125 | D | | | 1 | | | | | integer(10) | | Interconnector Id |
| N0200 | D | | | 1 | | | | | date | | Settlement Date |
| AIP | R | 46-50 | G | | | | | | | | Aggregated Interconnector Volume - Period |
| N0201 | D | | | | 1 | | | | integer(2) | | Settlement Period |
| N0090 | D | | | | 1 | | | | boolean | | Estimate Indicator |
| N0062 | D | | | | 1 | | | | date | | Date of Aggregation |
| N0139 | D | | | | 1 | | | | decimal(10,3) | | Meter Volume |
| N0049 | D | | | | 1 | | | | integer(2) | | CDCA Run Number |
| N0121 | D | | | | 1 | | | | char | I/E Flag | Import/Export Indicator |

looks like this:

AAA|C0411001|D|20000204093055|CD|LOGICA|IA|FRANCE|516|

AIV|FRANCE|20000203|

AIP|1|F|20000204|501.2|1|E|

AIP|2|F|20000204|498.6|1|E|

..

AIP|48|F|20000204|468.9|1|E|

ZZZ|51|1067512|

Here are some more examples, based on the ECVN flow ECVAA-I004

An ECVN is defined as follows in the spreadsheet:

| | | | | | | | | | | | | |
|------------------|---|-----|---|---|--|--|--|--|---------------|-----|--|--------------------------------|
| E0041 | F | | | | | | | | | | | ECVAA-I004: ECVNs |
| | | | | | | | | | | | | |
| EDN | R | 1 | G | | | | | | | | | ECVNs |
| N0080 | D | | | 1 | | | | | text(10) | | | ECVNAA Id |
| N0297 | D | | | 1 | | | | | text(10) | | | ECVNAA Key |
| M0310 | D | | | 1 | | | | | text(10) | | | ECVN ECVNAA Id |
| N0077 | D | | | 1 | | | | | text(10) | | | ECVN Reference Code |
| N0081 | D | | | 1 | | | | | date | | | Effective From Date |
| N0083 | D | | | O | | | | | date | | | Effective To Date |
| OTD ² | R | 0-1 | G | | | | | | | | | Omitted Data No Change |
| N0483 | D | | | 1 | | | | | boolean | | | No Change to Existing Data |
| CD9 | R | 0-* | G | | | | | | | | | Energy Contract Volumes |
| N0201 | D | | | 1 | | | | | integer(2) | | | Settlement Period |
| N0085 | D | | | 1 | | | | | decimal(10,3) | MWh | | energy contract volume |

This allows the following file formats:

- 1) An open-ended ECVN for a single period (effective-to date field omitted):

AAA|E0041001|D|20000204093055|EN|ECVNA1|EC|LOGICA|545546||
 EDN|00195|3444343|00195|ECV65011|20000207||
 CD9|23|1445233.323|
 ZZZ|4|1313360725|

- 2) Termination of the previous ECVN after a month (no CDV records):

AAA|E0041001|D|20000204103055|EN|ECVNA1|EC|LOGICA|545676||
 EDN|00195|3444343|00195|ECV65011|20000207|20000307|
 ZZZ|3|51341339|

² The Omitted Data functionality has been developed, but is disabled.

3) ECVN covering a single (long) day (multiple CDV records):

```

AAA|E0041001|D|20000204113055|EN|ECVNA1|EC|LOGICA|545873||
EDN|1095|0634343|1095|ECV65043|20000208|20000208|
CD9|1|100|
CD9|2|100|
CD9|3|110.323|
CD9|4|0.9|
CD9|5|0|
...
CD9|45|120|
CD9|46|0|
CD9|47|-120|
CD9|48|-120.5|
CD9|49|-121.0|
CD9|50|-121.0|
ZZZ|53|456423424|

```

3. External Interface Summary

This section provides convenient summary lists of the interfaces by system and by party or party agent type. Note that this section defines the default rules for distribution of reports: copies of other reports may be requested through BSCCo Ltd. using the Flexible Reporting procedure.

3.1 Interfaces by BSC Agent

3.1.1 BMRA Interfaces

The BMRA publishes balancing mechanism information to BSC Parties, including:

- Balancing Mechanism Data
- System Related Data
- Derived Data

The BMRA interfaces to BSC Parties, Agents and Market Index Data Providers are listed below. Note that the numbering convention for the interfaces includes internal interfaces and interfaces with other Service Providers (including the NETSO) which are not listed here because they are included in the IDD Part 2.

| Agent-id | Name | Dirn | User | Type |
|-----------|----------------------------------|------|------------------|---------------------------|
| BMRA-I004 | Publish Balancing Mechanism Data | to | BMR Service User | BMRA Publishing Interface |
| BMRA-I005 | Publish System Related Data | to | BMR Service User | BMRA Publishing Interface |

| Agent-id | Name | Dirn | User | Type |
|-----------|--------------------------------------|------|---------------------------|-------------------------------|
| BMRA-I006 | Publish Derived Data | to | BMR Service User | BMRA Publishing Interface |
| BMRA-I019 | Publish Credit Default Notices | to | BMR Service User | BMRA Publishing Interface |
| BMRA-I010 | Data Exception Report | to | MIDP | Electronic data file transfer |
| BMRA-I015 | Receive Market Index Data | from | MIDP | Electronic data file transfer |
| BMRA-I028 | Receive REMIT Data | from | BMR Service User, NETSO | Electronic data file transfer |
| BMRA-I030 | Publish REMIT Data | to | BMR Service User | BMRA Publishing Interface |
| BMRA-I031 | Publish Transparency Regulation Data | to | BMR Service User, ENTSO-E | BMRA Publishing Interface |
| BMRA-I035 | Publish Trading Unit Data | to | BMR Service User | BMRA Publishing Interface |

3.1.2 CDCA Interfaces

The CDCA interfaces to BSC Parties and Agents are listed below. Note that the numbering convention for the interfaces includes internal interfaces (which are not listed).

| Agent-id | Name | Dirn | User | Type |
|-----------|--|------|--------------------------------------|------------------------|
| | | | | |
| CDCA-I001 | Aggregation Rules | From | BSC Party | Manual |
| CDCA-I003 | Meter Technical Data | From | MOA | Manual |
| CDCA-I003 | Meter Technical Data | From | Registrant | Manual |
| CDCA-I004 | Notify new Meter Protocol | To | MOA | Manual |
| CDCA-I005 | Load New Meter Protocol | From | MOA | Manual |
| CDCA-I006 | Meter Data for Proving Test | To | MOA | Manual |
| CDCA-I007 | Proving Test Report/Exceptions | To | BSC Party | Manual |
| CDCA-I007 | Proving Test Report/Exceptions | To | MOA | Manual |
| CDCA-I008 | Obtain Metered Data from Metering Systems | From | Physical meters | Meter System Interface |
| CDCA-I009 | Meter Period Data collected via site visit | From | Hand Held Device/Data Capture Device | Manual |

| Agent-id | Name | Dirn | User | Type |
|-----------|--|------|--|-------------------------------|
| | | | (MV-90) | |
| CDCA-I010 | Exception Report for missing and invalid meter period data | To | BSC Party | Electronic data file transfer |
| CDCA-I010 | Exception Report for missing and invalid meter period data | To | MOA | Electronic data file transfer |
| CDCA-I011 | Dial Readings from meter, for MAR | From | Hand Held Device/Data Capture Device (MV-90) | Manual |
| CDCA-I012 | Report raw meter data | To | BSC Party | Electronic data file transfer |
| CDCA-I012 | Report raw meter data | To | Distribution Business | Electronic data file transfer |
| CDCA-I013 | Response to Estimated data | From | BSC Party | Manual |
| CDCA-I014 | Estimated Data Report | To | BSC Party | Electronic data file transfer |
| CDCA-I014 | Estimated Data Report | To | MOA | Electronic data file transfer |
| CDCA-I015 | Reporting Metering Equipment Faults | From | MOA | Manual |
| CDCA-I017 | Meter Reading Schedule for MAR | To | BSC Party | Manual |
| CDCA-I017 | Meter Reading Schedule for MAR | To | MOA | Manual |
| CDCA-I018 | MAR Reconciliation Report | To | BSC Party | Manual |
| CDCA-I018 | MAR Reconciliation Report | To | Distribution Business | Manual |
| CDCA-I018 | MAR Reconciliation Report | To | MOA | Manual |
| CDCA-I019 | MAR Remedial Action Report | To | BSC Party | Manual |
| CDCA-I019 | MAR Remedial Action Report | To | Distribution Business | Manual |
| CDCA-I019 | MAR Remedial Action Report | To | MOA | Manual |
| CDCA-I021 | Notification of Metering Equipment Work | From | MOA | Manual |
| CDCA-I025 | Aggregation Rule Exceptions | To | BSC Party | Manual |
| CDCA-I026 | Aggregated Meter Volume Exceptions | To | BSC Party | Manual |
| CDCA-I029 | Aggregated GSP Group Take Volumes | To | BSC Party | Electronic data file transfer |
| CDCA-I029 | Aggregated GSP Group Take Volumes | To | Distribution Business | Electronic data file transfer |
| CDCA-I030 | Meter Period Data for Distribution Area | To | Distribution Business | Electronic data file transfer |

| Agent-id | Name | Dirn | User | Type |
|-----------|--|------|---------------------------------|-------------------------------|
| CDCA-I037 | Estimated Data Notification | To | BSC Party | Manual |
| CDCA-I037 | Estimated Data Notification | To | MOA | Manual |
| CDCA-I038 | Reporting Metering Equipment Faults | To | BSC Party | Manual |
| CDCA-I038 | Reporting Metering Equipment Faults | To | MOA | Manual |
| | | | | |
| CDCA-I041 | Interconnector Aggregation Report | To | IA | Electronic data file transfer |
| CDCA-I042 | BM Unit Aggregation Report | To | BSC Party | Electronic data file transfer |
| CDCA-I044 | Meter System Proving Validation | From | MOA | Manual |
| CDCA-I045 | Meter Data from routine work and Metering Faults | From | MOA/Data Capture Device (MV-90) | Manual |
| CDCA-I046 | Site Visit Inspection Report | To | BSC Party | Manual |
| CDCA-I046 | Site Visit Inspection Report | To | MOA | Manual |
| CDCA-I047 | Correspondence Receipt Acknowledgement | To | BSC Party | Manual |
| CDCA-I048 | Report of Aggregation Rules | To | BSC Party | Manual |
| CDCA-I051 | Report Meter Technical Details | To | BSC Party, | Manual |
| CDCA-I051 | Report Meter Technical Details | To | Distribution Business | Manual |
| CDCA-I051 | Report Meter Technical Details | To | MOA | Manual |
| CDCA-I054 | Meter Status Report | To | BSC Party, | Electronic data file transfer |
| CDCA-I054 | Meter Status Report | To | Distribution Business | Electronic data file transfer |
| CDCA-I054 | Meter Status Report | To | MOA, | Electronic data file transfer |
| CDCA-I055 | Transfer from SMRS information | From | BSC Party | Manual |
| CDCA-I057 | Transfer to SMRS information | from | BSC Party | Manual |
| CDCA-I059 | Initial Meter Reading Report | To | BSC Party | Manual |
| CDCA-I060 | SVA Party Agent Details | From | SVA Registrant, CVA Registrant | Manual |
| CDCA-I067 | Disconnected CVA BM Units | From | Distribution Businesses, NETSO | Manual |

3.1.3 CRA Interfaces

The CRA interfaces to BSC Parties and Agents are listed below. Note that the numbering convention for the interfaces includes internal interfaces (which are not listed).

| Agent-id | Name | Dirn | User | Type |
|----------|--|------|-----------------------|-------------------------------|
| CRA-I001 | BSC Party Registration Data | from | BSC Party | Manual |
| CRA-I002 | Interconnector Admin Registration Data | from | BSC Party | Manual |
| CRA-I003 | BSC Party Agent Registration Data | from | BSC Party Agent | Manual |
| CRA-I005 | BM Unit Registration Data | from | BSC Party | Manual |
| CRA-I006 | Trading Unit Registration | from | BSC Party | Manual |
| CRA-I007 | Boundary Point and System Connection Point Registration Data | from | DB | manual |
| CRA-I008 | Interconnector Registration | from | Distribution Business | Manual |
| CRA-I012 | CRA Encryption Key | to | BSC Party | Manual |
| CRA-I012 | CRA Encryption Key | to | BSC Party Agent | Manual |
| CRA-I012 | CRA Encryption Key | to | MIDP | Manual |
| CRA-I014 | Registration Report | to | BSC Party | Electronic data file transfer |
| CRA-I014 | Registration Report | to | BSC Party Agent | Electronic data file transfer |
| CRA-I021 | Registered Service List | to | BSC Party | Electronic data file transfer |
| CRA-I021 | Registered Service List | to | Public | Manual |
| CRA-I024 | Certification and Accreditation Status Report | to | BSC Party | Electronic data file transfer |
| CRA-I024 | Certification and Accreditation Status Report | to | BSC Party Agents | Electronic data file transfer |
| CRA-I027 | GSP Group and GSP Registration | from | Distribution Business | Manual |
| CRA-I031 | Metering System Data | from | BSC Party | Manual |
| CRA-I034 | Flexible Reporting Request | from | BSC Party | Manual |
| CRA-I034 | Flexible Reporting Request | from | BSC Party Agent | Manual |
| CRA-I034 | Flexible Reporting Request | from | BSC Service Agent | Manual |
| CRA-I034 | Flexible Reporting Request | from | BSCCo Ltd | Manual |
| CRA-I034 | Flexible Reporting Request | from | NETSO | Manual |
| CRA-I038 | Transfer from SMRS Information | from | BSC Party | Manual |

| Agent-id | Name | Dirn | User | Type |
|----------|---|------|------------------|--------|
| CRA-I040 | Transfer to SMRS Information | from | BSC Party | Manual |
| CRA-I048 | GC Breach or DC Breach Notification | to | BSC Party, BSCCo | Manual |
| CRA-I049 | GC Breach or DC Breach Estimation Challenge | from | BSC Party | Manual |
| CRA-I051 | Notification of Breach Challenge Data | to | BSC Party | Manual |

3.1.4 ECVAA Interfaces

The ECVAA interfaces to BSC Parties and Agents are listed below. Note that the numbering convention for the interfaces includes internal interfaces (which are not listed).

| Agent-id | Name | Dirn | User | Type |
|------------|---------------------------|------|-----------|--|
| ECVAA-I002 | ECVNAA Data | from | BSC Party | Manual |
| ECVAA-I002 | ECVNAA Data | from | ECVNA | Manual |
| ECVAA-I003 | MVRNAA Data | from | BSC Party | Manual |
| ECVAA-I003 | MVRNAA Data | from | MVRNA | Manual |
| ECVAA-I004 | ECVN | from | ECVNA | Electronic data file transfer |
| ECVAA-I005 | MVRNs | from | MVRNA | Electronic data file transfer |
| ECVAA-I007 | ECVNAA Feedback | to | BSC Party | Manual / Electronic data file transfer |
| ECVAA-I007 | ECVNAA Feedback | to | ECVNA | Manual / Electronic data file transfer |
| ECVAA-I008 | MVRNAA Feedback | to | BSC Party | Manual / Electronic data file transfer |
| ECVAA-I008 | MVRNAA Feedback | to | MVRNA | Manual / Electronic data file transfer |
| ECVAA-I009 | ECVN Feedback (Rejection) | to | BSC Party | Electronic data file transfer |
| ECVAA-I009 | ECVN Feedback (Rejection) | to | ECVNA | Electronic data file transfer |
| ECVAA-I010 | MVRN Feedback (Rejection) | to | BSC Party | Electronic data file transfer |

| Agent-id | Name | Dirn | User | Type |
|------------|---|------|--------------------|-------------------------------|
| ECVAA-I010 | MVRN Feedback (Rejection) | to | MVRNA | Electronic data file transfer |
| ECVAA-I013 | Authorisation Report | to | BSC Party | Electronic data file transfer |
| ECVAA-I013 | Authorisation Report | to | ECVNA | Electronic data file transfer |
| ECVAA-I013 | Authorisation Report | to | MVRNA | Electronic data file transfer |
| ECVAA-I014 | Notification Report | to | BSC Party | Electronic data file transfer |
| ECVAA-I014 | Notification Report | to | ECVNA | Electronic data file transfer |
| ECVAA-I014 | Notification Report | to | MVRNA | Electronic data file transfer |
| ECVAA-I021 | Credit Limit Warning | to | BSC Party | Manual |
| ECVAA-I022 | Forward Contract Report | to | BSC Party | Electronic data file transfer |
| ECVAA-I024 | Credit Cover Minimum Eligible Amount Request | from | BSC Party | Manual |
| ECVAA-I025 | Credit Cover Minimum Eligible Amount Report | to | BSC Party | Manual |
| ECVAA-I028 | ECVN Acceptance Feedback | to | BSC Party | Electronic data file transfer |
| ECVAA-I028 | ECVN Acceptance Feedback | to | ECVNA | Electronic data file transfer |
| ECVAA-I029 | MVRN Acceptance Feedback | to | BSC Party | Electronic data file transfer |
| ECVAA-I029 | MVRN Acceptance Feedback | to | MVRNA | Electronic data file transfer |
| ECVAA-I035 | Forward Contract Report Start Period Override | from | BSC Party | Manual |
| ECVAA-I037 | Receive Volume Notification Nullification Request | from | BSC Party | Manual |
| ECVAA-I038 | Issue Volume Notification Nullification Confirmation Report | to | BSC Party | Manual |
| ECVAA-I039 | Issue Nullification Completion Report | to | BSC Party | Manual |
| ECVAA-I042 | Banning/Unbanning Individual User Access to the ECVAA Web Service | from | BSC Party ECVNA | Manual |

| Agent-id | Name | Dirn | User | Type |
|------------|--|------|-----------|------------|
| | | | MVRNA | |
| ECVAA-I043 | ECVAA Web Service – BSC Party View ECVNs | to | BSC Party | Electronic |
| ECVAA-I044 | ECVAA Web Service – BSC Party View MVRNs | to | BSC Party | Electronic |
| ECVAA-I045 | ECVAA Web Service – ECVNA View ECVNs | to | ECVNA | Electronic |
| ECVAA-I046 | ECVAA Web Service – MVRNA View MVRNs | to | MVRNA | Electronic |

3.1.5 SAA Interfaces

The SAA interfaces to BSC Parties and Agents are listed below. Note that the numbering convention for the interfaces includes internal interfaces (which are not listed).

| Agent-id | Name | Dirn | User | Type |
|----------|--|------|----------------------|-------------------------------|
| SAA-I006 | BM Unit Metered Volumes for Interconnector Users | from | IA | Electronic data file transfer |
| SAA-I012 | Dispute Notification | from | BSC Party | Manual |
| SAA-I014 | Settlement Reports | to | BSC Party | Electronic data file transfer |
| SAA-I016 | Settlement Calendar | to | BSC Party | Manual |
| SAA-I016 | Settlement Calendar | to | BSC Party Agent | Manual |
| SAA-I017 | SAA Exception Reports | to | BSC Party (IA), MIDP | Electronic data file transfer |
| SAA-I018 | Dispute Reports | to | BSC Party | Manual |
| SAA-I030 | Receive Market Index Data | From | MIDP | Electronic data file transfer |

3.2 Interfaces by Corresponding Party

3.2.1 BSC Party Interfaces

The interfaces to BSC Parties in general are listed below.

| Dir'n | User | Agent-id | Name | Type |
|-------|--------------------------------|------------|--|-------------------------------|
| to | BSC Party | BMRA flows | Publish Balancing Mechanism Reports | Publishing |
| from | BSC Party | CDCA-I001 | Aggregation Rules | Manual |
| to | BSC Party | CDCA-I007 | Proving Test Report/Exceptions | Manual |
| to | BSC Party | CDCA-I010 | Exception Report for missing and invalid meter period data | Electronic data file transfer |
| to | BSC Party | CDCA-I012 | Report raw meter data | Electronic data file transfer |
| from | BSC Party | CDCA-I013 | Response to Estimated data | Manual |
| to | BSC Party | CDCA-I014 | Estimated Data Report | Electronic data file transfer |
| to | BSC Party | CDCA-I017 | Meter Reading Schedule for MAR | Manual |
| to | BSC Party | CDCA-I018 | MAR Reconciliation Report | Manual |
| to | BSC Party | CDCA-I019 | MAR Remedial Action Report | Manual |
| to | BSC Party | CDCA-I025 | Aggregation Rule Exceptions | Manual |
| to | BSC Party | CDCA-I026 | Aggregated Meter Volume Exceptions | Manual |
| to | BSC Party | CDCA-I029 | Aggregated GSP Group Take Volumes | Electronic data file transfer |
| to | BSC Party | CDCA-I037 | Estimated Data Notification | Manual |
| to | BSC Party | CDCA-I038 | Reporting Metering Equipment Faults | Manual |
| to | BSC Party | CDCA-I042 | BM Unit Aggregation Report | Electronic data file transfer |
| to | BSC Party | CDCA-I046 | Site Visit Inspection Report | Manual |
| to | BSC Party | CDCA-I047 | Correspondence Receipt Acknowledgement | Manual |
| to | BSC Party | CDCA-I048 | Report of Aggregation Rules | Manual |
| to | BSC Party | CDCA-I051 | Report Meter Technical Details | Manual |
| to | BSC Party | CDCA-I054 | Meter Status Report | Electronic data file transfer |
| to | BSC Party | CDCA-I059 | Initial Meter Reading Report | Manual |
| From | SVA Registrant, CVA Registrant | CDCA-I060 | SVA Party Agent Details | Manual |
| from | BSC Party | CRA-I001 | BSC Party Registration Data | Manual |
| from | BSC Party | CRA-I002 | Interconnector Admin Registration Data | Manual |
| from | BSC Party | CRA-I005 | BM Unit Registration Data | Manual |
| from | BSC Party | CRA-I006 | Trading Unit Registration | Manual |
| From | DB | CRA-I007 | Boundary Point and System Connection Point Registration Data | manual |
| to | BSC Party | CRA-I012 | CRA Encryption Key | Manual |
| to | BSC Party | CRA-I014 | Registration Report | Electronic data file transfer |

| Dir'n | User | Agent-id | Name | Type |
|-------|-----------|------------|---|---|
| to | BSC Party | CRA-I021 | Registered Service List | Electronic data file transfer |
| to | BSC Party | CRA-I024 | Certification and Accreditation Status Report | Electronic data file transfer |
| from | BSC Party | CRA-I031 | Metering System Data | Manual |
| to | BSC Party | CRA-I048 | GC or DC Breach Notification | Manual |
| from | BSC Party | CRA-I049 | GC Breach or DC Breach Challenge | Manual |
| to | BSC Party | CRA-I051 | Notification of Breach Challenge Data | Manual |
| from | BSC Party | ECVAA-I002 | ECVNAA Data | Manual |
| from | BSC Party | ECVAA-I003 | MVRNAA Data | Manual |
| to | BSC Party | ECVAA-I007 | ECVNAA Feedback | Manual / Electronic data file transfer |
| to | BSC Party | ECVAA-I008 | MVRNAA Feedback | Manual / Electronic data file transfer |
| to | BSC Party | ECVAA-I009 | ECVN Feedback | Electronic data file transfer |
| to | BSC Party | ECVAA-I010 | MVRN Feedback | Electronic data file transfer |
| to | BSC Party | ECVAA-I013 | Authorisation Report | Electronic data file transfer |
| to | BSC Party | ECVAA-I014 | Notification Report | Electronic data file transfer |
| to | BSC Party | ECVAA-I021 | Credit Limit Warning | Manual |
| to | BSC Party | ECVAA-I022 | Forward Contract Report | Electronic data file transfer |
| from | BSC Party | ECVAA-I024 | Credit Cover Minimum Eligible Amount Request | Manual |
| to | BSC Party | ECVAA-I025 | Credit Cover Minimum Eligible Amount Report | Manual |
| to | BSC Party | ECVAA-I028 | ECVN Acceptance Feedback | Electronic data file transfer |
| to | BSC Party | ECVAA-I029 | MVRN Acceptance Feedback | Electronic data file transfer |
| from | BSC Party | ECVAA-I035 | Forward Contract Report Start Period Override | Manual |
| from | BSC Party | ECVAA-I037 | Receive Volume Notification Nullification Request | Manual |
| to | BSC Party | ECVAA-I038 | Issue Volume Notification Nullification Confirmation Report | Manual |
| to | BSC Party | ECVAA-I039 | Issue Nullification Completion Report | Manual |
| from | BSC Party | CRA-I034 | Flexible Reporting Request | Manual |
| from | BSC Party | SAA-I012 | Dispute Notification | Manual |
| to | BSC Party | SAA-I014 | Settlement Reports | Electronic data file transfer |
| to | BSC Party | SAA-I016 | Settlement Calendar | Manual |
| to | BSC Party | SAA-I017 | SAA Exception Reports | Electronic data file |

| Dir'n | User | Agent-id | Name | Type |
|-------|-----------|----------|-----------------|----------|
| | | | | transfer |
| to | BSC Party | SAA-I018 | Dispute Reports | Manual |

Interfaces specific to distribution businesses are listed below:

| Dir'n | User | Agent-id | Name | Type |
|-------|-----------------------|-----------|---|-------------------------------|
| to | Distribution Business | CDCA-I012 | Report raw meter data | Electronic data file transfer |
| to | Distribution Business | CDCA-I018 | MAR Reconciliation Report | Manual |
| to | Distribution Business | CDCA-I019 | MAR Remedial Action Report | Manual |
| to | Distribution Business | CDCA-I029 | Aggregated GSP Group Take Volumes | Electronic data file transfer |
| to | Distribution Business | CDCA-I030 | Meter Period Data for Distribution Area | Electronic data file transfer |
| to | Distribution Business | CDCA-I051 | Report Meter Technical Details | Manual |
| to | Distribution Business | CDCA-I054 | Meter Status Report | Electronic data file transfer |
| from | Distribution Business | CDCA-I067 | Disconnected BM Units | Manual |
| from | Distribution Business | CRA-I008 | Interconnector Registration | Manual |
| from | Distribution Business | CRA-I027 | GSP Group and GSP Registration | Manual |

Interfaces specific to the Interconnector Administrator are listed below:

| Dir'n | User | Agent-id | Name | Type |
|-------|------|-----------|--|-------------------------------|
| to | IA | CDCA-I041 | Interconnector Aggregation Report | Electronic data file transfer |
| from | IA | SAA-I006 | BM Unit Metered Volumes for Interconnector Users | Electronic data file transfer |
| to | IA | SAA-I017 | SAA Exception Reports | Electronic data file transfer |

For completeness, interfaces specific to meter reading are listed below:

| Dir'n | User | Agent-id | Name | Type |
|-------|--|-----------|--|------------------------|
| from | Physical meters | CDCA-I008 | Obtain Metered Data from Metering Systems | Meter System Interface |
| from | Hand Held Device/Data Capture Device (MV-90) | CDCA-I009 | Meter Period Data collected via site visit | Manual |
| from | Hand Held Device/Data Capture Device | CDCA-I011 | Dial Readings from meter, for MAR | Manual |

| Dir'n | User | Agent-id | Name | Type |
|-------|---------------------------------|-----------|--|--------|
| | (MV-90) | | | |
| from | MOA/Data Capture Device (MV-90) | CDCA-I045 | Meter Data from routine work and Metering Faults | Manual |

3.2.2 BSC Party Agent Interfaces

The interfaces specific to BSC Party Agents in general are listed below.

| Dir'n | User | Agent-id | Name | Type |
|-------|-----------------|----------|---|-------------------------------|
| from | BSC Party Agent | CRA-I003 | BSC Party Agent Registration Data | Manual |
| to | BSC Party Agent | CRA-I012 | CRA Encryption Key | Manual |
| to | BSC Party Agent | CRA-I014 | Registration Report | Electronic data file transfer |
| To | BSC Party Agent | CRA-I024 | Certification and Accreditation Status Report | Electronic data file transfer |
| from | BSC Party Agent | CRA-I034 | Flexible Reporting Request | Manual |
| to | BSC Party Agent | SAA-I016 | Settlement Calendar | Manual |

Interfaces specific to Meter Operator Agents are listed below:

| Dir'n | User | Agent-id | Name | Type |
|-------|------|-----------|--|-------------------------------|
| to | MOA | TAA-I006 | Notification of Metering Systems to be subject to site visits and request for site details | Manual |
| to | MOA | TAA-I024 | Rectification Plan Response | Manual |
| from | MOA | CDCA-I003 | Meter Technical Data | Manual |
| to | MOA | CDCA-I004 | Notify new Meter Protocol | Manual |
| from | MOA | CDCA-I005 | Load New Meter Protocol | Manual |
| to | MOA | CDCA-I006 | Meter Data for Proving Test | Manual |
| to | MOA | CDCA-I007 | Proving Test Report/Exceptions | Manual |
| to | MOA | CDCA-I010 | Exception Report for missing and invalid meter period data | Electronic data file transfer |
| to | MOA | CDCA-I014 | Estimated Data Report | Electronic data file transfer |
| from | MOA | CDCA-I015 | Reporting Metering Equipment Faults | Manual |
| to | MOA | CDCA-I017 | Meter Reading Schedule for MAR | Manual |
| to | MOA | CDCA-I018 | MAR Reconciliation Report | Manual |
| to | MOA | CDCA-I019 | MAR Remedial Action Report | Manual |
| from | MOA | CDCA-I021 | Notification of Metering Equipment Work | Manual |
| to | MOA | CDCA-I037 | Estimated Data Notification | Manual |
| to | MOA | CDCA-I038 | Reporting Metering Equipment Faults | Manual |
| | | | | |
| from | MOA | CDCA-I044 | Meter System Proving Validation | Manual |
| from | MOA | CDCA-I045 | Meter Data from routine work and Metering Faults | Manual |
| to | MOA | CDCA-I046 | Site Visit Inspection Report | Manual |
| to | MOA | CDCA-I051 | Report Meter Technical Details | Manual |
| to | MOA | CDCA-I054 | Meter Status Report | Electronic data file transfer |

Interfaces specific to Meter Volume Reallocation Notification Agents are listed below:

| Dir'n | User | Agent-id | Name | Type |
|-------|-------|------------|----------------------|--|
| from | MVRNA | ECVAA-I003 | MVRNAA Data | Manual |
| from | MVRNA | ECVAA-I005 | MVRNs | Electronic data file transfer |
| to | MVRNA | ECVAA-I008 | MVRNAA Feedback | Manual / Electronic data file transfer |
| to | MVRNA | ECVAA-I010 | MVRN Feedback | Electronic data file transfer |
| to | MVRNA | ECVAA-I013 | Authorisation Report | Electronic data file transfer |

| Dir'n | User | Agent-id | Name | Type |
|-------|-------|------------|--------------------------|-------------------------------|
| to | MVRNA | ECVAA-I014 | Notification Report | Electronic data file transfer |
| to | MVRNA | ECVAA-I029 | MVRN Acceptance Feedback | Electronic data file transfer |

Interfaces specific to ECVN Agents are listed below:

| Dir'n | User | Agent-id | Name | Type |
|-------|-------|------------|--------------------------|--|
| from | ECVNA | ECVAA-I002 | ECVNAA Data | Manual |
| from | ECVNA | ECVAA-I004 | ECVN | Electronic data file transfer |
| to | ECVNA | ECVAA-I007 | ECVNAA Feedback | Manual / Electronic data file transfer |
| to | ECVNA | ECVAA-I009 | ECVN Feedback | Electronic data file transfer |
| to | ECVNA | ECVAA-I013 | Authorisation Report | Electronic data file transfer |
| to | ECVNA | ECVAA-I014 | Notification Report | Electronic data file transfer |
| to | ECVNA | ECVAA-I028 | ECVN Acceptance Feedback | Electronic data file transfer |

3.2.3 Market Index Data Provider Interfaces

The interfaces to Market Index Data Providers in general are listed below:

| Dir'n | User | Agent-id | Name | Type |
|-------|------|-----------|-----------------------|-------------------------------|
| to | MIDP | CRA-I012 | CRA Encryption Key | Manual |
| to | MIDP | BMRA-I010 | Data Exception Report | Electronic data file transfer |
| from | MIDP | BMRA-I015 | Market Index Data | Electronic data file transfer |
| to | MIDP | SAA-I017 | SAA Exception Report | Electronic data file transfer |
| from | MIDP | SAA-I030 | Market Index Data | Electronic data file transfer |

4. BMRA External Inputs and Outputs

The outputs from BMRA which are presented to users are available in two formats - near real time broadcast of data using TIBCO messaging software and data download files available from the BMRA web site. The TIBCO type messages are available only on the High Grade Service, whereas the data files for download are obtainable from both the High Grade Service and the Low Grade Service.

The precise nature of the data available is specified in the BMRA URS. As noted in section 2.1.4, some of this data is provided via a publishing interface and it is not appropriate to include the physical structure of the screens data in this document.

Sections 4.1 to 4.3 comprise the logical definition of the data. Section 4.4 gives information on the contents of the raw data published in TIB message format from the BMRA High Grade Service, and section 4.5 gives information on the contents of the data files which are available for download from both the BMRA High Grade Service and the BMRA Low Grade Service web sites.

4.1 BMRA-I004: (output) Publish Balancing Mechanism Data

| | | | |
|--|--|--|---|
| Interface ID: BMRA-I004 | User: BMR Service User | Title: Publish Balancing Mechanism Data | BSC reference: BMRA SD 8.2, P71, P217 |
| Mechanism: BMRA Publishing Interface | Frequency: Continuous (as made available from the NETSO) | Volumes: Between 1000 - 5000 BM units. In each settlement period, at least 1 FPN data, 1 dynamic data and 1 Bid-Offer Acceptance per BM unit. At most 10 Bid-Offer Pairs per BM unit (estimated 1000) that receives bids and offers. Up to 5000 Balancing Services Volume data items per day. | |
| Interface Requirement: The BMRA Service shall publish Balancing Mechanism data continuously, as it is received from the NETSO. The Balancing Mechanism data consists of the following: Gate Closure Data Acceptance and Balancing Services Data Declaration Data | | | |

The following breakdown summarises the details which will be available.

4.1.1 Gate Closure Data

| |
|--|
| Point FPN Data BM Unit ID Time From Level From (MW) Time To Level To (MW) Point Quiescent FPN Data BM Unit ID Time From Level From (MW) Time To Level To (MW) |
| Bid-Offer Data: BM Unit ID Time From Time To Bid-Offer Pair Number Level From (MW) Level To (MW) Offer Price (£/MWh) Bid Price (£/MWh) |
| Maximum Export Limit: BM Unit ID Time From Maximum Export Level From (MW) Time To Maximum Export Level To (MW) Maximum Import Limit: BM Unit ID Time From Maximum Import Level From (MW) Time To Maximum Import Level To (MW) |

4.1.2 Acceptance and Balancing Services Data

| |
|--|
| For Settlement Dates prior to the P217 effective date: Bid-Offer Acceptance Level Data: BM Unit ID Acceptance Time Deemed Acceptance Flag Time From Level From (MW) Time To Level To (MW) For Settlement Dates on or after the P217 effective date: Bid-Offer Acceptance Level Flagged Data: BM Unit ID Acceptance Time Deemed Acceptance Flag SO-Flag Time From Level From (MW) Time To Level To (MW) |
|--|

| |
|--|
| Acceptance STOR Provider Flag (for dates after the P217 effective date and before the P305 effective date the STOR Provider Flag will be reported as null) |
| Applicable Balancing Services Volume Data BM Unit ID Settlement Date Settlement Period Applicable Balancing Services Volume (MWh) |

4.1.3 Declaration Data

| |
|--|
| Run Up Rates Export BM Unit ID Effective Time Run-Up Rate 1 (MW / minute) Run-Up Elbow 2 (MW) Run-Up Rate 2 (MW / minute) Run-Up Elbow 3 (MW) Run-Up Rate 3 (MW / minute) |
| Run Up Rates Import BM Unit ID Effective Time Run-Up Rate 1 (MW / minute) Run-Up Elbow 2 (MW) Run-Up Rate 2 (MW / minute) Run-Up Elbow 3 (MW) Run-Up Rate 3 (MW / minute) |
| Run Down Rates Export BM Unit ID Effective Time Run-Down Rate 1 (MW / minute) Run-Down Elbow 2 (MW) Run-Down Rate 2 (MW / minute) Run-Down Elbow 3 (MW) Run-Down Rate 3 (MW / minute) |
| Run Down Rates Import BM Unit ID Effective Time Run-Down Rate 1 (MW / minute) Run-Down Elbow 2 (MW) Run-Down Rate 2 (MW / minute) Run-Down Elbow 3 (MW) Run-Down Rate 3 (MW / minute) |
| Notice to Deviate from Zero BM Unit ID Effective Time Notice To Deviate From Zero (Minutes) |
| Notice to Deliver Offers BM Unit ID Effective Time Notice to Deliver Offers (Minutes) |
| Notice to Deliver Bids BM Unit ID Effective Time Notice to Deliver Bids (Minutes) |
| Minimum Zero Time BM Unit ID Effective Time Minimum Zero Time (Minutes) |
| Minimum Non-Zero Time BM Unit ID Effective Time Minimum Non-Zero Time (Minutes) |

| |
|------------------------------------|
| Stable Export Limit |
| BM Unit ID |
| Effective Time |
| Stable Export Limit (MW) |
| Stable Import Limit |
| BM Unit ID |
| Effective Time |
| Stable Import Limit (MW) |
| Maximum Delivery Volume |
| BM Unit ID |
| Effective Time |
| Maximum Delivery Limit (MWh) |
| Maximum Delivery Period |
| BM Unit ID |
| Effective Time |
| Maximum Delivery Period (Minutes) |
| Physical Interface Details: |

4.2 BMRA-I005: (output) Publish System Related Data

| | | | |
|---|--|--|---|
| Interface ID: BMRA-I005 | User: BMR Service User | Title: Publish System Related Data | BSC reference: BMRA SD 7.2, P8, P78, P172, P219, P220, P217, P243, P244, CP1333, CP1367 |
| Mechanism: BMRA Publishing Interface | Frequency: Continuous (as made available from the NETSO) | Volumes: Various | |
| Interface Requirement: The BMRA Service shall publish System data continuously, as it is received from the NETSO. The System Related data consists of the following: Indicated Generation Publishing Period Commencing Time Start Time of ½ Hour Period National/Boundary Identifier Sum of PN Generation (MW) Indicated Demand Publishing Period Commencing Time Start Time of ½ Hour Period National/Boundary Identifier Sum of PN Demand (MW) National Demand Forecast ³ Publishing Period Commencing Time Start Time of ½ Hour Period National/Boundary Identifier Demand (MW) Transmission System Demand Forecast ⁴ Publishing Period Commencing Time Start Time of ½ Hour Period National/Boundary Identifier Demand (MW) Initial National Demand Out-Turn Publishing Period Commencing Time | | | |

³ Note that the DF flow ceases publication in Q1/2009

⁴ Note that the DF flow ceases publication in Q1/2009

| Interface ID: BMRA-I005 | User: BMR Service User | Title: Publish System Related Data | BSC reference: BMRA SD 7.2, P8, P78, P172, P219, P220, P217, P243, P244, CP1333, CP1367 |
|---|-------------------------------------|---|--|
| <p>Start Time of ½ Hour Period Demand (MW)</p> <p>Initial Transmission System Demand Out-Turn Publishing Period Commencing Time Start Time of ½ Hour Period Demand (MW)</p> <p>National Demand Forecast Day, 2-14 Day Publishing Period Commencing Time Day of Forecast Demand (MW)</p> <p>Transmission System Demand Forecast Day, 2-14 Day Publishing Period Commencing Time Day of Forecast Demand (MW)</p> <p>National Demand Forecast Week, 2-52 Week Publishing Period Commencing Time Calendar Week Number Demand (MW)</p> <p>Transmission System Demand Forecast Week, 2-52 Week Publishing Period Commencing Time Calendar Week Number Demand (MW)</p> <p>National Surplus Forecast, 2-14 Day Publishing Period Commencing Time Day of Forecast Surplus (MW)</p> <p>National Surplus Forecast, 2-52 Week Publishing Period Commencing Time Calendar Week Number Surplus (MW)</p> <p>Indicated Margin Publishing Period Commencing Time Start Time of ½ Hour Period National/Boundary Identifier Margin (MW)</p> <p>Indicated Imbalance Publishing Period Commencing Time Start Time of ½ Hour Period National/Boundary Identifier Imbalance Value (MW)</p> <p>National Output Usable, 2-14 Day Publication Time System Zone Settlement Date Output Usable (MW)</p> <p>Zonal Output Usable, 2-14 Day Publication Time System Zone Settlement Date Output Usable (MW)</p> <p>National Output Usable by Fuel Type, 2-14 Day Fuel Type Publication Time System Zone Settlement Date Output Usable (MW)</p> <p>National Output Usable by Fuel Type and BM Unit, 2-14 Day BM Unit Fuel Type Publication Time System Zone Settlement Date</p> | | | |

| Interface ID: BMRA-I005 | User: BMR Service User | Title: Publish System Related Data | BSC reference: BMRA SD 7.2, P8, P78, P172, P219, P220, P217, P243, P244, CP1333, CP1367 |
|---|-------------------------------------|---|--|
| <p>Output Usable (MW)</p> <p>National Output Usable, 2-49 Day</p> <p>Publication Time</p> <p>System Zone</p> <p>Settlement Date</p> <p>Output Usable (MW)</p> <p>Zonal Output Usable, 2-49 Day</p> <p>Publication Time</p> <p>System Zone</p> <p>Settlement Date</p> <p>Output Usable (MW)</p> <p>National Output Usable, 2-52 Week</p> <p>Publication Time</p> <p>System Zone</p> <p>Calendar Week Number</p> <p>Calendar Year</p> <p>Output Usable (MW)</p> <p>Zonal Output Usable, 2-52 Week</p> <p>Publication Time</p> <p>System Zone</p> <p>Calendar Week Number</p> <p>Calendar Year</p> <p>Output Usable (MW)</p> <p>National Output Usable by Fuel Type, 2-52 Week</p> <p>Fuel Type</p> <p>Publication Time</p> <p>System Zone</p> <p>Calendar Week Number</p> <p>Calendar Year</p> <p>Output Usable (MW)</p> <p>National Output Usable by Fuel Type and BM Unit, 2-52 Week</p> <p>BM Unit</p> <p>Fuel Type</p> <p>Publication Time</p> <p>System Zone</p> <p>Calendar Week Number</p> <p>Calendar Year</p> <p>Output Usable (MW)</p> <p>National Output Usable, 1 year ahead</p> <p>Publication Time</p> <p>System Zone</p> <p>Calendar Week Number</p> <p>Calendar Year</p> <p>Output Usable (MW)</p> <p>National Output Usable, 2 years ahead</p> <p>Publication Time</p> <p>System Zone</p> <p>Calendar Week Number</p> <p>Calendar Year</p> <p>Output Usable (MW)</p> <p>National Output Usable, 3 years ahead</p> <p>Publication Time</p> <p>System Zone</p> <p>Calendar Week Number</p> <p>Calendar Year</p> <p>Output Usable (MW)</p> <p>National Output Usable, 4 years ahead</p> <p>Publication Time</p> <p>System Zone</p> <p>Calendar Week Number</p> <p>Calendar Year</p> <p>Output Usable (MW)</p> | | | |

| Interface ID: BMRA-I005 | User: BMR Service User | Title: Publish System Related Data | BSC reference: BMRA SD 7.2, P8, P78, P172, P219, P220, P217, P243, P244, CP1333, CP1367 |
|---|-------------------------------------|---|--|
| National Output Usable, 5 years ahead Publication Time System Zone Calendar Week Number Calendar Year Output Usable (MW) Zonal Output Usable, 1 year ahead Publication Time System Zone Calendar Week Number Calendar Year Output Usable (MW) Zonal Output Usable, 2 years ahead Publication Time System Zone Calendar Week Number Calendar Year Output Usable (MW) Zonal Output Usable, 3 years ahead Publication Time System Zone Calendar Week Number Calendar Year Output Usable (MW) Zonal Output Usable, 4 years ahead Publication Time System Zone Calendar Week Number Calendar Year Output Usable (MW) Zonal Output Usable, 5 years ahead Publication Time System Zone Calendar Week Number Calendar Year Output Usable (MW) Generating Plant Demand Margin, 2-14 Days Publication Time Settlement Date Generating Plant Demand Margin (MW) Generating Plant Demand Margin, 2-52 Weeks Publication Time Calendar Week Number Generating Plant Demand Margin (MW) System Zone Map NGC-BSC BM Unit Mapping System Warnings SO-SO Prices <u>Balancing Services Adjustment Data:</u> Settlement Date Settlement Period Net Energy Buy Price Cost Adjustment (EBCA) (£) Net Energy Buy Price Volume Adjustment (EBVA) (MWh) Net System Buy Price Volume Adjustment (SBVA) (MWh) Buy Price Price Adjustment (BPA) (£/MWh) Net Energy Sell Price Cost Adjustment (ESCA) (£) Net Energy Sell Price Volume Adjustment (ESVA) (MWh) Net System Sell Price Volume Adjustment (SSVA) (MWh) Sell Price Price Adjustment (SPA) (£/MWh) <u>Balancing Services Adjustment Action Data (for Settlement Dates after, and including the P217 effective date):</u> Settlement Date | | | |

| | | | |
|--|----------------------------------|--|---|
| Interface ID: BMRA-I005 | User: BMR Service User | Title: Publish System Related Data | BSC reference: BMRA SD 7.2, P8, P78, P172, P219, P220, P217, P243, P244, CP1333, CP1367 |
| <p>Settlement Period</p> <p>Balancing Services Adjustment Action ID (unique for Settlement Period)</p> <p>Balancing Services Adjustment Action Cost (£)</p> <p>Balancing Services Adjustment Action Volume (MWh)</p> <p>Balancing Services Adjustment Action SO-Flag (T/F)</p> <p>Balancing Services Adjustment Action STOR Flag (T/F) (for dates after the P217 effective date and before the P305 effective date the STOR Provider Flag will be reported as null)</p> <p><u>Market Index Data:</u></p> <p>Market Index Data Provider Identifier</p> <p>Settlement Date</p> <p>Settlement Period (1-50)</p> <p>Market Index Price</p> <p>Market Index Volume</p> <p>Missing Market Index Data Messages</p> <p><u>Temperature Data</u></p> <p>Publishing Period Commencing Time</p> <p>Settlement Date</p> <p>Outturn Temperature (degrees Celsius)</p> <p>Normal Reference Temperature (degrees Celsius)</p> <p>High Reference Temperature (degrees Celsius)</p> <p>Low Reference Temperature (degrees Celsius)</p> <p>Wind Generation Forecast</p> <p>Publishing Period Commencing Time</p> <p>Start Time of ½ Hour Period</p> <p>Generation Forecast (MW)</p> <p>Total Registered Capacity (MW)</p> <p>Instantaneous Generation By Fuel Type</p> <p>Publishing Period Commencing Time</p> <p>Start Time of ½ Hour Period</p> <p>Spot Time</p> <p>Fuel Type – ID representing one of:</p> <p>CCGT</p> <p>Oil Plant</p> <p>OCGT</p> <p>Coal</p> <p>Nuclear</p> <p>Power Park Module</p> <p>Pumped Storage Plant</p> <p>Non Pumped Storage Hydro Plant</p> <p>External Interconnector Flows from France to England</p> <p>External Interconnector Flows from Northern Ireland to Scotland</p> <p>External Interconnector Flows from the Netherlands to England</p> <p>External Interconnector Flows from Ireland to Wales</p> <p>External Interconnector Flows from Belgium to England</p> <p>Biomass</p> <p>Other</p> <p>Generation (MW)</p> <p>Half Hourly Generation By Fuel Type</p> <p>Publishing Period Commencing Time</p> <p>Start Time of ½ Hour Period</p> <p>Fuel Type – ID representing one of:</p> <p>CCGT</p> <p>Oil Plant</p> <p>OCGT</p> <p>Coal</p> <p>Nuclear</p> <p>Power Park Module</p> <p>Pumped Storage Plant</p> <p>Non Pumped Storage Hydro Plant</p> <p>External Interconnector Flows from France to England</p> <p>External Interconnector Flows from Northern Ireland to Scotland</p> <p>External Interconnector Flows from the Netherlands to England</p> | | | |

| Interface ID: BMRA-I005 | User: BMR Service User | Title: Publish System Related Data | BSC reference: BMRA SD 7.2, P8, P78, P172, P219, P220, P217, P243, P244, CP1333, CP1367 |
|---|------------------------------|--|---|
| <p> External Interconnector Flows from Ireland to Wales External Interconnector Flows from Belgium to England Biomass Other Generation (MW) Daily Energy Volume Data Publishing Period Commencing Time Settlement Date Outturn Volume (MWh) Normal Volume (MWh) High Volume (MWh) Low Volume (MWh) Realtime Transmission System Frequency Data Publishing Period Commencing Time Spot Time Frequency (Hz) Non-BM STOR Out-Turn Publishing Period Commencing Time Start Time of ½ Hour Period Non-BM STOR Volume (MWh) Loss of Load Probability and De-rated Margin Settlement Date Settlement Period 1200 Forecast – LoLP and DRM 8 hour forecast – LoLP and DRM 4 hour forecast – LoLP and DRM 2 hour forecast – LoLP and DRM 1 hour forecast – LoLP and DRM Demand Control Instruction Demand Control ID Affected DSO Instruction Sequence Demand Control Event Flag Time From Time To Demand Control Level SO-Flag STOR Availability Window Season Year Season Number STOR Availability Dates Weekday Start Time Weekday End Time Non-weekday Start Time Non-weekday End Time </p> | | | |
| <p>The System Warnings functionality will be utilised, within existing constraints, to report the issuing of all Emergency Instructions, and to notify whether or not each instruction should be treated as an Excluded Emergency Acceptance.</p> | | | |
| <p> Balancing Services Adjustment Data for Settlement Dates after, and including the P217 effective date will always have a value of zero for the following data items: Net Energy Buy Price Cost Adjustment (EBCA) Net Energy Buy Price Volume Adjustment (EBVA) Net System Buy Price Volume Adjustment (SBVA) Net Energy Sell Price Cost Adjustment (ESCA) Net Energy Sell Price Volume Adjustment (ESVA) Net System Sell Price Volume Adjustment (SSVA) </p> | | | |

| | | | |
|--|----------------------------------|--|---|
| Interface ID: BMRA-I005 | User: BMR Service User | Title: Publish System Related Data | BSC reference: BMRA SD 7.2, P8, P78, P172, P219, P220, P217, P243, P244, CP1333, CP1367 |
| Physical Interface Details: | | | |
| Within the Balancing Services Adjustment Action Data the SO-Flag will be set to 'T' where the associated Action has been flagged by the NETSO as potentially impacted by transmission constraints. | | | |

4.3 BMRA-I006: (output) Publish Derived Data

| | | | |
|--|--|--|--|
| Interface ID: BMRA-I006 | User: BMR Service User | Title: Publish Derived Data | BSC reference: BMRA SD 9.1, CP560, P18A, P78, P217, CP1333, P305 |
| Mechanism BMRA Publishing Interface | Frequency: Once, for each settlement period. | Volumes: Between 1000 - 5000 BM units. In each settlement period, at least 1 FPN data and 1 Bid- Offer Acceptance per BM unit. At most 12 Bid- Offer Pairs per BM unit (estimated 1000) that receives bids and offers. | |

Interface Requirement:

The BMRA Service shall normally publish Derived data once for each settlement period, as soon as it is calculated. Where as a result of an outage, calculations have been based on incomplete or incorrect data from the NETSO, derived data may be republished.

The Derived data shall include:

Derived BM Unit Data (for all Settlement Dates)

Period Bid and Offer Acceptance Volumes (QAB^{kn}_{ij} , QAO^{kn}_{ij} and CADL Flag)

Estimated Period Balancing Mechanism Bid and Offer Cashflows (CB^{n}_{ij} and CO^{n}_{ij})

Derived BM Unit Data (for Settlement Dates prior to the P217 effective date)

Estimated Period BM Unit Total Accepted Bid and Offer Volume (QAB^{n}_{ij} and QAO^{n}_{ij})

Derived BM Unit Data (for Settlement Dates after, and including the P217 effective date)

Estimated Period BM Unit Original Accepted Bid and Offer Volume (QAB^{n}_{ij} and QAO^{n}_{ij})

Estimated Period BM Unit Tagged Accepted Bid and Offer Volume ($QTAB^{n}_{ij}$ and $QTAO^{n}_{ij}$)

Estimated Period BM Unit Repriced Accepted Bid and Offer Volume ($QRAB^{n}_{ij}$ and $QRAO^{n}_{ij}$)

Estimated Period BM Unit Originally-Priced Accepted Bid and Offer Volume ($QOAB^{n}_{ij}$ and $QOAO^{n}_{ij}$)

Derived System-wide Data (for Settlement Dates prior to the P217 effective date)

Estimated System Sell/Buy Prices (SBP_i and SSP_i)

Price Derivation Code (PDC_i)

Indicative Net Imbalance Volume (NIV_i)

Total Accepted Bid Volume and Total Accepted Offer Volume

Total Unpriced Accepted Bid Volume and Total Unpriced Accepted Offer Volume

Total Priced Accepted Bid Volume and Total Priced Accepted Offer Volume

Total Bid Volume and Total Offer Volume

Derived System-wide Data (for Settlement Dates after, and including the P217 effective date)

Estimated System Sell/Buy Prices (SBP_i and SSP_i)

Price Derivation Code (PDC_i)

Indicative Net Imbalance Volume (NIV_i)

Replacement Price (RP_i)

Replacement Price Calculation Volume (RPV_i)

Total Accepted Bid Volume

Total Accepted Offer Volume

Tagged Accepted Bid Volume

Tagged Accepted Offer Volume

Total Adjustment Buy Volume

Total Adjustment Sell Volume

Tagged Adjustment Buy Volume

Tagged Adjustment Sell Volume

Reserve Scarcity Price (for dates after the P217 effective date and before the P305 effective

| Interface ID: | User: | Title: | BSC reference: |
|---------------|------------------|----------------------|---|
| BMRA-I006 | BMR Service User | Publish Derived Data | BMRA SD 9.1, CP560, P18A, P78, P217, CP1333, P305 |

date the STOR Provider Flag will be reported as null)

The BMRA Service shall publish details of the Indicative System Price Stacks once for each Settlement Period. This will detail all items on both the Buy and Sell Stacks including a description of the ordering of items within each stack. Each stack item will have the following data reported against it:

Indicative System Price Stack Item (see below for further details)

- Index
- Component Identifier
- Acceptance Number
- Bid-Offer Pair Number
- CADL Flag (T/F)
- SO-Flag (T/F)
- Acceptance STOR Provider Flag (T/F)
- Repriced Indicator (T/F)
- Bid-Offer Original Price (£/MWh)
- Volume (MWh)
- DMAT Adjusted Volume (MWh)
- Arbitrage Adjusted Volume (MWh)
- NIV Adjusted Volume (MWh)
- PAR Adjusted Volume (MWh)
- Reserve Scarcity Price (£/MWh)
- Stack Item Original Price (£/MWh)
- Final Price (£/MWh)
- Transmission Loss Multiplier
- TLM Adjusted Volume (MWh)
- TLM Adjusted Cost (£)

Notes:

- i. The Index will be a unique positive integer representing the item's relative position in the stack. The first item in the stack has an index of 1. The reported ordering of items reflects the final order of the stack.
- ii. The Component Identifier will hold the associated BM Unit's Identifier for Acceptance Volume stack items, the NETSO allocated ID for Disaggregated BSAD stack items or a unique ID that BSC Agent System derives for Demand Control Volume stack items.
- iii. For Disaggregated BSAD and Demand Control Volume stack items no Acceptance Number and Bid Offer Pair Number values will be reported.
- iv. The Repriced Indicator will reflect whether or not the stack item has been repriced.
- v. The Price value will be the final derived price for the stack item as used to derive the TLM Adjusted Cost (i.e. it will be the Replacement Price where appropriate).
- vi. The various "Adjusted Volume" values will be that part of the original volume that remains untagged after applying the associated process – e.g. PAR Adjusted Volume will be that volume which remains untagged after having carried out PAR Tagging.
- vii. The Transmission Loss Multiplier will be the Transmission Loss Multiplier for the stack item's associated BM Unit. For Disaggregated BSAD stack items, which have no associated BM Unit, this will always be a value of 1.
- viii. $TLM \text{ Adjusted Volume} = PAR \text{ Adjusted Volume} \times TLM$
- ix. $TLM \text{ Adjusted Cost} = PAR \text{ Adjusted Volume} \times TLM \times Price$
- x. The Bid-Offer Original Price is the Bid or Offer Price associated to the System Action based on its associated Bid-Offer Data or Balancing Services Adjustment Data sent by the NETSO. For STOR Actions, the Bid-Offer Original Price is sometimes referred to as the Utilisation Price.
- xi. The Reserve Scarcity Price will be null for System Actions that are not STOR Actions.
- xii. The Stack Item Original Price is a System Action's initial price when first added to a price stack (i.e. the System Action Price (SAP)). Typically the Stack Item Original Price will be equal to the Bid-Offer Original Price except if it is a STOR Action in which case it will be the greater of the Bid-Offer Original Price and the Reserve Scarcity Price.

For a full derivation of the various data items, refer to the Indicative System Price Calculation in the BMRA URS.

Derived data will be published for each Settlement Period within <CADL> + 15 (parameterised) minutes from the end of the Settlement Period.

| | | | |
|---|----------------------------------|---------------------------------------|--|
| Interface ID: BMRA-I006 | User: BMR Service User | Title: Publish Derived Data | BSC reference: BMRA SD 9.1, CP560, P18A, P78, P217, CP1333, P305 |
| Physical Interface Details: See SAA URS for Price Derivation Codes. | | | |

4.3.1 Indicative System Price Stack Data

For a full definition of what the variables mean and their derivation, refer to the Indicative System Price Calculation in the BMRA URS.

Each stack (Buy or Sell) will consist of a number of stack items listed in descending price order. Each stack item's data consists of the following:

| Data Item | Description |
|--------------------------|--|
| Index | A unique positive integer representing the item's relative position in the stack. The first item in the stack has an index of 1. The reported ordering of items reflects the final order of the stack. |
| Component Identifier | For Acceptance Volume stack items the Component Identifier will represent the associated BM Unit's Identifier. For Balancing Services Adjustment Action stack items Component Identifier will represent the NETSO allocated ID or for Demand Control Volume stack items a unique ID that the BSC Agent's System derives. |
| Acceptance Number | Only reported for Acceptance Volume stack items (null for Balancing Services Adjustment Action and Demand Control Volume stack items.) |
| Bid-Offer Pair Number | Only reported for Acceptance Volume stack items (null for Balancing Services Adjustment Action and Demand Control Volume stack items.) |
| CADL Flag | A value of 'T' indicates where an Acceptance stack item is considered to be a Short Duration Acceptance. |
| SO-Flag | A value of 'T' indicates where the NETSO has flagged this stack item as potentially impacted by transmission constraints. |
| STOR Provider Flag | A value of 'T' indicates where the NETSO has flagged this stack item as relating to STOR Providers. This flag only indicates that the action MAY be a STOR Action. |
| Repriced Indicator | A value of 'T' indicates where a stack item has been repriced. |
| Bid-Offer Original Price | The Offer or Bid Price or BSAA Cost of the stack item (£/MWh) as reported in the original BOD or BSAD |
| Reserve Scarcity Price | For a particular Settlement Period, the price determined as the product of VOLL and LoLP. |

| Data Item | Description |
|------------------------------|--|
| Stack Item Original Price | The original price of the stack item (£/MWh), typically the Stack Item Original Price will be equal to the Bid-Offer Original Price except if it is a STOR Action in which case it will be the greater of the Bid-Offer Original Price and the Reserve Scarcity Price. |
| Volume | The initial volume of the stack item (MWh). |
| DMAT Adjusted Volume | The volume of the stack item which is not considered to be impacted by DMAT (MWh). |
| Arbitrage Adjusted Volume | The volume of the stack item which is not impacted by Arbitrage (MWh). |
| NIV Adjusted Volume | The volume of the stack item which is not NIV tagged (MWh). |
| PAR Adjusted Volume | The volume of the stack item which is not PAR tagged (MWh). |
| Final Price | The final price of the stack item (as used to determined the TLM Adjusted Cost) (£/MWh). |
| Transmission Loss Multiplier | The Transmission Loss Multiplier associated with the stack item. For Acceptance Volume stack items this will be determined from the related BM Unit. For Balancing Services Adjustment Action stack items This will be considered to be 1. |
| TLM Adjusted Volume | PAR Adjusted Volume x TLM (MWh) |
| TLM Adjusted Cost | TLM Adjusted Volume x Price (£) |

4.4 BMRA-I019: (output) Publish Credit Default Notices

| | | | |
|--|----------------------------------|---|--------------------------------|
| Interface ID: BMRA-I019 | User: BMR Service User | Title: Publish Credit Default Notices | BSC reference: CP703 |
| Mechanism: BMRA Publishing Interface | Frequency: Ad-Hoc | Volumes: Low. | |
| Interface Requirement: The BMRA Service shall publish Credit Default Notices, as they are received from the ECVA. | | | |
| Credit Default Notices shall include all data listed in BMRA-I018, i.e.: | | | |
| <u>Credit Default Notice:</u> | | | |
| BSC Party ID Credit Default Level Entered Default Settlement Day Entered Default Settlement Period Cleared Default Settlement Day Cleared Default Settlement Period Cleared Default Reason | | | |
| Notes: | | | |
| 1. The Credit Default Level may be one of the following: <ul style="list-style-type: none">• Level 1 Default;• Level 2 Default; | | | |
| 2. The Entered Settlement Day and Entered Settlement Period indicate when the BSC Party entered the reported default level. | | | |
| 3. The Cleared Settlement Day and Cleared Settlement Period indicate when the BSC Party cleared the | | | |

| | | | |
|---|----------------------------------|---|--------------------------------|
| Interface ID: BMRA-I019 | User: BMR Service User | Title: Publish Credit Default Notices | BSC reference: CP703 |
| <p>reported default level.</p> <p>4. The Cleared Default Reason indicates why the Party cleared default as supplied by ECVA.</p> <p>Data shall be published according to the formats defined in BMRA URS Appendix C. For more information please refer to the BMRA System Specification and Design Specification.</p> <p>Credit Default Notices will be published 3 (parameterised) times at 20 minute (parameterised) intervals after receipt.</p> | | | |
| Physical Interface Details: | | | |
| | | | |

4.5 BMRA-I010: (output) BMRA Data Exception Reports

| | | | |
|---|---|--|--|
| Interface ID: BMRA-I010 | User: NETSO, BSCCo Ltd, CRA, MIDP | Title: BMRA Data Exception Reports | BSC reference: BMRA SD 6.2, 7.3, 8.3, 8.4, P78 |
| Mechanism: Electronic data file transfer | Frequency: Continuous | Volumes: | |
| <p>The BMRA Service shall issue Exception Reports to the NETSO, BSCCo Ltd, MIDPs or CRA if an input message fails validation, or if insufficient data has been received or, in the case of Adjustment Data, if a system parameter is set to indicate that an exception file is required. This covers errors in all message types.</p> | | | |
| <p>The exception reports shall include:</p> <p><u>Header of file being processed</u> File Type Creation Time From Role Code From Participant Id To Role Code To Participant Id Sequence Number Test Data Flag</p> <p><u>Header of NGC file being processed</u> NGC Filename</p> <p><u>BMRA Data Exceptions</u> Exception Type Exception Description</p> <p>The header of file being processed may be a NETA File Header, a NGC File Header, or it may be omitted if, for example, the exception is that a file is missing.</p> <p>The exception type may be one of the following:</p> <ul style="list-style-type: none">• Balancing Mechanism data incomplete• Input file validation error <p>Note that the file may contain one or many exception descriptions. A file may contain several problems, all of which will be reported in the one file. For example, exceptions on a FPN file may be reported against two different BMU identifiers which are not recognised by BMRA.</p> | | | |

4.6 BMRA-I015: (input) Receive Market Index Data

| | | | |
|-----------------------------------|--|---|------------------------------|
| Interface ID: BMRA-I015 | Source: MIDP | Title: Receive Market Index Data | BSC reference: P78 |
| Mechanism: Automatic | Frequency: Continuous for each Settlement Period | Volumes: Up to 5 Providers, each sending data for each Settlement Period. Each Provider will submit either 1 file per period, or 1 file per day. | |

Interface Requirement:
The BMRA shall receive Market Index Data, from Market Index Data Providers, for each Settlement Period.
The flow shall include:

Market Index Data

Market Index Data Provider ID

Settlement Date

Settlement Period Market Index Data (1-50)

Settlement Period

Market Index Price

Market Index Volume

Traded Price (to be ignored)

Traded Volume (to be ignored)

Note:

1. Data submitted after the related period's Indicative System Buy and Sell Price calculation has begun will be rejected.
2. Amendments to previously submitted data will be loaded and published by the BMRA as the most recent data, only if received before the related period's calculation has begun.
3. No validation is carried out between BMRA and SAA to determine whether or not the same Market Index Data is submitted to both systems for each Settlement Period.

| |
|------------------------------------|
| Physical Interface Details: |
|------------------------------------|

4.7 BMRA-I028: (input) Receive REMIT Data

| | | | |
|--|--|--|-------------------------------------|
| Interface ID: BMRA-I028 | Source: BMR Service User, NETSO | Title: Receive REMIT Data | BSC reference: P291, P329 |
| Mechanism: Electronic data file transfer, XML | Frequency: Continuous | Volumes: Up to 3000 messages per day | |

Interface Requirement:

The BMRA shall receive REMIT message data from BMR Service Users (via the ELEXON Portal) and the NETSO. The data will be received in individual XML files and will include:

- Message Type (Unavailabilities Of Electricity Facilities or Other Market Information)
- Message ID
- Message Heading
- Participant ID
- Participant Registration Code
- Asset ID
- Asset Type
- Affected Unit and EIC code*
- Affected Area
- Bidding Zone*
- Fuel Type*
- Event Type*
- Unavailability Type*
- Event Status
- Event Start and End dates

| |
|--|
| <ul style="list-style-type: none"> • Duration uncertainty • Normal , Available and Unavailable Capacity* • Event cause • Outage Profile <ul style="list-style-type: none"> ○ Outage Profile Start ○ Outage Profile End ○ Outage Profile Capacity <p><i>* Only required for 'Unavailabilities Of Electricity Facilities' Message Type</i></p> |
| <p>Physical Interface Details:</p> <p>These files will be received in a format defined by an XML Schema (REMIT XSD version 2.0) established and maintained by the BMRA.</p> |

4.8 BMRA-I030: (output) Publish REMIT Data

| | | | |
|---|--|--|-------------------------------------|
| Interface ID: BMRA-I030 | User: BMR Service User, | Title: Publish REMIT Data | BSC reference: P291, P329 |
| Mechanism: BMRA Publishing Interface | Frequency: Continuous upon receipt | Volumes: Up to 3000 individual messages per day. | |
| Interface Requirement: The BMRA Service shall publish messages submitted under REMIT (Regulation on Energy Market Integrity and Transparency) as soon as they are received from BMR Service Users or the NETSO. REMIT message data shall include: <ul style="list-style-type: none">• Message Type (Unavailabilities Of Electricity Facilities or Other Market Information)• Message ID• Message Heading• Participant ID• Participant Registration Code• Asset ID• Asset Type• Affected Unit and EIC code*• Affected Area• Bidding Zone*• Fuel Type*• Event Type*• Unavailability Type*• Event Status• Event Start and End dates• Duration uncertainty• Normal, Available, and Unavailable Capacity*• Event cause• Outage Profile<ul style="list-style-type: none">○ Outage Profile Start○ Outage Profile End○ Outage Profile Capacity <i>* Only required for 'Unavailabilities Of Electricity Facilities' Message Type</i> | | | |
| Physical Interface Details: The detailed contents of this interface are defined by an XML Schema (REMIT XSD version 2.0) established and maintained by the BMRA. | | | |

4.9 BMRA-I031: (output) Publish Transparency Regulation Data

| | | | |
|--|--|--|-------------------------------|
| Interface ID: BMRA-I031 | Source: BMR Service User, ENTSO-E | Title: Publish Transparency Regulation Data | BSC reference: P295 |
| Mechanism: BMRA Publishing Interface; Electronic data file transfer | Frequency: Continuous upon receipt | Volumes: | |
| Interface Requirement: The BMRA Service shall publish data provided under the Transparency Regulations as soon as it has been received from the NETSO. Data shall be provided to BMR Service Users through the publishing interface and directly to ENTSO-E for further publication on the Electricity Market Fundamental Information Platform (EMFIP). Transparency Regulation Data shall include information relating to the following categories: <ul style="list-style-type: none">• Load• Outages• Transmission• Congestion Management• Generation• Balancing Details of the individual articles reported are provided in Section 4.10. | | | |
| Physical Interface Details: The interface to ENTSO-e shall comprise an FTP connection to the Energy Communications Platform (ECP). The files will be published in XML and PDF formats defined by ENTSO-e. Data items in XML files will be defined in the relevant XML Schema Definition (XSD) and in accordance to the ENTSO-e's Manual of Procedures (V2.1); details are available from the Transparency section of the ENTSO-e Website (www.entsoe.eu). | | | |

4.10 BMRA-I035: (output) Publish Trading Unit Data

| | | | |
|--|--|--|-------------------------------|
| Interface ID: BMRA-I035 | Source: BMR Service User, | Title: Publish Trading Unit Data | BSC reference: P321 |
| Mechanism: BMRA Publishing Interface | Frequency: Continuous upon receipt | Volumes: | |
| Interface Requirement: | | | |
| The BMRA Service shall publish Trading Unit Data as soon as it has been received from the SAA. | | | |
| The following data items shall be included: | | | |
| <ul style="list-style-type: none">• Trading Unit Name• Trading Unit Type• Settlement Date• Settlement Period• Settlement Run Type• Delivery Mode• Import Volume• Export Volume• Net Volume | | | |
| This information will be available through a BMRS API, although it will <i>not</i> be available through the Tibco service. | | | |
| Physical Interface Details: | | | |
| | | | |

4.11 BMRA TIBCO Message Publishing - Data Formats

The BMRA service publishes all data received from the NETSO and additional data derived by the BMRA Service via the use of TIBCO messaging software. TIB messages are broadcast over the High Grade Service WAN and will be received by any client software that explicitly listens for them. The messages are anticipated to be used in one or both of two ways: firstly to provide the Near Real Time update to data screens used by traders, and secondly to load market data into participant bespoke applications.

The material in this section defines the structure of all the TIB messages sent from the BMRA service which subscribing client software may receive.

The hardware and software specification for the TIBCO client software required to support the High Grade Service is given in [COMMS]. Guidelines for how to subscribe to published TIBCO messages are given in section 4.10.5

This section of the document describes the following information

- message types
- subject naming conventions
- field definitions and formats
- message definitions and formats
- any special formatting or arrangement of data in messages

4.11.1 Message Types

The following table lists all of the message types sent from BMRA and specifies the External Interface Requirement met by each one.

| External Interface Requirement | Data Type | Message Type |
|--------------------------------|--|--------------|
| BMRA-I004 | Final Physical Notification | FPN |
| BMRA-I004 | Quiescent Physical Notification | QPN |
| BMRA-I004 | Bid-Offer Pairs | BOD |
| BMRA-I004 | Maximum Export Limit | MEL |
| BMRA-I004 | Maximum Import Limit | MIL |
| BMRA-I004 | Bid-Offer Acceptances | BOAL |
| BMRA-I004 | Bid-Offer Acceptance Level Flagged | BOALF |
| BMRA-I004 | BM Unit Applicable Balancing Services Volume | QAS |
| BMRA-I004 | Run Up Rates Export | RURE |
| BMRA-I004 | Run Up Rates Import | RURI |
| BMRA-I004 | Run Down Rates Export | RDRE |

| External Interface Requirement | Data Type | Message Type |
|--------------------------------|---|---------------------|
| BMRA-I004 | Run Down Rates Import | RDRI |
| BMRA-I004 | Notice to Deviate from Zero | NDZ |
| BMRA-I004 | Notice to Deliver Offers | NTD |
| BMRA-I004 | Notice to Deliver Bids | NTB |
| BMRA-I004 | Minimum Zero Time | MZT |
| BMRA-I004 | Minimum Non-Zero Time | MNZT |
| BMRA-I004 | Stable Export Limit | SEL |
| BMRA-I004 | Stable Import Limit | SIL |
| BMRA-I004 | Maximum Delivery Volume | MDV |
| BMRA-I004 | Maximum Delivery Period | MDP |
| BMRA-I005 | Indicated Generation | INDGEN |
| BMRA-I005 | Indicated Demand | INDDEM |
| | | |
| BMRA-I005 | National Demand Forecast | NDF |
| BMRA-I005 | Transmission System Demand Forecast | TSDF |
| BMRA-I005 | Initial National Demand Out-turn | INDO |
| BMRA-I005 | Initial Transmission System Demand Out-Turn | ITSDO |
| BMRA-I005 | Demand forecast. 2 -14 days ahead | NDFD |
| BMRA-I005 | Demand forecast. 2 -52 weeks ahead | NDFW |
| BMRA-I005 | Transmission System Demand Forecast, 2 -14 day | TSDFD |
| BMRA-I005 | Transmission System Demand Forecast, 2 -52 week | TSDFW |
| BMRA-I005 | Surplus forecast. 2 -14 days ahead | OCNMFD ⁵ |
| BMRA-I005 | Surplus forecast. 2 -52 weeks ahead | OCNMF ⁶ |
| BMRA-I005 | Indicated Margin | MELNGC |
| BMRA-I005 | Indicated Imbalance | IMBALNGC |
| BMRA-I005 | System Warnings | SYSWARN |
| BMRA-I005 | SO-SO Prices | SOSO |
| BMRA-I005 | Net Balancing Services Adjustment Data | NETBSAD |
| BMRA-I005 | Balancing Services Adjustment Action Data | DISBSAD |
| BMRA-I005 | System Message | SYSMSG |
| BMRA-I005 | Market Index Data | MID |
| BMRA-I005 | Temperature Data | TEMP |

⁵ Where OCNMFD is referred to throughout this document, it should be interpreted as being equivalent to SPLD.

⁶ Where OCNMF⁶ is referred to throughout this document, it should be interpreted as being equivalent to SPLW.

| External Interface Requirement | Data Type | Message Type |
|--------------------------------|---|--------------|
| BMRA-I005 | Wind Generation Forecast | WINDFOR |
| BMRA-I005 | Instantaneous Generation by Fuel Type | FUELINST |
| BMRA-I005 | Half-Hourly Generation by Fuel Type | FUELHH |
| BMRA-I005 | Daily Energy Volume Data | INDOD |
| BMRA-I005 | Realtime Transmission System Frequency Data | FREQ |
| BMRA-I005 | Non-BM STOR Out-turn | NONBM |
| BMRA-I005 | National Output Usable by Fuel Type, 2-14 days ahead | FOU2T14D |
| BMRA-I005 | National Output Usable by BM Unit and Fuel Type, 2-14 days ahead | UOU2T14D |
| BMRA-I005 | National Output Usable by Fuel Type, 2-52 weeks ahead | FOU2T52W |
| BMRA-I005 | National Output Usable by BM Unit and Fuel Type, 2-52 weeks ahead | UOU2T52W |
| BMRA-I005 | Generating Plant Demand Margin, 2-14 days ahead | OCNMFD2 |
| BMRA-I005 | Generating Plant Demand Margin, 2-52 weeks ahead | OCNMF2W |
| BMRA-I005 | Loss of Load Probability and De-rated Margin | LOLP |
| BMRA-I005 | Demand Control Instructions | DCONTROL |
| BMRA-I006 | Period B-O Acceptance Volumes | BOAV |
| BMRA-I006 | Period Total B-O Acceptance Volume | PTAV |
| BMRA-I006 | Disaggregated Period Total B-O Acceptance Volume | DISPTAV |
| BMRA-I006 | Estimated period B-O cash flows | EBOCF |
| BMRA-I006 | Net Estimated Buy/Sell Price and Total Accepted Bid/Offer Volumes | NETEBSP |
| BMRA-I006 | Disaggregated Estimated Buy/Sell Price and Total Accepted Bid/Offer Volumes | DISEBSP |
| BMRA-I006 | Total Bid Volume and Total Offer Volume | TBOD |
| BMRA-I006 | Indicative System Price Stack | ISPSTACK |
| BMRA-I019 | Credit Default Notices | CDN |
| BMRA-I030 | REMIT Data | REMIT |
| BMRA-I031 | Transparency Regulation Data | TRANSPARENCY |

Data has been divided up into a granular level, i.e. publication of data on a record by record basis. This allows the programmatic interface to insert the data more efficiently into any bespoke applications that need to receive the data feed.

BMRA publishes data using the TIBCO subject-based addressing messaging system - data is broadcast across the WAN in messages, each associated with a unique subject name which describes the type of data within the message. Any client software will 'subscribe' to the data by subject name. Thus, although all data is available, each piece of client software will only accept and process the data it specifically subscribes to.

4.11.2 Message Subject Naming

Subject names are used not only to provide an insight into the kind of data contained within the message, but also to divide the data into logical segments. TIBCO subject names consist of a string of characters that is divided into elements by a dot(.), and so data is organised hierarchically by assigning a specific meaning to each element in a subject name.

4.11.2.1 Base subject name

All subject names published by the BMRA system will have the following prefix:-

BMRA

It is important to prefix all messages from the BMRA system with an 'identity key' to allow BMRA data to be distinguished from other TIBCO message data. By establishing a prefix for BMRA messages now, possible confusion or corruption of data may be avoided in the future.

4.11.2.2 Sub-division of data through Subject Names

Published data will further be divided by data type - that is that all BM related data will be grouped together under an extended prefix, all system related data will be grouped together and all dynamic data will be grouped together.

The following table lists the subject name prefixes that the different types of data will be grouped under:

| Data Group | Subject name prefix |
|------------------------------|-----------------------------|
| System related data | BMRA.SYSTEM |
| BM related data | BMRA.BM.<BM_UNIT> |
| Dynamic Data | BMRA.DYNAMIC.<BM_UNIT> |
| Party Related Data | BMRA.BP.<PARTICIPANT> |
| REMIT Data | REMIT.BMRS |
| Transparency Regulation Data | TRANSPARENCY.BMRS.<ARTICLE> |
| Informational | BMRA.INFO |

System Data will contain all data that applies at a national (or zonal) level, rather than at BM Unit level. This includes all forecasting data, system warnings, National Demand Out-turn and estimated Buy and Sell prices (derived).

BM related data will contain the principal data relating to the Balancing mechanism. This includes FPN, QPN, B-O pairs, Acceptances, Maximum Import and Export Limits, Acceptance Volumes (derived) and B-O Cash Flows (derived).

Dynamic data will contain all the dynamic data relating to a BM Unit.

Transparency Regulation data will contain data relating to the individual articles that comprise the Transparency Regulations, each of which may contain data for a range of time periods and BM Units.

REMIT data will contain information submitted by individual participants in compliance with the Regulation on Energy Market Integrity and Transparency. Each message will relate to a specific event, e.g. failure, outage or return to service of a particular asset identified by the participant.

Party related data will contain all published data related to a participant. At present, this will include only Credit Default notices.

Information data will contain subjects relating to the BMRS itself. Its initial use will be for test messages and heartbeats for the TIBCO messaging protocol. These should currently be ignored by participants but the message definitions are given here for completeness.

This sub-division of data by subject name has been done to ease subscription to data by grouping related data types together. This means that wildcards may be used to subscribe to a selection of subject names which may all be plotted on the same graph, or listed in the same table. For example, much of the BM data may be viewed on the same graph and much of the dynamic data may be listed in the same table.

4.11.3 Message Formats

The messages are published using TIBCO Rendezvous software, using a subject-based addressing system and self describing data. A standard TIBCO message is composed of a header which contains the subject name, and an optional reply subject name, following by a string of data fields. Each field contains a single element of data together with details describing the data for platform independence.

Messages are built from a list of defined field types which have been identified to describe all of the data published by BMRA. Each of these two character BRMA Field Types is described later in this section, and has associated with it a unique field name and data types. No message will be published by BMRA containing fields outside of this set.

Note that the message definitions in this document contain only the data fields created by BMRA. Additional fields added to messages by Rendezvous - such as header fields and data description elements - will also be present in the published messages, but these are not listed in the definitions given in this document. Details of the standard TIBCO header fields may be found in TIBCO Rendezvous documentation.

In addition, certain messages published via TIBCO will consist of an XML payload rather than the standard message structure as described above. In these cases, subscribers will need to refer to relevant XML Schemas in order to process the payload. See section 4.10.5 'Message Definitions for further details on the schemas in use.

4.11.4 Field Type Definitions

This section identifies and defines all of the fields which are used to compose the BMRA messages. Each field in a message is associated with a Field Name, TIB Data type and a valid set of values. The fields are described using the following format:-

- Field Data Type :** The data the field represents.
- Field Type :** The reference identity of the field type, as used in message definitions.
- Field Name :** The field name used within the message to identify the field.
- Description :** A brief description of the data the field represents.
- TIB Data Type :** The data type used in the TIB wire format of the message. This is a data type defined in and used internally by the TIBCO Rendezvous software. They are platform and network independent.
- C/Java Type :** The C and Java data types which correspond to the TIB data type. The TIBCO Rendezvous software will convert the incoming TIB data type into this data type when the API is used for bespoke applications. Due to the nature of the C data type "float", it should be noted that where the data type "float" is given, it is the responsibility of the participant's API software to perform rounding to the appropriate accuracy (see section 4.10.7 and its subsections for additional information).
- Messages containing field :** The TIB message types which are broadcast by BMRA which contain the field.
- Additional Information :** Any additional information - such as the units of the data and the valid set of values if appropriate (note that £ and £/MWh are always to 2 decimal places).

4.11.4.1 Field Type Index by Data Type

| Data Type | Field Type |
|--------------------------------------|------------|
| Acceptance Level Value | VA |
| Acceptance Number | NK |
| Acceptance Time | TA |
| Adjustment Cost | JC |
| Adjustment Identifier | AI |
| Adjustment Volume | JV |
| Amendment Flag | AM |
| Applicable Balancing Services Volume | SV |
| Arbitrage Adjusted Volume | AV |
| Affected LDSO | DS |

| Data Type | Field Type |
|---|------------|
| Bid Cashflow | BC |
| Bid Price | BP |
| Bid Volume | BV |
| Bid/Offer Indicator | BO |
| Bid-Offer Level Value | VB |
| Bid-Offer Pair Number | NN |
| BMRS Informational Text | IN |
| BSAD Defaulted | BD |
| Buy Price | PB |
| Buy Price Cost Adjustment | A4 |
| Buy Price Price Adjustment | A6 |
| Buy Price Volume Adjustment | A5 |
| CADL Flag | CF |
| Calendar Year | CY |
| Calendar Week Number | WN |
| Cleared Default Settlement Date | CD |
| Cleared Default Settlement Period | CP |
| Component Identifier | CI |
| Contract Identification | IC |
| Credit Default Level | DL |
| Deemed Bid-Offer Flag | AD |
| Demand Control Event Flag | EV |
| Demand Control ID | ID |
| Demand Control Level | VO |
| Demand Margin | DM |
| Demand Value | VD |
| DMAT Adjusted Volume | DA |
| Effective From Time | TE |
| Entered Default Settlement Date | ED |
| Entered Default Settlement Period | EP |
| Energy Volume Daily High Reference | EH |
| Energy Volume Daily Low Reference | EL |
| Energy Volume Daily Normal Reference | EN |
| Energy Volume Outturn | EO |
| Export Level Value | VE |
| Fuel Type | FT |
| Fuel Type Generation | FG |
| GB Reference High Noon Temperature | TH |
| GB Noon Temperature Outturn | TO |
| GB Reference Low Noon Temperature | TL |
| GB Reference Normal Noon Temperature | TN |
| Generation Value | VG |
| Imbalance Value | VI |
| Import Level Value | VF |
| Indicative Net Imbalance Volume | NI |
| Instruction Sequence No | SQ |
| Margin/Surplus Value | VM |
| Market Index Data Provider ID | MI |
| Market Index Price | M1 |
| Market Index Volume | M2 |
| Maximum Delivery Period | DP |
| Maximum Delivery Volume | DV |
| Message Type | MT |
| Minimum non-Zero Time | MN |
| Minimum Zero Time | MZ |
| Net Energy Buy Price Cost Adjustment | A9 |
| Net Energy Buy Price Volume Adjustment | A10 |
| Net Energy Sell Price Cost Adjustment | A7 |
| Net Energy Sell Price Volume Adjustment | A8 |
| Net System Buy Price Volume Adjustment | A12 |
| Net System Sell Price Volume Adjustment | A11 |

| Data Type | Field Type |
|---|------------|
| NIV Adjusted Volume | NV |
| Non-BM STOR Volume | NB |
| Notice to Deliver Bids | DB |
| Notice to Deliver Offers | DO |
| Notice to Deviate from Zero | DZ |
| Number of Records | NR |
| Number Of Spot Points | NP |
| Offer Cashflow | OC |
| Offer Price | OP |
| Offer Volume | OV |
| Output Usable | OU |
| PAR Adjusted Volume | PV |
| Period Originally-Priced BM Unit Bid Volume | P6 |
| Period Originally-Priced BM Unit Offer Volume | P3 |
| Period Repriced BM Unit Bid Volume | P5 |
| Period Repriced BM Unit Offer Volume | P2 |
| Period Tagged BM Unit Bid Volume | P4 |
| Period Tagged BM Unit Offer Volume | P1 |
| PN Level Value | VP |
| Price Derivation Code | PD |
| Publishing Time | TP |
| Replacement Price | RP |
| Replacement Price Calculation Volume | RV |
| Repriced Indicator | RI |
| Reserve Scarcity Price | RSP |
| Run Down Elbow 2 | RB |
| Run Down Elbow 3 | RC |
| Run Down Rate 1 | R1 |
| Run Down Rate 2 | R2 |
| Run Down Rate 3 | R3 |
| Run Up Elbow 2 | UB |
| Run Up Elbow 3 | UC |
| Run Up Rate 1 | U1 |
| Run Up Rate 2 | U2 |
| Run Up Rate 3 | U3 |
| Sell Price | PS |
| Sell Price Cost Adjustment | A1 |
| Sell Price Price Adjustment | A3 |
| Sell Price Volume Adjustment | A2 |
| Sequence Number | SN |
| Settlement Date | SD |
| Settlement Period | SP |
| Short Acceptance Flag | SA |
| Spot Time | TS |
| Stable Export Limit | SE |
| Stable Import Limit | SI |
| Stack Item Final Price | FP |
| Stack Item Original Price | IP |
| Stack Item Volume | IV |
| STOR Provider Flag | PF |
| SO-Flag | SO |
| SO-SO Start Time | ST |
| SO-SO Trade Type | TT |
| System Frequency | SF |
| System Message Text | SM |
| System Total Priced Accepted Bid Volume | PC |
| System Total Priced Accepted Offer Volume | PP |
| System Total Unpriced Accepted Bid Volume | AC |
| System Total Unpriced Accepted Offer Volume | AP |
| System Warning Text | SW |
| Tagged Accepted Bid Volume | T2 |

| Data Type | Field Type |
|-------------------------------|------------|
| Tagged Accepted Offer Volume | T1 |
| Tagged Adjustment Buy Volume | J4 |
| Tagged Adjustment Sell Volume | J3 |
| Time From | TF |
| Time To | TI |
| TLM Adjusted Cost | TC |
| TLM Adjusted Volume | TV |
| Total Accepted Bid Volume | AB |
| Total Accepted Offer Volume | AO |
| Total Adjustment Buy Volume | J2 |
| Total Adjustment Sell Volume | J1 |
| Total Bid Volume | BT |
| Total Offer Volume | OT |
| Total Registered Capacity | TR |
| Trade Direction | TD |
| Trade Price | PT |
| Trade Quantity | TQ |
| Transmission Loss Multiplier | TM |
| Bid-Offer Original Price | UP |
| Week Start Date | WD |
| Zone Indicator | ZI |

4.11.4.2 Field Type Index

| Field Type | Data Type |
|------------|---|
| A1 | Sell Price Cost Adjustment |
| A10 | Net Energy Buy Price Volume Adjustment |
| A11 | Net System Sell Price Volume Adjustment |
| A12 | Net System Buy Price Volume Adjustment |
| A2 | Sell Price Volume Adjustment |
| A3 | Sell Price Price Adjustment |
| A4 | Buy Price Cost Adjustment |
| A5 | Buy Price Volume Adjustment |
| A6 | Buy Price Price Adjustment |
| A7 | Net Energy Sell Price Cost Adjustment |
| A8 | Net Energy Sell Price Volume Adjustment |
| A9 | Net Energy Buy Price Cost Adjustment |
| AB | Total Accepted Bid Volume |
| AC | System Total Unpriced Accepted Bid Volume |
| AD | Deemed Bid-Offer Flag |
| AI | Adjustment Identifier |
| AM | Amendment Flag |
| AO | Total Accepted Offer Volume |
| AP | System Total Unpriced Accepted Offer Volume |
| AV | Arbitrage Adjusted Volume |
| BC | Bid Cashflow |
| BD | BSAD Defaulted |
| BO | Bid/Offer Indicator |
| BP | Bid Price |
| BT | Total Bid Volume |
| BV | Bid Volume |
| CD | Cleared Default Settlement Date |
| CF | CADL Flag |
| CI | Component Identifier |
| IC | Contract Identification |
| CP | Cleared Default Settlement Period |
| CY | Calendar Year |
| DA | DMAT Adjusted Volume |
| DB | Notice to Deliver Bids |
| DL | Credit Default Level |

| Field Type | Data Type |
|------------|---|
| DM | Demand Margin |
| DO | Notice to Deliver Offers |
| DP | Maximum Delivery Period |
| DS | Affected LDSO |
| DV | Maximum Delivery Volume |
| DZ | Notice to Deviate from Zero |
| ED | Entered Default Settlement Date |
| EH | Energy Volume Daily High Reference |
| EL | Energy Volume Daily Low Reference |
| EN | Energy Volume Daily Normal Reference |
| EO | Energy Volume Outturn |
| EP | Entered Default Settlement Period |
| FG | Fuel Type Generation |
| FP | Stack Item Final Price |
| FT | Fuel Type |
| ID | Demand Control ID |
| IN | BMRS Informational Text |
| IP | Stack Item Original Price |
| IV | Stack Item Volume |
| J1 | Total Adjustment Sell Volume |
| J2 | Total Adjustment Buy Volume |
| J3 | Tagged Adjustment Sell Volume |
| J4 | Tagged Adjustment Buy Volume |
| JC | Adjustment Cost |
| JV | Adjustment Volume |
| M1 | Market Index Price |
| M2 | Market Index Volume |
| MI | Market Index Data Provider ID |
| MN | Minimum non-Zero Time |
| MT | Message Type |
| MZ | Minimum Zero Time |
| NB | Non-BM STOR Volume |
| NI | Indicative Net Imbalance Volume |
| NK | Acceptance Number |
| NN | Bid-Offer Pair Number |
| NP | Number Of Spot Points |
| NR | Number of Records |
| NV | NIV Adjusted Volume |
| OC | Offer Cashflow |
| OP | Offer Price |
| OT | Total Offer Volume |
| OU | Output Usable |
| OV | Offer Volume |
| PF | STOR Provider Flag |
| P1 | Period Tagged BM Unit Offer Volume |
| P2 | Period Repriced BM Unit Offer Volume |
| P3 | Period Originally-Priced BM Unit Offer Volume |
| P4 | Period Tagged BM Unit Bid Volume |
| P5 | Period Repriced BM Unit Bid Volume |
| P6 | Period Originally-Priced BM Unit Bid Volume |
| PB | Buy Price |
| PC | System Total Priced Accepted Bid Volume |
| PD | Price Derivation Code |
| PP | System Total Priced Accepted Offer Volume |
| PS | Sell Price |
| PV | PAR Adjusted Volume |
| RSP | Reserve Scarcity Price |
| R1 | Run Down Rate 1 |
| R2 | Run Down Rate 2 |
| R3 | Run Down Rate 3 |
| RB | Run Down Elbow 2 |

| Field Type | Data Type |
|------------|--------------------------------------|
| RC | Run Down Elbow 3 |
| RI | Repriced Indicator |
| RP | Replacement Price |
| RV | Replacement Price Calculation Volume |
| SA | Short Acceptance Flag |
| SD | Settlement Date |
| SE | Stable Export Limit |
| SF | System Frequency |
| SI | Stable Import Limit |
| SM | System Message Text |
| SN | Sequence Number |
| SO | SO-Flag |
| SP | Settlement Period |
| SQ | Instruction Sequence No |
| ST | SO-SO Start Time |
| SV | Applicable Balancing Services Volume |
| SW | System Warning Text |
| T1 | Tagged Accepted Offer Volume |
| T2 | Tagged Accepted Bid Volume |
| TA | Acceptance Time |
| TC | TLM Adjusted Cost |
| TD | Trade Direction |
| TE | Effective From Time |
| TF | Time From |
| TH | GB Reference High Noon Temperature |
| TI | Time To |
| TL | GB Reference Low Noon Temperature |
| TM | Transmission Loss Multiplier |
| TN | GB Reference Normal Noon Temperature |
| TO | GB Noon Temperature Outturn |
| TP | Publishing Time |
| PT | Trade Price |
| TQ | Trade Quantity |
| TR | Total Registered Capacity |
| TS | Spot Time |
| TT | SO-SO Trade Type |
| TV | TLM Adjusted Volume |
| U1 | Run Up Rate 1 |
| U2 | Run Up Rate 2 |
| U3 | Run Up Rate 3 |
| UB | Run Up Elbow 2 |
| UC | Run Up Elbow 3 |
| UP | Bid-Offer Original Price |
| VA | Acceptance Level Value |
| VB | Bid-Offer Level Value |
| VD | Demand Value |
| VE | Export Level Value |
| VF | Import Level Value |
| VG | Generation Value |
| VI | Imbalance Value |
| VM | Margin/Surplus Value |
| VO | Demand Control Level |
| VP | PN Level Value |
| WD | Week Start Date |
| WN | Calendar Week Number |
| ZI | Zone Indicator |

4.11.4.3 Acceptance Level Value

Field Data Type : Acceptance Level Value
Field Type : VA
Field Name : "VA"
Description : Level of Acceptance. Used to describe either a 'from level' or a 'to level'.
TIB Data Type : TIBRVMSG_F32
C/Java Type : Float
Messages containing field : BOAL, BOALF
Additional Information : Value in MW.
Valid Values: -9999 to +9999.

4.11.4.4 Acceptance Number

Field Data Type : Acceptance Number
Field Type : NK
Field Name : "NK"
Description : The number of an individual acceptance.
TIB Data Type : TIBRVMSG_I32
C/Java Type : Int
Messages containing field : BOAL, BOAV, BOALF, ISPSTACK
Additional Information : Valid values: 1 to 2147483647.

4.11.4.5 Acceptance Time

Field Data Type : Acceptance Time
Field Type : TA
Field Name : "TA"
Description : The time an acceptance was made.
TIB Data Type : TIBRVMSG_DATETIME
C/Java Type : time_t/Date
Messages containing field : BOAL, BOALF
Additional Information :

4.11.4.6 Adjustment Cost

Field Data Type : Adjustment Cost
Field Type : JC
Field Name : "JC"
Description : The defined cost of the Adjustment item.
TIB Data Type : TIBRVMSG_F32
C/Java Type : Float
Messages containing field : DISBSAD
Additional Information : Value in £. Can be NULL.

4.11.4.7 Adjustment Identifier

Field Data Type : Adjustment Identifier

Field Type : AI

Field Name : "AI"

Description : The unique identifier allocated to a single Balancing Services Adjustment Action item.

TIB Data Type : TIBRVMSG_I32

C/Java Type : Int

Messages containing field : DISBSAD

Additional Information : Unique within each Settlement Period.

4.11.4.8 Adjustment Volume

Field Data Type : Adjustment Volume

Field Type : JV

Field Name : "JV"

Description : The defined volume of the Adjustment item.

TIB Data Type : TIBRVMSG_F32

C/Java Type : Float

Messages containing field : DISBSAD

Additional Information : Value in MWh.

4.11.4.9 Applicable Balancing Services Volume

Field Data Type : BM Unit Applicable Balancing Services Volume

Field Type : SV

Field Name : "SV"

Description : Energy Volume associated with provision of balancing services

TIB Data Type : TIBRVMSG_F32

C/Java Type : Float

Messages containing field : QAS

Additional Information : Value in MWh

4.11.4.10 Arbitrage Adjusted Volume

Field Data Type : Arbitrage Adjusted Volume

Field Type : AV

Field Name : "AV"

Description : The volume remaining against a stack item after applying Arbitrage.

TIB Data Type : TIBRVMSG_F32

C/Java Type : Float

Messages containing field : ISPSTACK

Additional Information : Value in MWh.

4.11.4.11 Bid Cashflow

Field Data Type : Bid Cashflow
Field Type : BC
Field Name : "BC"
Description : The period bid cashflow for a single Bid-Offer pair.
TIB Data Type : TIBRVMSG_F32
C/Java Type : float
Messages containing field : EBOCF
Additional Information : Value in £.

4.11.4.12 Bid Price

Field Data Type : Bid Price
Field Type : BP
Field Name : "BP"
Description : The bid price attached to a Bid-Offer pair for a given settlement period.
TIB Data Type : TIBRVMSG_F32
C/Java Type : float
Messages containing field : BOD
Additional Information : Value in £/MWh.

4.11.4.13 Bid Volume

Field Data Type : Bid Volume
Field Type : BV
Field Name : "BV"
Description : Bid volume accepted for a Bid-Offer pair.
TIB Data Type : TIBRVMSG_F32
C/Java Type : float
Messages containing field : BOAV, PTAV
Additional Information : Value in MWh

4.11.4.14 Bid/Offer Indicator

Field Data Type : Bid/Offer Indicator
Field Type : BO
Field Name : "BO"
Description : Indicates whether the associated stack item is from the Bid or Offer Stack.
TIB Data Type : TIBRVMSG_STRING
C/Java Type : char*/String
Messages containing field : ISPSTACK
Additional Information : Single character. Can be either "B" or "O".

4.11.4.15 Bid-Offer Level Value

Field Data Type : Bid-Offer Level Value
Field Type : VB
Field Name : “VB”
Description : Level of Bid-Offer. Used to describe either a ‘from level’ or a ‘to level’.
TIB Data Type : TIBRVMSG_F32
C/Java Type : float
Messages containing field : BOD
Additional Information : Value in MW.

4.11.4.16 Bid-Offer Pair Number

Field Data Type : Bid-Offer Pair Number
Field Type : NN
Field Name : “NN”
Description : The number of a Bid-Offer pair.
TIB Data Type : TIBRVMSG_I32
C/Java Type : int
Messages containing field : BOD, BOAV, PTAV, EBOCF, DISPTAV
Additional Information : Valid values: -6 to 6.

4.11.4.17 BMRS Informational Text

Field Data Type : BMRS Informational Text
Field Type : IN
Field Name : “IN”
Description : General Informational message
TIB Data Type : TIBRVMSG_STRING
C/Java Type : Char*/String
Messages containing field : MSG
Additional Information : For future use. Should currently be ignored

4.11.4.18 BSAD Defaulted

Field Data Type : BSAD Defaulted
Field Type : BD
Field Name : “BD”
Description : Flag to indicate that the BSAD data shown is default values
TIB Data Type : TIBRVMSG_STRINGT
C/Java Type : Char*/String
Messages containing field : NETEBSP, DISEBSP
Additional Information : Valid Values: ‘T’ or ‘F’.

4.11.4.19 Buy Price

Field Data Type : Buy Price**Field Type :** PB**Field Name :** "PB"**Description :** The system buy price for a particular settlement period.**TIB Data Type :** TIBRVMSG_F32**C/Java Type :** float**Messages containing field :** NETEBSP, DISEBSP**Additional Information :** Value in £/MWh.

4.11.4.20 Buy Price Price Adjustment

Field Data Type : Buy Price Price Adjustment**Field Type :** A6**Field Name :** "A6"**Description :** Adjustment applied to quotient in computation of Buy Price**TIB Data Type :** TIBRVMSG_F32**C/Java Type :** float**Messages containing field :** NETBSAD, NETEBSP, DISEBSP**Additional Information :** Value in £/MWh.

4.11.4.21 CADL Flag

Field Data Type : CADL Flag**Field Type :** CF**Field Name :** "CF"**Description :** A value of 'T' indicates where the associated stack item is considered to be a Short Duration Acceptance.**TIB Data Type :** TIBRVMSG_STRING**C/Java Type :** Char*/String**Messages containing field :** ISPSTACK**Additional Information :** Valid Values: 'T' or 'F'.

4.11.4.22 Calendar Week Number

Field Data Type : Calendar Week Number**Field Type :** WN**Field Name :** "WN"**Description :** The number of a week in the year.**TIB Data Type :** TIBRVMSG_I32**C/Java Type :** int**Messages containing field :** OCNMFW, NDFW, TSDFW, FOU2T52W, UOU2T52W, OCNMFW2**Additional Information :** Valid values: 1 - 53.

The first week in the year with 4 days or more is

Week number 1.

4.11.4.23 Calendar Year

Field Data Type : Calendar Year
Field Type : CY
Field Name : "CY"
Description : The year to which data in a message pertains.
TIB Data Type : TIBRVMSG_I32
C/Java Type : int
Messages containing field : FOU2T52W, UOU2T52W, OCNMFW2
Additional Information :

4.11.4.24 Cleared Default Settlement Date

Field Data Type : Cleared Default Settlement Date
Field Type : CD
Field Name : "CD"
Description : The settlement date on which a party cleared credit default, at the level specified elsewhere in the message.
TIB Data Type : TIBRVMSG_DATETIME
C/Java Type : time_t/Date
Messages containing field : CDN
Additional Information : The time section of the DateTime is truncated to zero hours, zero minutes and zero seconds

4.11.4.25 Cleared Default Settlement Period

Field Data Type : Cleared Default Settlement Period
Field Type : CP
Field Name : "CP"
Description : The settlement Period on which a party cleared credit default, at the level specified elsewhere in the message.
TIB Data Type : TIBRVMSG_I32
C/Java Type : Int
Messages containing field : CDN
Additional Information : Valid values : 1 – 50

4.11.4.26 Cleared Default Text

Field Data Type : Cleared Default Text
Field Type : CT
Field Name : "CT"
Description : Reason that a party has cleared credit default, at the level specified elsewhere in the message.

TIB Data Type : TIBRVMSG_STRING
C/Java Type : char*/String
Messages containing field : CDN
Additional Information : The cleared default text will be plain ascii text, in the majority of cases, be less than 128 bytes in length.

4.11.4.27 Component Identifier

Field Data Type : Component Identifier
Field Type : CI
Field Name : "CI"
Description : For Acceptance items this is the associated BM Unit's Identifier. For Balancing Services Adjustment Action items this is the NETSO allocated, unique ID.
TIB Data Type : TIBRVMSG_STRING
C/Java Type : char*/String
Messages containing field : ISPSTACK
Additional Information :

4.11.4.28 Contract Identification

Field Data Type : Contract Identification
Field Type : IC
Field Name : "IC"
Description : A unique identifier for an offered SO-SO trade.
TIB Data Type : TIBRVMSG_STRING
C/Java Type : Char*/String
Messages containing field : SOSO
Additional Information :

4.11.4.29 Credit Default Level

Field Data Type : Credit Default Level
Field Type : DL
Field Name : "DL"
Description : The credit default level.
TIB Data Type : TIBRVMSG_I32
C/Java Type : Int
Messages containing field : CDN
Additional Information : Valid values : 1, 2

4.11.4.30 Deemed Bid-Offer Flag

Field Data Type : Deemed Bid-Offer Flag
Field Type : AD
Field Name : "AD"
Description : Indicates whether Bid-Offer was made for an

acceptance.
TIB Data Type : TIBRVMSG_STRING
C/Java Type : char*/String
Messages containing field : BOAL, BOALF
Additional Information : Valid Values: 'T' or 'F'.

4.11.4.31 Demand Margin

Field Data Type: Demand Margin
Field Type : DM
Field Name : "DM"
Description : A value of the demand margin from generating plants.
TIB Data Type : TIBRVMSG_F32
C/Java Type : float
Messages containing field : OCNMFD2, OCNMFW2
Additional Information : Value in MW.
Valid values: -99999 to +99999.

4.11.4.32 Demand Value

Field Data Type : Demand Value
Field Type : VD
Field Name : "VD"
Description : A value of demand.
TIB Data Type : TIBRVMSG_F32
C/Java Type : Float
Messages containing field : NDFD, NDFW, INDDEM, INDO, NDF, TSDF, TSDFD, TSDFW, ITSDO
Additional Information : Value in MW.
Valid values:
INDDEM: -99999 to 0
others: 0 to +99999.

4.11.4.33 DMAT Adjusted Volume

Field Data Type : DMAT Adjusted Volume
Field Type : DA
Field Name : "DA"
Description : The volume remaining against a stack item after applying DMAT.
TIB Data Type : TIBRVMSG_F32
C/Java Type : Float
Messages containing field : ISPSTACK
Additional Information : Value in MWh.

4.11.4.34 Effective From Time

Field Data Type : Effective From Time

Field Type : TE

Field Name : “TE”

Description : The date and time that a value of dynamic data starts to be effective.

TIB Data Type : TIBRVMSG_DATETIME

C/Java Type : time_t/Date

Messages containing field : RURE, RURI, RDRE, RDRI, NDZ, NTO, NTB, MZT, MNZT, SEL, SIL, MDV, MDP

Additional Information :

4.11.4.35 Energy Volume Daily High Reference

Field Data Type : Energy Volume Daily High Reference

Field Type : EH

Field Name : “EH”

Description : MWh.

TIB Data Type : TIBRVMSG_I32

C/Java Type : Int

Messages containing field : INDOD

Additional Information :

4.11.4.36 Energy Volume Daily Low Reference

Field Data Type : Energy Volume Daily Low Reference

Field Type : EL

Field Name : “EL”

Description : MWh.

TIB Data Type : TIBRVMSG_I32

C/Java Type : Int

Messages containing field : INDOD

Additional Information :

4.11.4.37 Energy Volume Daily Normal Reference

Field Data Type : Energy Volume Daily Normal Reference

Field Type : EN

Field Name : “EN”

Description : MWh.

TIB Data Type : TIBRVMSG_I32

C/Java Type : Int

Messages containing field : INDOD

Additional Information :

4.11.4.38 Energy Volume Daily Outturn

Field Data Type : Energy Volume Daily Outturn
Field Type : EO
Field Name : "EO"
Description : MWh.
TIB Data Type : TIBRVMSG_I32
C/Java Type : Int
Messages containing field : INDOD
Additional Information :

4.11.4.39 Entered Default Settlement Date

Field Data Type : Entered Default Settlement Date
Field Type : ED
Field Name : "ED"
Description : The settlement date on which a party entered credit default, at the level specified elsewhere in the message.
TIB Data Type : TIBRVMSG_DATETIME
C/Java Type : time_t/Date
Messages containing field : CDN
Additional Information : The time section of the DateTime is truncated to zero hours, zero minutes and zero seconds

4.11.4.40 Entered Default Settlement Period

Field Data Type : Entered Default Settlement Period
Field Type : EP
Field Name : "EP"
Description : The settlement Period on which a party entered credit default, at the level specified elsewhere in the message.
TIB Data Type : TIBRVMSG_I32
C/Java Type : Int
Messages containing field : CDN
Additional Information : Valid values : 1 – 50

4.11.4.41 Export Level Value

Field Data Type : Export Level Value
Field Type : VE
Field Name : "VE"
Description : A level of export capability.
TIB Data Type : TIBRVMSG_F32
C/Java Type : float
Messages containing field : MEL
Additional Information : Value in MW.

4.11.4.42 Fuel Type

Field Data Type : Fuel Type
Field Type : FT
Field Name : “FT”
Description : The class of generation fuel type.
TIB Data Type : TIBRVMSG_STRING
C/Java Type : Char*/String
Messages containing field : FUELINST, FUELHH, FOU2T14D, FOU2T52W, UOU2T14D, UOU2T52W
Additional Information : One of:
 CCGT Combined Cycle Gas Turbine
 OIL Oil Plant
 COAL Coal Plant
 NUCLEAR Nuclear Plant
 WIND Power Park Modules metered by the
 Transmission Operator
 PS Pumped Storage Plant
 NPSHYD Non Pumped Storage Hydro Plant
 OCGT Open Cycle Gas Turbine Plant
 OTHER Undefined
 INTFR External Interconnector flows with France
 INTIRL (IFA)
 INTNED External Interconnector flows with Ireland
 (Moyle)
 External Interconnector flows with the
 Netherlands (BritNed)
 INTEW External Interconnector flows with Ireland
 (East-West)
 BIOMASS Biomass Plant
 INTNEM External Interconnector flows with
 Belgium (Nemo Link)

4.11.4.43 Fuel Type Generation

Field Data Type : Fuel Type Generation
Field Type : FG
Field Name : “FG”
Description : Fuel Type Generation (MW).
TIB Data Type : TIBRVMSG_I32
C/Java Type : Int
Messages containing field : FUELINST, FUELHH
Additional Information : Value in MW.
 Valid values: -99999 to +99999.

4.11.4.44 GB Noon Temperature

Field Data Type : GB Noon Temperature Outturn
Field Type : TO
Field Name : “TO”
Description : Degree celsius Outturn temperature.
TIB Data Type : TIBRVMSG_F32
C/Java Type : Float

Messages containing field : TEMP
Additional Information : Value in degrees Celsius.
Valid Values: -99.9 to 99.9

4.11.4.45 GB Reference Normal Noon Temperature

Field Data Type : GB Reference Normal Temperature
Field Type : TN
Field Name : "TN"
Description : Degree celsius temperature.
TIB Data Type : TIBRVMSG_F32
C/Java Type : Float
Messages containing field : TEMP
Additional Information : Value in degrees Celsius.
Valid Values: -99.9 to 99.9

4.11.4.46 GB Reference High Noon Temperature

Field Data Type : GB Reference High Noon Temperature
Field Type : TH
Field Name : "TH"
Description : Degree celsius temperature.
TIB Data Type : TIBRVMSG_F32
C/Java Type : Float
Messages containing field : TEMP
Additional Information : Value in degrees Celsius.
Valid Values: -99.9 to 99.9

4.11.4.47 GB Reference Low Noon Temperature

Field Data Type : GB Reference Low Noon Temperature
Field Type : TL
Field Name : "TL"
Description : Degree celsius temperature.
TIB Data Type : TIBRVMSG_F32
C/Java Type : Float
Messages containing field : TEMP
Additional Information : Value in degrees Celsius.
Valid Values: -99.9 to 99.9

4.11.4.48 Generation Value

Field Data Type : Generation Value
Field Type : VG
Field Name : "VG"
Description : A value of Generation.
TIB Data Type : TIBRVMSG_F32

C/Java Type : float
Messages containing field : INDGEN, WINDFOR
Additional Information : Value in MW.
Valid values: 0 to +99999.

4.11.4.49 Imbalance Value

Field Data Type : Imbalance Value
Field Type : VI
Field Name : “VI”
Description : A value of Imbalance.
TIB Data Type : TIBRVMSG_F32
C/Java Type : float
Messages containing field : IMBALNGC
Additional Information : Value in MW.
Valid values: -99999 to +99999.

4.11.4.50 Import Level Value

Field Data Type : Import Level Value
Field Type : VF
Field Name : “VF”
Description : A level of Import capability.
TIB Data Type : TIBRVMSG_F32
C/Java Type : float
Messages containing field : MIL
Additional Information : Value in MW.

4.11.4.51 Indicative Net Imbalance Volume

Field Data Type : Indicative Net Imbalance Volume
Field Type : NI
Field Name : “NI”
Description : The Indicative Net Imbalance Volume
TIB Data Type : TIBRVMSG_F32
C/Java Type : Float
Messages containing field : NETEBSP, DISEBSP
Additional Information :

4.11.4.52 Margin/Surplus Value

Field Data Type : Margin/Surplus Value
Field Type : VM
Field Name : “VM”
Description : A value of margin or surplus.

TIB Data Type : TIBRVMSG_F32
C/Java Type : float
Messages containing field : OCNMFD, OCNMFW, MELNGC
Additional Information : Value in MW.
Valid values: -99999 to +99999.

4.11.4.53 Market Index Data Provider ID

Field Data Type : Market Index Data Provider ID
Field Type : MI
Field Name : “MI”
Description : The Identifier of a Market Index Data Provider.
TIB Data Type : TIBRVMSG_STRING
C/Java Type : Char*/String
Messages containing field : MID
Additional Information : The Identifier will be plain ascii text, in the majority of cases, be less than 4Kb in length.

4.11.4.54 Market Index Price

Field Data Type : Market Index Price
Field Type : M1
Field Name : “M1”
Description : Market Index Price.
TIB Data Type : TIBRVMSG_F32
C/Java Type : Float
Messages containing field : MID
Additional Information : Value in £/MWh.

4.11.4.55 Market Index Volume

Field Data Type : Market Index Volume
Field Type : M2
Field Name : “M2”
Description : Market Index Volume.
TIB Data Type : TIBRVMSG_F32
C/Java Type : Float
Messages containing field : MID
Additional Information : Value in MWh.

4.11.4.56 Maximum Delivery Period

Field Data Type : Maximum Delivery Period
Field Type : DP
Field Name : “DP”
Description : The minimum length of time in which the maximum delivery volume may be delivered.
TIB Data Type : TIBRVMSG_I32
C/Java Type : int
Messages containing field : MDP
Additional Information : Value in Minutes.
Valid Values: 1 to 239.

4.11.4.57 Maximum Delivery Volume

Field Data Type : Maximum Delivery Volume
Field Type : DV
Field Name : “DV”
Description : The maximum amount which may be delivered within the maximum delivery period.
TIB Data Type : TIBRVMSG_F32
C/Java Type : float
Messages containing field : MDV
Additional Information : Value in MWh.
Valid Values: -99999 to +99999.

4.11.4.58 Message Type

Field Data Type : Message type
Field Type : MT
Field Name : “MT”
Description : A 6 character code that specifies a system message type
TIB Data Type : TIBRVMSG_STRING
C/Java Type : Char*/String
Messages containing field : SYSMSG
Additional Information : Valid Values: ‘MIDNP’, and such values that are allocated from time to time.

4.11.4.59 Minimum non-Zero Time

Field Data Type : Minimum non-Zero Time
Field Type : MN
Field Name : “MN”
Description : The minimum time a BM unit may operate at non-zero level as a result of accepted BM action.
TIB Data Type : TIBRVMSG_I32

C/Java Type : int
Messages containing field : MNZT
Additional Information : Value in Minutes.
Valid values: 0 to 999.

4.11.4.60 Minimum Zero Time

Field Data Type : Minimum Zero Time
Field Type : MZ
Field Name : "MZ"
Description : The minimum time a BM unit must operate at zero or import before returning to export.
TIB Data Type : TIBRVMSG_I32
C/Java Type : int
Messages containing field : MZT
Additional Information : Value in Minutes.
Valid values: 0 to 999.

4.11.4.61 Net Energy Buy Price Cost Adjustment

Field Data Type : Net Energy Buy Price Cost Adjustment
Field Type : A9
Field Name : "A9"
Description : Adjustment included in computation of Buy Price
TIB Data Type : TIBRVMSG_F32
C/Java Type : Float
Messages containing field : NETBSAD, NETEBSP
Additional Information : Value in £

4.11.4.62 Net Energy Buy Price Volume Adjustment

Field Data Type : Net Energy Buy Price Volume Adjustment
Field Type : A10
Field Name : "A10"
Description : Adjustment included in computation of Buy Price
TIB Data Type : TIBRVMSG_F32
C/Java Type : Float
Messages containing field : NETBSAD, NETEBSP
Additional Information : Value in MWh.

4.11.4.63 Net Energy Sell Price Cost Adjustment

Field Data Type : Net Energy Sell Price Cost Adjustment

Field Type : A7

Field Name : "A7"

Description : Adjustment included in computation of Sell Price

TIB Data Type : TIBRVMSG_F32

C/Java Type : Float

Messages containing field : NETBSAD, NETEBSP

Additional Information : Value in £

4.11.4.64 Net Energy Sell Price Volume Adjustment

Field Data Type : Net Energy Sell Price Volume Adjustment

Field Type : A8

Field Name : "A8"

Description : Adjustment included in computation of Sell Price

TIB Data Type : TIBRVMSG_F32

C/Java Type : Float

Messages containing field : NETBSAD, NETEBSP

Additional Information : Value in MWh.

4.11.4.65 Net System Buy Price Volume Adjustment

Field Data Type : Net System Buy Price Volume Adjustment

Field Type : A12

Field Name : "A12"

Description : Adjustment included in computation of Buy Price

TIB Data Type : TIBRVMSG_F32

C/Java Type : Float

Messages containing field : NETBSAD, NETEBSP

Additional Information : Value in MWh.

4.11.4.66 Net System Sell Price Volume Adjustment

Field Data Type : Net System Sell Price Volume Adjustment

Field Type : A11

Field Name : "A11"

Description : Adjustment included in computation of Sell Price

TIB Data Type : TIBRVMSG_F32

C/Java Type : Float

Messages containing field : NETBSAD, NETEBSP

Additional Information : Value in MWh.

4.11.4.67 NIV Adjusted Volume

Field Data Type : NIV Adjusted Volume

Field Type : NV

Field Name : "NV"

Description : The volume remaining against a stack item after applying NIV.

TIB Data Type : TIBRVMSG_F32

C/Java Type : Float

Messages containing field : ISPSTACK

Additional Information : Value in MWh.

4.11.4.68 Non-BM STOR Volume

Field Data Type : Non-BM STOR Volume

Field Type : NB

Field Name : "NB"

Description : Non-BM STOR Instructed Volume (MWh).

TIB Data Type : TIBRVMSG_I32

C/Java Type : Int

Messages containing field : NONBM

Additional Information : Value in MWh.
Valid values: 0 to +99999.

4.11.4.69 Notice to Deliver Bids

Field Data Type : Notice to Deliver Bids

Field Type : DB

Field Name : "DB"

Description : Notification time for BM unit to deliver a bid

TIB Data Type : TIBRVMSG_I32

C/Java Type : int

Messages containing field : NTB

Additional Information : Value in Minutes.
Valid values: 0 to 239.

4.11.4.70 Notice to Deliver Offers

Field Data Type : Notice to Deliver Offers

Field Type : DO

Field Name : "DO"

Description : Notification time for BM unit to deliver an offer.

TIB Data Type : TIBRVMSG_I32

C/Java Type : int
Messages containing field : NTO
Additional Information : Value in Minutes.
Valid values: 0 to 239.

4.11.4.71 Notice to Deviate from Zero

Field Data Type : Notice to Deviate from Zero
Field Type : DZ
Field Name : "DZ"
Description : Notification time required for BM unit to change operating level from zero.
TIB Data Type : TIBRVMSG_I32
C/Java Type : int
Messages containing field : NDZ
Additional Information : Value in Minutes.
Valid values: 0 to 999.

4.11.4.72 Number of Records

Field Data Type : Number of Records
Field Type : NR
Field Name : "NR"
Description : A number of records contained within the message.
The context of this field will be described at the message definition level.
TIB Data Type : TIBRVMSG_I32
C/Java Type : int
Messages containing field : OCNMFD, OCNMFW, NDFD, NDFW, MELNGC, IMBALNGC, INDDDEM, INDGEN, NDF, TSDF, TSDFD, TSDFW, WINDFOR, FOU2T14D, FOU2T52W, UOU2T14D, UOU2T52W, OCNMFD2, OCNMFW2
Additional Information :

4.11.4.73 Number of Spot Points

Field Data Type : Number of Spot Points
Field Type : NP
Field Name : "NP"
Description : The number of spot times and levels that are contained within a message.
TIB Data Type : TIBRVMSG_I32
C/Java Type : int
Messages containing field : FPN, QPN, BOD, BOAL, MIL, MEL, BOALF
Additional Information : See section on 'Conversion of Effective From/To Time Data to Spot Time Data'.

4.11.4.74 Offer Cashflow

Field Data Type : Offer Cashflow
Field Type : OC
Field Name : "OC"
Description : The period offer cashflow for a single Bid-Offer pair.
TIB Data Type : TIBRVMSG_F32
C/Java Type : float
Messages containing field : EBOCF
Additional Information : Value in £.

4.11.4.75 Offer Price

Field Data Type : Offer Price
Field Type : OP
Field Name : "OP"
Description : The offer price attached to a Bid-Offer pair for a given settlement period.
TIB Data Type : TIBRVMSG_F32
C/Java Type : float
Messages containing field : BOD
Additional Information : Value in £/MWh.

4.11.4.76 Offer Volume

Field Data Type : Offer Volume
Field Type : OV
Field Name : "OV"
Description : The offer volume accepted for a Bid-Offer pair.
TIB Data Type : TIBRVMSG_F32
C/Java Type : float
Messages containing field : BOAV, PTAV
Additional Information : Value in MWh.

4.11.4.77 Output Usable

Field Data Type : Output Usable
Field Type : OU
Field Name : "OU"
Description : The volume of energy expected to be available over a given period (in the case of Interconnectors, this is the expected capacity).
TIB Data Type : TIBRVMSG_F32
C/Java Type : float
Messages containing field : FOU2T14D, FOU2T52W, UOU2T14D, UOU2T52W
Additional Information : Value in MW.
Valid values: 0 to +99999

4.11.4.78 PAR Adjusted Volume

Field Data Type : PAR Adjusted Volume
Field Type : PV
Field Name : "PV"
Description : The volume remaining against a stack item after applying PAR.
TIB Data Type : TIBRVMSG_F32
C/Java Type : Float
Messages containing field : ISPSTACK
Additional Information : Value in MWh.

4.11.4.79 Period Originally-Priced BM Unit Bid Volume

Field Data Type : Period Originally-Priced BM Unit Bid Volume
Field Type : P6
Field Name : "P6"
Description : The total originally-priced bid volume of the associated BM Unit for a given Bid-Offer pair and settlement period.
TIB Data Type : TIBRVMSG_F32
C/Java Type : Float
Messages containing field : DISPTAV
Additional Information : Value in MWh.

4.11.4.80 Period Originally-Priced BM Unit Offer Volume

Field Data Type : Period Originally-Priced BM Unit Offer Volume
Field Type : P3
Field Name : "P3"
Description : The total originally-priced offer volume of the associated BM Unit for a given Bid-Offer pair and settlement period.
TIB Data Type : TIBRVMSG_F32
C/Java Type : Float
Messages containing field : DISPTAV
Additional Information : Value in MWh.

4.11.4.81 Period Repriced BM Unit Bid Volume

Field Data Type : Period Repriced BM Unit Bid Volume
Field Type : P5
Field Name : "P5"
Description : The total repriced bid volume of the associated BM Unit for a given Bid-Offer pair and settlement period.
TIB Data Type : TIBRVMSG_F32
C/Java Type : Float
Messages containing field : DISPTAV

Additional Information : Value in MWh.

4.11.4.82 Period Repriced BM Unit Offer Volume

Field Data Type : Period Repriced BM Unit Offer Volume

Field Type : P2

Field Name : "P2"

Description : The total repriced offer volume of the associated BM Unit for a given Bid-Offer pair and settlement period.

TIB Data Type : TIBRVMSG_F32

C/Java Type : Float

Messages containing field : DISPTAV

Additional Information : Value in MWh.

4.11.4.83 Period Tagged BM Unit Bid Volume

Field Data Type : Period Tagged BM Unit Bid Volume

Field Type : P4

Field Name : "P4"

Description : The total tagged bid volume of the associated BM Unit for a given Bid-Offer pair and settlement period.

TIB Data Type : TIBRVMSG_F32

C/Java Type : Float

Messages containing field : DISPTAV

Additional Information : Value in MWh.

4.11.4.84 Period Tagged BM Unit Offer Volume

Field Data Type : Period Tagged BM Unit Offer Volume

Field Type : P1

Field Name : "P1"

Description : The total tagged offer volume of the associated BM Unit for a given Bid-Offer pair and settlement period.

TIB Data Type : TIBRVMSG_F32

C/Java Type : Float

Messages containing field : DISPTAV

Additional Information : Value in MWh.

4.11.4.85 PN Level Value

Field Data Type : PN Level Value

Field Type : VP

Field Name : "VP"

Description : Level of Physical Notice. Used to describe either a 'from level' or a 'to level' of Final or Quiescent PN.

TIB Data Type : TIBRVMSG_F32

C/Java Type : float

Messages containing field : FPN, QPN
Additional Information : Value in MW.

4.11.4.86 Price Derivation Code

Field Data Type : Price Derivation Code
Field Type : PD
Field Name : “PD”
Description : A 2 character code that describes how the SBP and SSP were derived
TIB Data Type : TIBRVMSG_STRING
C/Java Type : Char*/String
Messages containing field : NETEBSP, DISEBSP
Additional Information : Valid Values: are defined in BMRA-I006

4.11.4.87 Publishing Time

Field Data Type : Publishing Time
Field Type : TP
Field Name : “TP”
Description : The time a message or a particular field was originally published. The context of this field will be described at the message definition level.
TIB Data Type : TIBRVMSG_DATETIME
C/Java Type : time_t/Date
Messages containing field : OCNMFD, OCNMFW, NDFD, NDFW, MELNGC, IMBALNGC, INDDEM, INDGEN, SYSWARN, INDO, MSG, NDF, TSDF, TSDFD, TSDFW, ITSDO, TEMP, FUELINST, FUELHH, WINDFOR, NONBM, INDOD, FOU2T14D, FOU2T52W, UOU2T14D, UOU2T52W, OCNMFD2, OCNMFW2
Additional Information :

4.11.4.88 Replacement Price

Field Data Type : Replacement Price
Field Type : RP
Field Name : “RP”
Description : The Replacement Price used for a given settlement period.
TIB Data Type : TIBRVMSG_F32
C/Java Type : Float
Messages containing field : DISEBSP
Additional Information : Value in £/MWh.

4.11.4.89 Replacement Price Calculation Volume

Field Data Type : Replacement Price Calculation Volume

Field Type : RV

Field Name : "RV"

Description : The derived Replacement Price Calculation Volume for a given Settlement Period (as defined in the Indicative System Price Calculation function in the BMRA URS).

TIB Data Type : TIBRVMSG_F32

C/Java Type : Float

Messages containing field : DISEBSP

Additional Information : Value in MWh.

4.11.4.90 Repriced Indicator

Field Data Type : Repriced Indicator

Field Type : RI

Field Name : "RI"

Description : A value of 'T' indicates where the associated stack item has been repriced.

TIB Data Type : TIBRVMSG_STRING

C/Java Type : Char*/String

Messages containing field : ISPSTACK

Additional Information : Valid Values: 'T' or 'F'.

4.11.4.91 Run Down Elbow 2

Field Data Type : Run Down Elbow 2

Field Type : RB

Field Name : "RB"

Description : The point at which run down rate 2 applies.

TIB Data Type : TIBRVMSG_I32

C/Java Type : int

Messages containing field : RDRE, RDRI

Additional Information : Value in whole MW.

4.11.4.92 Run Down Elbow 3

Field Data Type : Run Down Elbow 3

Field name : RC

Field Name : "RC"

Description : The point at which run down rate 3 applies.

TIB Data Type : TIBRVMSG_I32

C/Java Type : int

Messages containing field : RDRE, RDRI

Additional Information : Value in whole MW.

4.11.4.93 Run Down Elbow 4

Field Data Type : Run Down Elbow 4
Field Type : RD
Field Name : “RD”
Description : The point at which run down rate 4 applies.
TIB Data Type : TIBRVMSG_I32
C/Java Type : int
Messages containing field : RDRE, RDRI
Additional Information : Value in whole MW.

4.11.4.94 Run Down Elbow 5

Field Data Type : Run Down Elbow 5
Field Type : RE
Field Name : “RE”
Description : The point at which run down rate 5 applies.
TIB Data Type : TIBRVMSG_I32
C/Java Type : int
Messages containing field : RDRE, RDRI
Additional Information : Value in whole MW.

4.11.4.95 Run Down Elbow 6

Field Data Type : Run Down Elbow 6
Field Type : RF
Field Name : “RF”
Description : The point at which run down rate 6 applies.
TIB Data Type : TIBRVMSG_I32
C/Java Type : int
Messages containing field : RDRE, RDRI
Additional Information : Value in whole MW.

4.11.4.96 Run Down Elbow 7

Field Data Type : Run Down Elbow 7
Field Type : RG
Field Name : “RG”
Description : The point at which run down rate 7 applies.
TIB Data Type : TIBRVMSG_I32
C/Java Type : int
Messages containing field : RDRE, RDRI
Additional Information : Value in whole MW.

4.11.4.97 Run Down Elbow 8

Field Data Type : Run Down Elbow 8

Field Type : RH
Field Name : "RH"
Description : The point at which run down rate 8 applies.
TIB Data Type : TIBRVMSG_I32
C/Java Type : int
Messages containing field : RDRE, RDRI
Additional Information : Value in whole MW.

4.11.4.98 Run Down Elbow 9

Field Data Type : Run Down Elbow 9
Field Type : RJ
Field Name : "RJ"
Description : The point at which run down rate 9 applies.
TIB Data Type : TIBRVMSG_I32
C/Java Type : int
Messages containing field : RDRE, RDRI
Additional Information : Value in whole MW.

4.11.4.99 Run Down Elbow 10

Field Data Type : Run Down Elbow 10
Field Type : RK
Field Name : "RK"
Description : The point at which run down rate 10 applies.
TIB Data Type : TIBRVMSG_I32
C/Java Type : int
Messages containing field : RDRE, RDRI
Additional Information : Value in whole MW.

4.11.4.100 Run Down Rate 1

Field Data Type : Run Down Rate 1
Field Name : R1
Field Name : "R1"
Description : Decrease in active power consumption between zero and run down elbow 2.
TIB Data Type : TIBRVMSG_F32
C/Java Type : float
Messages containing field : RDRE, RDRI
Additional Information : Value in MW/Minute.
Valid values: 0.2 to 999.0.

4.11.4.101 Run Down Rate 2

Field Data Type : Run Down Rate 2
Field Name : R2
Field Name : "R2"

Description : Decrease in active power consumption between run down elbows 2 and 3.
TIB Data Type : TIBRVMSG_F32
C/Java Type : float
Messages containing field : RDRE, RDRI
Additional Information : Value in MW/Minute.
Valid values: 0.2 to 999.0 or 0 (representing a null value).

4.11.4.102 Run Down Rate 3

Field Data Type : Run Down Rate 3
Field Name : R3
Field Name : "R3"
Description : Decrease in active power consumption after run down elbow 3.
TIB Data Type : TIBRVMSG_F32
C/Java Type : float
Messages containing field : RDRE, RDRI
Additional Information : Value in MW/Minute.
Valid values: 0.2 to 999.0 or 0 (representing a null value).

4.11.4.103 Run Up Elbow 2

Field Data Type : Run Up Elbow 2
Field Type : UB
Field Name : "UB"
Description : The point at which run up rate 2 applies.
TIB Data Type : TIBRVMSG_I32
C/Java Type : int
Messages containing field : RURE, RURI
Additional Information : Value in whole MW.

4.11.4.104 Run Up Elbow 3

Field Data Type : Run Up Elbow 3
Field Type : UC
Field Name : "UC"
Description : The point at which run up rate 3 applies.
TIB Data Type : TIBRVMSG_I32
C/Java Type : int
Messages containing field : RURE, RURI
Additional Information : Value in whole MW.

4.11.4.105 Run Up Rate 1

Field Data Type : Run Up Rate 1
Field Type : U1

Field Name : “U1”
Description : Increase in active power production between zero and run up elbow 2.
TIB Data Type : TIBRVMSG_F32
C/Java Type : float
Messages containing field : RURE, RURI
Additional Information : Value in MW/Minute.
Valid values: 0.2 to 999.0.

4.11.4.106 Run Up Rate 2

Field Data Type : Run Up Rate 2
Field Type : U2
Field Name : “U2”
Description : Increase in active power production between run up elbows 2 and 3.
TIB Data Type : TIBRVMSG_F32
C/Java Type : float
Messages containing field : RURE, RURI
Additional Information : Value in MW/Minute.
Valid values: 0.2 to 999.0 or 0 (representing a null value).

4.11.4.107 Run Up Rate 3

Field Data Type : Run Up Rate 3
Field Type : U3
Field Name : “U3”
Description : Increase in active power production after run up elbow 3.
TIB Data Type : TIBRVMSG_F32
C/Java Type : float
Messages containing field : RURE, RURI
Additional Information : Value in MW/Minute.
Valid values: 0.2 to 999.0 or 0 (representing a null value).

4.11.4.108 Sell Price

Field Data Type : Sell Price
Field Type : PS
Field Name : “PS”
Description : The system sell price for a particular settlement period.
TIB Data Type : TIBRVMSG_F32
C/Java Type : float
Messages containing field : NETEBSP, DISEBSP
Additional Information : Value in £/MWh.

4.11.4.109 Sell Price Price Adjustment

Field Data Type : Sell Price Price Adjustment

Field Type : A3

Field Name : "A3"

Description : Adjustment applied to quotient in computation of Sell Price

TIB Data Type : TIBRVMSG_F32

C/Java Type : float

Messages containing field : NETBSAD, NETEBSP, DISEBSP

Additional Information : Value in £/MWh.

4.11.4.110 Sequence Number

Field Data Type : Sequence Number

Field Type : SN

Field Name : "SN"

Description : The stack item's Index number, representing the relative position of the associated stack item within its related stack. A value of 1 represents the first item in a stack.

TIB Data Type : TIBRVMSG_I32

C/Java Type : Int

Messages containing field : ISPSTACK

Additional Information : A positive integer greater than zero.

4.11.4.111 Settlement Date

Field Data Type : Settlement Date

Field Type : SD

Field Name : "SD"

Description : The settlement date.

TIB Data Type : TIBRVMSG_DATETIME

C/Java Type : time_t/Date

Messages containing field : OCNMFD, NDFD, MELNGC, IMBALNGC, INDDem, INDGEN, INDO, FPN, QPN, BOD, MIL, MEL, BOAV, PTAV, EBOCF, NETEBSP, TBOD, NDF, TSDF, TSDFD, ITSDO, FUELINST, FUELHH, WINDFOR, NONBM, INDOD, DISEBSP, NETBSAD, DISBSAD, DISPTAV, ISPSTACK, OCNMFD2, FOU2T14D, UOU2T14D

Additional Information : The time section of the DateTime is truncated to zero hours, zero minutes and zero seconds

4.11.4.112 Settlement Period

Field Data Type : Settlement Period

Field Type : SP
Field Name : "SP"
Description : The settlement Period.
TIB Data Type : TIBRVMSG_I32
C/Java Type : int
Messages containing field : OCNMFD, NDFD, MELNGC, IMBALNGC, INDDDEM, INDGEN, INDO, FPN, QPN, BOD, MIL, MEL, BOAV, PTAV, EBOCF, NETEBSP, TBOD, NDF, TSDF, TSDFD, ITSDO, FUELINST, FUELHH, WINDFOR, NONBM, DISEBSP, NETBSAD, DISBSAD, DISPTAV, ISPSTACK, LOLP, DCONTROL
Additional Information : Valid values: 1 - 50

4.11.4.113 Short Acceptance Flag

Field Data Type : Short Acceptance Flag
Field Type : SA
Field Name : "SA"
Description : Flag indicating whether the Acceptance was of "short" duration
TIB Data Type : TIBRVMSG_STRING
C/Java Type : Char*/String
Messages containing field : BOAV
Additional Information : Valid values: 'S' or 'L'

4.11.4.114 SO-Flag

Field Data Type : SO-Flag
Field Type : SO
Field Name : "SO"
Description : A value of 'T' indicates where an Acceptance or Balancing Services Adjustment Action item should be considered to be potentially impacted by transmission constraints.
TIB Data Type : TIBRVMSG_STRING
C/Java Type : Char*/String
Messages containing field : BOALF, ISPSTACK, DISBSAD
Additional Information : Valid Values: 'T' or 'F'.

4.11.4.115 SO-SO Start Time

Field Data Type : SO-SO Start Time
Field Type : ST
Field Name : "ST"
Description : The date and time from which an SO-SO price applies.

TIB Data Type : TIBRVMSG_DATETIME

C/Java Type : time_t/Date

Messages containing field : SOSO

Additional Information :

4.11.4.116 SO-SO Trade Direction

Field Data Type : SO-SO Trade Direction

Field Type : TD

Field Name : "TD"

Description : Flag indicating whether the direction of an SO-SO trade is up or down.

TIB Data Type : TIBRVMSG_STRING

C/Java Type : Char*/String

Messages containing field : SOSO

Additional Information : Valid values: 'A01' (up) or 'A02' (down)

4.11.4.117 SO-SO Trade Type

Field Data Type : SO-SO Trade Type

Field Type : TT

Field Name : "TT"

Description : The type of SO-SO Trade.

TIB Data Type : TIBRVMSG_STRING

C/Java Type : Char*/String

Messages containing field : SOSO

Additional Information :

4.11.4.118 Spot Time

Field Data Type : Spot Time

Field Type : TS

Field Name : "TS"

Description : The time applicable to a given value in a Spot Point pair.

TIB Data Type : TIBRVMSG_DATETIME

C/Java Type : time_t/Date

Messages containing field : FPN, QPN, BOD, BOAL, MIL, MEL, TEMP, FREQ, FUELINST, BOALF

Additional Information : See section on 'Conversion of Effective From/To times to Spot Times'

4.11.4.119 Stable Export Limit

Field Data Type : Stable Export Limit

Field Type : SE

Field Name : “SE”
Description : Range in which power export is stable.
TIB Data Type : TIBRVMSG_F32
C/Java Type : float
Messages containing field : SEL
Additional Information : Value in MW.
Valid Values: 0 to 9999.

4.11.4.120 Stable Import Limit

Field Data Type : Stable Import Limit
Field Type : SI
Field Name : “SI”
Description : Range in which power import is stable.
TIB Data Type : TIBRVMSG_F32
C/Java Type : float
Messages containing field : SIL
Additional Information : Value in MW.
Valid Values: -9999 to 0.

4.11.4.121 Stack Item Final Price

Field Data Type : Stack Item Final Price
Field Type : FP
Field Name : “FP”
Description : The final price of the associated stack item as used to determine the item’s final cost.
TIB Data Type : TIBRVMSG_F32
C/Java Type : Float
Messages containing field : ISPSTACK
Additional Information : Value in £/MWh.

4.11.4.122 Stack Item Original Price

Field Data Type : Stack Item Original Price
Field Type : IP
Field Name : “IP”
Description : The original price of the associated stack item. Typically the Bid-Offer Original Price except for STOR Actions where the Stack Item Original Price is the derived price based on either the Bid-Offer Original Price or Reserve Scarcity Price (i.e. the STOR Action Price).
TIB Data Type : TIBRVMSG_F32
C/Java Type : Float
Messages containing field : ISPSTACK
Additional Information : Value in £/MWh.

4.11.4.123 Stack Item Volume

Field Data Type : Stack Item Volume
Field Type : IV
Field Name : “IV”
Description : The volume of the associated stack item.
TIB Data Type : TIBRVMSG_F32
C/Java Type : Float
Messages containing field : ISPSTACK
Additional Information : Value in MWh.

4.11.4.124 System Frequency

Field Data Type : System Frequency
Field Type : SF
Field Name : “SF”
Description : System Frequency in Hz.
TIB Data Type : TIBRVMSG_F32
C/Java Type : Float
Messages containing field : FREQ
Additional Information : Value in Hz.
Valid Values: 0 to 99.999

4.11.4.125 System Message Text

Field Data Type : System Message text
Field Type : SM
Field Name : “SM”
Description : This field contains the body text of any system messages that are generated by BMRA.
TIB Data Type : TIBRVMSG_STRING
C/Java Type : Char*/String
Messages containing field : SYSMMSG
Additional Information : The message text will be plain ascii text, in the majority of cases, be less than 4Kb in length.

4.11.4.126 System Total Priced Accepted Bid Volume

Field Data Type : System Total Priced Accepted Bid Volume
Field Type : PC
Field Name : “PC”
Description : System wide total Priced Accepted Bid Volume for the Settlement Period
TIB Data Type : TIBRVMSG_F32
C/Java Type : Float
Messages containing field : NETEBSP, DISEBSP

Additional Information : Value in MWh.

4.11.4.127 System Total Priced Accepted Offer Volume

Field Data Type : System Total Priced Accepted Offer Volume

Field Type : PP

Field Name : "PP"

Description : System wide total Priced Accepted Offer Volume for the Settlement Period

TIB Data Type : TIBRVMSG_F32

C/Java Type : Float

Messages containing field : NETEBSP, DISEBSP

Additional Information : Value in MWh.

4.11.4.128 System Total Unpriced Accepted Offer Volume

Field Data Type : System Total Unpriced Accepted Offer Volume

Field Type : AP

Field Name : "AP"

Description : System wide total Unpriced Accepted Offer Volume for the Settlement Period

TIB Data Type : TIBRVMSG_F32

C/Java Type : Float

Messages containing field : NETEBSP

Additional Information : Value in MWh.

4.11.4.129 System Total Unpriced Accepted Bid Volume

Field Data Type : System Total Unpriced Accepted Bid Volume

Field Type : AC

Field Name : "AC"

Description : System wide total Unpriced Accepted Bid Volume for the Settlement Period

TIB Data Type : TIBRVMSG_F32

C/Java Type : Float

Messages containing field : NETEBSP

Additional Information : Value in MWh.

4.11.4.130 System Warning Text

Field Data Type : System Warning text

Field Type : SW

Field Name : "SW"

Description : This field contains the body text of any system warnings that are announced by the NETSO.

TIB Data Type : TIBRVMSG_STRING

C/Java Type : char*/String

Messages containing field : SYSWARN

Additional Information : The warning text will be plain ascii text, in the majority of cases, be less than 4Kb in length.

4.11.4.131 TLM Adjusted Cost

Field Data Type : TLM Adjusted Cost

Field Type : TC

Field Name : "TC"

Description : The derived cost of a stack item based on the final untagged volume, price and associated transmission loss multiplier.

TIB Data Type : TIBRVMSG_F32

C/Java Type : Float

Messages containing field : ISPSTACK

Additional Information : Value in £.

4.11.4.132 TLM Adjusted Volume

Field Data Type : TLM Adjusted Volume

Field Type : TV

Field Name : "TV"

Description : The derived volume of a stack item based on the final untagged volume and associated transmission loss multiplier.

TIB Data Type : TIBRVMSG_F32

C/Java Type : Float

Messages containing field : ISPSTACK

Additional Information : Value in MWh.

4.11.4.133 Total Bid Volume

Field Data Type : Total Bid Volume

Field Type : BT

Field Name : "BT"

Description : System wide total Bid Volume for the Settlement Period.

TIB Data Type : TIBRVMSG_F32

C/Java Type : Float

Messages containing field : TBOD

Additional Information : Value in MWh

4.11.4.134 Total Offer Volume

Field Data Type : Total Offer Volume

Field Type : OT

Field Name : "OT"

Description : System wide total Offer Volume for the Settlement Period.
TIB Data Type : TIBRVMSG_F32
C/Java Type : Float
Messages containing field : TBOD
Additional Information : Value in MWh

4.11.4.135 Total Registered Capacity

Field Data Type : Total Registered Capacity
Field Type : TR
Field Name : "TR"
Description : Total Registered Wind Generation Capacity (MW).
TIB Data Type : TIBRVMSG_I32
C/Java Type : Int
Messages containing field : WINDFOR
Additional Information :

4.11.4.136 Total System Accepted Bid Volume

Field Data Type : Total System Accepted Bid Volume
Field Type : AB
Field Name : "AB"
Description : System wide total Accepted Bid Volume for the Settlement Period.
TIB Data Type : TIBRVMSG_F32
C/Java Type : Float
Messages containing field : NETEBSP, DISEBSP
Additional Information : Value in MWh

4.11.4.137 Total System Accepted Offer Volume

Field Data Type : Total System Accepted Offer Volume
Field Type : AO
Field Name : "AO"
Description : System wide total Accepted Offer Volume for the Settlement Period.
TIB Data Type : TIBRVMSG_F32
C/Java Type : Float
Messages containing field : NETEBSP, DISEBSP
Additional Information : Value in MWh

4.11.4.138 Total System Adjustment Buy Volume

Field Data Type : Total System Adjustment Buy Volume
Field Type : J2
Field Name : "J2"

Description : Total volume of Adjustment items held on the Buy Stack.
TIB Data Type : TIBRVMSG_F32
C/Java Type : Float
Messages containing field : DISEBSP
Additional Information : Value in MWh.

4.11.4.139 Total System Adjustment Sell Volume

Field Data Type : Total System Adjustment Sell Volume
Field Type : J1
Field Name : "J1"
Description : Total volume of Adjustment items held on the Sell Stack.
TIB Data Type : TIBRVMSG_F32
C/Java Type : Float
Messages containing field : DISEBSP
Additional Information : Value in MWh.

4.11.4.140 Total System Tagged Accepted Bid Volume

Field Data Type : Total System Tagged Accepted Bid Volume
Field Type : T2
Field Name : "T2"
Description : Total tagged Accepted Bid volume.
TIB Data Type : TIBRVMSG_F32
C/Java Type : Float
Messages containing field : DISEBSP
Additional Information : Value in MWh.

4.11.4.141 Total System Tagged Accepted Offer Volume

Field Data Type : Total System Tagged Accepted Offer Volume
Field Type : T1
Field Name : "T1"
Description : Total tagged Accepted Offer volume.
TIB Data Type : TIBRVMSG_F32
C/Java Type : Float
Messages containing field : DISEBSP
Additional Information : Value in MWh.

4.11.4.142 Total System Tagged Adjustment Buy Volume

Field Data Type : Total System Tagged Adjustment Buy Volume
Field Type : J4
Field Name : "J4"
Description : Total tagged volume of Adjustment items held on the

Buy Stack.
TIB Data Type : TIBRVMSG_F32
C/Java Type : Float
Messages containing field : DISEBSP
Additional Information : Value in MWh.

4.11.4.143 Total System Tagged Adjustment Sell Volume

Field Data Type : Total System Tagged Adjustment Sell Volume
Field Type : J3
Field Name : "J3"
Description : Total tagged volume of Adjustment items held on the Sell Stack.
TIB Data Type : TIBRVMSG_F32
C/Java Type : Float
Messages containing field : DISEBSP
Additional Information : Value in MWh.

4.11.4.144 Trade Quantity

Field Data Type : Trade Quantity
Field Type : TQ
Field Name : "TQ"
Description : Level of an offered SO-SO trade.
TIB Data Type : TIBRVMSG_F32
C/Java Type : Float
Messages containing field : SOSO
Additional Information : Value in MW

4.11.4.145 Trade Price

Field Data Type : Trade Price
Field Type : PT
Field Name : "PT"
Description : The price of an SO-SO trade.
TIB Data Type : TIBRVMSG_F32
C/Java Type : Float
Messages containing field : SOSO
Additional Information : Value in unit currency per MWh. The currency used (e.g. EUR or GBP) will potentially be different for different SO-SO Trade Types (i.e. different Interconnectors and products)

4.11.4.146 Transmission Loss Multiplier

Field Data Type : Transmission Loss Multiplier

Field Type : TM
Field Name : "TM"
Description : The Transmission Loss Multiplier for the associated stack item derived from its associated BM Unit (for Balancing Services Adjustment Action items the value is set as 1.)
TIB Data Type : TIBRVMSG_F32
C/Java Type : Float
Messages containing field : ISPSTACK
Additional Information : Always a positive value.

4.11.4.147 Week Start Date

Field Data Type : Week Start Date
Field Type : WD
Field Name : "WD"
Description : The date of the Monday in a particular week.
TIB Data Type : TIBRVMSG_DATETIME
C/Java Type : time_t/Date
Messages containing field : OCNMFW, NDFW, TSDFW
Additional Information : The time section of the DateTime will be truncated to zero hours, zero minutes and zero seconds.

4.11.4.148 Zone Indicator

Field Data Type : Zone Indicator
Field Type : ZI
Field Name : "ZI"
Description : The Zone that a forecast is applicable to
TIB Data Type : TIBRVMSG_STRING
C/Java Type : char*/String
Messages containing field : INDDDEM, INDGEN, MELNGC, IMBALNGC, NDF, TSDF
Additional Information : Valid Values: "B1", "B2", "B3", "B4", "B5", "B6", "B7", "B8", "B9", "B10", "B11", "B12", "B13", "B14", "B15", "B16", "B17" and "N"

4.11.4.149 STOR Provider Flag

Field Data Type : STOR Provider Flag
Field Type : PF
Field Name : "PF"
Description : A value of 'T' indicates where an Acceptance or Balancing Services Adjustment Action item should be considered being related to a STOR Provider
TIB Data Type : TIBRVMSG_STRING
C/Java Type : Char*/String

Messages containing field : BOALF, ISPSTACK, DISBSAD
Additional Information : Valid Values: 'T' or 'F'.

4.11.4.150 De-rated Margin

Field Data Type : De-rated Margin
Field Type : DR
Field Name : "DR"
Description : ***.
TIB Data Type : TIBRVMSG_F32
C/Java Type : Float
Messages containing field : LOLP
Additional Information : Value in MW

4.11.4.151 Loss of Load Probability

Field Data Type : Loss of Load Probability
Field Type : LP
Field Name : "LP"
Description : ***.
TIB Data Type : TIBRVMSG_F32
C/Java Type : Float
Messages containing field : LOLP
Additional Information : Always less than or equal to 1

4.11.4.152 Affected LDSO

Field Data Type : Affected LDSO
Field Type : DS
Field Name : "DS"
Description : The LDSO affected by a demand control instruction
TIB Data Type : TIBRVMSG_STRING
C/Java Type : char*/String
Messages containing field : DCONTROL
Additional Information :

4.11.4.153 Demand Control ID

Field Data Type : Demand Control ID
Field Type : ID
Field Name : "ID"
Description : The unique identifier for a demand control instruction
TIB Data Type : TIBRVMSG_STRING
C/Java Type : char*/String
Messages containing field : DCONTROL
Additional Information :

4.11.4.154 Instruction Sequence No

Field Data Type : Instruction Sequence No
Field Type : SQ
Field Name : "SQ"
Description : The sequence number relating to the demand control event
TIB Data Type : TIBRVMSG_32
C/Java Type : Int
Messages containing field : DCONTROL
Additional Information :

4.11.4.155 Demand Control Event Flag

Field Data Type : Demand Control Event Flag
Field Type : EV
Field Name : "EV"
Description : A value of 'I' indicates an instruction initiated by the NETSO or an Emergency Manual Disconnection. A Value of 'L' indicates an Automatic Low Frequency Demand Disconnection
TIB Data Type : TIBRVMSG_STRING
C/Java Type : char*/String
Messages containing field : DCONTROL
Additional Information :

4.11.4.156 Time From

Field Data Type : Time From
Field Type : TF
Field Name : "TF"
Description : The time from which the demand control instruction takes effect
TIB Data Type : TIBRVMSG_DATETIME
C/Java Type : Time_t/Date
Messages containing field : DCONTROL
Additional Information :

4.11.4.157 Time To

Field Data Type : Time To
Field Type : TI
Field Name : "TI"
Description : The time to which the demand control instruction takes effect
TIB Data Type : TIBRVMSG_DATETIME

C/Java Type : Time_t/Date
Messages containing field : DCONTROL
Additional Information :

4.11.4.158 Demand Control Level

Field Data Type : Demand Control Level
Field Type : VO
Field Name : “VO”
Description : The level of demand during the demand control event in MW
TIB Data Type : TIBRVMSG_F32
C/Java Type : Float
Messages containing field : DCONTROL
Additional Information :

4.11.4.159 Amendment Flag

Field Data Type : Amendment Flag
Field Type : AM
Field Name : “AM”
Description : ORI (Original), INS (Insert), UPD (Update)
TIB Data Type : TIBRVMSG_STRING
C/Java Type : Char*/String
Messages containing field : DCONTROL
Additional Information :

4.11.4.160 Reserve Scarcity Price

Field Data Type : Reserve Scarcity Price
Field Type : RSP
Field Name : “RSP”
Description : The Reserve Scarcity Price for a given Settlement Period. This field will be NULL where related to an action that is not a STOR Action.
TIB Data Type : TIBRVMSG_F32
C/Java Type : Double
Messages containing field : ISPSTACK, DISEBSP
Additional Information : Value in £/MWh

4.11.4.161 Bid-Offer Original Price

Field Data Type : Bid-Offer Original Price
Field Type : UP
Field Name : “UP”

Description : The Offer or Bid Price or BSAA Cost of the System Action (£/MWh) as derived from the original BOD or BSAD

TIB Data Type : TIBRVMSG_F32

C/Java Type : Double

Messages containing field : ISPSTACK

Additional Information : Value in £/MWh

4.11.5 Message Definitions

4.11.5.1 OCNMFD - Surplus Forecast 2-14 days ahead

This message contains peak-of-the-day surplus forecast values for the following 2 weeks. The data is published by BMRA as it is received from the NETSO. The Publishing Time in the message is applicable to the forecast as a whole. The records in the message are ordered by time.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|-----------------------------|------------|---|
| Publishing Date | TP | The time that the data was originally published by the NETSO. |
| Number of records | NR | The number of times the next THREE fields are repeated. |
| Settlement Date | SD | The settlement date. |
| Settlement Period | SP | The settlement period. |
| Margin/Surplus Value | VM | The surplus in MW. |

Message Subject Name

BMRA.SYSTEM.OCNMFD

4.11.5.2 OCNMFW - Surplus Forecast 2-52 weeks ahead

This message contains peak-of-the-week surplus forecast values for the following year. The data is published by BMRA as it is received from the NETSO. The Publishing Time in the message is applicable to the forecast as a whole. The records in the message are ordered by time.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|-----------------------------|------------|---|
| Publishing Date | TP | The time that the data was originally published by the NETSO. |
| Number of Records | NR | The number of times the next THREE fields are repeated. |
| Calendar Week Number | WN | The number of the week. |
| Week Start Date | WD | The start date of the week (in GMT). |
| Margin/Surplus Value | VM | The Surplus in MW. |

Message Subject Name

BMRA.SYSTEM.OCNMFW

4.11.5.3 NDFD - Demand Forecast 2-14 days ahead

This message contains peak-of-the-day demand forecast values for the following 2 weeks. The data is published by BMRA as it is received from the NETSO. The Publishing Time in the message is applicable to the forecast as a whole. The records in the message are ordered by time.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|--------------------------|------------|---|
| Publishing Date | TP | The time that the data was originally published by the NETSO. |
| Number of Records | NR | The number of times the next THREE fields are repeated. |
| Settlement Date | SD | The settlement date. |
| Settlement Period | SP | The settlement period. |
| Demand Value | VD | The demand in MW. |

Message Subject Name

BMRA.SYSTEM.NDFD

4.11.5.4 TSDFD – Transmission System Demand Forecast 2-14 days ahead

This message contains peak-of-the-day Transmission System demand forecast values for the following 2 weeks. The data is published by BMRA as it is received from the NETSO. The Publishing Time in the message is applicable to the forecast as a whole. The records in the message are ordered by time.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|--------------------------|------------|---|
| Publishing Date | TP | The time that the data was originally published by the NETSO. |
| Number of Records | NR | The number of times the next THREE fields are repeated. |
| Settlement Date | SD | The settlement date. |
| Settlement Period | SP | The settlement period. |
| Demand Value | VD | The demand in MW. |

Message Subject Name

BMRA.SYSTEM.TSDFD

4.11.5.5 NDFW - Demand Forecast 2-52 weeks ahead

This message contains peak-of-the-week demand forecast values for the following year. The data is published by BMRA as it is received from the NETSO. The Publishing Time in the message is applicable to the forecast as a whole. The records in the message are ordered by time.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|-----------------------------|------------|---|
| Publishing Date | TP | The time that the data was originally published by the NETSO. |
| Number of Records | NR | The number of times the next THREE fields are repeated. |
| Calendar Week Number | WN | The number of the week. |
| Week Start Date | WD | The start date of the week (in GMT). |

| Field | Field Type | Description of field |
|---------------------|------------|----------------------|
| Demand Value | VD | The Demand in MW. |

Message Subject Name

BMRA.SYSTEM.NDFW

4.11.5.6 TSDFW – Transmission System Demand Forecast 2-52 weeks ahead

This message contains peak-of-the-week Transmission System demand forecast values for the following year. The data is published by BMRA as it is received from the NETSO. The Publishing Time in the message is applicable to the forecast as a whole. The records in the message are ordered by time.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|-----------------------------|------------|---|
| Publishing Date | TP | The time that the data was originally published by the NETSO. |
| Number of Records | NR | The number of times the next THREE fields are repeated. |
| Calendar Week Number | WN | The number of the week. |
| Week Start Date | WD | The start date of the week (in GMT). |
| Demand Value | VD | The Demand in MW. |

Message Subject Name

BMRA.SYSTEM.TSDFW

4.11.5.7 NDF – National Demand Forecast

This message contains the National Demand Forecast values for every half hour period from the start of the current day to the furthest ahead forecast that has so far been received by the BMRA.

Every time an updated forecast is received from the NETSO, BMRA publishes the data in this message and additionally includes previously received forecast values from period 1 of the current day onwards. The Publishing Time field is therefore applicable to each period in the forecast and indicates the time that data for a particular period was last received and the data reported is always that most

recently received for each period. The records in the message are ordered by Settlement Date and Period.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|--------------------------|------------|--|
| Zone Indicator | ZI | The zone that this forecast applies to. N for national data. |
| Number of Records | NR | This field indicates how many times the next FOUR fields appear in the message. |
| Publishing Date | TP | The time that this element of the forecast was originally published by the NETSO. It is included so users can see which forecast this value comes from, and therefore which weather forecast the value was based upon. |
| Settlement Date | SD | The settlement date. |
| Settlement Period | SP | The settlement period. |
| Demand | VD | The Demand in MW. |

Message Subject Name

BMRA.SYSTEM.NDF.*c*

(where *c* is 'N' and indicates the forecast is National)

4.11.5.8 TSDF – Transmission System Demand Forecast

This message contains the Transmission System Demand Forecast values for every half hour period from the start of the current day to the furthest ahead forecast that has so far been received by the BMRA.

Every time an updated forecast is received from the NETSO, BMRA publishes the data in this message and additionally includes previously received forecast values from period 1 of the current day onwards. The Publishing Time field is therefore applicable to each period in the forecast and indicates the time that data for a particular period was last received and the data reported is always that most recently received for each period. The records in the message are ordered by Settlement Date and Period.

The NETSO cannot provide Demand values for Interconnectors and pumped storage (Transmission System Demand forecast) for the 09:00am hour forecast. Therefore NETSO estimates these values or enters them as a 'zero' value.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|--------------------------|------------|--|
| Zone Indicator | ZI | The zone that this forecast applies to. B1-B17 for zonal data, N for national data. |
| Number of Records | NR | This field indicates how many times the next FOUR fields appear in the message. |
| Publishing Date | TP | The time that this element of the forecast was originally published by the NETSO. It is included so users can see which forecast this value comes from, and therefore which weather forecast the value was based upon. |
| Settlement Date | SD | The settlement date. |
| Settlement Period | SP | The settlement period. |
| Demand | VD | The Demand in MW. |

Message Subject Name

BMRA.SYSTEM.TSDF.*c*

(where *c* is 'N', or 'B1' to 'B17' and indicates whether the forecast is National or Regional)

4.11.5.9 MELNGC - Indicated Margin

This message contains margin forecast values for every half hour period from the start of the current day to the furthest ahead forecast that has so far been received by the BMRA.

Every time an updated forecast is received from the NETSO, BMRA publishes the data in this message and additionally includes previously received forecast values from period 1 of the current day onwards. The Publishing Time field is therefore applicable to each period in the forecast and indicates the time that data for a particular period was last received and the data reported is always that most recently received for each period. The records in the message are ordered by Settlement Date and Period.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|-----------------------|------------|--|
| Zone Indicator | ZI | The zone that this forecast applies to. B1-B17 for zonal data, N for national data. |

| | | |
|--------------------------|----|--|
| Number of Records | NR | This field indicates how many times the next FOUR fields appear in the flow. |
| Publishing Date | TP | The time that this element of the forecast was originally published by the NETSO. It is included so users can see which forecast this value comes from, and therefore which weather forecast the value was based upon. |
| Settlement Date | SD | The settlement date. |
| Settlement Period | SP | The settlement period. |
| Indicated Margin | VM | The indicated margin in MW. |

Message Subject Name

BMRA.SYSTEM.MELNGC.c

(where *c* is 'N', or 'B1' to 'B17' and indicates whether the forecast is National or Regional)

4.11.5.10 IMBALNGC - Indicated Imbalance

This message contains imbalance forecast values for every half hour period from the start of the current day to the furthest ahead forecast that has so far been received by the BMRA.

Every time an updated forecast is received from the NETSO, BMRA publishes the data in this message and additionally includes previously received forecast values from period 1 of the current day onwards. The Publishing Time field is therefore applicable to each period in the forecast and indicates the time that data for a particular period was last received and the data reported is always that most recently received for each period. The records in the message are ordered by Settlement Date and Period.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|--------------------------|-------------------|--|
| Zone Indicator | ZI | The zone that this forecast applies to. B1-B17 for zonal data, N for national data. |
| Number of Records | NR | This field will indicate how many times the next FOUR fields appear in the flow. |

| | | |
|----------------------------|----|--|
| Publishing Date | TP | The time that this element of the forecast was originally published by the NETSO. It is included so users can see which forecast this value comes from, and therefore which weather forecast the value was based upon. |
| Settlement Date | SD | The settlement date. |
| Settlement Period | SP | The settlement period. |
| Indicated Imbalance | VI | The indicated imbalance in MW. |

Message Subject Name

BMRA.SYSTEM.IMBALNGC.*c*

(where *c* is 'N', or 'B1' to 'B17' and indicates whether the forecast is National or Regional)

4.11.5.11 INDGEN - Indicated Generation

This message contains generation forecast values for every half hour period from the start of the current day to the furthest ahead forecast that has so far been received by the BMRA.

Every time an updated forecast is received from the NETSO, BMRA publishes the data in this message and additionally includes previously received forecast values from period 1 of the current day onwards. The Publishing Time field is therefore applicable to each period in the forecast and indicates the time that data for a particular period was last received and the data reported is always that most recently received for each period. The records in the message are ordered by Settlement Date and Period.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|--------------------------|-------------------|--|
| Zone Indicator | ZI | The zone that this forecast applies to. B1-B17 for zonal data, N for national data. |
| Number of Records | NR | This field will indicate how many times the next FOUR fields appear in the flow. |
| Publishing Date | TP | The time that this element of the forecast was originally published by the NETSO. It is included so users can see which forecast this value comes from, and therefore which weather forecast the value was based upon. |

| | | |
|-----------------------------|----|---------------------------------|
| Settlement Date | SD | The settlement date. |
| Settlement Period | SP | The settlement period. |
| Indicated Generation | VG | The indicated generation in MW. |

Message Subject Name

BMRA.SYSTEM.INDGEN.*c*

(where *c* is 'N', or 'B1' to 'B17' and indicates whether the forecast is National or Regional)

4.11.5.12 INDDDEM - Indicated Demand

This message contains indicated demand forecast values for every half hour period from the start of the current day to the furthest ahead forecast that has so far been received by the BMRA.

Every time an updated forecast is received from the NETSO, BMRA publishes the data in this message and additionally includes previously received forecast values from period 1 of the current day onwards. The Publishing Time field is therefore applicable to each period in the forecast and indicates the time that data for a particular period was last received and the data reported is always that most recently received for each period. The records in the message are ordered by Settlement Date and Period.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|--------------------------|-------------------|--|
| Zone Indicator | ZI | The zone that this forecast applies to. B1-B17 for zonal data, N for national data. |
| Number of Records | NR | This field will indicate how many times the next FOUR fields appear in the flow. |
| Publishing Date | TP | The time that this element of the forecast was originally published by the NETSO. It is included so users can see which forecast this value comes from, and therefore which weather forecast the value was based upon. |
| Settlement Date | SD | The settlement date. |
| Settlement Period | SP | The settlement period. |
| Indicated Demand | VD | The indicated demand in MW. |

Message Subject Name

BMRA.SYSTEM.INDDDEM.c

(where *c* is 'N', or 'B1' to 'B17' and indicates whether the forecast is National or Regional)

4.11.5.13 SYSWARN - System Warnings

This message contains the text of any system warnings that are issued by the NETSO. Note that the Publishing Time is the time that the message was published by BMRA, not NETSO.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|----------------------------|------------|--|
| Publishing Time | TP | The time (in GMT) the warning was published by BMRA. |
| System Warning Text | SW | The body text of the system warning. |

Message Subject Name

BMRA.SYSTEM.SYSWARN

4.11.5.14 INDO - Initial National Demand Out-turn

This message is published when the appropriate data is received from the NETSO. A single message is published every settlement period.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|--------------------------|------------|--|
| Publishing Date | TP | This is the time that the data was published by the NETSO. |
| Settlement Date | SD | The settlement date. |
| Settlement Period | SP | The settlement period. |
| Demand Out-turn | VD | The average demand in MW. |

Message Subject Name

BMRA.SYSTEM.INDO

4.11.5.15 ITSDO – Initial Transmission System Demand Out-turn

This message is published when the appropriate data is received from the NETSO. A single message is published every settlement period.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|--------------------------|------------|--|
| Publishing Date | TP | This is the time that the data was published by the NETSO. |
| Settlement Date | SD | The settlement date. |
| Settlement Period | SP | The settlement period. |
| Demand Out-turn | VD | The average demand in MW. |

Message Subject Name

BMRA.SYSTEM.ITSDO

4.11.5.16 TEMP – Temperature Data

This message contains the weighted average temperature as measured at noon local time in a number of GB locations, along with 3 additional reference data values for the Normal, High and Low temperatures.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|-------------------------------------|------------|---|
| Publishing Date | TP | The time that the data was originally published by the NETSO. |
| Spot Time | TS | The datetime at which the temperature was measured. |
| Outturn temperature | TO | Temperature in degrees celsius. |
| Normal Reference temperature | TN | Temperature in degrees celsius. |
| Low Reference temperature | TL | Temperature in degrees celsius. |

| Field | Field Type | Description of field |
|-----------------------------------|------------|---|
| Publishing Date | TP | The time that the data was originally published by the NETSO. |
| Spot Time | TS | The datetime at which the temperature was measured. |
| Outturn temperature | TO | Temperature in degrees celsius. |
| High Reference temperature | TH | Temperature in degrees celsius. |

Message Subject Name

BMRA.SYSTEM.TEMP

4.11.5.17 **FREQ – System Frequency**

This message contains the System Frequency at a spot time, measured in Hz.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|-------------------------|------------|---|
| Spot Time | TS | The datetime at which the frequency was measured. |
| System Frequency | SF | System Frequency in Hz. |

Message Subject Name

BMRA.SYSTEM.FREQ

4.11.5.18 **FUELINST – Instantaneous Generation by Fuel Type**

This message contains the Instantaneous Generation by Fuel Type for a particular Settlement Period.

It should be noted that the TIBCO messages cap negative values received from NETSO at zero for all fuel types (including interconnectors).

Furthermore, the BMRA does NOT publish a Total Instantaneous figure across all fuel types.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|--------------------------|------------|---|
| Publishing Date | TP | The time that this element was originally published by the NETSO. |
| Settlement Date | SD | The settlement date. |
| Settlement Period | SP | The settlement period. |
| Spot Time | TS | The datetime at which the generation was measured. |
| Fuel Type | FT | Fuel Type. |
| Generation | FG | The Generation in MW. |

Message Subject Name

BMRA.SYSTEM.FUELINST

4.11.5.19 FUELHH – Half-Hourly Generation by Fuel Type

This message contains the Generation by Fuel Type for a particular Half Hour.

It should be noted that the TIBCO messages cap negative values received from NETSO at zero for all non-interconnector fuel types. For interconnector fuel types, NO capping is applied, values are publish exactly as received.

Furthermore, the BMRA does NOT publish a Total Half-Hourly Outturn figure across all fuel types.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|--------------------------|------------|---|
| Publishing Date | TP | The time that this element of the forecast was originally published by the NETSO. |
| Settlement Date | SD | The settlement date. |
| Settlement Period | SP | The settlement period. |
| Fuel Type | FT | Fuel Type. |
| Generation | FG | The Generation in MW. |

Message Subject Name

BMRA.SYSTEM.FUELHH

4.11.5.20 WINDFOR – Forecast Peak Wind Generation

This message contains the peak wind generation forecast values for various half hour periods from the start of the current day to the furthest ahead forecast that has so far been received by the BMRA.

Each forecast file contains data for the following local times:

21:00 D
 00:00 D+1
 05:00 D+1
 08:00 D+1
 12:00 D+1
 17:00 D+1
 21:00 D+1
 00:00 D+2
 05:00 D+2
 08:00 D+2
 12:00 D+2
 17:00 D+2
 21:00 D+2

Every time an updated forecast is received from the NETSO, BMRA publishes the data in this message and additionally includes previously received forecast values from period 1 of the current day onwards (where previously received). The Publishing Time field is therefore applicable to each period in the forecast and indicates the time that data for a particular period was last received and the data reported is always that most recently received for each period. The records in the message are ordered by Settlement Date and Period.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|--------------------------|------------|--|
| Number of Records | NR | This field indicates how many times the next FOUR fields appear in the message. |
| Publishing Date | TP | The time that this element of the forecast was originally published by the NETSO. It is included so users can see which forecast this value comes from, and therefore which forecast the value was based upon. |
| Settlement Date | SD | The settlement date. |
| Settlement Period | SP | The settlement period. |
| Generation | VG | The Generation in MW. |

| Field | Field Type | Description of field |
|---------------------------|------------|--|
| Number of Records | NR | This field indicates how many times the next FOUR fields appear in the message. |
| Publishing Date | TP | The time that this element of the forecast was originally published by the NETSO. It is included so users can see which forecast this value comes from, and therefore which forecast the value was based upon. |
| Settlement Date | SD | The settlement date. |
| Settlement Period | SP | The settlement period. |
| Generation | VG | The Generation in MW. |
| Total Registered Capacity | TR | Total Registered Wind Generation Capacity (MW) |

Message Subject Name

BMRA.SYSTEM.WINDFOR

4.11.5.21 INDOD – Daily Energy Volume Data

This message is published when the appropriate data is received from the NETSO. A single message is published every settlement day.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|--------------------------------|------------|--|
| Publishing Date | TP | This is the time that the data was published by the NETSO. |
| Settlement Date | SD | The settlement date. |
| Energy Volume Out-turn | EO | The Outturn Daily Energy Volume in MWh. |
| Energy Volume Low Reference | EL | The Daily Energy Low Reference Volume in MWh. |
| Energy Volume High Reference | EH | The Daily Energy High Reference Volume in MWh. |
| Energy Volume Normal Reference | EN | The Daily Energy Normal Reference Volume in MWh. |

Message Subject Name

BMRA.SYSTEM.INDOD

4.11.5.22 NONBM – Non-BM STOR Generation Instructed Volume

This message contains the total volume of instructions issued to non-BM STOR units under Short Term Operating Reserve (STOR) contracts for a particular Half Hour.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|---------------------------|------------|---|
| Publishing Date | TP | The time that this element of the forecast was originally published by the NETSO. |
| Settlement Date | SD | The settlement date. |
| Settlement Period | SP | The settlement period. |
| Non-BM STOR Volume | NB | The Non-BM STOR Instructed Volume in MWh. |

Message Subject Name

BMRA.SYSTEM.NONBM

4.11.5.23 FPN - Final Physical Notice

This message contains FPN values for a single BM Unit, for a single settlement period. The data is published as it is received from the NETSO.

Note that the Effective From Time and Effective To Times are converted to spot times for purposes of distribution. One message will contain the data for a whole settlement period.

If the Number of Records field is set to zero, BMRA has received invalid data for that settlement period and BM Unit.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|------------------------|------------|----------------------|
| Settlement Date | SD | The settlement date. |

| Field | Field Type | Description of field |
|------------------------------|------------|--|
| Settlement Period | SP | The settlement period. |
| Number of Spot Points | NP | The number of spot points. Implies that what follows is a series of spot data points, each of which consist of TWO fields. |
| Spot Time | TS | The time at which the following VP field value is valid. |
| FPN Level | VP | FPN in MW at the above spot time. |

Message Subject Name

BMRA.BM.<BM_UNIT>.FPN

4.11.5.24 QPN - Quiescent Physical Notice

This message contains QPN values for a single BM Unit, for a single settlement period. The data is published as it is received from the NETSO.

Note that the Effective From Time and Effective To Times are converted to spot times for purposes of distribution. One message will contain the data for a whole settlement period.

If the Number of Records field is set to zero, BMRA has received invalid data for that settlement period and BM Unit.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|------------------------------|------------|--|
| Settlement Date | SD | The settlement date. |
| Settlement Period | SP | The settlement period. |
| Number of Spot Points | NP | The number of spot points. Implies that what follows is a series of spot data points, each of which consist of TWO fields. |
| Spot Time | TS | The time at which the following VP field value is valid. |
| QPN Level | VP | QPN in MW at the above spot time. |

Message Subject Name

BMRA.BM.<BM_UNIT>.QPN

4.11.5.25 BOD - Bid-Offer Pairs

This message contains Bid-Offer values for a single BM Unit, for a single settlement period, for a single bid-offer pair number. The data is published as it is received from the NETSO.

Note that the Effective From Time and Effective To Times are converted to spot times for purposes of distribution. One message will contain the data for a whole settlement period.

If the Number of Records field is set to zero, BMRA has received invalid data for that settlement period and BM Unit.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|-----------------------|------------|--|
| Settlement Date | SD | The settlement date. |
| Settlement Period | SP | The settlement period. |
| Bid-Offer pair number | NN | B-O pair number. |
| Offer price | OP | Offer price. |
| Bid price | BP | Bid price. |
| Number of Spot Points | NP | The number of spot points. Implies that what follows is a series of spot data points, each of which consist of TWO fields. |
| Spot time | TS | The time at which the following VB field value is valid. |
| Bid-Offer Level Value | VB | Bid-Offer level in MW at the above spot time. |

Message Subject Name

BMRA.BM.<BM_UNIT>.BOD.*n*

(where *n* represents the Bid-Offer Pair number, in the range -6 to 6 excluding 0).

4.11.5.26 BOAL - Bid-Offer Acceptances

This message contains acceptance data for a single BM Unit, for a single acceptance for Settlement Dates prior to the P217 effective date. The data is published as it is received from the NETSO.

Note that the Effective From Time and Effective To Times are converted to spot times for purposes of distribution. One message will contain the data for a single acceptance.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|-------------------------------|------------|--|
| Acceptance number | NK | The acceptance number described in this message. |
| Acceptance Time | TA | Time that acceptance was made. |
| Deemed Acceptance flag | AD | If true, no Bid-Offer was made. |
| Number of Spot Points | NP | The number of spot points. Implies that what follows is a series of spot data points, each of which consist of TWO fields. |
| Spot Time | TS | The time at which the following VA field value is valid. |
| Acceptance Level Value | VA | Acceptance in MW at the above spot time. |

Message Subject Name

BMRA BM.<BM_UNIT>.BOAL

4.11.5.27 BOALF – Bid-Offer Acceptance Level Flagged

This message contains acceptance data for a single BM Unit, for a single acceptance for Settlement Dates on and after the P217 effective date. The data is published as it is received from the NETSO.

Note that the Effective From Time and Effective To Times are converted to spot times for purposes of distribution. One message will contain the data for a single acceptance.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|--------------------------|------------|--|
| Acceptance number | NK | The acceptance number described in this message. |

| Field | Field Type | Description of field |
|-------------------------------|------------|--|
| SO-Flag | SO | A value of 'T' indicates the Acceptance should be considered to be potentially impacted by transmission constraints. |
| STOR Provider Flag | PF | Indicates the item relates to a STOR Provider |
| Acceptance Time | TA | Time that acceptance was made. |
| Deemed Acceptance flag | AD | If true, no Bid-Offer was made. |
| Number of Spot Points | NP | The number of spot points. Implies that what follows is a series of spot data points, each of which consist of TWO fields. |
| Spot Time | TS | The time at which the following VA field value is valid. |
| Acceptance Level Value | VA | Acceptance in MW at the above spot time. |

Message Subject Name

BMRA BM.<BM_UNIT>.BOALF

4.11.5.28 MEL - Maximum Export Limit

This message contains MEL values for a single BM Unit, for a single settlement period. The data is published as it is received from the NETSO.

Note that the Effective From Time and Effective To Times are converted to spot times for purposes of distribution. One message will contain the data for a whole settlement period.

If the Number of Records field is set to zero, BMRA has received invalid data for that settlement period and BM Unit.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|------------------------------|------------|--|
| Settlement Date | SD | The settlement date. |
| Settlement Period | SP | The settlement period. |
| Number of Spot Points | NP | The number of spot points. Implies that what follows is a series of spot data points, each of which consist of TWO fields. |

| Field | Field Type | Description of field |
|------------------|------------|--|
| Spot Time | TS | The time at which the following VE field value is valid. |
| MEL | VE | MEL in MW at the above spot time. |

Message Subject Name

BMRA.BM.<BM_UNIT>.MEL

4.11.5.29 MIL - Maximum Import Limit

This message contains MIL values for a single BM Unit, for a single settlement period. The data is published as it is received from the NETSO.

Note that the Effective From Time and Effective To Times are converted to spot times for purposes of distribution. One message will contain the data for a whole settlement period.

If the Number of Records field is set to zero, BMRA has received invalid data for that settlement period and BM Unit.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|------------------------------|------------|--|
| Settlement Date | SD | The settlement date. |
| Settlement Period | SP | The settlement period. |
| Number of Plot Points | NP | The number of spot points. Implies that what follows is a series of spot data points, each of which consist of TWO fields. |
| Spot Time | TS | The time at which the following VF field value is valid. |
| MIL | VF | MIL in MW at the above spot time |

Message Subject Name

BMRA.BM.<BM_UNIT>.MIL

4.11.5.30 BOAV - Bid-Offer Acceptance Volumes

This message contains data derived by BMRA concerning bid and offer acceptance volumes - one message is published per acceptance, per bid-offer pair number, per BM Unit. Due to the granularity of this message, many BOAV messages types can be published every settlement period.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|---|------------|--|
| Settlement Date | SD | The settlement date. |
| Settlement Period | SP | The settlement period. |
| Bid-Offer pair number | NN | B-O pair number that the acceptance volumes apply to. |
| Acceptance Number | NK | Acceptance number that the volumes apply to. |
| Period BM Unit Offer Accepted Volume | OV | Total Offer Volume accepted for a particular B-O pair. |
| Period BM Unit Bid Accepted Volume | BV | Total Bid Volume accepted for a particular B-O pair. |
| Short Acceptance Flag | SA | Flag indicating whether the Acceptance was of “short” duration |

Message Subject Name

BMRA.BM.<BM_UNIT>.BOAV.*n*

(where *n* represents the Bid-Offer Pair number, in the range -6 to 6 excluding 0)

4.11.5.31 PTAV - Period Total Bid-Offer Acceptance Volumes

This message contains data derived by BMRA concerning period total bid and offer acceptance volumes - one message is published per bid-offer pair number, per settlement period, per BM Unit.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|--|------------|--|
| Settlement Date | SD | The settlement date. |
| Settlement Period | SP | The settlement period. |
| Bid-Offer pair number | NN | B-O pair number that the acceptance volumes apply to. |
| Period Total BM Unit Offer Volume | OV | Total Offer Volume accepted for a particular B-O pair. |
| Period Total BM Unit Bid Volume | BV | Total Bid Volume accepted for a particular B-O pair. |

Message Subject Name

BMRA.BM.<BM_UNIT>.PTAV.*n*

(where *n* represents the Bid-Offer Pair number, in the range -6 to 6 excluding 0).

4.11.5.32 DISPTAV – Disaggregated Period Total Bid-Offer Acceptance Volumes

This message contains data derived by BMRA concerning period total bid and offer acceptance volumes - one message is published per Bid-Offer Pair Number, per Settlement Period, per BM Unit.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|---|------------|--|
| Settlement Date | SD | The Settlement Date. |
| Settlement Period | SP | The Settlement Period. |
| Bid-Offer Pair Number | NN | B-O Pair Number that the acceptance volumes apply to. |
| Period Total BM Unit Offer Volume | OV | Total Offer Volume accepted for a particular B-O Pair. |
| Period Tagged BM Unit Offer Volume | P1 | Tagged element of the Total Offer Volume accepted for a particular B-O Pair. |

| Field | Field Type | Description of field |
|--|------------|---|
| Period Repriced BM Unit Offer Volume | P2 | Repriced element of the Total Offer Volume accepted for a particular B-O Pair. |
| Period Originally-Priced BM Unit Offer Volume | P3 | Originally-priced element of the Total Offer Volume accepted for a particular B-O Pair. |
| Period Total BM Unit Bid Volume | BV | Total Bid Volume accepted for a particular B-O Pair. |
| Period Tagged BM Unit Bid Volume | P4 | Tagged element of the Total Bid Volume accepted for a particular B-O Pair. |
| Period Repriced BM Unit Bid Volume | P5 | Repriced element of the Total Bid Volume accepted for a particular B-O Pair. |
| Period Originally-Priced BM Unit Bid Volume | P6 | Originally-priced element of the Total Bid Volume accepted for a particular B-O Pair. |

Message Subject Name

BMRA.BM.<BM_UNIT>.DISPTAV.n

(where n represents the Bid-Offer Pair number, in the range -6 to 6 excluding 0).

4.11.5.33 EBOCF - Estimated Bid-Offer Cash Flows

This message contains data derived by BMRA concerning bid and offer cashflows - one message is published per bid-offer pair number, per settlement period, per BM Unit.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|---------------------------------------|------------|---|
| Settlement Date | SD | The settlement date. |
| Settlement Period | SP | The settlement period. |
| Bid-Offer pair number | NN | B-O pair number that the acceptance volumes apply to. |
| Period BM Unit Offer Cash Flow | OC | Period Offer Cash Flow for a particular B-O pair. |
| Period BM Unit Bid Cash Flow | BC | Period Bid Cash Flow for a particular B-O pair. |

*Message Subject Name*BMRA.BM.<BM_UNIT>.EBOCF.*n*(where *n* represents the Bid-Offer Pair number, in the range -6 to 6 excluding 0).

4.11.5.34 DISEBSP – Disaggregated Estimated Buy and Sell Price

This message contains data derived by BMRA concerning estimated system buy and sell prices for Settlement Dates on and after the P217 effective date - one message is published per settlement period.

Note: where no Replacement Price has been calculated the values of the 'Replacement Price' and 'Replacement Price Calculation Volume' fields will be considered to be NULL and therefore they will not be included in the associated Tibco message

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|---|------------|--|
| Settlement Date | SD | The Settlement Date. |
| Settlement Period | SP | The Settlement Period. |
| Buy Price | PB | The price that must be paid for electricity which is out of balance. |
| Sell Price | PS | The price received for electricity which is out of balance. |
| Price Derivation Code | PD | A code that describes the way in which SSP and SBP were calculated |
| Reserve Scarcity Price | RSP | The Reserve Scarcity Price |
| Replacement Price | RP | The derived Replacement Price value. This field can be NULL and so may not always be included in the Tibco message. |
| Replacement Price Calculation Volume | RV | The volume used to derived the Replacement Price. This field can be NULL and so may not always be included in the Tibco message. |
| BSAD Defaulted | BD | If True the following BSAD fields are default values |
| Sell Price Price Adjustment | A3 | SPA in £/MWh |
| Buy Price Price Adjustment | A6 | BPA in £/MWh |

| Field | Field Type | Description of field |
|---|------------|---|
| Indicative Net Imbalance Volume | NI | The Indicative NIV |
| Total System Accepted Offer Volume | AO | System wide total Accepted Offer Volume for the Settlement Period |
| Total System Accepted Bid Volume | AB | System wide total Accepted Bid Volume for the Settlement Period |
| Total System Tagged Accepted Offer Volume | T1 | System wide total tagged Accepted Offer Volume for the Settlement Period |
| Total System Tagged Accepted Bid Volume | T2 | System wide total tagged Accepted Bid Volume for the Settlement Period |
| System Total Priced Accepted Offer Volume | PP | System wide total Priced Accepted Offer Volume for the Settlement Period |
| System Total Priced Accepted Bid Volume | PC | System wide total Priced Accepted Bid Volume for the Settlement Period |
| Total System Adjustment Sell Volume | J1 | System wide total Adjustment Sell Volume for the Settlement Period |
| Total System Adjustment Buy Volume | J2 | System wide total Adjustment Buy Volume for the Settlement Period |
| Total System Tagged Adjustment Sell Volume | J3 | System wide total tagged Adjustment Sell Volume for the Settlement Period |
| Total System Tagged Adjustment Buy Volume | J4 | System wide total tagged Adjustment Buy Volume for the Settlement Period |

Message Subject Name

BMRA.SYSTEM.DISEBSP

4.11.5.35 RURE - Run Up Rates Export

This messages contains dynamic data, which is published whenever it is received from the NETSO. The message describes the run up rates of a single BM Unit.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|---------------------|------------|---|
| Effective From Time | TE | Time that the following U* field values are effective from. |
| Run up rate 1 | U1 | |
| Run up elbow 2 | UB | |
| Run up rate 2 | U2 | |
| Run up elbow 3 | UC | |
| Run up rate 3 | U3 | |

Message Subject Name

BMRA.DYNAMIC.<BM_UNIT>.RURE

4.11.5.36 RURI - Run Up Rates Import

This message contains dynamic data, which is published whenever it is received from the NETSO. The message describes the run up rates of a single BM Unit.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|---------------------|------------|---|
| Effective From Time | TE | Time that the following U* field values are effective from. |
| Run up rate 1 | U1 | |
| Run up elbow 2 | UB | |
| Run up rate 2 | U2 | |
| Run up elbow 3 | UC | |
| run up rate 3 | U3 | |

Message Subject Name

BMRA.DYNAMIC.<BM_UNIT>.RURI

4.11.5.37 RDRE - Run Down Rates Export

This message contains dynamic data, which is published whenever it is received from the NETSO. The message describes the run down rates of a single BM Unit.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|---------------------|------------|---|
| Effective From Time | TE | Time that the following R* field values are effective from. |
| Run down rate 1 | R1 | |
| Run down elbow 2 | RB | |
| Run down rate 2 | R2 | |
| Run down elbow 3 | RC | |
| run down rate 3 | R3 | |

Message Subject Name

BMRA.DYNAMIC.<BM_UNIT>.RDRE

4.11.5.38 RDRI - Run Down Rates Import

This message contains dynamic data, which is published whenever it is received from the NETSO. The message describes the run down rates of a single BM Unit.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|---------------------|------------|---|
| Effective From Time | TE | Time that the following R* field values are effective from. |
| Run down rate 1 | R1 | |
| Run down elbow 2 | RB | |
| Run down rate 2 | R2 | |
| Run down elbow 3 | RC | |
| run down rate 3 | R3 | |

Message Subject Name

BMRA.DYNAMIC.<BM_UNIT>.RDRI

4.11.5.39 NDZ - Notice to Deviate from Zero

This message contains dynamic data, which is published whenever it is received from the NETSO. The message describes the notice to deviate from zero time of a single BM Unit.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|-----------------------------|------------|---|
| Effective From Time | TE | Time that the following DE field value is effective from. |
| Notice to Deviate from Zero | DZ | |

Message Subject Name

BMRA.DYNAMIC.<BM_UNIT>.NDZ

4.11.5.40 NTO - Notice to Deliver Offers

This message contains dynamic data, which is published whenever it is received from the NETSO. The message describes the notice to deliver offers time of a single BM Unit.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|--------------------------|------------|---|
| Effective From Time | TE | Time that the following DO field value is effective from. |
| Notice to Deliver Offers | DO | |

Message Subject Name

BMRA.DYNAMIC.<BM_UNIT>.NTO

4.11.5.41 NTB - Notice to Deliver Bids

This message contains dynamic data, which is published whenever it is received from the NETSO. The message describes the notice to deliver bids time of a single BM Unit.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|------------------------|------------|---|
| Effective From Time | TE | Time that the following DB field value is effective from. |
| Notice to Deliver Bids | DB | |

Message Subject Name

BMRA.DYNAMIC.<BM_UNIT>.NTB

4.11.5.42 MZT - Minimum Zero Time

This message contains dynamic data, which is published whenever it is received from the NETSO. The message describes the minimum zero time of a single BM Unit.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|---------------------|------------|---|
| Effective From Time | TE | Time that the following MZ field value is effective from. |
| Minimum Zero Time | MZ | |

Message Subject Name

BMRA.DYNAMIC.<BM_UNIT>.MZT

4.11.5.43 MNZT - Minimum non-Zero Time

This message contains dynamic data, which is published whenever it is received from the NETSO. The message describes the minimum non-zero time of a single BM Unit.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|-----------------------|------------|---|
| Effective From Time | TE | Time that the following MN field value is effective from. |
| Minimum non-Zero Time | MN | |

Message Subject Name

BMRA.DYNAMIC.<BM_UNIT>.MNZT

4.11.5.44 SEL - Stable Export Limit

This message contains dynamic data, which is published whenever it is received from the NETSO. The message describes the stable export limit of a single BM Unit.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|---------------------|------------|---|
| Effective From Time | TE | Time that the following SE field value is effective from. |
| Stable Export Limit | SE | |

Message Subject Name

BMRA.DYNAMIC.<BM_UNIT>.SEL

4.11.5.45 SIL - Stable Import Limit

This message contains dynamic data, which is published whenever it is received from the NETSO. The message describes the stable import limit of a single BM Unit.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|---------------------|------------|---|
| Effective From Time | TE | Time that the following SI field value is effective from. |
| Stable Import Limit | SI | |

Message Subject Name

BMRA.DYNAMIC.<BM_UNIT>.SIL

4.11.5.46 MDV - Maximum Delivery Volume

This message contains dynamic data, which is published whenever it is received from the NETSO. The message describes the maximum delivery volume of a single BM Unit.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|-------------------------|------------|---|
| Effective From Time | TE | Time that the following DV field value is effective from. |
| Maximum Delivery Volume | DV | |

Message Subject Name

BMRA.DYNAMIC.<BM_UNIT>.MDV

4.11.5.47 MDP - Maximum Delivery Period

This message contains dynamic data, which is published whenever it is received from the NETSO. The message describes the maximum delivery period time of a single BM Unit.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|--------------------------------|------------|---|
| Effective From Time | TE | Time that the following DP field value is effective from. |
| Maximum Delivery Period | DP | |

Message Subject Name

BMRA.DYNAMIC.<BM_UNIT>.MDP

4.11.5.48 TBOD - Total Bid Offer Data

This message contains data derived by BMRA concerning total bid and total offer volumes - one message is published per settlement period.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|---------------------------|------------|--|
| Settlement Date | SD | The settlement date. |
| Settlement Period | SP | The settlement period. |
| Total Offer Volume | OT | System wide total Offer Volume for the Settlement Period |
| Total Bid Volume | BT | System wide total Bid Volume for the Settlement Period |

Message Subject Name

BMRA.SYSTEM.TBOD

4.11.5.49 DISBSAD – Balancing Services Adjustment Action Data

This message contains values for a single Balancing Services Adjustment Action data item for a half hour period for Settlement Dates on or after the P217 effective date.

Every time the data for a period is received from the NETSO, BMRA publishes the data in this message.

Note: where a Balancing Services Adjustment Action has no defined cost then the associated Tibco message will not include an 'Adjustment Cost' field.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|------------------------------|------------|---|
| Settlement Date | SD | The settlement date |
| Settlement Period | SP | The settlement period |
| Adjustment Identifier | AI | The item's unique (for the settlement period) identifier |
| SO-Flag | SO | A value of 'T' indicates the Balancing Services Adjustment Action should be considered to be potentially impacted by transmission constraints |
| STOR Provider Flag | PF | Indicates the item relates to a STOR Provider |
| Adjustment Cost | JC | in £. Where an Action has no defined cost then this field will not be included in the Tibco message. |
| Adjustment Volume | JV | in MWh |

Message Subject Name

BMRA.SYSTEM.DISBSAD

4.11.5.50 MSG – BMRS Informational Message

This message contains only informational data. It is reserved for future use but may appear in the general message transfers from time to time. It should be ignored by participants.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|-------------------------|------------|--|
| Publishing Time | TP | The time (in GMT) the information was published by BMRA. |
| Information Text | IN | The body text of the informational message. |

Message Subject Name

BMRA.INFO.MSG

4.11.5.51 NETEBSP - Estimated Buy and Sell Price

This message contains data derived by BMRA concerning estimated system buy and sell prices, for Settlement Dates prior to the P217 effective date - one message is published per Settlement Period.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|---|------------|--|
| Settlement Date | SD | The Settlement Date. |
| Settlement Period | SP | The Settlement Period. |
| Buy Price | PB | The price that must be paid for electricity which is out of balance. |
| Sell Price | PS | The price received for electricity which is out of balance. |
| Price Derivation Code | PD | A code that describes the way in which SSP and SBP were calculated |
| Total Accepted Offer Volume | AO | System wide total Accepted Offer Volume for the Settlement Period |
| Total Accepted Bid Volume | AB | System wide total Accepted Bid Volume for the Settlement Period |
| Total Unpriced Accepted Offer Volume | AP | System wide total Unpriced Accepted Offer Volume for the Settlement Period |
| Total Unpriced Accepted Bid Volume | AC | System wide total Unpriced Accepted Bid Volume for the Settlement Period |
| Total Priced Accepted Offer Volume | PP | System wide total Priced Accepted Offer Volume for the Settlement Period |
| Total Priced Accepted Bid Volume | PC | System wide total Priced Accepted Bid Volume for the Settlement Period |
| Indicative Net Imbalance Volume | NI | The Indicative NIV |

| Field | Field Type | Description of field |
|--|------------|--|
| BSAD Defaulted | BD | If True the following BSAD fields are default values |
| Net Energy Sell Price Cost Adjustment | A7 | ESCA in £ |
| Net Energy Sell Price Volume Adjustment | A8 | ESVA in MWh |
| Net System Sell Price Volume Adjustment | A11 | SSVA in MWh |
| Sell Price Price Adjustment | A3 | SPA in £/MWh |
| Net Energy Buy Price Cost Adjustment | A9 | EBCA in £ |
| Net Energy Buy Price Volume Adjustment | A10 | EBVA in MWh |
| Net System Buy Price Volume Adjustment | A12 | SBVA in MWh |
| Buy Price Price Adjustment | A6 | BPA in £/MWh |

Message Subject Name

BMRA.SYSTEM.NETEBSP

4.11.5.52 NETBSAD - Balancing Services Adjustment Data

This message contains a set of adjustment values for a half hour period.

Every time the data for a period is received from the NETSO, BMRA publishes the data in this message. Note that for Settlement Dates on or after the P217 effective date the following data items will always be zero:

- Net Energy Buy Price Cost Adjustment (EBCA)
- Net Energy Buy Price Volume Adjustment (EBVA)
- Net System Buy Price Volume Adjustment (SBVA)
- Net Energy Sell Price Cost Adjustment (ESCA)
- Net Energy Sell Price Volume Adjustment (ESVA)
- Net System Sell Price Volume Adjustment (SSVA)

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|--|------------|-----------------------|
| Settlement Date | SD | The Settlement Date |
| Settlement Period | SP | The Settlement Period |
| Net Energy Sell Price Cost Adjustment | A7 | ESCA in £ |
| Net Energy Sell Price Volume Adjustment | A8 | ESVA in MWh |
| Net System Sell Price Volume Adjustment | A11 | SSVA in MWh |
| Sell Price Price Adjustment | A3 | SPA in £/MWh |
| Net Energy Buy Price Cost Adjustment | A9 | EBCA in £ |
| Net Energy Buy Price Volume Adjustment | A10 | EBVA in MWh |
| Net System Buy Price Volume Adjustment | A12 | SBVA in MWh |
| Buy Price Price Adjustment | A6 | BPA in £/MWh |

Message Subject Name

BMRA.SYSTEM.NETBSAD

4.11.5.53 SYSMMSG - System Messages

This message contains the text of any system messages that are generated by BMRA. Note that the Publishing Time is the time that the message was published by BMRA.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|----------------------------|------------|--|
| Message Type | MT | The 'type' of message being reported. |
| Publishing Time | TP | The time (in GMT) the message was published by BMRA. |
| System Message Text | SM | The body text of the system message. |

Message Subject Name

BMRA.SYSTEM.SYSMSG

4.11.5.54 MID – Market Index Data

This message contains a set of Market Index Data values for a half hour period.

Every time the data for a period is received from an MIDP, BMRA publishes the data in this message.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|--------------------------------------|------------|---------------------------------------|
| Market Index Data Provider ID | MI | Market Index Data Provider Identifier |
| Settlement Date | SD | The Settlement Date |
| Settlement Period | SP | The Settlement Period |
| Market Index Price | M1 | Market Index Price in £/MWh |
| Market Index Volume | M2 | Market Index Volume in MWh |

Message Subject Name

BMRA.SYSTEM.MID

4.11.5.55 SOSO – SO-SO Prices

This message contains details of prices for trades offered between the NETSO and another System Operator. The data is published by BMRA as it is received from the NETSO.

Message Definition

| Field | Field Type | Description of field |
|--------------------------------|------------|---|
| SO-SO Trade Type | TT | A code identifying the type of trade being made |
| SO-SO Start Time | ST | The start date and time for which a Trade Price applies |
| SO-SO Trade Direction | TD | The direction of the trade |
| Contract Identification | IC | A unique identifier for an offered trade |
| Trade Quantity | TQ | The quantity of an offered trade in MW |
| Trade Price | PT | The price of the trade in units of currency per MWh |

Message Subject Name

BMRA.SYSTEM.SOSO

4.11.5.56 QAS - BM Unit Applicable Balancing Services Volume

This message contains the Applicable Balancing Services Volume for a BM Unit in a specific Settlement Period. The data is published as it is received from the NETSO.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|---|------------|--|
| Settlement Date | SD | The Settlement Date. |
| Settlement Period | SP | The Settlement Period. |
| BM Unit Applicable Balancing Services Volume | SV | Energy Volume in MWh for the Settlement Period |

Message Subject Name

BMRA.BM.<BM_UNIT>.QAS

4.11.5.57 CDN – Credit Default Notice

This message contains Credit Default Notices values for a single BSC Party, and the settlement date and period the default level was entered and cleared (if applicable). The data is published as it is received from ECVA and repeated up to 3 times at 20 minute intervals. (Note that both the repeat count and the interval are configurable)

NOTE: The last 3 fields of the message (Cleared Default Settlement Date, Cleared Default Settlement Period, and Cleared Default Text) are all optional and will not be present in all messages. The absence of these fields indicates that the party is currently in the Credit Default Level published. The message will therefore always contain either 3 (for Parties entering default) or 6 (for Parties clearing default) fields.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|--|------------|---|
| Credit Default Level | DL | The credit default level |
| Entered Default Settlement Date | ED | The entered default settlement date. |
| Entered Default Settlement Period | EP | The entered default settlement period. |
| Cleared Default Settlement Date | CD | (Optional) The cleared default settlement date. |
| Cleared Default Settlement Period | CP | (Optional) The cleared default settlement period. |
| Cleared Default Text | CT | (Optional) The cleared default text |

Message Subject Name

BMRA.BP.<PARTICIPANT>.CDN

4.11.5.58 ISPSTACK – Indicative System Price Stack

This message contains data derived by BMRA when calculating the System Price. The Indicative System Price Stacks (Buy and Sell) consist of a number of ordered stack items which can be either BM Unit Acceptance or Balancing Services Adjustment Action data. Each message relates to a single item on the Bid or Offer Stack for a given Settlement Period. The total stack data for a given Settlement Period is therefore communicated using a number of messages. Each individual message indicates which stack (Buy or Sell) it relates to as well as indicating the relative position of the data item within that stack.

Note: where a stack item has no defined cost then the associated Tibco message will not include a 'Stack Item Original Price' field. For Balancing Services Adjustment Action and Demand Control Volume stack items the 'Acceptance Number' and 'Bid-Offer Pair Number' fields will not be included in the associated Tibco message because these items are NULL.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|---------------------------------|------------|---|
| Settlement Date | SD | The settlement date. |
| Settlement Period | SP | The settlement period. |
| Bid/Offer Indicator | BO | Indicates whether this is a Bid or an Offer item. |
| Sequence Number | SN | The stack item's Index number, representing the relative position of the associated stack item within its related stack. A value of 1 representing the first item in the stack. |
| Component Identifier | CI | For an acceptance data item this will hold the associated BM Unit's Id. For Balancing Services Adjustment Action items this will hold the item's unique ID as allocated by the SO or for Demand Control Volume stack items a unique ID that BSC Agent's System derives. |
| Acceptance Number | NK | The acceptance number (for Balancing Services Adjustment Action and Demand Control Volume items this will be NULL and therefore not included in the associated Tibco message.) |
| Bid-Offer Pair Number | NN | The Bid-Offer Pair number (for Balancing Services Adjustment Action and Demand Control Volume items this will be NULL and therefore not included in the associated Tibco message.) |
| CADL Flag | CF | A value of 'T' indicates that an Acceptance is considered to be a Short Duration Acceptance. |
| SO-Flag | SO | A value of 'T' indicates that an Acceptance or Balancing Services Adjustment Action item should be considered to be potentially impacted by transmission constraints. |
| STOR Provider Flag | PF | Indicates the item relates to a STOR Provider |
| Repriced Indicator | RI | Indicates where the item has been repriced. |
| Bid-Offer Original Price | UP | The Offer or Bid Price of the stack item (£/MWh) as reported in the original BOD |

| Field | Field Type | Description of field |
|-------------------------------------|------------|---|
| Reserve Scarcity Price | RSP | The calculated Reserve Scarcity Price. This field will be NULL where the action is outside of a STOR Availability Window |
| Stack Item Original Price | IP | The stack item's original price in £/MWh (i.e. the Bid-Offer Original Price). For STOR Actions, the Stack Item Original Price is the derived price based on either the Bid-Offer Original Price or Reserve Scarcity Price. For items which are initially unpriced this value will be NULL and therefore not included in the associated Tibco message. |
| Stack Item Volume | IV | The stack item's volume in MWh |
| DMAT Adjusted Volume | DA | The item's volume after DMAT has been applied. |
| Arbitrage Adjusted Volume | AV | The item's volume after Arbitrage has been applied. |
| NIV Adjusted Volume | NV | The item's volume after NIV has been applied, |
| PAR Adjusted Volume | PV | The item's volume after PAR has been applied. |
| Stack Item Final Price | FP | The stack item's final price in £/MWh |
| Transmission Loss Multiplier | TM | The associated BM Unit's Transmission Loss Multiplier value (for Balancing Services Adjustment Action items this will be 1.) |
| TLM Adjusted Volume | TV | PAR Adjusted Volume x TLM |
| TLM Adjusted Cost | TC | PAR Adjusted Volume x TLM x Price |

Message Subject Name

BMRA.SYSTEM.ISPSTACK

4.11.5.59 OCNMFD2 – Generating Plant Demand Margin, 2-14 days ahead

This message contains peak-of-the-day generating plant demand margin values for the following 2 weeks. The data is published by BMRA as it is received from the NETSO. The Publishing Time in the message is applicable to the forecast as a whole. The records in the message are ordered by time.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|--------------------------|------------|--|
| Publishing Date | TP | The time that the data was originally published by the NETSP |
| Number of records | NR | The number of times the next TWO fields are repeated. |
| Settlement Date | SD | The settlement date. |
| Demand Margin | DM | The demand margin for generating plants in MW |

Message Subject Name

BMRA.SYSTEM.OCNMFD2

4.11.5.60 OCNMFW2 – Generating Plant Demand Margin, 2-52 weeks ahead

This message contains peak-of-the-week generating plant demand margin values for the following year. The data is published by BMRA as it is received from the NETSO. The Publishing Time in the message is applicable to the forecast as a whole. The records in the message are ordered by time.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|-----------------------------|------------|--|
| Publishing Date | TP | The time that the data was originally published by the NETSO |
| Number of records | NR | The number of times the next THREE fields are repeated. |
| Calendar Week Number | WN | The number of the week. |
| Calendar Year | CY | The year to which the data pertains |
| Demand Margin | DM | The demand margin for generating plants in MW |

Message Subject Name

BMRA.SYSTEM.OCNMFW2

4.11.5.61 FOU2T14D – National Output Usable by Fuel Type, 2-14 days ahead

This message contains peak-of-the-day output usable values for the following 2 weeks by fuel type. The data is published by BMRA as it is received from the NETSO. The Publishing Time in the message is applicable to the forecast as a whole. The records in the message are ordered by time.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|--------------------------|------------|--|
| Publishing Date | TP | The time that the data was originally published by the NETSO |
| Number of records | NR | The number of times the next THREE fields are repeated. |
| Settlement Date | SD | The settlement date. |
| Fuel Type | FT | The fuel type. |
| Output Usable | OU | The output usable in MW. |

Message Subject Name

BMRA.SYSTEM.FOU2T14D

4.11.5.62 UOU2T14D – National Output Usable by Fuel Type and BM Unit, 2-14 days ahead

This message contains peak-of-the-day output usable values for the following 2 weeks by fuel type and BM Unit. The data is published by BMRA as it is received from the NETSO. The Publishing Time in the message is applicable to the forecast as a whole. The records in the message are ordered by time.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|--------------------------|------------|--|
| Publishing Date | TP | The time that the data was originally published by the NETSO |
| Number of records | NR | The number of times the next THREE fields are repeated. |
| Settlement Date | SD | The settlement date. |
| Fuel Type | FT | The fuel type. |
| Output Usable | OU | The output usable in MW. |

Message Subject Name

BMRA.SYSTEM.<BM_UNIT>.UOU2T14D

4.11.5.63 FOU2T52W – National Output Usable by Fuel Type, 2-52 weeks ahead

This message contains peak-of-the-week output usable values for the following year by fuel type. The data is published by BMRA as it is received from the NETSO. The Publishing Time in the message is applicable to the forecast as a whole. The records in the message are ordered by time.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|-----------------------------|------------|--|
| Publishing Date | TP | The time that the data was originally published by the NETSO |
| Number of records | NR | The number of times the next FOUR fields are repeated. |
| Calendar Week Number | WN | The number of the week. |
| Calendar Year | CY | The year to which the data pertains |
| Fuel Type | FT | The fuel type |
| Output Usable | OU | The output usable in MW. |

Message Subject Name

BMRA.SYSTEM.FOU2T52W

4.11.5.64 UOU2T52W – National Output Usable by Fuel Type and BM Unit, 2-52 weeks ahead

This message contains peak-of-the-week output usable values for the following year by fuel type and BM Unit. The data is published by BMRA as it is received from the NETSO. The Publishing Time in the message is applicable to the forecast as a whole. The records in the message are ordered by time.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|-----------------------------|------------|--|
| Publishing Date | TP | The time that the data was originally published by the NETSO |
| Number of records | NR | The number of times the next FOUR fields are repeated. |
| Calendar Week Number | WN | The number of the week. |
| Calendar Year | CY | The year to which the data pertains |
| Fuel Type | FT | The fuel type |
| Output Usable | OU | The output usable in MW. |

Message Subject Name

BMRA.SYSTEM.<BM_UNIT>.UOU2T52W

4.11.5.65 REMIT – Data relating to Regulation on Energy Market Integrity and Transparency)

This message contains information submitted by BMR Service Users in accordance with REMIT regulations, detailing outages and/or expected changes in capacity of assets under their control.

Message Definition

Each message is delivered as an XML payload through the TIBCO channel; for details of the schema refer to the REMIT XSD maintained and made available by the BMRA.

Message Subject Name

REMIT.BMRS

4.11.5.66 TRANSPARENCY – Data relating to Transparency Regulations

This message contains information relating to known outages and changes in capacity that is required to be reported under the Transparency Regulations. There are several different articles of data established under these Regulations.

The following details are reported by the BMRS:

| Article ref | Category | Description |
|-------------|----------|--------------------------------------|
| 6.1.(a) | Load | Actual Total Load per Bidding Zone |
| 6.1.(b) | Load | Day Ahead Total Load per Biding Zone |

| Article ref | Category | Description |
|-------------|-----------------------|--|
| 6.1.(c) | Load | Week Ahead Total Load Forecast per Bidding Zone |
| 6.1.(d) | Load | Month Ahead Total Load Forecast per Bidding Zone |
| 6.1.(e) | Load | Year Ahead Total Load Forecast per Bidding Zone |
| 7.1.(a) | Outages | Planned Unavailability of Consumption Units (≥ 100 MW) |
| 7.1.(b) | Outages | Changes in Actual Availability of Consumption Units (≥ 100 MW) |
| 8.1 | Load | Year Ahead Forecast Margin |
| 9.1 | Transmission | Expansion and Dismantling Projects (≥ 100 MW) |
| 10.1.(a) | Outages | Planned Unavailability in the Transmission Grid (≥ 100 MW) |
| 10.1.(b) | Outages | Changes in Actual Availability in the Transmission Grid (≥ 100 MW) |
| 10.1.(c) | Outages | Changes in Actual Availability of Off-Shore Grid Infrastructure |
| 13.(b) | Congestion Management | Countertrading |
| 13.1(c) | Congestion Management | Costs of Congestion Management |
| 14.1.(a) | Generation | Installed Generation Capacity Aggregated (> 1 MW) |
| 14.1.(b) | Generation | Installed Generation Capacity per Unit (> 100 MW) |
| 14.1.(c) | Generation | Day-Ahead Aggregated Generation |
| 14.1.(d) | Generation | Day-Ahead Generation Forecasts for Wind and Solar (MWh) |
| 15.1.(a) | Outages | Planned Unavailability of Generation Units (> 100 MW) |
| 15.1.(b) | Outages | Changes in Actual Availability of Generation Units (> 100 MW) |
| 15.1.(c) | Outages | Planned Unavailability of Production Units (≥ 200 MW including changes of 100 MW or more) |
| 15.1.(d) | Outages | Changes in Actual Availability of Production Units (≥ 200 MW) |
| 16.1.(a) | Generation | Actual Generation Output Per Generation Unit |
| 16.1.(b) | Generation | Aggregated Generation per Type (units > 100 MW installed capacity) |
| 16.1.(c) | Generation | Actual or Estimated Wind and Solar Power Generation |
| 17.1.(b) | Balancing | Amount of Balancing Reserves under Contract |
| 17.1.(c) | Balancing | Prices of Procured Balancing Reserves |
| 17.1.(d) | Balancing | Accepted Aggregated Offers |
| 17.1.(e) | Balancing | Activated Balancing Energy |
| 17.1.(f) | Balancing | Prices of Activated Balancing Energy |
| 17.1.(g) | Balancing | Market Imbalance Prices |
| 17.1.(h) | Balancing | Aggregated Imbalance Volumes |
| 17.1.(i) | Balancing | Financial Expenses And Income For Balancing |
| 17.1.(j) | Balancing | Cross-Border Balancing <ul style="list-style-type: none"> • Volumes of Exchanged Bids and Offers. • Prices • Energy Activated |

The article code can be used to subscribe to specific articles of interest.

Message Definition

Each message is delivered as an XML payload through the TIBCO channel. Each of the categories makes use of a schema defined by ENTSO-E and available from the Transparency section of the ENTSO-E Website (www.entsoe.eu).

Message Subject Name

TRANSPARENCY.BMRS.<ARTICLE>

4.11.5.67 LoLP – Loss of Load Probability and De-rated Margin

This message contains values of indicative and final Loss of Load Probability along with De-rated Margin.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|-------------------|------------|--|
| Publishing Date | TP | The time that the data was originally published by the NETSO |
| Number of records | NR | The number of times the next FOUR fields are repeated. |
| Settlement Date | SD | The Settlement Date |
| Settlement Period | SP | The Settlement Period |
| LoLP | LP | Loss of Load Probability |
| De-rated Margin | DR | De-rated Margin in MW |

Message Subject Name

BMRA.SYSTEM.LOLP

4.11.5.68 DCONTROL – Demand Control Instruction Notification

This message contains details of Demand Control instructions issued by the NETSO.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|-------------------|------------|--|
| Publishing Date | TP | The time that the data was originally published by the NETSO |
| Number of records | NR | The number of times the next NINE fields are repeated. |
| Affected LDSO | DS | The LDSO affected by the instruction |

| | | |
|----------------------------------|----|--|
| Demand Control ID | ID | The unique identifier for a demand control instruction |
| Instruction Sequence No | SQ | The sequence number relating to the demand control event |
| Demand Control Event Flag | EV | A value of 'I' indicates an instruction initiated by the NETSO or an Emergency Manual Disconnection. A Value of 'L' indicates an Automatic Low Frequency Demand Disconnection. |
| Time From | TF | The time from which the instruction takes effect |
| Time To | TI | The time to which the instruction takes effect |
| Demand Control Level | VO | The level of demand during the event in MW |
| SO-Flag | SO | A value of 'T' indicates that an instruction should be considered to be potentially impacted by transmission constraints. |
| Amendment Flag | AM | ORI (Original), INS (Insert), UPD (Update) |

Message Subject Name

BMRA.SYSTEM.DCONTROL

4.11.5.69 LoLP – Loss of Load Probability and De-rated Margin

This message contains values of indicative and final Loss of Load Probability along with De-rated Margin.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|--------------------------|------------|--|
| Publishing Date | TP | The time that the data was originally published by the NETSO |
| Number of records | NR | The number of times the next THREE fields are repeated. |
| Settlement Date | SD | |
| LoLP | LP | Loss of Load Probability |
| Derated Margin | DR | De-rated Margin in MW |

Message Subject Name

BMRA.SYSTEM.LOLP

4.11.5.70 DCONTROL – Demand Control Instruction Notification

This message contains details of Demand Control instructions issued by the NETSO.

Message Definition

The following table lists the fields that are required in the message.

| Field | Field Type | Description of field |
|----------------------------------|------------|--|
| Publishing Date | TP | The time that the data was originally published by the NETSO |
| Number of records | NR | The number of times the next NINE fields are repeated. |
| Affected LDSO | AL | The LDSO affected by the instruction |
| Demand Control ID | DI | The unique identifier for a demand control instruction |
| Instruction Sequence No | IS | The sequence number relating to the demand control event |
| Demand Control Event Flag | EF | A value of 'I' indicates an instruction initiated by the NETSO or an Emergency Manual Disconnection. A Value of 'L' indicates an Automatic Low Frequency Demand Disconnection. |
| Time From | DF | The time from which the instruction takes effect |
| Time To | DT | The time to which the instruction takes effect |
| Demand Control Level | LD | The level of demand during the event in MW |
| SO-Flag | SO | A value of 'T' indicates that an instruction should be considered to be potentially impacted by transmission constraints. |
| Amendment Flag | AF | ORI (Original), INS (Insert), UPD (Update) |

Message Subject Name

BMRA.SYSTEM.DCONTROL

4.11.6 Format of Data within TIB Messages

4.11.6.1 The Use of Time Locales

All data published by BMRA that involves time stamps or DateTime data formats are published in GMT. Data is received from the NETSO in GMT and is published without conversion into local time.

Messages for all data that is based around settlement periods contain Settlement Dates and Settlement Period numbers, which are a number between 1 and 50 describing the number of the half hour period relative to midnight LOCAL time.

4.11.6.2 Conversion of Effective from/to data into Spot Time data

Some data received from the NETSO is received in the format of effective from and to times. The types of data which is received in this format are: - FPN, QPN, MIL, MEL, BOD and BOAL.

This data is not represented in this same fashion in the BMRA published messages. Instead it is described in the form of spot times and values. This is to eliminate data redundancy in the messages and reduce network traffic.

Since a 'from time' is the same as the previous 'to time', and in the vast majority of cases the 'from level' is also the same as the previous 'to level', it is inefficient to send both. BMRA therefore converts the data from the NETSO into a series of spot points and levels. This is a sequence of times, each of which has an associated level. The spot times are always on the boundaries of 'from times' or 'to times'.

The diagram overleaf illustrates how this conversion is done. The shaded areas in the from/to level formats are the non-redundant data parts which are added to the list of spot times. Those that are not shaded are redundant and therefore left out of the list of spot times.

The spot time data may be converted back into from/to level data using the number of spot times and comparing spot times to see if a step in levels has occurred.

The following diagram shows how data in the form of From and To times is converted into Spot Times. To avoid redundancy in the published data, From Times and Levels which are identical to the previous To Times and Levels are removed. The shaded data is retained and passed on as spot times in the published message.

| From/To Level Format | | | | | | Spot Time Format | | | | | | | | | | | |
|----------------------|----------------|--------------|---------------|------------|-------------|------------------|--------------------------|--------------|-------|--------------|-------|--------------|-------|--------------|-------|------|-----|
| | Sett Period | From Time | From Level | To Time | To Level | | Number of Spot Points | Spot time | Value | Spot time | Value | Spot time | Value | Spot time | Value | | |
| Example 1 | 19 | 9:00 | 400 | 9:30 | 450 | -> | 2 | 9:00 | 400 | 9:30 | 450 | | | | | | |
| | | | | | | | | | | | | | | | | | |
| | 20 | 9:30 | 450 | 10:00 | 470 | -> | 2 | 9:30 | 450 | 10:00 | 470 | | | | | | |
| Example 2 | 19 | 9:00 | 400 | 9:13 | 420 | -> | 3 | 9:00 | 400 | 9:13 | 420 | 9:30 | 450 | | | | |
| | | 9:13 | 420 | 9:30 | 450 | -> | | | | | | | | | | | |
| | 20 | 9:30 | 450 | 9:39 | 460 | -> | | | | | | | | | | | |
| | | 9:39 | 460 | 9:52 | 465 | -> | | | | | | | | | | | |
| | | 9:52 | 465 | 10:00 | 470 | -> | | | | | | | | | | | |
| | | | | | | -> | | | | | | | | | | | |
| Example 3 | 19 | 9:00 | 400 | 9:13 | 420 | -> | 3 | 9:00 | 400 | 9:13 | 420 | 9:30 | 450 | | | | |
| | | 9:13 | 420 | 9:30 | 450 | -> | | | | | | | | | | | |
| | 20 | 9:30 | 450 | 9:39 | 457 | -> | | | | | | | | | | | |
| | | 9:39 | 460 | 9:52 | 465 | -> | | | | | | | | | | | |
| | | 9:52 | 465 | 10:00 | 470 | -> | | | | | | | | | | | |
| | | | | | | -> | 5 | 9:30 | 450 | 9:39 | 457 | 9:39 | 460 | | | 9:52 | 465 |

Example 1 shows Sett Periods that have only a single set of from/to data

Example 2 shows Sett Periods that have more than one set of from/to data

Example 3 shows Sett Periods that have more than one set of from/to data and also contain a step in values

The following algorithm is used to convert a list of from/to data (each record in list contains a from time & level, and a to time & level) and results in a list of spot time data

```

set point_counter = 0
set current_spot_time and current_level to null
WHILE from/to record exists

  IF "from time" != current_spot_time OR "from level" != current_level
    create new spot time and level from "from time" and "from level" and add to spot time list
    point_counter = point_counter + 1
  END IF
  create new spot time and level from "to time" and "to level" and add to spot time list
  set current_spot_time to "to time" and current_level to "to level"
  point_counter = point_counter + 1
  move to next record of from/to data

END WHILE

```

4.11.7 Writing an Application that Subscribes to TIB Messages

Third party applications may be written or adapted to interface to the near real-time TIB messages that are published by BMRA. The application registers interest in specific message(s) by subscribing to message subject names(s). Message(s) are then received by the application, which then has to process the field data and store or display as required.

In order to receive and process TIB messages a licensed copy of TIB/Rendezvous version 6.2 must be installed on the host machine for the application to be adapted. TIB/Rendezvous software includes an application program interface (API) for making all the necessary requests for subscribing to a TIB message, receiving it and processing the composite field data. The API is available in C, C++, Java and Perl programming languages. (The API is also available in Active X/Visual Basic if TIB/Rendezvous version 5.3 is installed. TIBCO have confirmed that TIB/Rendezvous version 5.3 is compatible with published TIB/Rendezvous version 6.2 data.)

For each supported API, TIBCO provide example source code that may be used and adapted for development of a bespoke TIB/Rendezvous application adapter. For the C API for example, "tibrvlisten.c" is a working program that listens for all messages on a specified list of subjects. The code will need to be adapted to:

1. specify the correct service group in the creation of the rv transport;
2. listen to the desired subject names;
3. process the received message;
4. parse the message for field data;
5. interface the field data with the application, as required.

4.11.7.1 Specifying the service group

The UDP port (or service group) must be configured in creation of the rv transport. The UDP port defines the broadcast channel for which TIB/Rendezvous messages are sent and received on the participant LAN. The default port for TIB/Rendezvous (UDP port 7500) will be the port configured on the participant Rendezvous Routing Daemon to publish TIB messages originating from the BMRA.

4.11.7.2 Listening for message subject names

A "listener" is created to listen for message subject name(s). The listener must be given the subject name to listen to and the call back function to process the message when it arrives. Subject names that are published by the BMRA are listed in section 4.10.5.

Subject names are hierarchical and consist of multiple elements separated by dots. The listener can receive a group of related messages by specifying a wildcard (">" or "*") in the subject name. "BMRA.BM.BMUNIT01.>" can be used for

example to listen to all message subject names that begin “BMRA.BM.BMUNIT01”, i.e. all balancing mechanism data for BMUNIT01.

Extreme care must be taken when specifying wildcards in message subject names. The use of the wildcard character in place of the BM unit id would mean that messages for all BM Units (there are estimated to be between 1,000 and 5,000 BM Units) would be received and have to be processed by the application.

4.11.7.3 Processing the received message

Each message that is received and identified by a listener will invoke the specified call back function. Code must be written for the call back function to process the message and parse the field data.

4.11.7.4 Parsing the message for field data

Each message consists of field data. The structure of each message, broken down into its composite fields, is listed in section 4.10.5. Each field has a defined type and is listed in section 4.10.4.

In order to parse the message for each field, the GetFieldInstance function (of the TibrvMsg class) can be used to specify the field type and return each instance of the field type. In this way, messages that consist of multiple fields of the same field type can be indexed to return data for each field instance. For example, National Demand Forecast messages (section 4.10.5.7) consist of multiple instances of Publishing Date (TP), Settlement Date (SD), Settlement Period (SP) and Demand (VD). Repeated calls of the GetFieldInstance function, specifying the field type and an incrementing number for the field instance, will return each specified instance of the field type.

4.11.7.5 Interfacing the field data with the application

Field data that is returned from the GetFieldInstance function must be cast to the appropriate C/Java type for use by the application. The application can then use the data as required.

(The data could be stored for later off-line analysis in a database/data warehouse. Alternatively the data could be written to the display to present a near real-time dynamically updateable view of subscribed data.)

Care must be taken with data fields of type “float” to ensure that the correct rounding is performed.

4.11.7.6 Further information

For further information on TIB/Rendezvous concepts and programming please refer to the following documentation supplied by TIBCO Software Inc and available from their web site at www.tibco.com.

- TIB/Rendezvous Concepts, Software Release 6.2, March 2000;

- TIB/Rendezvous Administration, Software Release 6.2, March 2000;
- TIB/Rendezvous C Reference, Software Release 6.2, March 2000;
- TIB/Rendezvous C++ Reference, Software Release 6.2, March 2000;
- TIB/Rendezvous Java Reference, Software Release 6.2, March 2000;

4.12 BMRA Data Download Service - Data Formats

This section gives the interface definition (file formats) for the files which can be downloaded from both the High and Low Grade Service web pages.

The formats are very simple comma separated variable records consisting of one header record, zero or more body records and one footer record. The contents of the header record differ between the types of the data downloaded. The Common Footer record only contains a count of the body section records.

The contents of the files will match the criteria specified in the User Interface.

4.12.1 Common Footer Record

| Field | Type | Format | Comments |
|-------------------|--------|--------|--------------------|
| Record Type | string | | Fixed String "FTR" |
| Body Record Count | number | | |

4.12.2 Forecast Day and Day Ahead Demand Data

4.12.2.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|---|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed string "FORECAST DAY AND DAY AHEAD DEMAND DATA" |

4.12.2.2 Body Record National Day and Day-Ahead National Demand Forecast

| Field | Type | Format | Comments |
|-------------------|--------|----------|---|
| Record Type | string | | Fixed String "DANF" |
| Settlement Date | date | yyyymmdd | Records ordered incrementing by this field first |
| Settlement Period | number | | Records ordered incrementing by this field second |

| Field | Type | Format | Comments |
|----------------------|----------|----------------------|----------|
| Boundary ID | string | Always N | |
| Publication Time | datetime | yyyymmddhh24mis s | |
| Demand Forecast (DF) | number | | |

4.12.2.3 Body Record Day and Day-Ahead Indicated Demand

| Field | Type | Format | Comments |
|---------------------------|----------|----------------------|---|
| Record Type | string | | Fixed String "DAID" |
| Settlement Date | date | yyyymmdd | Records ordered incrementing by this field first |
| Settlement Period | number | | Records ordered incrementing by this field second |
| Boundary ID | string | One of B1-B17 or N | |
| Publication Time | datetime | yyyymmddhh24mis s | |
| Indicated Demand (INDDEM) | number | | |

4.12.2.4 Body Record Day and Day-Ahead Indicated Generation

| Field | Type | Format | Comments |
|-------------------------------|----------|----------------------|---|
| Record Type | string | | Fixed String "DAIG" |
| Settlement Date | date | yyyymmdd | Records ordered incrementing by this field first |
| Settlement Period | number | | Records ordered incrementing by this field second |
| Boundary ID | string | One of B1-B17 or N | |
| Publication Time | datetime | yyyymmddhh24mis s | |
| Indicated Generation (INDGEN) | number | | |

4.12.2.5 Body Record Day and Day-Ahead Transmission System Demand Forecast

| Field | Type | Format | Comments |
|----------------------|----------|--------------------|---|
| Record Type | string | | Fixed String "DATF" |
| Settlement Date | date | yyyymmdd | Records ordered incrementing by this field first |
| Settlement Period | number | | Records ordered incrementing by this field second |
| Boundary ID | string | One of B1-B17 or N | |
| Publication Time | datetime | yyyymmddhh24miss | |
| Demand Forecast (DF) | number | | |

4.12.2.6 Example File

```

HDR,FORECAST DAY AND DAY AHEAD DEMAND DATA

DANF,20001017,1,N,20001016220000,9861.000

DANF,20001017,2,N,20001016220000,8783.000

DATF,20001017,1,N,20001016220000,9661.000

DATF,20001017,2,N,20001016220000,8583.000

DAID,20001017,1,N,20001016220000,9560.000

DAID,20001017,2,N,20001016220000,8484.000

DAIG,20001017,1,N,20001016220000,9699.000

DAIG,20001017,2,N,20001016220000,8612.000

FTR,8

```

4.12.3 Forecast Day and Day Ahead Margin and Imbalance Data

4.12.3.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|---|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed string "FORECAST DAY AND DAY AHEAD MARGIN AND IMBALANCE DATA" |

4.12.3.2 Body Record Day and Day-Ahead Margin

| Field | Type | Format | Comments |
|---------------------------|----------|--------------------|---|
| Record Type | string | | Fixed String "DAM" |
| Settlement Date | date | yyyymmdd | Records ordered incrementing by this field first |
| Settlement Period | number | | Records ordered incrementing by this field second |
| Boundary ID | string | One of B1-B17 or N | |
| Publication Time | datetime | yyyymmddhh24miss | |
| Indicated Margin (MELNGC) | number | | |

4.12.3.3 Body Record Day and Day-Ahead Imbalance

| Field | Type | Format | Comments |
|--------------------------------|----------|--------------------|---|
| Record Type | string | | Fixed String "DAI" |
| Settlement Date | date | yyyymmdd | Records ordered incrementing by this field first |
| Settlement Period | number | | Records ordered incrementing by this field second |
| Boundary ID | string | One of B1-B17 or N | |
| Publication Time | datetime | yyyymmddhh24miss | |
| Indicated Imbalance (IMBALNGC) | number | | |

4.12.3.4 Example File

```

HDR,FORECAST DAY AND DAY AHEAD MARGIN AND IMBALANCE DATA

DAM,20001017,1,B1,20001016220000,2623.000

DAM,20001017,2,B1,20001016220000,2574.000

DAI,20001017,1,B1,20001016220000,2602.000

```

DAI, 20001017, 2, B1, 20001016220000, 2556.000

FTR, 4

4.12.4 Demand & Surplus Forecast Data (2-14 days ahead)

4.12.4.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|---|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed string "FORECAST 2 TO 14 DAYS AHEAD DEMAND AND MARGIN DATA" |

4.12.4.2 Demand & Surplus Forecast Data (2-14 days ahead) National Demand

| Field | Type | Format | Comments |
|--|----------|------------------|---|
| Record Type | string | | Fixed String "DSN" |
| Settlement Date | date | yyyymmdd | Records ordered incrementing by this field first |
| Settlement Period | number | | Records ordered incrementing by this field second |
| Boundary ID | string | Always N | |
| Publication Time | datetime | yyyymmddhh24miss | |
| Average half-hour MW Demand value for peak of Day (NDFD) | number | | |

4.12.4.3 Demand & Surplus Forecast Data (2-14 days ahead) Surplus

| Field | Type | Format | Comments |
|-------------------|--------|----------|---|
| Record Type | string | | Fixed String "DSM" |
| Settlement Date | date | yyyymmdd | Records ordered incrementing by this field first |
| Settlement Period | number | | Records ordered incrementing by this field second |
| Boundary ID | string | Always N | |

| Field | Type | Format | Comments |
|---|----------|------------------|----------|
| Publication Time | datetime | yyyymmddhh24miss | |
| Average half-hour MW Surplus value for peak of Day (OCNMFD) | number | | |

4.12.4.4 Demand & Surplus Forecast Data (2-14 days ahead) Transmission System Demand

| Field | Type | Format | Comments |
|---|----------|------------------|---|
| Record Type | string | | Fixed String “DST” |
| Settlement Date | date | yyyymmdd | Records ordered incrementing by this field first |
| Settlement Period | number | | Records ordered incrementing by this field second |
| Boundary ID | string | Always N | |
| Publication Time | datetime | yyyymmddhh24miss | |
| Average half-hour MW Demand value for peak of Day (TSDFD) | number | | |

4.12.4.5 Demand & Surplus Forecast Data (2-14 days ahead) Generating Plant Demand Margin

| Field | Type | Format | Comments |
|-------------------|----------|------------------|---|
| Record Type | string | | Fixed String “OCNMFD2” |
| Settlement Date | date | yyyymmdd | Records ordered incrementing by this field first |
| Settlement Period | number | | Records ordered incrementing by this field second |
| Boundary ID | string | Always N | |
| Publication Time | datetime | yyyymmddhh24miss | |

| | | | |
|---|--------|--|--|
| Average half-hour MW demand margin value for peak of Day (OCNMFD2) | number | | |
|---|--------|--|--|

4.12.4.6 Example File

HDR,FORECAST 2 TO 14 DAYS AHEAD DEMAND AND MARGIN DATA

DSN,20001019,9,N,20001016150000,41000.000

DSN,20001020,11,N,20001016150000,42000.000

DSM,20001019,9,N,20001016160000,41000.000

DSM,20001020,11,N,20001016160000,42000.000

DST,20001019,9,N,20001016150000,40000.000

DST,20001020,11,N,20001016150000,41000.0000

CNMFD2, 20001010,9,N, 20001016150000,17330.000

OCNMFD2, 20001010,11,N, 20001016150000,14288.000

FTR,8

4.12.5 Demand & Surplus Forecast Data (2-52 weeks ahead)

4.12.5.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|--|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed string "FORECAST 2 TO 52 WEEKS AHEAD DEMAND AND MARGIN DATA" |

4.12.5.2 Demand & Surplus Forecast Data (2-52 weeks ahead) National Demand

| Field | Type | Format | Comments |
|---|----------|------------------|--|
| Record Type | string | | Fixed String "WN" |
| Week Number | number | | Records ordered incrementing by this field (wraps from 53 to 1 when new year starts) |
| Boundary ID | string | Always N | |
| Publication Time | datetime | yyyymmddhh24miss | |
| Average half-hour MW Demand value for peak of Week (NDFW) | number | | |

4.12.5.3 Demand & Surplus Forecast Data (2-52 weeks ahead) Transmission System Demand

| Field | Type | Format | Comments |
|--|----------|------------------|--|
| Record Type | string | | Fixed String "WT" |
| Week Number | number | | Records ordered incrementing by this field (wraps from 53 to 1 when new year starts) |
| Boundary ID | string | Always N | |
| Publication Time | datetime | yyyymmddhh24miss | |
| Average half-hour MW Demand value for peak of Week (TSDFW) | number | | |

4.12.5.4 Demand & Surplus Forecast Data (2-52 weeks ahead) Surplus

| Field | Type | Format | Comments |
|--|----------|----------------------|--|
| Record Type | string | | Fixed String "WM" |
| Week Number | number | | Records ordered incrementing by this field (wraps from 53 to 1 when new year starts) |
| Boundary ID | string | Always N | |
| Publication Time | datetime | yyyymmddhh 24miss | |
| Average half-hour MW Surplus value for peak of Week (OCNMFV) | number | | |

4.12.5.5 Demand & Surplus Forecast Data (2-52 weeks ahead) Generating Plant Demand Margin

| Field | Type | Format | Comments |
|---|----------|----------------------|--|
| Record Type | string | | Fixed String "OCNMFV2" |
| Week Number | number | | Records ordered incrementing by this field (wraps from 53 to 1 when new year starts) |
| Boundary ID | string | Always N | |
| Publication Time | datetime | yyyymmddhh 24miss | |
| Average half-hour MW demand margin value for peak of Week (OCNMFV2) | number | | |

4.12.5.6 Example File

HDR,FORECAST 2 TO 52 WEEKS AHEAD DEMAND AND MARGIN DATA

WN,44,N,20001013170000,36000.000

WN,45,N,20001013170000,37000.000

WM,44,N,20001011160000,37000.000

WM,45,N,20001011160000,38000.000

WT,44,N,20001013170000,35000.000

WT,45,N,20001013170000,36000.000

OCNMF2,44,N,20001013170000,17830.000

OCNMF2,45,N,20001013170000,18610.000

FTR,8

4.12.6 Output Usable

4.12.6.1 National Output Usable (2-14 days ahead)

4.12.6.1.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|---|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed String "NATIONAL OUTPUT USABLE MW BASED ON OC2 (2-14 DAYS) DATA" |

4.12.6.1.2 Body Record

| Field | Type | Format | Comments |
|------------------|----------|----------------------|----------------------------|
| Record Type | string | | Fixed String "NOU2T14D" |
| Publication Time | datetime | yyyymmddhh24 miss | |
| System Zone | string | Always N | |
| Settlement Date | date | | |
| Output Usable | number | | |

4.12.6.1.3 Example File

HDR,NATIONAL OUTPUT USABLE MW BASED ON OC2 (2-14 DAYS)DATA

NOU2T14D,201004231113,N,20100425,54267

NOU2T14D,201004231113,N,20100425,57666

FTR,2

4.12.6.2 National Output Usable (2-49 days ahead)

4.12.6.2.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|---|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed String "NATIONAL OUTPUT USABLE MW BASED ON OC2 (2-49 DAYS) DATA" |

4.12.6.2.2 Body Record

| Field | Type | Format | Comments |
|------------------|----------|----------------------|----------------------------|
| Record Type | string | | Fixed String "NOU2T49D" |
| Publication Time | datetime | yyyymmddhh24 miss | |
| System Zone | string | Always N | |
| Settlement Date | date | | |
| Output Usable | number | | |

4.12.6.2.3 Example File

```

HDR,NATIONAL OUTPUT USABLE MW BASED ON OC2 (2-49 DAYS)DATA
NOU2T49D,201004231113,N,20100425,54267
NOU2T49D,201004231113,N,20100425,57666
FTR,2

```

4.12.6.3 National Output Usable (2-52 weeks ahead)

4.12.6.3.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|--|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed String "NATIONAL OUTPUT USABLE MW BASED ON OC2 (2-52 WEEKS) DATA" |

4.12.6.3.2 Body Record

| Field | Type | Format | Comments |
|-------------------------|----------|----------------------|----------------------------|
| Record Type | string | | Fixed String "NOU2T52W" |
| Publication Time | datetime | yyyymmddhh24 miss | |
| System Zone | string | Always N | |
| Calendar Week Number | number | | |
| Calendar Year | number | | |
| Output Usable | number | | |

4.12.6.3.3 Example Record

HDR,NATIONAL OUTPUT USABLE MW BASED ON OC2 (2-52 WEEKS)DATA

NOU2T52W,201004231113,N,18,2010,59588

NOU2T52W,201004231113,N,19,2010,60966

FTR,2

4.12.6.4 National Output Usable (1 year ahead)

4.12.6.4.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|--|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed String "NATIONAL OUTPUT USABLE MW BASED ON OC2 (1 YEAR) DATA" |

4.12.6.4.2 Body Record

| Field | Type | Format | Comments |
|-------------------------|----------|----------------------|-------------------------|
| Record Type | string | | Fixed String "NOUY1" |
| Publication Time | datetime | yyyymmddhh24 miss | |
| System Zone | string | Always N | |
| Calendar Week Number | number | | |
| Calendar Year | number | | |
| Output Usable | number | | |

4.12.6.4.3 Example File

HDR,NATIONAL OUTPUT USABLE MW BASED ON OC2 (YEAR 1)DATA

NOUY1,201004231113,N,1,2011,75907

NOUY1,201004231113,N,2,2011,74731

FTR,2

4.12.6.5 National Output Usable (2 years ahead)

4.12.6.5.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|--|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed String "NATIONAL OUTPUT USABLE MW BASED ON OC2 (2 YEAR) DATA" |

4.12.6.5.2 Body Record

| Field | Type | Format | Comments |
|-------------------------|----------|----------------------|-------------------------|
| Record Type | string | | Fixed String "NOUY2" |
| Publication Time | datetime | yyyymmddhh24 miss | |
| System Zone | string | Always N | |
| Calendar Week Number | number | | |
| Calendar Year | number | | |
| Output Usable | number | | |

4.12.6.6 Example File

HDR,NATIONAL OUTPUT USABLE MW BASED ON OC2 (YEAR 2)DATA

NOUY2,201004231113,N,1,2012,75907

NOUY2,201004231113,N,2,2012,74731

FTR,2

4.12.6.7 National Output Usable (3 years ahead)

4.12.6.7.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|--|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed String "NATIONAL OUTPUT USABLE MW BASED ON OC2 (3 YEAR) DATA" |

4.12.6.7.2 Body Record

| Field | Type | Format | Comments |
|-------------------------|----------|----------------------|-------------------------|
| Record Type | string | | Fixed String "NOUY3" |
| Publication Time | datetime | yyyymmddhh24 miss | |
| System Zone | string | Always N | |
| Calendar Week Number | number | | |
| Calendar Year | number | | |
| Output Usable | number | | |

4.12.6.7.3 Example File

HDR,NATIONAL OUTPUT USABLE MW BASED ON OC2 (YEAR 3)DATA

NOUY3,201004231113,N,1,2013,75907

NOUY3,201004231113,N,2,2013,74731

FTR,2

4.12.6.8 National Output Usable (4 years ahead)

4.12.6.8.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|--|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed String "NATIONAL OUTPUT USABLE MW BASED ON OC2 (4 YEAR) DATA" |

4.12.6.8.2 Body Record

| Field | Type | Format | Comments |
|-------------------------|----------|----------------------|-------------------------|
| Record Type | string | | Fixed String "NOUY4" |
| Publication Time | datetime | yyyymmddhh24 miss | |
| System Zone | string | Always N | |
| Calendar Week Number | number | | |
| Calendar Year | number | | |
| Output Usable | number | | |

4.12.6.8.3 Example File

HDR,NATIONAL OUTPUT USABLE MW BASED ON OC2 (YEAR 4)DATA

NOUY4,201004231113,N,1,2014,75907

NOUY4,201004231113,N,2,2014,74731

FTR,2

4.12.6.9 National Output Usable (5 years ahead)

4.12.6.9.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|--|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed String "NATIONAL OUTPUT USABLE MW BASED ON OC2 (5 YEAR) DATA" |

4.12.6.9.2 Body Record

| Field | Type | Format | Comments |
|-------------------------|----------|----------------------|-------------------------|
| Record Type | string | | Fixed String "NOUY5" |
| Publication Time | datetime | yyyymmddhh24 miss | |
| System Zone | string | Always N | |
| Calendar Week Number | number | | |
| Calendar Year | number | | |
| Output Usable | number | | |

4.12.6.9.3 Example File

HDR,NATIONAL OUTPUT USABLE MW BASED ON OC2 (YEAR 5)DATA

NOUY5,201004231113,N,1,2015,75907

NOUY5,201004231113,N,2,2015,74731

FTR,2

4.12.6.10 Zonal Output Usable (2-14 days ahead)

4.12.6.10.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|--|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed String "SYSTEM ZONE OUTPUT USABLE MW BASED ON OC2 (2-14 DAYS) DATA" |

4.12.6.10.2 Body Record

| Field | Type | Format | Comments |
|------------------|----------|----------------------|----------------------------|
| Record Type | string | | Fixed String "ZOU2T14D" |
| Publication Time | datetime | yyyymmddhh24 miss | |
| System Zone | string | One of B1-B17 | |
| Settlement Date | date | | |
| Output Usable | number | | |

4.12.6.10.3 Example File

HDR,NATIONAL OUTPUT USABLE MW BASED ON OC2 (2-14 DAYS)DATA

ZOU2T14D,201004231113,B1,20100423,13389

ZOU2T14D,201004231113,B2,20100423,13151

FTR,2

4.12.6.11 Zonal Output Usable (2-49 days ahead)

4.12.6.11.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|--|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed String "SYSTEM ZONE OUTPUT USABLE MW BASED ON OC2 (2-49 DAYS) DATA" |

4.12.6.11.2 Body Record

| Field | Type | Format | Comments |
|------------------|----------|----------------------|----------------------------|
| Record Type | string | | Fixed String "ZOU2T49D" |
| Publication Time | datetime | yyyymmddhh24 miss | |
| System Zone | string | One of B1-B17 | |
| Settlement Date | date | | |
| Output Usable | number | | |

4.12.6.11.3 Example File

HDR,NATIONAL OUTPUT USABLE MW BASED ON OC2 (2-49 DAYS)DATA

ZOU2T49D,201004231113,B1,20100423,13389

ZOU2T49D,201004231113,B2,20100423,13151

FTR,2

4.12.6.12 Zonal Output Usable (2-52 weeks ahead)

4.12.6.12.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|---|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed String "SYSTEM ZONE OUTPUT USABLE MW BASED ON OC2 (2-52 WEEKS) DATA" |

4.12.6.12.2 Body Record

| Field | Type | Format | Comments |
|-------------------------|----------|----------------------|----------------------------|
| Record Type | string | | Fixed String "ZOU2T52W" |
| Publication Time | datetime | yyyymmddhh24 miss | |
| System Zone | string | One of B1-B17 | |
| Calendar Week Number | number | | |
| Calendar Year | number | | |
| Output Usable | number | | |

4.12.6.12.3 Example File

HDR,NATIONAL OUTPUT USABLE MW BASED ON OC2 (2-52 WEEKS)DATA

ZOU2T52W,201004231113,B1,18,2010,11083

ZOU2T52W,201004231113,B1,19,2010,11793

FTR,2

4.12.6.13 Zonal Output Usable (1 year ahead)

4.12.6.13.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|---|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed String "SYSTEM ZONE OUTPUT USABLE MW BASED ON OC2 (1 YEAR) DATA" |

4.12.6.13.2 Body Record

| Field | Type | Format | Comments |
|-------------------------|----------|----------------------|-------------------------|
| Record Type | string | | Fixed String "ZOUY1" |
| Publication Time | datetime | yyyymmddhh24 miss | |
| System Zone | string | One of B1-B17 | |
| Calendar Week Number | number | | |
| Calendar Year | number | | |
| Output Usable | number | | |

4.12.6.13.3 Example File

HDR,NATIONAL OUTPUT USABLE MW BASED ON OC2 (YEAR 1)DATA

ZOUY1,201004231113,B1,1,2011,14120

ZOUY1,201004231113,B1,2,2011,13390

FTR,2

4.12.6.14 Zonal Output Usable (2 years ahead)

4.12.6.14.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|---|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed String "SYSTEM ZONE OUTPUT USABLE MW BASED ON OC2 (2 YEAR) DATA" |

4.12.6.14.2 Body Record

| Field | Type | Format | Comments |
|-------------------------|----------|----------------------|-------------------------|
| Record Type | string | | Fixed String "ZOUY2" |
| Publication Time | datetime | yyyymmddhh24 miss | |
| System Zone | string | One of B1-B17 | |
| Calendar Week Number | number | | |
| Calendar Year | number | | |
| Output Usable | number | | |

4.12.6.14.3 Example File

HDR,NATIONAL OUTPUT USABLE MW BASED ON OC2 (YEAR 2)DATA

ZOUY2,201004231113,B1,1,2012,14120

ZOUY2,201004231113,B1,2,2012,13390

FTR,2

4.12.6.15 Zonal Output Usable (3 years ahead)

4.12.6.15.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|---|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed String "SYSTEM ZONE OUTPUT USABLE MW BASED ON OC2 (3 YEAR) DATA" |

4.12.6.15.2 Body Record

| Field | Type | Format | Comments |
|-------------------------|----------|----------------------|-------------------------|
| Record Type | string | | Fixed String "ZOUY3" |
| Publication Time | datetime | yyyymmddhh24 miss | |
| System Zone | string | One of B1-B17 | |
| Calendar Week Number | number | | |
| Calendar Year | number | | |
| Output Usable | number | | |

4.12.6.15.3 Example File

HDR,NATIONAL OUTPUT USABLE MW BASED ON OC2 (YEAR 3)DATA

ZOUY3,201004231113,B1,1,2013,14120

ZOUY3,201004231113,B1,2,2013,13390

FTR,2

4.12.6.16 Zonal Output Usable (4 years ahead)

4.12.6.16.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|---|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed String "SYSTEM ZONE OUTPUT USABLE MW BASED ON OC2 (4 YEAR) DATA" |

4.12.6.16.2 Body Record

| Field | Type | Format | Comments |
|-------------------------|----------|----------------------|-------------------------|
| Record Type | string | | Fixed String "ZOUY4" |
| Publication Time | datetime | yyyymmddhh24 miss | |
| System Zone | string | One of B1-B17 | |
| Calendar Week Number | number | | |
| Calendar Year | number | | |
| Output Usable | number | | |

4.12.6.16.3 Example File

HDR,NATIONAL OUTPUT USABLE MW BASED ON OC2 (YEAR 4)DATA

ZOUY4,201004231113,B1,1,2014,14120

ZOUY4,201004231113,B1,2,2014,13390

FTR,2

4.12.6.17 Zonal Output Usable (5 years ahead)

4.12.6.17.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|---|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed String "SYSTEM ZONE OUTPUT USABLE MW BASED ON OC2 (5 YEAR) DATA" |

4.12.6.17.2 Body Record

| Field | Type | Format | Comments |
|-------------------------|----------|----------------------|-------------------------|
| Record Type | string | | Fixed String "ZOUY5" |
| Publication Time | datetime | yyyymmddhh24 miss | |
| System Zone | string | One of B1-B17 | |
| Calendar Week Number | number | | |
| Calendar Year | number | | |
| Output Usable | number | | |

4.12.6.17.3 Example File

HDR,NATIONAL OUTPUT USABLE MW BASED ON OC2 (YEAR 5)DATA

ZOUY5,201004231113,B1,1,2015,14120

ZOUY5,201004231113,B1,2,2015,13390

FTR,2

4.12.6.18 National Output Usable by Fuel Type (2-14 days ahead)

4.12.6.18.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|---|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed String "NATIONAL OUTPUT USABLE MW BASED ON OC2 (2-14 DAYS) DATA – BY FUEL TYPE" |

4.12.6.18.2 Body Record

| Field | Type | Format | Comments |
|------------------|----------|----------------------|----------------------------|
| Record Type | string | | Fixed String "FOU2T14D" |
| Fuel Type | | | |
| Publication Time | datetime | yyyymmddhh24 miss | |
| System Zone | string | Always N | |
| Settlement Date | date | | |
| Output Usable | number | | |

4.12.6.18.3 Example File

HDR,NATIONAL OUTPUT USABLE MW BASED ON OC2 (2-14 DAYS)DATA –
BY FUEL TYPE

FOU2T14D,CCGT,201001021550,N,20100204,1500

FOU2T14D,OIL,201001021550,N,20100204,1500

FOU2T14D,COAL,201001021550,N,20100204,1500

FOU2T14D,NUCLEAR,201001021550,N,20100204,1500

FTR,4

4.12.6.19 National Output Usable by Fuel Type and BM Unit (2-14 days ahead)

4.12.6.19.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|---|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed String "NATIONAL OUTPUT USABLE MW BASED ON OC2 (2-14 DAYS) DATA – BY BM UNIT/INTERCONN ECTOR & FUEL TYPE" |

4.12.6.19.2 Body Record

| Field | Type | Format | Comments |
|------------------|----------|----------------------|----------------------------|
| Record Type | string | | Fixed String "UOU2T14D" |
| BM Unit ID | | | |
| Fuel Type | | | |
| Publication Time | datetime | yyyymmddhh24 miss | |
| System Zone | string | Always N | System Zone |
| Settlement Date | date | | |
| Output Usable | number | | |

4.12.6.19.3 Example File

HDR,NATIONAL OUTPUT USABLE MW BASED ON OC2 (2-14 DAYS)DATA – BY
BM UNIT/INTERCONNECTOR & FUEL TYPE

UOU2T14D,BMUNIT01,CCGT,201001021550,N,20100204,150

UOU2T14D,BMUNIT02,COAL, 201001021550,N,20100204,150

UOU2T14D,BMUNIT03,OIL, 201001021550,N,20100204,150

UOU2T14D,INTFR, INTFR, 201001021550,N,20100204,150

FTR,4

4.12.6.20 National Output Usable by Fuel Type (2-52 weeks ahead)

4.12.6.20.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|--|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed String "NATIONAL OUTPUT USABLE MW BASED ON OC2 (2-52 WEEKS) DATA –FUEL TYPE" |

4.12.6.20.2 Body Record

| Field | Type | Format | Comments |
|-------------------------|----------|----------------------|----------------------------|
| Record Type | string | | Fixed String "FOU2T52W" |
| Fuel Type | | | |
| Publication Time | datetime | yyyymmddhh24 miss | |
| System Zone | string | Always N | |
| Calendar Week Number | number | | |
| Calendar Year | number | | |
| Output Usable | number | | |

4.12.6.20.3 Example File

HDR,NATIONAL OUTPUT USABLE MW BASED ON OC2 (2-52 WEEKS)DATA –
BY FUEL TYPE

FOU2T52W,CCGT,201001021550,N,3,2010,1500

FOU2T52W,COAL,201001021550,N,3,2010,1500

FTR,2

4.12.6.21 National Output Usable by Fuel Type and BM Unit (2-52 weeks ahead)

4.12.6.21.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|--|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed String "NATIONAL OUTPUT USABLE MW BASED ON OC2 (2-52 WEEKS) DATA – BY BM UNIT/INTERCONN ECTOR & FUEL TYPE" |

4.12.6.21.2 Body Record

| Field | Type | Format | Comments |
|-------------------------|----------|----------------------|----------------------------|
| Record Type | string | | Fixed String "UOU2T52W" |
| BM Unit ID | | | |
| Fuel Type | | | |
| Publication Time | datetime | yyyymmddhh24 miss | |
| System Zone | string | Always N | |
| Calendar Week Number | number | | |
| Calendar Year | number | | |
| Output Usable | number | | |

4.12.6.21.3 Example File

HDR,NATIONAL OUTPUT USABLE MW BASED ON OC2 (2-52 WEEKS)DATA –
BY BM UNIT/INTERCONNECTOR & FUEL TYPE

UOU2T52W,BMUNIT01,CCGT,201001021550,N,12,2010,1000

UOU2T52W,BMUNIT02,COAL,201001021550,N,12,2010,1000

UOU2T52W,BMUNIT03,OIL,201001021550,N,12,2010,1000

UOU2T52W,INTFR,INTFR,201001021550,N,12,2010,2500

FTR,4

4.12.7 Initial Demand Outturn

4.12.7.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|---------------------------------------|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed string "INITIAL DEMAND OUTTURN" |

4.12.7.2 Body Record Initial Demand Outturn

| Field | Type | Format | Comments |
|--------------------------|--------|----------|---|
| Record Type | string | | Fixed String "INDO" |
| Settlement Date | date | yyyymmdd | Group ordered by this field first, incrementing. |
| Settlement Period | number | | Group ordered by this field second, incrementing. |
| National Demand Out-Turn | number | | |

4.12.7.3 Body Record Initial Transmission System Demand Outturn

N.B. ITSDO is a data stream introduced through Modification P219. P219 has an effectiveness date of 6th November 2008 and therefore ITSDO data is only available on calendar dates from that date onwards. This body record will therefore only appear in the CSV for dates on or after 6th November 2008.

| Field | Type | Format | Comments |
|---|--------|----------|---|
| Record Type | string | | Fixed String "ITSDO" |
| Settlement Date | date | yyyymmdd | Group ordered by this field first, incrementing. |
| Settlement Period | number | | Group ordered by this field second, incrementing. |
| Initial Transmission System Demand Out-Turn (ITSDO) | number | | |

4.12.7.4 Example File

```

HDR, INITIAL DEMAND OUTTURN

INDO, 20001016, 32, 38889.000

INDO, 20001016, 33, 39066.000

ITSDO, 20001016, 32, 48889.000

ITSDO, 20001016, 33, 49066.000

FTR, 4

```

4.12.8 Gate Closure Data

4.12.8.1 Header Record

| Field | Type | Format | Comments |
|-------------------|--------|----------|---|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed string "PHYSICAL BM DATA" |
| | | | |
| Settlement Date | date | yyyymmdd | |
| Settlement Period | string | | number between 1 and 50 or * if selecting a full day's data |

4.12.8.2 Body Record FPN Data

| Field | Type | Format | Comments |
|-------------------|----------|------------------|---|
| Record Type (PN) | string | | Fixed String "PN" |
| BM Unit ID | string | | ordered by this field first, incrementing |
| Settlement Period | number | | number between 1 and 50; ordered by this field second, incrementing |
| From Time | datetime | yyyymmddhh24miss | Group ordered by this field third, incrementing. |
| From Level | number | | |
| To Time | datetime | yyyymmddhh24miss | |
| To Level | number | | |

4.12.8.3 Body Record QPN Data

| Field | Type | Format | Comments |
|-------------------|----------|------------------|---|
| Record Type (QPN) | string | | Fixed String “QPN” |
| BM Unit ID | string | | ordered by this field first, incrementing |
| Settlement Period | number | | number between 1 and 50; ordered by this field second, incrementing |
| From Time | datetime | yyyymmddhh24miss | Group ordered by this field third, incrementing. |
| From Level | number | | |
| To Time | datetime | yyyymmddhh24miss | |
| To Level | number | | |

4.12.8.4 Body Record Maximum Export Level Data

| Field | Type | Format | Comments |
|-------------------|----------|------------------|---|
| Record Type (MEL) | string | | Fixed String “MEL” |
| BM Unit ID | string | | ordered by this field first, incrementing |
| Settlement Period | number | | number between 1 and 50; ordered by this field second, incrementing |
| From Time | datetime | yyyymmddhh24miss | Group ordered by this field third, incrementing. |
| From Level | number | | |
| To Time | datetime | yyyymmddhh24miss | |
| To Level | number | | |

4.12.8.5 Body Record Maximum Import Level Data

| Field | Type | Format | Comments |
|-------------------|--------|--------|--------------------|
| Record Type (MIL) | string | | Fixed String “MIL” |

| Field | Type | Format | Comments |
|-------------------|----------|------------------|---|
| BM Unit ID | string | | ordered by this field first, incrementing |
| Settlement Period | number | | number between 1 and 50; ordered by this field second, incrementing |
| From Time | datetime | yyyymmddhh24miss | Group ordered by this field third, incrementing. |
| From Level | number | | |
| To Time | datetime | yyyymmddhh24miss | |
| To Level | number | | |

4.12.8.6 Body Record Bid-Offer Acceptance Level Data

For Settlement Dates prior to the P217 effective date the following data item will be reported:

| Field | Type | Format | Comments |
|-------------------------|----------|------------------|---|
| Record Type(BOAL) | string | | Fixed String "BOAL" |
| BM Unit ID | string | | ordered by this field first, incrementing |
| Bid Offer Acceptance ID | number | | Group ordered secondly by this field, incrementing. |
| Acceptance Time | datetime | yyyymmddhh24miss | |
| Deemed Flag | boolean | Y or N | |
| From Time | datetime | yyyymmddhh24miss | Group ordered thirdly by this field, incrementing. |
| From Level | number | | |
| To Time | datetime | yyyymmddhh24miss | |
| To Level | number | | |

4.12.8.7 Body Record Bid-Offer Acceptance Level Flagged Data

For Settlement Dates on or after the P217 effective date the following data will be reported:

| Field | Type | Format | Comments |
|---------------------------|----------|------------------|--|
| Record Type(BOALF) | string | | Fixed String "BOALF" |
| BM Unit ID | string | | ordered by this field first, incrementing |
| Bid Offer Acceptance ID | number | | Group ordered secondly by this field, incrementing. |
| Acceptance Time | datetime | yyyymmddhh24miss | |
| Deemed Flag | boolean | Y or N | |
| SO-Flag | boolean | T or F | 'T' if potentially impacted by transmission constraints. |
| STOR Provider Flag | boolean | Y or N | 'Y' if related to a STOR Provider This field will be null if pre-P305 Settlement Date |
| From Time | datetime | yyyymmddhh24miss | Group ordered thirdly by this field, incrementing. |
| From Level | number | | |
| To Time | datetime | yyyymmddhh24miss | |
| To Level | number | | |

4.12.8.8 Example File

For Settlement Dates prior to the P217 effective date the following data will be reported:

```
HDR,PHYSICAL BM DATA,20001016,43
PN,T_GENSET176,43,20001016200000,170.000,20001016200600,180.000
PN,T_GENSET176,43,20001016200600,180.000,20001016201200,180.000
PN,T_GENSET176,43,20001016201200,180.000,20001016201800,160.000
PN,T_GENSET176,43,20001016201800,160.000,20001016202400,160.000
PN,T_GENSET176,43,20001016202400,160.000,20001016203000,170.000
QPN,T_GENSET176,43,20001016200000,10.000,20001016201000,15.000
QPN,T_GENSET176,43,20001016201000,15.000,20001016202000,5.000
QPN,T_GENSET176,43,20001016202000,5.000,20001016203000,10.000
MEL,T_GENSET176,43,20001016200000,200.000,20001016201500,210.000
MEL,T_GENSET176,43,20001016201500,210.000,20001016203000,200.000
MIL,T_GENSET176,43,20001016200000,-200.000,20001016201500,-210.000
MIL,T_GENSET176,43,20001016201500,-210.000,20001016203000,-200.000
BOAL,T_GENSET176,3000,20001016160000,N,20001016200000,175.000,20001016200600,185.000
BOAL,T_GENSET176,3000,20001016160000,N,20001016200600,185.000,20001016201200,185.000
BOAL,T_GENSET176,3000,20001016160000,N,20001016201200,185.000,20001016201800,165.000
BOAL,T_GENSET176,3000,20001016160000,N,20001016201800,165.000,20001016202400,165.000
BOAL,T_GENSET176,3000,20001016160000,N,20001016202400,165.000,20001016203000,175.000
BOAL,T_GENSET176,3100,20001016161100,N,20001016200000,180.000,20001016200600,190.000
BOAL,T_GENSET176,3100,20001016161100,N,20001016200600,190.000,20001016201200,190.000
BOAL,T_GENSET176,3100,20001016161100,N,20001016201200,190.000,20001016201800,170.000
BOAL,T_GENSET176,3100,20001016161100,N,20001016201800,170.000,20001016202400,170.000
BOAL,T_GENSET176,3100,20001016161100,N,20001016202400,170.000,20001016203000,180.000
FTR,22
```

For Settlement Dates on or after the P217 effective date the following data will be reported:

```
HDR,PHYSICAL BM DATA,20001016,43
PN,T_GENSET176,43,20001016200000,170.000,20001016200600,180.000
PN,T_GENSET176,43,20001016200600,180.000,20001016201200,180.000
PN,T_GENSET176,43,20001016201200,180.000,20001016201800,160.000
PN,T_GENSET176,43,20001016201800,160.000,20001016202400,160.000
```

PN,T_GENSET176,43,20001016202400,160.000,20001016203000,170.000
QPN,T_GENSET176,43,20001016200000,10.000,20001016201000,15.000
QPN,T_GENSET176,43,20001016201000,15.000,20001016202000,5.000
QPN,T_GENSET176,43,20001016202000,5.000,20001016203000,10.000
MEL,T_GENSET176,43,20001016200000,200.000,20001016201500,210.000
MEL,T_GENSET176,43,20001016201500,210.000,20001016203000,200.000
MIL,T_GENSET176,43,20001016200000,-200.000,20001016201500,-210.000
MIL,T_GENSET176,43,20001016201500,-210.000,20001016203000,-200.000
BOALF,T_GENSET176,3000,20001016160000,N,F,,20001016200000,175.000,20001016200600,185.000
BOALF,T_GENSET176,3000,20001016160000,N,F,,20001016200600,185.000,20001016201200,185.000
BOALF,T_GENSET176,3000,20001016160000,N,F,,20001016201200,185.000,20001016201800,165.000
BOALF,T_GENSET176,3000,20001016160000,N,F,,20001016201800,165.000,20001016202400,165.000
BOALF,T_GENSET176,3000,20001016160000,N,F,,20001016202400,165.000,20001016203000,175.000
BOALF,T_GENSET176,3100,20001016161100,N,F,,20001016200000,180.000,20001016200600,190.000
BOALF,T_GENSET176,3100,20001016161100,N,F,,20001016200600,190.000,20001016201200,190.000
BOALF,T_GENSET176,3100,20001016161100,N,F,,20001016201200,190.000,20001016201800,170.000
BOALF,T_GENSET176,3100,20001016161100,N,F,,20001016201800,170.000,20001016202400,170.000
BOALF,T_GENSET176,3100,20001016161100,N,F,,20001016202400,170.000,20001016203000,180.000
FTR,22

For Settlement Dates on or after the P305 effective date the following data will be reported:

HDR,PHYSICAL BM DATA,20001016,43
PN,T_GENSET176,43,20001016200000,170.000,20001016200600,180.000
PN,T_GENSET176,43,20001016200600,180.000,20001016201200,180.000
PN,T_GENSET176,43,20001016201200,180.000,20001016201800,160.000
PN,T_GENSET176,43,20001016201800,160.000,20001016202400,160.000
PN,T_GENSET176,43,20001016202400,160.000,20001016203000,170.000
QPN,T_GENSET176,43,20001016200000,10.000,20001016201000,15.000
QPN,T_GENSET176,43,20001016201000,15.000,20001016202000,5.000
QPN,T_GENSET176,43,20001016202000,5.000,20001016203000,10.000
MEL,T_GENSET176,43,20001016200000,200.000,20001016201500,210.000
MEL,T_GENSET176,43,20001016201500,210.000,20001016203000,200.000
MIL,T_GENSET176,43,20001016200000,-200.000,20001016201500,-210.000
MIL,T_GENSET176,43,20001016201500,-210.000,20001016203000,-200.000

```
BOALF,T_GENSET176,3000,20001016160000,N,F,F,20001016200000,175.000,20001016200600,185.000
BOALF,T_GENSET176,3000,20001016160000,N,F,F,20001016200600,185.000,20001016201200,185.000
BOALF,T_GENSET176,3000,20001016160000,N,F,F,20001016201200,185.000,20001016201800,165.000
BOALF,T_GENSET176,3000,20001016160000,N,F,F,20001016201800,165.000,20001016202400,165.000
BOALF,T_GENSET176,3000,20001016160000,N,F,F,20001016202400,165.000,20001016203000,175.000
BOALF,T_GENSET176,3100,20001016161100,N,F,F,20001016200000,180.000,20001016200600,190.000
BOALF,T_GENSET176,3100,20001016161100,N,F,F,20001016200600,190.000,20001016201200,190.000
BOALF,T_GENSET176,3100,20001016161100,N,F,F,20001016201200,190.000,20001016201800,170.000
BOALF,T_GENSET176,3100,20001016161100,N,F,F,20001016201800,170.000,20001016202400,170.000
BOALF,T_GENSET176,3100,20001016161100,N,F,F,20001016202400,170.000,20001016203000,180.000
FTR,22
```

4.12.9 Dynamic Data

4.12.9.1 Header Record

| Field | Type | Format | Comments |
|-------------------|--------|----------|---|
| Record Type | string | | Fixed String “HDR” |
| File Type | string | | Fixed string “DYNAMIC DATA” |
| | | | |
| Settlement Date | date | yyyymmdd | |
| Settlement Period | string | | number between 1 and 50 or * if selecting a full day’s data |

4.12.9.2 Body Record Run Up Rate Export

| Field | Type | Format | Comments |
|--------------------|----------|------------------|--|
| Record Type (RURE) | string | | Fixed String “RURE” |
| BM Unit ID | string | | Ordered by this field first, incrementing |
| Time | datetime | yyyymmddhh24miss | Ordered by this field second, incrementing |
| Rate 1 | number | | |
| Elbow 2 | number | | |
| Rate 2 | number | | |
| Elbow 3 | number | | |
| Rate 3 | number | | |

4.12.9.3 Body Record Run Down Rate Export

| Field | Type | Format | Comments |
|--------------------|----------|------------------|--|
| Record Type (RDRE) | string | | Fixed String “RDRE” |
| BM Unit ID | string | | Ordered by this field first, incrementing |
| Time | datetime | yyyymmddhh24miss | Ordered by this field second, incrementing |
| Rate 1 | number | | |
| Elbow 2 | number | | |
| Rate 2 | number | | |
| Elbow 3 | number | | |

| Field | Type | Format | Comments |
|--------|--------|--------|----------|
| Rate 3 | number | | |

4.12.9.4 Body Record Run Up Rate Import

| Field | Type | Format | Comments |
|--------------------|----------|------------------|--|
| Record Type (RURI) | string | | Fixed String “RURI” |
| BM Unit ID | string | | Ordered by this field first, incrementing |
| Time | datetime | yyyymmddhh24miss | Ordered by this field second, incrementing |
| Rate 1 | number | | |
| Elbow 2 | number | | |
| Rate 2 | number | | |
| Elbow 3 | number | | |
| Rate 3 | number | | |

4.12.9.5 Body Record Run Down Rate Import

| Field | Type | Format | Comments |
|--------------------|----------|------------------|--|
| Record Type (RDRI) | string | | Fixed String “RDRI” |
| BM Unit ID | string | | Ordered by this field first, incrementing |
| Time | datetime | yyyymmddhh24miss | Ordered by this field second, incrementing |
| Rate 1 | number | | |
| Elbow 2 | number | | |
| Rate 2 | number | | |
| Elbow 3 | number | | |
| Rate 3 | number | | |

4.12.9.6 Body Record Notice to Deviate from Zero

| Field | Type | Format | Comments |
|-------------------|----------|------------------|--|
| Record Type (NDZ) | string | | Fixed String “NDZ” |
| BM Unit ID | string | | Ordered by this field first, incrementing |
| Time | datetime | yyyymmddhh24miss | Ordered by this field second, incrementing |
| Notice | number | | |

4.12.9.7 Body Record Notice to Deliver Bids

| Field | Type | Format | Comments |
|-------------|----------|------------------|--|
| Record Type | string | | Fixed String “NDB” |
| BM Unit ID | string | | Ordered by this field first, incrementing |
| Time | datetime | yyyymmddhh24miss | Ordered by this field second, incrementing |
| Notice | number | | |

4.12.9.8 Body Record Notice to Deliver Offers

| Field | Type | Format | Comments |
|-------------|----------|------------------|--|
| Record Type | string | | Fixed String “NDO” |
| BM Unit ID | string | | Ordered by this field first, incrementing |
| Time | datetime | yyyymmddhh24miss | Ordered by this field second, incrementing |
| Notice | number | | |

4.12.9.9 Body Record Minimum Zero Time

| Field | Type | Format | Comments |
|-------------|--------|--------|---|
| Record Type | string | | Fixed String “MZT” |
| BM Unit ID | string | | Ordered by this field first, incrementing |

| Field | Type | Format | Comments |
|--------|----------|------------------|--|
| Time | datetime | yyyymmddhh24miss | Ordered by this field second, incrementing |
| Period | number | | |

4.12.9.10 Body Record Minimum Non-Zero Time

| Field | Type | Format | Comments |
|-------------|----------|------------------|--|
| Record Type | string | | Fixed String “MNZT” |
| BM Unit ID | string | | Ordered by this field first, incrementing |
| Time | datetime | yyyymmddhh24miss | Ordered by this field second, incrementing |
| Period | number | | |

4.12.9.11 Body Record Stable Export Limit

| Field | Type | Format | Comments |
|-------------|----------|------------------|--|
| Record Type | string | | Fixed String “SEL” |
| BM Unit ID | string | | Ordered by this field first, incrementing |
| Time | datetime | yyyymmddhh24miss | Ordered by this field second, incrementing |
| Level | number | | |

4.12.9.12 Body Record Stable Import Limit

| Field | Type | Format | Comments |
|-------------|----------|------------------|--|
| Record Type | string | | Fixed String “SIL” |
| BM Unit ID | string | | Ordered by this field first, incrementing |
| Time | datetime | yyyymmddhh24miss | Ordered by this field second, incrementing |
| Level | number | | |

4.12.9.13 Body Record Maximum Delivery Volume

| Field | Type | Format | Comments |
|-------------|----------|------------------|--|
| Record Type | string | | Fixed String "MDV" |
| BM Unit ID | string | | Ordered by this field first, incrementing |
| Time | datetime | yyyymmddhh24miss | Ordered by this field second, incrementing |
| Level | number | | |

4.12.9.14 Body Record Maximum Delivery Period

| Field | Type | Format | Comments |
|-------------|----------|------------------|--|
| Record Type | string | | Fixed String "MDP" |
| BM Unit ID | string | | Ordered by this field first, incrementing |
| Time | datetime | yyyymmddhh24miss | Ordered by this field second, incrementing |
| Period | number | | |

4.12.9.15 Example File

```

HDR,DYNAMIC DATA,20001018,*
RURE,E_EMBEDD139,20001018150400,10.0,30,5.0,40,2.0
RDRE,E_EMBEDD139,20001018150400,10.0,30,5.0,40,2.0
RURI,E_EMBEDD139,20001018150400,10.0,-30,5.0,-40,2.0
RDRI,E_EMBEDD139,20001018150400,10.0,-30,5.0,-40,2.0
NDZ,E_EMBEDD139,20001018145200,20.000
NDB,E_EMBEDD139,20001018145200,20.000
NDO,E_EMBEDD139,20001018145200,20.000
MZT,E_EMBEDD139,20001018145200,20.000
MNZT,E_EMBEDD139,20001018145200,20.000
SEL,E_EMBEDD139,20001018145200,110.000
SIL,E_EMBEDD139,20001018145200,-110.000
MDV,E_EMBEDD139,20001018145200,90.000
MDP,E_EMBEDD139,20001018145200,30.000
FTR,13

```

4.12.10 Bid-Offer Level Data

4.12.10.1 Header Record Bid-Offer Level Data

| Field | Type | Format | Comments |
|-------------------|--------|----------|---|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed string "BID OFFER LEVEL DATA" |
| | | | |
| Settlement Date | date | yyyymmdd | |
| Settlement Period | string | | number between 1 and 50 or * if selecting a full day's data |

4.12.10.2 Body Record Bid-Offer Level Data

| Field | Type | Format | Comments |
|-----------------------|----------|------------------|---|
| Record Type (BOD) | string | | Fixed String "BOD" |
| BM Unit ID | string | | Group ordered firstly by this field, incrementing. |
| Bid Offer Pair Number | number | | Group ordered thirdly by this field, decrementing. |
| From Time | datetime | yyyymmddhh24miss | Group ordered secondly by this field, incrementing. |
| From Level | number | | |
| To Time | datetime | yyyymmddhh24miss | |
| To Level | number | | |
| Bid Price | number | | |
| Offer Price | number | | |

4.12.10.3 4.11.9.3 Example File

```

HDR,BID OFFER LEVEL DATA,20001016,*
BOD,T_GENSET176,-2,20001016173000,-
10.000,20001016180000,-10.000,10.00000,15.00000
BOD,T_GENSET176,-1,20001016173000,-
10.000,20001016180000,-10.000,20.00000,25.00000
BOD,T_GENSET176,1,20001016173000,10.000,20001016180000,
10.000,30.00000,35.00000

```

```

BOD,T_GENSET176,2,20001016173000,10.000,20001016180000,
10.000,40.00000,45.00000
BOD,T_GENSET176,3,20001016173000,10.000,20001016180000,
10.000,50.00000,55.00000
FTR,5

```

4.12.11 Derived BM Unit Data

4.12.11.1 Header Record

| Field | Type | Format | Comments |
|-------------------|--------|----------|--|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed string "DERIVED DATA" |
| | | | |
| Settlement Date | date | yyyymmdd | |
| Settlement Period | string | | number between 1 and 50 or * if selecting a full day's data |

4.12.11.2 Body Record Bid Acceptance Volumes

| Field | Type | Format | Comments |
|--|--------|--------|--|
| Record Type | string | | Fixed String "BAV" |
| BM Unit ID | string | | Ordered by this field first, incrementing |
| Settlement Period | number | | number between 1 and 50 |
| Acceptance ID | number | | Ordered by this field second, incrementing |
| Short Acceptance Flag | SA | | Flag indicating whether this acceptance was a "short" acceptance. |
| Volume Accepted for Bid-Offer Pair -6 | number | | |
| Volume Accepted for Bid-Offer Pair -5 | number | | |

| Field | Type | Format | Comments |
|---------------------------------------|--------|--------|----------|
| Volume Accepted for Bid-Offer Pair -4 | number | | |
| Volume Accepted for Bid-Offer Pair -3 | number | | |
| Volume Accepted for Bid-Offer Pair -2 | number | | |
| Volume Accepted for Bid-Offer Pair -1 | number | | |
| Volume Accepted for Bid-Offer Pair 1 | number | | |
| Volume Accepted for Bid-Offer Pair 2 | number | | |
| Volume Accepted for Bid-Offer Pair 3 | number | | |
| Volume Accepted for Bid-Offer Pair 4 | number | | |
| Volume Accepted for Bid-Offer Pair 5 | number | | |
| Volume Accepted for Bid-Offer Pair 6 | number | | |
| Total | number | | |

4.12.11.3 Body Record Offer Acceptance Volumes

| Field | Type | Format | Comments |
|---------------------------------------|--------|--------|---|
| Record Type | string | | Fixed String "OAV" |
| BM Unit ID | string | | Ordered by this field first, incrementing |
| Settlement Period | number | | number between 1 and 50 |
| Acceptance ID | number | | Ordered by this field second, incrementing |
| Short Acceptance Flag | SA | | Flag indicating whether this acceptance was a "short" acceptance. |
| Volume Accepted for Bid-Offer Pair -6 | number | | |
| Volume Accepted for Bid-Offer Pair -5 | number | | |

| Field | Type | Format | Comments |
|---------------------------------------|--------|--------|----------|
| Volume Accepted for Bid-Offer Pair -4 | number | | |
| Volume Accepted for Bid-Offer Pair -3 | number | | |
| Volume Accepted for Bid-Offer Pair -2 | number | | |
| Volume Accepted for Bid-Offer Pair -1 | number | | |
| Volume Accepted for Bid-Offer Pair 1 | number | | |
| Volume Accepted for Bid-Offer Pair 2 | number | | |
| Volume Accepted for Bid-Offer Pair 3 | number | | |
| Volume Accepted for Bid-Offer Pair 4 | number | | |
| Volume Accepted for Bid-Offer Pair 5 | number | | |
| Volume Accepted for Bid-Offer Pair 6 | number | | |
| Total | number | | |

4.12.11.4 Body Record Indicative Period Bid Acceptance Volumes

For Settlement Dates prior to the P217 effective date the body record will have the following format:

| Field | Type | Format | Comments |
|---------------------------------------|--------|--------|--|
| Record Type | string | | Fixed String "IPBAV" |
| BM Unit ID | string | | Ordered by this field first, incrementing |
| Settlement Period | number | | number between 1 and 50; ordered by this field second, incrementing |
| Volume Accepted for Bid-Offer Pair -6 | number | | |
| Volume Accepted for Bid-Offer Pair -5 | number | | |
| Volume Accepted for Bid-Offer Pair -4 | number | | |

| Field | Type | Format | Comments |
|---------------------------------------|--------|--------|----------|
| Volume Accepted for Bid-Offer Pair -3 | number | | |
| Volume Accepted for Bid-Offer Pair -2 | number | | |
| Volume Accepted for Bid-Offer Pair -1 | number | | |
| Volume Accepted for Bid-Offer Pair 1 | number | | |
| Volume Accepted for Bid-Offer Pair 2 | number | | |
| Volume Accepted for Bid-Offer Pair 3 | number | | |
| Volume Accepted for Bid-Offer Pair 4 | number | | |
| Volume Accepted for Bid-Offer Pair 5 | number | | |
| Volume Accepted for Bid-Offer Pair 6 | number | | |
| Total | number | | |

For Settlement Dates on or after the P217 effective date the body record will have the following format:

| Field | Type | Format | Comments |
|---------------------------------------|--------|--------|--|
| Record Type | string | | Fixed String "IPBAV" |
| BM Unit ID | string | | Ordered by this field first, incrementing |
| Settlement Period | number | | number between 1 and 50; ordered by this field second, incrementing |
| Data Type | string | | 'O' for Original 'T' for Tagged 'R' for Repriced 'N' for Originally- Priced (Not Repriced) |
| Volume Accepted for Bid-Offer Pair -6 | number | | |
| Volume Accepted for Bid-Offer Pair -5 | number | | |
| Volume Accepted for Bid-Offer Pair -4 | number | | |

| Field | Type | Format | Comments |
|---------------------------------------|--------|--------|----------|
| Volume Accepted for Bid-Offer Pair -3 | number | | |
| Volume Accepted for Bid-Offer Pair -2 | number | | |
| Volume Accepted for Bid-Offer Pair -1 | number | | |
| Volume Accepted for Bid-Offer Pair 1 | number | | |
| Volume Accepted for Bid-Offer Pair 2 | number | | |
| Volume Accepted for Bid-Offer Pair 3 | number | | |
| Volume Accepted for Bid-Offer Pair 4 | number | | |
| Volume Accepted for Bid-Offer Pair 5 | number | | |
| Volume Accepted for Bid-Offer Pair 6 | number | | |
| Total | number | | |

4.12.11.5 Body Record Indicative Period Offer Acceptance Volumes

For Settlement Dates prior to the P217 effective date the body record will have the following format:

| Field | Type | Format | Comments |
|---------------------------------------|--------|--------|---|
| Record Type | string | | Fixed String "IPOAV" |
| BM Unit ID | string | | Ordered by this field first, incrementing |
| Settlement Period | number | | number between 1 and 50; ordered by this field second, incrementing |
| Volume Accepted for Bid-Offer Pair -6 | number | | |
| Volume Accepted for Bid-Offer Pair -5 | number | | |
| Volume Accepted for Bid-Offer Pair -4 | number | | |
| Volume Accepted for Bid-Offer Pair -3 | number | | |

| Field | Type | Format | Comments |
|---------------------------------------|--------|--------|----------|
| Volume Accepted for Bid-Offer Pair -2 | number | | |
| Volume Accepted for Bid-Offer Pair -1 | number | | |
| Volume Accepted for Bid-Offer Pair 1 | number | | |
| Volume Accepted for Bid-Offer Pair 2 | number | | |
| Volume Accepted for Bid-Offer Pair 3 | number | | |
| Volume Accepted for Bid-Offer Pair 4 | number | | |
| Volume Accepted for Bid-Offer Pair 5 | number | | |
| Volume Accepted for Bid-Offer Pair 6 | number | | |
| Total | number | | |

For Settlement Dates on or after to the P217 effective date the body record will have the following format:

| Field | Type | Format | Comments |
|---------------------------------------|--------|--------|--|
| Record Type | string | | Fixed String "IPOAV" |
| BM Unit ID | string | | Ordered by this field first, incrementing |
| Settlement Period | number | | number between 1 and 50; ordered by this field second, incrementing |
| Data Type | string | | 'O' for Original 'T' for Tagged 'R' for Repriced 'N' for Originally- Priced (Not Repriced) |
| Volume Accepted for Bid-Offer Pair -6 | number | | |
| Volume Accepted for Bid-Offer Pair -5 | number | | |
| Volume Accepted for Bid-Offer Pair -4 | number | | |
| Volume Accepted for Bid-Offer Pair -3 | number | | |

| Field | Type | Format | Comments |
|---------------------------------------|--------|--------|----------|
| Volume Accepted for Bid-Offer Pair -2 | number | | |
| Volume Accepted for Bid-Offer Pair -1 | number | | |
| Volume Accepted for Bid-Offer Pair 1 | number | | |
| Volume Accepted for Bid-Offer Pair 2 | number | | |
| Volume Accepted for Bid-Offer Pair 3 | number | | |
| Volume Accepted for Bid-Offer Pair 4 | number | | |
| Volume Accepted for Bid-Offer Pair 5 | number | | |
| Volume Accepted for Bid-Offer Pair 6 | number | | |
| Total | number | | |

4.12.11.6 Body Record Indicative Period Bid Cashflow

| Field | Type | Format | Comments |
|--------------------------------|--------|--------|---|
| Record Type | string | | Fixed String "IPBC" |
| BM Unit ID | string | | Ordered by this field first, incrementing |
| Settlement Period | number | | number between 1 and 50; ordered by this field second, incrementing |
| Cashflow for Bid-Offer Pair -6 | number | | |
| Cashflow for Bid-Offer Pair -5 | number | | |
| Cashflow for Bid-Offer Pair -4 | number | | |
| Cashflow for Bid-Offer Pair -3 | number | | |
| Cashflow for Bid-Offer Pair -2 | number | | |
| Cashflow for Bid-Offer Pair -1 | number | | |

| Field | Type | Format | Comments |
|-------------------------------|--------|--------|----------|
| Cashflow for Bid-Offer Pair 1 | number | | |
| Cashflow for Bid-Offer Pair 2 | number | | |
| Cashflow for Bid-Offer Pair 3 | number | | |
| Cashflow for Bid-Offer Pair 4 | number | | |
| Cashflow for Bid-Offer Pair 5 | number | | |
| Cashflow for Bid-Offer Pair 6 | number | | |
| Total | number | | |

4.12.11.7 Body Record Indicative Period Offer Cashflow

| Field | Type | Format | Comments |
|--------------------------------|--------|--------|---|
| Record Type | string | | Fixed String "IPOC" |
| BM Unit ID | string | | Ordered by this field first, incrementing |
| Settlement Period | number | | number between 1 and 50; ordered by this field second, incrementing |
| Cashflow for Bid-Offer Pair -6 | number | | |
| Cashflow for Bid-Offer Pair -5 | number | | |
| Cashflow for Bid-Offer Pair -4 | number | | |
| Cashflow for Bid-Offer Pair -3 | number | | |
| Cashflow for Bid-Offer Pair -2 | number | | |
| Cashflow for Bid-Offer Pair -1 | number | | |
| Cashflow for Bid-Offer Pair 1 | number | | |
| Cashflow for Bid-Offer Pair 2 | number | | |
| Cashflow for Bid-Offer Pair 3 | number | | |
| Cashflow for Bid-Offer Pair 4 | number | | |
| Cashflow for Bid-Offer Pair 5 | number | | |

| Field | Type | Format | Comments |
|-------------------------------|--------|--------|----------|
| Cashflow for Bid-Offer Pair 6 | number | | |
| Total | number | | |

4.12.11.8 Example File

For Settlement Dates prior to the P217 effective date the body record will have the following format:

```
HDR,DERIVED DATA,20001018,33
BAV,T_GENSET176,33,3000,L,,,,,,,,-5.0000,,,,,,,,-5.0000
BAV,T_GENSET176,33,3100,L,,,,,,,,-5.0000,,,,,,,,-5.0000
OAV,T_GENSET176,33,3000,L,,,,,,,,2.5000,,,,,,,,2.5000
OAV,T_GENSET176,33,3100,L,,,,,,,,2.5000,,,,,,,,2.5000
IPBAV,T_GENSET176,33,,,,,,,,-10.000,,,,,,,,-10.000
IPOAV,T_GENSET176,33,,,,,,,,5.000,,,,,,,,5.000
IPBC,T_GENSET176,33,,,,,,,,-50.00,,,,,,,,-50.00
IPOC,T_GENSET176,33,,,,,,,,175.00,,,,,,,,175.00
FTR,8
```

For Settlement Dates on or after the P217 effective date the body record will have the following format:

```
HDR,DERIVED DATA,20001018,33
BAV,T_GENSET176,33,3000,L,,,,,,,,-5.0000,,,,,,,,-5.0000
BAV,T_GENSET176,33,3100,L,,,,,,,,-5.0000,,,,,,,,-5.0000
OAV,T_GENSET176,33,3000,L,,,,,,,,2.5000,,,,,,,,2.5000
OAV,T_GENSET176,33,3100,L,,,,,,,,2.5000,,,,,,,,2.5000
IPBAV,T_GENSET176,33,O,,,,,,,,-10.000,,,,,,,,-10.000
IPBAV,T_GENSET176,33,T,,,,,,,,0.000,,,,,,,,-10.000
IPBAV,T_GENSET176,33,R,,,,,,,,0.000,,,,,,,,-10.000
IPBAV,T_GENSET176,33,N,,,,,,,,-10.000,,,,,,,,-10.000
IPOAV,T_GENSET176,33,O,,,,,,,,5.000,,,,,,,,5.000
IPOAV,T_GENSET176,33,T,,,,,,,,0.000,,,,,,,,5.000
IPOAV,T_GENSET176,33,R,,,,,,,,0.000,,,,,,,,5.000
IPOAV,T_GENSET176,33,N,,,,,,,,5.000,,,,,,,,5.000
IPBC,T_GENSET176,33,,,,,,,,-50.00,,,,,,,,-50.00
IPOC,T_GENSET176,33,,,,,,,,175.00,,,,,,,,175.00
FTR,8
```

4.12.12 Derived System-wide Data

4.12.12.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|-------------------------------------|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed string "SYSTEM BUY SELL DATA" |

4.12.12.2 Body Record System Buy/Sell Prices

For Settlement Dates prior to the P217 effective date the body record will have the following format:

| Field | Type | Format | Comments |
|---|---------|----------|---|
| Record Type | string | | Fixed String "SSB" |
| Settlement Date | date | yyyymmdd | Group ordered by this field first, incrementing. |
| Settlement Period | number | | Group ordered by this field second, incrementing. |
| System Sell Price | number | | |
| System Buy Price | number | | |
| BSAD Default | boolean | | True if following BSAD data represents default values |
| Price Derivation Code | string | | |
| Indicative Net Imbalance Volume | number | | The Indicative NIV |
| Net Energy Sell Price Cost Adjustment | number | | ESCA used in derivation of the main price |
| Net Energy Sell Price Volume Adjustment | number | | ESVA used in derivation of the main price |
| Net System Sell Price Volume Adjustment | number | | SSVA used in derivation of the main price |
| Sell Price Price Adjustment | number | | SPA used in derivation of the main price |
| Net Energy Buy Price Cost Adjustment | number | | EBCA used in derivation of the main price |

| Field | Type | Format | Comments |
|--|--------|--------|---|
| Net Energy Buy Price Volume Adjustment | number | | EBVA used in derivation of the main price |
| Net System Buy Price Volume Adjustment | number | | SBVA used in derivation of the main price |
| Buy Price Price Adjustment | number | | BPA used in derivation of the main price |

For Settlement Dates on or after the P217 effective date the body record will have the following format:

| Field | Type | Format | Comments |
|---|---------|----------|---|
| Record Type | string | | Fixed String "SSB" |
| Settlement Date | date | yyyymmdd | Group ordered by this field first, incrementing. |
| Settlement Period | number | | Group ordered by this field second, incrementing. |
| System Sell Price | number | | |
| System Buy Price | number | | |
| BSAD Default | boolean | | True if following BSAD data represents default values |
| Price Derivation Code | string | | |
| Reserve Scarcity Price | number | | £/MWh |
| Replacement Price | number | | £/ MWh |
| Replacement Price Calculation Volume | number | | MWh |
| Indicative Net Imbalance Volume | number | | The Indicative NIV |
| Total System Accepted Offer Volume | number | | MWh |
| Total System Accepted Bid Volume | number | | MWh |
| Total System Tagged Accepted Offer Volume | number | | MWh |

| Field | Type | Format | Comments |
|--|--------|--------|----------|
| Total System Tagged Accepted Bid Volume | number | | MWh |
| System Total Priced Accepted Offer Volume | number | | MWh |
| System Total Priced Accepted Bid Volume | number | | MWh |
| Total System Adjustment Sell Volume | number | | MWh |
| Total System Adjustment Buy Volume | number | | MWh |
| Total System Tagged Adjustment Sell Volume | number | | MWh |
| Total System Tagged Adjustment Buy Volume | number | | MWh |

4.12.12.3 Example File

For Settlement Dates prior to the P217 effective date an example file would look like this:

```
HDR,SYSTEM BUY SELL DATA
SSB,20001018,33,32.66245,34.96198,F,A,0.000,0.00,0.000,0.000,0.00,0.00,0.000,0.000,0.00
SSB,20001018,36,31.74655,34.96312,F,L,0.000,0.00,0.000,0.000,0.00,0.00,0.000,0.000,0.00
SSB,20001018,37,1.00000,1.00000,T,E,0.000,0.00,0.000,0.000,0.00,0.00,0.000,0.000,0.00
FTR,3
```

For Settlement Dates on and after the P217 effective date an example file would look like this:

```
HDR,SYSTEM BUY SELL DATA
SSB,20001018,33,32.66245,34.96198,F,N,0.000,0.000,0.00,0.000,0.000,0.00,0.00,0.000,0.000,0.00
SSB,20001018,36,31.74655,34.96312,F,L,,0.000,0.00,0.000,0.000,0.00,0.00,0.00,0.000,0.000,0.00
SSB,20001018,37,1.00000,1.00000,T,E,,0.000,0.00,0.000,0.000,0.00,0.00,0.00,0.000,0.000,0.00
FTR,3
```


Please note that RSP will be null for dates on or after the P217 effective date until the P305 effective date.

4.12.13 Market Depth Data

4.12.13.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|----------------------------------|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed string "MARKET DEPTH DATA" |

4.12.13.2 Body Record Market Depth Data

| Field | Type | Format | Comments |
|--------------------------------------|--------|----------|---|
| Record Type | string | | Fixed String "MDD" |
| Settlement Date | date | yyyymmdd | Group ordered by this field first, incrementing. |
| Settlement Period | number | | Group ordered by this field second, incrementing. |
| IMBALNGC | number | | |
| Total Offer Volume | number | | |
| Total Bid Volume | number | | |
| Total Accepted Offer Volume | number | | |
| Total Accepted Bid Volume | number | | |
| Total Unpriced Accepted Offer Volume | number | | |
| Total Unpriced Accepted Bid Volume | number | | |
| Total Priced Accepted Offer Volume | number | | |
| Total Priced Accepted Bid Volume | number | | |

4.12.13.3 Example File

```

HDR, MARKET DEPTH DATA
MDD, 20001206, 1, 1936.000, , , , , , ,
MDD, 20001206, 2, 1755.000, , , , , , ,
MDD, 20001206, 3, 1676.000, , , , , , ,
MDD, 20001206, 4, 1665.000, , , , , , ,
FTR, 4

```

4.12.14 Latest Acceptances

4.12.14.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|---------------------------------------|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed string "LATEST ACCEPTANCE DATA" |

4.12.14.2 Body Record Latest Acceptance Data

| Field | Type | Format | Comments |
|-------------------|----------|------------------|---|
| Record Type | string | | Fixed String "LAD" |
| BM Unit Id | string | | |
| Acceptance Number | number | | |
| Acceptance Time | datetime | yyyymmddhh24miss | Group ordered by this field first, decrementing. |
| From Time | datetime | yyyymmddhh24miss | Group ordered by this field second, incrementing. |

4.12.14.3 Example File

```

HDR, LATEST ACCEPTANCE DATA
LAD, GEN1, 12771, 20001201232800, 20001202030000
LAD, SUPBMU21, 12770, 20001201232600, 20001202030000
LAD, EMBEDG111, 12769, 20001201232400, 20001202030000
LAD, T_GENSET199, 12768, 20001201231400, 20001202030000
LAD, GENSET209, 12767, 20001201231400, 20001202030000
FTR, 5

```

4.12.15 Historic Acceptances

4.12.15.1 Header Record

| Field | Type | Format | Comments |
|-------------------|--------|----------|---|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed string "ACCEPTANCE DATA" |
| Settlement Date | date | yyyymmdd | |
| Settlement Period | string | | number between 1 and 50 or * if selecting a full day's data |

4.12.15.2 Body Record Historic Acceptance Data

| Field | Type | Format | Comments |
|-------------------|----------|------------------|--|
| Record Type | string | | Fixed String "HAD" |
| BM Unit Id | string | | |
| Acceptance Number | number | | |
| Acceptance Time | datetime | yyyymmddhh24miss | Group ordered by this field first, incrementing. |
| Offer Price | number | | |
| Bid Price | number | | |

Note that this includes all acceptances which overlap the specified settlement Date and Period.

Note that where the acceptance overlaps more than one bid-offer pair, a separate record will be shown for each giving the appropriate prices.

4.12.15.3 Example File

```
HDR,ACCEPTANCE DATA,20001201,6
HAD,T_GENSET199,12768,20001201231400,75.00000,70.00000
HAD,GENSET209,12767,20001201231400,55.00000,40.00000
HAD,EMBEDG111,12769,20001201232400,65.00000,65.00000
HAD,SUPBMU21,12770,20001201232600,60.00000,20.00000
HAD,GEN1,12771,20001201232800,75.00000,60.00000
FTR,5
```

4.12.16 Balancing Services Adjustment Data

4.12.16.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|---|
| Record Type | String | | Fixed String "HDR" |
| File Type | String | | Fixed string "BALANCING SERVICES ADJUSTMENT DATA" |

4.12.16.2 Body Record Balancing Services Adjustment Data

Note that for Settlement Dates on or after the P217 effective date the following data items will always be zero:

- Net Energy Buy Price Cost Adjustment (EBCA)
- Net Energy Buy Price Volume Adjustment (EBVA)
- Net System Buy Price Volume Adjustment (SBVA)
- Net Energy Sell Price Cost Adjustment (ESCA)
- Net Energy Sell Price Volume Adjustment (ESVA)
- Net System Sell Price Volume Adjustment (SSVA)

| Field | Type | Format | Comments |
|--|--------|----------|---|
| Record Type | string | | Fixed String "BSAD" |
| Settlement Date | date | yyyymmdd | Group ordered by this field first, incrementing. |
| Settlement Period | number | | Group ordered by this field second, incrementing. |
| Net Energy Sell Price Cost Adjustment | number | | ESCA £ |
| Net Energy Sell Price Volume Adjustment | number | | ESVA MWh |
| Net System Sell Price Volume Adjustment | number | | SSVA MWh |
| Sell Price Price Adjustment | number | | SPA £/MWh |
| Net Energy Buy Price Cost Adjustment | number | | EBCA £ |
| Net Energy Buy Price Volume | number | | EBVA MWh |

| Field | Type | Format | Comments |
|---|--------|--------|-----------|
| Adjustment | | | |
| Net System Buy Price Volume Adjustment | number | | SBVA MWh |
| Buy Price Price Adjustment | number | | BPA £/MWh |

4.12.16.3 Body Record Balancing Services Adjustment Action Data

For Settlement Dates on and after the P217 effective date the following data will be reported:

| Field | Type | Format | Comments |
|--|---------|----------|--|
| Record Type | string | | Fixed String "DISAG" |
| Settlement Date | date | yyyymmdd | Group ordered by this field first, incrementing. |
| Settlement Period | number | | Group ordered by this field second, incrementing. |
| Action Identifier | number | | |
| SO-Flag | boolean | T or F | 'T' if potentially impacted by transmission constraints. |
| Balancing Services Adjustment Action STOR Provider Flag | boolean | T or F | 'T' if related to a STOR Provider This field will be null if pre-P305 Settlement Date |
| Action Cost | number | | £ (can be NULL) |
| Action Volume | number | | MWh |

4.12.16.4 Example File

For Settlement Dates on, and after prior to the P217 effective date an example file would look like this:

```
HDR,BALANCING SERVICES ADJUSTMENT DATA
BSAD,20001018,33,0.00,0.000,0.000,0.00,0.00,0.000,0.000,0.00
BSAD,20001018,36,0.00,0.000,0.000,0.00,0.00,0.000,0.000,0.00
BSAD,20001018,37,0.00,0.000,0.000,0.00,0.00,0.000,0.000,0.00
FTR,3
```

For Settlement Dates on and after the P217 effective date an example file would look like this:

```
HDR,BALANCING SERVICES ADJUSTMENT DATA
BSAD,20001018,33,0.00,0.000,0.000,13.1,0.00,0.000,0.000,0.00
DISAG,20001018,33,1,F,,5.00,1.23
DISAG,20001018,33,2,T,,0.000
DISAG,20001018,33,3,F,,10.00,4.5
BSAD,20001018,36,0.00,0.000,0.000,0.00,0.00,0.000,0.000,4.57
DISAG,20001018,36,1,T,,6.00,2.2
DISAG,20001018,36,2,T,,3.00,6.000
BSAD,20001018,37,0.00,0.000,0.000,0.00,0.00,0.000,0.000,11.00
DISAG,20001018,37,1,F,,5.00,7.113
DISAG,20001018,37,2,T,,10.00,5.051
DISAG,20001018,37,3,T,,3.00,0.309
DISAG,20001018,37,4,F,,7.00,0.099
FTR,3
```

For Settlement Dates on and after the P305 effective date an example file would look like this:

```
HDR,BALANCING SERVICES ADJUSTMENT DATA
BSAD,20001018,33,0.00,0.000,0.000,13.1,0.00,0.000,0.000,0.00
DISAG,20001018,33,1,F,F,5.00,1.23
DISAG,20001018,33,2,T,F,0.000
DISAG,20001018,33,3,F,F,10.00,4.5
BSAD,20001018,36,0.00,0.000,0.000,0.00,0.00,0.000,0.000,4.57
DISAG,20001018,36,1,T,F,6.00,2.2
DISAG,20001018,36,2,T,F,3.00,6.000
BSAD,20001018,37,0.00,0.000,0.000,0.00,0.00,0.000,0.000,11.00
DISAG,20001018,37,1,F,F,5.00,7.113
DISAG,20001018,37,2,T,F,10.00,5.051
DISAG,20001018,37,3,T,F,3.00,0.309
DISAG,20001018,37,4,F,F,7.00,0.099
FTR,3
```

4.12.17 Market Index Data

4.12.17.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|----------------------------------|
| Record Type | String | | Fixed String "HDR" |
| File Type | String | | Fixed string "MARKET INDEX DATA" |

4.12.17.2 Body Record Market Index Data

| Field | Type | Format | Comments |
|-------------------------------|--------|--------|--|
| Record Type | string | | Fixed String "MID" |
| Market Index Data Provider ID | string | | Group ordered by this field first, incrementing. |

| | | | |
|----------------------------|--------|----------|---|
| Settlement Date | date | yyyymmdd | Group ordered by this field second, incrementing. |
| Settlement Period | number | | Group ordered by this field third, incrementing. |
| Market Index Price | number | | £/MWh |
| Market Index Volume | number | | MWh |

4.12.17.3 4.5.15.3 Example File

```

HDR,MARKET INDEX DATA
MID,NNCUK,20001018,33,10.000,40.000
MID,NNCUK,20001018,36,20.000,50.000
MID,NNCUK,20001018,37,10.000,30.000
FTR,3

```

4.12.18 Applicable Balancing Services Volume Data

4.12.18.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|--|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed string "APPLICABLE BALANCING SERVICES VOLUME" |

4.12.18.2 Body Record Applicable Balancing Services Volume Data

| Field | Type | Format | Comments |
|--|--------|--------|---|
| Record Type | string | | Fixed String "QAS" |
| BM Unit ID | string | | |
| Settlement Period | number | | Group ordered by this field second, incrementing. |
| BM Unit Applicable Balancing Services Volume | number | | |

4.12.18.3 Example File

```
HDR,APPLICABLE BALANCING SERVICES VOLUME,20001016,1
QAS,T_GENERATE,1,38889.000
QAS,E_EMBED,1,39066.000
FTR,2
```

4.12.19 Credit Default Notice Data

4.12.19.1 4.11.18.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|---|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed string "CREDIT DEFAULT NOTICE DATA" |

4.12.19.2 Body Record

| Field | Type | Format | Comments |
|-----------------------------------|--------|----------|--|
| Record Type | string | | Fixed String "CDN" |
| Participant ID | string | | Records ordered incrementing by this field |
| Credit Default Level | number | 1 or 2 | |
| Entered Default Settlement Date | date | yyyymmdd | |
| Entered Default Settlement Period | number | | |
| Cleared Default Settlement Date | date | yyyymmdd | May be NULL |
| Cleared Default Settlement Period | number | | May be NULL |
| Cleared Default Text | string | | May be NULL |

4.12.19.3 Example File

```
HDR, CREDIT DEFAULT NOTICE DATA
CDN,PARTY01,1,20021127,12,20021128,2,Credit Cover Percentage
<= 75 percent
CDN,PARTY02,2,20021126,11,,,
FTR,2
```


4.12.20 Temperature Data

4.12.20.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|---------------------------------|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed string "TEMPERATURE DATA" |

4.12.20.2 Body Record Temperature Data

| Field | Type | Format | Comments |
|------------------------------|----------|------------------|--|
| Record Type | string | | Fixed String "TEMP" |
| Spot Time | datetime | yyyymmddhh24miss | Group ordered by this field first, incrementing. |
| Temperature Out-Turn | number | | |
| Normal Reference Temperature | number | | |
| Low Reference Temperature | number | | |
| High Reference Temperature | number | | |

4.12.20.3 Example File

HDR,TEMPERATURE DATA

TEMP,20081016091503,18.3,17.2,12.3,22.4

FTR,1

4.12.21 Wind Generation Forecast and Outturn Data

4.12.21.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|--|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed string "WIND GENERATION FORECAST AND OUTTURN DATA" |

4.12.21.2 Body Record Wind Generation Forecast and Outturn Data

| Field | Type | Format | Comments |
|-------------------------------------|----------|------------------|---|
| Record Type | string | | Fixed String "WIND" |
| Settlement Date | date | yyyymmdd | Group ordered by this field first, incrementing. |
| Settlement Period | number | | Group ordered by this field second, incrementing. |
| Publication Time (Initial Forecast) | datetime | yyyymmddhh24miss | Optional field |
| Initial Forecast Generation (MW) | number | | Optional field |
| Publication Time (Latest Forecast) | datetime | yyyymmddhh24miss | Optional field |
| Latest Forecast Generation (MW) | number | | Optional field |
| Publication Time (Outturn) | datetime | yyyymmddhh24miss | |
| Outturn Generation (MW) | number | | |

4.12.21.3 Example File

HDR,WIND GENERATION FORECAST AND OUTTURN DATA

```

WIND,20080429,1,20080427170000,1001,
20080428170000,1011,20080429003500,1221

WIND,20080429,2,,,,,20080429010500,1221

WIND,20080429,3,,,,,20080429013500,1221

WIND,20080429,4,,,,,20080429020500,1221

WIND,20080429,5,,,,,20080429023500,1221

WIND,20080429,6,,,,,20080429030500,1221

WIND,20080429,7,,,,,20080429033500,1221

WIND,20080429,8,,,,,20080429040500,1221

WIND,20080429,9,,,,,20080429043500,1221

WIND,20080429,10,,,,,20080429050500,1221

WIND,20080429,11,
20080427170000,1147,20080428170000,1157,20080429053500,1221

```

WIND,20080429,12,,,,,20080429060500,1221

WIND,20080429,13,,,,,20080429063500,1221

WIND,20080429,14,,,,,20080429070500,1221

WIND,20080429,15,,,,,20080429073500,1221

WIND,20080429,16,,,,,20080429080500,1221

WIND,20080429,17,
20080427170000,1205,20080428170000,1200,20080429083500,1221

WIND,20080429,18,,,,,20080429090500,1221

WIND,20080429,19,,,,,20080429093500,1221

WIND,20080429,20,,,,,20080429100500,1221

FTR,20

4.12.22 Instantaneous Generation By Fuel Type

4.12.22.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|--|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed string "INSTANTANEOUS GENERATION BY FUEL TYPE DATA" |

4.12.22.2 Body Record Instantaneous Generation By Fuel Type Data

| Field | Type | Format | Comments |
|-------------------|----------|------------------|---|
| Record Type | string | | Fixed String "FUELINST" |
| Settlement Date | date | yyyymmdd | Group ordered by this field first, incrementing. |
| Settlement Period | number | | Group ordered by this field second, incrementing. |
| Spot Time | datetime | yyyymmddhh24miss | |
| CCGT (MW) | number | | |
| OIL (MW) | number | | |
| COAL (MW) | number | | |
| NUCLEAR (MW) | number | | |

| Field | Type | Format | Comments |
|--------------|--------|--------|----------|
| WIND (MW) | number | | |
| PS (MW) | number | | |
| NPSHYD (MW) | number | | |
| OCGT (MW) | number | | |
| OTHER (MW) | number | | |
| INTFR (MW) | number | | |
| INTIRL (MW) | number | | |
| INTNED (MW) | number | | |
| INTEW (MW) | number | | |
| BIOMASS (MW) | number | | |
| INTNEM (MW) | number | | |

4.12.22.3 Example File

HDR, INSTANTANEOUS GENERATION BY FUEL TYPE DATA

FUELINST,20080428,37,20080428170503,18137,1850,0,15315,7308,189,15,
15,0,55,152,21,22,27,28

FUELINST,20080428,37,20080428171007,18134,1849,0,15312,7307,181,16,
14,0,52,150,13,17,27,31

FTR,2

4.12.23 Half Hourly Outturn Generation By Fuel Type

4.12.23.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|---|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed string "HALF HOURLY OUTTURN GENERATION BY FUEL TYPE DATA" |

4.12.23.2 Body Record Half Hourly Outturn Generation By Fuel Type Data

| Field | Type | Format | Comments |
|-----------------|--------|----------|--|
| Record Type | string | | Fixed String "FUELHH" |
| Settlement Date | date | yyyymmdd | Group ordered by this field first, incrementing. |

| Field | Type | Format | Comments |
|-------------------|--------|--------|---|
| Settlement Period | number | | Group ordered by this field second, incrementing. |
| CCGT (MW) | number | | |
| OIL (MW) | number | | |
| COAL (MW) | number | | |
| NUCLEAR (MW) | number | | |
| WIND (MW) | number | | |
| PS (MW) | number | | |
| NPSHYD (MW) | number | | |
| OCGT (MW) | number | | |
| OTHER (MW) | number | | |
| INTFR (MW) | number | | |
| INTIRL (MW) | number | | |
| INTNED (MW) | number | | |
| INTEW (MW) | number | | |
| BIOMASS (MW) | number | | |
| INTNEM (MW) | number | | |

4.12.23.3 Example File

HDR, HALF HOURLY OUTTURN GENERATION BY FUEL TYPE DATA

FUELHH,20080428,1,18137,1850,0,15315,7308,189,15,15,0,55,152,12,16,27,19

FUELHH,20080428,2,18134,1849,0,15312,7307,181,16,14,0,52,150,22,16,27,5

FTR,2

4.12.24 Transmission System Demand

4.12.24.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|--|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed string "TRANSMISSION SYSTEM DEMAND DATA" |

4.12.24.2 Body Record Transmission System Demand Data

| Field | Type | Format | Comments |
|-------------|----------|------------------|--------------------|
| Record Type | string | | Fixed String "TSD" |
| Spot Time | datetime | yyyymmddhh24miss | |
| Demand (MW) | number | | |

4.12.24.3 Example File

HDR, TRANSMISSION SYSTEM DEMAND DATA

TSD,20080428170500,43036

TSD,20080428171000,43006

TSD,20080428171500,41160

TSD,20080428172000,42705

TSD,20080428172500,42565

FTR,5

4.12.25 Half Hourly Interconnector Outturn Generation

4.12.25.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|--|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed string "HALF HOURLY INTERCONNECTOR OUTTURN GENERATION" |

4.12.25.2 Body Record Half Hourly Interconnector Outturn Generation

| Field | Type | Format | Comments |
|-------------------|--------|----------|---|
| Record Type | string | | Fixed String "INTOUTHH" |
| Settlement Date | date | yyyymmdd | Group ordered by this field first, incrementing. |
| Settlement Period | number | | Group ordered by this field second, incrementing. |
| INTFR (MW) | number | | |
| INTIRL (MW) | number | | |

| Field | Type | Format | Comments |
|-------------|--------|--------|----------|
| INTNED (MW) | number | | |
| INTEW (MW) | number | | |
| INTNEM (MW) | number | | |

4.12.25.3 Example File

```
HDR, HALF HOURLY OUTTURN GENERATION BY FUEL TYPE DATA
INTOUTH,20080428,1,55,152,23,32,27
INTOUTH,20080428,2,52,150,22,21,17
FTR,2
```

4.12.26 Daily Energy Volume Data

4.12.26.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|---|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed string "DAILY ENERGY VOLUME DATA" |

4.12.26.2 Body Record Temperature Data

| Field | Type | Format | Comments |
|--------------------------------------|--------|----------|--|
| Record Type | string | | Fixed String "INDOD" |
| Settlement Day | Date | yyyymmdd | Group ordered by this field first, incrementing. |
| Daily Energy Volume Outturn | number | | |
| Daily Energy Volume Normal Reference | number | | |
| Daily Energy Volume Low Reference | number | | |
| Daily Energy Volume High Reference | number | | |

4.12.26.3 Example File

HDR,DAILY ENERGY VOLUME DATA

INDOD,20081016,43323,40121,38124,47634

FTR,1

4.12.27 Non-BM STOR Instructed Volume Data

4.12.27.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|---|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed string "NON-BM STOR INSTRUCTED VOLUME DATA" |

4.12.27.2 Non-BM STOR Instructed Volume Data

| Field | Type | Format | Comments |
|-------------------------|--------|----------|---|
| Record Type | string | | Fixed String "NONBM" |
| Settlement Date | date | yyyymmdd | Group ordered by this field first, incrementing. |
| Settlement Period | number | | Group ordered by this field second, incrementing. |
| Instructed Volume (MWh) | number | | |

4.12.27.3 Example File

HDR, NON-BM STOR INSTRUCTED VOLUME DATA

NONBM,20080428,1,551

NONBM,20080428,2,524

FTR,2

4.12.28 System Frequency

4.12.28.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|--------------------------------------|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed string "SYSTEM FREQUENCY DATA" |

4.12.28.2 Body Record System Frequency Data

| Field | Type | Format | Comments |
|----------------|----------|------------------|---------------------|
| Record Type | string | | Fixed String "FREQ" |
| Spot Time | datetime | yyyymmddhh24miss | |
| Frequency (Hz) | number | | |

4.12.28.3 Example File

```

HDR, SYSTEM FREQUENCY DATA

FREQ,20080428170500,49.101

FREQ,20080428171000,49.393

FREQ,20080428171500,49.573

FREQ,20080428172000,49.032

FREQ,20080428172500,49.432

FTR,5

```

4.12.29 Indicative System Price Stack Data

4.12.29.1 Header

| Field | Type | Format | Comments |
|-------------|--------|--------|---|
| Record Type | String | | Fixed String "HDR" |
| File Type | String | | Fixed string "INDICATIVE SYSTEM PRICE STACK DATA" |

4.12.29.2 Body Record Indicative System Price Bid Stack Data

| Field | Type | Format | Comments |
|---------------------------------|---------|----------|--|
| Record Type | string | | Fixed String "BID" |
| Settlement Date | date | yyyymmdd | Group ordered by this field first, incrementing. |
| Settlement Period | number | | Group ordered by this field second, incrementing. |
| Sequence Number | number | | Group ordered by this field third, incrementing. |
| Component Identifier | string | | Acceptance BM Unit ID or BSAD NETSO allocated ID |
| Acceptance Number | number | | |
| Bid-Offer Pair Number | number | | |
| CADL Flag | boolean | T or F | 'T' if Short Duration Acceptance |
| SO-Flag | boolean | T or F | 'T' if potentially impacted by transmission constraints. |
| STOR Provider Flag | Boolean | T or F | 'T' if System Action relates to a BOA accepted for a SBR Provider. This field will be null for pre-P305 dates |
| Repriced Indicator | Boolean | T or F | 'T' if repriced item |
| Bid-Offer Original Price | Number | | £/MWh |
| Reserve Scarcity Price | Number | | £/MWh This will be null because STOR not accepted as a Bid This field will be null for pre-P305 dates |

| Field | Type | Format | Comments |
|------------------------------|--------|--------|----------|
| Stack Item Original Price | number | | £/MWh |
| Stack Item Volume | number | | MWh |
| DMAT Adjusted Volume | number | | MWh |
| Arbitrage Adjusted Volume | number | | MWh |
| NIV Adjusted Volume | number | | MWh |
| PAR Adjusted Volume | number | | MWh |
| Stack Item Final Price | number | | £/MWh |
| Transmission Loss Multiplier | number | | |
| TLM Adjusted Volume | number | | MWh |
| TLM Adjusted Cost | number | | £ |

4.12.29.3 Body Record Indicative System Price Offer Stack Data

| Field | Type | Format | Comments |
|----------------------|--------|----------|---|
| Record Type | string | | Fixed String "OFFER" |
| Settlement Date | date | yyyymmdd | Group ordered by this field first, incrementing. |
| Settlement Period | number | | Group ordered by this field second, incrementing. |
| Sequence Number | number | | Group ordered by this field third, incrementing. |
| Component Identifier | string | | Acceptance BM Unit ID or BSAD NETSO allocated ID |

| Field | Type | Format | Comments |
|-------------------------------------|---------|--------|---|
| Acceptance Number | number | | |
| Bid-Offer Pair Number | number | | |
| CADL Flag | boolean | T or F | ‘T’ if Short Duration Acceptance |
| SO-Flag | boolean | T or F | ‘T’ if potentially impacted by transmission constraints. |
| STOR Provider Flag | boolean | T or F | ‘T’ if System Action relates to a BOA accepted for a SBR Provider This field will be null for pre-P305 dates |
| Repriced Indicator | boolean | T or F | ‘T’ if repriced item |
| Bid-Offer Original Price | number | | £/MWh |
| Reserve Scarcity Price | number | | £/MWh This field will be null for pre-P305 dates |
| Stack Item Original Price | number | | £/MWh |
| Stack Item Volume | number | | MWh |
| DMAT Adjusted Volume | number | | MWh |
| Arbitrage Adjusted Volume | number | | MWh |
| NIV Adjusted Volume | number | | MWh |
| PAR Adjusted Volume | number | | MWh |
| Stack Item Final Price | number | | £/MWh |
| Transmission Loss Multiplier | number | | |

| Field | Type | Format | Comments |
|----------------------------|--------|--------|----------|
| TLM Adjusted Volume | number | | MWh |
| TLM Adjusted Cost | number | | £ |

4.12.29.4 Example File

```

HDR, INDICATIVE SYSTEM PRICE STACK DATA
BID,20001018,33,1,T_BASS-1,2345,-
1,F,F,F,F,2.0,,2.0,30.0,30.0,30.0,30.0,30.0,2.0,0.9,27.0,54.0
BID,20001018,33,2,1,,,T,F,F,F,2.0,,2.0,30.0,30.0,30.0,30.0,2.0,0.9,2
7.0,54.0
OFFER,20001018,33,1,T_EROL-1,1357,-
1,F,F,F,F,2.0,,2.0,30.0,30.0,30.0,30.0,30.0,2.0,0.9,27.0,54.0
OFFER,20001018,33,2,1,,,T,F,F,T,2.0,2.5,2.5,30.0,30.0,30.0,30.0,2.0,
0.9,27.0,54.0
OFFER,20001018,33,3,T_HEST-1,6789,-
1,F,F,F,F,2.0,,2.0,30.0,30.0,30.0,30.0,30.0,2.0,0.9,27.0,54.0
FTR,5

```

4.12.30 SO-SO Prices

4.12.30.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|-----------------------------|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed String "SO-SO PRICES" |

4.12.30.2 Body Record

| Field | Type | Format | Comments |
|-------------------------|----------|----------------|---|
| Record Type | string | | Fixed String "SOSO" |
| Trade Type | string | | A code identifying the type of trade being made |
| Start Time | datetime | yyyymmddhhmmss | The start date and time for which a Trade Price applies |
| Trade Direction | string | A01, A02 | The direction of the trade |
| Contract Identification | string | | A unique identifier for an offered trade |
| Trade Quantity | number | MW | The quantity of an offered trade in MW |

| Field | Type | Format | Comments |
|-------------|--------|--------------|---|
| Trade Price | number | Currency/MWh | The price of the trade in units of currency per MWh |

4.12.30.3 Example File

HDR,SO-SO PRICES

SOSO,BALIT_NG,20100422170000,A01,RTE_20101225_1000_3,12584,24.25

SOSO,BALIT_NG,20100422180000,A02,RTE_20101225_1000_27,10524,30.16

FTR,2

4.12.31 Demand Control Instruction

4.12.31.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|-------------------------|
| Record Type | String | | Fixed String "HDR" |
| File Type | String | | Fixed String "DCONTROL" |

4.12.31.2 Body Record

| Field | Type | Format | Comments |
|---------------------------|----------|------------------|---|
| Record Type | String | | Fixed String "DEMCI" |
| Demand Control ID | String | | The unique identifier for a demand control instruction |
| Affected DSO | String | | |
| Instruction Sequence | Number | | |
| Demand Control Event Flag | Boolean | 'I' or 'L' | A value of 'I' indicates an instruction initiated by the NETSO or an Emergency Manual Disconnection. A Value of 'L' indicates an Automatic Low Frequency Demand Disconnection |
| Time From | datetime | yyyymmddhh24miss | |

| Field | Type | Format | Comments |
|----------------------|----------|------------------|----------|
| Time To | datetime | yyyymmddhh24miss | |
| Demand Control Level | Number | | |
| SO-Flag | Boolean | 'T' or 'F' | |

4.12.31.3 Example File

HDR,DCONTROL

DEMCI,DCID,,1,L,2015-08-10 01:00,2015-08-10 01:25,30.00000,T

DEMCI,DCID,NORW,1,I,2015-08-10 01:00,2015-08-10 01:25,30.00000,F

DEMCI,DCID,,2,L,2015-08-10 02:00,2015-08-10 02:40,40.00000,T

FTR,3

4.12.32 Loss of Load Probability

4.12.32.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|---------------------|
| Record Type | string | | Fixed String "HDR" |
| File Type | string | | Fixed String "LOLP" |

4.12.32.2 Body Record

| Field | Type | Format | Comments |
|-------------------|--------|----------|--|
| Record Type | String | | Fixed String "LOLPDRM" |
| Settlement Date | Date | yyyymmdd | |
| Settlement Period | Number | 1-50 | |
| LOLP_1200 | number | | Midday Indicative LoLP value |
| DRM_1200 | number | | Midday forecast of De-rated Margin |
| LOLP_8h | number | | 8 hour ahead Indicative LoLP value |
| DRM_8h | number | | 8 hour ahead forecast of De-rated Margin |
| LOLP_4h | number | | 4 hour ahead Indicative LoLP value |

| Field | Type | Format | Comments |
|---------|--------|--------|--|
| DRM_4h | number | | 4 hour ahead forecast of De-rated Margin |
| LOLP_2h | number | | 2 hour ahead Indicative LoLP value |
| DRM_2h | number | | 2 hour ahead forecast of De-rated Margin |
| LOLP_1h | number | | 1 hour ahead Final LoLP value |
| DRM_1h | number | | 1 hour ahead forecast of De-rated Margin |

4.12.32.3 Example File

HDR,LOLP

LOLPDRM,20150810,25,0.345,10.56,0.234,112.34,0.123,1.456,0.56,345.789,0.8,0.80000

FTR,1

4.12.33 STOR Availability Window

4.12.33.1 Header Record

| Field | Type | Format | Comments |
|-------------|--------|--------|----------------------------|
| Record Type | String | | Fixed String "HDR" |
| File Type | String | | Fixed String "STORAW DATA" |

4.12.33.2 Body Record

| Field | Type | Format | Comments |
|-----------------------------|----------|------------------|-----------------------|
| Record Type | String | | Fixed String "STORAW" |
| Season Year | Date | yyyy | |
| Season Number | Number | | |
| STOR Availability From Date | Datetime | yyyymmddhh24mm | |
| STOR Availability To Date | Date | yyyymmddhh24miss | |
| Weekday Start Time | time | hhmm | |
| Weekday End Time | time | hhmm | |
| Non-weekday Start | time | hhmm | |

| Field | Type | Format | Comments |
|----------------------|------|--------|----------|
| Time | | | |
| Non-weekday End Time | time | hhmm | |

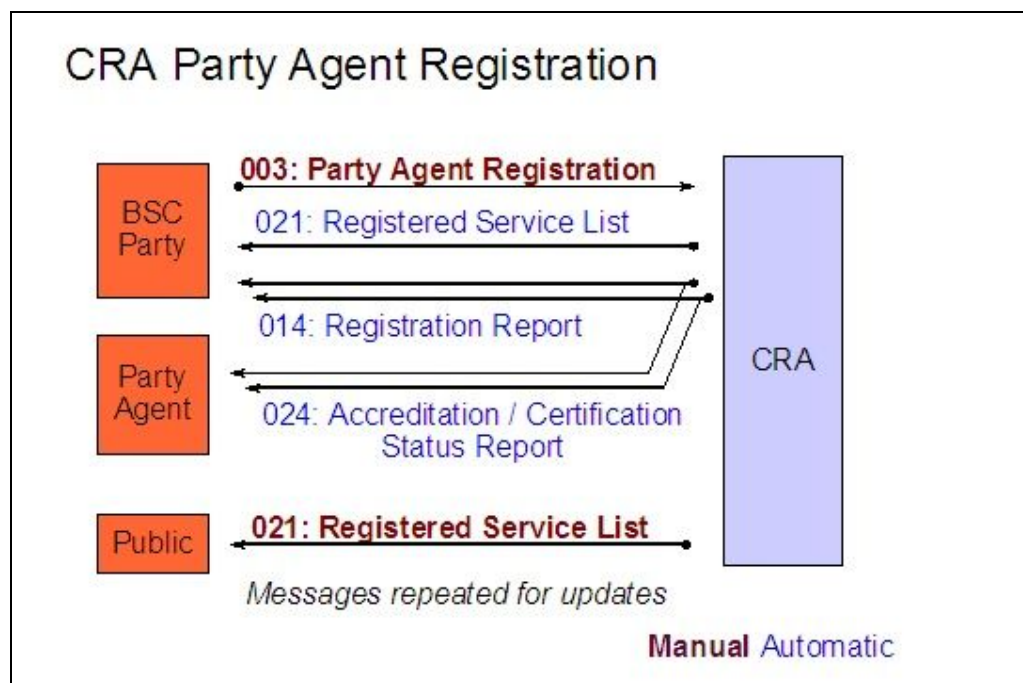
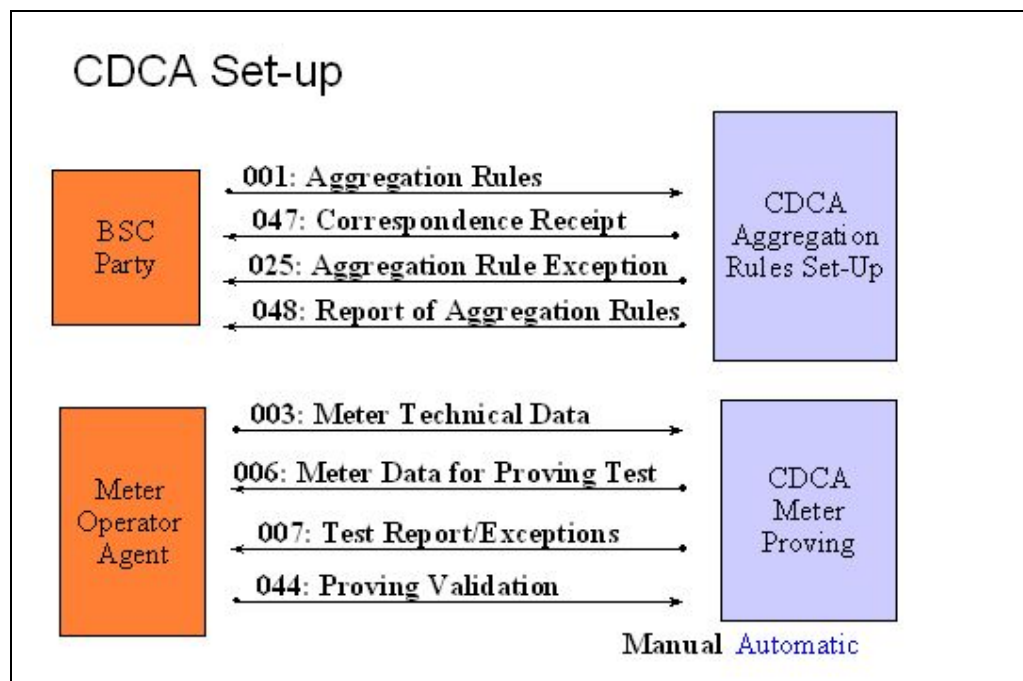
4.12.33.3 Example File

HDR,STORAW DATA

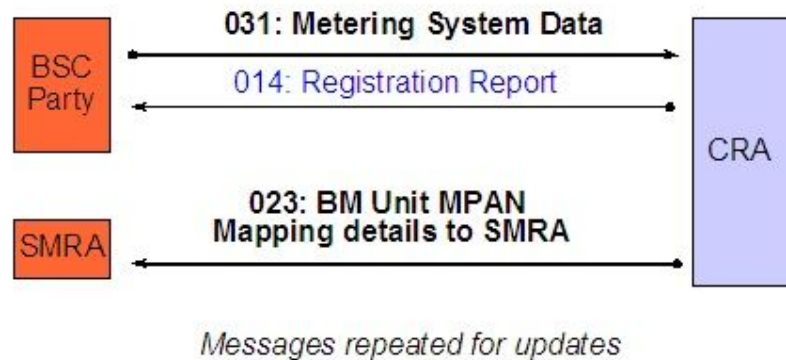
STORAW,2015-2015,1,201504010500,201504270500,0700,1330,1000,1400
 STORAW,2015-2015,1,201504010500,201504270500,1900,2200,1930,2200
 STORAW,2015-2015,2,201504270500,201508240500,0730,1400,0930,1330
 STORAW,2015-2015,2,201504270500,201508240500,1600,1800,1630,2030
 STORAW,2015-2015,2,201504270500,201508240500,1930,2230,2030,2200
 STORAW,2015-2015,3,201508240500,201509210500,0730,1400,1030,1330
 STORAW,2015-2015,3,201508240500,201509210500,1600,2130,1900,2200
 STORAW,2015-2015,4,201509210500,201510260500,0700,1330,,
 STORAW,2015-2015,4,201509210500,201510260500,1630,2100,1730,2100
 STORAW,2015-2016,5,201510260500,201602010500,0700,1330,1030,1330
 STORAW,2015-2016,5,201510260500,201602010500,1600,2100,1600,2230
 STORAW,2016-2016,6,201602010500,201604010500,0700,1330,1030,1330
 STORAW,2016-2016,6,201602010500,201604010500,,1630,2100
 FTR,13

5. CDCA External Inputs and Outputs

5.1 CDCA Flow Overview

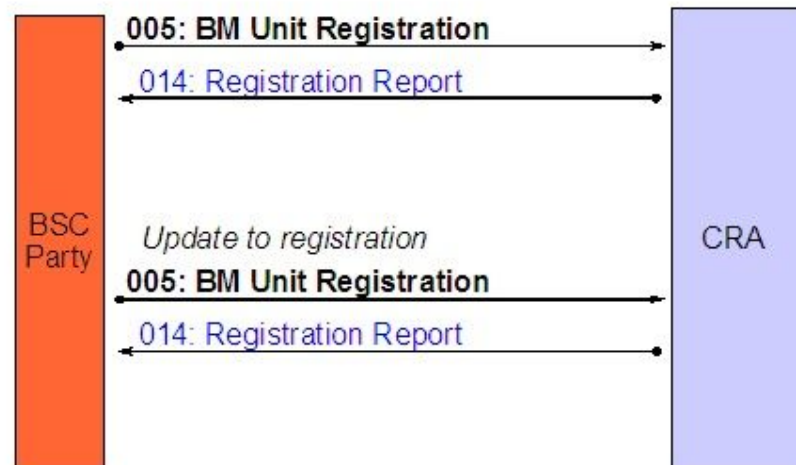


CRA Meter Registration

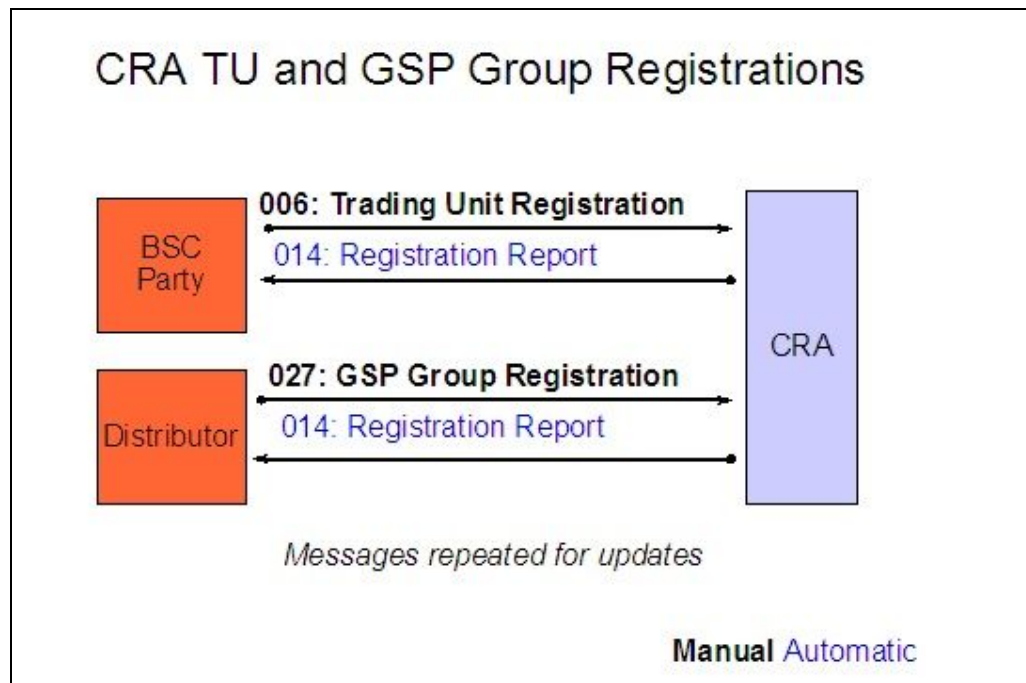


Manual Automatic

CRA BM Unit Registration



Manual Automatic



5.2 CDCA-I001: (input) Aggregation rules

| | | | |
|--|---------------------------------|---|--|
| Interface ID: CDCA-I001 | Source: BSC Party | Title: Receive aggregation rules | BSC reference: CDCA SD 4.1, 22.2, A CDCA BPM 3.5, 4.17, CP753, CP756 |
| Mechanism: Manual, by email, letter or fax | Frequency: On demand. | Volumes: 50 per month | |
| Interface Requirement: | | | |
| <p>The CDCA receives, from the BSC Party, Aggregation Rules for each of the following:</p> <ul style="list-style-type: none">• BM Unit;• Grid Supply Point;• Inter-GSP-Group Connection;• GSP Group;• Interconnector. <p>The flow will include an indication whether the aggregation rules are provided as part of a transfer from SMRS, in which case there are initially only validated. Data entry only occurs once the transfer coordinator has confirmed the effective dates of the transfer.</p> <p>Other information, as may be required, to support the Aggregation Rules. This may include, but shall not be limited to the following:-</p> <ul style="list-style-type: none">network diagrams;NGESO. connection agreement;installation documentation; <p>The lowest level of measurement value referred to by Aggregation Rules is the Metering Subsystem Quantity. Each Quantity represents one of the four possible quantities that can be measured by physical meters for each single energy flow (e.g. Active Import, Active Export, Reactive Import, Reactive Export), as referenced by the Metering Subsystem. A Metering Subsystem is a virtual entity consisting of the complete set of registers within a single Metering System which measure a single unique energy flow. Metering Subsystem Quantity Id is a text string consisting of the</p> | | | |

Metering System Id followed by the Subsystem Id followed by the Measurement Quantity. Here Subsystem Id is an identifier unique within the Metering System and Measurement Quantity is 'AE', 'AI', 'RE' or 'RI'. e.g. a valid Metering Subsystem Id Quantity Id within Metering System '1234' would be '1234SUB1AE'.

Aggregation rules are constructed from unary or binary triplets..

Binary rules are specified as triplets (identifier A, identifier B, operator), where:

identifier A or *B* specifies the aggregated entity (either Metering Subsystem Quantity, BM Unit, GSP, Interconnector, Inter-GSP-Group Connection, or another suitable triplet)
operator is one of (=, +, -, *, /)

Rules for BM Units, GSPs, Interconnectors and Inter-GSP-Group Connections, can only be made up of Metering Subsystem Quantity aggregations.

Rules for GSP Groups can only be made up of Metering Subsystem Quantity, BM Unit, GSP, Interconnector, or Inter-GSP-Group Connection aggregations.

Valid binary rules include:

(GSP ID, Metering Subsystem Quantity Id, operator)
 (BM Unit ID, Metering Subsystem Quantity Id, operator)
 (Interconnector ID, Metering Subsystem Quantity Id, operator)
 (Inter-GSP-Group Connection, Metering Subsystem Quantity Id, operator)
 (GSP Group ID, Metering Subsystem Quantity Id, operator)
 (GSP Group ID, GSP ID, operator)
 (GSP Group ID, BM Unit ID, operator)
 (GSP Group ID, Interconnector ID, operator)
 (GSP Group ID, Inter-GSP-Group Connection, operator)

Unary rules are specified as triplets, allowing constant transforms to be applied to meter readings.

Unary rules are specified as triplets (identifier, operator, argument), where:

identifier specifies the aggregated entity (Metering Subsystem Quantity, BM Unit, GSP, Interconnector or Inter-GSP-Group Connection)

operator is one of (=, +, -, *, /)

argument is the numeric scaling to apply. This can either be an explicit numeric factor (eg for slugging), or may be a scaling category, eg "LLF", which means that the Line Loss Factor applicable given the Settlement Date and Period of the meter reading must be applied during aggregation.

This interface covers addition, modification and deletion of Aggregation Rules. Aggregation rules will have effective dates which will be in clock time and may be retrospective.

Physical Interface Details:

5.3 CDCA-I003: (input) Meter technical data

| | | | |
|---|-----------------------------------|---|--|
| Interface ID: CDCA-I003 | Source: MOA, Registrant | Title: Receive meter technical data | BSC reference: CDCA SD 5 BPM 4.20, CP619, CP751, CP753, CP756, CP1201 |
| Mechanism: Manual, by email, letter or fax | Frequency: On demand. | Volumes: 50 per month | |
| Interface Requirement: | | | |
| The CDCA receives records of Metering Equipment Technical Details (including passwords where appropriate) associated with each Metering System, associated data collector outstation and communications facility applicable to that Metering System, as received from the relevant MOA or Registrant. The details will have effective dates which may be retrospective. | | | |
| This data consists of the following: | | | |
| <u>Metering System Details</u> Metering System Identifier Effective from Settlement Date | | | |

Distribution Business Id
Energisation Status
Energisation Status Effective from date
Energisation Status Effective to date
Metering System Contact Name
Metering System Contact Telephone Number
Metering System Contact Fax Number
Metering System Address Line 1
Metering System Address Line 2
Metering System Address Line 3
Metering System Address Line 4
Metering System Address Line 5
Metering System Address Line 6
Metering System Address Line 7
Metering System Address Line 8
Metering System Address Line 9
Metering System Postcode
Metering System Latitude
Metering System Longitude
Meter Equipment/Service Location
Dispensation Reference;
Dispensation Effective From Date;
Dispensation Effective To Date;
Reason for Dispensation.
Transfer flag (indicates this is a transfer from SMRS)

Outstation Details

Outstation Id
Outstation Type
Outstation Serial Number
Outstation Number of Channels
Outstation Number of Dials
Outstation PIN
Outstation Password A
Outstation Password B
Outstation Password C
Communications Address
Baud Rate
Previous Metering System Identifier
Previous Outstation Id

Outstation Channel

Outstation Id
Outstation Channel Number
Meter Serial Number
Meter Register Id
Outstation Channel Precedence (Primary, Secondary, Tertiary etc)
Pulse Multiplier
Outstation Channel Multiplier
Minimum MWh Value
Maximum MWh Value

Physical Meter Details

Meter Serial Number
Manufacturers Make & Type
Meter Current Rating
Meter Code of Practice
VT Ratio
CT Ratio
System Voltage
Number of Phases

Meter Register Details

Meter Register Id
Meter Register Multiplier
Measurement Quantity Id

| |
|---|
| <p>Metering Subsystem Id (for Main channels only) Number of Register Digits Associated Meter Id (for Check channels pointing to a Main) Associated Meter Register Id (for Check channels pointing to a Main)</p> <p>Metering Subsystem Id is an identifier associated with Main channels, for the purpose of referencing filtered measurement quantities within aggregation rules supplied by a BSC Party via CDCA-I001.</p> <p>Other data required by CDCA may include schematics and network diagrams from MOAs or Registrants in order to support validation of meter technical data.</p> |
| Physical Interface Details: |
| |

5.4 CDCA-I004: (output) Notify New Meter Protocol

| | | | |
|---|----------------------------------|--|--|
| Interface ID: CDCA-I004 | User: MOA | Title: Notify New Meter Protocol | BSC reference: CDCA SD 6.1-4 |
| Mechanism: Manual | Frequency: As required | Volumes: One or two per year | |
| Interface Requirement: | | | |
| The CDCA will inform all MOAs registered with the CRA of any newly approved protocol within seven days of approval; | | | |
| The data will include protocol name effective from date | | | |
| Physical Interface Details: | | | |
| | | | |

5.5 CDCA-I005: (input) Load New Meter Protocol

| | | | |
|--|---|---|---|
| Interface ID: CDCA-I005 | Source: MOA or Protocol Provider | Title: Load New Meter Protocol | BSC reference: CDCA SD 6.1-4, CP756 |
| Mechanism: Manual, by email, letter or fax | Frequency: | Volumes: One or two per year | |
| Interface Requirement: | | | |
| <p>The CDCA receives notifications of newly approved protocols from an MOA or other Protocol Provider, so that the protocol can be loaded onto its data collection systems, such that data can be collected from the meter.</p> <p>Details of the interface depend on the data capture device used. This is likely to be MV-90.</p> <p>The CDCA shall be responsible for procuring whatever translation interface modules or other device drivers necessary to allow the data capture device to remotely interrogate the metering equipment.</p> | | | |
| Physical Interface Details: | | | |
| A flow description is not provided for this interface, as different protocols will be provided. | | | |

5.6 CDCA-I006: (output) Meter Data for Proving Test

| | | | |
|---|----------------------------------|--|--------------------------------------|
| Interface ID: CDCA-I006 | User: MOA | Title: Meter Data for Proving Test | BSC reference: CDCA SD 7.2 |
| Mechanism: Manual | Frequency: As required | Volumes: Low | |
| Interface Requirement: | | | |
| In the process of proving tests for meter data collection, the CDCA transfers the test data received to the relevant MOA responsible for that Metering System for validation of accuracy. | | | |
| The data content will be a subset of CDCA-I008 | | | |
| Physical Interface Details: | | | |
| | | | |

5.7 CDCA-I007: (output) Proving Test Report/Exceptions

| | | | |
|--|----------------------------------|--|--------------------------------------|
| Interface ID: CDCA-I007 | User: MOA, BSC Party | Title: Proving Test Report/Exceptions | BSC reference: CDCA SD 7.6 |
| Mechanism: Manual | Frequency: As required | Volumes: Low | |
| Interface Requirement: | | | |
| In the process of proving tests for meter data collection, the CDCA reports any proving, validation and communications errors associated with any Metering System to the relevant MOA. and a duplicate report to the registrant BSC Party. | | | |
| Physical Interface Details: | | | |
| | | | |

5.8 CDCA-I008: (input) Obtain metered data from metering systems

| | | | |
|---|-----------------------------------|--|--|
| Interface ID: CDCA-I008 | Source: Physical meters | Title: Obtain metered data from metering systems | BSC reference: CDCA SD 8.1- 8.4, 8.7 |
| Mechanism: Meter System interface | Frequency: Daily | Volumes: 1100 - 5000 per day | |
| Interface Requirement: | | | |
| The CDCA collects meter period data remotely over a communications link, via a data capture device (MV-90). | | | |
| For each registered meter the CDCA shall collect and record meter period data as follows: | | | |
| a). Export Active Energy; | | | |
| b). Import Active Energy; | | | |
| c). Export Reactive Energy; and | | | |
| d). Import Reactive Energy; | | | |
| The CDCA shall collect meter period data relating all Main and Check meters, and/or the corresponding data collector outstation registers, where installed and operational, and which are used for settlement purposes. | | | |

The CDCA shall record and store all meter period data collected from Metering Systems. The data items recorded and stored shall include, but not be limited to the following:-

- Date and Time of Reading
- Metering System Identifier
- Settlement Date
- Outstation Id
- Channel Number
- Measurement Quantity (Active Import , Active Export, Reactive Import, or Reactive Export)
- Main/Check Indicator
- Settlement Period (46, 48 or 50 occurrences)
- Meter Reading Volume
- Meter Reading Status

Meter Reading Status can be one of:

- A - Valid meter data
- B - Invalid meter data
- C - Unavailable meter data

Note that there may be more than one Check channel for the same Main, for a given Measurement Quantity.

This flow includes data collection from all metering systems registered with the CRA, including those associated with both External Interconnectors (points of connection between transmission networks) and Internal Interconnectors (points of connection between distribution networks).

Physical Interface Details:

No physical structure is defined as protocols vary

5.9 CDCA-I009: (input) Meter Period Data Collected via Site Visit

| | | | |
|---|--|---|---|
| Interface ID: CDCA-I009 | Source: Hand Held Device/Data Capture Device (MV-90) | Title: Meter Period Data Collected via Site Visit | BSC reference: CDCA SD 8.5, CP756 |
| Mechanism: Manual, by email, letter or fax | Frequency: On demand. | Volumes: Low | |
| Interface Requirement: | | | |
| The CDCA shall make provisions to collect the meter period data manually, by visit to site, where collection of meter period data via a communication link is not possible. | | | |
| Meter data will be collected manually using a Hand Held Device/Data Capture Device (MV-90), and the information collected will then be loaded automatically into CDCA. | | | |
| The CDCA shall manually collect meter period data relating to all Main and Check meters, and/or the corresponding data collector outstation registers, where installed and operational, and which are used for settlement purposes. | | | |
| The data items recorded and stored shall include, but not be limited to the following:- | | | |
| Metering System Identifier | | | |
| Settlement Date | | | |
| Outstation Id | | | |
| Date and time of Reading | | | |
| Channel Number | | | |
| Measurement Quantity (Active Import , Active Export, Reactive Import, or Reactive Export) | | | |
| Settlement Period (46, 48 or 50 occurrences) | | | |
| Meter Reading Volume | | | |
| Meter Reading Status | | | |

| |
|---|
| <p>Meter Reading Status can be one of:</p> <p>A - Valid meter data</p> <p>B - Invalid meter data</p> <p>C - Unavailable meter data</p> <p>Note that there may be more than one Check channel for the same Main, for a given Measurement Quantity.</p> |
| Physical Interface Details: |
| No physical structure is defined as protocols vary |

5.10 CDCA-I010: (output) Exception report for missing and invalid meter period data

| | | | |
|---|--------------------------------|---|---|
| Interface ID: CDCA-I010 | User: BSC Party, MOA | Title: Exception report for missing and invalid meter period data | BSC reference: CDCA SD 8.6, 19.2 BPM 4.12, CP527 |
| Mechanism: Electronic data file transfer | Frequency: Daily. | Volumes: estimate 50 per day (1% of 5000) | |
| Interface Requirement: | | | |
| <p>When meter reading data is either not available for collection or the data is deemed to be invalid, the CDCA sends exception reports to:</p> <p style="margin-left: 40px;">The Responsible Party for the Metering System</p> <p style="margin-left: 40px;">The MOA operating the Metering System</p> <p>For each exception the report will include:</p> <p style="margin-left: 20px;">BSC Party Identifier</p> <p style="margin-left: 40px;">Metering System Identifier</p> <p style="margin-left: 60px;">Settlement Date</p> <p style="margin-left: 60px;">Outstation Id</p> <p style="margin-left: 80px;">Channel Number</p> <p style="margin-left: 80px;">Measurement Quantity (Active Import , Active Export, Reactive Import, or Reactive Export)</p> <p style="margin-left: 80px;">Main/Check Indicator</p> <p style="margin-left: 100px;">Settlement Period (46, 48 or 50 occurrences)</p> <p style="margin-left: 120px;">Meter Reading Volume</p> <p style="margin-left: 120px;">Meter Reading Status</p> <p style="margin-left: 140px;">Exception Description related to validation rule</p> <p>Meter Reading Status can be one of:</p> <p>A - Valid meter data</p> <p>B - Invalid meter data</p> <p>C - Unavailable meter data</p> | | | |
| Physical Interface Details: | | | |
| | | | |

5.11 CDCA-I011: (input) Dial Readings from meter, for MAR

| | | | |
|--|--|--|--|
| Interface ID: CDCA-I011 | Source: Hand Held Device/Data Capture Device (MV-90) | Title: Dial Readings from meter, for MAR | BSC reference: CDCA SD 12.2 CDCA BPM 4.1, CP756 CP1153 |
| Mechanism: Manual, by email, letter or fax | Frequency: As Required | Volumes: 1100 - 5000 metering systems | |
| Interface Requirement: | | | |
| The CDCA shall receive meter readings for MAR | | | |
| Meter data will be collected manually using a Hand Held Device/Data Capture Device (MV-90), and the information collected will then be loaded automatically into CDCA. The information collected will include: | | | |
| Metering System Identifier | | | |
| Settlement Date | | | |
| Outstation Id | | | |
| Date and time of Reading | | | |
| Channel Number | | | |
| Meter Serial Number | | | |
| Measurement Quantity (Active Import or Active Export only) | | | |
| Dial Reading | | | |
| Physical Interface Details: | | | |
| No physical structure is defined as protocols vary | | | |

5.12 CDCA-I012: (output) Report Raw meter Data

| | | | |
|--|---|--|---|
| Interface ID: CDCA-I012 | User: BSC Party, Distribution Business, NETSO | Title: Report Raw meter Data | BSC reference: CDCA SD 19.1 CDCA BPM 4.21, CP841 |
| Mechanism: Electronic data file transfer | Frequency: Daily | Volumes: up to 240000 period readings to each agent (5000 * 48) | |
| Interface Requirement: | | | |
| The CDCA provides the relevant BSC Party(s), including the Distribution Business, and the NETSO, with a Metering System data collection report relating to the raw meter period data collected from each meter or associated outstation. | | | |
| The readings will not include any estimated data. All readings reported will not be line loss adjusted. The report will report data in clock time. | | | |
| The data included, for each BSC Party will consist of those Metering Systems for which the BSC Party is the Responsible Party, and will consist of: | | | |
| BSC Party Identifier | | | |
| Metering System Identifier | | | |
| Settlement Date | | | |
| Outstation Id | | | |
| Channel Number | | | |
| Measurement Quantity (Active Import , Active Export, Reactive Import, or Reactive Export) | | | |
| Main/Check Indicator | | | |
| Settlement Period (46, 48 or 50 occurrences) | | | |
| Meter Reading Volume | | | |
| Meter Reading Status | | | |

| |
|---|
| <p>Meter Reading Status can be one of:</p> <p>A - Valid meter data</p> <p>B - Invalid meter data</p> <p>C - Unavailable meter data</p> <p>D – Substituted from secondary outstation meter data</p> <p>Note that there may be more than one Check channel for the same Main, for a given Measurement Quantity.</p> <p>This report is also sent to the System Operators, covering all metering systems.</p> |
| Physical Interface Details: |
| |

5.13 CDCA-I013: (input) Response to Estimated data

| | | | |
|---|-----------------------------|---|---|
| Interface ID: CDCA-I013 | Source: BSC Party | Title: Response to Estimated data | BSC reference: CDCA SD 10.8 CDCA BPM 4.22? CP566, CP756 |
| Mechanism: Manual, by email, letter or fax | Frequency: Daily | Volumes: estimate 50 per day (1% of 5000) | |
| Interface Requirement: | | | |
| BSC Parties will respond to CDCA-I037 'Estimated Data Notification' messages, indicating their agreement to an estimate made when meter readings are unavailable. | | | |
| The flow contains at minimum: | | | |
| Metering System Identifier Settlement Date Outstation Id Channel Number Measurement Quantity (Active Import , Active Export) Settlement Period (46, 48 or 50 occurrences) Agreement Flag (A/P) Estimated Meter Reading Volume (Agreed estimate or Proposed value for estimate) Basis for proposed value | | | |
| Physical Interface Details: | | | |
| | | | |

5.14 CDCA-I014: (output) Estimated Data Report

| | | | |
|---|--|---|--|
| Interface ID: CDCA-I014 | User: BSC Party, MOA, BSCCo Ltd, NETSO | Title: Estimated Data Report | BSC reference: CDCA SD 10.7, 10.9, CP751, CP841, CP1245 |
| Mechanism: Electronic data file transfer | Frequency: As required | Volumes: estimate 50 per day (1% of 5000) | |
| Interface Requirement: | | | |
| The estimated data report contains all estimate notifications issued by CDCA in a given period. | | | |
| An estimated data report is sent to: | | | |
| 1. BSCCo Ltd (on request) - data for all metering systems | | | |

2. MOA (Daily) - data for metering systems operated by the MOA
3. BSC Party (Daily) - data for metering systems for which the party is the responsible party.
4. the host Distribution business or the NETSO , depending who has registered the metering system (Daily).

This report will be run at the end of the working day to report estimates carried out on that day.

The information provided is as follows for each Metering System included in the report:

Total Volume Estimated in Report

BSC Party Identifier

Metering System Identifier

Settlement Date

Outstation Id

Channel Number

Meter Serial Number

Measurement Quantity (Active Import , Active Export)

Settlement Period (46, 48 or 50 occurrences)

Original Meter Reading Volume (if available)

Estimated Meter Reading Volume

Estimation Method

Estimate Agreed Indicator (T/F)

Estimation method is an indicator of the method used for estimation:

- A - Generation: Main meter data missing or incorrect in Primary and Secondary Outstations, Check meter data available – copied from Primary Check
- D - Demand: Main meter data missing or incorrect, Check meter data available – copied from Primary Check
- E - Demand: Main meter data missing or incorrect, Check meter not fully functional, but Main meter or Check meter register advance available – profiled using Meter Reading Estimation Tool
- I - Demand: Main meter data missing or incorrect, Check meter not fully functional, Main meter and Check meter register advance NOT available – profiled using Trend
- J - Generation: Main meter data missing, or incorrect, in Primary Outstation, Secondary Outstation main meter data available – substituted from Secondary Main
- K - Generation: Main and Check meter data missing or incorrect in Primary and Secondary Outstations, data estimated to zero awaiting confirmation of generation
- L - Demand; Primary Main meter data missing, or incorrect, Secondary Outstation Main meter data available – substituted from Secondary Main
- M - Demand: Main meter data missing or incorrect, data copied from suitable settlement period(s)
- N - Validation Failure: Main meter data deemed correct
- U - Used parties own reading
- X - Used different estimation method

Physical Interface Details:

5.15 CDCA-I015: (input) Reporting metering system faults

| | | | |
|--|----------------------------------|---|---|
| Interface ID: CDCA-I015 | Source: MOA | Title: Reporting metering system faults. | BSC reference: CDCA SD 11.1-11.4 BPM , CP756 |
| Mechanism: Manual, by email, letter or fax | Frequency: As required | Volumes: estimate 10 per day (0.2% of 5000) | |
| Interface Requirement: | | | |
| The CDCA receives reports from the MOA in respect of Metering Equipment faults. This includes free format text which could be communicated by a letter, email, fax or phone call. | | | |
| Physical Interface Details: | | | |
| | | | |

5.16 CDCA-I017: (output) Meter Reading Schedule for MAR

| | | | |
|--|--------------------------------|--|--|
| Interface ID: CDCA-I017 | User: BSC Party, MOA | Title: Meter Reading Schedule for MAR | BSC reference: CDCA SD 12.1 BPM |
| Mechanism: Manual | Frequency: Annual | Volumes: One schedule for all metering systems | |
| Interface Requirement: | | | |
| The CDCA issues a Meter Reading Schedule for MAR for each metering system on an annual basis, at least three months ahead and forward it to the relevant BSC Parties trading at the metering system, and the MOA responsible for the maintenance of the metering system. | | | |
| The Schedule will contain, for each Metering System: | | | |
| BSC Party Metering System Id Metering System Location Details Planned date of Site Visit | | | |
| Physical Interface Details: | | | |
| No physical structure is defined for this flow | | | |

5.17 CDCA-I018: (output) MAR Reconciliation Report

| | | | |
|---|--|---|---|
| Interface ID: CDCA-I018 | User: BSC Party, MOA, BSCCo Ltd, Distribution Business | Title: MAR Reconciliation Report | BSC reference: CDCA SD 12.6, 19.2 CDCA BPM 4.2 CN116 CP1153 |
| Mechanism: Manual | Frequency: As Required | Volumes: 100 per working day based upon 5000 metering systems | |
| Interface Requirement: | | | |
| The results of each Meter Advance Reconciliation is provided to the relevant BSC Party(s) with a reconciliation report detailing the actual difference calculated for each active energy meter or associated outstation register. | | | |
| The MAR report is sent to the relevant BSC Party, the relevant MOA, and, if appropriate, any other parties such as the Distribution Business. It may also be sent to BSCCo Ltd for dispute resolution. | | | |

| |
|--|
| <p>The information, for each metering system, includes:</p> <p>Metering System Identifier Advance Period Start Date Advance Period End Date Original Energy volume reading for all relevant channels (MWh) (e.g. main, check, active, reactive etc.) MAR Energy volume reading for all relevant channels Percentage Variation BSCP Requirement Compliance Indicator (T/F) Import/Export Indicator (I/E)</p> <p>The Import/Export indicator indicates the direction of the energy flow: the Meter Volume is therefore unsigned.</p> |
| Physical Interface Details: |
| |

5.18 CDCA-I019: (output) MAR Remedial Action Report

| | | | |
|--|---|--|--|
| Interface ID: CDCA-I019 | User: BSC Party, MOA, BSCCo Ltd, Distribution Business | Title: MAR Remedial Action Report | BSC reference: CDCA SD 12.9 BPM 4.2 |
| Mechanism: Manual | Frequency: Ad hoc | Volumes: 2 per day based upon 2% of the 100 MARs undertaken each day. | |
| Interface Requirement: | | | |
| When the CDCA initiates remedial action to resolve a Meter Advance Reconciliation discrepancy, it notifies the interested parties of the remedial action(s) taken. The interested parties are the relevant BSC Party, the relevant MOA, and, if appropriate, any other parties such as the Distribution Business. It may also be sent to BSCCo Ltd for dispute resolution. | | | |
| Physical Interface Details: | | | |
| | | | |

5.19 CDCA-I021: (input) Notification of Metering Equipment Work

| | | | |
|---|------------------------------|---|---|
| Interface ID: CDCA-I021 | Source: MOA | Title: Notification of Metering Equipment Work | BSC reference: CDCA SD 13.5, CP756, CP1152 |
| Mechanism: Manual, by telephone | Frequency: Ad hoc. | Volumes: 50 per month | |
| Interface Requirement: | | | |
| The CDCA receives notifications of work on Metering Equipment from the relevant MOA by telephone. | | | |
| Physical Interface Details: | | | |
| | | | |

5.20 CDCA-I022: (input) Distribution Line Loss Factors

This interface is from BSCCo Ltd to CDCA and therefore is defined in Part 2 of the IDD, which covers interfaces that do not affect BSC Parties or their agents. However a copy of the definition is included here for information. The BSC Parties have sent the Distribution Line Loss Factors to the BSCCo Ltd for validation, then the BSCCo Ltd sends them on to CDCA via this interface. This interface is not included in the summary tables in section 3, and the physical definition is not included in the spreadsheet.

| | | | |
|---|-------------------------------|---|---|
| Interface ID: CDCA-I022 | Source: BSCCo Ltd | Title: Distribution Line Loss Factors | BSC reference: CDCA SD 15.1 CDCA BPM 4.5 (?) |
| Mechanism: Electronic data file transfer | Frequency: Annually | Volumes: 17568000 factors (1000 metering systems * 366 * 48) | |
| Interface Requirement: | | | |
| The CDCA receives Line Loss Factors relating to a Metering System from BSCCo Ltd. Metering System Identifier Settlement Date Settlement Period Line loss Factor | | | |
| Physical Interface Details: | | | |

5.21 CDCA-I023: (output) Missing Line Loss Factors

This interface is from BSCCo Ltd to CDCA and therefore is defined in Part 2 of the IDD, which covers interfaces that do not affect BSC Parties or their agents. However a copy of the definition is included here for information. It is not included in the summary tables in section 3,

| | | | |
|--|-------------------------------|---|--|
| Interface ID: CDCA-I023 | User: BSCCo Ltd | Title: Missing Line Loss Factors | BSC reference: CDCA SD 15.2, CP527 |
| Mechanism: Manual | Frequency: Annually | Volumes: 17520000 factors (1000 metering systems * 365 * 48) | |
| Interface Requirement: | | | |
| The CDCA shall validate such Line Loss Factors received from the BSCCo Ltd. Any missing or invalid factor values will be reported back to the BSCCo Ltd. | | | |
| Attributes are likely to include: | | | |
| File Reference for Line Loss Factors | | | |
| Date LLF File Received | | | |
| File Acceptance Status (all accepted, partially accepted, file rejected) | | | |
| Date of Acceptance Status | | | |
| File Rejection Reason (if File Acceptance Status = file rejected) | | | |
| Details of any individual exceptions: | | | |
| Metering System Identifier (for site specific Line Losses) | | | |
| Settlement Date | | | |
| Time Period | | | |

| |
|--|
| Line Loss Factor Reason for rejection |
| Physical Interface Details: |
| |

5.22 CDCA-I025: (output) Aggregation Rules Exceptions

| | | | |
|---|---------------------------------|--|---|
| Interface ID: CDCA-I025 | User: BSC Party | Title: Aggregation Rules Exceptions | BSC reference: CDCA SD 19.2, 22.3 BPM 4.12 |
| Mechanism: Manual | Frequency: On demand. | Volumes: Low | |
| Interface Requirement: | | | |
| <p>The CDCA validates all Aggregation Rules received from the relevant BSC Party, and identifies metering systems registered with the CRA for which no aggregation rules exist.</p> <p>Missing or invalid aggregation rules will be reported to the relevant BSC Party.</p> | | | |
| Physical Interface Details: | | | |
| | | | |

5.23 CDCA-I026: (output) Aggregated Meter Volume Exceptions

| | | | |
|--|-----------------------------|--|---|
| Interface ID: CDCA-I026 | User: BSC Party | Title: Aggregated Meter Volume Exceptions | BSC reference: CDCA SD 19.2 BPM 4.12 |
| Mechanism: Manual | Frequency: Ad hoc | Volumes: Low | |
| Interface Requirement: | | | |
| <p>When an exception occurs exceptions during aggregation process, the CDCA sends an exception report to the relevant BSC Party.</p> <p>For each exception the report will include:</p> <p>Settlement Date Settlement Period Exception Type Item being Aggregated Component contributing to Aggregation Factor value contributing to Aggregation Exception Description</p> | | | |
| Physical Interface Details: | | | |
| | | | |

5.24 CDCA-I029: (output) Aggregated GSP Group Take Volumes

| | | | |
|---|--|--|---|
| Interface ID: CDCA-I029 | User: BSC Party, including the Distribution Business; NETSO. | Title: Aggregated GSP Group Take Volumes | BSC reference: CDCA SD 22, 23.1, A, B CDCA BPM 4.4 BPM IRR CDCA2, CP559 |
| Mechanism: Electronic data file transfer | Frequency: Daily per aggregation run | Volumes: | |
| Interface Requirement: | | | |
| Reports on aggregated meter flow volumes for the GSP Groups are sent to BSC Parties, as follows for each GSP Group: GSP Group Id Settlement Date Settlement Run Type CDCA Run Number Date of aggregation Settlement Period Estimate Indicator Import/Export Indicator Meter Volume These reports are distributed to the following BSC Parties: To the distribution business associated with the GSP group To all BSC Parties which are lead parties for the BM Units within the GSP group and to the NETSO. | | | |
| Physical Interface Details: | | | |
| | | | |

5.25 CDCA-I030: (output) Meter Period Data for Distribution Area

| | | | |
|---|--|---|--|
| Interface ID: CDCA-I030 | User: Distribution Business | Title: Meter Period Data for Distribution Area | BSC reference: CDCA SD 19.4 BPM IRR CDCA8 CR_991027_06b, CP559 |
| Mechanism: Electronic data file transfer | Frequency: Daily | Volumes: Several hundred Metering Systems | |
| Interface Requirement: CDCA will forward meter period data for all Grid Supply Points Metering Systems, Interconnectors and Inter-GSP-Group Connections, to the relevant host distribution business(es), where required. A report will be sent to the Distribution Business associated with each GSP Group which shall include the following data: GSP Group Id Settlement Date Settlement Run Type CDCA Run Number Date of aggregation GSP Id Settlement Period Estimate Indicator (T/F) Meter Volume Import/Export indicator (I/E) | | | |

| |
|--|
| Interconnector Id Settlement Period Estimate Indicator (T/F) Meter Volume Import/Export indicator (I/E) Inter-GSP-Group Connection Id Settlement Period Estimate Indicator (T/F) Meter Volume Import/Export indicator (I/E) |
| <p>The file can be provided on request to a BSC Party which is active within the relevant GSP Group.</p> <p>The Import/Export indicator indicates the direction of the energy flow: the Meter Volume is therefore unsigned.</p> |
| Physical Interface Details: |
| |

5.26 CDCA-I033: File Receipt Acknowledgement

See Section 2.2.7.

5.27 CDCA-I037: (output) Estimated Data Notification

| | | | |
|---|--------------------------------|---|--|
| Interface ID: CDCA-I037 | User: BSC Party, MOA | Title: Estimated Data Notification | BSC reference: CDCA SD 10.8 CDCA BPM 4.22? , CP751, CP841 |
| Mechanism: Manual | Frequency: Daily | Volumes: estimate 50 per day (1% of 5000) | |
| Interface Requirement: | | | |
| <p>This flow notifies the MOA and BSC Party of an estimate made when a meter readings is unavailable or invalid.</p> <p>The information provided is as follows:</p> <p>BSC Party Identifier</p> <p> Metering System Identifier</p> <p> Settlement Date</p> <p> Outstation Id</p> <p> Channel Number</p> <p> Meter Serial Number</p> <p> Measurement Quantity (Active Import , Active Export)</p> <p> Settlement Period (46, 48 or 50 occurrences)</p> <p> Original Meter Reading Volume (if available)</p> <p> Estimated Meter Reading Volume</p> <p> Estimation Method</p> <p>Estimation method is an indicator of the method used for estimation:</p> <p>A - Generation: Main meter data missing or incorrect in Primary and Secondary Outstations, Check meter data available – copied from Primary Check</p> <p>D - Demand: Main meter data missing or incorrect, Check meter data available – copied from Primary Check</p> <p>E - Demand: Main meter data missing or incorrect, Check meter not fully functional, but Main meter or Check meter register advance available – profiled using Meter Reading Estimation Tool</p> <p>I - Demand: Main meter data missing or incorrect, Check meter not fully functional, Main meter and Check meter register advance NOT available – profiled using Trend</p> | | | |

| |
|--|
| <p>K - Generation: Main and Check meter data missing or incorrect in Primary and Secondary Outstations, data estimated to zero awaiting confirmation of generation</p> <p>M - Demand: Main meter data missing or incorrect, data copied from suitable settlement period(s)</p> <p>N - Validation Failure: Main meter data deemed correct</p> <p>U - Used parties own reading</p> <p>X - Used different estimation method</p> <p>If Estimation method = X, the method used will be described.</p> <p>Method codes J and L (see CDCA-I014) refer specifically to substitution, rather than estimation, and are therefore not reported via this flow.</p> |
| Physical Interface Details: |
| |

5.28 CDCA-I038: (output) Reporting metering system faults

| | | | |
|---|----------------------------------|---|---|
| Interface ID: CDCA-I038 | User: MOA, BSC Party | Title: Reporting metering system faults. | BSC reference: CDCA SD 11.1-11.4 BPM |
| Mechanism: Manual | Frequency: As required | Volumes: estimate 10 per day (0.2% of 5000) | |
| Interface Requirement: | | | |
| The CDCA reports to the MOA and the BSC party who is responsible for the meter (the Registrant) all suspected metering faults detected while performing its responsibilities. This will include details of the fault. Note that the faults reported may relate to exception reports for missing or invalid meter period data (CDCA-I010). | | | |
| Physical Interface Details: | | | |
| | | | |

5.29 CDCA-I041: (output) Interconnector Aggregation Report

| | | | |
|---|--|---|--|
| Interface ID: CDCA-I041 | User: IA | Title: Interconnector Aggregation Report | BSC reference: CDCA SD 19.3, B CDCA BPM 4.4 BPM IRR CDCA5, CP559 |
| Mechanism: Electronic data file transfer | Frequency: Daily, per aggregation run | Volumes: Initially 96 (2 interconnectors * 48 readings). The number of interconnectors is expected to increase to 5 or 6. | |
| Interface Requirement: A report on aggregated meter flow volumes for each Interconnector is sent to the BSC party who is the Interconnector Administrator associated with the Interconnector. The following information is sent: Interconnector Id Settlement Date Settlement Run Type CDCA Run Number Date of aggregation Settlement Period Estimate Indicator (T/F) Meter Volume Import/Export indicator (I/E) | | | |

| |
|---|
| The Import/Export indicator indicates the direction of the energy flow: the Meter Volume is therefore unsigned. |
| Physical Interface Details: |
| |

5.30 CDCA-I042: (output) BM Unit Aggregation Report

| | | | |
|---|--|--|---|
| Interface ID: CDCA-I042 | User: BSC Party NETSO | Title: BM Unit Aggregation Report | BSC reference: CDCA SD 22, 23.1, A, B CDCA BPM 4.4 BPM IRR CDCA3, CP559 |
| Mechanism: Electronic data file transfer | Frequency: Daily, per aggregation run | Volumes: | |
| Interface Requirement: | | | |
| <p>A report on aggregated meter flow volumes for each BM Unit is sent to the BSC party who is the lead party for the BM Unit, and copied to the NETSO.</p> <p>The following information is sent:</p> <p>BM Unit Id Settlement Date Settlement Run Type CDCA Run Number Date of aggregation Settlement Period Estimate Indicator (T/F) Meter Volume Import/Export Indicator (I/E)</p> <p>The Import/Export indicator indicates the direction of the energy flow: the Meter Volume is therefore unsigned.</p> | | | |
| Physical Interface Details: | | | |

5.31 CDCA-I044: (input) Meter System Proving Validation

| | | | |
|--|-----------------------|---|---|
| Interface ID: CDCA-I044 | Source: MOA | Title: Meter System Proving Validation | BSC reference: CDCA SD 7.3, CP756 |
| Mechanism: Manual, by email, letter or fax | Frequency: | Volumes: | |
| Interface Requirement: | | | |
| The MOA will confirm that the data from meter system proving is valid. | | | |
| Physical Interface Details: | | | |
| | | | |

5.32 CDCA-I045: (input) Meter Data from routine work and Metering Faults

| | | | |
|--|---|--|---|
| Interface ID: CDCA-I045 | Source: MOA/Data Capture Device (MV-90) | Title: Meter Data from routine work and Metering Faults | BSC reference: CDCA SD 13.1- 13.7, CP756, P190 |
| Mechanism: Manual, by email, letter or fax | Frequency: | Volumes: | |
| Interface Requirement: | | | |
| Meter data will be collected manually during planned work by the MOA on site and by CDCA using a Data Capture Device (MV-90), and the information collected will then be loaded automatically into CDCA. | | | |
| This data shall include: | | | |
| Metering System Identifier | | | |
| Settlement Date | | | |
| Outstation Id | | | |
| Date and Time of Reading | | | |
| Channel Number | | | |
| Meter Serial Number | | | |
| Measurement Quantity (Active Import , Active Export, Reactive Import, or Reactive Export) | | | |
| Settlement Period (46, 48 or 50 occurrences) | | | |
| Meter Reading Volume | | | |
| Meter Reading Status | | | |
| Meter Reading Status can be one of: | | | |
| A - Valid meter data | | | |
| B - Invalid meter data | | | |
| C - Unavailable meter data | | | |
| Physical Interface Details: | | | |
| | | | |

5.33 CDCA-I046: (output) Site Visit Inspection Report

| | | | |
|---|--------------------------------|---|---|
| Interface ID: CDCA-I046 | User: MOA, BSC Party | Title: Site Visit Inspection Report | BSC reference: CDCA SD 13.1- 13.7, P190 |
| Mechanism: Manual | Frequency: Ad hoc | Volumes: 50 per month | |
| Interface Requirement: | | | |
| On completion of a site inspection, the CDCA shall provide the relevant MOA with a written report detailing the outcome of the site inspection including, but not limited to meter readings. A duplicate of this report shall be sent to the relevant BSC Party registrant. | | | |
| Physical Interface Details: | | | |
| | | | |

5.34 CDCA-I047: (output) Correspondence Receipt Acknowledgement

| | | | |
|---|---|---|---------------------------------------|
| Interface ID: CDCA-I047 | User: BSC Party, BSCCo Ltd | Title: Correspondence Receipt Acknowledgement | BSC reference: CDCA SD 20.3 |
| Mechanism: Manual | Frequency: As required | Volumes: One per incoming item of manual data | |
| Interface Requirement: | | | |
| CDCA will acknowledge receipt of manual data received from any BSC Party (including BSCCo Ltd). The following information will be sent to the BSC Party: Correspondence reference Date/Time of receipt | | | |
| Physical Interface Details: | | | |
| | | | |

5.35 CDCA-I048: (output) Report of Aggregation Rules

| | | | |
|---|--------------------------------|---|---|
| Interface ID: CDCA-I048 | User: BSC Party | Title: Report of Aggregation Rules | BSC reference: CDCA SD 4.6 BPM 3.2 |
| Mechanism: Manual | Frequency: On demand | Volumes: All rules for relevant BSC Party | |
| Interface Requirement: | | | |
| <p>The CDCA shall produce a physical copy of the aggregation rules to the BSC Party to ensure the correct recording of the aggregation rules. This shall be provided on demand and as confirmation of the process of loading the rules into the system.</p> <p>The information sent to the BSC Party will be similar to that included in CDCA-I001 and will include a report of the Aggregation Rule(s) for each of the following types of registrations for the BSC Party:</p> <ul style="list-style-type: none">• BM Unit;• Grid Supply Point;• Inter-GSP-Group Connections;• GSP Group;• Interconnector. | | | |
| Physical Interface Details: | | | |
| | | | |

5.36 CDCA-I051: (output) Report Meter Technical Details

| | | | |
|---|--|--|--|
| Interface ID: CDCA-I051 | User: BSC Party, MOA, Distribution Business, NETSO | Title: Report Meter Technical Details | BSC reference: CR 78a, CP751, CP1201 |
| Man/auto: Manual | Frequency: On Demand | Volumes: 50 per month | |
| Interface Requirement: | | | |
| <p>The CDCA shall report the Meter Technical Details (which are received from Meter Operator Agents or Registrants in flow CDCA-I003) to the MOA, Registrant, Distributor (where appropriate) and NETSO, as confirmation of the process of loading the details into the system. This report shall also be provided on demand.</p> <p>The information sent will be similar to that included in CDCA-I003, and will include the following:</p> <p><u>Metering System Details</u> Metering System Identifier Effective from Settlement Date Distribution Business Id Energisation Status Metering System Contact Name Metering System Contact Telephone Number Metering System Contact Fax Number Metering System Address Line 1 Metering System Address Line 2 Metering System Address Line 3 Metering System Address Line 4 Metering System Address Line 5 Metering System Address Line 6 Metering System Address Line 7 Metering System Address Line 8 Metering System Address Line 9 Metering System Postcode Metering System Latitude Metering System Longitude Meter Equipment/Service Location Dispensation Reference Dispensation Effective From Date Dispensation Effective To Date Reason for Dispensation</p> <p><u>Outstation Details</u> Outstation Id Outstation Type Outstation Serial Number Outstation Number of Channels Outstation Number of Dials Outstation PIN Outstation Password A Outstation Password B Outstation Password C Communications Address Baud Rate Previous Metering System Identifier Previous Outstation Id</p> <p><u>Outstation Channel</u> Outstation Id Outstation Channel Number Meter Serial Number Meter Register Id Outstation Channel Precedence (Primary, Secondary, tertiary etc.) Pulse Multiplier</p> | | | |

| |
|--|
| Outstation Channel Multiplier Min MWh Value Max MWh Value <u>Physical Meter Details</u> Meter Serial Number Manufacturers Make & Type Meter Current Rating Meter Code of Practice VT Ratio CT Ratio System Voltage Number of Phases <u>Meter Register Details</u> <u>Meter Serial Number</u> Meter Register Id (1, 2, 3, or 4) Meter Register Multiplier Measurement Quantity Id (AE, AI, RE, RI) Register type (Main, Check) Metering Subsystem Id (for Main channels only) Number of Register Digits Associated Meter Id (for Check channels pointing to a Main) Associated Meter Register Id (for Check channels pointing to a Main) |
| <p>Metering Subsystem Id is an identifier associated with Main channels, for the purpose of referencing filtered measurement quantities within aggregation rules supplied by a BSC Party via CDCA-I001.</p> |
| Physical Interface Details: |
| |

5.37 CDCA-I054:(output) Meter Status Report

| | | | |
|--|--|---|--------------------------------|
| Interface ID: CDCA-I054 | User: BSC Party MOA Distribution Business | Title: Meter Status Report. | BSC reference: CP511 |
| Mechanism: Electronic Data Transfer | Frequency: Daily, reporting on the previous Settlement Day | Volumes: Approximately 100 per day (2% of 5000) | |
| Interface Requirement: This data flow will be sent whenever a potential fault is identified with the metering equipment. The CDCA will send meter status reports to: The Responsible Party for the Metering System The MOA operating the Metering System The Distribution Business associated with the Metering System (if any) For each metering system where a fault is identified the report will include: <u>Settlement Date</u> Settlement Date <u>BSC Party</u> BSC Party Identifier <u>Metering System</u> Metering System Identifier | | | |

Meter Equipment Location

Missing Data (note 1)

Outstation ID

Number of days since data was last downloaded successfully from the outstation.

Alarms

Outstation ID

Channel (optional, omit if alarm applies to all channels)

Alarm Code

First Settlement Period of Alarm

Last Settlement Period of Alarm

Main/Check discrepancies over Settlement Day (note 2)

Outstation ID for Main Meter

Meter Serial Number for Main Meter

Meter Register ID for Main Meter

Channel Number for Main Meter

Outstation ID for Check Meter

Meter Serial Number for Check Meter

Meter Register ID for Check Meter

Channel Number for Check Meter

Metering Subsystem ID

Measurement Quantity

Difference (MWh)

Difference (% of main)

Primary/Secondary discrepancies (note 3)

Primary Outstation ID

Primary Channel Number

Secondary Outstation ID

Secondary Channel Number

Meter Serial Number

Meter Register ID

Metering Subsystem ID

Measurement Quantity

Period Data

Settlement Period

Discrepancy Value

Discrepancy, expressed as a percentage of primary

Data outside limits (note 4)

Outstation ID

Meter Serial Number

Meter Register ID

Channel Number

Metering Subsystem ID

Measurement Quantity

Minimum Threshold

Maximum Threshold

Period Data

Settlement Period

Value Recorded

Notes:

1. Count of contiguous Settlement Days up to and including the Day being reported on for which no data has been downloaded from any channel for any Settlement Period
2. Main/Check checks using data aggregated over the whole Settlement Day apply the same validation checks that are applied to individual Settlement Periods as defined in CDCA-F007. Note that data will be summed for all periods for which data is available (i.e. missing period data will default to 0)
3. Primary/Secondary checks are those applied in CDCA-F007

4. Data Limits checks are those applied in CDCA-F007

Physical Interface Details:

If there is nothing to report, a null report will not be issued

5.38 CDCA-I055: (input) Transfer from SMRS information

| | | | |
|--|---|---|--------------------------------|
| Interface ID: CDCA-I055 | User: Transfer Coordinator, BSC Party | Title: Transfer from SMRS information | BSC reference: CP753 |
| Mechanism: Manual | Frequency: On Demand | Volumes: low | |
| Interface Requirement: | | | |
| Where metering is transferred from SMRS into CDCA, the following information will be provided. | | | |
| Status (New, rejected, confirmed, confirmation request) Effective from date (if confirmed) Name of Registrant Address Contact for Transfer Telephone number Email address Participant ID Site name Site address | | | |
| <u>Transfer details</u> Circuit description Measurement quantity Metering System ID Metering Subsystem ID | | | |
| <u>Metering system details</u> NGC BMU identifiers BMU ID GSP reference CVA MOA | | | |
| Physical Interface Details: | | | |
| The flow will include a schematic diagram where appropriate | | | |
| | | | |

5.39 CDCA-I057: (input) Transfer to SMRS information

| | | | |
|---|---|--|--------------------------------|
| Interface ID: CDCA-I057 | User: Transfer Coordinator, BSC Party | Title: Transfer to SMRS information | BSC reference: CP753 |
| Mechanism: Manual | Frequency: On Demand | Volumes: low | |
| Interface Requirement: | | | |
| Where metering is transferred from CDCA into SMRS, the following information will be provided. | | | |
| Status (New, rejected, confirmed, confirmation request) Effective to date (if confirmed) Name of Registrant | | | |

| |
|--|
| Address Contact for Transfer Telephone number Email address Participant ID Site name Site address <u>Transfer details</u> Circuit description Measurement quantity Metering System ID Metering Subsystem ID <u>Metering system details</u> NGC BMU identifiers BMU ID GSP reference <u>CVA MOA Details</u> CVA MOA Contact Name Telephone Number Email address |
| Physical Interface Details: |
| The flow will include a schematic diagram where appropriate |

5.40 CDCA-I059: (output) Initial Meter Reading Report

| | | | |
|--|---------------------------------|--|--------------------------------|
| Interface ID: CDCA-I059 | User: BSC Party | Title: Initial Meter Reading Report | BSC reference: CP753 |
| Mechanism: Manual | Frequency: On Request | Volumes: low | |
| Interface Requirement: | | | |
| If requested by the old HHDC or by the new registrant following a transfer from SMRS <u>Meter Details</u> CVA MSID CVA Metering Subsystem ID Date/time of reading <u>Reading Details</u> Measurement Quantity Reading (MWh) | | | |
| Physical Interface Details: | | | |
| | | | |

5.41 CDCA-I060: (input) SVA Party Agent Details

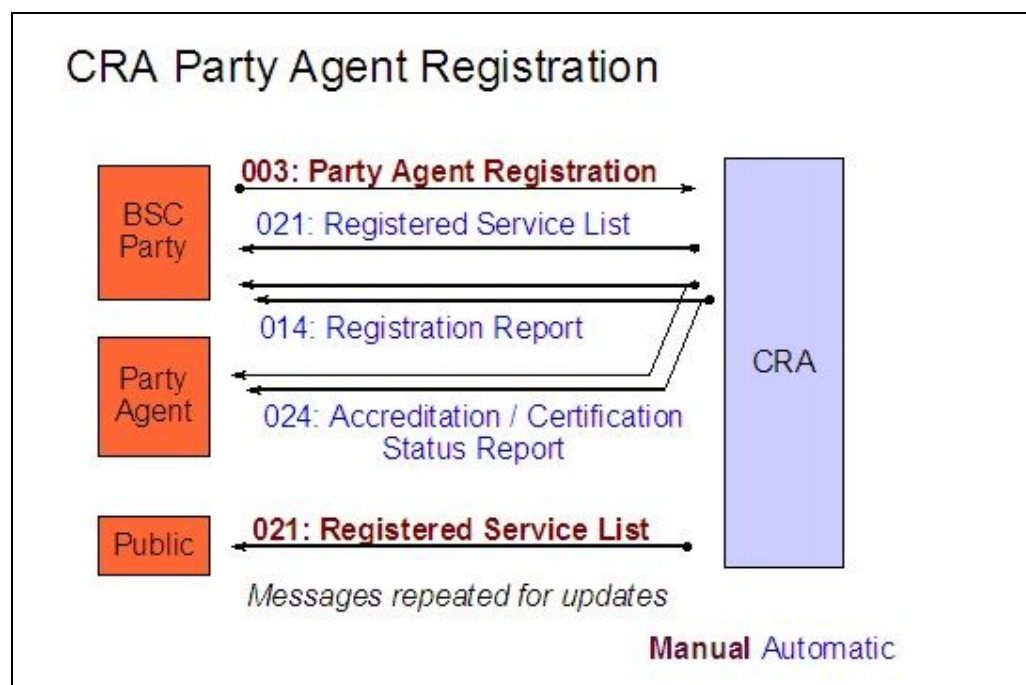
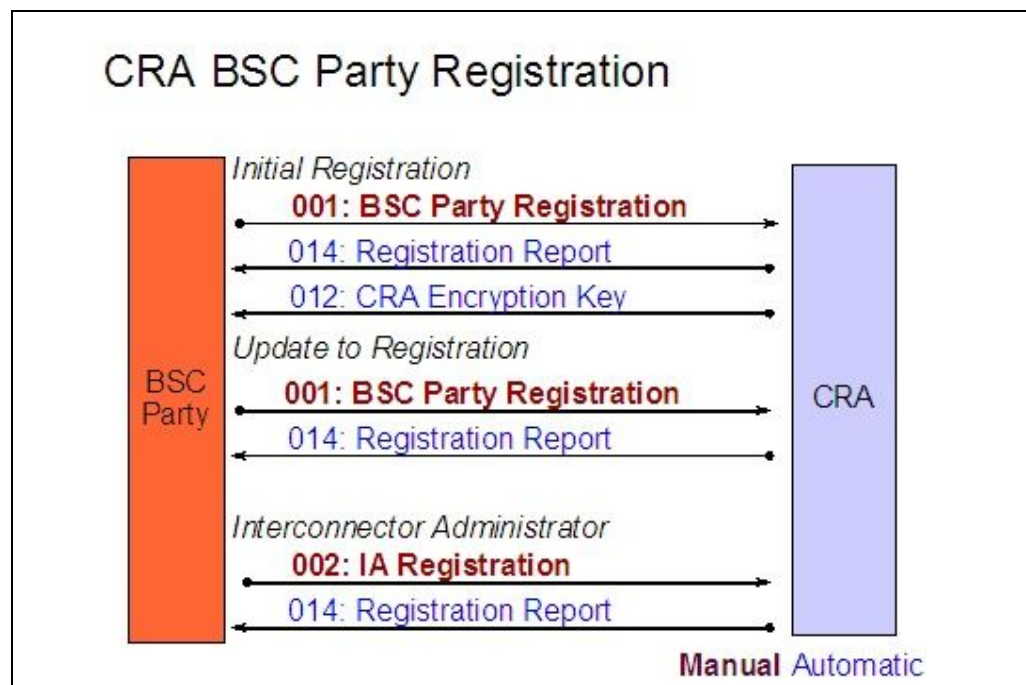
| | | | |
|---|---|---|--------------------------------|
| Interface ID: CDCA-I060 | Source: SVA Registrant, CVA Registrant | Title: SVA Party Agent Details | BSC reference: CP753 |
| Mechanism: Manual | Frequency: On Demand | Volumes: Low | |
| Interface Requirement: | | | |
| <div>1. Where an Outstation is shared between CDCA (Export) and SMRA (Import), the CDCA will receive from the SVA registrant details of the SVA Half Hourly Data Collector</div> <div>2. The CVA (CRA) registrant of the Metering System will submit a request to allow the SVA HHDC to access the Import metering system</div> | | | |
| Physical Interface Details: | | | |
| | | | |

5.42 CDCA-I067: (input) Disconnected BM Units

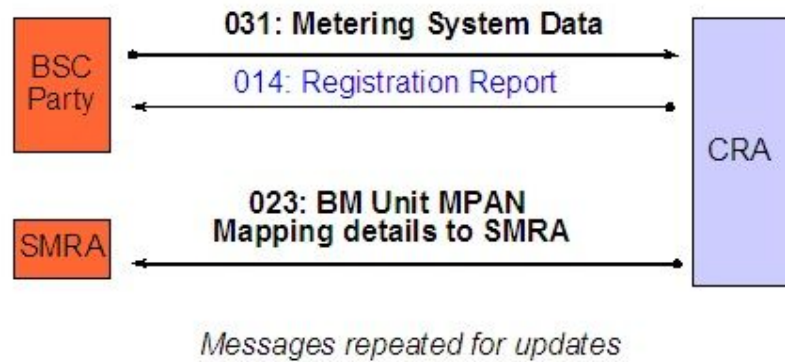
| | | | |
|--|--|---|-------------------------------|
| Interface ID: CDCA-I067 | Source: SO, Distribution Business | Title: Disconnected CVA BM Units | BSC reference: P305 |
| Mechanism: Manual | Frequency: As required | Volumes: low | |
| Interface Requirement: | | | |
| <p>Where a Demand Control Event occurs, the CDCA will receive details of any CVA BM Units disconnected as a result of the Event from:</p> <ul style="list-style-type: none">a. The NETSO, in the case of directly-connected CVA BM Units; and/orb. Distribution Businesses, in the case of embedded CVA BM Units. <p>The information received shall include:</p> <p style="padding-left: 40px;">BM Unit IDs subject to Demand Disconnection as part of a Demand Control Event Demand Disconnection Start Date and Time Demand Disconnection End Date and Time</p> <p>Note: This interface is not defined in the IDD spreadsheet that accompanies this document. This is because the communication of Disconnected BM Units is a manual flow. The NETSO and DSOs should email the details described above to the CDCA.</p> | | | |
| Physical Interface Details: | | | |

6. CRA External Inputs and Outputs

6.1 CRA Flow Overview

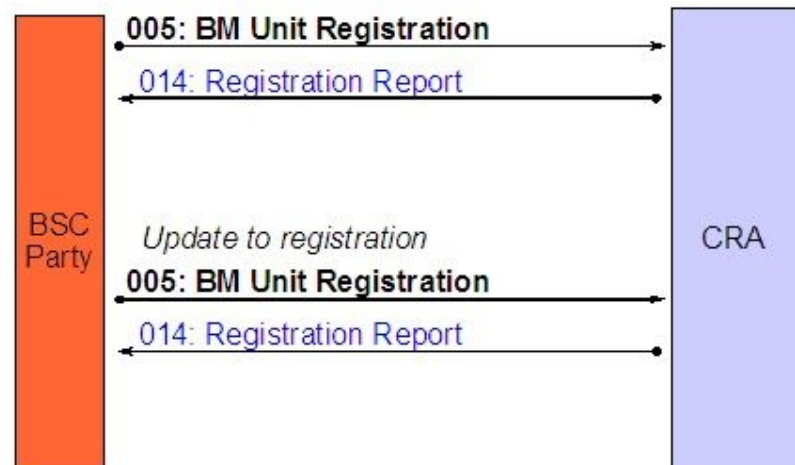


CRA Meter Registration

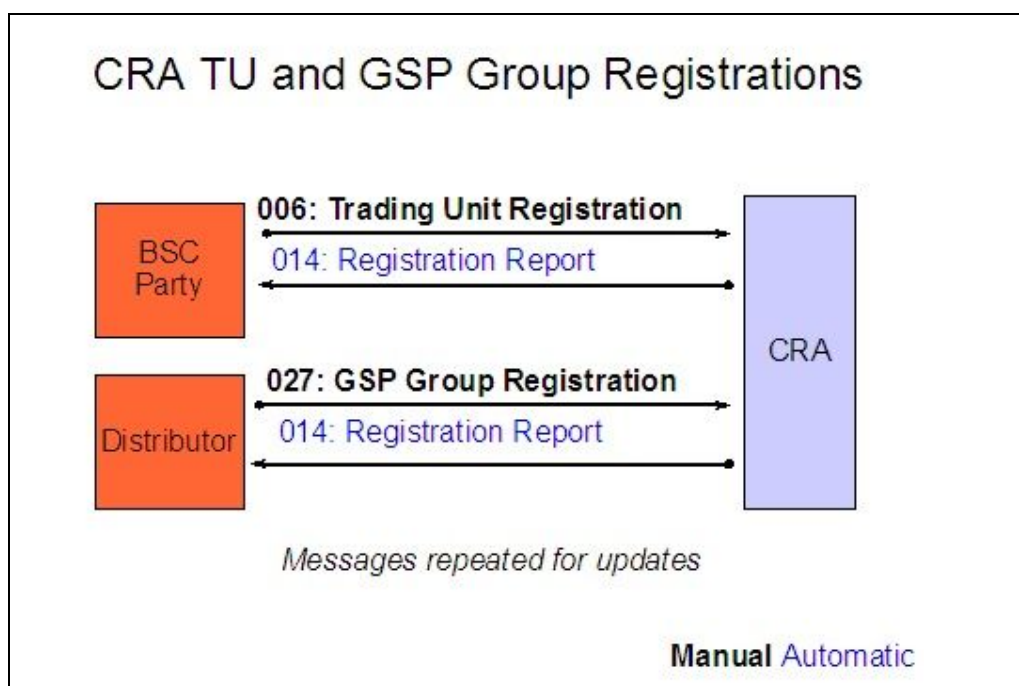


Manual Automatic

CRA BM Unit Registration



Manual Automatic



6.2 CRA-I001: (input) BSC Party Registration Data

| | | | |
|--|--|---|--|
| Interface ID: CRA-I001 | Source: BSC Party, BSCCo Ltd. | Title: BSC Party Registration Data | BSC reference: CRA SD 4.1, CRA BPM 3.1, ERM, CRA BPM 4.5, RETA SCH 4,B, 2.4.2, CRAWs-20, CRAWs-22, CR_18_990909, CP508, CP546/CP726, CP756 |
| Mechanism: Manual, by email, letter or fax, or can be sent as an electronic data file over the network | Frequency: As Necessary | Volumes: Mostly at initial setup | |

The CRA shall receive BSC Party information containing the following data content:

Action Description

BSC Party Details
BSC Party Name
BSC Party ID

Authentication Details
Name
Password

Party Role Details**
Party Type
Registration Effective From Date
Registration Effective To Date

Role Address Details

Contact Name⁷
 Address
 Telephone No
 Fax No
 e-mail Address

Party Stage 2 Participant Details**

Stage 2 Participant ID (if BSC Party is a Stage 2 participant)

Party Authentication Key

Key Details

Authorised Signatories**

Name
 Password
 Contact Phone No
 e-mail Address

Authorisation Levels**

Activity
 Effective From Date
 Effective To Date

Settlement Report Details

Report Type
 Distribution Method

Interconnector Error Administration Details (if BSC Party is an IEA)**

Interconnector ID
 Effective From Date
 Effective To Date

** Registration changes relating to participant capacity or authorised person shall be confirmed by BSCCo Ltd in order to ensure that the new registration details are valid and are consistent with the current status of the BSC Party. This confirmation shall be submitted via a CRA-I001 flow from BSCCo Ltd containing the change. The registration changes requiring this confirmation are:

- Add new party role
- Change party role effective dates
- Change Stage 2 participant details
- Add, remove authorised signatory
- Add authorisation level
- Change effective dates on authorisation level
- Changes Interconnector Administration details

Other registration changes do not require confirmation by BSCCo Ltd.

Physical Interface Details:

A physical structure is defined for this manual interface because the registrant can send this information as an electronic data file over the network; the CRA operator enters the information via a screen-based interface however it is sent.

⁷ Note that the Contact Name is **not** included in the CRA-I014 (sub flow 1) sent in response to new and amended data.

6.3 CRA-I002: (input) Interconnector Administrator Registration Data

| | | | |
|--|---|---|---|
| Interface ID: CRA-I002 | Source: BSC Party (who is the Interconnector Administrator) | Title: Interconnector Administrator Registration Data | BSC reference: CRA SD 4.1.3, CRA BPM 3.1, CRA BPM 4.11, ERM, RETA SCH 4,B, 2.4.2, CP756 |
| Mechanism: Manual, by email, letter or fax, or can be sent as an electronic data file over the network | Frequency: As Necessary | Volumes: Mostly at initial setup | |
| The CRA shall receive Interconnector Administrator Registration Details including the following. | | | |
| This interface allows for the registration of the Administrator for an Interconnector and as well as defining the definitive notification of the error administrator for the Interconnector at any one time. Registration of the Interconnector itself is provided through requirement CRA-I008. | | | |
| Action Description | | | |
| <u>Party Authentication Details</u> Name Password | | | |
| <u>Interconnector Administrator Details</u> Interconnector Administrator ID | | | |
| <u>Interconnector Details</u> Interconnector ID | | | |
| <u>Interconnector Error Administrator Data</u> Interconnector Error Administrator ID Effective From Date Effective To Date | | | |
| Physical Interface Details: A physical structure is defined for this manual interface because the registrant can send this information as an electronic data file over the network; the CRA operator enters the information via a screen-based interface however it is sent. | | | |

6.4 CRA-I003: (input) BSC Party Agent Registration Data

| | | | |
|---|---|---|---|
| Interface ID: CRA-I003 | Source: BSC Party Agent, BSCCo Ltd | Title: BSC Party Agent Registration Data | BSC reference: CRA SD 4.2, CRA BPM 3.1, ERM, CRA BPM 4.2, RETA SCH 2.4.2, CP756, P197 |
| Mechanism: Manual, by email, letter or fax, or can be sent as an electronic data file over the network | Frequency: As Necessary. | Volumes: Low | |
| <p>Initial registration of a BSC party agent will be by BSCCo Ltd. Changes to an agent's details will be provided by the agent.</p> <p>Note: Certification/Accreditation refers to Qualification.</p> <p>The CRA shall receive BSC Party Agent Details including the following:</p> <p>Action Description</p> | | | |

| |
|---|
| <p><u>Party Authentication Details</u> (if source is a BSC Party)</p> <p>Name</p> <p>Password</p> <p><u>BSC Party Agent Details</u></p> <p>Agent Name</p> <p>Agent Identifier</p> <p><u>Agent Role Details</u></p> <p>Agent Type</p> <p>Registration Effective From Date</p> <p>Registration Effective To Date</p> <p><u>Role Address Details</u></p> <p>Address</p> <p>Telephone No</p> <p>Fax No</p> <p>e-mail Address</p> <p><u>Certification/Accreditation Details</u></p> <p>Certification/Accreditation Status</p> <p><u>Party Agent Authentication Details</u></p> <p>Name</p> <p>Password</p> <p><u>Authorised Signatories</u></p> <p>Name</p> <p>Password</p> <p>Contact Phone No</p> <p>e-mail Address</p> <p><u>Authorisation Levels</u></p> <p>Activity</p> <p>Effective From Date</p> <p>Effective To Date</p> |
| <p>Physical Interface Details</p> <p>A physical structure is defined for this manual interface because the registrant can send this information as an electronic data file over the network; the CRA operator enters the information via a screen-based interface however it is sent.</p> |

6.5 CRA-I005: (input) BM Unit Registration Data

| | | | |
|--|-----------------------------------|---|--|
| Interface ID: CRA-I005 | Source: BSC Party | Title: BM Unit Registration Data | BSC reference: CRA SD 6.0, CRA BPM 3.2, ERM, CRA BPM 4.3, RETA SCH 4,B, 2.4.2, CP753, CP756, P100 |
| Mechanism: Manual, by email, letter or fax, or can be sent as an electronic data file over the network | Frequency: As Necessary | Volumes: Low | |
| <p>The CRA shall receive BM Unit Registration Details from a BSC Party. The registrant is the lead party.</p> <p>The flow is meant to incorporate two forms of data:</p> <p>1) The individual BM Units may be registered</p> <p>2) Where required, by the NETSO, the flow may be used to register that a set of individual BM units should form a Joint BM Unit.</p> | | | |

The information shall include the following:

Action Description

Authentication Details

Name
Password

BM Unit Registration Details

BM Unit Details

Name
BM Unit ID
BM Unit Type
NGC BM Unit Name
Zone
NETSO Reference
GSP Group ID (where appropriate)
Generation Capacity (MW)
Demand Capacity (MW)
Production / Consumption Flag
Base TU Flag (for Exempt Export BM Units only)
FPN Flag
Interconnector ID (where appropriate)
Effective From Date

Effective To Date
Transfer flag (indicates this is a transfer from SMRS)

SVA Metering Mapping Details

SVA MSID
Effective From Date
Effective To Date

BM Unit Group Details

Joint BM Unit ID
Effective From Date
Effective To Date

Joint BM Unit Details
BM Unit ID

Physical Interface Details:

A physical structure is defined for this manual interface because the registrant can send this information as an electronic data file over the network; the CRA operator enters the information via a screen-based interface however it is sent.

The physical structure does not include SVA Metering Mapping Details as these are always sent manually, on paper.

6.6 CRA-I006: (input) Trading Unit Registration

| | | | |
|--|-----------------------------------|---|---|
| Interface ID: CRA-I006 | Source: BSC Party | Title: Trading Unit Registration | BSC reference: CRA SD 6.2, CRA BPM 3.2, ERM, CRA BPM 4.17, CP756 |
| Mechanism: Manual, by email, letter or fax, or can be sent as an electronic data file over the network | Frequency: As Necessary | Volumes: Low | |
| The CRA shall receive Trading Unit Registration Details from a BSC Party. The flow may be used to | | | |

register an individual Trading Unit as well as to add and subtract the BM Units that make up the Trading Unit at a later time.

The flow shall be composed of the following Details

Action Description

Authentication Details

Name
Password

Trading Unit Details

Trading Unit Name

BM Unit Details

BM Unit ID
Effective From Date
Effective To Date

Physical Interface Details:

A physical structure is defined for this manual interface because the registrant can send this information as an electronic data file over the network; the CRA operator enters the information via a screen-based interface however it is sent.

6.7 CRA-I007: (input/output) Boundary Point and System Connection Point Data

| | | | |
|--|--|--|--|
| Interface ID: CRA-I007 | Source:- NETSO, Distribution Business Destination: BSCCo Ltd | Title: Boundary Point and System Connection Point Data | BSC reference: CRA SD 6.4, CRA BPM 3.3, ERM, CRA BPM 4.9, RETA SCH 4,B, 2.4.2, CP615, CP756 |
| Mechanism: Manual, by email, letter or fax, or can be sent as an electronic data file over the network | Frequency: As Necessary | Volumes: Low | |

The CRA shall receive information concerning the initial registration, decommissioning and changes to registered data for Boundary Points and System Connection Points. The information shall include the following:

Action Description

Authentication Details
Name
Password

Point Details
Boundary Point or System Connection Point Identifier
Boundary Point or System Connection Point Type
Effective From Date
Effective To Date

Where the information concerns a new registration, or the permanent decommissioning of an existing point, then CRA shall forward a copy of the information to BSCCo Ltd. The forwarded copy will include any additional information provided.

Physical Interface Details:
A physical structure is defined for this manual interface because the registrant can send this information as an electronic data file over the network; the CRA operator enters the information via a screen-based interface however it is sent.

6.8 CRA-I008: (input) Interconnector Registration Details

| | | | |
|--|--|---|---|
| Interface ID: CRA-I008 | Source: NETSO or Distribution Business | Title: Interconnector Registration Details | BSC reference: CRA SD 6.3, CRA BPM 3.5, ERM, CP756 |
| Mechanism: Manual, by email, letter or fax, or can be sent as an electronic data file over the network | Frequency: As Necessary | Volumes: Low | |
| Interface Requirement: | | | |
| The CRA shall receive new registrations and changes to the registration details of Interconnectors. Changes to the administration of the Interconnector are considered within the requirements of the Interconnector Administrator requirements: | | | |
| Action Description | | | |
| <u>Authentication Details</u> | | | |
| Name | | | |
| Password | | | |
| <u>Interconnector Details</u> | | | |
| Name | | | |
| Additional Details (including GSP Group Id where appropriate) | | | |
| Interconnector ID | | | |
| Effective From Date | | | |
| Effective To Date | | | |
| Physical Interface Details: | | | |
| A physical structure is defined for this manual interface because the registrant can send this information as an electronic data file over the network; the CRA operator enters the information via a screen-based interface however it is sent. | | | |

6.9 CRA-I012: (output) CRA Encryption Key

| | | | |
|--|--|-------------------------------------|--|
| Interface ID: CRA-I012 | User: BSC Party, BSC Party Agent, MIDP | Title: CRA Encryption Key | BSC reference: CRA SD 4.1.7, P78 |
| Mechanism: Manual | Frequency: As necessary | Volumes: Low | |
| <p>See [COMMS] for details of the encryption key.</p> <p>The CRA system shall issue a report containing the authentication details for a BSC Party, Market Index Data Provider and other agents where necessary. The Authentication details shall consist of:</p> <p><u>Encryption details</u></p> <p>CRA public Key</p> <p>Effective Start Date</p> | | | |
| Physical Interface Details: | | | |

6.10 CRA-I014: (output) Registration Report

| | | | |
|--|--|--------------------------------------|--|
| Interface ID: CRA-I014 | User: BSC Party, BSC Party Agent, BSC Service Agent, NETSO, BSCCo Ltd | Title: Registration Report | BSC reference: CRA SD 4, CRA BPM 3.5, CRA BPM 3.1, CRA BPM 4.16, ERM, CP546/CP726, P78, P100, CP962, P215 |
| Mechanism: Electronic data file transfer (except Manual to BSC Service Agents and BSCCo Ltd) | Frequency: As necessary | Volumes: Low | |

The CRA system shall issue a report detailing changes and new registration data once it has been input into the CRA system. The report will be issued to the interested parties in the registration:

In most cases, the update only directly affects the registrant (i.e. the participant that submitted the registration request), but in a few particular cases, additional participants must be informed.

The report is issued to the relevant participants according to the following rules, dependent on the entity updated:

1. If the entity is a BSC Party then the report will be issued to that BSC Party;
2. If the entity is a BSC Party Agent then the report is issued to that BSC Party Agent;
3. If the entity is a BSC Service Agent then the report is issued to that BSC Service Agent;
4. If the entity is a BM Unit then the owning BSC Party of that unit is issued with the report;
5. If the entity is a Joint BM Unit Group then all BSC Parties having BM Units in the Group(s) concerned are issued with the report, as well as the owner of the Joint BM Unit Group;
6. If the entity is a Trading Unit then all BSC Parties having BM Units in the Trading Unit concerned are issued with the report, as well as the owner of the Trading Unit;
7. If the entity is a Metering System, the owning BSC Party and the BSC Party Agent appointed as Meter Operator Agent are issued with the report;
8. If the entity is a Boundary Point, then the owning BSC Party of that Boundary Point is issued with the report;
9. If the entity is a GSP Group, GSP or Distribution Systems Connection Point (DSCP) then the owning BSC Party is issued with the report;
10. If the entity is an Interconnector or an Interconnector Administration appointment then all BSC Parties owning Interconnector-usage BM Units on that Interconnector are issued with the report, as well as the Parties acting as Administrator and Error Administrator, and the owner of the Interconnector.
11. If the entity is a Market Index Data Provider then BSCCo Ltd will be issued with the report.

For Market Index Data Provider Registration a full refresh of the MIDP's current registration details will be sent as a manual flow, back to BSCCo Ltd. This manual flow will include:

Market Index Data Provider ID

Market Index Data Provider Name

Registration Details

Registration Effective From

Registration Effective To

Name

Address

Telephone No

Fax No

e-mail address

For all other Registration types an automatic flow will be generated, which will meet the following requirements:

The interface may be used to either send updated details (received over the course of a day), or a full refresh of all the BSC Party's current registration details.

The report shall contain the details of the registration along with the success / failure / pending nature and where appropriate, the reasons for failure / pending status.

The report shall contain a header detailing the status of the registration attempt / change, along with the structure and content of the input data flow for which this is a report. The structure of the individual response shall correspond to that contained on the incoming flow (CRA-I001⁸, CRA-I002, CRA-I003, CRA-I004, CRA-I005, CRA-I006, CRA-I007, CRA-I008, CRA-I027, CRA-I031).

The content of the report corresponding to incoming flow CRA-I005 shall be extended to include the following data items, in addition to the details contained in the incoming flow:

| | |
|-----------------------------------|---|
| ■ WDCALF | (as received in interface CRA-I011) ⁹ |
| ■ NWDCALF | (as received in interface CRA-I011) ¹⁰ |
| ■ SECALF | (as received in interface CRA-I011) ¹¹ |
| ■ TLF | (as received in interface CRA-I029) |
| ■ Exempt Export Flag | (as received in interface CRA-I043) |
| ■ Manual Credit Qualifying Flag | (as received in interface CRA-I009) |
| ■ Credit Qualifying Status | (derived value) |
| ■ WDBMCAIC | (derived value) |
| ■ NWDBMCAIC | (derived value) |
| ■ WDBMCAEC | (derived value) |
| ■ NWDBMCAEC | (derived value) |
| ■ Production / Consumption Status | (derived value) |

Updates shall be reported in response to incoming flow CRA-I005 or where any of the data items above have changed. A report may also be issued following changes to the composition of a Trading Unit, or changes to any of the component BM Units belonging to a Trading Unit, that result in re-computation of Production / Consumption Status even though that re-computation may derive the same Status as before.

The header details shall contain the following information:

Registration Details

Requesting Registrant,
Registration Type (Party, Party Agent, Service Agent, BM Unit etc.)
Registration Status (success, failure, pending)
Additional Details

The requesting registrant field will normally contain the Id of the registrant; but for the report sent in response to CRA-I003, it will always be the Id of the Party Agent being registered.

The registration status details the result of the registration request. This may be:

- Success: The registration request was successful
- Failure: The request failed validation and was rejected
- Pending: The request relied upon corroborative material and is thus pending the arrival of this information.

Where BSC Parties, BSC Party Agents and BSC Service Agents have registered multiple roles, the report includes a separate registration status for each role.

Followed by the individual registration details, omitting authentication details, but including any additional details (such as identifiers and BM Units automatically assigned).

Each record of the report contains an Action Code, indicating whether the record has a) been added or changed; b) been deleted or c) not changed. When the report is sent as a full refresh, the action code is omitted for each record.

Note that there is no data item "Energy Account ID" since each party has a Production and a Consumption account which are identified by the Party ID and the P/C Indicator.

⁸ Note that the Contact Name is **not** reported in the CRA-I014

⁹ With the exception that any WDCALF value exceeding ± 9.9999999 shall be capped and reported as ± 9.9999999 in the CRA-I014. The values of WDBMCAIC and WDBMCAEC reported in the CRA-I014 will still be derived using the 'real' uncapped WDCALF value.

¹⁰ With the exception that any NWDCALF value exceeding ± 9.9999999 shall be capped and reported as ± 9.9999999 in the CRA-I014. The values of NWDBMCAIC and NWDBMCAEC reported in the CRA-I014 will still be derived using the 'real' uncapped NWDCALF value.

¹¹ With the exception that any SECALF value exceeding ± 9.9999999 shall be capped and reported as ± 9.9999999 in the CRA-I014. The values of WDBMCAEC and NWDBMCAEC reported in the CRA-I014 will still be derived using the 'real' uncapped SECALF value.

Physical Interface Details:

In the physical report, Registration Status can only be success or pending. Reporting that a registration has failed is a manual process. Accordingly, the physical report does not contain "Additional Details".

For the response to CRA-I005, where a BM Unit's Production / Consumption Status changes on a date where no other BM Unit attributes change (for example as a result of another BM Unit being added or removed from the Trading Unit to which the BM Unit belongs), the BM Unit information will be reported as separate date ranges in order to accurately report the changing Status.

6.11 CRA-I021: (output) Registered Service List

| | | | |
|---|-----------------------------------|--|---|
| Interface ID: CRA-I021 | User: BSC Party, Public | Title: Registered Service List | BSC reference: RETA SCH 4,B, 2.2.2, CRA BPM 4.12, P197 |
| Mechanism: Electronic data file transfer/Manual | Frequency: On Request | Volumes: Low | |

The CRA system shall issue a report listing the registered services to BSC Parties (automatically) and issue a subset of this information to the public (manually) on request.

Note: Certification/Accreditation refers to Qualification.

This will contain:

BSC Party Agent Details
Agent Name
Agent Identifier

Agent Role Details
Agent Type

Role Address Details
Address
Telephone No
Fax No
e-mail Address

Certification/Accreditation Details
Certification/Accreditation Status

BSC Service Agent Details
Agent Name
Agent Identifier

Service Agent Role Details
Agent Type
Effective From Date
Effective To Date

Role Address Details
Address
Telephone No
Fax No
e-mail Address

Physical Interface Details:

6.12 CRA-I024: (output) Certification and Accreditation Status Report

| | | | |
|---|---|--|---|
| Interface ID: CRA-I024 | User: BSC Parties BSC Party Agents BSC Service Agents | Title: Certification and Accreditation Status Report | BSC reference: CRA SD 5.3, P197 |
| Mechanism: Electronic data file transfer (except Manual to BSC Service Agents) | Frequency: On Request | Volumes: Low | |

The CRA system shall issue a report to the BSC Parties, Party Agents and (manually in the case of) Service Agents detailing changes to the Qualification status of BSC Party Agents and BSC Service Agents.

Note: Certification/Accreditation refers to Qualification.

The report shall contain the following data:

BSC Party Agent Details
 Action Code
 Agent Name
 Agent Identifier

Agent Role Details
 Action Code
 Agent Type
 Effective From Date
 Effective To Date

Role Address Details
 Action Code
 Address
 Telephone No
 Fax No
 e-mail Address

Certification/Accreditation Details
 Action Code
 Certification/Accreditation Status

BSC Service Agent Details
 Action Code
 Agent Name
 Agent Identifier

Service Agent Role Details
 Action Code
 Agent Type
 Effective From Date
 Effective To Date

Role Address Details
 Action Code
 Address
 Telephone No
 Fax No
 e-mail Address

The first field of each record of the report is an Action Code, indicating whether the record has a) been added or changed; b) been deleted or c) not changed.

Physical Interface Details:

6.13 CRA-I025: Receive Acknowledgement

See Section 2.2.7.

6.14 CRA-I026: Issue Acknowledgement

See Section 2.2.7.

6.15 CRA-I027: (input) GSP Group and GSP Registration

| | | | |
|--|---|--|--------------------------------|
| Interface ID: CRA-I027 | Source: BSC Party (Distribution Business) | Title: GSP Group Registration | BSC reference: CP756 |
| Mechanism: Manual, by email, letter or fax, or can be sent as an electronic data file over the network | Frequency: As Necessary | Volumes: Low | |
| <p>The CRA shall receive GSP Group Registration Details from a Distribution Business. The flow may be used to register an individual GSP Group as well as GSP's and inter-GSP-Group Connections. The CRA shall not maintain a relationship between the three data items.</p> <p>The flow shall be composed of the following Details</p> <p>Action Description</p> <p><u>Authentication Details</u></p> <p> Name</p> <p> Password</p> <p><u>GSP Group Details</u></p> <p> GSP Group ID</p> <p> GSP Group Name</p> <p> Effective From Date</p> <p> Effective To Date</p> <p><u>GSP Details</u></p> <p> GSP ID</p> <p> Effective From Date</p> <p> Effective To Date</p> <p><u>Inter-GSP Group Connection Details</u></p> <p> Inter-GSP Group Connection ID</p> <p> Effective From Date</p> <p> Effective To Date</p> | | | |
| <p>Physical Interface Details:</p> <p>A physical structure is defined for this manual interface because the registrant can send this information as an electronic data file over the network; the CRA operator enters the information via a screen-based interface however it is sent.</p> | | | |

6.16 CRA-I031: (input) Metering System Data

| | | | |
|--|-----------------------------------|---------------------------------------|--|
| Interface ID: CRA-I031 | Source: BSC Party | Title: Metering System Data | BSC reference: CRA SD 6.4, CRA BPM 3.3, ERM, CRA BPM 4.9, RETA SCH 4,B, 2.4.2, CP569, CP753, CP756 |
| Mechanism: Manual, by email, letter or fax, or can be sent as an electronic data file over the network | Frequency: As Necessary | Volumes: Low | |

The CRA shall receive Metering System Registration Details. The CRA records the master set of registration details for the Metering Systems. This information is later augmented by the CDCA to record the full details for NETA. The information shall include the following:

Action Description

Authentication Details

 Name

 Password

Metering System Details

 Metering System Identifier

 Meter Operator Agent ID

 Effective From Date

 Effective To Date

 Transfer flag (indicates this is a transfer from SMRS)

For each new Metering System registration, the Registrant shall include confirmation that either:

- The Registrant is the Equipment Owner, or
- The Registrant has obtained the Equipment Owner’s consent for the appointment.

| |
|--|
| Physical Interface Details: A physical structure is defined for this manual interface because the registrant can send this information (except for the equipment owner’s confirmation for new registrations) as an electronic data file over the network; the CRA operator enters the information via a screen-based interface however it is sent. |
|--|

6.17 CRA-I034: (input) Flexible Reporting Request

| | | | |
|--|--|---|---|
| Interface ID: CRA-I034 | Source: BSCCo, BSC Party, BSC Party Agent, NETSO, BSC Service Agents | Title: Flexible Reporting Request | BSC reference: CR 53, P8, CP756 |
| Mechanism: Manual, by email, letter or fax | Frequency: As Necessary | Volumes: Low | |
| Interface Requirement: | | | |
| The CRA shall receive authorisations: a) to start or stop sending copies of reports generated for one organisation to another organisation i) a BSC Party (P) may receive copies of reports generated for another BSC Party (P'). The request must be submitted by BSCCo or, for those reports designated by BSCCo, by BSC Party P. ii) BSCCo may receive copies of reports generated for any organisation. The request | | | |

| | |
|--|---|
| must be submitted by BSCCo. | |
| b) | to specify which version of a report to create for an organisation (If present this requests a specific version of the report be generated for the party. The default is to issue the latest version of a report. Old versions of reports are supported for a limited period (as agreed between the BSC Service Agent providing the report and BSCCo Ltd) following the introduction of a new version) The request will come from the organisation; |
| <u>Requesting BSC Party Details</u> | |
| organisation Id | |
| organisation type | |
| <u>Report Copy Details</u> | |
| Report Type | |
| Effective from date | |
| Effective to date | |
| organisation Id | |
| organisation type | |
| Start/Stop Flag | |
| <u>Report Version Details</u> | |
| Report Type | |
| Effective from date | |
| Effective to date | |
| Version (<i>specific or "latest"</i>) | |
| Note: If receiving a copy of another party's report, the version copied will be the version generated for the original party | |
| Note: in this specification, "organisation" is any of BSCCo, BSC Party, BSC Party Agent, NETSO, BSC Service Agents | |
| Physical Interface Details: | |
| The flow may contain requests from one or more organisation and each request may cover a number of report types/BSC Parties. | |

6.18 CRA-I038: Transfer from SMRS information

| | | | |
|---|--|--|--------------------------------|
| Interface ID: CRA-I038 | Source: Transfer Coordinator, BSC Party | Title: Transfer from SMRS information | BSC reference: CP753 |
| Mechanism: Manual | Frequency: On Demand | Volumes: low | |
| Interface Requirement: | | | |
| Where metering is transferred from SMRS into CRA, the following information will be provided. | | | |
| Status (New, rejected, confirmed, confirmation request) | | | |
| Effective from date (if confirmed) | | | |
| Name of Registrant | | | |
| Address | | | |
| Contact for Transfer | | | |
| Telephone number | | | |
| Email address | | | |
| Participant ID | | | |
| Site name | | | |
| Site address | | | |
| <u>Transfer details</u> | | | |
| Circuit description | | | |
| Measurement quantity | | | |
| Metering System ID | | | |
| Metering Subsystem ID | | | |
| <u>Metering system details</u> | | | |
| NGC BMU identifiers | | | |

| |
|---|
| BM Unit identifier GSP reference CVA MOA |
| Physical Interface Details: |
| The flow will include a schematic diagram where appropriate |

6.19 CRA-I040: Transfer to SMRS information

| | | | |
|--|---|--|--------------------------------|
| Interface ID: CRA-I040 | Source: Transfer Coordinator, BSC Party | Title: Transfer to SMRS information | BSC reference: CP753 |
| Mechanism: Manual | Frequency: On Demand | Volumes: low | |
| Interface Requirement: | | | |
| Where metering is transferred from CRA into SMRS , the following information will be provided. | | | |
| Status (New, rejected, confirmed, confirmation request) Effective to date (if confirmed) Name of CVA Registrant Address Contact for Transfer Telephone number Email address Participant ID Site name Site address <u>Transfer details</u> Circuit description Measurement quantity Metering System ID Metering Subsystem ID <u>Metering system details</u> NGC BMU identifiers BM Unit ID GSP reference CVA MOA | | | |
| Physical Interface Details: | | | |
| The flow will include a schematic diagram where appropriate | | | |

6.20 CRA-I048: GC or DC Breach Notification

| | | | |
|--|----------------------------------|--|-------------------------------|
| Interface ID: CRA-I048 | User: CRA, BSCCo | Title: GC or DC Breach Notification | BSC reference: P359 |
| Mechanism: Manual | Frequency: As required | Volumes: low | |
| Interface Requirement: | | | |
| Where a GC Breach or a DC Breach has been identified for a BM Unit, the CRA shall provide the following information to the Lead Party: | | | |
| BM Unit Id GC or DC Breach Type | | | |

| |
|---|
| Settlement Day Settlement Period CRA-estimated GC or DC Amount Effective From Date for CRA-Estimated GC or DC Amount Other information deemed by BSCCo to be relevant |
| <i>Please note that this notification will also be published on the BSC Website</i> |
| Physical Interface Details: |
| |

6.21 CRA-I049: GC or DC Breach Estimation Challenge

| | | | |
|---|----------------------------------|---|-------------------------------|
| Interface ID: CRA-I049 | Source: BSC Party | Title: GC or DC Breach Estimation Challenge | BSC reference: P359 |
| Mechanism: Manual | Frequency: As required | Volumes: low | |
| Interface Requirement: | | | |
| Where a BSC Party Challenges a GC or DC Breach Estimation for a BM Unit, they shall provide the following information: BM Unit Id Type of GC or DC Breach Settlement Day Settlement Period Evidence of error | | | |
| <i>Please note that this notification will also be published on the BSC Website</i> | | | |
| Physical Interface Details: | | | |
| | | | |

6.22 CRA-I051: Notification of Breach Challenge Data

| | | | |
|---|----------------------------------|--|-------------------------------|
| Interface ID: CRA-I051 | User: BSC Party | Title: Notification of Breach Challenge Data | BSC reference: P359 |
| Mechanism: Manual | Frequency: As required | Volumes: Low | |
| Interface Requirement: | | | |
| The CRA shall publish data relating to a BM Unit in GC Breach or DC Breach on the BSC Website for not less than 24 calendar months after the date of the Breach notification: | | | |
| <ul style="list-style-type: none">• Breach Identification Date/Time stamp• GC or DC breach• BM Unit ID• Breach SD | | | |

- Breach SP
- Actual BM Unit Metered Volume that triggered breach
- [Prevailing] GC or DC
- CRA calculated estimate of BM Unit Metered Volume
- EFD for GC or DC based on CRA estimate
- Appeal status – default value at the time of breach identification will be 'No appeal'. Allowable values are: 'No appeal', 'Appealed', 'Upheld', 'Rejected'
- Estimated BM Unit Metered Volume following the conclusion of an appeal (default value is NULL)
- Effective From Date of the amended volume due to an appeal. When an appeal has been successfully completed the effected from date of the new GC and/or DC resulting from the appeal.

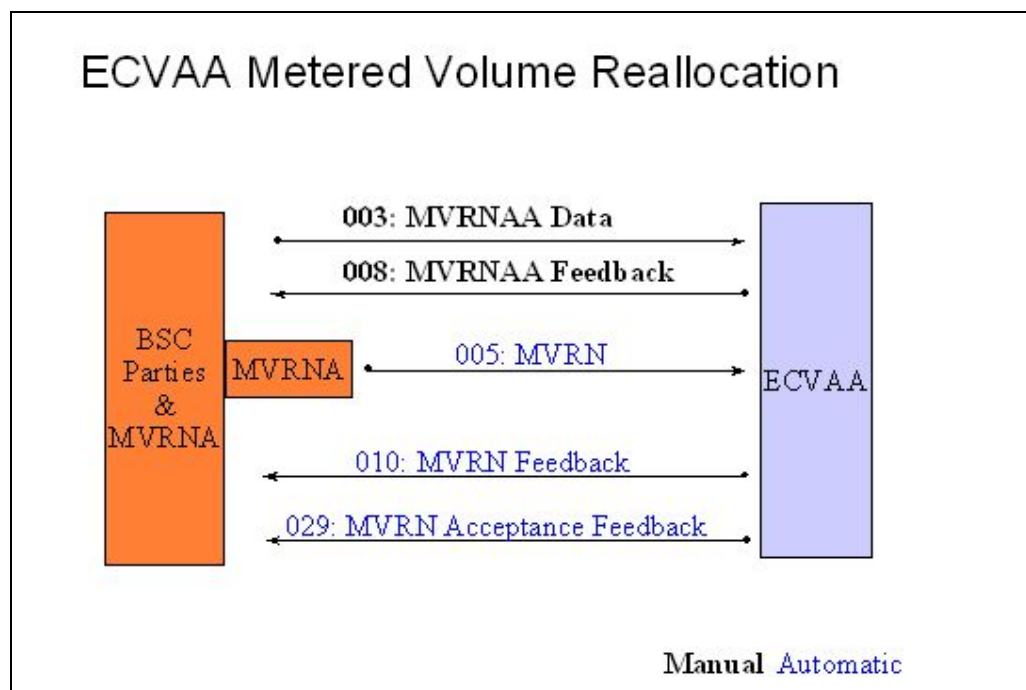
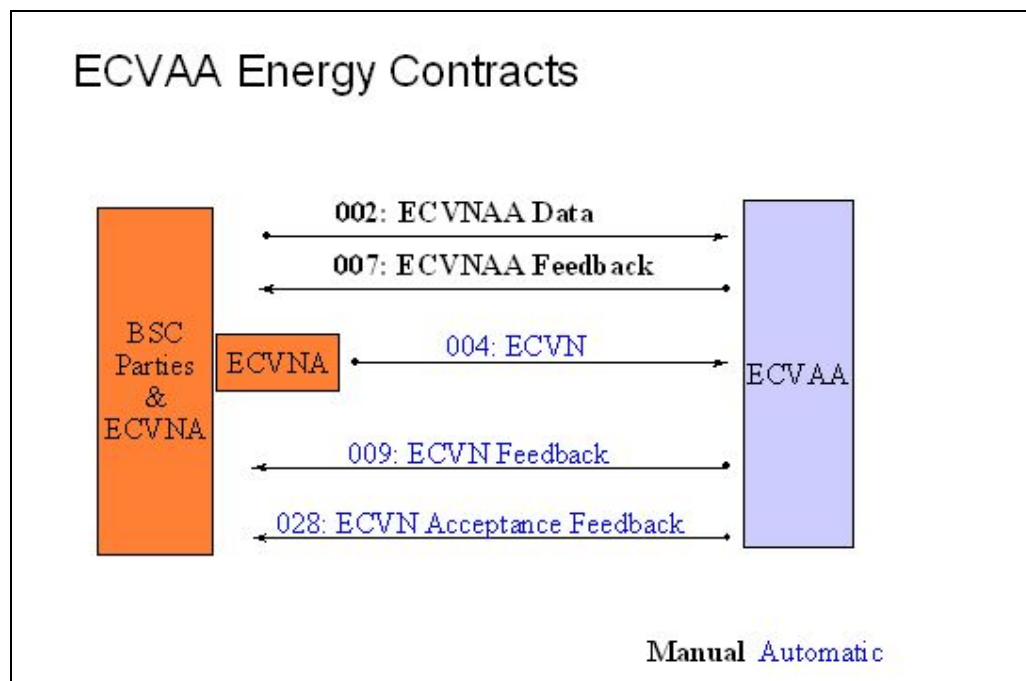
The CRA shall ensure that only the Lead Party of the relevant BM Unit will be entitled to see the above details.

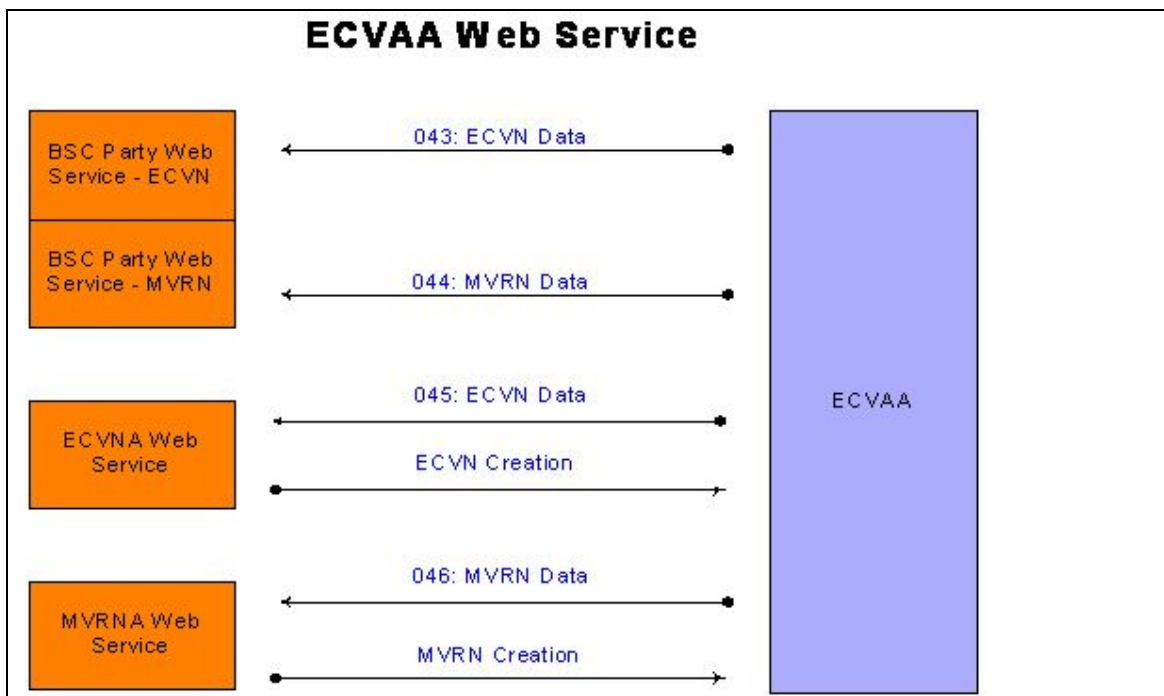
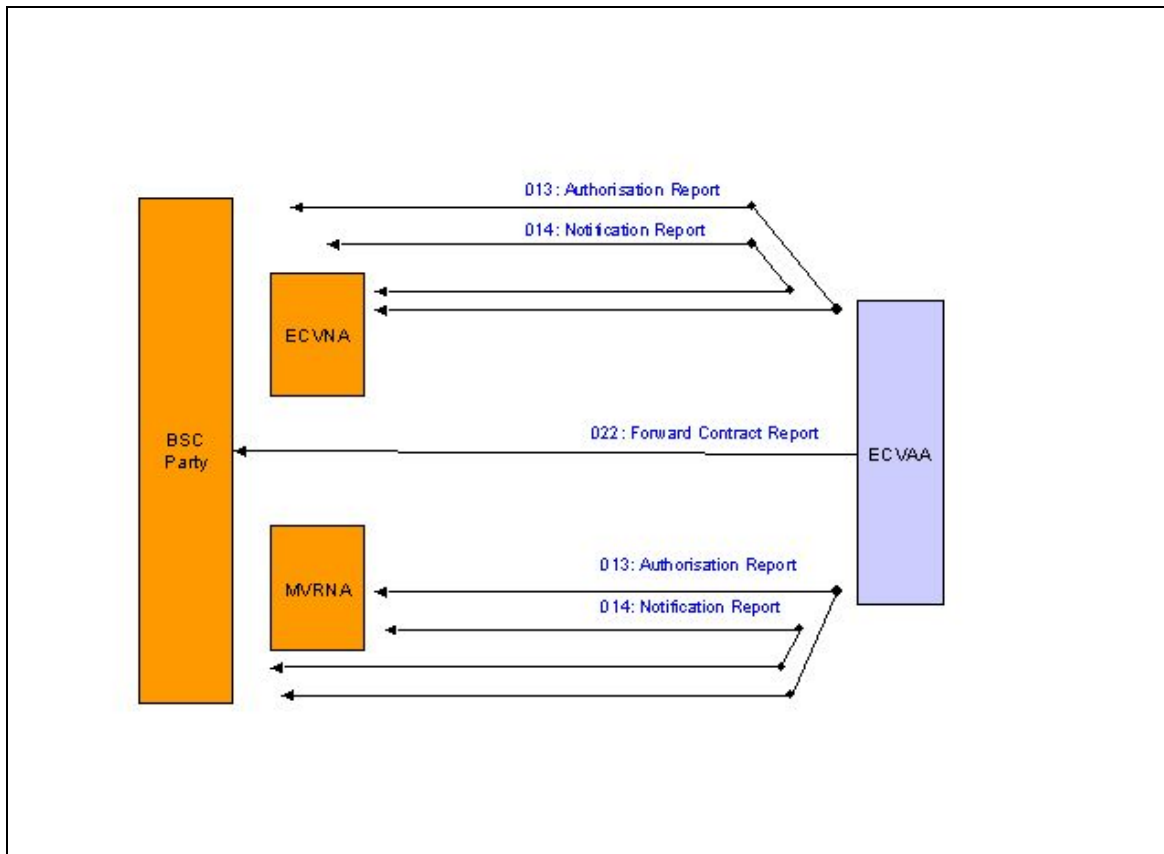
The CRA shall also issue the above details to the Lead Party of the relevant BM Unit by email.

Physical Interface Details:

7. ECVAA External Inputs and Outputs

7.1 ECVAA Flow Overview





7.2 ECVAA-I002: (input) ECVNAA Data

| | | | |
|---|-------------------------------------|------------------------------|---|
| Interface ID: ECVAA-I002 | User: ECVNA, BSC Party | Title: ECVNAA Data | BSC reference: ECVAA SD: 6.1, 6.6, A ECVAA BPM: 3.1, 4.1, 4.4 RETA SCH: 4, B, 3.4, CP547, P110, CP888, P98, P309 |
| Mechanism: Manual, by letter or fax, or can be sent as an electronic file over the network | Frequency: Ad hoc | Volumes: Low | |
| <p>The ECVAA Service shall receive the following ECVNAA data on an ad hoc basis.</p> <ul style="list-style-type: none"> i. ECVNAA requests. Each request shall be submitted separately by two BSC Parties and either one or two ECVNAs, each providing identical details of the request as shown below along with their individual password/signature. ii. ECVNAA Authorisation Termination requests. Each termination request shall be submitted by either of the two BSC Parties or an ECVNA for the relevant ECVNAA. iii. ECVNAA Key Change requests. Each request shall be submitted by an ECVNA for the relevant ECVNAA. iv. ECVNAA Report Requirement Change requests. Each request shall be submitted by an ECVNA, or BSC Party for the relevant ECVNAA. | | | |
| The ECVNAA data shall comprise: | | | |
| <p><u>ECVNAA Requests:</u></p> <ul style="list-style-type: none"> ECVNAA Change ('T' or 'F') ECVNA ID ECVNA Name ECV Party 1 ID ECV Party 1 Name ECV Party 1 production/consumption flag ECVNA ID 2 (optional) ECVNA Name 2 (optional) ECV Party 2 ID ECV Party 2 Name ECV Party 2 production/consumption flag Effective From Date Effective To Date ECVN Amendment Type (Additional/Replacement/Both) Notification Amendment Type Effective From Date Report Requirements (optional – specific to submitter) | | | |
| <p><u>ECVNAA Termination Requests:</u></p> <ul style="list-style-type: none"> ECVNAA ID ECVNA ID ECV Party 1 ID ECVNA ID 2 (optional) ECV Party 2 ID Associated VNNR Indicator | | | |
| <p><u>ECVNAA Key Change Requests</u> (specific to submitter):</p> <ul style="list-style-type: none"> ECVNAA ID ECVNA ID ECV Party 1 ID ECVNA ID 2 (optional) ECV Party 2 ID | | | |
| <p><u>ECVNAA Report Requirement Change Requests</u> (specific to submitter):</p> <ul style="list-style-type: none"> ECVNAA ID ECVNA ID ECV Party 1 ID ECVNA ID 2 (optional) ECV Party 2 ID Report Requirement | | | |

Notes:

- The ECVNAA Key is not included in the key change request since this is a manual interface. However standard authentication checks will ensure that the party submitting the request is the ECVNA for the relevant ECVNAA.
- The Associated VNNR Indicator is used to inform the ECVAA that this ECVNAA Termination Request should be processed prior to processing the corresponding Volume Notification Nullification Request.
- The EVCN Amendment Type allows the user to specify whether follow-up notifications submitted under the relevant ECVNAA should be accepted as either Additional or Replacement notifications, or whether both mechanisms are acceptable.
- Only if the Authorisation Request is a new or successor request, then the Notification Amendment Effective From Date should equal the Effective From Date (N0081).
- The Report Requirement will allow the following report variants to be selected for a given BSC Party or ECVNA and ECVNAA:
 - Receive AFR (with accepted data groups only) and RFR
 - Receive AFR (with accepted and matched data groups) and RFR
 - Receive no AFR and no RFR

Physical Interface Details: Physical flow details are defined for this manual interface because the registrant can send this information as an electronic data file over the network; the ECVAA operator enters the information via a screen-based interface however it is sent..

7.3 ECVAA-I003: (input) MVRNAA Data

| | | | |
|--|-------------------------------------|------------------------------|---|
| Interface ID: ECVAA-I003 | User: MVRNA, BSC Party | Title: MVRNAA Data | BSC reference: ECVAA SD: 7.1, 7.6, 7.7, A ECVAA BPM: 3.2, 4.6, 4.10, 4.12 RETA SCH: 4, B, 3.4 CR 005, CP547, P110, CP888, P98 |
| Mechanism: Manual, by letter or fax, or can be sent as an electronic data file over the network | Frequency: Ad hoc | Volumes: Low | |

The ECVAA Service shall receive the following MVRNAA data on an ad hoc basis.

- MVRNAA requests. Each request shall be submitted separately by the BM Unit Lead Party, BM Unit Subsidiary Party and either one or two MVRNAs, each providing identical details as shown below along with their individual password/signature.
- MVRNAA Termination requests. Each termination request shall be submitted by the BM Unit Lead Party, BM Unit Subsidiary Party or a MVRNA of the relevant MVRNAA.
- MVRNAA Key Change requests. Each request shall be submitted by a MVRNA for the relevant MVRNAA.
- MVRNAA Report Requirement Change requests. Each request shall be submitted by a MVRNA or BSC Party for the relevant MVRNAA.

The MVRNAA data shall comprise:

MVRNAA Requests:

- MVRNA ID
- MVRNA Name
- BM Unit ID
- Lead Party ID
- Lead Party Name
- Lead Party production/consumption flag
- MVRNA ID 2 (optional)
- MVRNA Name 2 (optional)
- Subsidiary Party ID
- Subsidiary Party Name
- Subsidiary Party production/consumption flag
- Effective From Date
- Effective To Date

| |
|--|
| Report Requirements (optional - specific to submitter) |
| <u>MVR Termination Requests:</u> MVRNAA ID MVRNA ID BM Unit ID Lead Party ID MVRNA ID 2 (optional) Subsidiary Party ID Associated VNNR Indicator |
| <u>MVRNAA Key Change Requests</u> (specific to submitter): MVRNAA ID MVRNA ID BM Unit ID Lead Party ID MVRNA ID 2 (optional) Subsidiary Party ID |
| <u>MVRNAA Report Requirement Change Requests</u> (specific to submitter): MVRNAA ID MVRNA ID BM Unit ID Lead Party ID MVRNA ID 2 (optional) Subsidiary Party ID Report Requirement |
| Notes: <ul style="list-style-type: none"> The MVRNAA Key is not included in the key change request since this is a manual interface. However standard authentication checks will ensure that the party submitting the request is the MVRNA for the relevant MVRNAA. The Associated VNNR Indicator is used to inform the ECVAA that this MVRNAA Termination Request should be processed prior to processing the corresponding Volume Notification Nullification Request. The Report Requirement will allow the following report variants to be selected for a given BSC Party or MVRNA and MVRNAA: <ul style="list-style-type: none"> Receive AFR (with accepted data groups only) and RFR Receive AFR (with accepted and matched data groups) and RFR Receive no AFR and no RFR |
| Physical Interface Details: Physical flow details are defined for this manual interface because the registrant can send this information as an electronic data file over the network; the ECVAA operator enters the information via a screen-based interface however it is sent.. |

7.4 ECVAA-I004: (input) ECVN

| | | | |
|---|---------------------------------|-------------------------|--|
| Interface ID: ECVAA-I004 | User: ECVNA | Title: ECVNs | BSC reference: ECVAA SD: 8.1, A ECVAA BPM: 3.3, 4.18 RETA SCH: 4, B, 3.4 CR 008, CP527, P98 |
| Mechanism: Electronic Data File Transfer | Frequency: Continuous | Volumes: High | |
| Interface Requirement: | | | |
| i. The ECVAA Service shall receive the following ECVNs from ECVNAs continuously for every Settlement Period up until the Submission Deadline (the notification deadline for the purposes of submitting ECVNs and MVRNs for each Settlement Period as defined in Annex X-1). | | | |
| Note that ECVN Withdrawal is implemented by sending a notification containing a null ECV. | | | |
| The ECVNs shall comprise: | | | |

| |
|---|
| <u>Energy Contract Volume Notification:</u> ECVNA ID ECVNAA ID ECVNAA Key ECVN ECVNAA ID ECVN Reference Code Effective From Date Effective To Date (optional) Settlement Period (1-50) Energy Contract Volume (MWh) (<i>volume sold by party 1 to party 2, may be negative</i>) Omitted Data: No Change (optional) ¹² |
| Physical Interface Details: <p>The ECVNA Id is the From Participant Id in the AAA header record of the physical file and so is not included in the EDN record.</p> <p>The ECVN ECVNAA Id should always be either</p> <ol style="list-style-type: none"> the ECVNAA Id of the Agent submitting the ECVN, or an ECVNAA Id that has now expired (i.e. effective to date < today's date) but was for the same pair of trading Party Energy Accounts (specified in the same order in each ECVNAA); <p>An ECVN that does not follow these rules should be rejected in full.</p> |

See section 7.24 for more details.

7.5 ECVAA-I005: (input) MVRN

| | | | |
|---|---------------------------------|--|--|
| Interface ID: ECVAA-I005 | Source: MVRNA | Title: Meter Volume Reallocation (MVR) Notifications | BSC reference: ECVAA SD: 9.1, A RETA ERR 2 ECVAA BPM: 3.3, 4.19 RETA SCH: 4, B, 3.4 CR 005, CR 008, CP527, P98 |
| Mechanism: Electronic Data File Transfer | Frequency: Continuous | Volumes: High | |
| <p>The ECVAA Service shall receive MVRNs from MVRNAs continuously for every Settlement Period up until the Submission Deadline.</p> <p>The MVRNs shall comprise:</p> <p><u>Meter Volume Reallocation Notification:</u></p> MVRNA ID MVRNAA ID MVRNAA Key MVRN MVRNAA ID MVRN Reference Code Effective From Date Effective To Date (optional) Settlement Period (1-50) Metered Volume Fixed Reallocation (MWh) Metered Volume Percentage Reallocation (%) Omitted Data: No Change (optional) ¹³ | | | |

¹² The Omitted Data functionality has been developed, but is disabled.

¹³ The Omitted Data functionality has been developed, but is disabled.

Physical Interface Issues:

The MVRNA Id is the From Participant Id in the AAA header record of the physical file and so is not included in the MVN record.

The MVRN MVRNAA Id should always be either

- a) the MVRNAA Id of the Agent submitting the new/replacement MVRN (If an MVRN already exists with the same reference code, the new MVRNs will be processed as amendments, i.e. being an replacement rather than being additive), or
- b) an MVRNAA Id that has now expired (i.e. to date < today's date) but was for the same Lead and Subsidiary Party Energy Account;

An MVRN that does not follow these rules should be rejected in full.

See section 7.24 for more details; the information given there on ECVNs is equally applicable to MVRNs.

7.6 ECVAA-I007: (output) ECVNAA Feedback

| | | | |
|---|--|----------------------------------|--|
| Interface ID: ECVAA-I007 | User: BSC Party, ECVNA | Title: ECVNAA Feedback | BSC reference: ECVAA SD: 6.2, 6.3, 6.4, 6.7, 6.8, A ECVAA BPM: 3.1, 4.2, 4.3, 4.5 RETA SCH: 4, B, 3.2, CP547, CP571, CP888, P98, Variation 59 |
| Mechanism: Manual for Rejections and Deletions; Electronic Data File Transfer for Confirmations | Frequency: Ad hoc, in response to ECVNAA requests and registration data changes | Volumes: Low | |
| Interface Requirement: The ECVAA Service shall issue the following ECVNAA Feedback data in response to ECVNAA requests: <ol style="list-style-type: none"> i. Confirmed ECVNAA - issued to both BSC Parties and ECVNA(s). ii. Rejected ECVNAA - issued to both BSC Parties and ECVNA(s). iii. Confirmed ECVNAA Termination - issued to both BSC Parties and ECVNA(s). iv. Rejected ECVNAA Termination - issued to the BSC Party or ECVNA. v. Confirmed ECVNAA Key Change - issued to the relevant ECVNA. vi. Rejected ECVNAA Key Change - issued to the relevant ECVNA. vii. Confirmed ECVNAA Deletion – issued to the relevant BSC Parties and ECVNA(s). viii. Rejected ECVNAA Deletion – issued to the relevant BSC Party or ECVNA. ix. Confirmed ECVNAA Reporting Option Change - issued to the requesting BSC Party or ECVNA. x. Rejected ECVNAA Reporting Option Change - issued to the requesting BSC Party or ECVNA. | | | |
| The ECVNAA Feedback shall include: | | | |
| <u>Confirmed ECVNAA:</u> <i>Original details received in ECVAA-I002 Authorisation request plus -</i> ECVNAA ID (to both BSC Parties and relevant ECVNA(s)) ECVNAA Key (to ECVNA only, each ECVNA receives their Key) Nb confirmation of an Authorisation Change will not include the Notification Amendment Type Effective From Date | | | |

| |
|--|
| <p><u>Rejected ECVNAA:</u> <i>Original details received in ECVAA-I002 Authorisation request plus -</i> Rejection Reason Note: if the rejection is due to non-receipt of matching authorisations, then both parties and the ECVNA are still informed, and the feedback sent to each shall not include another's authentication information</p> |
| <p><u>Confirmed ECVNAA Termination:</u> <i>Original details received in ECVAA-I002 Termination request plus-</i> Effective To Date Termination Reason Note: Termination Reason indicates whether party or ECVNA request or triggered by change to registration data.</p> |
| <p><u>Rejected ECVNAA Termination:</u> <i>Original details received in ECVAA-I002 Termination request plus -</i> Rejection Reason</p> |
| <p><u>Confirmed ECVNAA Key Change:</u> ECVNAA ID ECVNAA Key (new key) Effective From Date</p> |
| <p><u>Rejected ECVNAA Key Change:</u> <i>Original details received in Key Change request plus -</i> Rejection Reason</p> |
| <p><u>Confirmed ECVNAA Deletion:</u> <i>Original details received in Termination request plus-</i> Termination Reason Note: This is sent in response to a Termination request where the Termination Date is before the Effective From Date.</p> |
| <p><u>Rejected ECVNAA Deletion:</u> <i>Original details received in Termination request plus-</i> Rejection Reason Note: This is sent in response to a Termination request where the Termination Date is before the Effective From Date.</p> |
| <p><u>Confirmed ECVNAA Reporting Option Change:</u> <i>Authorisation Details after Reporting Option Change request applied</i></p> |
| <p><u>Rejected ECVNAA Reporting Option Change:</u> <i>Original details received in Reporting Option Change request plus -</i> Rejection Reason Note that Reporting Options and details of the second ECVNA will only be reported if the ECVNAA is a dual agent authorisation.</p> |

7.7 ECVAA-I008: (output) MVRNAA Feedback

| | | | |
|---|---|--|---|
| <p>Interface ID: ECVAA-I008</p> | <p>User: BSC Party, MVRNA</p> | <p>Title: MVRNAA Feedback</p> | <p>BSC reference: ECVAA SD: 7.2, 7.3, 7.4, 7.7, 7.8, 7.11, 7.12, A ECVAA BPM: 3.2, 4.9, 4.10, 4.11, 4.14 RETA SCH: 4, B, 3.2# CR 005, CP547, CP571, CP888, P98, Variation 59</p> |
| <p>Mechanism: Manual for Rejections and Deletions;</p> | <p>Frequency: Ad hoc, in response to</p> | <p>Volumes: Low</p> | |

| | | |
|--|---|--|
| Electronic Data File Transfer for Confirmations | MVRNAA requests and registration data changes | |
| Interface Requirement: The ECVA Service shall issue the following MVRNAA Feedback data , in response to MVRNAA requests : <ul style="list-style-type: none"> i. Confirmed MVRNAA - issued to the relevant BM Unit Lead Party, BM Unit Subsidiary Party and MVRNA(s). ii. Rejected MVRNAA - issued to the relevant BM Unit Lead Party, BM Unit Subsidiary Party and MVRNA(s). iii. Confirmed MVRNAA Termination - issued to the relevant BM Unit Lead Party, BM Unit Subsidiary Party and MVRNA(s). iv. Rejected MVRNAA Termination - issued to the relevant BM Unit Lead Party, BM Unit Subsidiary Party or MVRNA. v. Confirmed MVRNAA Key Change - issued to the relevant MVRNA. vi. Rejected MVRNAA Key Change - issued to the relevant MVRNA. vii. Confirmed MVRNAA Deletion - issued to the relevant BM Unit Lead Party, BM Unit Subsidiary Party and MVRNA(s). viii. Rejected MVRNAA Deletion - issued to the relevant BM Unit Lead Party or BM Unit Subsidiary Party or MVRNA. ix. Confirmed MVRNAA Reporting Option Change - issued to the requesting BM Unit Lead Party, BM Unit Subsidiary Party or MVRNA. x. Rejected MVRNAA Reporting Option Change - issued to the requesting BM Unit Lead Party, BM Unit Subsidiary Party or MVRNA. | | |
| The MVRNAA Feedback shall include: | | |
| <u>Confirmed MVRNAA:</u> <i>Original details received in ECVA-1003 Authorisation request plus -</i> MVRNAA ID (to Lead, Subsidiary Party and relevant MVRNA(s)) MVRNAA Key (to MVRNA only, each MVRNA receives their Key) | | |
| <u>Rejected MVRNAA:</u> <i>Original details received in ECVA-1003 Authorisation request plus -</i> Rejection Reason Note: if the rejection is due to non-receipt of matching authorisations, then both parties and the MVRNA are still informed, and the feedback sent to each shall not include another's authentication information. | | |
| <u>Confirmed MVRNAA Termination:</u> <i>Original details received in ECVA-1003 Termination request plus-</i> Effective To Date Termination Reason Note: Termination Reason indicates whether party or MVRNA request or triggered by change to registration data. | | |
| <u>Rejected MVRNAA Termination:</u> <i>Original details received in ECVA-1003 Termination request plus -</i> Rejection Reason | | |
| <u>Confirmed MVRNAA Key Change:</u> MVRNAA ID MVRNAA Key (new key) Effective From Date | | |
| <u>Rejected MVRNAA Key Change:</u> <i>Original details received in Key Change request plus -</i> Rejection Reason | | |

| |
|--|
| <p><u>Confirmed MVRNAA Deletion:</u> <i>Original details received in Termination request plus-</i> Termination Reason Note: This is sent in response to a Termination request where the Termination Date is before the Effective From Date.</p> |
| <p><u>Rejected MVRNAA Deletion:</u> <i>Original details received in Termination request plus-</i> Rejection Reason Note: This is sent in response to a Termination request where the Termination Date is before the Effective From Date.</p> |
| <p><u>Confirmed MVRNAA Reporting Option Change:</u> <i>Authorisation Details after Reporting Option Change request applied</i></p> |
| <p><u>Rejected MVRNAA Reporting Option Change:</u> <i>Original details received in Reporting Option Change request plus -</i> Rejection Reason Note that Reporting Options and details of the second MVRNA will only be reported if the MVRNAA is a dual agent authorisation.</p> |

7.8 ECVAA-I009: (output) ECVN Feedback (Rejection)

| | | | |
|--|---|---|--|
| Interface ID: ECVAA-I009 | User: BSC Party, ECVNA | Title: ECVN Feedback (Rejection) | BSC reference: ECVAA SD: 8.3, A ECVAA BPM: 3.3, 4.22, 4.23, 4.24, 4.25 RETA SCH: 4, B, 3.2 CR 12, CP527, CP703, P98, CP1221 |
| Mechanism: Electronic Data File Transfer | Frequency: Continuous, for rejected ECVNs and ECVN components | Volumes: Medium | |
| <p>Interface Requirement:</p> <p>The ECVAA Service shall issue ECVN Feedback (rejection) to BSC Parties and ECVNAs continuously to report:</p> <ol style="list-style-type: none"> the rejection of ECVNs on receipt; and the rejection of ECVN components during the half-hourly credit check process. <p>The ECVN Feedback (rejection) shall comprise:</p> <p><u>Rejected ECVN:</u></p> <ul style="list-style-type: none"> ECVNA Id ECVNAA Id ECVN ECVNAA Id ECVN Reference Code Effective From Date Effective To Date (optional) Settlement Period (1-50) Energy Contract Volume (MWh) Rejection Reason, including: <ul style="list-style-type: none"> Invalid time stamp Level 2 Credit Default <p>Notes:</p> <ol style="list-style-type: none"> For rejection of ECVNs on receipt, the ECVN Feedback (rejection) shall comprise the original details received in the ECVN (except the ECVNAA Key). | | | |

- ii. For rejection of ECVN components during the half-hourly credit check process, the ECVN Feedback (rejection) shall comprise the single Settlement Period component from the original ECVN which is rejected.
- iii. Each Party and their ECVNA receives feedback on Notifications as determined from the ECVNAA used in submission (subject to Reporting Options selected by the Party and ECVNA for that ECVNAA - see ECVAA-F003).

7.9 ECVAA-I010: (output) MVRN Feedback (Rejection)

| | | | |
|--|---|---|--|
| Interface ID: ECVAA-I010 | User: BSC Party, MVRNA | Title: MVRN Feedback (Rejection) | BSC reference: ECVAA SD: 9.2, A RETA ERR: 2 ECVAA BPM: 3.3, 4.22, 4.23, 4.24, 4.25 RETA SCH: 4, B, 3.2 CR 12, CP527, CP703, P98 CP1221 |
| Mechanism: Electronic Data File Transfer | Frequency: Continuous, for rejected MVRNs and MVRN components | Volumes: Medium | |
| <p>Interface Requirement:</p> <p>The ECVAA Service shall issue MVRN Feedback (rejection) to BSC Parties and MVRNAs continuously to report:</p> <ul style="list-style-type: none"> i. the rejection of MVRNs on receipt; and ii. the rejection of MVRN components during the half-hourly credit check process. <p>The MVRN Feedback (rejection) shall comprise:</p> <p><u>Rejected MVRN:</u></p> <ul style="list-style-type: none"> MVRNA Id MVRNAA Id MVRN MVRNAA Id MVRN Reference Code Effective From Date Effective To Date (optional) Settlement Period (1-50) Metered Volume Fixed Reallocation (MWh) Metered Volume Percentage Reallocation (%) Rejection Reason, including: <ul style="list-style-type: none"> Invalid time stamp Level 2 Credit Default 100% Total Exceeded <p><u>Notes:</u></p> <ul style="list-style-type: none"> i. For rejection of MVRNs on receipt, the MVRN Feedback (rejection) shall comprise the original details received in the MVRN (except the MVRNAA Key). ii. For rejection of MVRN components during the half-hourly credit check process, the MVRN Feedback (rejection) shall comprise the single Settlement Period component from the original MVRN which is rejected. iii. Each Party and their MVRNA receives feedback on Notifications as determined from the MVRNAA used in submission (subject to Reporting Options selected by the Party and MVRNA for that MVRNAA - see ECVAA-F004). | | | |

7.10 ECVAA-I013: (output) Authorisation Report

| | | | |
|---|---|---------------------------------------|---|
| Interface ID: ECVAA-I013 | User: BSC Party, MVRNA, ECVNA | Title: Authorisation Report | BSC reference: ECVAA IRR: E1, E2, P98 |
| Mechanism: Electronic Data File Transfer | Frequency: Daily, on request | Volumes: Low | |
| Interface Requirement: The ECVAA Service shall issue Authorisation Reports to BSC Parties, ECVNAs and MVRNAs once a day ¹⁴ . Note: Reports will only be issued to those parties that have (manually) requested a report (covering a specified date range) to be sent on that day. | | | |
| The Authorisation Report shall comprise: Report Start Date Report End Date | | | |
| <u>ECVNAA data:</u> Data same as 'Confirmed ECVNAA' described for requirement ECVAA-I007: Issue ECVNAA Feedback, except ECVNAA Key. | | | |
| <u>MVRNAA data:</u> Data same as 'Confirmed MVRNAA' described for requirement ECVAA-I008: Issue MVRNAA Feedback, except MVRNAA Key. | | | |
| | | | |

7.11 ECVAA-I014: (output) Notification Report

| | | | |
|--|---|--------------------------------------|--|
| Interface ID: ECVAA-I014 | User: MVRNA, ECVNA, BSC Party | Title: Notification Report | BSC reference: ECVAA IRR: E3, E4 CR 12, CP527, CP858, CP869, P98, P140, P215 |
| Mechanism: Electronic Data File Transfer | Frequency: Daily and in support of disputes | Volumes: Medium | |
| Interface Requirement: The ECVAA Service shall issue Notification Reports to BSC Parties, ECVNAs and MVRNAs once a day. At the end of each Settlement Date, the ECVAA shall report notifications which apply to that Settlement Date to all relevant parties. For the avoidance of doubt this is not notifications received on the relevant Settlement Date. The ECVAA Service shall issue revised Notification Reports to the BSC Parties, ECVNAs and MVRNAs as a result of disputes. A revised report shall only be sent to parties affected by the dispute. | | | |
| The Notification Report shall comprise: | | | |
| <u>Notification Data:</u> | | | |

¹⁴ P98: Note that because the format of the ECVAA-I007 and ECVAA-I008 flows is changing, this flow will also change. The detail of the change will be contained in the IDD where a new version of the flow will be added. The default version of this report will remain the pre-P98 version (i.e. with no report requirements) until further notice.

Settlement Date
 ECVAA Run Number
Day Start Energy Indebtedness Data (to BSC Party Only):
 Actual Energy Indebtedness (MWh) ($\sum_{d28} AEI_{pd}$)
 Metered Energy Indebtedness (MWh) ($\sum_{d28} MEI_{pd}$)
 Cumulative Credit Assessment Energy Indebtedness (MWh) ($CCEI_{pi}$)
Actual Energy Indebtedness Dates (identifies which date range(s) have AEI data)
 From Settlement Date
 To Settlement Date
Metered Energy Indebtedness Dates (identifies which date range(s) have MEI data)
 From Settlement Date
 To Settlement Date

Settlement Period Data
 Settlement Period (1-50)

ECVN Data
 ECVN ECVNAA ID
 ECVN Reference Code
 Energy Contract Volume (MWh)
 ECVNA ID ++
 ECVNAA ID ++
 BSC Party 1 ID
 BSC Party 1 Name
 BSC Party 1 Energy Account Production/Consumption flag
 BSC Party 2 ID
 BSC Party 2 Name
 BSC Party 2 Energy Account Production/Consumption flag

MVRN Data
 MVRN MVRNAA ID
 MVRN Reference Code
 Metered Volume Fixed Reallocation (MWh)
 Metered Volume Percentage Reallocation (%)
 MVRNA ID ++
 MVRNAA ID ++
 BM Unit ID
 Lead Party ID
 Lead Party Name
 Lead Party Energy Account Production/Consumption flag
 Subsidiary Party ID
 Subsidiary Party Name
 Subsidiary Party Energy Account Production/Consumption flag

Indebtedness Data (to BSC Party Only)
 Credit Assessment Credited Energy Volume ($CAQCE_{pi}$)
 Aggregated Energy Contract Volume ($QABC_{pi}$)
 Cumulative Credit Assessment Energy Indebtedness* (MWh) ($CCEI_{pi}$)
 Energy Indebtedness* (MWh) (EI_{pi})
 Credit Cover Percentage (%)
 Credit Limit
Credit Assessment Credited Energy Volume by BMU Type
 FPN Derived Credit Assessment Credited Energy Volume (MWh)
 Non FPN Derived Credit Assessment Credited Energy Volume (MWh)
Account Energy Data (to BSC Party Only)
 Energy Account Production/Consumption flag
 Account Period CA Credited Energy Volume (MWh) ($CAQCE_{ai}$)
 Account Period Energy Contract Volume (MWh) ($QABC_{ai}$)
 Account Cumulative CA Credited Energy Volume* (MWh) ($CCAQCE_{ai}$)
 Account Cumulative Energy Contract Volume* (MWh) ($CQABC_{ai}$)
Account Energy Data by BMU Type
 FPN Derived Account Period CA Credited Energy Volume (MWh)
 FPN Derived Account Cumulative CA Credited Energy Volume* (MWh)
 Non FPN Derived Account Period CA Credited Energy Volume (MWh)
 Non FPN Derived Account Cumulative CA Credited Energy Volume* (MWh)

Credit Limit Warning Data

| |
|--|
| BSC Party Id BSC Party Name |
| <p><u>Notes:</u></p> <ol style="list-style-type: none"> 1. The "Day Start Indebtedness Data" group will contain cumulative figures for the 28 days up to (but not including) period 1 of the reported Settlement Day as follows: <ol style="list-style-type: none"> a. the sum of available Actual Energy Indebtedness; b. the sum of Credit Assessment Energy Indebtedness for Settlement Days where Actual Energy indebtedness is not available. 2. Data items are marked with a "*" to indicate that they are a "cumulative" figure. That is, the value is aggregated over the 29 days up to and including the reported settlement period. 3. Data items are marked with "++" to indicate that they contain the Agent and Authorisation relevant to the party/agent receiving the report. |

7.12 ECVAA-I018: Receive Acknowledgement

See Section 2.2.7.

7.13 ECVAA-I019: Issue Acknowledgement

See Section 2.2.7.

7.14 ECVAA-I022: (output) Forward Contract Report

The Forward Contract Report is sent only to BSC Parties.

Notes:

The report transaction number given on the forward contract report provides a means for determining whether a particular notification was received and processed prior to generation of the report.

- When a notification is loaded, the transaction is allocated a transaction number.
- The Report Transaction Number is the highest transaction which had been applied when the report snapshot view was taken
- The ECVAA-I028 or ECVAA-I029 acceptance feedback flow (which is issued for notifications which are effective within 72 periods of loading) includes the transaction number.

Contract volumes/Reallocation volumes & percentages for Settlement Periods prior to the Report Start Period shall not be included in the report (where this excludes all volumes for a notification, that notification will not appear). The following examples cover the case of a report generated starting on date D when the Report Start Period is P:

| Notification Start date | Notification End date | Notification Period Data | What is reported |
|-------------------------|-----------------------|--|---------------------------|
| D | D | Includes volume for at least one period $\geq P$ | Periods $\geq P$ |
| D | D | No volumes for periods $\geq P$, at least one volume for a period $< P$ | Notification not reported |
| $<D$ | D | Includes volume for at least one period $\geq P$ | Periods $\geq P$ |
| $<D$ | D | No volumes for periods $\geq P$, at least one volume for a period $< P$ | Notification not reported |
| $>D$ | $>D$ | Volume for at least one period | All periods |
| D | $>D$ | Volume for at least one period | All periods |
| $<D$ | $>D$ | Volume for at least one period | All periods |
| Any | Any | No volume for any period | Notification not reported |

For regular reports, Report Start Period will be the first period for which the Submission Deadline has not occurred at report generation time.

For ad hoc reports, the operator may explicitly specify the Report Start Period to allow a report to include data for periods for which the Gate has closed.

BSC Parties may override the default or operator-specified Report Start Period by issuing a Forward Contract Report Start Period Override to the ECVA as described by ECVA-I035. If an override has been requested then the report to the specified Party will include data for all periods on the current day regardless of whether the Gate has closed for that period, i.e. the Report Start Period will be 1.

Data is generally reported using the same Effective From/Effective To date ranges as submitted by the Notification Agent. The exceptions to this are¹⁵:

- where Notifications are split into two (Current Date and Future),
- where a Notifications Effective From Date is changed from a past day to the Current Date (i.e. the Applied From Date),
- where a Notification is truncated by a subsequently received Notification.

¹⁵ Variation 43

- where a Dual Notification is split to be consistent with date ranges submitted by a counterparty's appointed agent.

These cases are described in the Notification processing in ECVAA-F005 and ECVAA-F006 and in Section 7.24.3 which describes detailed aspects of Notification Storage and Reporting.

Only matched data is reported in the Forward Contract Report. For Single Notifications however, data is automatically matched and will always be available for reporting.

| | | | |
|--|----------------------------|--|---|
| Interface ID: ECVAA-I022 | User: BSC Party | Title: Forward Contract Report | BSC reference: CR 051 CR 085 P4, CP725, CP877, P110 |
| Mechanism: Electronic Data File Transfer | Frequency: Daily | Volumes: Medium | |
| Interface Requirement: The ECVAA Service shall issue Forward Contract Reports to BSC Parties once a day to report each party's contractual position for the current day and the next 7 days. This report shall be based on a snapshot time of 18:30. The flow will not include any notifications which were rejected on receipt, but will include notification data for the current day which has been rejected by the credit check process. All BSC parties will be sent a forward contract report, even if they are not a party to any notifications in the period. A report covering a longer date range can be requested by a Party following receipt of ECVAA-I039. The Forward Contract Report shall comprise: Report Start Date Report End Date Report Snapshot Time Report Transaction Number Report Start Period <u>Energy Account data:</u> Production/Consumption flag <u>Originator Energy Contract Volume Notification Agent Authorisation data:</u> ECVNAA ID* ECVNA ID* ECVNAA BSC Party Sequence Other BSC Party ID Other BSC Party P/C Flag ECVNAA Effective From Date ECVNAA Effective To Date (optional) <u>Energy Contract Volume Notification data:</u> ECVN ECVNAA ID ECVN Reference Code ECVN Effective From Date ECVN Effective To Date (optional) ECVNA ID* (null if authorisation same as Originator record) ECVNAA ID* (null if authorisation same as Originator record) ECVNAA Effective From Date (null if authorisation same as Originator record) ECVNAA Effective To Date (null if authorisation same as Originator record) | | | |

| |
|--|
| Settlement Period From |
| Settlement Period To (null if Volume applies to single period) |
| Energy Contract Volume (to other party) |
| <u>Originator Meter Volume Reallocation Notification Agent Authorisation data:</u> |
| MVRNAA ID* |
| MVRNA ID* |
| BM Unit ID |
| Lead or Subsidiary Party indicator |
| Other BSC Party ID |
| Other BSC Party P/C Flag |
| MVRNAA Effective From |
| MVRNAA Effective To (optional) |
| <u>Meter Volume Reallocation Notification data:</u> |
| MVRN MVRNAA ID |
| MVRN Reference Code |
| MVRN Effective From Date |
| MVRN Effective To Date (optional) |
| MVRNA ID* (null if authorisation same as Originator record) |
| MVRNAA ID* (null if authorisation same as Originator record) |
| MVRNAA Effective From Date (null if authorisation same as Originator record) |
| MVRNAA Effective To Date (null if authorisation same as Originator record) |
| Settlement Period From |
| Settlement Period To (null if Volume/Percentage apply to single period) |
| Metered Volume Fixed Reallocation (to Subsidiary party) |
| Metered Volume Percentage Reallocation (to Subsidiary party) |
| *- Data as relevant to the BSC Party receiving the report. |
| location (to Subsidiary party) |

7.15 ECVA-1024: (input) Credit Cover Minimum Eligible Amount Request

| | | | |
|--|-----------------------------|---|--------------------------------|
| Interface ID: ECVAA-I024 | Source: BSC Party | Title: Credit Cover Minimum Eligible Amount Request | BSC reference: CP519 |
| Mechanism: Manual | Frequency: Ad hoc | Volumes: Low | |
| Interface Requirement: | | | |
| The ECVAA shall receive Credit Cover Minimum Eligible Amount Requests from BSC Parties on an ad hoc basis. | | | |
| The Credit Cover Minimum Eligible Amount Request data shall comprise: | | | |
| BSC Party ID | | | |
| | | | |

7.16 ECVAA-I025: (output) Credit Cover Minimum Eligible Amount Report

| | | | |
|---|--|--|--|
| Interface ID: ECVAA-I025 | User: BSC Party, FAA, BSCCo Ltd | Title: Credit Cover Minimum Eligible Amount Report | BSC reference: CP519, CP1313 |
| Mechanism: Manual | Frequency: Ad hoc, in response to Credit Cover Minimum Eligible Amount Requests | Volumes: Low | |
| Interface Requirement: The ECVAA shall issue Credit Cover Minimum Eligible Amount Reports to the BSCCo Ltd, FAA and BSC Parties in response to Credit Cover Minimum Eligible Amount Requests. The Credit Cover Minimum Eligible Amount Report data shall comprise: BSC Party ID Waiting Period Start Date Waiting Period End Date Minimum Eligible Amount Rule (75% or 80%) Maximum Indebtedness Settlement Day Maximum Indebtedness Settlement Period (1-50) Minimum Eligible Amount (MWh) Note: the Waiting Period Start Date is the date of receipt of the Credit Cover Minimum Eligible Amount Request by the ECVAA. | | | |

7.17 ECVA-1028: (output) ECVN Acceptance Feedback

Several variants of the ECVA-1028 ECVN Acceptance Feedback Report are supported. The variant received depends on whether the recipient is the submitting ECVNA or associated Party and what reporting option has been selected (see ECVA-F003).

All variants of the report have the same basic structure but may contain differing sets of optional fields and require alternative interpretation of particular fields. The contents of the report depend on reporting option selected for each ECVNA or Party for the associated ECVNAA. The reporting options are:¹⁶

1. No Feedback; in this case no feedback report is sent to the ECVNA or Party specified for any ECVN submitted under the ECVNAA.
2. Feedback (Acceptance only); if a potential recipient has specified this option, a feedback report is sent only if the recipient is the submitting ECVNA or associated Party. The report contains details of data accepted from the submitted ECVN only.
3. Feedback (Matching); if a potential recipient has specified this option, a feedback report is sent to them if they are the submitting ECVNA or associated Party with full details of the submitted ECVN and matching data. They will also receive a feedback report if they are the non-submitting ECVNA or associated Party. In the latter case the report will contain basic details of the latest processed ECVN for the associated counterparty and matching data. The variant is only available after the P98 BSC Implementation Date. The table below details what will be provided to each interested Party or Agent.

The feedback report is only generated if the notification start date is within the next 72 periods. The feedback report will contain all Settlement Periods (i.e. from period 1) in each reported Settlement Day.

The table below lists all fields that could be contained in the report and the expected content for each reporting option (1, 2 or 3 above) where the recipient is the submitter (submitting ECVNA or associated Party) or non-submitter (non-submitting ECVNA or associated Party). Note that for a Single Notification, the ECVNA and both Parties are associated with submission and their reports will be generated as shown in the “Submitter” columns in the table below.

| | | Submitter | | Non-submitter | |
|--|---------------------------------|------------------|-----------------------|-------------------|-----------------------|
| | Reporting option / Report Field | Match (option 3) | Acceptance (option 2) | Match* (option 3) | Acceptance (option 2) |

¹⁶ Note that flexible reporting preferences for version numbers overrule specific report requirements. For example, in order to receive Matching Data in the ECVA-1028 a Party must elect to receive V002 of the flow (V001 will be the default) and specify that it wishes to receive Matching Data via a Report Requirement Change Request (ECVA-1002); a subsequent reversion to V001 of the ECVA-1028, effected through flexible reporting would negate the Report Requirement Change Request.

| | | Submitter | | Non-submitter | |
|----------------------------|--|--|--|--|-----------------------|
| | Reporting option / Report Field | Match (option 3) | Acceptance (option 2) | Match* (option 3) | Acceptance (option 2) |
| Header | ECVN Data (Group) | | | | No Report |
| | ECVNA ID | Submitting ECVNA | Submitting ECVNA | Non-submitting ECVNA | |
| | ECVNAA ID | Submitter's ECVNAA ID | Submitter's ECVNAA ID | Not Reported | |
| | ECVN ID Originator's ECVNAA ID | ECVN ECVNAA ID | ECVN ECVNAA ID | ECVN ECVNAA ID | |
| | ECVN ID Reference Code | ECVN Reference | ECVN Reference | ECVN Reference | |
| | Effective From Date | Submitted Date | Submitted Date | Submitted Date** | |
| | Effective To Date | Submitted Date | Submitted Date | Submitted Date** | |
| | First Effective Period | Applied from Period | Applied from Period | Applied from Period** | |
| | ECVN Filename | Submitted Filename | Submitted Filename | Last Filename from non-submitter | |
| | ECVN File Sequence Number | Submitted File Seq Number | Submitted File Seq Number | Last File Seq Num from non-submitter | |
| | ECVAA Transaction Number | Loaded Tx for Submitted File | Loaded Tx for Submitted File | Loaded Tx for Submitted File | |
| Acc. Feedback | <u>Accepted ECVN Period Data (Group)</u> | Optional – only if period data submitted | Optional – only if period data submitted | Not Reported | |
| | Settlement Period | Settlement Period | Settlement Period | | |
| | Energy Contract Volume | Volume | Volume | | |
| Matching / No-match Report | <u>Matched Contract Dates (Group)</u> | | Not Reported | | |
| | Settlement Date | Dates started or starting in the next 72 periods | | Dates started or starting in the next 72 periods | |
| | Matched Contract Volumes (Group) | | | | |
| | Settlement Period | From Period 1 of Current Day | | From Period 1 of Current Day | |

| | | Submitter | | Non-submitter | |
|--|------------------------------------|----------------------------------|-----------------------|----------------------------------|-----------------------|
| | Reporting option / Report Field | Match (option 3) | Acceptance (option 2) | Match* (option 3) | Acceptance (option 2) |
| | Recipient Energy Contract Volume | Latest Volume from Submitter | | Latest Volume from Non-Submitter | |
| | Other Party Energy Contract Volume | Latest Volume from Non-Submitter | | Latest Volume from Submitter | |
| | Matched Energy Contract Volume | Latest Matched Volume | | Latest Matched Volume | |

* - Note that, in this case, a match report will only be sent to the non-submitter if they have already had a corresponding ECVN processed, and the start date of that ECVN is within the next 72 periods. Any report generated before this point would have contained only the other ECVNAs latest, unmatched position.

In summary, the 3 possible report variants are:

- Submitter / No match; the basic Acceptance Feedback Report with no matching.
- Submitter / Match; full acceptance feedback with matching report.
- Non-Submitter / Match; essentially just a matching report.

** - Data reported in these fields is as reported to the submitting ECVNA and their associated Party. This gives the non-submitter information on how the position held on behalf of the counter party and consequently the matched position may have changed.

| | | | |
|---|---|--|---|
| Interface ID: ECVAA-I028 | User: BSC Party, ECVNA | Title: Energy Contract Volume Notification (ECVN) Acceptance Feedback | BSC reference: P4, CP725, P98 |
| Mechanism: Electronic Data File Transfer | Frequency: Continuous, for accepted ECVNs | Volumes: High | |
| Interface Requirement: <p>The ECVAA Service shall issue Energy Contract Volume Notification Acceptance Feedback to the submitting ECVNA and the associated Party (or Parties) continuously to report the acceptance of ECVNs where settlement period 1 of the effective from date on the ECVN starts within a parameterised 36 hours (72 settlement periods) of receipt of the ECVN.</p> <p>Where a position has already been received from the non-submitting ECVNA, the ECVAA Service shall also issue Energy Contract Volume Notification (ECVN) Acceptance Feedback reports to the non-submitting ECVNA and their associated BSC Party continuously to report the matching of ECVN period data where settlement period 1 of the settlement date for which the match occurs starts within a parameterised 36 hours (72 settlement periods) of the match being made.</p> | | | |
| The ECVN Acceptance Feedback shall comprise: | | | |
| <u>Accepted Energy Contract Volume Notification:</u> ECVNA ID ECVNAA ID (optional) ECVN ID - Originator's ECVNAA ID ECVN ID - Reference Code Effective From Date Effective To Date (optional) First Effective Period ECVN Filename ECVN File Sequence Number ECVAA Transaction Number Energy Contract Volumes (optional) Settlement Period (1-50) Energy Contract Volume (MWh) <u>Matched Contract Dates (optional)</u> <i>only for settlement dates within 72 settlement periods of receipt of notification</i> Settlement Date <u>Matched Contract Volumes (optional)</u> Settlement Period (1-50) Recipient Party Energy Contract Volume (MWh) Other Party Energy Contract Volume (MWh) Matched Energy Contract Volume (MWh) | | | |
| Notes: <p>The acceptance feedback message echoes back the data sent in the ECVN (with the exception of the key) with the following additions or modifications:</p> <p>Effective From Date: This will contain the Applied From Date. This will be the later of the Effective From Date received in the notification and the Current Date. The Current Date is the earliest Settlement Date for which at least one Settlement Period has not passed the Submission Deadline at the time the ECVAA receives the notification.</p> <p>First Effective Period: This will be set to the number of the first settlement period on the Applied From Date of the ECVN for which the Submission Deadline had not passed at the time of receipt of the ECVN. This value provides an indication of any period data in the ECVN which may have been ignored because the ECVN arrived after the Submission Deadline for some periods. The notification has been applied starting with <first effective period> on the <effective from date> reported here.</p> <p>ECVAA Transaction Number: This value is the transaction number under which the</p> | | | |

| | | | |
|---|-------------------------------------|--|---|
| Interface ID: ECVAA-I028 | User: BSC Party, ECVNA | Title: Energy Contract Volume Notification (ECVN) Acceptance Feedback | BSC reference: P4, CP725, P98 |
| <p>ECVN was loaded. This can be compared to the transaction number provided in the Forward Contract Report to determine if an ECVN is included in the report. The ECVAA shall ensure that Acceptance Feedback Reports generated in response to notifications from a single Agent have sequence numbers which follow the same order as the transaction numbers which they contain.</p> <p>Where the recipient is the submitter of the ECVN triggering this report, the ECVNA Id and ECVNAA Id are those of the Agent associated with the recipient of the report. Where the recipient is the non-submitter, the ECVNAA Id is always null.</p> <p>The Matched Contract Dates group will be reported for any Settlement Date where Settlement Period 1 of that date starts within a parameterised 36 hours (72 settlement periods) of receipt of the ECVN.</p> <p>The Matched Contract Volumes group contains the latest received Energy Contract Volume for each Party from their nominated ECVNA and the latest matched Energy Contract Volume. Matched data is reported from Settlement Period 1 of the first day covered by the Notification, but only Settlement Periods for which an ECVNA has submitted data will be reported. The sign of matched volume values is consistent with that in the received ECVNs.</p> <p>The ECVNA or BSC Party will only receive an Energy Contract Volume Notification Acceptance Feedback if they have opted to receive them in their Reporting Options (see ECVAA-F003) for the associated ECVNAA. Furthermore, the matched group will be reported only if the recipient has selected matched data in their Reporting Options</p> | | | |

7.18 ECVAA-I029: (output) MVRN Acceptance Feedback

Several variants of the ECVAA-I029 MVRN Acceptance Feedback Report are supported. The variant received depends on whether the recipient is the submitting MVRNA or associated Party and what reporting option has been selected (see ECVAA-F004).

All variants of the report have the same basic structure but may contain differing sets of optional fields and require alternative interpretation of particular fields. The contents of the report depend on reporting option selected for each MVRNA or Party for the associated MVRNAA. The reporting options are:¹⁷

1. No Feedback; in this case no feedback report is sent to the MVRNA or Party specified for any MVRN submitted under the MVRNAA.
2. Feedback (Acceptance Only); if a potential recipient has specified this option, a feedback report is sent only if the recipient is the submitting MVRNA or associated Party. The report contains details of the submitted MVRN and no matching data.

¹⁷ Note that flexible reporting preferences for version numbers overrule specific report requirements. For example, in order to receive Matching Data in the ECVAA-I029 a Party must elect to receive V002 of the flow (V001 will be the default) and specify that it wishes to receive Matching Data via a Report Requirement Change Request (ECVAA-I003); a subsequent reversion to V001 of the ECVAA-I029, effected through flexible reporting would negate the Report Requirement Change Request.

3. Feedback (Matching); if a potential recipient has specified this option, a feedback report is sent them if they are the submitting MVRNA or associated Party with full details of the submitted MVRN and matching data. They will also receive a feedback report if they are the non-submitting MVRNA or associated Party. In the latter case the report will contain basic details of the latest processed MVRN for the associated counterparty and matching data. The variant is only available after the P98 Implementation Date. The table below details what will be provided to each interested Party or Agent.

The feedback report is only generated if the notification start date is within the next 72 periods. The feedback report will contain all Settlement Periods (i.e. from period 1) in each reported Settlement Day.

The table below lists all fields that could be contained in the report and the expected content for each reporting option (1, 2 or 3 above) where the recipient is the submitter (submitting MVRNA or associated Party) or non-submitter (non-submitting MVRNA or associated Party). Note that for a Single Notification, the MVRNA and both Parties are associated with submission and their reports will be generated as shown in the “Submitter” columns in the table below.

| | | Submitter | | Non-submitter | |
|---------------|--|--|--|--------------------------------------|-----------------------|
| | Reporting option / Report Field | Match (option 3) | Acceptance (option 2) | Match* (option 3) | Acceptance (option 2) |
| Header | <u>MVRN Data (Group)</u> | | | | No Report |
| | MVRNA ID | Submitting MVRNA | Submitting MVRNA | Non-submitting MVRNA | |
| | MVRNAA ID | Submitter's MVRNAA ID | Submitter's MVRNAA ID | Not Reported | |
| | MVRN ID Originator's MVRNAA ID | MVRN MVRNAA ID | MVRN MVRNAA ID | MVRN MVRNAA ID | |
| | MVRN ID Reference Code | MVRN Reference | MVRN Reference | MVRN Reference | |
| | Effective From Date | Submitted Date | Submitted Date | Submitted Date** | |
| | Effective To Date | Submitted Date | Submitted Date | Submitted Date** | |
| | First Effective Period | Applied from Period | Applied from Period | Applied from Period** | |
| | MVRN Filename | Submitted Filename | Submitted Filename | Last Filename from non-submitter | |
| | MVRN File Sequence Number | Submitted File Seq Number | Submitted File Seq Number | Last File Seq Num from non-submitter | |
| | MVRN Transaction Number | Loaded Tx for Submitted File | Loaded Tx for Submitted File | Loaded Tx for Submitted File | |
| Acc. Feedback | <u>Accepted MVRN Period Data (Group)</u> | Optional – only if period data submitted | Optional – only if period data submitted | Not Reported | |
| | Settlement Period | Settlement Period | Settlement Period | | |

| | | Submitter | | Non-submitter | |
|----------------------------|--|--|-----------------------|--|-----------------------|
| | Reporting option / Report Field | Match (option 3) | Acceptance (option 2) | Match* (option 3) | Acceptance (option 2) |
| | Meter Volume Fixed Reallocation | Volume | Volume | | |
| | Meter Volume Percentage Reallocation | Percentage | Percentage | | |
| Matching / No Match Report | <u>Matched Reallocation Dates (Group)</u> | | Not Reported | | |
| | Settlement Date | Dates started or starting in the next 72 periods | | Dates started or starting in the next 72 periods | |
| | Matched Reallocations (Group) | | | | |
| | Settlement Period | From Period 1 of Current Day | | From Period 1 of Current Day | |
| | Recipient Metered Volume Fixed Reallocation | Latest Volume from Submitter | | Latest Volume from Non-Submitter | |
| | Recipient Metered Volume Percentage Reallocation | Latest Percentage from Submitter | | Latest Percentage from Non-Submitter | |
| | Other Party Metered Volume Percentage Reallocation | Latest Volume from Non-Submitter | | Latest Volume from Submitter | |
| | Other Party Metered Volume Percentage Reallocation | Latest Percentage from Non-submitter | | Latest Percentage from Submitter | |
| | Matched Metered Volume Percentage Reallocation | Latest Matched Volume | | Latest Matched Volume | |
| | Matched Metered Volume Percentage Reallocation | Latest Matched Percentage | | Latest Matched Percentage | |

* - Note that, in this case, a match report will only be sent to the non-submitter if they have already had a corresponding MVRN processed, and the start date of that MVRN is within the next 72 periods. Any report generated before this point would have contained only the other MVRNA's latest, unmatched position.

In summary, the 3 possible report variants are:

- Submitter / No match; the basic Acceptance Feedback Report with no matching.
- Submitter / Match; full acceptance feedback with matching report.
- Non-Submitter / Match; essentially just a matching report.

**** - Data reported in these fields is as reported to the submitting MVRNA and their associated Party. This gives the non-submitter information on how the position held on behalf of the counter party and consequently the matched position may have changed.**

| | | | |
|---|---|---|---|
| Interface ID: ECVAA-I029 | User: BSC Party, MVRNA | Title: Meter Volume Reallocation Notification (MVRN) Acceptance Feedback | BSC reference: P4, CP725, P98 |
| Mechanism: Electronic Data File Transfer | Frequency: Continuous, for accepted MVRNs | Volumes: Medium | |
| Interface Requirement: The ECVAA Service shall issue Meter Volume Reallocation Notification Acceptance Feedback to the submitting MVRNA and the associated Party (or Parties) continuously to report the acceptance of MVRNs where settlement period 1 of the effective from date on the MVRN starts within a parameterised 36 hours (72 settlement periods) of receipt of the MVRN. Where a position has already been received from the non-submitting MVRNA, the ECVAA Service shall also issue Meter Volume Reallocation Notification Acceptance Feedback reports to the non-submitting MVRNA and their associated BSC Party continuously to report the matching of MVRNs where settlement period 1 of the settlement date for which the match occurs starts within a parameterised 36 hours (72 settlement periods) of the match being made. The Meter Volume Reallocation Notification Acceptance Feedback shall comprise: | | | |
| <u>Accepted Meter Volume Reallocation Notification:</u> MVRNA ID MVRNAA ID (optional) MVRN ID - Originator's MVRNAA ID MVRN ID - Reference Code Effective From Date Effective To Date (optional) First Effective Period MVRN Filename MVRN File Sequence Number ECVAA Transaction Number MVR Reallocations (optional) Settlement Period (1-50) Metered Volume Fixed Reallocation (MWh) Metered Volume Percentage Reallocation (%) <u>Matched Reallocation Dates (optional)</u> <i>only for settlement dates within 72 settlement periods of receipt of matching notification</i> Settlement Date <u>Matched Reallocations (optional)</u> Settlement Period (1-50) Recipient Metered Volume Fixed Reallocation (MWh) Recipient Metered Volume Percentage Reallocation (%) Other Party Metered Volume Fixed Reallocation (MWh) Other Party Metered Volume Percentage Reallocation (%) Matched Metered Volume Fixed Reallocation (MWh) Matched Metered Volume Percentage Reallocation (%) | | | |
| Notes: The acceptance feedback message echoes back the data sent in the MVRN (with the exception of the key) with the following additions or modifications: Effective From Date: This will contain the Applied From Date. This will be the later of the Effective | | | |

From Date received in the notification and the Current Date. The Current Date is the earliest Settlement Date for which at least one Settlement Period has not passed the Submission Deadline at the time the ECVAAs receive the notification.

First Effective Period: This will be set to the number of the first settlement period on the Applied From Date of the MVRN for which the Submission Deadline had not passed at the time of receipt of the MVRN. The notification has been applied starting with <first effective period> on the <effective from date> reported here.

ECVAA Transaction Number: This value is the transaction number under which the MVRN was loaded. This can be compared to the transaction number provided in the Forward Contract Report to determine if an MVRN is included in the report. The ECVAAs shall ensure that Acceptance Feedback Reports generated in response to notifications from a single Agent have sequence numbers which follow the same order as the transaction numbers which they contain.

Where the recipient is the submitter of the MVRN triggering this report, the MVRNA Id and MVRNAA Id are those of the Agent associated with the recipient of the report. Where the recipient is the non-submitter, the MVRNAA Id is always null.

The Matched Reallocation Dates group will be reported for any Settlement Date where Settlement Period 1 of that date starts within a parameterised 36 hours (72 settlement periods) of receipt of the MVRN.

The Matched Reallocations group contains the latest received Metered Volume Reallocation for each Party from their nominated MVRNA and the latest matched Metered Volume Reallocation. Matched data is reported from Settlement Period 1 of the first day covered by the Notification, but only Settlement Periods for which a MVRNA has submitted data will be reported. The sign of matched volume values is consistent with that in the received MVRNs.

The MVRNA or BSC Party will only receive a Meter Volume Reallocation Notification Acceptance Feedback if they have opted to receive them in their Reporting Options (see ECVAAs-F004) for the associated MVRNAA. Furthermore, the matched and unmatched groups will be reported only if the recipient has selected matched data in their Reporting Options.

7.19 Forward Contract Report Start Period Override

| | | | |
|--|--|--|---|
| Interface ID: ECVAA-I035 | User: BSC Party, ECVNA, MVRNA | Title: Forward Contract Report Start Period Override | BSC reference: P4, P17, CP877 |
| Mechanism: Manual | Frequency: As required | Volumes: Low | |
| Interface Requirement: The ECVAA Service shall receive Forward Contract Report Start Period Override requests from BSC Parties as required. The Forward Contract Report Start Period Override request shall comprise: Participant Id Participant Name Override Default Report Start Period (Y or N) Notes: <ul style="list-style-type: none">i. The default Report Start Period for the Forward Contract Report (see ECVAA-I022: Issue Forward Contract Report) will be the first period for which the Submission Deadline has not occurred at report generation time.ii. To override this default a participant should submit a request to the ECVAA with an Override Default Report Start Period value of Y.iii. To cancel a previous override request, i.e. to revert to the default, a participant should submit a request to the ECVAA with an Override Default Report Start Period value of N.iv. The override or cancellation request takes affect for all reports issued after the request has been processed by the ECVAA. | | | |

7.20 ECVAA-I021: (output) Credit Limit Warning

| | | | |
|--|---|---------------------------------------|---------------------------------------|
| Interface ID: ECVAA-I021 | User: BSC Party, BSCCo Ltd | Title: Credit Limit Warning | BSC reference: CR 12, CP703 |
| Mechanism: Manual | Frequency: Ad hoc, when credit usage at warning level | Volumes: | |
| Interface Requirement: The ECVAA Service shall issue a Credit Limit Warning to BSCCo Ltd and the relevant BSC Party on an ad hoc basis, when a BSC Party's credit usage reaches warning level. The Party Credit Limit Warning shall comprise: <u>Credit Limit Warning</u> BSC Party Id BSC Party Name Credit Cover Percentage (%) Credit Limit (MWh) | | | |

7.21 ECVAA-I037: (input) Receive Volume Notification Nullification Request

| | | | |
|--|-----------------------------|---|-------------------------------|
| Interface ID: ECVAA-I037 | Source: BSC Party | Title: Receive Volume Notification Nullification Request (VNNR) | BSC reference: P110 |
| Mechanism: Manual | Frequency: Ad hoc | Volumes: Low | |
| Interface Requirement: The ECVAA Service shall receive VNNR data from BSC Parties as required. Each request shall provide the name, password and signature of an appropriate Authorised Signatory. The VNNR data shall comprise: Party ID Party Name Party Energy Account Production/Consumption Flag Party Contact Email Address Party Contact Telephone No. Counter-Party ID Counter-Party Name Counter-Party Energy Account Production/Consumption Flag Requested Nullification Effective Date and Period Associated Authorisation Termination Indicator Party VNNR Reference Amendment Flag Note: The Associated Authorisation Termination Indicator is used to inform the ECVAA that there are Authorisation Termination Requests associated with this VNNR, and that these should be processed prior to processing the VNNR. | | | |
| Physical Interface Issues: | | | |

7.22 ECVAA-I038: (output) Issue Volume Notification Nullification Confirmation Report

| | | | |
|--|----------------------------------|---|--------------------------------------|
| Interface ID: ECVAA-I038 | User: BSC Party | Title: Issue Volume Notification Nullification Confirmation Report (VNNCR) | BSC reference: P110 CP1169 |
| Mechanism: Manual - via email | Frequency: As Required | Volumes: Low | |
| Interface Requirement: The ECVAA Service shall issue VNNCRs in the following circumstances: i. To confirm an accepted VNNR - issued to both the requesting party and counter-party ii. In response to a received BSC Panel authorised Section H Volume Notification Nullification – issued to both Parties to the nullified Notification. iii. To confirm a rejected VNNR - issued to the requesting party only, in response to a BSC Party raised VNNR. The VNNCR shall comprise: Party ID Party Name Party Energy Account Production/Consumption Flag Counter-Party ID Counter-Party Name Counter-Party Energy Account Production/Consumption Flag | | | |

Nullification Effective Date and Period (if VNNR is accepted)
 Party VNNR Reference or the words 'SECTION H' in the case of a BSC Panel authorised Volume
 Notification Nullifications for a Section H Default.
 ECVAA Reference
 Acceptance / Rejection Flag
 Rejection Reason (if VNNR is rejected)
 Rejection Details (if VNNR is rejected)

Physical Interface Details:

Rejection Details may include, for example, a list of outstanding authorisations.

VNNCRs shall be issued as emails during Business Hours only, where for the purposes of this requirement, Business Hours are defined as 9am-5pm on a Business Day. Furthermore, the ECVAA Service shall issue VNNCRs within 1 hour from receipt of the associated Volume Notification Nullification, where the hour is measured only during Business Hours. On receipt of a valid amendment VNNR from a Party, the hour will be re-started from the time of receipt of the amendment.

The ECVAA operator shall inform the requesting Party and Counter-Party by telephone that a VNNCR has been issued. Failure to make telephone contact with either the requesting Party or Counter-Party will not delay nullification processing.

7.23 ECVAA-I039: (output) Issue Nullification Completion Report

| | | | |
|---|----------------------------------|---|--------------------------------------|
| Interface ID: ECVAA-I039 | User: BSC Party | Title: Issue Nullification Completion Report | BSC reference: P110 CP1169 |
| Mechanism: Manual - via email | Frequency: As required | Volumes: Low | |
| Interface Requirement: The ECVAA Service shall issue a Nullification Completion Report to BSC Parties. The Nullification Completion Report shall comprise: Party ID Party Name Party Energy Account Production/Consumption Flag Counter-Party ID Counter-Party Name Counter-Party Energy Account Production/Consumption Flag Nullification Effective Date and Period Party VNNR Reference or the words 'SECTION H' in the case of a BSC Panel authorised Volume Notification Nullifications for a Section H Default. ECVAA Reference Completion date and time (GMT) | | | |
| Physical Interface Details: The ECVAA systems shall generate and send the Nullification Completion Report as emails. | | | |

7.24 Additional Clarification on ECVAAs Interfaces

7.24.1 Sign Convention

This section clarifies the notes given in the spreadsheets regarding the sign conventions used for Energy Contract Volume Notifications (ECVAA-I004) and the reporting of this data in the subsequent Notification Reports (ECVAA-I014) and Forward Contract Reports (ECVAA-I022). The table below details the Sign Convention where Party 1 is selling and Party 2 is buying and then vice versa.

| Party | Buying / Selling | I004 | I014 | I022 |
|-------|------------------|----------|----------|----------|
| 1 | Selling | Positive | Positive | Positive |
| 2 | Buying | Positive | Positive | Negative |
| 1 | Buying | Negative | Negative | Negative |
| 2 | Selling | Negative | Negative | Positive |

In summary the ECVAA-I004 flows and ECVAA-I014 reports always use the sign relative to Party 1, but the ECVAA-I022 report uses the sign specific to the Party who is receiving the report.

7.24.2 Notes on functionality

The following text is provided for additional clarification. It is included in the IDD for convenience. However, this information is outside the scope of the IDD and the IDD is not the definitive location for such functional detail. For definitive information on functionality, the reader is referred to the ECVAA URS, and in the event of inconsistency between the text here and the URS, it is the URS that prevails.

This section explains how the ECVN interface is used, with examples.

ECVN Ids:

- 1) Each Notification (ECVN) will include the ECVNA Id (in the header record), ECVNAA Id, ECVNAA Key, and ECVN Id (ECVNAA Id + reference code).
- 2) The ECVNAA Id exists twice in each Notification - once to determine the Agent and Parties to this Notification, and then again within the ECVN Id to enable the uniqueness of a Notification for a given pair of trading Parties.
- 3) The ECVN Id is unique across all Agents. It is a combination of 2 attributes - the ECVNAA Id of the Agent, followed by a reference code.
- 4) The ECVNAA Id within the ECVN Id has restrictions applied to it. It must either be the ECVNAA Id of the Agent submitting the ECVN, or the ECVNAA Id of an Agent whose ECVNAA has now expired and who once submitted ECVNs for the same pair of trading Parties.

- 5) The reference code should be unique within an ECVNAA Id to ensure that the ECVN Id is unique and is hence processed as an Additional Notification. If the reference code is not unique within the ECVNAA Id then the ECVN will be processed as a Replacement Notification.
- 6) Where the ECVN Amendment Type is set to 'Additional' or 'Replacement', the ECVA shall reject any notifications that do not follow the appropriate conventions as described in 5) above. For example, if an ECVN is submitted with a unique reference code within an ECVNAA Id, implying that an Additional Notification is intended, and the ECVN Amendment Type is set to 'Replacement', the ECVA shall reject the notification.

EXAMPLE:

Consider trading relationships between Party A and Party B, and Party B and Party C.

Party A and B use both ECVNA1 and ECVNA2 (ECVNAA Id 101 and ECVNAA Id 102)

Party B and C use ECVNA1 (ECVNAA Id 103)

Notification

Here 'ECV' followed by a 6 character integer is being used as the reference code.

- Agent ECVNA1, ECVNAA Id 101, ECVN Id 101 ECV000001 is an Additional notification for Party A and B

- Agent ECVNA2, ECVNAA Id 102, ECVN Id 102 ECV000001 is an Additional notification for Party A and B

- Agent ECVNA1, ECVNAA Id 103, ECVN Id 103 ECV000001 is an Additional notification for Party B and C

- Agent ECVNA1, ECVNAA Id 101, ECVN Id 101 ECV000002 is an Additional notification for Party A and B

- Agent ECVNA1, ECVNAA Id 101, ECVN Id 101 ECV000001 is a Replacement notification for Party A and B

- Agent ECVNA2, ECVNAA Id 101, ECVN Id 101 ECV000001 is rejected as ECVNAA Id 101 belongs to another active Agent

The Parties are responsible for ensuring their other agents are able to maintain their Notifications. If ECVNAA Id 101 is then terminated (i.e. Agent ECVNA1 no longer acts on behalf of Parties A and B), then the Parties must inform another agent of their Notifications. The following Notification could then be submitted:

- Agent ECVNA2, ECVNAA Id 102, ECVN Id 101 ECV000001 is a Replacement notification for Party A and B

- Agent ECVNA2, ECVNAA Id 102, ECVN Id 102 ECV000002 is an Additional notification for Party A and B
- Agent ECVNA2, ECVNAA Id 102, ECVN Id 102 ECV000002 is an Replacement notification for Party A and B
- Agent ECVNA2, ECVNAA Id 102, ECVN Id 101 ECV000005 is rejected as this does not exist to be overwritten

7.24.3 Notes on Notification Processing and Reporting

In general Notifications are stored (and reported in the ECVAIA-I022) using the same date range as Notified. There are some exceptions to this, and this section describes the circumstances. This processing applies equally to ECVNs and MVRNs.

Note that the Current Date is the earliest date for which not all Settlement Periods in the day have passed the Submission Deadline and the Applied From Date (as reported in the ECVAIA-I028/ECVAIA-I029) is the later of the Current Date and the Effective From Date in a received Notification.

Data for the Current Date is never changed for those periods where the Submission Deadline has already passed.

To determine the date range(s) stored (and reported):

- If Effective From = Effective To, the Notification will be stored as received (Multi-Day flag = "S").
- Otherwise (the Notification spans multiple dates):
 - For Notification with Effective From Date > Current Date: the Notification will be stored as received (Multi-Day flag = "M")
 - Otherwise (For a Notification with Applied From Date = Current Date):
 - If there is an exact match between the Notification and the data already held by ECVAIA for the notification (including the case where there is currently no data on the database) for **all** periods for which the Submission Deadline has passed, then the Notification is stored as a single date range from the Applied From Date to the specified Effective To Date (Multi-Day flag = "M").
 - Otherwise, the Notification is stored as two records, a single day for the Current Date (Multi-Day flag = "M" *unless* Current Date is a Clock Change Day, in which case the Periods are converted to 46/50 period day and Multi-Day = "S") and the remainder from Current Date+1 to specified Effective To Date (Multi-Day flag = "M")

The following table shows how Notifications are stored (and subsequently reported) in various scenarios. Note that the “Multi-Day” flag is not reported, but is shown here for clarity.

| From ECVN/MRVN | | | As stored on the database | | | |
|---------------------------|-----------------------|-------------|---------------------------|---------------------|----------------------|--|
| Notification Start date | Notification End date | Ref / Notes | Multi-Day Flag | Effective From date | Effective To Date | Period Data |
| Current Date | Current Date | A | S | Current Date | Current Date | As held pre-Submission Deadline, as notification after the Submission Deadline |
| Future Date | Future Date | B | S | Future Date | Future Date | As notification |
| Future Date | Future Date + n (>0) | C | M | Future Date | Future Date + n (>0) | As notification |
| Past Date or Current Date | Future Date | D** | S | Current Date | Current Date | As held pre-Submission Deadline, as notification after the Submission Deadline |
| | | | M | Current Date + 1 | Future Date | As notification |
| | | E* | M | Current Date | Future Date | As notification |
| Past Date | Current Date | F** | S | Current Date | Current Date | As held pre-Submission Deadline, as notification after the Submission Deadline |
| | | G* | M | Current Date | Current Date | As notification |

* - Only where period data exactly matches previously held pre-Submission Deadline period data for Current Date and the Current Date is not a clock change day.

** - Where period data does not exactly match previously held pre-Submission Deadline data for the Current Date, or the Current Date is a clock change day. In these cases, the Current Date part will be mapped into a clock change day (46/50 periods) if appropriate.

An existing Multi-Day Notification which starts before and ends on or after the Applied From Date of a received Notification which replaces it will have its Effective To date set to Applied From Date *minus one*. the “Multi-Day” flag will remain “M”. For example,

- an existing notification with Effective From Date D and Effective To Date D+5 is overwritten by a Notification with Applied From Date D+3; here the existing Notification’s Effective To Date is set to D+2, with the new Notification starting at D+3.
- an existing notification with Effective From Date D and Effective To Date D+5 is overwritten by a Notification Applied From Date D+1; here the existing Notification’s Effective To Date is set to D, with the new Notification starting at D+1.

Note that in this second example, if D is a clock change day, the data will be correctly converted from 48 to 46/50 periods due to the Multi-Day flag being set to “M”

Any Notifications stored with a single day range and the “Multi-Day” flag set to “M” are processed by the ECVA-A-I022 Forward Contract Report such that the reported data is mapped into a clock change day (46/50 periods) if appropriate.

The following examples illustrate some of these scenarios and how received Notification data is reported in the ECVA-A-I022 report; in each case the current date is the 29th March 2003, and the 30th March 2003 is a short clock change day. In each case the “Ref” refers to the table above, but it is not intended that every case should be covered:

7.24.3.1 Multi-Day Notification Received in-day before a Clock Change (Ref D)

Received as:

Effective From Date: 26th March 2003
 Effective To Date: 30th March 2003
 Period Data: 48 Periods

Reported as:

Effective From Date: 29th March 2003 (note the Applied From Date is Current Date)
 Effective To Date: 29th March 2003
 Period Data: 48 Periods; 0 up to the Submission Deadline, as received after that

Effective From Date: 30th March 2003
 Effective To Date: 30th March 2003
 Period Data: 46 Periods; 1,2,5-48 mapped to short clock change day
 Periods 1-46 (*stored as 48 periods with Multi-Day flag set to “M”*)

7.24.3.2 Multi-Day Notification Received in-day before a Clock Change (Replacement Notification received in 7.24.3.1) (Ref E)

Received as:

Effective From Date: 26th March 2003
 Effective To Date: NULL (i.e. open ended)
 Period Data: 48 Periods (data same as 7.24.3.1 up to the Submission Deadline)

Reported as:

Effective From Date: 29th March 2003 (note the Applied From Date is Current Date)
 Effective To Date: NULL
 Period Data: 48 Periods as received in 7.24.3.2.

7.24.3.3 Future Multi-Day Notification starting on Clock Change day (Ref C)

Received as:

Effective From Date: 30th March 2003
Effective To Date: NULL (i.e. open ended)
Period Data: 48 Periods

Reported as:

Effective From Date: 30th March 2003
Effective To Date: NULL
Period Data: 48 Periods as received

7.24.3.4 Future Multi-Day Notification (Replacement Notification received in 7.24.3.3) (Ref C)

Received as:

Effective From Date: 31st March 2003
Effective To Date: NULL (i.e. open ended)
Period Data: 48 Periods

Reported as:

Effective From Date: 30th March 2003
Effective To Date: 30th March 2003
Period Data: 46 Periods; 1,2,5-48 as received in 7.24.3.3, but mapped to short clock change day Periods 1-46 (*stored as 48 periods with Multi-Day flag set to "M"*)

Effective From Date: 31st March 2003
Effective To Date: NULL
Period Data: 48 Periods as received in 7.24.3.4

7.25 ECVAA-I042: Banning/Unbanning Individual User Access to the ECVAA Web Service

| | | | |
|---|---|--|------------------------------|
| Interface ID: ECVAA-I042 | User: BSC Party ECVNA MVRNA | Title: Banning/Unbanning Individual User Access to the ECVAA Web Service | BSC reference: P98 |
| Mechanism: Manual | Frequency: As Required | Volumes: Low | |
| Interface Requirement: The ECVAA Service shall receive and action, from time to time, requests to ban and unban specific credentials files. This flow is composed of; Participant Name Credentials File ID Participant Role Party or Party Agent ID Name of Sender Contact email address Sender reference Contact Tel. No Action required Other details. Where a participant is unable to ban / un-ban one of its users itself, then the Participant may submit a I042 form requesting that the ECVAA ban or unban a specific credentials file. Such a request must be sanctioned by a category 'Z' signatory. This manual process is available only within business hours. | | | |

7.26 ECVAA-I043: ECVAA Web Service – BSC Party View ECVNs

| | | | |
|--|----------------------------------|--|------------------------------|
| Interface ID: ECVAA-I043 | Status: Mandatory | Title: ECVAA Web Service – BSC Party View ECVNs | BSC reference: P98 |
| Mechanism: Automatic | Frequency: As Required | Volumes: Low | |
| <div>1. Common Page items. All pages shall display the following; The BSC Party name of the logged in BSC Party; The role of the logged in BSC Party; The username of the logged in user; Date and time of the last data refresh;</div> <div>2. ECVN Position Page (Home page). This page shall display two tables, one for the logged in BSC Party's Production Account and the second for the logged in party's Consumption Account. Each table shall display the following data: For each counterparty by matching window date; Counterparty Name; Counterparty Account (P or C – Production or Consumption); Total net matched position for each day in the matching window; Totals for the total net matched positions (above) for each day in the matching window.</div> | | | |

| | | | |
|---|-----------------------------|--|------------------------------|
| Interface ID: ECVAA-I043 | Status: Mandatory | Title: ECVAA Web Service – BSC Party View ECVNs | BSC reference: P98 |
| <p>The following information shall be made available for the latest transaction for the Party:</p> <p>Latest transaction Number ECVNAA ID / ECVN reference code Counterparty ID Effective From Date Effective To Date</p> <p>This information is for the latest ECVN processed and may not directly relate to other data displayed.</p> | | | |
| <p>3. ECVN Party / Counterparty Summary Page</p> <p>This page shall display a single table for the logged in BSC Party's Production or Consumption Account dependent on the choice made in the ECVN Position Page.</p> <p>The table shall display the following data:</p> <p>Settlement Day Counterparty Name Counterparty Account (P or C –Production or Consumption) ECVN reference Notification Type (D or S – dual or single notification) Logged in BSC Party Volume (MWh) Counterparty Volume (MWh) Matched Volume (MWh)</p> | | | |
| <p>4. ECVN Party / Settlement Day Summary Page</p> <p>This page shall display a single table for the logged in BSC Party's Production or Consumption Account dependent on the choice made in the ECVN Position Page.</p> <p>The table shall display the following data:</p> <p>Settlement Day Counterparty Name Counterparty Account (P or C –Production or Consumption) ECVN reference Notification Type (D or S – dual or single notification) Logged in BSC Party Volume (MWh) Counterparty Volume (MWh) Matched Volume (MWh) A total for each Counterparty's matched volume (MWh)</p> | | | |
| <p>5. ECVN Party / Settlement Period Summary Page</p> <p>This page shall display a single table for the logged in BSC Party's Production or Consumption Account dependent on the choice made in the ECVN Position Page.</p> <p>The table shall display the following data:</p> <p>Counterparty Name Counterparty Account (P or C –Production or Consumption) Settlement Period Logged in BSC Party Volume (MWh) Counterparty Volume (MWh) Matched Volume (MWh)</p> | | | |
| <p>6. ECVN Detail Viewer Page</p> <p>This page shall display a single table for the logged in BSC Party for an individual notification for a single Settlement Date.</p> <p>The table shall display the following data:</p> | | | |

| | | | |
|--|-----------------------------|--|------------------------------|
| Interface ID: ECVAA-I043 | Status: Mandatory | Title: ECVAA Web Service – BSC Party View ECVNs | BSC reference: P98 |
| <p>Settlement Period Logged in BSC Party Volume (MWh) Counterparty Volume (MWh) Matched Volume (MWh)</p> <p>This page will also display the following data about the notification displayed;</p> <p>Authorisation ID Authorisation Effective From Authorisation Effective To Notification Reference Code Settlement Date Party 1Name Account Agent Name Party 2 Name Account Agent Name</p> <p>Latest transaction panel will be displayed;</p> <p>Logged in Party Name Latest Transaction Number Logged in Party's Agents Name Logged in Party's Account Latest Web Sequence Number Latest File Sequence Number Counterparty Name Counterparty's Agents Name Counterparty's Account</p> | | | |

7.27 ECVAA-I044: ECVAA Web Service – BSC Party View MVRNs

| | | | |
|--|---------------------------------|--|------------------------------|
| Interface ID: ECVAA-I044 | Status: Mandatory | Title: ECVAA Web Service – BSC Party View MVRNs | BSC reference: P98 |
| Mechanism: Automatic | Frequency: Continuous | Volumes: Low | |
| 1. Common Page items. All pages will display the following; The Party name of the logged in BSC Party; The role of the logged in BSC Party; The username of the logged in user; Date and time of the last data refresh; | | | |
| 2. BSC Party MVRNAA Selection Page This page shall display a single table displaying each authorisation that the logged in BSC Party is a party to. The table shall display the following data: Authorisation Id Type (D or S – dual or single notification) BM Unit ID Lead Party Name Lead Account (P or C –production or consumption) Lead Agent Name | | | |

| | | | |
|---|-----------------------------|--|------------------------------|
| Interface ID: ECVAA-1044 | Status: Mandatory | Title: ECVAA Web Service – BSC Party View MVRNs | BSC reference: P98 |
| Subsidiary Party Subsidiary Party Account (P or C –production or consumption) Subsidiary Agent Name Effective from Effective to Notification Count | | | |
| <p>3. BSC Party MVRN Selection Page</p> <p>For the single Authorisation selected in the BSC Party MVRNA Authorisations view. This page shall display two tables for the logged in BSC Party.</p> <p>The first table shall display the following data:</p> <p>Authorisation Id Type (D or S – dual or single notification) BM Unit ID Lead Party Name Lead Account (P or C –production or consumption) Lead Agent Name Subsidiary Party Sub Account (P or C –production or consumption) Subsidiary Agent Name Effective from Effective to</p> <p>For the authorisation detailed in the first table, the second table will display the following Notification information;</p> <p>Settlement Date Reference Code</p> | | | |
| <p>4. BSC Party MVRN Detail Page</p> <p>This page shall display the following details about the MVRN Notification selected from the BSC Party MVR Notification Page;</p> <p>Authorisation Id BM Unit ID Reference Code Notification Effective from Notification Effective To Lead Party Name Subsidiary Party Name Lead Party Agent Name Subsidiary Party Agent Name</p> <p>For these Notification Details, the page shall display the following data in a tabular format;</p> <p>Settlement Period Lead Party Percentage Reallocation Subsidiary Party Percentage Reallocation Matched Percentage Reallocation Lead Party Fixed Reallocation Subsidiary Party Fixed Reallocation Matched Fixed Reallocation</p> <p>Latest transaction panel will be displayed;</p> <p>Logged in Party Name Latest Transaction Number Logged in Party's Agents Name</p> | | | |

| | | | |
|---|-----------------------------|--|------------------------------|
| Interface ID: ECVAA-I044 | Status: Mandatory | Title: ECVAA Web Service – BSC Party View MVRNs | BSC reference: P98 |
| Logged in Party's Account Latest Web Sequence Number Latest File Sequence Number Counterparty Name Counterparty's Agents Name Counterparty's Account | | | |

7.28 7ECVAA-I045: ECVAA Web Service – ECVNA View ECVNs.

| | | | |
|--|---------------------------------|---|------------------------------|
| Interface ID: ECVAA-I045 | Status: Mandatory | Title: ECVAA Web Service - ECVNA View ECVNs. | BSC reference: P98 |
| Mechanism: Automatic | Frequency: Continuous | Volumes: Low. | |
| 1. Common Page items. | | | |
| All pages shall display the following; The Agent name of the logged in Agent; The role of the logged in Agent; The username of the logged in user; Date and time of the last data refresh; The BSC Party Name of the BSC Party selected by the user to represent; | | | |
| 2. BSC Party and ECVNAA Selection Page | | | |
| This page shall allow the logged in agent to select the BSC Party to represent from a list of parties that the agent has a current authorisation under. This page shall display a single table for the logged in Agent. For each authorisation that the logged in Agent is appointed for, filtered by the BSC party selected, the table shall display the following data: Authorisation Id Type (D or S – dual or single notification) Party 1 Name Party 1 Account (P or C –production or consumption) Party 1 Agent Name Party 2 Name Party 2 Account (P or C –production or consumption) Party 2 Agent name Effective from Effective to Notification Count | | | |
| 3. ECVN Selection Page | | | |
| For the single Authorisation selected in the ECVNAA page, this page shall display two tables for the logged in Agent. The first table shall display the following data; Authorisation Id Type (D or S – dual or single notification) Party 1 Name Party 1 Account (P or C –production or consumption) Party 1 Agent Name Party 2 Name Party 2 Account (P or C –production or consumption) Party 2 Agent Name Effective from Effective to | | | |

| Interface ID: ECVAA-I045 | Status: Mandatory | Title: ECVAA Web Service - ECVNA View ECVNs. | BSC reference: P98 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|------------------------------|----------------|---------------------------------|--------------------------|---|-----------------|---|------------------------------|---|----------------------------|---|--------------|---|--------------|---|--------------------|---|--------------------|---|-------|-------|-------------------|-------------------------------|----------------|---|----------------|---|----------------|---|-------------------|---|
| <p>For the Authorisation detailed in the first table, the second table shall display the following Notification information;</p> <p>Settlement Date Reference Code Party 1 Volume (MWh) Party 2 Volume (MWh) Matched Volume (MWh)</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4. ECVN Editor Page | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>This page shall display the following details about the ECVN selected from the ECVN Page;</p> <table><tr><th>Field</th><th>State</th></tr><tr><td>Authorisation Id</td><td>Non-editable, from the ECVN Selection Page.</td></tr><tr><td>Reference Code</td><td>Blank For new notifications or Non-editable values from the ECVN Selection Page for own submission edits and counterparty copies.</td></tr><tr><td>Notification Effective from*</td><td>Blank For new notifications or editable values from the ECVN Selection Page for own submission edits and counterparty copies.</td></tr><tr><td>Notification Effective To*</td><td>Blank For new notifications or editable values from the ECVN Selection Page for own submission edits and counterparty copies.</td></tr><tr><td>Party 1 Name</td><td>Non-editable, from the ECVN Selection Page.</td></tr><tr><td>Party 2 name</td><td>Non-editable, from the ECVN Selection Page.</td></tr><tr><td>Party 1 Agent Name</td><td>Non-editable, from the ECVN Selection Page.</td></tr><tr><td>Party 2 Agent name</td><td>Non-editable, from the ECVN Selection Page.</td></tr></table> <p>*Dates as notified by the submitting ECVNAA(s), subject to the storage and reporting requirements described in section 5.16</p> <p>For these Notification Details, the page shall display the following data in a tabular format;</p> <table><tr><th>Field</th><th>State</th></tr><tr><td>Settlement Period</td><td>Non-editable, period numbers.</td></tr><tr><td>Party 1 volume</td><td>Non-editable, Party 1 current submission for each period.</td></tr><tr><td>Party 2 volume</td><td>Non-editable, Party 2 current submission for each period.</td></tr><tr><td>Matched volume</td><td>Non-editable, current matched submission for each period.</td></tr><tr><td>Submission volume</td><td>Editable, blank for new submissions, populated with users existing values for own submission edits, populated with Counterparties values for copy Counterparty edits.</td></tr></table> <p>The latest transaction panel will be displayed;</p> <p>Logged in Agents Party Name Latest Transaction Number Logged in Agent's Name Logged in Agent's Party's Account Latest Web Sequence Number Latest File Sequence Number Counterparty Name Counterparty's Agents Name Counterparty's Account</p> | | | | Field | State | Authorisation Id | Non-editable, from the ECVN Selection Page. | Reference Code | Blank For new notifications or Non-editable values from the ECVN Selection Page for own submission edits and counterparty copies. | Notification Effective from* | Blank For new notifications or editable values from the ECVN Selection Page for own submission edits and counterparty copies. | Notification Effective To* | Blank For new notifications or editable values from the ECVN Selection Page for own submission edits and counterparty copies. | Party 1 Name | Non-editable, from the ECVN Selection Page. | Party 2 name | Non-editable, from the ECVN Selection Page. | Party 1 Agent Name | Non-editable, from the ECVN Selection Page. | Party 2 Agent name | Non-editable, from the ECVN Selection Page. | Field | State | Settlement Period | Non-editable, period numbers. | Party 1 volume | Non-editable, Party 1 current submission for each period. | Party 2 volume | Non-editable, Party 2 current submission for each period. | Matched volume | Non-editable, current matched submission for each period. | Submission volume | Editable, blank for new submissions, populated with users existing values for own submission edits, populated with Counterparties values for copy Counterparty edits. |
| Field | State | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Authorisation Id | Non-editable, from the ECVN Selection Page. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Reference Code | Blank For new notifications or Non-editable values from the ECVN Selection Page for own submission edits and counterparty copies. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Notification Effective from* | Blank For new notifications or editable values from the ECVN Selection Page for own submission edits and counterparty copies. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Notification Effective To* | Blank For new notifications or editable values from the ECVN Selection Page for own submission edits and counterparty copies. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Party 1 Name | Non-editable, from the ECVN Selection Page. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Party 2 name | Non-editable, from the ECVN Selection Page. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Party 1 Agent Name | Non-editable, from the ECVN Selection Page. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Party 2 Agent name | Non-editable, from the ECVN Selection Page. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Field | State | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Settlement Period | Non-editable, period numbers. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Party 1 volume | Non-editable, Party 1 current submission for each period. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Party 2 volume | Non-editable, Party 2 current submission for each period. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Matched volume | Non-editable, current matched submission for each period. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Submission volume | Editable, blank for new submissions, populated with users existing values for own submission edits, populated with Counterparties values for copy Counterparty edits. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5. ECVAA Notification Submission/Confirmation Page | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <p>The Confirmation page shall contain the following information:</p> <table><tr><td>Reference Code</td><td>ECV Notification Reference Code</td></tr><tr><td>Submission date and time</td><td>Blank before confirmation</td></tr><tr><td>Sequence Number</td><td>The Web submission Sequence Number</td></tr></table> | | | | Reference Code | ECV Notification Reference Code | Submission date and time | Blank before confirmation | Sequence Number | The Web submission Sequence Number | | | | | | | | | | | | | | | | | | | | | | | | |
| Reference Code | ECV Notification Reference Code | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Submission date and time | Blank before confirmation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sequence Number | The Web submission Sequence Number | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | |
|--|-----------------------------|--|------------------------------|
| Interface ID: ECVAA-I045 | Status: Mandatory | Title: ECVAA Web Service - ECVNA View ECVNs. | BSC reference: P98 |
| Effective from Effective to Submission Volume for Period [x] | | Notification Start Date Notification End Date [May be NULL] Period Volume [One line for each period] | |

7.29 ECVAA-I046: ECVAA Web Service – MVRNA View MVRNs.

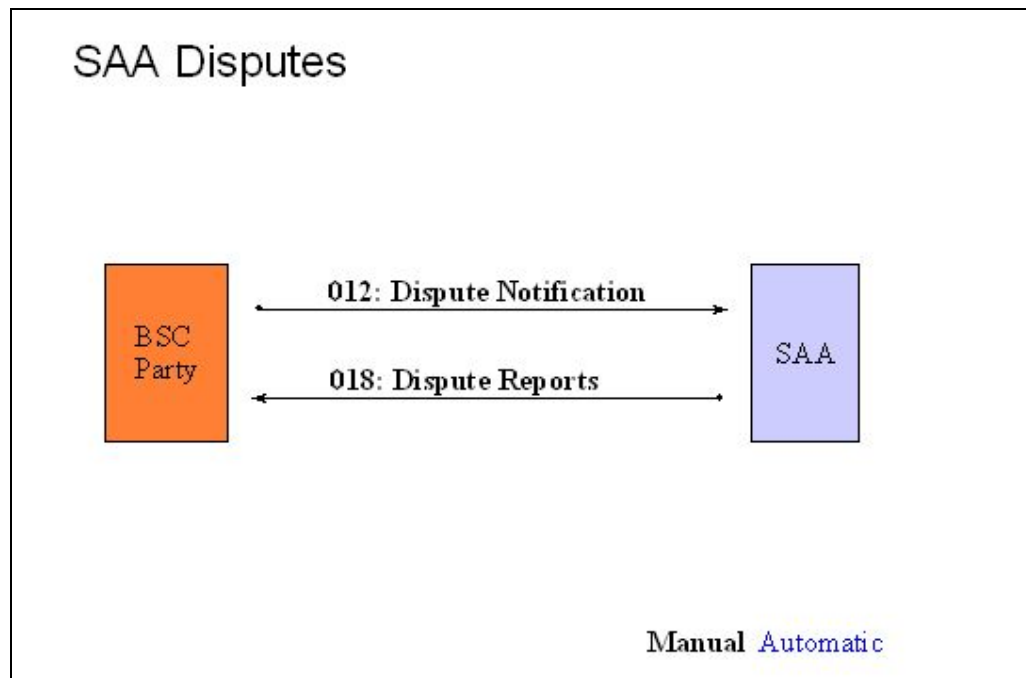
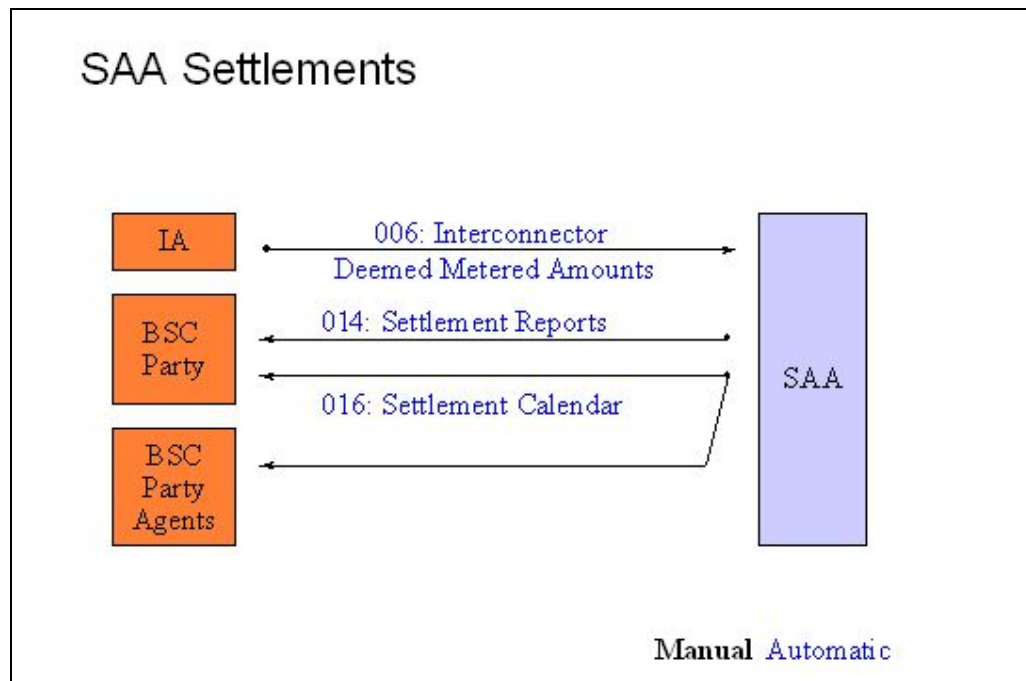
| | | | |
|---|---------------------------------|--|------------------------------|
| Interface ID: ECVAA-I046 | Status: Mandatory | Title: ECVAA Web Service – MVRNA View MVRNs | BSC reference: P98 |
| Mechanism: Automatic | Frequency: Continuous | Volumes: Low | |
| 1. Common Page items. | | | |
| All pages shall display the following; The Agent name of the logged in Agent; The role of the logged in Agent; The username of the logged in user; Date and time of the last data refresh; The BSC Party Name of the BSC Party selected by the user to represent; | | | |
| 2. BSC Party and MVRNAA Selection Page | | | |
| This page shall allow the logged in agent to select the BSC Party to represent from a list of parties that the agent has a current authorisation under. | | | |
| This page shall display a single table for the logged in Agent. | | | |
| For each authorisation that the logged in Agent is a appointed for, filtered by the selected BSC Party, the table shall display the following data: | | | |
| Authorisation Id Type (D or S – dual or single notification) BM Unit Id Lead Party Name Lead Party Account (P or C –production or consumption) Lead Party Agent Name Subsidiary Party name Subsidiary Party Account (P or C –production or consumption) Subsidiary Party Agent name Effective from Effective to Notification Count | | | |
| 3. MVRN Selection Page | | | |
| For the single Authorisation selected in the MVRNAA Selection Page. This page shall display two tables for the logged in Agent, the first table shall display the following data: | | | |
| Authorisation Id Type (D or S – dual or single notification) BM Unit ID Lead Party Name Lead Party Account (P or C –production or consumption) Lead Party Agent Name Subsidiary Party Name Subsidiary Party Account (P or C –production or consumption) Subsidiary Party Agent Name | | | |

| | | | |
|---|----------------------|---|-----------------------|
| Interface ID: ECVAA-I046 | Status: Mandatory | Title: ECVAA Web Service – MVRNA View MVRNs | BSC reference: P98 |
| Effective from Effective to | | | |
| For the Authorisation detailed in the first table, the second table shall display the following Notification information; | | | |
| Settlement Date Reference Code. | | | |
| 4. MVRN Editor Page | | | |
| This page shall display the following details about the MVRN selected from the MVRN Selection Page; | | | |
| Field | | State | |
| Authorisation Id | | Non-editable, from the MVRNAA Selection Page. | |
| BM Unit | | Non-editable, from the MVRNAA Selection Page. | |
| Reference Code | | Blank For new notifications or Non-editable values from the MVRN Selection Page for own submission edits and counterparty copies. | |
| Notification Effective from* | | Blank For new notifications or editable values from the MVRN Selection Page for own submission edits and counterparty copies. | |
| Notification Effective To* | | Blank For new notifications or editable values from the MVRN Selection Page for own submission edits and counterparty copies. | |
| Lead Party Name | | Non-editable, from the MVRNAA Selection Page. | |
| Subsidiary Party name | | Non-editable, from the MVRNAA Selection Page. | |
| Agent 1 Name | | Non-editable, from the MVRNAA Selection Page. | |
| Agent 2 name | | Non-editable, from the MVRNAA Selection Page. | |
| *Dates as notified by the submitting ECVNAA(s), subject to the storage and reporting requirements described in section 5.15 | | | |
| For these Notification Details, the page shall display the following data in a tabular format; | | | |
| Field | | State | |
| Settlement Period | | Non-editable, period numbers. | |
| Lead Party Percentage Reallocation | | Non-editable, Lead Party current percentage submission for each period. | |
| Subsidiary Party Percentage Reallocation | | Non-editable, Subsidiary Party current percentage submission for each period. | |
| Matched Percentage Reallocation | | Non-editable, current matched percentage submission for each period. | |
| Submission Percentage | | Editable, blank for new submissions, populated with users existing values for own submission edits, populated with counterparty's values for copy Counterparty edits. | |
| Lead Party Fixed Reallocation | | Non-editable, Lead Party current fixed submission for each period | |
| Subsidiary Party Fixed Reallocation | | Non-editable, Subsidiary Party current fixed submission for each period. | |
| Matched Fixed Reallocation | | Non-editable, current matched fixed submission for each period. | |
| Submission Volume | | Editable, blank for new submissions, populated with users existing values for own submission edits, populated with counterparties values for copy Counterparty edits. | |
| Latest transaction panel will be displayed; | | | |
| Logged in Agent Name Latest Transaction Number Logged in Agent's Party Name | | | |

| | | | |
|---|-----------------------------|--|------------------------------|
| Interface ID: ECVAA-1046 | Status: Mandatory | Title: ECVAA Web Service – MVRNA View MVRNs | BSC reference: P98 |
| Logged in Agent's Party's Account Latest Web Sequence Number Latest File Sequence Number Counterparty Name Counterparty's Agents Name Counterparty's Account | | | |
| 5. MVRN Submission Confirmation Page The Submission/Confirmation shall contain the following information: | | | |
| Reference Code Submission date and time Sequence Number Effective from Effective to Submission Percentage for Period [x] Submission Volume for Period [x] | | MVR Notification Reference Code Blank before confirmation The Web submission Sequence Number Notification Start Date Notification End Date [May be NULL] Period Percentage Reallocation [One line for each period] Period Volume Reallocation [One line for each period] | |

8. SAA External Inputs and Outputs

8.1 SAA Flow Overview



8.2 SAA-I006: (input) BM Unit Metered Volumes for Interconnector Users

| | | | |
|---|----------------------------|---|--|
| Interface ID: SAA-I006 | Source: IA | Title: BM Unit Metered Volumes for Interconnector Users | BSC reference: RETA SCH: 4, B, 2.4.1 SAA SD: 2.4, A1, CP555 |
| Mechanism Electronic data file transfer | Frequency: Daily | Volumes: | |
| Interface Requirement: The SAA Service shall receive BM Unit Metered Volumes for Interconnector Users once a day from Interconnector Administrators. The BM Unit Metered Volumes for Interconnector Users data shall include: Interconnector ID Settlement Date BM Unit ID Settlement Period (1-50) Energy Volume Reading (MWh) | | | |

8.3 SAA-I012: (input) Dispute Notification

| | | | |
|---|--|---------------------------------------|---|
| Interface ID: SAA-I012 | Source: BSC Party, BSCCo Ltd NETSO | Title: Dispute Notification | BSC reference: RETA SCH: 4, B, 2.4.1 SAA SD: 2.9, 5.1.2 SAA BPM: 3.18, 4.16 |
| Mechanism: Manual | Frequency: Ad-hoc | Volumes: | |
| Interface Requirement: The SAA Service shall receive Dispute Notifications from BSC Parties, BSCCo Ltd and the NETSO on an ad-hoc basis. The contents of these notifications are likely to vary according to the nature of the individual dispute, but as a minimum shall include: <ul style="list-style-type: none">• BSC Party raising dispute• The BSC Party's unique reference for the dispute• Settlement Dates and Periods under dispute• Optionally and if appropriate, the reported values which are under dispute• The reason why the values are under dispute• The estimated total materiality of the dispute (e.g. the BSC Party believes that the report is in error by 100MW)• The identity of any other parties involved in the dispute. | | | |

8.4 SAA-I014: (output) Settlement Reports

| | | | |
|---|---|--|--|
| Interface ID: SAA-I014 | User: BSC Party, BSCCo Ltd, BMRA, NETSO, EMR Settlement Services Provider | Title: Settlement Reports | BSC reference: RETA SCH: 4, B, 2.2.1 SAA SD: 3.54, 4.1, 4.2, A2 SAA BPM: 3.19, 4.41 SAA IRR: SAA5, SAA7, SAA8, SAA9, P8, P18A, CP527, CP597, P78, P194, P217, CP1397, EMR, P305 |
| Mechanism: Electronic data file transfer | Frequency: Daily | Volumes: | |
| Interface Requirement: The SAA Service shall issue Settlement Reports to BSC Parties, BSCCo Ltd, the BMRA, EMR Settlement Services Provider and the NETSO once a day. | | | |
| The contents of the Settlement Reports sent to the NETSO, BSCCo Ltd, EMR Settlement Services Provider and the BMRA are listed in Part 2 of the IDD. | | | |
| The Settlement Report to a BSC Party shall include: | | | |
| <u>Settlement Date information:</u> Settlement Date Settlement Run Type SAA Run Number SAA CDCA Settlement Run number SVAA CDCA Settlement Date SVAA CDCA Settlement Run Number SVAA SSR Run Number BSC Party Id Aggregate Party Day Charges (see below) | | | |
| <u>Settlement Period Information:</u> Settlement Period (1-50) (j) Aggregate Party Period Charges (see below) System Period Data (see below) | | | |
| <u>Market Index Information:</u> Market Index Data (see below) | | | |
| <u>Balancing Services Adjustment Action Information</u> (post-P217 only): Balancing Services Adjustment Action Data (see below) | | | |
| <u>Account Period Information:</u> Production/Consumption Flag (a) Account Period Data (see below) | | | |
| <u>Account Period BMU Information:</u> BM Unit ID (i) Account Period BMU Data (see below) | | | |
| <u>BM Unit Period Information:</u> BM Unit ID BM Unit Period Data (see below) Trading Unit Name Total Trading Unit Metered Volume (MWh) | | | |
| <u>BM Unit Period FPN Spot Points</u> (^f FPN _{it}): Time from FPN Value from Time to FPN Value to | | | |
| <u>BM Unit Period Bid-Offfer Information:</u> | | | |

| |
|--|
| <p>Bid-Offer pair number (n) Bid-Offer Data (see below)</p> <p><u>BM Unit Period Bid-Offer Spot Points</u> (QBO_{ij}^n): Time from Bid-Offer Value from Time to Bid-Offer Value to</p> <p><u>BM Unit Period Bid-Offer Acceptance</u> (for all Settlement Dates): Bid-Offer Acceptance number CADL Flag</p> <p><u>BM Unit Period Bid-Offer Acceptance</u> (for post P217 Settlement Dates): SO-Flag</p> <p>Acceptance STOR Provider Flag Reserve Scarcity Price Flag</p> <p>Nb the STOR Provider Flag and RSP Flag will be null for pre-P305 Settlement Dates.</p> <p><u>BM Unit Period Bid-Offer Acceptance Spot Points</u> (QA_{it}^k): Time from Bid-Offer Acceptance Level from Time to Bid-Offer Acceptance Level to</p> <p><u>BM Unit Bid-Offer Pair Acceptance Volume Data</u> (post P217 only): Bid-Offer Pair Number Bid-Offer Pair Acceptance Bid Volume Bid-Offer Pair Acceptance Offer Volume</p> <p><u>BM Unit MVR Information:</u> Subsidiary Party ID and Production/Consumption Flag (a) MVR Data (see below)</p> |
| <p>Physical Interface Details:</p> <p>This is sub-flow 1 of the Settlement Report, file id S0141</p> |

Note:

SAA CDCA Settlement Run Number

Identifies the CDCA run which generated volumes used directly by SAA in the settlement calculations

For all settlement runs, other than Interim Initial for Settlement Dates prior to the P253 effective date:

SVAA CDCA Settlement Date

SVAA CDCA Settlement Run Number

Identify the CDCA run for Settlement Date which generated the GSP Group Take volumes which were allocated by the SVAA

SVAA SSR Run Number

Identifies the SVAA Run for Settlement Date which generated the SVA BM Unit volumes

For Interim Initial Settlement Runs for Settlement Dates prior to the P253 effective date:

SVAA CDCA Settlement Date

SVAA SSR Run Number

Identify the Settlement Date and Initial Settlement (SF) SVAA Run from which SVA volumes are derived

SVAA CDCA Run Number

Will be zero

The intention of this report is to provide all information necessary for calculating charges.

The following types of data are **not** included in the settlement report as currently defined:

- minute-by-minute data such as $FPN_{ij}(t)$, which can be derived from the spot point data.
- intermediate data on bid-offer acceptance such as QAB^{kn}_{ij} which can be derived from the bid-offer and acceptance spot point data.

In the following descriptions, a definition of the data item is given which is consistent with that used in the SAA URS. The following exceptions to this are noted:

1. $TCBSCCO_j$ is used to represent the BSCCo Ltd Costs allocated to the settlement period as a whole
2. $CBSCCO_{aj}$ is used to represent the allocation of $TCBSCCO_j$ to a particular energy account.

Variables (with their subscripts as appropriate) are as defined in the SAA URS. For a definition of what the variables mean and their derivation, refer to the URS.

8.4.1 Aggregate Party Day Charges

This data consists of the following for each settlement run:

| Data Item | Definition |
|---------------------------------------|-------------------------|
| BSCCo Ltd Cost Allocation | $\sum_{aj} CBSCCO_{aj}$ |
| BM Unit Cashflow | $\sum_{ij} CBM_{ij}$ |
| Energy Imbalance Cashflow | $\sum_{aj} CAEI_{aj}$ |
| Information Imbalance Cashflow | $\sum_{aj} CII_{aj}$ |
| Non-Delivery Charge | $\sum_{aj} CND_{aj}$ |
| Residual Cashflow Reallocation Charge | $\sum_{aj} RCRC_{aj}$ |
| System Operator BM Charge | $\sum_j CSOBM_j$ |

8.4.2 Aggregate Party Period Charges

This data consists of the following for each settlement period:

| Data Item | Definition |
|---------------------------------------|-------------------------------|
| BSCCo Ltd Cost Allocation | $\Sigma_a \text{CBSCCO}_{aj}$ |
| BM Unit Cashflow | $\Sigma_i \text{CBM}_{ij}$ |
| Energy Imbalance Cashflow | $\Sigma_a \text{CAEI}_{aj}$ |
| Information Imbalance Cashflow | $\Sigma_a \text{CII}_{aj}$ |
| Non-Delivery Charge | $\Sigma_a \text{CND}_{aj}$ |
| Residual Cashflow Reallocation Charge | $\Sigma_a \text{RCRC}_{aj}$ |

8.4.3 System Period Data

This data includes the following for each settlement period for all Settlement Dates reported:

| Data Item | Definition |
|--|-------------------------------|
| Period BSCCo Ltd Costs | TCBSCCO_j |
| System Operator BM Cashflow | CSOBM_j |
| Information Imbalance Price 1 | IIP1_j |
| Information Imbalance Price 2 | IIP2_j |
| System Buy Price | SBP_j |
| System Sell Price | SSP_j |
| Price Derivation Code | PDC_j |
| Total System BM Cashflow | TCBM_j |
| Total System Energy Imbalance Cashflow | TCEI_j |
| Total System Non-Delivery Charge | TCND_j |
| Total System Accepted Bid Volume | TQAB_j |
| System Total Priced Accepted Bid Volume | TQPAB_j |
| Total System Energy Contract Volume | $\Sigma_a \text{QABC}_{aj} $ |
| Total System Accepted Offer Volume | TQAO_j |
| System Total Priced Accepted Offer Volume | TQPAO_j |
| Total System Energy Imbalance Volume | TQEI_j |
| Residual Cashflow Reallocation Denominator | RCRD_j |
| Total System Residual Cashflow | TRC_j |
| Total System Information Imbalance Charge | TCII_j |
| Sell Price Price Adjustment | SPA_j |

| Data Item | Definition |
|---|--------------------|
| Buy Price Price Adjustment | BPA _j |
| Total Period Applicable Balancing Services Volume | TQAS _j |
| System Operator Production Imbalance [redundant] | QAEI _{aj} |
| System Operator Consumption Imbalance [redundant] | QAEI _{aj} |
| Net Imbalance Volume | NIV _j |
| Total NIV Tagged Volume | TCQ _j |

For Settlement Dates prior to the P78 effective date the following data items will also be reported:

| Data Item | Definition |
|------------------------------|-------------------|
| Sell Price Cost Adjustment | SCA _j |
| Buy Price Cost Adjustment | BCA _j |
| Sell Price Volume Adjustment | SVA _j |
| Buy Price Volume Adjustment | BVA _j |

For Settlement Dates prior to the P217 effective date the following data items will also be reported:

| Data Item | Definition |
|---|---------------------|
| System Total Unpriced Accepted Bid Volume | TQUAB _j |
| System Total Unpriced Accepted Offer Volume | TQUAO _j |
| NIV Tagged System Total Unpriced Bid Volume | TTQUAB _j |
| NIV Tagged System Total Unpriced Offer Volume | TTQUAO _j |
| Net Energy Sell Price Cost Adjustment | ESCA _j |
| Net Energy Buy Price Cost Adjustment | EBCA _j |
| Net Energy Sell Price Volume Adjustment | ESVA _j |
| Net Energy Buy Price Volume Adjustment | EBVA _j |
| Net System Sell Price Volume Adjustment | SSVA _j |
| Net System Buy Price Volume Adjustment | SBVA _j |
| NIV Tagged System Total Unpriced Bid Volume | TTQUAB _j |
| NIV Tagged System Total Unpriced Offer Volume | TTQUAO _j |
| NIV Tagged SBVA | TSBVA _j |
| NIV Tagged SSVA | TSSVA _j |
| NIV Tagged Energy Buy Volume Adjustment | NTEBVA _j |
| NIV Tagged Energy Sell Volume Adjustment | NTESVA _j |
| PAR Tagged Energy Buy Volume Adjustment | PTEBVA _j |

| Data Item | Definition |
|--|---------------------|
| PAR Tagged Energy Sell Volume Adjustment | PTESVA _j |
| Untagged EBCA | UEBCA _j |
| Untagged EBVA | UEBVA _j |
| Untagged ESCA | UESCA _j |
| Untagged ESVA | UESVA _j |

For Settlement Dates after, and including, the P217 effective date the following data items will also be reported:

| Data Item | Definition |
|---|--------------------|
| Total System Tagged Accepted Bid Volume | TQTAB _j |
| Total System Tagged Accepted Offer Volume | TQTAO _j |
| Total System Repriced Accepted Bid Volume | TQRAB _j |
| Total System Repriced Accepted Offer Volume | TQRAO _j |
| Total System Originally-priced Accepted Bid Volume | TQOAB _j |
| Total System Originally-priced Accepted Offer Volume | TQOAO _j |
| Total System Adjustment Sell Volume | TSVA _j |
| Total System Adjustment Buy Volume | TBVA _j |
| Total System Tagged Adjustment Sell Volume | TSTVA _j |
| Total System Tagged Adjustment Buy Volume | TBTVA _j |
| Total System Repriced Adjustment Sell Volume | TSRVA _j |
| Total System Repriced Adjustment Buy Volume | TBRVA _j |
| Total System Originally-priced Adjustment Sell Volume | TSOVA _j |
| Total System Originally-priced Adjustment Buy Volume | TBOVA _j |
| Replacement Price | RP _j |
| Replacement Price Calculation Volume | RPV _j |

For Settlement Dates after, and including, the P217 effective date the following data items will also be reported and will be null fields for pre-P305 Settlement Dates:

| Data Item | Definition |
|-------------------------------|-------------------|
| STOR Availability Window Flag | |
| Loss of Load Probability | LoLP _j |
| De-rated Margin | |
| Value of Lost Load | VoLL |

| Data Item | Definition |
|------------------------|-------------------|
| Reserve Scarcity Price | RSVP _j |

8.4.4 Account Period Data

Provided for both of the party's accounts, for each period:

| Data Item | Definition |
|---|----------------------|
| BSCCo Ltd Cost Allocation | CBSCCO _{aj} |
| Energy Imbalance Charge | CAEI _{aj} |
| Information Imbalance Charge | CII _{aj} |
| Residual Cashflow Reallocation Charge | RCRC _{aj} |
| Account Bilateral Contract Volume | QABC _{aj} |
| Account Period Balancing Services Volume | QABS _{aj} |
| Account Energy Imbalance Volume | QAEI _{aj} |
| Account Credited Energy Volume | QACE _{aj} |
| Residual Cashflow Reallocation Proportion | RCRP _{aj} |

8.4.5 Account Period BMU Data

Provided for all BM Units for which the party is a subsidiary party:

| Data Item | Definition |
|--|---------------------|
| Credited Energy Volume | QCE _{iaj} |
| Fixed Metered Volume Reallocation | QMFR _{iaj} |
| Percentage Metered Volume Reallocation | QMPR _{iaj} |

8.4.6 BM Unit Period Data

Provided for all BM Units for which the party is the lead party:

| Data Item | Definition |
|--|-------------------|
| Information Imbalance Cashflow | CII _{ij} |
| BM Unit Period Non-Delivery Charge | CND _{ij} |
| Period FPN | FPN _{ij} |
| Period BM Unit Balancing Services Volume | QBS _{ij} |
| Period Information Imbalance Volume | QII _{ij} |
| Period Expected Metered Volume | QME _{ij} |
| BM Unit Metered Volume | QM _{ij} |

| Data Item | Definition |
|--|--------------------|
| Period BM Unit Non-Delivered Bid Volume | QNDB _{ij} |
| Period BM Unit Non-Delivered Offer Volume | QNDO _{ij} |
| Transmission Loss Factor | TLF _{ij} |
| Transmission Loss Multiplier | TLM _{ij} |
| BM Unit Applicable Balancing Services Volume | QAS _{ij} |

8.4.7 Bid-Offer Data

Provided for all bid-offer pairs which were submitted for the period for the BM Unit.

For all Settlement Dates the following data items will be reported:

| Data Item | Definition |
|--|--------------------------------|
| Bid Price | Pb ⁿ _{ij} |
| Offer Price | Po ⁿ _{ij} |
| Period BM Unit Total Accepted Bid Volume | QAB ⁿ _{ij} |
| Period BM Unit Total Accepted Offer Volume | QAO ⁿ _{ij} |
| Period BM Unit Bid Cashflow | CB ⁿ _{ij} |
| Period BM Unit Offer Cashflow | CO ⁿ _{ij} |

For Settlement Dates prior to the P217 effective date the following data items will also be reported:

| Data Item | Definition |
|---|---------------------------------|
| Period BM Unit Total Priced Accepted Bid Volume | QAPB ⁿ _{ij} |
| Period BM Unit Total Priced Accepted Offer Volume | QAPO ⁿ _{ij} |

For Settlement Dates after, and including, the P217 effective date the following data items will also be reported:

| Data Item | Definition |
|---|---------------------------------|
| Period BM Unit Tagged Bid Volume | QTAB ⁿ _{ij} |
| Period BM Unit Tagged Offer Volume | QTAO ⁿ _{ij} |
| Period BM Unit Repriced Bid Volume | QRAB ⁿ _{ij} |
| Period BM Unit Repriced Offer Volume | QRAO ⁿ _{ij} |
| Period BM Unit Originally-Priced Bid Volume | QOAB ⁿ _{ij} |
| Period BM Unit Originally-Priced Offer | QOAO ⁿ _{ij} |

| Data Item | Definition |
|-----------|------------|
| Volume | |

8.4.8 MVR Data

For all BM Units for which the party is the lead party, information is provided on the Metered Volume Reallocation to any subsidiary parties in the period as follows:

| Data Item | Definition |
|--|--------------|
| Credited Energy Volume | QCE_{iaj} |
| Fixed Metered Volume Reallocation | $QMFR_{iaj}$ |
| Percentage Metered Volume Reallocation | $QMPR_{iaj}$ |

8.4.9 Market Index Data

This data includes the following for each Settlement Period:

| Data Item | Definition |
|--------------------------------|------------|
| Market Index Data Provider | s |
| Individual Liquidity Threshold | n/a |
| Market Index Price | PXP_{sj} |
| Market Index Volume | QXP_{sj} |

8.4.10 Balancing Services Adjustment Action Data

Provided for all Settlement Dates after, and including, the P217 effective date:

| Data Item | Definition |
|---|-------------|
| Balancing Services Adjustment Action Id | |
| Balancing Services Adjustment Action Cost | $BSAC^m_j$ |
| Balancing Services Adjustment Action Volume | $QBSA^m_j$ |
| Tagged Balancing Services Adjustment Action Volume | $TQBSA^m_j$ |
| Repriced Balancing Services Adjustment Action Volume | $RQBSA^m_j$ |
| Originally-Priced Balancing Services Adjustment Action Volume | $OQBSA^m_j$ |
| Balancing Services Adjustment Action SO-Flag | |

For Settlement Dates after, and including, the P217 effective date the following data items will also be reported and will be null for pre-P305 Settlement Dates:

| Data Item | Definition |
|-----------|------------|
|-----------|------------|

| Data Item | Definition |
|---|------------|
| Balancing Services Adjustment Action STOR Provider Flag | |
| Reserve Scarcity Price Flag | |

8.4.11 BM Unit Bid-Offer Pair Acceptance Volume Data

Provided for all Settlement Dates after, and including, the P217 effective date:

| Data Item | Definition |
|--|-----------------|
| Bid-Offer Pair Number | |
| Bid-Offer Pair Acceptance Bid Volume | QAB_{ij}^{kn} |
| Bid-Offer Pair Acceptance Offer Volume | QAO_{ij}^{kn} |

8.5 SAA-I016: (output) Settlement Calendar

| | | | |
|---|--|--------------------------------------|--|
| Interface ID: From: SAA-I016 To: CDCA-I034 | User: BSC Party, BSC Party Agent, SVAA, BSCCo Ltd, CDCA | Title: Settlement Calendar | BSC reference: RETA SCH: 4, B, 2.1.1, 2.2.1 SAA SD: 5.2.1, A2 SAA BPM: 3.2, 4.40, CP1222 |
| Mechanism: Manual, in normal NETA file format, but without header and trailer records, probably as an email attachment | Frequency: Annual | Volumes: | |
| Interface Requirement: The SAA Service shall publish the Settlement Calendar once a year to all BSC Parties and Agents, SVAA, BSCCo Ltd and CDCA. | | | |
| The Settlement Calendar shall include the publication date/time of the calendar, and then the following details for each Settlement Date / Settlement Run Type | | | |
| Settlement Date Settlement Run Type (II/SF/R1/R2/R3/RF/D/DF) CVA run date (CDCA)** SVA run date (SVAA, n/a for II for Settlement Days prior to the P253 effective date)** Settlement Run date (SAA)** Notification Date (date credit/debit report must reach FAA)** Payment Date (date money changes hands)** Notification Period (days between Settlement Date and Notification Date)** Payment Period (days between Settlement Date and Payment Date)** Elapsed Days SAA after Settlement Working Days SAA after Settlement Working Days SAA before Notification ** indicates fields copied from payment calendar | | | |
| ** nominal date for runs. Run is any time after 9:00 a.m. on the scheduled date; results to be delivered to next service provider by 9:00 a.m. the next working day. | | | |
| Physical Interface Details: The physical structure is included in the SAA tab of the IDD spreadsheet, although the file is not sent over the network as a NETA format file. | | | |

8.6 SAA-I017: (output) SAA Data Exception Report

| | | | |
|---|--|--|--|
| Interface ID: From: SAA-I017 To: CRA-I030 To: CDCA-I050 To: ECVAA-I020 | User: IAs ECVAA CDCA CRA NETSO SVAA MIDP | Title: SAA Data Exception Report | BSC reference: SAA IRR: SAA1, SAA4, CP595, P78 |
| Mechanism: Electronic data file transfer, unless stated below as Manual (phone call and / or fax) or via Shared Database | Frequency: As required | Volumes: | |
| Interface Requirement: If an exception occurs while processing a received file, the SAA Service shall issue Exception Report to the sender of the file, one of the following: ECVAA CDCA (via Shared Database) CRA (via Shared Database) NETSO IA SVAA (Manual) MIDP | | | |
| The Exception Reports shall include: | | | |
| File Header of file being processed Exception Type Exception Description | | | |

8.7 SAA-I018: (output) Dispute Reports

| | | | |
|---|---|----------------------------------|--|
| Interface ID: SAA-I018 | User: BSC Party, BSCCo Ltd, NETSO | Title: Dispute Reports | BSC reference: SAA SD: 5.1.4 SAA IRR: SAA10 |
| Mechanism: Manual | Frequency: Ad-hoc | Volumes: | |
| Interface Requirement: The SAA Service shall issue Dispute Reports to BSC Parties, BSCCo Ltd and the NETSO on an ad-hoc basis. The contents of these reports to BSC Parties are likely to be defined on an ad hoc basis. Summary reports to BSCCo Ltd are likely to include the following data: Number of Disputes in Month, by status Total Materiality, by status For each dispute: Dispute Reference BSC Parties Involved Dispute Status Settlement Period Involved Materiality Nature of Dispute Actions Taken Outstanding Actions Expected Resolution Date | | | |

8.8 SAA-I021: Receive Acknowledgement of SAA Messages

See Section 2.2.7.

8.9 SAA-I022: Issue SAA Acknowledgement of Messages

See Section 2.2.7.

8.10 SAA-I030: (input) Receive Market Index Data

| | | | |
|---|----------------------------|--|------------------------------|
| Interface ID: SAA-I030 | Source: MIDPs | Title: Receive Market Index Data | BSC reference: P78 |
| Mechanism: Automatic | Frequency: Daily | Volumes: | |
| Interface Requirement: The SAA shall receive Market Index Data, from Market Index Data Providers, for each Settlement Day. The flow shall include: Market Index Data Provider Identifier Settlement Date <u>Period Data (46/48/50)</u> Settlement Period Market Index Price Market Index Volume Traded Price (to be ignored) Traded Volume (to be ignored) | | | |