

Redlined NETA Interface Definition and Design: Part 1 Interfaces with BSC Parties and their Agents text for P369 ‘National Grid Legal Separation changes to BSC’

This Modification proposes changes to sections 1.2.2, 1.6, 2.2.1, 2.2.11.13, 3.1.1, 4.5, 4.7, 4.8, 4.9, 4.10, 4.11.30.2, 5.2, 5.12, 5.14, 5.24, 5.30, 5.36, 5.42, 6.7, 6.8, 6.10, 8.3, 8.4 and 8.7. We have redlined these changes against Version 37.0.

There is no impact on any other part of this document for this Modification.

Amend section 1.2.2 as follows:

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 ~~System Operator~~ Transmission Company (SO) 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.

Amend section 1.6 as follows:

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
NETA	New Electricity Trading Arrangements
NGET	National Grid Electricity Transmission plc
NWDBMCAEC	Non-Working Day BM Unit Credit Assessment Export Capability
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
SO	System Operator Transmission Company
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

Amend section 2.2.1 as follows:

2.2.1 File Header

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

AAA-File Header			
Field	Field Name	Type	Comments

AAA-File Header			
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)	
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' (~~System Operator~~ Transmission Company)

‘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.

Amend section 2.2.11.13 as follows:

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’ (~~System Operator~~Transmission Company)
‘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)

Amend section 3.1.1 as follows:

3.1.1 BMRA Interfaces

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

- Balancing Mechanism Data
- System Related Data
- Derived Data

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

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 SO) 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
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, System Operator <u>Transmission Company</u>	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

Amend section 4.5 as follows:

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

Interface ID: BMRA-I010	User: System Operator <u>Transmission Company</u> , BSCCo Ltd, CRA, MIDP	Title: BMRA Data Exception Reports	BSC reference: BMRA SD 6.2, 7.3, 8.3, 8.4, P78
Mechanism:	Frequency:	Volumes:	

Electronic data file transfer	Continuous	
<p>The BMRA Service shall issue Exception Reports to the SO, 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>		

Amend section 4.7 as follows:

4.7 BMRA-I028: (input) Receive REMIT Data

Interface ID: BMRA-I028	Source: BMR Service User, System <u>Operator Transmission</u> <u>Company</u>	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 ~~System Operator~~Transmission Company. 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
- Duration uncertainty
- Normal , Available and Unavailable Capacity*
- Event cause
- Outage Profile
 - Outage Profile Start
 - Outage Profile End
 - Outage Profile Capacity

* Only required for 'Unavailabilities Of Electricity Facilities' Message Type

Physical Interface Details:

These files will be received in a format defined by an XML Schema (REMIT XSD version 2.0) established and maintained by the BMRA.

Amend section 4.8 as follows:

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 System Operator <u>Transmission Company</u> . 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			

Interface ID: BMRA-I030	User: BMR Service User,	Title: Publish REMIT Data	BSC reference: P291, P329
<ul style="list-style-type: none"> • Normal, Available, and Unavailable Capacity* • Event cause • Outage Profile <ul style="list-style-type: none"> ○ Outage Profile Start ○ Outage Profile End ○ Outage Profile Capacity 			
* Only required for 'Unavailabilities Of Electricity Facilities' Message Type			
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.			

Amend section 4.9 as follows:

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 System Operator <u>Transmission Company</u> . 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).			

Amend section 4.10 as follows:

4.10 BMRA TIBCO Message Publishing - Data Formats

The BMRA service publishes all data received from the ~~System Operator~~ Transmission Company 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

4.10.4.123 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 ~~System Operator~~ Transmission Company.

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.

4.10.4.148 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 ~~System Operator~~ Transmission Company 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 :

4.10.5 Message Definitions

4.10.5.1 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 ~~System Operator~~Transmission Company. 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 System Operator <u>Transmission Company</u> .
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

4.10.5.2 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 ~~System Operator~~Transmission Company. 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 System Operator <u>Transmission Company</u> .

Field	Field Type	Description of field
		Operator <u>Transmission Company</u> -.
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

4.10.5.3 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 ~~System Operator~~Transmission Company-. 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 System Operator <u>Transmission Company</u> -.
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

4.10.5.4 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 ~~System Operator~~Transmission Company. 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 System Operator <u>Transmission Company</u> .
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

4.10.5.5 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 ~~System Operator~~Transmission Company-. 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 System Operator <u>Transmission Company</u> -.
Number of Records	NR	The number of times the next THREE fields are repeated.
Calendar Week	WN	The number of the week.

Field	Field Type	Description of field
Number		
Week Start Date	WD	The start date of the week (in GMT).
Demand Value	VD	The Demand in MW.

Message Subject Name

BMRA.SYSTEM.NDFW

4.10.5.6 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 ~~System Operator~~Transmission Company. 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 System Operator <u>Transmission Company</u> .
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

4.10.5.7 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 ~~System Operator~~Transmission Company, 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 System Operator <u>Transmission Company</u> . 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)

4.10.5.8 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 ~~System Operator~~Transmission Company, 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.

~~National Grid~~The Transmission Company cannot provide Demand values for Interconnectors and pumped storage (Transmission System Demand forecast) for the 09:00am hour forecast. Therefore ~~National Grid~~the Transmission Company 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 System Operator <u>Transmission Company</u> . 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)

4.10.5.9 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 ~~System Operator~~ Transmission Company , 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
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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 System Operator Transmission Company-. 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)

4.10.5.10 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 ~~System Operator~~Transmission Company, 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 System Operator <u>Transmission Company</u> . 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)

4.10.5.11 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 ~~System Operator~~ Transmission Company , 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 System Operator <u>Transmission Company</u> -. 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)

4.10.5.12 INDDEM - 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 ~~System Operator~~ Transmission Company, 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 System Operator <u>Transmission Company</u> . 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)

4.10.5.13 SYSWARN - System Warnings

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

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

4.10.5.14 INDO - Initial National Demand Out-turn

This message is published when the appropriate data is received from the ~~System Operator~~Transmission Company. 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 System Operator <u>Transmission Company</u> .
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

4.10.5.15 ITSDO – Initial Transmission System Demand Out-turn

This message is published when the appropriate data is received from the ~~System Operator~~Transmission Company. 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 System Operator <u>Transmission Company</u> .
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

4.10.5.16 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 System Operator <u>Transmission Company</u> .
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.
High Reference temperature	TH	Temperature in degrees celsius.

Message Subject Name

BMRA.SYSTEM.TEMP

4.10.5.17 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.

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

4.10.5.18 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 ~~National Grid~~ the Transmission Company 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 System Operator <u>Transmission Company</u> .
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

4.10.5.19 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 ~~National Grid the Transmission Company~~ 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 System Operator Transmission Company.
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

4.10.5.20 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 ~~System Operator~~Transmission Company, 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 System Operator <u>Transmission Company</u> . 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

4.10.5.21 INDOD – Daily Energy Volume Data

This message is published when the appropriate data is received from the ~~System Operator~~Transmission Company. 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
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Field	Field Type	Description of field
Publishing Date	TP	This is the time that the data was published by the System Operator <u>Transmission Company</u> .
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

4.10.5.22 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 System Operator <u>Transmission Company</u> .
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

4.10.5.23 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 ~~System Operator~~Transmission Company .

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.
FPN Level	VP	FPN in MW at the above spot time.

Message Subject Name

BMRA.BM.<BM_UNIT>.FPN

4.10.5.24 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 ~~System Operator~~Transmission Company .

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

4.10.5.25 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 ~~System Operator~~ Transmission Company .

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,

Field	Field Type	Description of field
		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).

4.10.5.26 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 ~~System Operator~~ Transmission Company.

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

4.10.5.27 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 ~~System Operator~~ Transmission Company.

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.
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

4.10.5.28 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 ~~System Operator~~ Transmission Company.

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 VE field value is valid.
MEL	VE	MEL in MW at the above spot time.

Message Subject Name

BMRA.BM.<BM_UNIT>.MEL

4.10.5.29 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 ~~System Operator~~Transmission Company.

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,

Field	Field Type	Description of field
		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

4.10.5.30 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)

4.10.5.31 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).

4.10.5.32 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.

Field	Field Type	Description of field
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.
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).

4.10.5.33 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.

Field	Field Type	Description of field
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).

4.10.5.34 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

Field	Field Type	Description of field
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
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

Field	Field Type	Description of field
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

4.10.5.35 RURE - Run Up Rates Export

This messages contains dynamic data, which is published whenever it is received from the ~~System Operator~~Transmission Company . 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

4.10.5.36 RURI - Run Up Rates Import

This messages contains dynamic data, which is published whenever it is received from the ~~System Operator~~Transmission Company . 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

4.10.5.37 RDRE - Run Down Rates Export

This messages contains dynamic data, which is published whenever it is received from the ~~System Operator~~[Transmission Company](#) . 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

4.10.5.38 RDRI - Run Down Rates Import

This messages contains dynamic data, which is published whenever it is received from the ~~System Operator~~[Transmission Company](#) . 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

4.10.5.39 NDZ - Notice to Deviate from Zero

This messages contains dynamic data, which is published whenever it is received from the ~~System Operator~~Transmission Company . 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

4.10.5.40 NTO - Notice to Deliver Offers

This messages contains dynamic data, which is published whenever it is received from the ~~System Operator~~Transmission Company . 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>.NTD

4.10.5.41 NTB - Notice to Deliver Bids

This messages contains dynamic data, which is published whenever it is received from the ~~System Operator~~Transmission Company . 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

4.10.5.42 MZT - Minimum Zero Time

This messages contains dynamic data, which is published whenever it is received from the ~~System Operator~~Transmission Company . 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

4.10.5.43 MNZT - Minimum non-Zero Time

This messages contains dynamic data, which is published whenever it is received from the ~~System Operator~~Transmission Company . 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

4.10.5.44 SEL - Stable Export Limit

This messages contains dynamic data, which is published whenever it is received from the ~~System Operator~~Transmission Company . 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

4.10.5.45 SIL - Stable Import Limit

This messages contains dynamic data, which is published whenever it is received from the ~~System Operator~~Transmission Company . 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

4.10.5.46 MDV - Maximum Delivery Volume

This messages contains dynamic data, which is published whenever it is received from the ~~System Operator~~Transmission Company . 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

4.10.5.47 MDP - Maximum Delivery Period

This messages contains dynamic data, which is published whenever it is received from the ~~System Operator~~Transmission Company . 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

4.10.5.48 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

4.10.5.49 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 ~~System Operator~~Transmission Company, 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

4.10.5.50 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

4.10.5.51 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

Field	Field Type	Description of field
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
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

4.10.5.52 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 ~~System Operator~~Transmission Company, 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

4.10.5.53 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

4.10.5.54 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

Field	Field Type	Description of field
Market Index Volume	M2	Market Index Volume in MWh

Message Subject Name

BMRA.SYSTEM.MID

4.10.5.55 SOSO – SO-SO Prices

This message contains details of prices for trades offered between the Transmission Company and a ~~System Operator~~ member of ENTSO-E. The data is published by BMRA as it is received from the ~~System Operator~~ Transmission Company.

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

4.10.5.56 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 ~~System Operator~~ Transmission Company.

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

4.10.5.57 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 ECVAAs 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

4.10.5.58 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.

Field	Field Type	Description of field
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
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,

Field	Field Type	Description of field
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

4.10.5.59 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 ~~System Operator~~Transmission Company. 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 System Operator <u>Transmission Company</u>
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

4.10.5.60 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 ~~System Operator~~Transmission Company. 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 System Operator <u>Transmission Company</u>
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

4.10.5.61 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 ~~System Operator~~Transmission Company. 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 System Operator <u>Transmission Company</u>
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

4.10.5.61 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 ~~System Operator~~ Transmission Company. 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 System Operator <u>Transmission Company</u>
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

4.10.5.62 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 ~~System Operator~~Transmission Company. 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 System Operator <u>Transmission Company</u>
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

4.10.5.63 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 ~~System Operator~~Transmission Company. 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 System Operator <u>Transmission Company</u>
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

4.10.5.64 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

4.10.5.65 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

Article ref	Category	Description
6.1.(b)	Load	Day Ahead Total Load per Bidding Zone
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>

4.10.5.66 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 System Operator <u>Transmission Company</u>
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

4.10.5.67 DCONTROL – Demand Control Instruction Notification

This message contains details of Demand Control instructions issued by the ~~System Operator~~Transmission Company.

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 System Operator <u>Transmission Company</u>
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 System Operator <u>Transmission Company</u> 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

4.10.5.67 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 System Operator <u>Transmission Company</u>
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

4.10.5.67 DCONTROL – Demand Control Instruction Notification

This message contains details of Demand Control instructions issued by the ~~System Operator~~Transmission Company.

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 System Operator <u>Transmission Company</u>
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 System Operator <u>Transmission Company</u> 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

4.10.6 Format of Data within TIB Messages

4.10.6.1 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 ~~System Operator~~Transmission Company 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.

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

Some data received from the ~~System Operator~~Transmission Company 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 ~~System Operator~~Transmission Company 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	->	4	9:30	450	9:39	460	9:52	465	10:00	470
		9:39	460	9:52	465										
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	->	5	9:30	450	9:39	457	9:39	460	9:52	465
		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

```

Amend section 4.11.30.2 as follows:

4.11.30.2 Body Record

Field	Type	Format	Comments
Record Type	String		Fixed String "DEMCP"
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 System Operator <u>Transmission Company</u> or an Emergency Manual Disconnection. A Value of 'L' indicates an Automatic Low Frequency Demand Disconnection
Time From	datetime	yyyymmddhh24miss	
Time To	datetime	yyyymmddhh24miss	
Demand Control Level	Number		
SO-Flag	Boolean	'T' or 'F'	

Amend section 5.2 as follows:

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:			
The CDCA receives, from the BSC Party, Aggregation Rules for each of the following: <ul style="list-style-type: none">• BM Unit;• Grid Supply Point;• Inter-GSP-Group Connection;• GSP Group;• Interconnector.			

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.

Other information, as may be required, to support the Aggregation Rules. This may include, but shall not be limited to the following:-

- network diagrams;
- ~~NGETNGESO~~- connection agreement;
- installation documentation;

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 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:

Amend section 5.12 as follows:

5.12 CDCA-I012: (output) Report Raw meter Data

Interface ID: CDCA-I012	User: BSC Party, Distribution Business, System Operator <u>Transmission Company</u>	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:			
<p>The CDCA provides the relevant BSC Party(s), including the Distribution Business, and the System Operator<u>Transmission Company</u>, with a Metering System data collection report relating to the raw meter period data collected from each meter or associated outstation.</p> <p>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.</p> <p>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:</p> <p>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> <p>Meter Reading Status can be one of: A - Valid meter data B - Invalid meter data C - Unavailable meter data 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<u>Transmission Company</u>, 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:

Amend section 5.14 as follows:

5.14 CDCA-I014: (output) Estimated Data Report

Interface ID: CDCA-I014	User: BSC Party, MOA, BSCCo Ltd, System Operator <u>Transmission Company</u>	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:			
<p>The estimated data report contains all estimate notifications issued by CDCA in a given period.</p> <p>An estimated data report is sent to:</p> <ol style="list-style-type: none">1. BSCCo Ltd (on request) - data for all metering systems2. MOA (Daily) - data for metering systems operated by the MOA3. BSC Party (Daily) - data for metering systems for which the party is the responsible party.4. the host Distribution business or the Transmission Company , depending who has registered the metering system (Daily). <p>This report will be run at the end of the working day to report estimates carried out on that day.</p> <p>The information provided is as follows for each Metering System included in the report:</p> <p>Total Volume Estimated in Report</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> Estimate Agreed Indicator (T/F)</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>			

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:

Amend section 5.24 as follows:

5.24 CDCA-I029: (output) Aggregated GSP Group Take Volumes

Interface ID: CDCA-I029	User: BSC Party, including the Distribution Business; System Operator <u>Transmission Company.</u>	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 System Operator <u>Transmission Company.</u>			
Physical Interface Details:			

Amend section 5.30 as follows:

5.30 CDCA-I042: (output) BM Unit Aggregation Report

Interface ID: CDCA-I042	User: BSC Party System Operator <u>Transmission Company</u>	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 System Operator<u>Transmission Company</u>.</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:			

Amend section 5.36 as follows:

5.36 CDCA-I051: (output) Report Meter Technical Details

Interface ID: CDCA-I051	User: BSC Party, MOA, Distribution Business, System Operator <u>Transmission Company</u>	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 System Operator<u>Transmission Company</u>, 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</p>			

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

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
 Min MWh Value
 Max 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 Serial Number
 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)

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.

Physical Interface Details:

Amend section 5.42 as follows:

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> <p>a. The System Operator<u>Transmission Company</u>, in the case of directly-connected CVA BM Units; and/or</p> <p>b. Distribution Businesses, in the case of embedded CVA BM Units.</p> <p>The information received shall include:</p> <p>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 SO and DSOs should email the details described above to the CDCA.</p>			
Physical Interface Details:			

Amend section 6.7 as follows:

6.7 CRA-I007: (input/output) Boundary Point and System Connection Point Data

Interface ID: CRA-I007	Source:- System Operator <u>Transmission Company</u> , 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	Frequency: As Necessary	Volumes: Low	

network		
<p>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:</p> <p>Action Description</p> <p><u>Authentication Details</u> Name Password</p> <p><u>Point Details</u> Boundary Point or System Connection Point Identifier Boundary Point or System Connection Point Type Effective From Date Effective To Date</p> <p>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.</p> <p>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.</p>		

Amend section 6.8 as follows:

6.8 CRA-I008: (input) Interconnector Registration Details

Interface ID: CRA-I008	Source: System Operator <u>Transmission Company</u> 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.

Amend section 6.10 as follows:

6.10 CRA-I014: (output) Registration Report

Interface ID: CRA-I014	User: BSC Party, BSC Party Agent, BSC Service Agent, System Operator <u>Transmission Company</u> , 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-I001², 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) ³
■ NWDCALF	(as received in interface CRA-I011) ⁴
■ SECALF	(as received in interface CRA-I011) ⁵
■ 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.

² Note that the Contact Name is **not** reported in the CRA-I014

³ 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.

⁴ 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.

⁵ 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.

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.

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.

Amend section 8.3 as follows:

8.3 SAA-I012: (input) Dispute Notification

Interface ID: SAA-I012	Source: BSC Party, BSCCo Ltd System Operator Transmission Company	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 SO 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.			

Amend section 8.4 as follows:

8.4 SAA-I014: (output) Settlement Reports

Interface ID: SAA-I014	User: BSC Party,	Title: Settlement	BSC reference: RETA SCH: 4, B, 2.2.1
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	BSCCo Ltd, BMRA, System Operator <u>Transmission</u> Company , EMR Settlement Services Provider	Reports	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 SO once a day.			
The contents of the Settlement Reports sent to the SO, 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> (ⁱ FPN _{it}): Time from FPN Value from Time to FPN Value to			
<u>BM Unit Period Bid-Offer Information:</u> Bid-Offer pair number (n) Bid-Offer Data (see below)			

<p><u>BM Unit Period Bid-Offer Spot Points</u> (QBO_{ij}^n):</p> <p>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):</p> <p>Bid-Offer Acceptance number CADL Flag</p> <p><u>BM Unit Period Bid-Offer Acceptance</u> (for post P217 Settlement Dates):</p> <p>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):</p> <p>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):</p> <p>Bid-Offer Pair Number Bid-Offer Pair Acceptance Bid Volume Bid-Offer Pair Acceptance Offer Volume</p> <p><u>BM Unit MVR Information:</u></p> <p>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
Buy Price Price Adjustment	BPA_j

Data Item	Definition
Total Period Applicable Balancing Services Volume	TQAS _j
System Operator Production Imbalance <u>[redundant]</u>	QAEI _{aj}
System Operator Consumption Imbalance <u>[redundant]</u>	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
PAR Tagged Energy Sell Volume Adjustment	PTESVA _j
Untagged EBCA	UEBCA _j

Data Item	Definition
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
Reserve Scarcity Price	RSVP _j

Amend section 8.7 as follows:

8.7 SAA-I018: (output) Dispute Reports

Interface ID: SAA-I018	User: BSC Party, BSCCo Ltd, System <u>Operator Transmission Company</u>	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 SO 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			