

Public

BMRS User Group

Meeting 3

29 July 2014
BMRS Project Team

ELEXON

Health & Safety

In case of an emergency

An alarm will sound to alert you. The alarm is tested for fifteen seconds every Wednesday at 9.20am

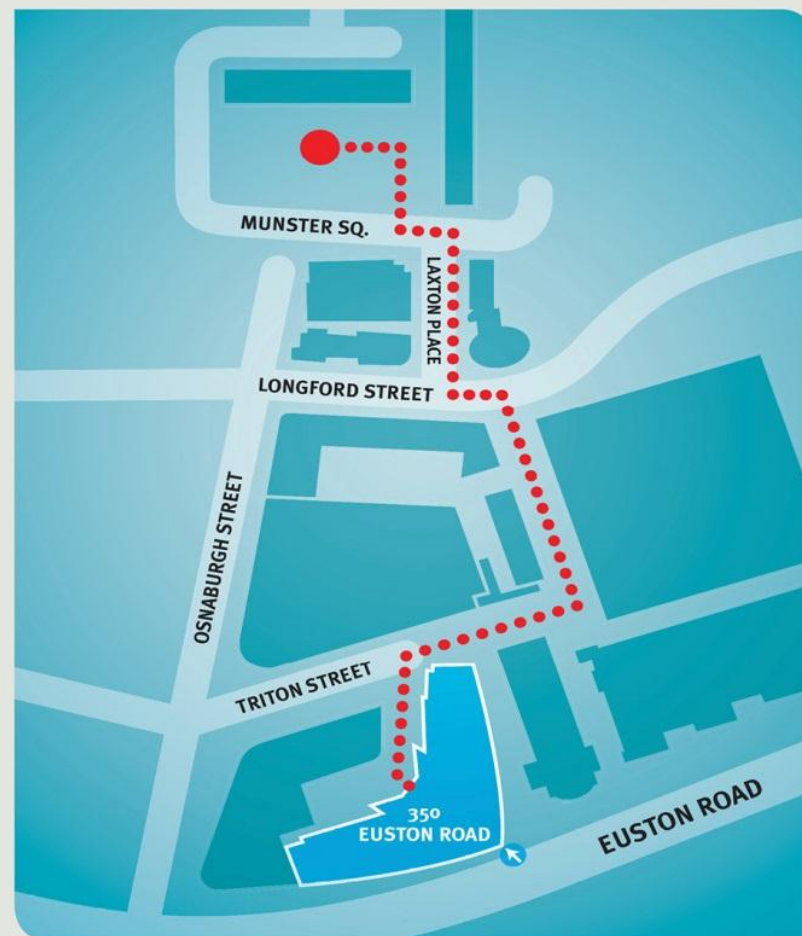
Evacuating 350 Euston Road

- If you discover a fire, operate one of the fire alarms next to the four emergency exits.
- Please do not tackle a fire yourself.
- If you hear the alarm, please leave the building immediately.
- Evacuate by the nearest signposted fire exit and walk to the assembly point.
- Please remain with a member of ELEXON staff and await further instructions from a Fire Warden.
- For visitors unable to use stairs, a Fire Warden will guide you to a refuge point and let the fire brigade know where you are.

When evacuating please remember

- Do not use the lifts.
- Do not re-enter the building until the all clear has been given by the Fire Warden or ground floor security.

Our team on reception is here to help you, if you have any questions, please do ask them.



Content

- Introductions
- Recap from Meeting 2
- BMRS Phase 2 - Scope & Requirements
- API Discussion – Progress/Policy/User Guide
- Lunch (\approx 13:00)
- REMIT Implementation Guide
- System Demo/Pilot/Screenshots
- Participants Testing

Purpose of Working Group

- Validation of requirements for new functionality such as the user interface and Application Programming Interface (API)
- Review of New BMRS documentations such as Terms of use policy, API guidance in a timely manner
- Recommendations for functionality
- Participation testing
- Terms of Reference

The New BMRS

- The Balancing Mechanism Reporting Service (BMRS) is the primary channel for providing operational data relating to the GB Electricity Balancing and Settlement Arrangements
- P291 and P295 will bring additional data to BMRS
- BMRS has served the industry well but it is becoming increasingly challenging to support the growing data demands of its users and to accommodate new data items
- BSC Panel/ELEXON Board sanctioned redevelopment of the BMRS to achieve the following:
 - Improving the speed of access to BMRS data to all interactive participants by providing free alternative mechanisms such as web services/Application Programming Interface (API)
 - Improving the user experience of the BMRS as a whole (speed, navigation and data presentation with better integration of data)
 - Lowering cost of change and maintenance of the website
 - Maintaining TIBCO for high grade users

Implementation Timescales

Outline Phases in the proposed delivery model

Phase 1 - Establish the new platform and deliver Modifications P291 and P295. The functionality for P291 and P295 will include:

- New front end web server and user interface
- Data downloadable through new API (Application Programming Interface)
- TIBCO interface for existing TIBCO users

Phase 2 – Provide API for all Raw Data:

- Migrate the data loading components.
- Make all raw data being available via the API Interface
- Note derived data, e.g. imbalance prices will not be migrated until Phase 3

Phase 3 - Full functionality for all BMRS data and deliver Modification P297¹

- Migrate the BMRS calculations (such as imbalance price calculation)
- New front end web server and user interface for all BMRS published data
- P297 data available through all channels (including TIBCO)

Recap From Meeting 2

Walkthrough of REMIT submissions process, XSD and screenshots

- REMIT – Action to include EIC as part of XSD
- Suggestion to include a hierarchical XML structure
- Suggestion for inclusion of RSS feeds
- Action to include a boiler plate message

Screen shots of P295 transparency data was shared with the group

- The group viewed that the pages looked good and useful

API Policy

- Action – To circulate API Terms of use to User for next meeting



Phase 2 Requirements

Phase 2 Requirements

1. Work on the scope of phase 2 is currently in progress.
2. The following lists the industry facing changes that are candidates for phase 2:

#	Area	Requirement	Detail
1	Data Loading	New Data loading flows	Introducing Data Loading Capabilities based on new platform to load the existing BMRS Flows from NGC, ECVA and MIDP Will include TIBCO components also.
2	Data Migration	Migration of historic data	For all existing data flows, there is a need to migrate 3 years worth of historic data.
3	APIs for existing flows	Provision of new RESTful APIs	Creation of a new set of RESTful APIs exposing the data from the new flows.
4	Data Loading	Provision of sFTP	Provision of an sFTP capability between NGC and BMRS
5	Data Provision	RSS Feed	The provision of an RSS feed to participants for P291 REMIT Messages
6	Data Streaming	Data Streaming web service APIs	Create a set of streaming Web Service APIs The Streaming APIs needs to be designed only for those flows that have a frequency of a week or more.
7	Data Streaming	Data streaming Backfill	Provision the ability to optionally provide a configurable set of backfill data when connecting to the data streaming APIs



API Discussion

API Progress and Features 1

1. As part of Phase 1 a set of RESTFul APIs will be rolled out providing data for the following:
 - a. P291 REMIT
 - b. P295 European Transparency Regulation
2. The current progress with the rollout of the Restful APIs is as follows:

P291 REMIT

- Currently in final stages of Dev and Unit test
- Due for delivery to Functional Acceptance Test (FAT) next week
- FAT commencing 18/08

P295 ETR (European Transparency Reg.)

- Development and Unit test is complete.
- Has been delivered to FAT
- FAT phase currently in progress.
- FAT due to be complete end of Sept

API Progress and Features 2

The following features have been built into the RESTful APIs

1. Versioning

- a. The set of RESTful APIs will be versioned
- b. Benefits include
 - Reduction of impact on users when a new version is published.
 - Provides users with a cutover period during which both versions are available.
- c. Requested version is passed as part of the URL

Flow	Amount of balancing reserves under contract
Article	17.1b
URL	http://10.53.132.137:7039/BMRS/B1720/V1?Period=10&APIKey=AP8DA26&SettlementDate=2014-07-25

API Progress and Features 3

2. Response Type

a. The response type can be defined as part of the request url

b. Formats include XML/CSV

i. When service type blank then default it will return xml response:

```
http://10.53.132.137:7039/BMRS/B1720/V1?Period=10&APIKey=AP8DA26&SettlementDate=2014-07-25
```

ii. When XML download option then service type is xml:

```
http://10.53.132.137:7039/BMRS/B1720/V1?ServiceType=xml&Period=10&APIKey=AP8DA26&SettlementDate=2014-07-25
```

iii. When CSV download option then service type is csv:

```
http://10.53.132.137:7039/BMRS/B1720/V1?ServiceType=csv&Period=10&APIKey=AP8DA26&SettlementDate=2014-07-25
```

API Progress and Features 4

The following features have been built into the RESTful APIs

1. Data Capping

- a. API response size will be capped to prevent any undue load on the system
- b. Response size cap is to be determined.
- c. Capping information is contained with the response itself.
- d. "cappingApplied" tag – "Yes" – means capping has been done; "No" – means capping has not been applied.
- e. "cappingLimit" tag - value of this tag is configurable in DB.
- f. We can configure different capping limits for different flows.
- g. The following is an example of capping information:

```
- URL:
- http://10.53.132.137:7039/BMRS/B1820/V1?Period=10&APIKey=AP8DA26&SettlementDate=2014-03-14

- Response:
<response>
  <responseMetadata>
    <httpCode>200</httpCode>
    <errorType>Ok</errorType>
    <description>Success</description>
    <cappingApplied>No</cappingApplied>
    <cappingLimit>10</cappingLimit>
    <queryString>SettlementDate=2014-03-14,Period=21</queryString>
  </responseMetadata>
  <responseBody>
    <dataItem>B1820</dataItem>
    <responseList>
      <item>
        <timeSeriesID>MRID-1820</timeSeriesID>
        ...
```

API Progress and Features 5

2. Sample Request URLs:

Flow	Installed Generation Capacity Per Unit
Article	14.1b
URL	<code>http://10.53.132.137:7039/BMRS/B1420/V1?APIKey=AP8DA26&Year=2014</code>

Flow	Amount of balancing reserves under contract
Article	17.1b
URL	<code>http://10.53.132.137:7039/BMRS/B1720/V1?Period=10&APIKey=AP8DA26&SettlementDate=2014-07-25</code>

Flow	Amount of balancing reserves under contract
Article	17.1b
URL	<code>http://10.53.132.137:7039/BMRS/B1720/V1?Period=* &APIKey=AP8DA26&SettlementDate=2014-07-25</code>

API Terms of Use Policy

- The API terms of use is designed to protect the overall service provided via the BMRS
- Participants must agree to the terms before using the API
- Focussed on monitoring Service level and preventing misuse
- Any comments?
- Next Step: Sent to ISG for information

API Guidance

- This document will be put in place to help users implement the API
- Not under BSC Governance and will be issued to parties
- Current thinking
 - How to get API Key and registration
 - API URLs
 - How to invoke an API
 - Data Set (initially limited to P291/295)
 - Setting up Streaming API
 - XSD for returned results
 - FAQs



REMIT Implementation Guide

REMIT Implementation Guide

- Approach
- Comments and Questions



System Screen Shots

BMRS UI Overview 1

■ P291 Summary Page Basic Filter

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HOME MESSAGES

Home » Messages

This information has been provided by market participants to comply with Article 4 of REGULATION (EU) No 1227/2011 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 25 October 2011 on wholesale energy market integrity and transparency.

DATE:

☒ Ongoing event ☐ Date of publication

Next 7 Days From 2014-03-20 To 2014-04-01 FILTER MESSAGES More Filters

[XML](#) [CSV](#)

Event Type	Published Date/Time (GMT)	Event Start Date/Time (GMT)	Event End Date/Time (GMT)	Market Participant ID	Event Message	Asset ID	Asset EIC Code	Available Capacity (MW)	[Affected Unit]	Fuel Type	Event Status
Planned Outage	2014-03-18 14:00:00Z	2014-03-18 14:00:00Z	2014-03-18 16:30:00Z	UMM-01-01212	EXAMGEN1 - Planned Outage for Power Station Generating Unit A from 20/03/14 14:00 untill 20/03/14 16:30	EXAMGEN1	NA	0	G31	coal	Open
Planned Outage	2014-03-18 14:00:00Z	2014-03-18 14:00:00Z	2014-03-18 16:30:00Z	UMM-01-01212	EXAMGEN1 - Planned Outage for Power Station Generating Unit A from 20/03/14 14:00 untill 20/03/14 16:30	EXAMGEN1	NA	0	G31	coal	Closed
Planned Outage	2014-03-18 14:00:00Z	2014-03-18 14:00:00Z	2014-03-18 16:30:00Z	UMM-01-01212	EXAMGEN1 - Planned Outage for Power Station Generating Unit A from 20/03/14 14:00 untill 20/03/14 16:30	EXAMGEN1	NA	0	G31	coal	Open
Planned Outage	2014-03-18 14:00:00Z	2014-03-18 14:00:00Z	2014-03-18 16:30:00Z	UMM-01-01212	EXAMGEN1 - Planned Outage for Power Station Generating Unit A from 20/03/14 14:00 untill 20/03/14 16:30	EXAMGEN1	NA	0	G31	coal	Closed
Planned Outage	2014-03-18 14:00:00Z	2014-03-18 14:00:00Z	2014-03-18 16:30:00Z	UMM-01-01212	EXAMGEN1 - Planned Outage for Power Station Generating Unit A from 20/03/14 14:00 untill 20/03/14 16:30	EXAMGEN1	NA	0	G31	coal	Open
Planned Outage	2014-03-18 14:00:00Z	2014-03-18 14:00:00Z	2014-03-18 16:30:00Z	UMM-01-01212	EXAMGEN1 - Planned Outage for Power Station Generating Unit A from 20/03/14 14:00 untill 20/03/14 16:30	EXAMGEN1	NA	0	G31	coal	Closed
Planned Outage	2014-03-18 14:00:00Z	2014-03-18 14:00:00Z	2014-03-18 16:30:00Z	UMM-01-01212	EXAMGEN1 - Planned Outage for Power Station Generating Unit A from 20/03/14 14:00 untill 20/03/14 16:30	EXAMGEN1	NA	0	G31	coal	Open
Planned Outage	2014-03-18 14:00:00Z	2014-03-18 14:00:00Z	2014-03-18 16:30:00Z	UMM-01-01212	EXAMGEN1 - Planned Outage for Power Station Generating Unit A from 20/03/14 14:00 untill 20/03/14 16:30	EXAMGEN1	NA	0	G31	coal	Closed
Planned Outage	2014-03-18 14:00:00Z	2014-03-18 14:00:00Z	2014-03-18 16:30:00Z	UMM-01-01212	EXAMGEN1 - Planned Outage for Power Station Generating Unit A from 20/03/14 14:00 untill 20/03/14 16:30	EXAMGEN1	NA	0	G31	coal	Open
Planned Outage	2014-03-18 14:00:00Z	2014-03-18 14:00:00Z	2014-03-18 16:30:00Z	UMM-01-01212	EXAMGEN1 - Planned Outage for Power Station Generating Unit A from 20/03/14 14:00 untill 20/03/14 16:30	EXAMGEN1	NA	0	G31	coal	Closed

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BMRS UI Overview 2

■ P291 REMIT - Summary Page Advanced Filter

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HOME **MESSAGES**

Home » Messages

This information has been provided by market participants to comply with Article 4 of REGULATION (EU) No 1227/2011 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 25 October 2011 on wholesale energy market integrity and transparency.

DATE:

☒ Ongoing event ☐ Date of publication

Next 7 Days From 2014-03-20 To 2014-04-01

EVENT TYPE : ☒ Planned Outage ☐ Failure ☒ Special Information

FUEL TYPE : ☐ Bio ☒ Coal ☐ Hydro ☐ Light oil ☐ Natural gas ☒ Nuclear ☐ Oil ☒ Oil shale ☐ Other ☐ Wind

MARKET PARTICIPANT ID:

ASSET ID / EIC CODE:

FILTER MESSAGES [Hide Filters](#) [XML](#) [CSV](#)

Event Type	Published DateTime (GMT)	Event Start DateTime (GMT)	Event End DateTime (GMT)	Market Participant ID	Event Message	Asset ID	Asset EIC Code	Available Capacity (MW)	Affected Unit	Fuel Type	Event Status
Planned Outage	2014-03-18 14:00:00Z	2014-03-18 14:00:00Z	2014-03-18 16:30:00Z	UNDM-01-01212	EXAMGEN1 - Planned Outage for Power Station Generating Unit A from 20/03/14 14:00 until 20/03/14 16:30	EXAMGEN1	NA	0	G31	coal	Open
Planned Outage	2014-03-18 14:00:00Z	2014-03-18 14:00:00Z	2014-03-18 16:30:00Z	UNDM-01-01212	EXAMGEN1 - Planned Outage for Power Station Generating Unit A from 20/03/14 14:00 until 20/03/14 16:30	EXAMGEN1	NA	0	G31	coal	Closed
Planned Outage	2014-03-18 14:00:00Z	2014-03-18 14:00:00Z	2014-03-18 16:30:00Z	UNDM-01-01212	EXAMGEN1 - Planned Outage for Power Station Generating Unit A from 20/03/14 14:00 until 20/03/14 16:30	EXAMGEN1	NA	0	G31	coal	Open
Planned Outage	2014-03-18 14:00:00Z	2014-03-18 14:00:00Z	2014-03-18 16:30:00Z	UNDM-01-01212	EXAMGEN1 - Planned Outage for Power Station Generating Unit A from 20/03/14 14:00 until 20/03/14 16:30	EXAMGEN1	NA	0	G31	coal	Closed
Planned Outage	2014-03-18 14:00:00Z	2014-03-18 14:00:00Z	2014-03-18 16:30:00Z	UNDM-01-01212	EXAMGEN1 - Planned Outage for Power Station Generating Unit A from 20/03/14 14:00 until 20/03/14 16:30	EXAMGEN1	NA	0	G31	coal	Open
Planned Outage	2014-03-18 14:00:00Z	2014-03-18 14:00:00Z	2014-03-18 16:30:00Z	UNDM-01-01212	EXAMGEN1 - Planned Outage for Power Station Generating Unit A from 20/03/14 14:00 until 20/03/14 16:30	EXAMGEN1	NA	0	G31	coal	Closed
Planned Outage	2014-03-18 14:00:00Z	2014-03-18 14:00:00Z	2014-03-18 16:30:00Z	UNDM-01-01212	EXAMGEN1 - Planned Outage for Power Station Generating Unit A from 20/03/14 14:00 until 20/03/14 16:30	EXAMGEN1	NA	0	G31	coal	Open
Planned Outage	2014-03-18 14:00:00Z	2014-03-18 14:00:00Z	2014-03-18 16:30:00Z	UNDM-01-01212	EXAMGEN1 - Planned Outage for Power Station Generating Unit A from 20/03/14 14:00 until 20/03/14 16:30	EXAMGEN1	NA	0	G31	coal	Closed
Planned Outage	2014-03-18 14:00:00Z	2014-03-18 14:00:00Z	2014-03-18 16:30:00Z	UNDM-01-01212	EXAMGEN1 - Planned Outage for Power Station Generating Unit A from 20/03/14 14:00 until 20/03/14 16:30	EXAMGEN1	NA	0	G31	coal	Open
Planned Outage	2014-03-18 14:00:00Z	2014-03-18 14:00:00Z	2014-03-18 16:30:00Z	UNDM-01-01212	EXAMGEN1 - Planned Outage for Power Station Generating Unit A from 20/03/14 14:00 until 20/03/14 16:30	EXAMGEN1	NA	0	G31	coal	Closed

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BMRS UI Overview 3

■ P291 REMIT - Message Detail Page

The screenshot displays the ELEXON website interface for the P291 REMIT Message Detail Page. The top navigation bar includes links for ELEXON.co.uk, ELEXON Portal, BM Reports (highlighted), TAAMT, and Careers. The main header features the ELEXON logo and a navigation menu with HOME and MESSAGES (selected). Below the menu, a breadcrumb trail reads 'Home » Messages'. A disclaimer states: 'This information has been provided by market participants to comply with Article 4 of REGULATION (EU) No 1227/2011 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 25 October 2011 on wholesale energy market integrity and transparency.'

The main content area is titled 'Planned Outage' with the identifier 'UMM-01-01212'. It specifies the event: 'EXAMGEN1 – Planned Outage for Power Station Generating Unit A from 20/03/14 09:00 until 20/03/14 18:00'. Asset ID is 'EXAMGEN1' and Market Participant ID is 'BGAS'. The publication date is '2014-03-18 14:00:00Z'. There are links for 'XML' and 'CSV' data formats.

Event Details

Available Capacity (MW)	Event Start (GMT)	End Start (GMT)	Duration Uncertainty	Cause	Event Status
0	2014-03-20 14:00:00Z	2014-03-20 16:30:00Z	+/- 24 Outage	Planned Outage	Open

Asset Details

EIC Code	Asset Type	Affected Unit	Affected Area	Type of Fuel	Normal Capacity (MW)
NA	Transmission	NA	B1	Coal	200

Related Information

Planned outage for routine maintenance

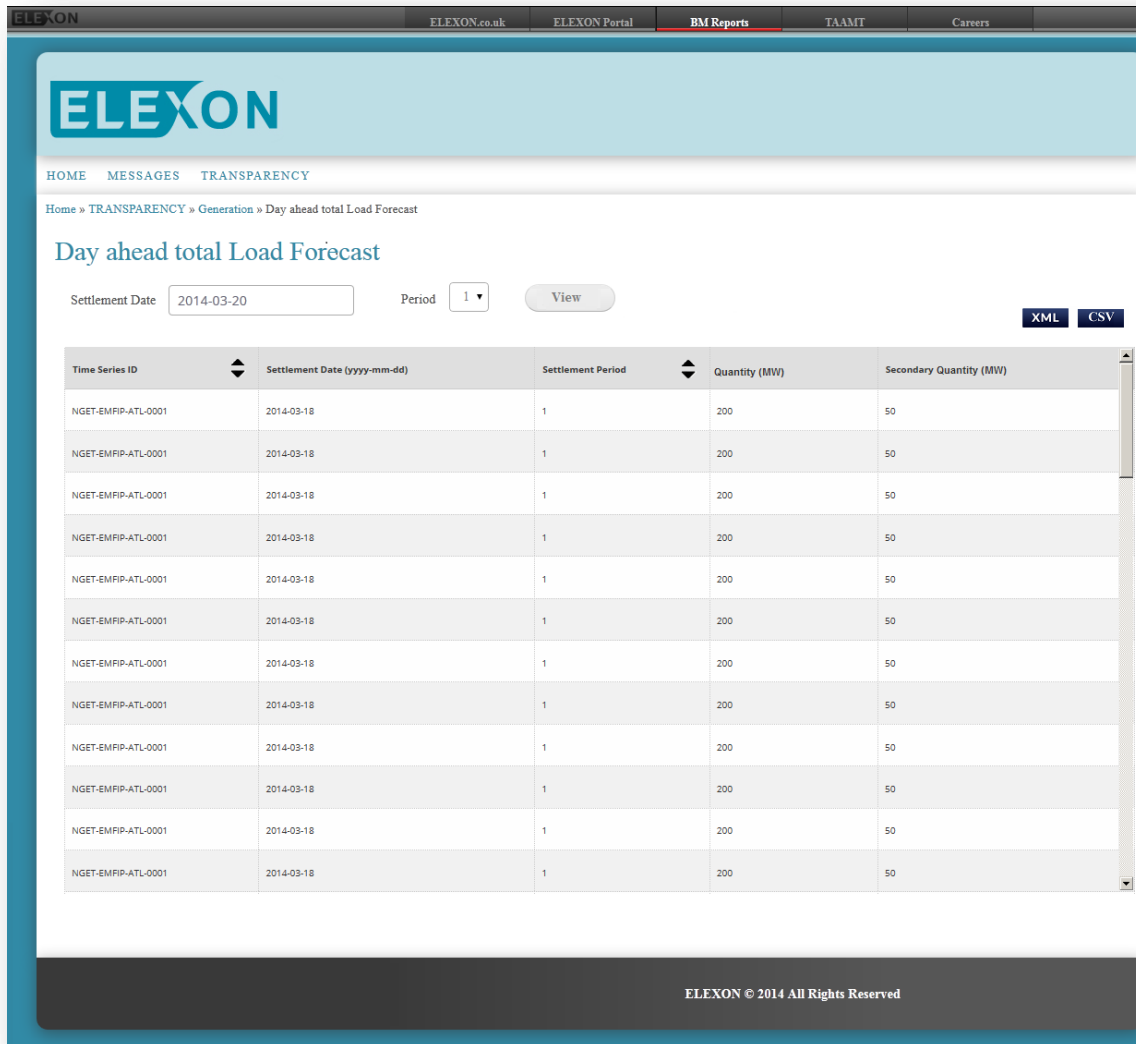
Related Messages

Published Date Time (GMT)	
2014-03-15 14:00:00Z	
2014-03-18 14:00:00Z	(Currently Viewing)
2014-03-13 17:00:00Z	
2014-03-18 18:00:00Z	
2014-03-18 13:00:00Z	

A 'Back' button is located at the bottom left of the message list. The footer contains the text 'ELEXON © 2014 All Rights Reserved'.

BMRS UI Overview 4

■ P295 ETR – Day Ahead Total Load Forecast



The screenshot displays the ELEXON web portal interface. At the top, there is a navigation bar with links: ELEXON.co.uk, ELEXON Portal, **BM Reports**, TAAMT, and Careers. Below this is a header section with the ELEXON logo and navigation links: HOME, MESSAGES, and TRANSPARENCY. A breadcrumb trail reads: Home » TRANSPARENCY » Generation » Day ahead total Load Forecast. The main heading is "Day ahead total Load Forecast". Below the heading, there is a form with "Settlement Date" set to "2014-03-20", a "Period" dropdown set to "1", and a "View" button. To the right of the form are buttons for "XML" and "CSV". The main content area contains a table with the following data:

Time Series ID	Settlement Date (yyyy-mm-dd)	Settlement Period	Quantity (MW)	Secondary Quantity (MW)
NGET-EMFIP-ATL-0001	2014-03-18	1	200	50
NGET-EMFIP-ATL-0001	2014-03-18	1	200	50
NGET-EMFIP-ATL-0001	2014-03-18	1	200	50
NGET-EMFIP-ATL-0001	2014-03-18	1	200	50
NGET-EMFIP-ATL-0001	2014-03-18	1	200	50
NGET-EMFIP-ATL-0001	2014-03-18	1	200	50
NGET-EMFIP-ATL-0001	2014-03-18	1	200	50
NGET-EMFIP-ATL-0001	2014-03-18	1	200	50
NGET-EMFIP-ATL-0001	2014-03-18	1	200	50
NGET-EMFIP-ATL-0001	2014-03-18	1	200	50
NGET-EMFIP-ATL-0001	2014-03-18	1	200	50
NGET-EMFIP-ATL-0001	2014-03-18	1	200	50
NGET-EMFIP-ATL-0001	2014-03-18	1	200	50
NGET-EMFIP-ATL-0001	2014-03-18	1	200	50
NGET-EMFIP-ATL-0001	2014-03-18	1	200	50

At the bottom of the page, there is a footer that reads: ELEXON © 2014 All Rights Reserved.

BMRS UI Overview 5

■ P295 ETR – Week Ahead Total Load Forecast

The screenshot displays the ELEXON web portal interface. At the top, a navigation bar includes links for ELEXON.co.uk, ELEXON Portal, BM Reports (highlighted), TAAMT, and Careers. Below this, the ELEXON logo is prominently displayed. A breadcrumb trail shows the path: Home » TRANSPARENCY » Generation » Week ahead total Load Forecast. The main heading is "Week ahead total Load Forecast". Below the heading, there are filters for "Year" (set to 2013) and "Week" (set to 01), followed by a "View" button. To the right of the filters are links for "XML" and "CSV". The main content area features a table with the following data:

Time Series ID	Business Type	Week	Date (yyyy-mm-dd)	Quantity (MW)	Secondary Quantity (MW)
NGET-EMFIP-WATL-0001	Consumption	22	2014-03-18	200	50
NGET-EMFIP-WATL-0001	Consumption	22	2014-03-18	200	50
NGET-EMFIP-WATL-0001	Consumption	22	2014-03-18	200	50
NGET-EMFIP-WATL-0001	Consumption	22	2014-03-18	200	50
NGET-EMFIP-WATL-0001	Consumption	22	2014-03-18	200	50
NGET-EMFIP-WATL-0001	Consumption	22	2014-03-18	200	50
NGET-EMFIP-WATL-0001	Consumption	22	2014-03-18	200	50
NGET-EMFIP-WATL-0001	Consumption	22	2014-03-18	200	50
NGET-EMFIP-WATL-0001	Consumption	22	2014-03-18	200	50
NGET-EMFIP-WATL-0001	Consumption	22	2014-03-18	200	50
NGET-EMFIP-WATL-0001	Maximum Possible	22	2014-03-18	200	--

At the bottom of the page, a footer states "ELEXON © 2014 All Rights Reserved".



Participant Testing

Participant Testing

- Testing Plan & Approach
- Scope
- Next Steps