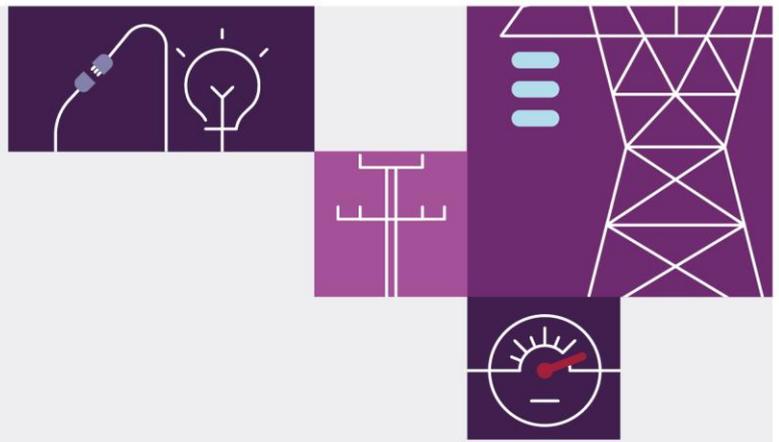


WEMS MPI User Guide: Short Term Energy Market

August 2023

Version 1





Important notice

Purpose

AEMO has prepared this document to provide information about the Short Term Energy Market (STEM) support process available to Market Participants for the Wholesale Electricity Market System (WEMS), as at the date of publication.

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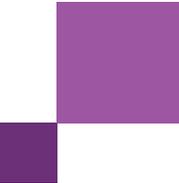
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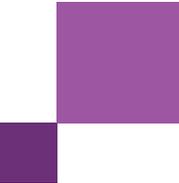
Version control

Version	Release date	Changes
1.0	August 11 2023	Initial release



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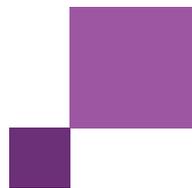
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1 Introduction

The purpose of this document is to describe the functions and capabilities of the Wholesale Electricity Market System Market Participant Interface and act as a guide to users specific to the Short Term Energy Market. The WEMS Market Participant Interface (WEMS MPI) is the medium between the Market Participant and AEMO to exchange and submit registration information, trading submissions, and facilitate the extraction of reports.

This document is intended for WEMS MPI users.

2 System Requirements

Please refer to the [Market Procedure: Data and IT Interface Requirements](#) for more information on the necessary technical details and standards, software and hardware specifications, and security standards required for Market Participants to operate in the Wholesale Electricity Market (WEM).

3 Accessing the System

The WEMS MPI is located at <https://wems.aemo.com.au/mpi>.

Upon visiting the site, the MPI will require the user to authenticate with their WEMS RSA SecurID token before the user is able to access the MPI. The RSA SecurID token can be identified by the RSA SecurID dark blue and red logo with white writing (see Figure 1).

New users must apply for WEMS access by contacting their Market Participant Administrator (MPA) as well as completing the WEMS Token Request Form. This form, along with the RSA Quick Reference Guide, is available from the MPI login page or from WA Market Operations at wa.operations@aemo.com.au.

New users must also be assigned the appropriate roles by their MPA to ensure they have the correct access privileges. Refer to the [Market Participant Administrator Guide](#) for more information.

RSA SecurID tokens are managed and issued by AEMO; however individual roles and user accounts are managed by each MPA.

Once logged in to WEMS MPI, users seeking to make or view STEM and Bilateral submissions can do so within the Energy Market menu (Figure 3).

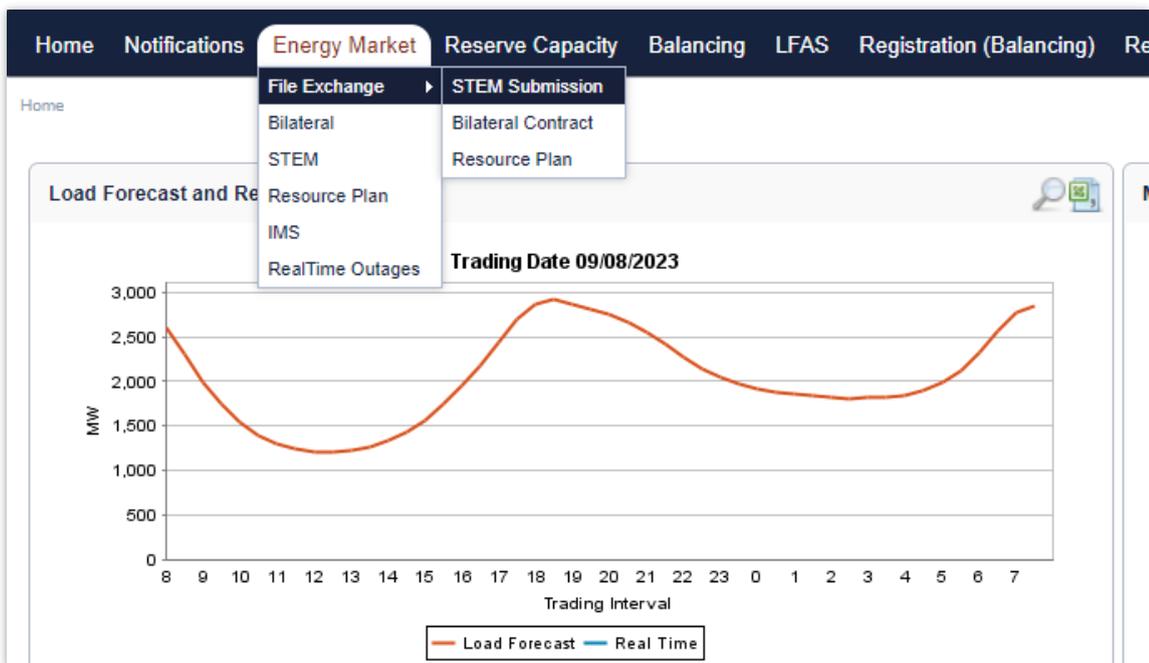
Figure 1 RSA SecurID token example

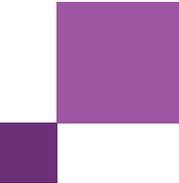


Figure 2 WEMS MPI login screen



Figure 3 Energy Market Menu





4 Common Information

Every webpage within the MPI contains the standard navigation items in Table 1.

Table 1 Standard MPI navigation items

Item	Description
Contact Us	Provides AEMO contact details for queries related to the MPI and WEMS.
Disclaimer	Site specific disclaimer for MPI user.
Help	Provides the user guide of the application (this document).
Logout	Allows the user to logout from the application.
Menu	Allows navigating across the application. Home, Notifications, Energy Market, Reserve Capacity, Balancing, LFAS, Registration, Settlements, Reports, Configuration, Help, and Logout menu items are available.
User Name	Name of the user that is logged in.
WEMS Market Time	Displays the time of the WEMS (Australian Western Standard Time)

5 Dashboard

Upon successfully logging into the MPI, users will be directed to the Market Summary dashboard (see Figure 4). Each of the individual components of the dashboard (see Table 2) is refreshed periodically, ensuring the latest information is presented to users without the need for the user to refresh the page. The functionality of the dashboard components are explained in more detail in Sections 5.1, 5.1.2, 5.2 and 5.3.

For assistance with the Dashboard, please contact WA Market Operations at wa.operations@aemo.com.au.

Figure 4 Market Summary dashboard

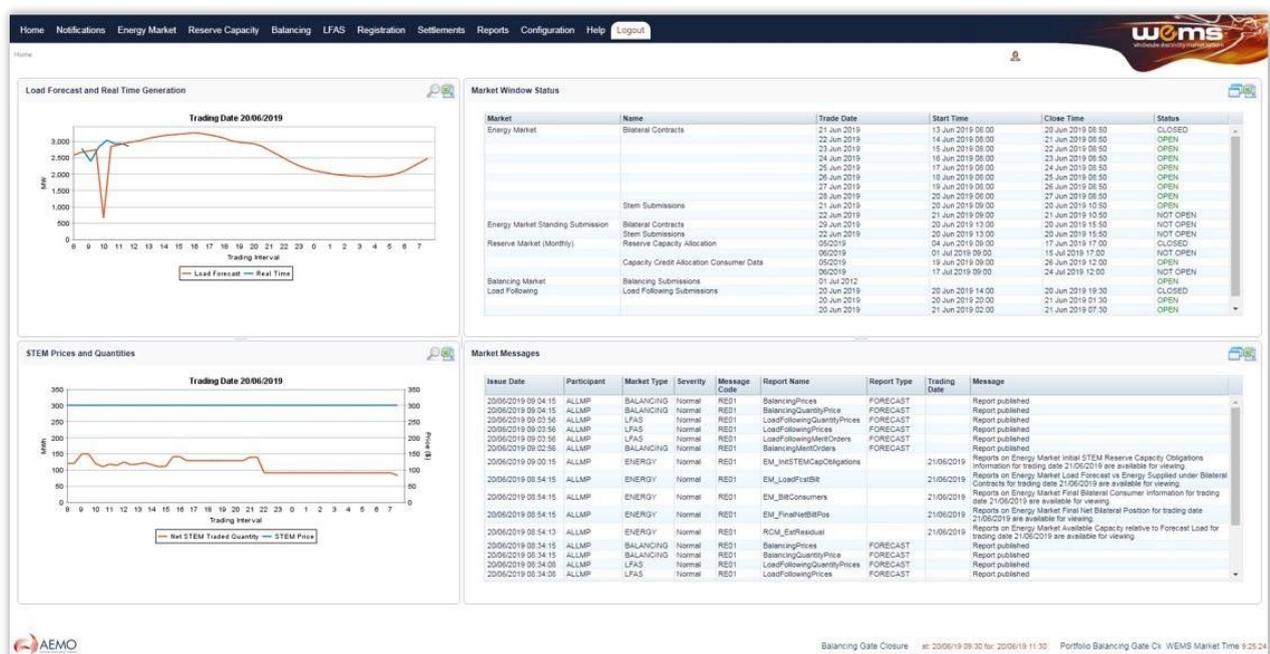


Table 2 Market Summary dashboard component descriptions

Dashboard Item	Description
Load Forecast and Real Time Generation Graph	Provides a graph of the forecasted load and real time load for the current trading day. Refreshes every 60 seconds. Can be enlarged or downloaded to CSV.
STEM Prices and Quantities Graph	Provides a graph of the STEM Traded Quantities and Prices for each trading interval of the current trading day. Refreshes every time the dashboard loads or the page is refreshed. Can be enlarged or downloaded to CSV.
Market Window Status	Displays all the Market Windows which are in an "Open state", at any point of time. Refreshes every 60 seconds. Can be enlarged or downloaded to CSV.

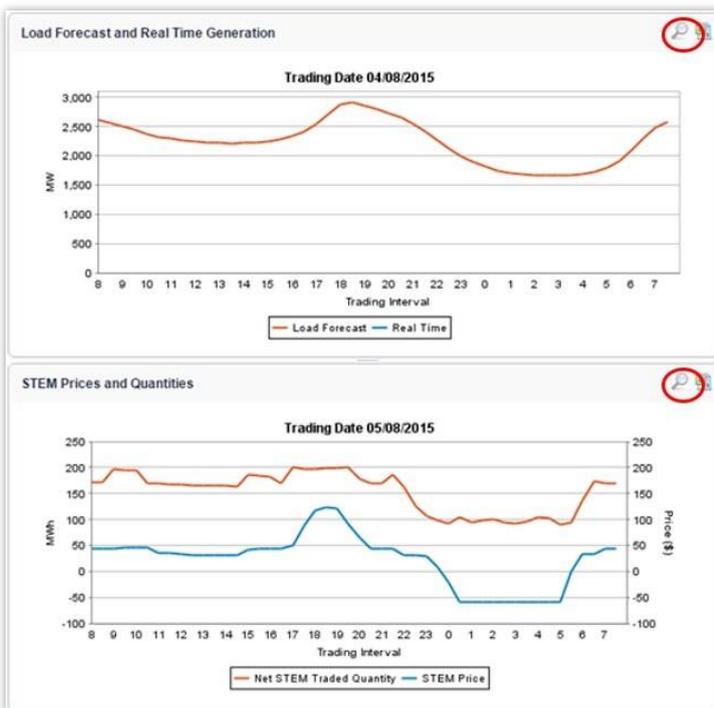
Dashboard Item	Description
Market Messages	<p>Displays the latest 20 WEMS market messages.</p> <p>Displays market messages by Issue Date, Participant, Market Type, Trading Date and Message.</p> <p>Refreshes every 60 seconds.</p> <p>Can be enlarged or downloaded to CSV.</p>

5.1 Market Summary Graphs

5.1.1 Enlarging the graphs

All graphs on the dashboard can be enlarged by clicking the magnifier icon in the header of the graph (see Figure 5). The graph will then enlarge to cover the MPI screen (see Figure 6).

Figure 5 Enlarging the graph using the magnifier icon



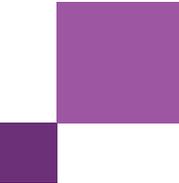
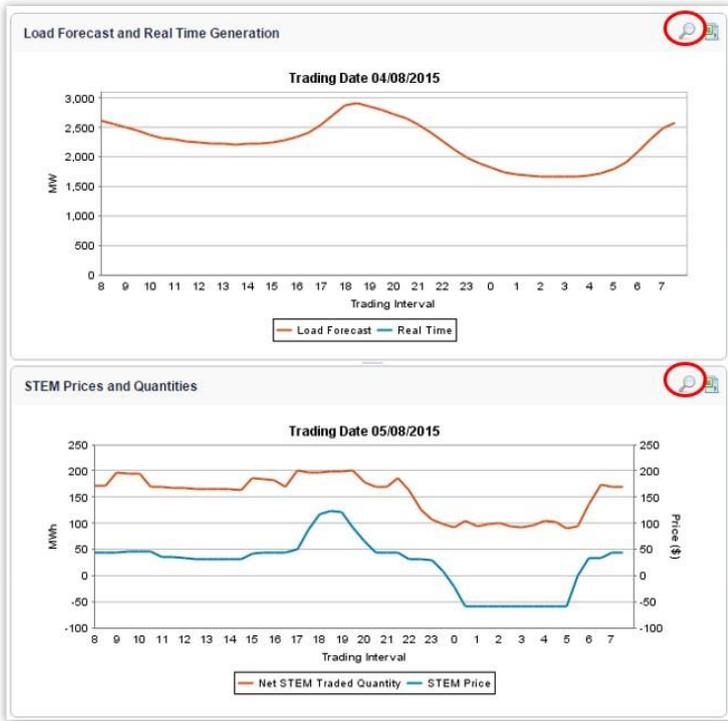


Figure 7 Downloading data from graph using the download icon



5.2 Market Window Status

The Market Window Status display provides all Energy Data Submission Window details (see Figure 7).

The Market Window Status fields are described in Table 3.

Use the scroll bar to view all Market Window Statuses on the dashboard.

To open the Market Window Status display in a separate tab/window, click on the window icon at the top right of the Market Window Status display (see Figure 8). The full Market Window page provides details of all the current and future Market Windows and their respective status (see Figure 9).

Table 3 Market Window Status field descriptions

Field Name	Field Description
Market	Energy Market
Name	Bilateral Contracts or Stem submissions
Trade Date	Trading Date for which the market window is open
Start Time	Date and time when the Market Window opens
Close Time	Date and time when the Market Window closes
Status	Market Window status

Figure 8 Market Window Status display

Market	Name	Trade Date	Start Time	Close Time	Status
Energy Market	Bilateral Contracts	11 Jun 2014	03 Jun 2014 08:00	10 Jun 2014 08:50	CLOSED
		12 Jun 2014	04 Jun 2014 08:00	11 Jun 2014 08:50	OPEN
		13 Jun 2014	05 Jun 2014 08:00	12 Jun 2014 08:50	OPEN
		14 Jun 2014	06 Jun 2014 08:00	13 Jun 2014 08:50	OPEN
		15 Jun 2014	07 Jun 2014 08:00	14 Jun 2014 08:50	OPEN
		16 Jun 2014	08 Jun 2014 08:00	15 Jun 2014 08:50	OPEN
		17 Jun 2014	09 Jun 2014 08:00	16 Jun 2014 08:50	OPEN
		18 Jun 2014	10 Jun 2014 08:00	17 Jun 2014 08:50	OPEN
		Resource Plan and Balancing Submissions	11 Jun 2014	10 Jun 2014 11:00	10 Jun 2014 12:50
	12 Jun 2014		11 Jun 2014 11:00	11 Jun 2014 12:50	NOT OPEN
	11 Jun 2014		10 Jun 2014 09:00	10 Jun 2014 09:50	CLOSED

Figure 9 Market Window Status displayed in a separate tab/window

Market	Name	Trade Date	Start Time	Close Time	Status
Energy Market	Bilateral Contracts	27 Mar 2016	19 Mar 2016 08:00	26 Mar 2016 08:50	CLOSED
		28 Mar 2016	20 Mar 2016 08:00	27 Mar 2016 08:50	OPEN
		29 Mar 2016	21 Mar 2016 08:00	28 Mar 2016 08:50	OPEN
		30 Mar 2016	22 Mar 2016 08:00	29 Mar 2016 08:50	OPEN
		31 Mar 2016	23 Mar 2016 08:00	30 Mar 2016 08:50	OPEN
		01 Apr 2016	24 Mar 2016 08:00	31 Mar 2016 08:50	OPEN
		02 Apr 2016	25 Mar 2016 08:00	01 Apr 2016 08:50	OPEN
		03 Apr 2016	26 Mar 2016 08:00	02 Apr 2016 08:50	OPEN
		27 Mar 2016	26 Mar 2016 11:00	26 Mar 2016 12:50	CLOSED
	Resource Plan and Balancing Submissions	27 Mar 2016	27 Mar 2016 11:00	27 Mar 2016 12:50	NOT OPEN
		27 Mar 2016	26 Mar 2016 09:00	26 Mar 2016 09:50	CLOSED
		26 Mar 2016	27 Mar 2016 09:00	27 Mar 2016 09:50	NOT OPEN
	Stem Submissions	04 Apr 2016	26 Mar 2016 13:00	26 Mar 2016 15:50	NOT OPEN
		26 Mar 2016	26 Mar 2016 13:00	26 Mar 2016 15:50	NOT OPEN
		28 Mar 2016	26 Mar 2016 13:00	26 Mar 2016 15:50	NOT OPEN
	Energy Market Standing Submission	02/2016	01 Mar 2016 09:00	19 Mar 2016 17:00	CLOSED
		03/2016	02 Apr 2016 09:00	16 Apr 2016 17:00	NOT OPEN
		02/2016	19 Mar 2016 09:00	26 Mar 2016 12:00	CLOSED
Reserve Market (Monthly)	03/2016	19-Apr-2016 09:00	26-Apr-2016 12:00	NOT OPEN	
	01 Jul 2012	26 Mar 2016 14:00	26 Mar 2016 19:30	OPEN	
	26 Mar 2016	26 Mar 2016 20:00	27 Mar 2016 01:30	CLOSED	
Balancing Market Load Following	26 Mar 2016	26 Mar 2016 02:00	27 Mar 2016 07:30	OPEN	
	26 Mar 2016	27 Mar 2016 02:00	27 Mar 2016 07:30	OPEN	
	27 Mar 2016	27 Mar 2016 08:00	27 Mar 2016 13:30	OPEN	

5.3 Market Messages

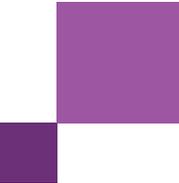
The Market Messages display provides information headlines on recent market events, such as automated report publication and availability to the market. Events that have been initiated manually by WA Market Operations will also appear here.

Market Messages are categorised by the following severity types:

- Normal (N): Automated market messages generated by the system.
- Urgent (U): Urgent messages.
- Emergency (E): Emergency messages.

The Market Messages display fields are described in Table 5.

Use the scroll bar to view all Market Messages on the dashboard.



To view the Market Messages in separate tab/window, click on the window icon at the top right of the display (see Figure 10). Market Messages can then be filtered by Issue Date, Market Type, and Severity of the message.

The results from the Market Message search query will populate the right-hand side of the browser (see Figure 11).

To download the Market Messages from the Home dashboard, click on the file icon at the top right of the window (see Figure 10). The user will be prompted with a File Download dialog box where the message information can either be saved to disk or opened directly. The format of the file is comma delimited (CSV).

The default file name for the data is:

- notification.marketmessages_[MP SHORTNAME]_YYYYMMDDHHMMSS

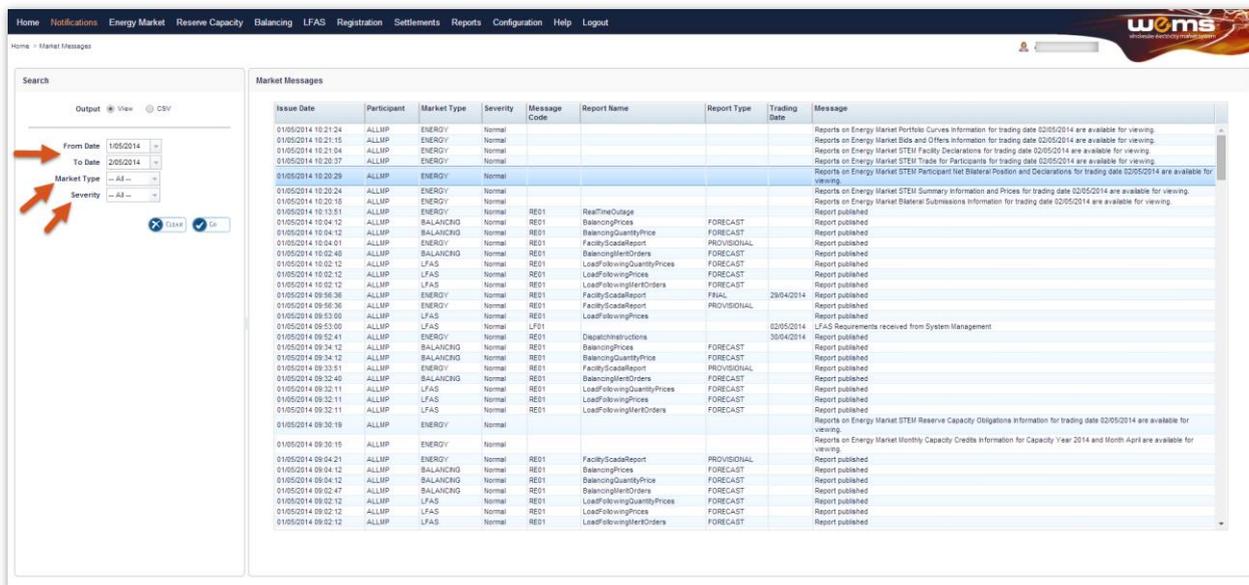
Table 4 Market Messages display fields

Field Name	Field Description
Issue Date	Date and time of the message issued
Participant	Participant the Message is applicable to – most messages are applicable to all participants and this field shows ALLMP
Market Type	ENERGY
Severity	Can be NORMAL, URGENT, or EMERGENCY
Message Code	
Report Name	The name of report the message is applicable to (if message is not specific to a report then this field will be blank)
Report Type	
Trading Date	The trading date the report is applicable to (if message is not specific to a report then this field will be blank)
Message	Market Message description

Figure 10 Market Messages display

Issue Date	Participant	Market Type	Severity	Message Code	Report Name	Report Type	Trading Date	Message
11/09/2014 15:05:02	ALLMP	ENERGY	Normal	RE01	FacilityScadaReport	PROVISIONAL		Report published
11/09/2014 15:04:08	ALLMP	BALANCING	Normal	RE01	BalancingPrices	FORECAST		Report published
11/09/2014 15:04:08	ALLMP	BALANCING	Normal	RE01	BalancingQuantityPrice	FORECAST		Report published
11/09/2014 15:02:35	ALLMP	BALANCING	Normal	RE01	BalancingMeritOrders	FORECAST		Report published
11/09/2014 15:02:07	ALLMP	LFAS	Normal	RE01	LoadFollowingQuantityPrices	FORECAST		Report published
11/09/2014 15:02:07	ALLMP	LFAS	Normal	RE01	LoadFollowingPrices	FORECAST		Report published
11/09/2014 15:02:07	ALLMP	LFAS	Normal	RE01	LoadFollowingMeritOrders	FORECAST		Report published
11/09/2014 14:35:32	ALLMP	ENERGY	Normal	RE01	FacilityScadaReport	PROVISIONAL		Report published
11/09/2014 14:35:18	ALLMP	ENERGY	Normal					Reports on Energy Market Ex Post Outages Information for trading date 23/08/2014 are available for viewing.
11/09/2014 14:34:08	ALLMP	BALANCING	Normal	RE01	BalancingPrices	FORECAST		Report published

Figure 11 Market Messages displayed in a separate tab/window



5.4 Market Messages Search

The Market Messages search functionality enables users to search historical messages for a date range. The date range is configured and controlled by AEMO.

To access the search function, select **Notifications >Market Messages** (see Figure 12).

Upon clicking the menu, the system navigates to a screen with default search criteria (see Figure 13). The search criteria is described in Table 5 and the search result data fields are described in Table 7.

Once the search criteria have been selected, click on the Go button to retrieve the results. For the example shown in Figure 14, Energy is selected under Market Type and Normal is selected under Severity.

Once the search criteria has been selected, select the CSV option to download the file (see Figure 15).

Table 5 Market Messages search criteria fields

Field Name	Field Description
From Date	Start Date of the date range for searching
To Date	End Date of the date range for searching
Market Type	Market Type for which the message belongs to. Available options are as follows: <ul style="list-style-type: none"> • ALL • ENERGY • RESERVE • BALANCING • LFAS • STEM

Field Name	Field Description
Severity	Message Severity. Available options are as follows. <ul style="list-style-type: none"> • ALL • NORMAL • URGENT • EMERGENCY

Table 6 Market Messages search results fields

Field Name	Field Description
Issue Date	Market Message issued date and time
Participant	Participant name for which the message is belongs to
Market Type	The market type
Severity	The severity type
Message Code	Used for AEMO internal
Report Name	The name of the report
Report Type	FINAL or PROVISIONAL
Trading Date	Trading date for which the report was issued
Message	The message description

Figure 12 Market Messages search



Figure 13 Market Messages search display

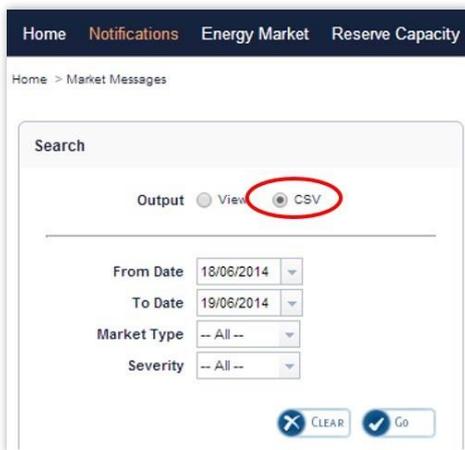
The screenshot shows the 'Market Messages' search interface. On the left is a search panel with the following fields: 'Output' (radio buttons for View and CSV), 'From Date' (18/06/2014), 'To Date' (19/06/2014), 'Market Type' (dropdown menu), and 'Severity' (dropdown menu). There are 'CLEAR' and 'Go' buttons at the bottom of the search panel. On the right is a table titled 'Market Messages' with the following columns: Issue Date, Participant, Market Type, Severity, Message Code, Report Name, Report Type, Trading Date, and Message. The table contains 13 rows of data.

Issue Date	Participant	Market Type	Severity	Message Code	Report Name	Report Type	Trading Date	Message
18/06/2014 11:30:12	ALLMP	ENERGY	Normal	RE01	RealTimeOutage			Report published
18/06/2014 11:04:09	ALLMP	BALANCING	Normal	RE01	BalancingPrices	FORECAST		Report published
18/06/2014 11:04:09	ALLMP	BALANCING	Normal	RE01	BalancingQuantityPrice	FORECAST		Report published
18/06/2014 11:03:53	ALLMP	ENERGY	Normal	RE01	FacilityScadaReport	PROVISIONAL		Report published
18/06/2014 11:02:41	ALLMP	BALANCING	Normal	RE01	BalancingMeritOrders	FORECAST		Report published
18/06/2014 11:02:08	ALLMP	LFAS	Normal	RE01	LoadFollowingQuantityPrices	FORECAST		Report published
18/06/2014 11:02:08	ALLMP	LFAS	Normal	RE01	LoadFollowingPrices	FORECAST		Report published
18/06/2014 11:02:08	ALLMP	LFAS	Normal	RE01	LoadFollowingMeritOrders	FORECAST		Report published
18/06/2014 11:01:42	ALLMP	ENERGY	Normal	RE01	RealTimeOutage			Report published
18/06/2014 11:00:05	ALLMP	BALANCING	Normal	RE01	BalancingQuantityPrice	FINAL	15/06/2014	Report published

Figure 14 Market Messages search criteria example



Figure 15 Market Messages download



5.5 Market Status

The Market Status display is a dashboard to view the expected timeline for when market windows will open and close. It also displays the current status.

To view the Market Status display, select Notifications > Market Status (see Figure 16). The Market Status display fields are described in Figure 16 .

Table 7 Market Status display fields

Field Name	Field Description
Market	ENERGY MARKET
Name	Name of submission type
Trade Date	Trade date for which the submission applies

Field Name	Field Description
Start Time	Time that the window opens
Close Time	Time that the window closes

Figure 16 Market Status display

Market	Name	Trade Date	Start Time	Close Time	Status
Energy Market	Bilateral Contracts	21 Jun 2019	13 Jun 2019 08:00	20 Jun 2019 08:50	CLOSED
		22 Jun 2019	14 Jun 2019 08:00	21 Jun 2019 08:50	OPEN
		23 Jun 2019	15 Jun 2019 08:00	22 Jun 2019 08:50	OPEN
		24 Jun 2019	16 Jun 2019 08:00	23 Jun 2019 08:50	OPEN
		25 Jun 2019	17 Jun 2019 08:00	24 Jun 2019 08:50	OPEN
		26 Jun 2019	18 Jun 2019 08:00	25 Jun 2019 08:50	OPEN
		27 Jun 2019	19 Jun 2019 08:00	26 Jun 2019 08:50	OPEN
		28 Jun 2019	20 Jun 2019 08:00	27 Jun 2019 08:50	OPEN
		21 Jun 2019	20 Jun 2019 08:00	20 Jun 2019 10:50	OPEN
		22 Jun 2019	21 Jun 2019 08:00	21 Jun 2019 10:50	OPEN
Energy Market Standing Submission	Bilateral Contracts	29 Jun 2019	20 Jun 2019 13:00	20 Jun 2019 15:50	NOT OPEN
		22 Jun 2019	20 Jun 2019 13:00	20 Jun 2019 15:50	NOT OPEN
Reserve Market (Monthly)	Stem Submissions	05/2019	04 Jun 2019 08:00	17 Jun 2019 17:00	CLOSED
		06/2019	01 Jul 2019 08:00	15 Jul 2019 17:00	NOT OPEN
		05/2019	19 Jun 2019 08:00	26 Jun 2019 12:00	OPEN
Balancing Market	Capacity Credit Allocation Consumer Data	06/2019	17 Jul 2019 08:00	24 Jul 2019 12:00	NOT OPEN
		01 Jul 2012			OPEN
		01 Jul 2012			OPEN
Load Following	Balancing Submissions	20 Jun 2019	20 Jun 2019 14:00	20 Jun 2019 19:30	CLOSED
		20 Jun 2019	20 Jun 2019 20:00	21 Jun 2019 01:30	OPEN
		20 Jun 2019	21 Jun 2019 02:00	21 Jun 2019 07:30	OPEN
		21 Jun 2019	21 Jun 2019 08:00	21 Jun 2019 13:30	OPEN

6 Reports

This section should be read in conjunction with the [WEMS Reports and Web Service Specification](#) document. For assistance with Reports, please contact WA Market Operations at wa.operations@aemo.com.au.

6.1 Available Reports

The operational reports available in the MPI are outlined in Table 8.

Table 8 Operational reports available in MPI

Category	Report	Report Name
STEM and Bilateral Reports	Bilateral Contract Standing Data Conversion	EM_BiltStdConv
STEM and Bilateral Reports	Bilateral Submissions	EM_BiltSubmission
STEM and Bilateral Reports	Final Bilateral Consumer Information	EM_BiltConsumers
STEM and Bilateral Reports	Final Net Bilateral Position	EM_FinalNetBiltPos
STEM and Bilateral Reports	Load Forecast vs Bilateral Contracts	EM_LoadFcstBilt
STEM and Bilateral Reports	Standing STEM Submission Curtailment	EM_STEMStdCurt
STEM and Bilateral Reports	STEM Bids and Offers	EM_STEMBidsAndOffer
STEM and Bilateral Reports	STEM Facility Declaration	EM_STEMResInfo
STEM and Bilateral Reports	STEM Facility Limits	EM_FacilityLimit
STEM and Bilateral Reports	STEM Participant Limits	EM_PartLimit
STEM and Bilateral Reports	STEM Portfolio Curve	EM_STEMPortCrv
STEM and Bilateral Reports	STEM Standing Data Conversion	EM_STEMStdConv
STEM and Bilateral Reports	STEM Summary Info	EM_STEMSummaryInfo
STEM and Bilateral Reports	STEM Trade Results	EM_STEMResultPartInfo
Market Reports	All STEM Bids and Offers Report	All_Bids_and_Offers
Market Reports	All STEM Facility Declarations Report	All_Facility_Declarations
Market Reports	All STEM Trades Report	All_STEM_Trades

6.2 View Reports

The MPI allows users to view and download reports by the methods outlined in Table 9. To view and download reports, select Reports > View (see Figure 17).

Table 9 Report access methods

Access Method	Description
By Report Name	Allows the user to view and download the report by name for a date range.
By Trade Date	Allows users to download multiple reports published for a single trade date, while viewing of reports within the browser is limited to one report at a time. The number of reports a user can download at a time is controlled and configurable by AEMO.

Figure 17 View and Download reports



6.2.1 By Report Name

By default, the system navigates to the By Report tab in the Reports display. In this tab, users are able to select a report from the dropdown list for viewing or downloading (see Figure 18).

Once the report name is selected, the system will automatically populate the available search criteria and control parameters which are specific to the report, in the left-hand search area of the page.

The control parameters are outlined in Table 10 and the search criteria are outlined in Table 11.

All report parameters are controlled and configurable by AEMO, including the number of days of data available to users for download at a time per report. These parameters may be modified from time to time by AEMO to improve usability and performance.

Once the search criteria have been chosen, the report can be viewed by clicking on the View button in the left-hand search area. Depending on the availability of data, the MPI will respond in one of the following ways:

1. Returns the report data matching the search criteria.
2. Report Not Published.
3. No data found.

An example of a report displayed using the View button is shown in Figure 20.

Table 10 Report parameters display

Field Name	Field Description
Max Days/Months/Years	Maximum number of days/months/years a report can be retrieved in a single request (dependant on report group).
Earlier Date	Earliest date for which the report data is available.

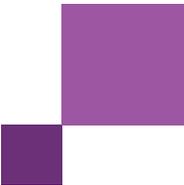


Table 11 By Report display search criteria fields

Field Name	Field Description
Start Date	Start date of a date range for the search, which defaults to the current trading date.
End Date	End date of a date range for the search, which defaults to the current trading date.

Figure 18 Selecting a report

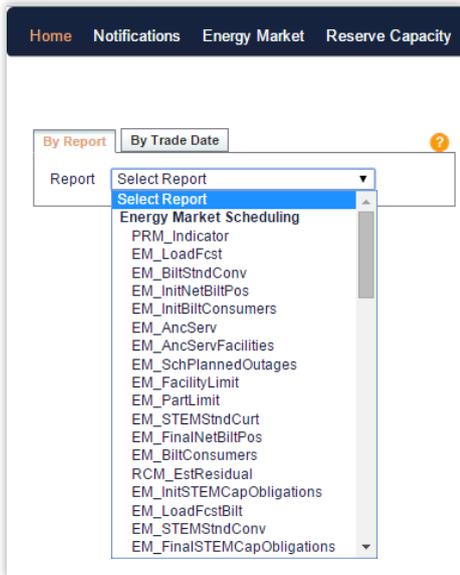


Figure 19 Options once a report is selected

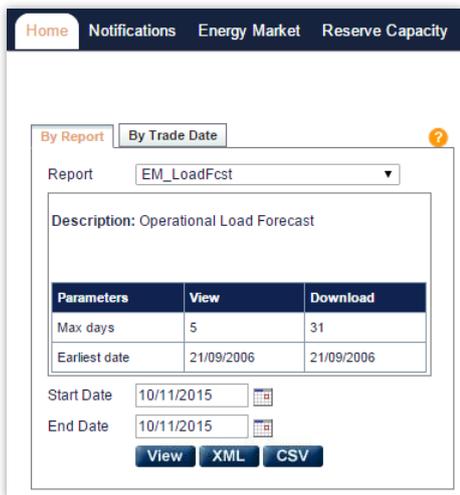


Figure 20 Viewing a selected report

TRADING DAY	HOUR OF DAY	TRADING INTERVAL	FORECAST (MWh)	FORECAST (MW)
14/05/2015	8	1	1,115.130	2,238.259
14/05/2015	8	2	1,101.228	2,202.455
14/05/2015	9	1	1,088.938	2,177.875
14/05/2015	9	2	1,076.555	2,153.199
14/05/2015	10	1	1,067.818	2,135.837
14/05/2015	10	2	1,062.512	2,125.062
14/05/2015	11	1	1,062.725	2,125.451
14/05/2015	11	2	1,066.122	2,132.244
14/05/2015	12	1	1,069.147	2,138.294
14/05/2015	12	2	1,072.794	2,145.508
14/05/2015	13	1	1,084.214	2,168.428
14/05/2015	13	2	1,096.790	2,193.588
14/05/2015	14	1	1,109.254	2,218.508
14/05/2015	14	2	1,121.186	2,242.392
14/05/2015	15	1	1,134.631	2,269.262
14/05/2015	15	2	1,152.435	2,304.668
14/05/2015	16	1	1,170.277	2,340.554
14/05/2015	16	2	1,188.593	2,377.187
14/05/2015	17	1	1,215.436	2,438.872
14/05/2015	17	2	1,275.347	2,550.694
14/05/2015	18	1	1,310.457	2,620.914
14/05/2015	18	2	1,288.993	2,577.988

6.2.2 By Trade Date

The By Trade Date option allows users to search multiple reports at a time for a particular date. Once a date has been chosen, the left-hand search menu will populate itself with a list of all the available reports for the chosen date (see Figure 21).

Users can refresh the report list at any time, or select reports for another date, by modifying the date in the Date box and clicking on the Refresh button.

Users are able to view a list of published reports only. The selection criteria are outlined in Table 12.

To view reports from the By Trade Date screen, users need to click on the report name hyperlink in the left-hand search area. The single report will then be viewable to the right of the search criteria (see Figure 22).

While it is not possible to view multiple reports simultaneously in the browser, it is possible to download multiple reports at once by enabling the check boxes of the required reports and clicking on the desired download format (either XML or CSV) (see Download Reports).

Table 12 By Trade Date display search criteria fields

Field Name	Field Description
Date	Report Date
Report List	List of reports applicable to the chosen report date. The total number of reports that a user can select to download at a time is controlled and configurable by AEMO.

Figure 21 By Trade Date display

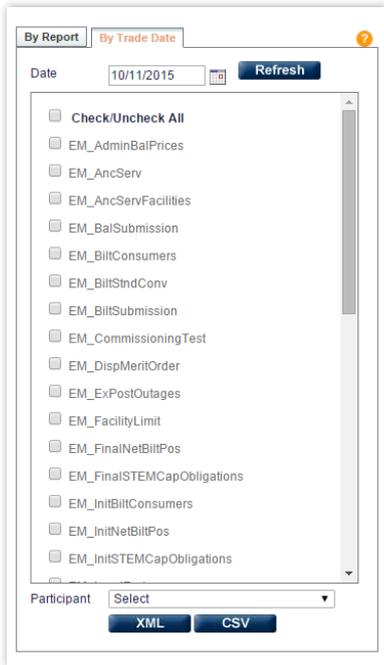


Figure 22 By Trade Date display results

TRADING DAY	HOUR OF DAY	TRADING INTERVAL	FORECAST (MWh)	TOTAL SCHEDULED BLT QUANTITY (MWh)
08/10/2015	8	1	1,055,889	1,073,406
08/10/2015	8	2	1,063,332	1,063,368
08/10/2015	9	1	1,061,280	1,050,301
08/10/2015	9	2	1,056,241	1,036,983
08/10/2015	10	1	1,056,036	1,039,891
08/10/2015	10	2	1,066,732	1,034,515
08/10/2015	11	1	1,070,269	1,025,157
08/10/2015	11	2	1,082,978	1,014,591
08/10/2015	12	1	1,093,861	1,007,930
08/10/2015	12	2	1,104,883	1,006,616
08/10/2015	13	1	1,120,616	1,013,452
08/10/2015	13	2	1,136,139	1,019,416
08/10/2015	14	1	1,155,193	1,028,273
08/10/2015	14	2	1,172,647	1,043,289
08/10/2015	15	1	1,188,060	1,064,817
08/10/2015	15	2	1,201,589	1,086,745
08/10/2015	16	1	1,213,866	1,117,564
08/10/2015	16	2	1,228,825	1,149,755
08/10/2015	17	1	1,223,326	1,184,968
08/10/2015	17	2	1,238,568	1,220,008
08/10/2015	18	1	1,242,725	1,246,167
08/10/2015	18	2	1,270,241	1,261,859

6.3 Download Reports

The MPI supports XML and CSV download formats.

To download the report data to a file, choose which format to download, and click on the appropriate button. Users can choose to download the reports directly or view the report first and then initiate the download.

Multiple reports are available for download as a single ZIP file which contains each of the individual reportfiles for the selected date. Only 30 reports can be downloaded at once.

The default file names for the data are shown in Table 13.

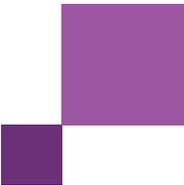


Table 13 Default file names for report download

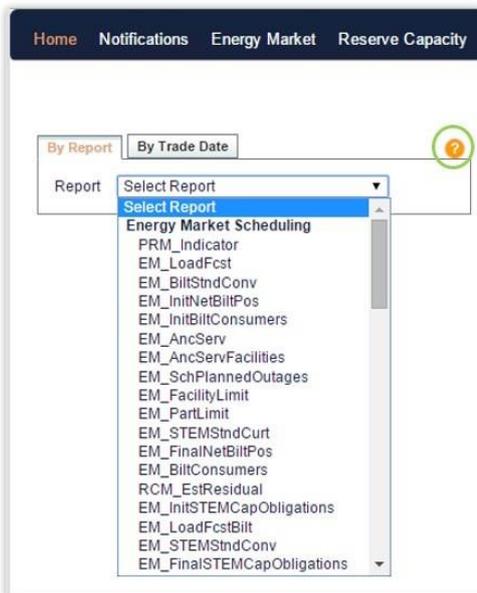
Download Format	File Name Format
XML	{Reportname}_{participant}_{ddmmyyyyhhmmss}.xml <ul style="list-style-type: none">• Reportname: name of the report being downloaded• Participant: name of the Participant to which the report belongs• ddmmyyyyhhmmss: download time
CSV	{Reportname}_{participant}_{ddmmyyyyhhmmss}.csv <ul style="list-style-type: none">• Reportname: name of the report being downloaded• Participant: name of the Participant to which the report belongs• ddmmyyyyhhmmss: download time
ZIP	Reports_{ddmmyyyyhhmmss}.zip <ul style="list-style-type: none">• ddmmyyyyhhmmss: user initiated download time

6.4 Report Help

Users are able to view a full list of available report names and descriptions by clicking on the orange question mark button at the top left of the Reports display (see Figure 23).

This provides the list of reports with the report name, title and category (see Figure 24).

Figure 23 Report Help button



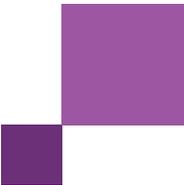


Figure 24 Report Help results

Reports		
Report name	Report title	Report category
PRM_Indicator	Prudential Risk Indicators (MP)	DAILY
EM_LoadFcst	Operational Load Forecast	DAILY
EM_BillStndConv	Bilateral Contract Standing Data Conversion	DAILY
EM_InitNetBillPos	Initial Net Bilateral Position(MP)	DAILY
EM_InitBillConsumers	Initial Bilateral Consumer Information (MP)	DAILY
EM_AncServ	Ancillary Service Energy excluded from STEM (MP)	DAILY
EM_AncServFacilities	Ancillary Service Facilities (MP)	DAILY
EM_SchPlannedOutages	Schedule of Outages (SWIS)	DAILY

6.5 Report Attributes

The Report Attributes component of WEMS has been removed.

The energy price limits can be viewed on the [AEMO Website](#).

Gate Closure information can be viewed [here](#).

7 File Exchange

To access the File Exchange, select Energy Market > File Exchange (see Figure 25).

Selecting **Balancing > File Exchange** or **LFAS > File Exchange** will also redirect to this display.

The File Exchange allows users to make Bilateral Contracts and STEM Submissions in either XML or CSV format via the MPI Interface. A submission may consist of a single XML file, or a set of CSV files.

Detailed file specifications and templates can be found under [Guides and Useful Information](#).

The functionality of the File Exchange dashboard components is explained in more detail in the sections below.

Figure 25 File Exchange dashboard

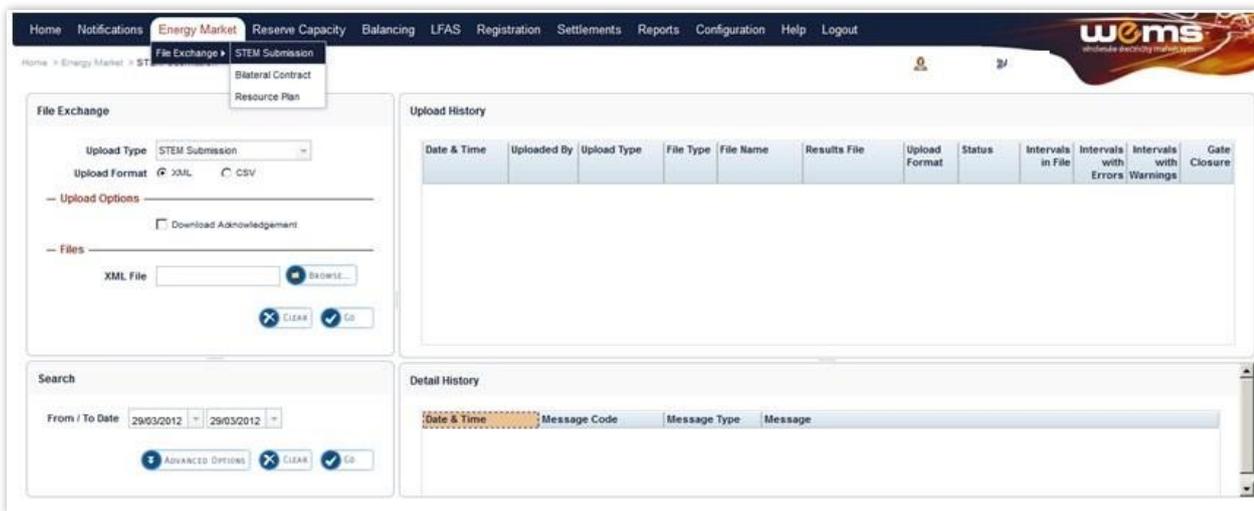


Table 14 File Exchange dashboard component descriptions

Item	Description
File Exchange	<ul style="list-style-type: none"> Provides a facility for uploading submissions to AEMO
Search	<ul style="list-style-type: none"> Provides a search facility for viewing historical submissions based on selected criteria
Upload History	<ul style="list-style-type: none"> Displays the file history based on selected search criteria
Detail History	Displays additional details of a selected historical upload selected from the Upload History dashboard item

7.1 File Exchange Options

Depending on the Upload Format (XML or CSV), the File Exchange display will provide different fields and options (see Figure 26).

The default File Exchange display is for XML uploads.

For CSV uploads, the File Exchange display will change depending upon the type of submission selected in the Upload Type drop-down menu.

The File Exchange display fields are described in Table 15.

Figure 26 File Exchange display options for XML and CSV

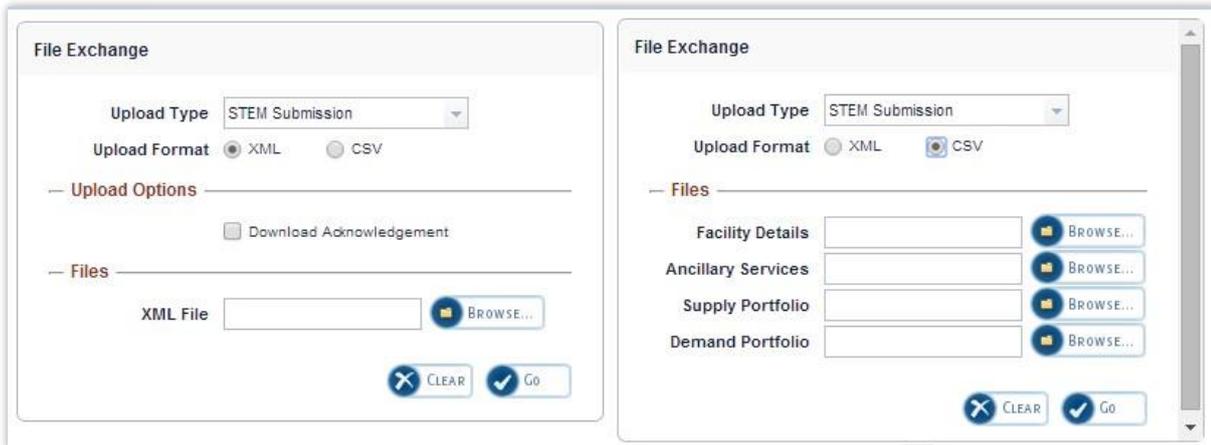


Table 15 File Exchange display field descriptions

Field Name	Field Description
Upload Type	Type of file to be uploaded: <ul style="list-style-type: none"> • Bilateral Contracts • STEM Submission
Upload Format	File format to be uploaded: <ul style="list-style-type: none"> • XML • CSV
File Type	Type of submission (does not apply to all Upload Types): <ul style="list-style-type: none"> • Standing • Variation
Upload Options	Options associated with Upload Types: <ul style="list-style-type: none"> • Allow Gate Closure Violations • Discard Entire File on Errors • Download Acknowledgement
XML File	Read-only display of the XML file name selected

7.2 XML Submissions

The steps to upload an XML file are:

1. Select the type of submission from the Upload Type drop-down menu.
2. Select the XML radio button.
3. If required, tick the Download Acknowledgement option (optional).
4. Click Browse and select the relevant file from the “Choose file to upload” window.

5. Once the file is selected, the file name of the selected file is displayed in the “XML File” text box.
6. Click Go to submit the file. If the user decides not to submit the file, click Clear.

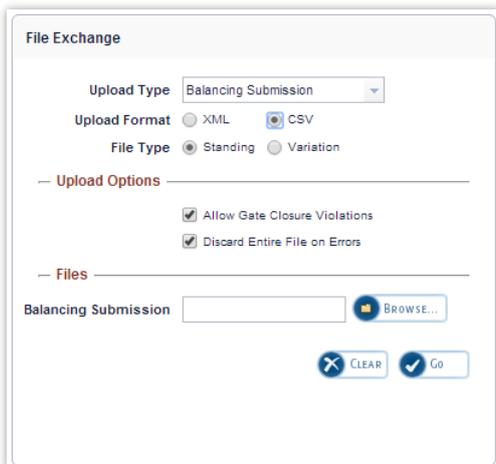
7.3 CSV Submissions

For CSV submissions, the File Exchange display changes depending upon the type of submission selected from the Upload Type drop-down menu. The exception is Bilateral Contracts which use the same File Exchange display as the XML submissions.

The steps to upload a CSV file are:

1. Select the type of submission from the Upload Type drop-down menu.
2. Select the CSV radio button.
3. If required, tick the relevant Upload Options (optional) (see Table 15).
4. Click Browse and select the relevant file(s) from the “Choose file to upload” window:
 - 4.1. Balancing Submissions consist of a single CSV file (see Figure 27). A Balancing Submission can be either a Standing submission, or a Variation submission which will overwrite a submission which had previously been made by the Participant for the Trading Intervals specified in the file.
 - 4.2. Bilateral Contracts consist of a single CSV file that contains details for bilateral market submissions (see Figure 28).
 - 4.3. LFAS Submissions consists of a single CSV file (see Figure 29).
 - 4.4. STEM Submissions require four CSV files to be uploaded (see Figure 30 and Table 16).
5. Once the file(s) is selected, the file name(s) of the selected file(s) is displayed in the text box.
6. Click Go to submit the file(s). If the user decides not to submit the file(s), click Clear.

Figure 27 Balancing Submission in CSV format



The screenshot shows the 'File Exchange' window with the following configuration:

- Upload Type:** Balancing Submission (selected in the dropdown)
- Upload Format:** CSV (selected with a radio button)
- File Type:** Standing (selected with a radio button)
- Upload Options:**
 - Allow Gate Closure Violations
 - Discard Entire File on Errors
- Files:** A text box labeled 'Balancing Submission' is empty, with a 'BROWSE...' button to its right.
- At the bottom, there are 'CLEAR' and 'Go' buttons.

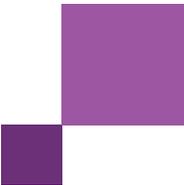


Figure 28 Bilateral Contracts in CSV format

The screenshot shows the 'File Exchange' interface. At the top, 'Upload Type' is set to 'Bilateral Contracts' and 'Upload Format' is set to 'CSV'. Below this, there is a section titled 'Files' with a sub-section 'Bilateral Contracts' containing a text input field and a 'BROWSE...' button. At the bottom of this section are 'CLEAR' and 'GO' buttons.

Figure 29 LFAS Submissions in CSV format

The screenshot shows the 'File Exchange' interface. 'Upload Type' is 'LFAS Submission' and 'Upload Format' is 'CSV'. There is also a 'File Type' section with 'Standing' and 'Variation' options. Below this is an 'Upload Options' section with checkboxes for 'Allow Gate Closure Violations' and 'Discard Entire File on Errors'. The 'Files' section has a sub-section 'LFAS Submission' with a text input field and a 'BROWSE...' button. 'CLEAR' and 'GO' buttons are at the bottom.

Figure 30 STEM Submissions in CSV format

The screenshot shows the 'File Exchange' interface. 'Upload Type' is 'STEM Submission' and 'Upload Format' is 'CSV'. The 'Files' section contains four sub-sections: 'Facility Details', 'Ancillary Service Details', 'Supply Portfolio', and 'Demand Portfolio', each with a text input field and a 'BROWSE...' button. 'CLEAR' and 'GO' buttons are at the bottom.

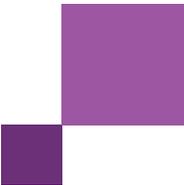


Table 16 STEM Submissions file name descriptions

File Name	File Description
Facility Details	Facility details, standing submission information
Ancillary Service Details	Ancillary Services
Supply Portfolio	Supply portfolio curve
Demand Portfolio	Demand portfolio curve

7.4 File Exchange Search

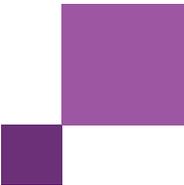
The File Exchange Search display enables users to search for historical submissions using the relevant search criteria provided in Table 17.

The steps to search for historical submissions are:

1. Click on Advanced Options from the File Exchange Search display (see Figure 31).
2. Enter the required search criteria. To clear all search criteria, click the Clear button.
3. Once the user has completed the search criteria, click the Go button.
4. The results are displayed in the Upload History section.

Figure 31 File Exchange Search display

The screenshot shows a web interface for file exchange. The top section, titled 'File Exchange', contains a dropdown for 'Upload Type' set to 'STEM Submission', radio buttons for 'Upload Format' with 'XML' selected, a 'Download Acknowledgement' checkbox, and a 'Files' section with an 'XML File' input field and a 'BROWSE...' button. Below these are 'CLEAR' and 'GO' buttons. The bottom section, titled 'Search', features a 'From / To Date' field with a date range of '30/03/2012' to '30/03/2012' circled in red, and buttons for 'ADVANCED OPTIONS', 'CLEAR', and 'GO'.



Search

From / To Date: 1/02/2012 21/02/2012

Uploaded By: -- All --

Status: -- All --

Error Type: -- All --

Upload Type: -- All --

File Type: -- All --

Upload Format: -- All --

File Name Search: *

Table 17 File Exchange Search fields description

File Name	File Description
From / To Date	Date range of submissions
Participant	Participant that made the submission
Uploaded By	User that uploaded the submission
Status	Status of a submission: <ul style="list-style-type: none"> • Successful • Failed
Error Type	Error type: <ul style="list-style-type: none"> • Errors • Warning • Gate Closure
Upload Type	Type of file uploaded: <ul style="list-style-type: none"> • Bilateral ContractsSTEM Submission • Balancing Submission • LFAS Submission • Resource Plan (for historical purposes) • STEM Submission
Upload Format	XML or CSV
File Name Search	Free-text file name search (wildcard options e.g. *.*)

7.5 File Exchange Upload History

The Upload History display defaults to displaying submissions for the current day (see Figure 32). The display can be filtered by using the File Exchange Search (see section 7.4).

To download the contents of a historical submission, click on the file name under the File Name column.

To download the results file of a historical submission, click on the file name under the Results File column.

Figure 32 File Exchange Upload History display

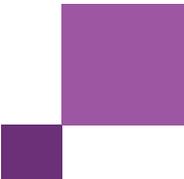
Date & Time	Uploaded By	Upload Type	File Type	File Name	Results File	Upload Format	Status	Intervals in File	Intervals with Errors	Intervals with Warnings	Gate Closure
16/02/2012 15:49:23	Ben Tan	STEM Submission		Stem_Submit_14_s.csv	Result.xml	CSV	Failed	0	0	0	0
16/02/2012 15:49:23	Ben Tan	STEM Submission		Stem_Submit_14_d.csv	Result.xml	CSV	Failed	0	0	0	0
16/02/2012 15:49:43	Ben Tan	STEM Submission		Stem_Submit_1_Actual.xml	Result.xml	XML	Failed	0	0	0	0
16/02/2012 15:20:04	Ben Tan	STEM Submission		Stem_Submit_1_Actual.xml	Result.xml	XML	Failed	0	0	0	0
16/02/2012 15:19:01	Ben Tan	STEM Submission		Stem_Submit_1_Actual.xml	Result.xml	XML	Failed	0	0	0	0
16/02/2012 15:18:12	Ben Tan	STEM Submission		Stem_Submit_1_Actual.xml	Result.xml	XML	Failed	0	0	0	0
16/02/2012 15:16:46	Ben Tan	STEM Submission		Stem_Submit_1_Actual.xml	Result.xml	XML	Failed	0	0	0	0
16/02/2012 15:14:59	Ben Tan	STEM Submission		Stem_Submit_1_Actual.xml	Result.xml	XML	Successful	0	0	0	0
16/02/2012 14:39:43	Ben Tan	STEM Submission		Stem_Submit_1.xml	Result.xml	XML	Failed	0	0	0	0
16/02/2012 14:38:59	Ben Tan	STEM Submission		Stem_Submit_1.xml	Result.xml	XML	Failed	0	0	0	0
16/02/2012 14:34:41	Ben Tan	STEM Submission		Stem_Submit_1.xml	Result.xml	XML	Failed	0	0	0	0
16/02/2012 14:24:29	Ben Tan	STEM Submission		Stem_Submit_14_s.csv	Result_Stem_Submit_14_s.xml	CSV	Failed	0	0	0	0
16/02/2012 14:24:29	Ben Tan	STEM Submission		Stem_Submit_14_d.csv	Result_Stem_Submit_14_d.xml	CSV	Failed	0	0	0	0
16/02/2012 14:21:42	Ben Tan	STEM Submission		Stem_Submit_14_s.csv	Result.xml	CSV	Failed	0	0	0	0
16/02/2012 14:21:42	Ben Tan	STEM Submission		Stem_Submit_14_d.csv	Result.xml	CSV	Failed	0	0	0	0
16/02/2012 14:20:34	Ben Tan	STEM Submission		Stem_Submit_14_s.csv	Result.xml	CSV	Failed	0	0	0	0
16/02/2012 14:20:34	Ben Tan	STEM Submission		Stem_Submit_14_d.csv	Result.xml	CSV	Failed	0	0	0	0
16/02/2012 14:19:20	Ben Tan	STEM Submission		Stem_Submit_14_s.csv	Result.xml	CSV	Failed	0	0	0	0
16/02/2012 14:19:20	Ben Tan	STEM Submission		Stem_Submit_14_d.csv	Result.xml	CSV	Failed	0	0	0	0
16/02/2012 13:56:09	Ben Tan	STEM Submission		Stem_Submit_14_s.csv	Result.xml	CSV	Successful	0	0	0	0
16/02/2012 13:56:09	Ben Tan	STEM Submission		Stem_Submit_14_d.csv	Result.xml	CSV	Successful	0	0	0	0

7.6 File Exchange Detail History

The Detail History display provides additional information about an upload selected in the Detail History display (see Figure 33).

Figure 33 File Exchange Detail History

Date & Time	Message Code	Message Type	Message
03/11/2015 19:25:10	I0001	Info	File Uploaded to AEMO Server - Starting File Processing
03/11/2015 19:25:10	I0002	Info	File Processing Completed Successfully



8 Web Services

Users have the option to setup a Web Service to facilitate their trading requirements for the STEM and Bilateral Markets.

Web Service requests are delivered using the standard web service protocol SOAP (Simple Object Access Protocol).

In addition to making submissions via Web Services, users are also able to extract the reports available in the MPI through web service definition files (WSDL).

Refer to the [WEMS Report and Web Service Specification](#) document for more information.

To utilise Web Services, a certificate must be obtained from AEMO. If you require a new certificate, please contact Market Operations (WA) at wa.operations@aemo.com.au.

WEMS web certificates are issued by DigiCert. Market Participants using web services should ensure their systems trust certificates issued by this authority.

Glossary

Term	Definition
AEMO	Australian Electricity Market Operator
LFAS	Load Following Ancillary Services
MPA	Market Participant Administrator
MPI	Market Participant Interface
Participant	In the context of this document, Participant is used in general terms to mean any registered Rule Participant, unless otherwise specified
RCM	Reserve Capacity Mechanism
RSA SecurID Token	Third party security token for performing two-factor authentication for a user to a network source
STEM	Short Term Energy Market
SWIS	South West Interconnected System
WEM	Wholesale Electricity Market
WEMS	Wholesale Electricity Market Systems