



# VAR DISPATCH WEB INTERFACE USER GUIDE

VERSION 0.3

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# IMPORTANT NOTICE

## Purpose

AEMO has prepared this document to provide information about the VAR Dispatch web interface, as at the date of publication.

## Disclaimer

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# 1. INTRODUCTION

## 1.1 Purpose

This guide provides an understanding of the VAR Dispatch web interface in AEMO's Electricity Market Management System (EMMS) web portal.

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This document is written in plain language for ease of reading. Where there is a discrepancy between the Rules, and information or a term in this document, the Rules take precedence.

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## 1.2 Audience

This guide is relevant to Reactive Plant Operators (RPO) requiring an understanding of the Var Dispatch web interface in the EMMS web portal. Additionally, Participant Administrators may use this guide to find out the relevant entity(s) to grant to users requiring access to the Var Dispatch web interface.

## 1.3 How to use this guide

Use this guide to help you use the Var Dispatch web interface. It is organised according to the menu item in the System Security web application in the EMMS web portal.

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Text in this format indicates a direct hyperlink with details of the resource listed in “References” on page 16.

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## 1.4 What's in this guide

- Chapter 2 “About Var Dispatch Web Interface” on page 6 explains what it is for, who can use it, how it is used, and how to access it.
- Chapter 3 “View Var Dispatch” on page 8 explains the various elements on the Var Dispatch web interface and its data in detail.
- Chapter 4 “Needing Help” on page 15 provides information to assist participants with IT related issues and provides guidance for requesting assistance from AEMO.
- Chapter 5 “References” on page 16 is a resource section containing related information that may assist you and describes where to find the resources mentioned throughout this guide.

## 2. ABOUT VAR DISPATCH WEB INTERFACE

### 2.1 What VAR Dispatch web interface is for

The VAR Dispatch web interface is used by RPOs to view the latest and current instructions issued by VDS.

### 2.2 Who can use VAR Dispatch web interface

Persons having access to the VAR Dispatch web interface include registered participants and AEMO.

### 2.3 User rights access

Your organisation's participant administrator (PA) grants you permission to use the VAR Dispatch web interface. The entity required for access is:

- MMS\_VAR – Mvar Webpage

Where a participant user has user rights assigned by more than one participant, they interactively choose the participant they represent, using the Set Participant option.

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For more information about user administration and the Set Participant option, see [Guide to User Rights Management](#).

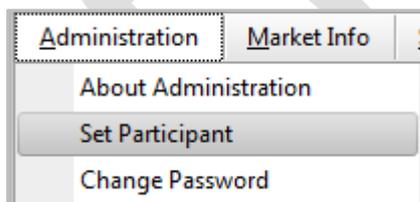
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### 2.4 How do you use VAR Dispatch web interface

The VAR Dispatch web interface is part of AEMO's EMMS web portal and is accessed using a web browser. See "View Var Dispatch" in section 3.

You can also:

- See information for other participant IDs you have permission to access, using the Set Participant function. This function allows you to act for another participant without having to log out, change IDs, and log in again. For permission to see other participant IDs using Set Participant, see your company's PA.



### 2.5 System requirements

The VAR Dispatch web interface is accessed using a web browser and requires:

- Microsoft Internet Explorer (IE) version 9 or later (IE version 10 Compatibility View is not supported); Chrome is also a viable option.
- A monitor capable of 1024 x 768 screen resolution.
- Access to MarketNet.



A user ID, password, and the website address where the application is located on AEMO's network, provided by your company's participant administrator. Access is handled by your company's participant administrator.

The VAR Dispatch web interface runs on both Windows and Unix-like operating systems.

For more details about MarketNet, see [Guide to Information Systems](#).

## 2.6 Accessing VAR Dispatch web interface

To access the VAR Dispatch web interface web application:

1. Using your web browser, access the EMMS web portal, either:

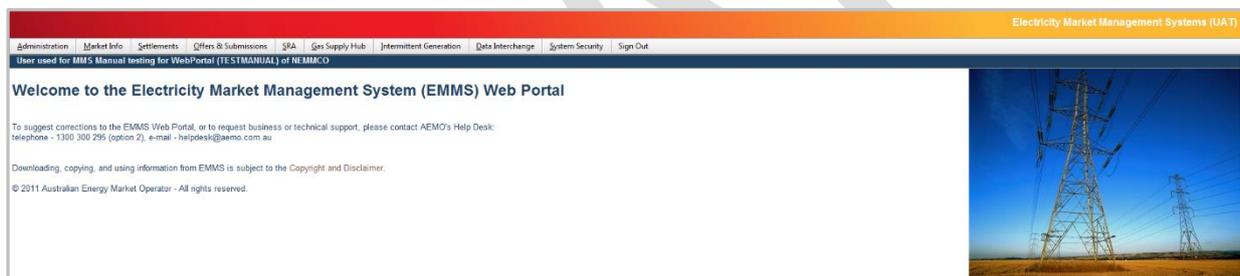
Pre-production: <https://mms.preprod.nemnet.net.au>

Production: <https://mms.prod.nemnet.net.au>

*Note: the EMMS web portal provides you with a clear indication of the environment you are working in by providing a different background colour behind the participant identifier bar located beneath the menu bar. The production environment has a navy background and the pre-production environment has a green background.*

2. Sign in using the user ID and password provided by your company's PA.
3. On the top menu, click **System Security**, and then **View Var Dispatch**.

Figure 1 EMMS web portal home page



## 3. VIEW VAR DISPATCH

This chapter describes the Var Dispatch web interface and its data in detail.

### 3.1 View current instructions

The Var Dispatch web interface displays the latest instructions issued by the VAR Dispatch Scheduling System (VDS), illustrated in Figure 2 below.

**Figure 2 VAR Dispatch web interface**

VAR Dispatch							
Participant	All selected	Station	All selected	Options	Refresh Screen periodically, Alarm whe...		Run Date Time 22/10/2015 10:30:47
Participant ID	Station ID	Device ID	Device Type	Control Type	Target/Change	Instruction	EMS ID
AEMO	BLUFF/PORCUPINE	NEEDS_DEVICE_ID	GEN	MVAR		NO INSTRUCTION	BLUFF_WF_GEN.PPR_1
AEMO	NTH BROWN HILL WF	NBH_A	GEN	MVAR		NO INSTRUCTION	NO_B_H_GEN.NBH_A
AEMO	NTH BROWN HILL WF	NBH_B	GEN	MVAR		NO INSTRUCTION	NO_B_H_GEN.NBH_B
AEMO	WATTLE POINT 132KV	WP_1	GEN	MVAR		NO INSTRUCTION	WATT_P_GEN.WP_1
AEMO	WATERLOO WIND FARM	WW_1	GEN	MVAR		NO INSTRUCTION	WAT_WF_GEN.WW_1
AGL Hydro	EPS	No1 Bus 220KV	GENGRP	VOLTAGE		NO INSTRUCTION	EPS_BUS_1B_220_VV_D
AGL Hydro	North Brown Hill Wind Farm	T_1	TRANS	TAP		NO INSTRUCTION	FAKE.EMS.168_VT_D
AGL Hydro	MBTS	No1 220KV	GENGRP	VOLTAGE		NO INSTRUCTION	FAKE.EMS.307_VV_D
AGL Hydro	Townsville Gt Ps	1 Gen T1mr twl	TRANS	TAP		NO INSTRUCTION	TVLLE_PS.TRANS.1_GEN_TVLT_VT_D
AGL Hydro	TOWNSVILLE PS	X2	TRANS	TAP		NO INSTRUCTION	TVLLE_PS.TRANS.2_GEN_TVLT_VT_D
AGL Loy Yang	LYP A	Lyps A No.1 Gen Trans	TRANS	TAP		NO INSTRUCTION	LYPA.TRANS.A1GTR_VT_D
AGL Loy Yang	LYP A	Lyps A No.2 Gen Trans	TRANS	TAP		NO INSTRUCTION	LYPA.TRANS.A2GTR_VT_D
AGL Loy Yang	LYP A	Lyps A No.3 Gen Trans	TRANS	TAP		NO INSTRUCTION	LYPA.TRANS.A3GTR_VT_D
AGL Loy Yang	LYP A	Lyps A No.4 Gen Trans	TRANS	TAP		NO INSTRUCTION	LYPA.TRANS.A4GTR_VT_D

The following information displays:

- **Participant drop-down filter:** A list of all participant's preferred name for the RPOs (Reactive Plant Operator). Refer to section 3.2.
- **Station drop-down filter:** A list of all station names contained within the most recent instructions file. Refer to section 3.3.
- **Options drop-down list with the following options:**
  - Only show devices with active instructions: Refer to section 3.4.
  - Refresh screen periodically: Refer to section 3.5.
  - Alarm when new Instructions arrive: Refer to section 3.6.
  - Alarm when Instructions are too old: Refer to section 3.7.
  - Alarm when disconnected: Refer to section 3.8.
- **Instruction status:** Informs users whether instructions are currently active or a signal file has been issued to clear instructions.
- **Run Date Time:** Displays the date/time of the latest VDS run.
- **Instructions grid with the following fields:**
  - **Participant ID:** The participant's preferred name for the RPO.
  - **Station ID:** The company/participant preferred name of the substation the equipment is located at.
  - **Device ID:** The company/participant preferred name of an equipment.
  - **Device Type:** One of REACTOR, CAPACITOR, GEN, SVC, TRANS or GENGRP but may be extended to other types.
  - **Control Type:** The type of issued control.
  - **Target/Change:** Instruction for the device for this interval – null denotes no instruction.



- **Instruction:** Verbose summary of instruction.
- **EMS ID:** The unique identifier for reference within AEMO –matches equipment names between NOS and EMS.

### 3.1.1 Summary of screen behaviour

Screen elements exhibit certain behaviours under specific scenarios. Table 1 summarises the screen behaviour depending on the scenario.

**Table 1 Summary of screen behaviour**

Scenario	Instructions displayed	Instruction status message and colour	Run Date Time colour
New instructions have been issued	Yes	<b>Instruction</b>	<b>Run Date Time 22/10/2015 10:30:47</b>
Instructions have exceeded expiry time limit	No	Instructions expired	Run Date Time 22/10/2015 08:47:45
Signal has been issued	No	<b>No Instructions</b>	<b>Run Date Time 22/10/2015 10:30:47</b>
Signal has exceeded expiry time	No	No Instructions	Run Date Time 22/10/2015 08:47:45
Instruction or Signal has exceeded system error warning time limit	No	Experiencing Delays	Run Date Time 22/10/2015 08:13:47
Web browser has lost connectivity to the AEMO web portal server	No	Error: unable to contact server	Run Date Time 22/10/2015 08:13:47

### 3.1.2 Non-conforming devices

Non-conforming devices are highlighted in red.

**Figure 3 Non-conforming devices**

Participant ID	Station ID	Device ID	Device Type	Control Type	Target/Change	Instruction	EMS ID
AGL Macquarie	Bayswater PS 330kv	NEEDS_DEVICE_ID	GEN	VOLTAGE		NO INSTRUCTION	BAYSWATR.UNIT.4.VV_D
AGL Macquarie	Liddell PS 330kv	1A	TRANS	TAP		NO INSTRUCTION	LIDDELL.TX.1AH.VT_D
AGL Macquarie	Liddell Power Station	No.1 transformer	TRANS	TAP	-1	Lower taps of No.1 transformer at Liddell Power Station by 1 tap	LIDDELL.TX.1H.VT_D
AGL Macquarie	Liddell PS 330kv	2A	TRANS	TAP		NO INSTRUCTION	LIDDELL.TX.2AH.VT_D
AGL Macquarie	Liddell Power Station	No.2 transformer	TRANS	TAP	-1	Lower taps of No.2 transformer at Liddell Power Station by 1 tap	LIDDELL.TX.2H.VT_D
AGL Macquarie	Liddell Power Station	No.3 transformer	TRANS	TAP		NO INSTRUCTION	LIDDELL.TX.3H.VT_D
AGL Macquarie	Liddell Power Station	No.4 transformer	TRANS	TAP	-1	Lower taps of No.4 transformer at Liddell Power Station by 1 tap	LIDDELL.TX.4H.VT_D

## 3.2 Participant filter

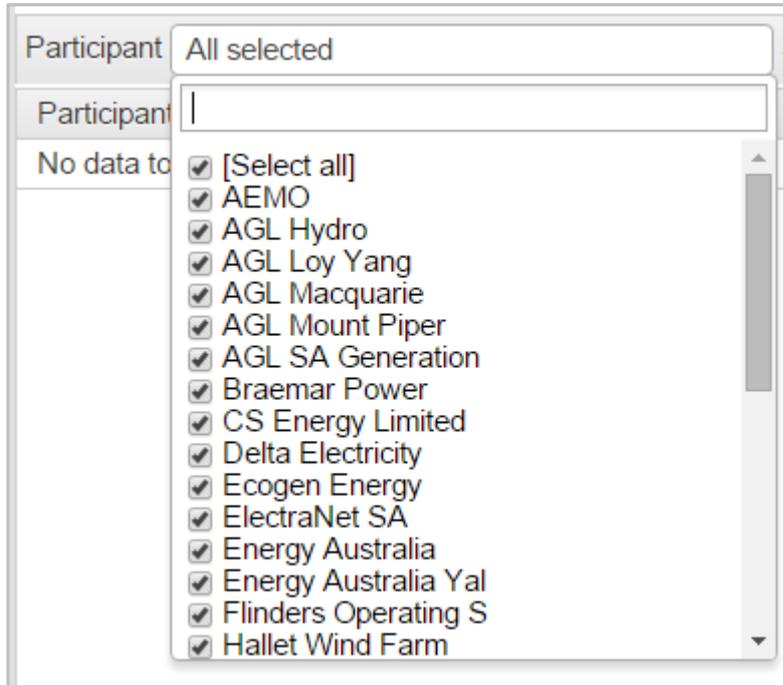
The Participant filter shown in Figure 4 below displays a list of all participant’s preferred name for the RPOs contained within the most recent instructions file displayed in the web interface.

To filter the instructions displayed on the screen for specific participants:

- Click on the **Participant** drop-down filter box to expand and display the participant list.
- Click the desired checkboxes to select or deselect participants. The screen automatically applies the filter as they are selected or deselected.

- Click on the **Participant** drop-down filter box to collapse and hide the participant list.

**Figure 4 Participant filter**

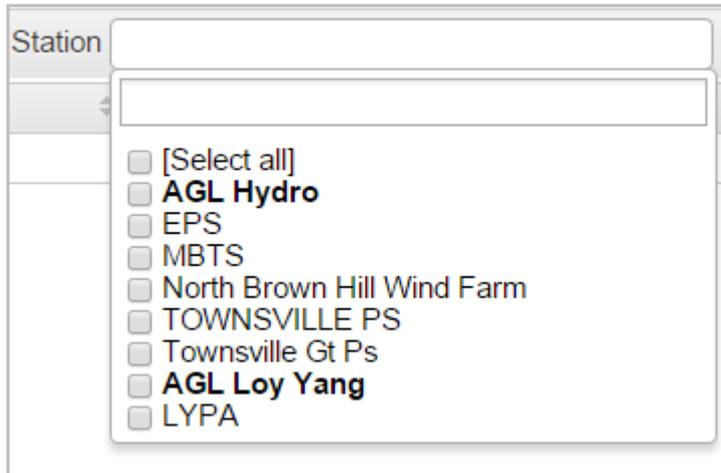


### 3.3 Station filter

The Station filter shown in Figure 5 below displays a list of all station names contained within the most recent instructions file displayed in the web interface. The Station filter is dynamically populated with the stations that are operated by the participants selected in the Participant filter described in section 3.1. Stations are grouped by participant, with the participant name shown in bold.

To filter the instructions displayed on the screen for specific stations:

- Click on the **Station** drop-down filter box to expand and display the station list.
- Click the desired checkboxes to select or deselect stations. The screen automatically applies the filter as they are selected or deselected.
- Click on the **Station** drop-down filter box to collapse and hide the station list.

**Figure 5 Station filter**

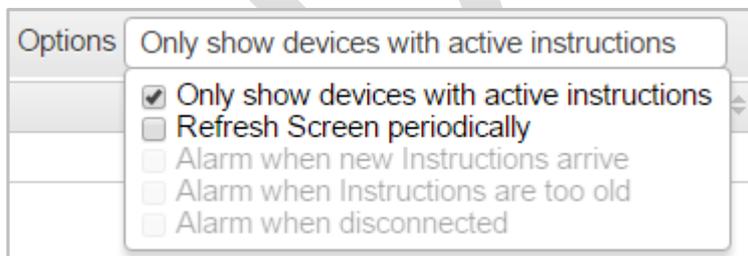
Clicking on the participant name in the station list will select/deselect all stations listed in that participant group.

### 3.4 Active instructions filter

The Active Instructions filter shown in Figure 6 below filters the screen to display only devices with active instructions. Inactive instructions are identified by the words “NO INSTRUCTION” appearing in the Instruction field.

To apply the active instructions filter:

- Click on the **Options** drop-down box to expand and display the options list.
- Click the **Only show devices with active instructions** checkbox. The screen automatically applies the filter once it is selected or deselected.
- Click on the **Options** drop-down box to collapse and hide the options list.

**Figure 6 Active Instructions filter**

### 3.5 Automatic screen refresh

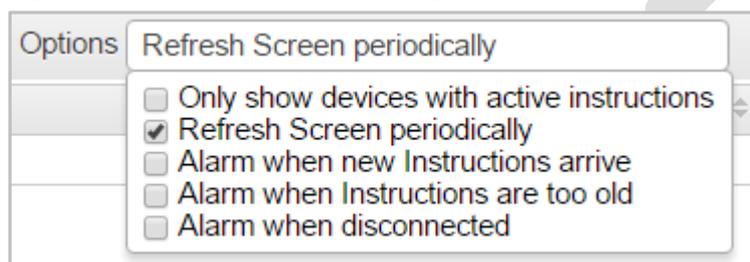
The automatic screen refresh option shown in Figure 7 triggers the web interface to periodically check for new instructions on a set time interval. When this option is selected, all three alarm options are automatically selected by default. Refer to sections 3.6, 3.7 and 3.8 for further details on the alarm options.

When this option is selected for the first time, a disclaimer pop-up explains that this option prevents the user session from time out and automatic log off, potentially exposing the computer to unintended users gaining access. Upon accepting, the disclaimer box does not re-appear in future visits to this web page using the same computer.

To apply the auto screen refresh option:

- Click on the **Options** drop-down box to expand and display the options list.
- Click the **Refresh Screen periodically** checkbox.
- Click on the **Options** drop-down box to collapse and hide the options list.

**Figure 7 Automatic screen refresh option**



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The screen can also be manually refresh at any time by clicking the Refresh button  on your browser.

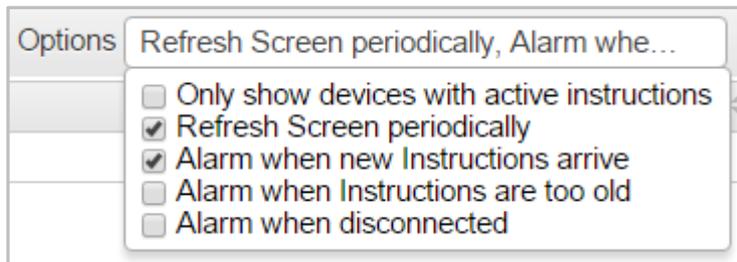
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### 3.6 Alarm when new instructions arrive

The 'alarm when new instructions arrive' option shown in Figure 8 triggers an audible alarm when it detects that the web interface has received new active instructions (target is not null) for one or more devices listed on the screen. This check occurs with each page refresh, therefore this option is only available for selection if the automatic screen refresh option has also been selected (refer to section 3.5)

To apply the auto screen refresh option:

- Click on the **Options** drop-down box to expand and display the options list.
- Click the **Refresh Screen periodically** checkbox (if not already selected).
- Click the **Alarm when new Instructions arrive** checkbox.
- Click on the **Options** drop-down box to collapse and hide the options list.

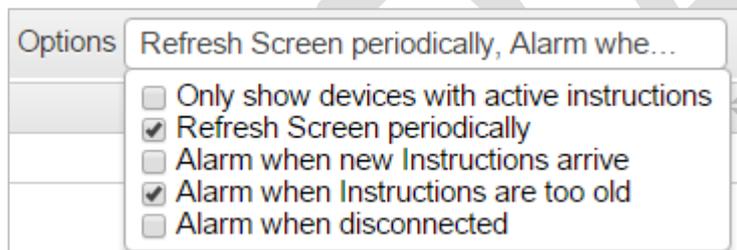
**Figure 8 Alarm when new instructions arrive option**

### 3.7 Alarm when instructions are too old

The 'alarm when instructions are too old' option shown in Figure 9 triggers an audible alarm when it detects that the instructions displayed on the screen have exceeded their expiry time. The expiry time is determined by the time elapsed since the Run Date Time of the instructions. This check occurs with each page refresh, therefore this option is only available for selection if the automatic screen refresh option has also been selected (refer to section 3.5)

To apply the auto screen refresh option:

- Click on the **Options** drop-down box to expand and display the options list.
- Click the **Refresh Screen periodically** checkbox (if not already selected).
- Click the **Alarm when Instructions are too old** checkbox.
- Click on the **Options** drop-down box to collapse and hide the options list.

**Figure 9 Alarm when instructions are too old option**

### 3.8 Alarm when disconnected from server

The 'alarm when disconnected from server' option shown in Figure 10 triggers an audible alarm when the web browser detects a loss of connectivity with the web portal server. This check occurs with each page refresh, therefore this option is only available for selection if the automatic screen refresh option has also been selected (refer to section 3.5)

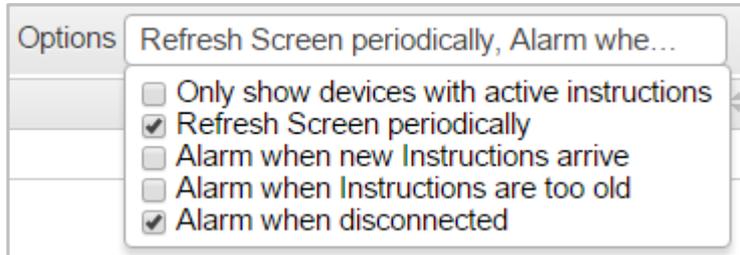
To apply the auto screen refresh option:

- Click on the **Options** drop-down box to expand and display the options list.
- Click the **Refresh Screen periodically** checkbox (if not already selected).
- Click the **Alarm when disconnected** checkbox.



- Click on the **Options** drop-down box to collapse and hide the options list.

**Figure 10 Alarm when disconnected option**



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## 4. NEEDING HELP

### 4.1 AEMO's Information and Support Hub

#### 4.1.1 Contacting AEMO's Information and Support Hub

Assistance is requested through AEMO's Information and Support Hub using one of the following methods:

- Phone: 1300 AEMO 00 (1300 236 600) and follow the prompts.  
For non-urgent issues, normal coverage is 8:00 AM to 6:00 PM on weekdays, Australian Eastern Standard Time (AEST).
- Email: [supporthub@aemo.com.au](mailto:supporthub@aemo.com.au)

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Please note that AEMO recommends participants call AEMO's Information and Support Hub for all urgent issues.

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#### 4.1.2 Information to provide AEMO

Please provide the following information when requesting assistance from AEMO:

- Your name
- Organisation name
- Participant ID
- System or application name
- Environment: production or pre-production
- Problem description
- Screenshots

For AEMO software-related issues please also provide:

- Version of software
- Properties or log files
- Replication Manager support dump and instance name (if Data Interchange problem)

## 4.2 Feedback

To suggest improvements to this guide, please contact the [AEMO Information and Support Hub](#).



## 5. REFERENCES

The resources listed in this section contain additional related information that may assist you.

- AEMO Information and Support Hub: phone: 1300 AEMO 00 (1300 236 600), and follow the prompts; email: [supporthub@aemo.com.au](mailto:supporthub@aemo.com.au).
- National Gas Rules (NGR) and National Electricity Rules (NER): see the Australian Energy Market Commission (AEMC) website <http://www.aemc.gov.au>.

### 5.1 AEMO's website

You can find the following documents on AEMO's website:

- "Energy Market Registration", links to registration applications and related information: <http://www.aemo.com.au/registration/registration.html> (Home>Energy Market Registration). Viewed 1 February 2012.
- Participant Rights Administration User Interface Guide, for information about managing a web portal account (accounts are created in MSATS), <http://www.aemo.com.au/electricityops/userguide.html> (Home>Electricity Retail & Metering>MSATS>MSATS Participant User Interface Guides). Viewed 1 February 2012.
- "Systems Access Policy": <http://www.aemo.com.au/registration/infosystems.html#policy> (Home>Energy Market Registration>Understanding Energy Market Information Systems). Viewed 1 February 2012.
- "Understanding Energy Market Information Systems", Information systems information, related documents, and access forms: <http://www.aemo.com.au/registration/infosystems.html>. (Home>Energy Market Registration>Understanding Energy Market Information Systems). Viewed 1 February 2012.

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It is important to ensure that you are reading the current version of any document.

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## ABBREVIATIONS

Abbreviation	Expanded name
AEMO	Australian Energy Market Operator
AEST	Australian Eastern Standard Time
EMMS	[wholesale] Electricity Market Management System; software, hardware, network and related processes to implement the National Electricity Market (NEM)
NEM	National Electricity Market
NER	National Electricity Rules; also often just called the Rules
RPO	Reactive Plant Operator; A participant who accepts and responds to reactive plant instructions from AEMO
VDS	VAR Dispatch Scheduling System; the system that produces instructions for reactive plant

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