

USER GUIDE: SYSTEM MANAGEMENT'S MARKET PARTICIPANT INTERFACE

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IMPORTANT NOTICE

Purpose

The purpose of this user guide is to assist Market Participants in communicating with AEMO using the System Management Market Participant Interface (MPI).

This publication is generally based on information available to AEMO as at 1 December 2020. More recent information may have been included where practical.

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VERSION RELEASE HISTORY

Version	Effective Date	Summary of Changes
1.0	1 February 2020	Initial AEMO release
2.0	13 October 2020	Initial SMST release
3.0	1 December 2020	Post-SMST release
3.1	13 October 2021	Updated for Two Factor Authentication

CONTENTS

IMPORTANT NOTICE	2
1. INTRODUCTION	6
1.1. Purpose	6
1.2. Definitions and Glossary	6
2. NEW MARKET PARTICIPANT MPI REGISTRATION PROCESS	6
3. END-USER ACCESS PROVISIONING & DE-PROVISIONING	6
3.1. Registration of new Market Participant end-user	6
3.2. Deregistration of a Market Participant end-user	7
4. END-USER PASSWORD RESET	7
5. LOGGING ON TO THE MPI	7
6. MPI TWO FACTOR AUTHENTICATION	7
6.1. Two Factor Authentication reset	9
7. MAIN MENU	9
8. OUTAGE REVIEW	10
9. TYPES OF OUTAGE REQUESTS	12
10. CREATING A PROPOSED OUTAGE PLAN (POP)	12
10.1. Outage scheduling	12
10.2. Outage Approval	16
11. OPPORTUNISTIC MAINTENANCE	16
12. FORCED OUTAGES	18
12.1. Creating a Forced Outage	18
12.2. Cancelling a Forced Outage	19
13. LOADING FORCED OUTAGES VIA CSV	20
14. DISPATCH	21
14.1. Dispatch Instruction Acknowledgement	21
15. CONTACTING SYSTEM MANAGEMENT – OPERATIONAL QUERIES/TWO FACTOR AUTHENTICATION ISSUES	22
16. CONTACTING AEMO SUPPORT HUB – USER ACCESS AND PASSWORD RESET	22

FIGURES

Figure 1	Login screen	7
Figure 2	QR Code Image	8
Figure 3	Microsoft Authenticator setup for AEMO SM-MPI.....	8
Figure 4	Two Factor Authentication code verification	9
Figure 5	Two Factor Authentication reset	9
Figure 6	Closed navigation menu	10
Figure 7	Opened navigation menu	10
Figure 8	Expanded navigation menu	10
Figure 9	Popular links	11
Figure 10	Outage Review screen	11
Figure 11	Outage search criteria.....	12
Figure 12	Menu selection for creating a Proposed Outage Plan	12
Figure 13	Create Outage screen for creating a Proposed Outage Plan	13
Figure 14	Create Outage screens with entry errors	14
Figure 15	Outage Successfully Submitted screen	15
Figure 16	Automatic receipt of confirmation of outage submission	15
Figure 17	Outage Approval request.....	16
Figure 18	Selecting Opportunistic Maintenance in the Outage Type drop-down menu	17
Figure 19	Error message for an outage request that has been raised before the allowable time	17
Figure 20	Error message for an outage request that has been raised after the allowable time	17
Figure 21	Error message for an outage request that has been raised within 24 hours before the Start Time of any future Opportunistic Maintenance	17
Figure 22	Error message for an outage request that has been raised within 24 hours after the End Time of the previous Opportunistic Maintenance	18
Figure 23	Error message for an outage request that has been raised for longer than a 24 hour period ...	18
Figure 24	Selecting Forced Outage in the Outage Type drop-down menu	18
Figure 25	Outage Successfully Submitted screen	19
Figure 26	Cancel Outage screen.....	19
Figure 27	Example CSV file for uploading Forced Outage details.....	20
Figure 28	Selecting a CSV file in Forced Outage via CSV screen	20
Figure 29	List of Forced Outages uploaded in Forced Outage via CSV screen	20
Figure 30	Forced Outage Result screen	21
Figure 31	Example of a failed upload on Forced Outage via CSV screen.....	21
Figure 32	Dispatch Instruction Acknowledgement List screen	21
Figure 33	Example of a successful Dispatch Instruction acknowledgement	22

TABLES

Table 1	Abbreviations and specific terms, and their definitions.....	6
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1. INTRODUCTION

1.1. Purpose

The purpose of this user guide is to assist Market Participants in communicating with AEMO via the System Management Market Participant Interface (MPI).

1.2. Definitions and Glossary

The words, phrases and abbreviations in the table below have the meaning set out opposite them when used in this user guide.

Table 1 Abbreviations and specific terms, and their definitions

Term	Definition
MPI	Market Participant Interface
POP	Proposed Outage Plan
SM Ops	System Management Operations
SMST	System Management System Transition
WEM	Wholesale Electricity Market
IT Contact	Contact within a Market Participant organisation that is responsible for managing their organisations' end user accounts

2. NEW MARKET PARTICIPANT MPI REGISTRATION PROCESS

For a Market Participant to manage System Management MPI end user accounts, they must nominate an AEMO IT Contact with the AEMO Support Hub team. AEMO SM Operations will contact the Market Participant as part of the registration process to arrange for an AEMO IT Contact nomination. The AEMO IT Contact will be responsible for registering and de-registering of System Management MPI users, as well as resetting of end user passwords, when required. The AEMO IT Contact need not be an IT specialist, it is merely a coordination and key contact point for the AEMO Support Hub team in relation to new user creations/ de-registrations and password resets.

The following key information will be required for the AEMO IT Contact nominee:

1. Full name;
2. Email address; and
3. Contact phone number.

3. END-USER ACCESS PROVISIONING & DE-PROVISIONING

3.1. Registration of new Market Participant end-user

If an end user requires access to the System Management MPI they would need to advise their dedicated AEMO IT Contact. The AEMO IT Contact will call the AEMO Support Hub team to arrange System Management MPI access for the end user.

3.2. Deregistration of a Market Participant end-user

If an end user has left the organisation or no longer requires access, the AEMO IT Contact must call the AEMO Support Hub team to arrange the removal of System Management MPI access for that end user.

4. END-USER PASSWORD RESET

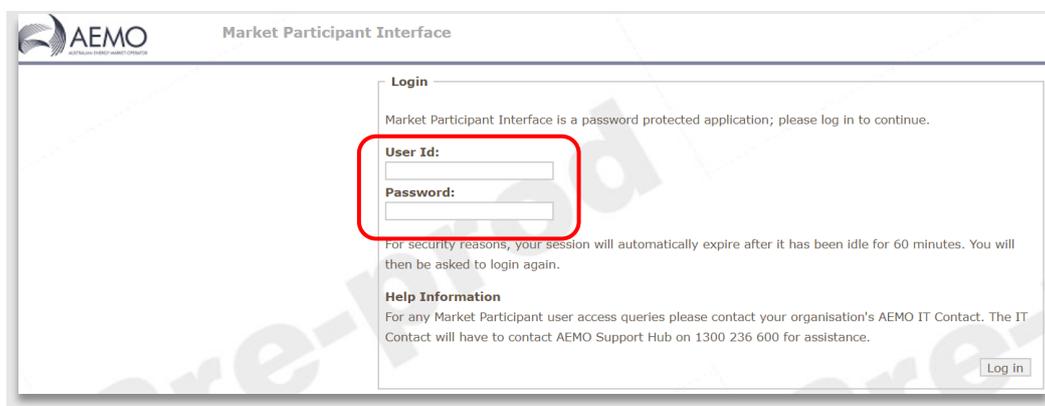
If an end user has forgotten their password to access the System Management MPI, they need to advise their organisations' AEMO IT Contact. The AEMO IT Contact would then call the AEMO Support Hub team to arrange for the end user's password to be reset. Once the AEMO Support Hub team has reset the end user's password, it will be communicated to the AEMO IT Contact, who will advise the end user of their new password.

5. LOGGING ON TO THE MPI

Participants can access the System Management MPI via one of the following options:

1. The URL directly via <https://mpi.wasm.aemo.com.au/online/mpi2/do/Login>;
2. The portal via the AEMO website > *Access Market Portals* > *System Management MPI*; or
3. The Market Participant Interface link via the AEMO website as per the below URL:
<https://aemo.com.au/energy-systems/electricity/wholesale-electricity-market-wem/system-operations/outages-and-commissioning>.

Figure 1 Login screen



Enter your *User Id* and *Password* to login.

For security purposes, the system will log the user out if the System Management MPI has been idle for 60 minutes, and any unsaved data that has been entered will be lost. A keystroke is not classified as an interaction with MPI. A link must be selected within the application for it to remain active.

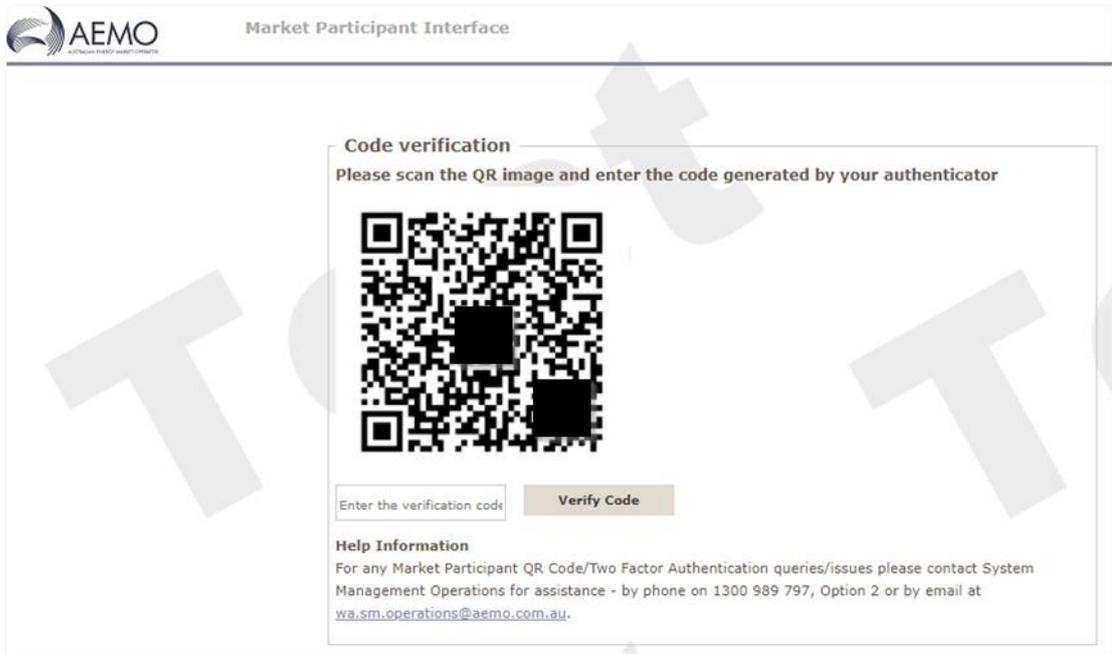
6. MPI TWO FACTOR AUTHENTICATION

AEMO has introduced two factor authentication for logging into the System Management MPI due to the associated security risk of relying on single factor authentication (*User Id/Password* combination).

AEMO's preferred application for Two Factor authentication is Microsoft Authenticator which is available on the iOS and Android store.

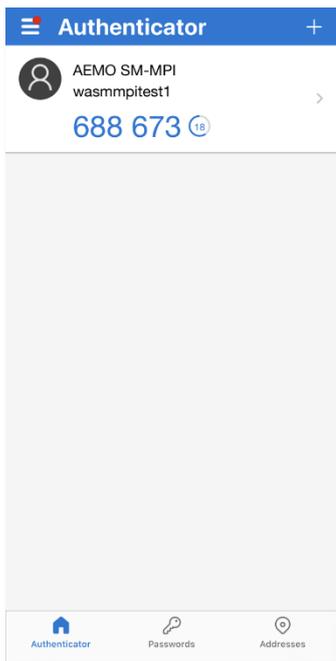
Following log on using the *User Id* and *Password*, if the end user has not logged into the MPI before (or registered for Two Factor Authentication), the end user will be presented with a QR code for scanning

Figure 2 **QR Code Image**



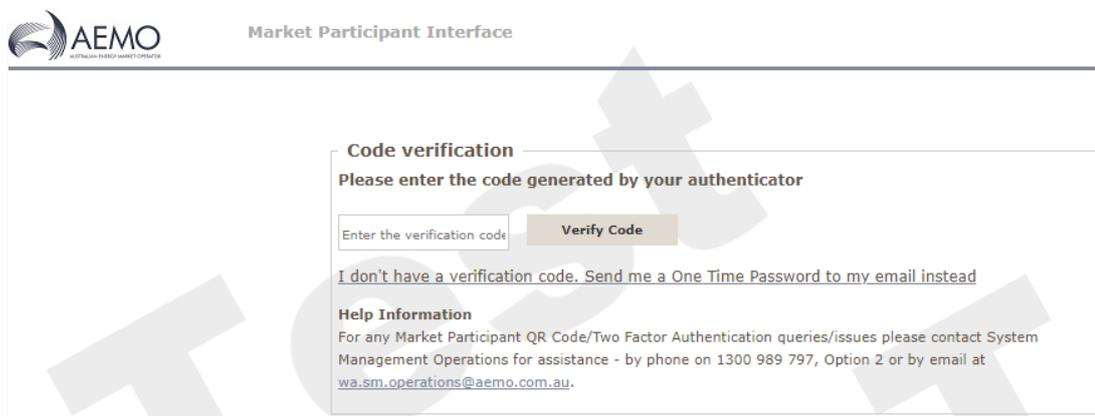
Scanning the QR Code as shown in Figure 2 using the Microsoft Authenticator application will add the account to the end user's device as seen below in Figure 3.

Figure 3 **Microsoft Authenticator setup for AEMO SM-MPI**



Entering the code generated by the Microsoft Authenticator application for *AEMO SM-MPI* will log the end user into the System Management MPI.

Figure 4 Two Factor Authentication code verification



6.1. Two Factor Authentication reset

If the original authenticator device is unavailable (e.g., new phone/device), clicking on *"I don't have a verification code. Send me a One Time Password to my email instead"* will send a One Time Password email to the *User Id's* associated email account for Two Factor Authentication reset.

Note: If Microsoft Authenticator is already setup on the device for the SM MPI, for some devices you may need to remove the existing entry first. Otherwise, an error may occur when it attempts to overwrite the existing setup.

Figure 5 Two Factor Authentication reset



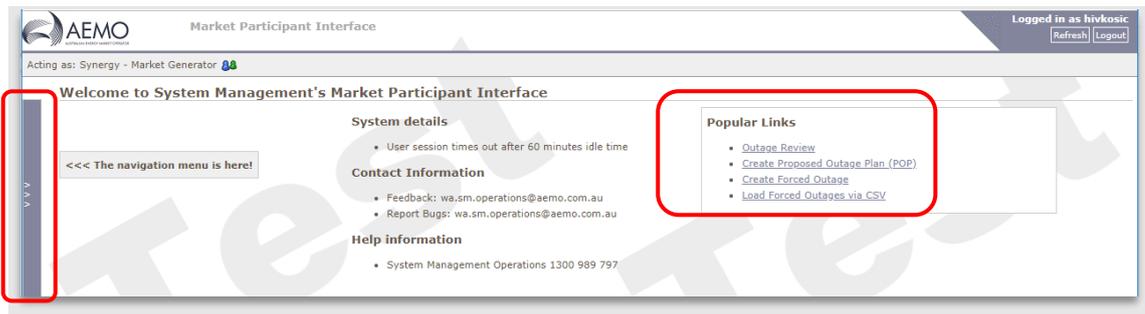
The end user will have three minutes to enter the One Time Password (under Figure 3). After such time, it will expire, and a new One Time Password will need to be requested by clicking on the *"Re-send One Time Password (OTP)"* URL.

Following successful Code verification of the One Time Password, the end user will be presented with a QR Code to scan using the Microsoft Authenticator application. See Figure 2 above.

7. MAIN MENU

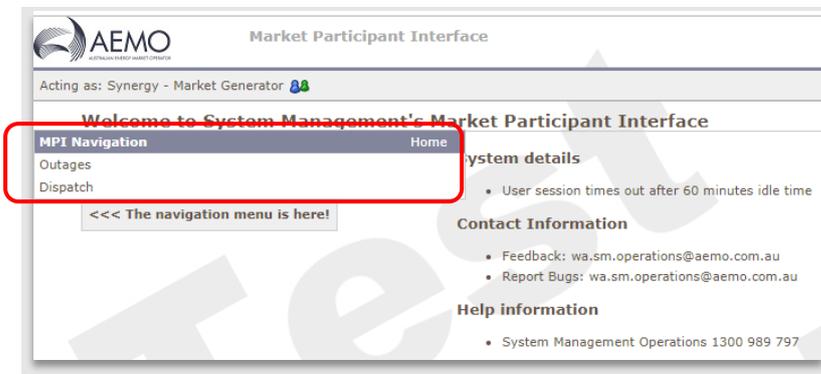
Once logged in, the home page will appear. Popular links can be found to the right of the screen which allows for quick searching or entering of outages, and a hidden navigation menu on the left. To view this menu, move the mouse above the purple box and white tip arrows.

Figure 6 Closed navigation menu



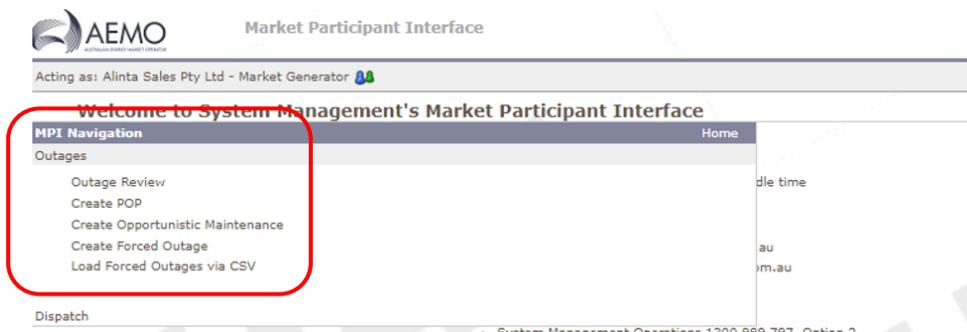
Moving the mouse over the purple box will allow a menu to appear.

Figure 7 Opened navigation menu



Select one of the options to expand the selection.

Figure 8 Expanded navigation menu



8. OUTAGE REVIEW

All Market Participants can view all other Market Participants' outages, but only when the outages are in their *Approved* or *Approved with Conditions* stage.

When an item in a category is selected, to unselect it, hold *Ctrl* and click on the previously selected resources.

Searching based upon a nominated *Outage Number* or *Equipment Description* will cause other search criteria to be ignored, and *Wildcard* searching is supported in the Equipment Description field using either * (asterisk) or % (percent) characters to represent multiple missing characters.

Example:

Searching for a description of **clearing** will cause search results to include all records where "clearing" appears anywhere in the Equipment Description field, whereas searching for a description of **clearing* (note no trailing asterisk) will cause search results to include records where the description field starts with "clearing".

To view outages, select *Outage Review* from either the hidden menu or *Popular Links*.

Figure 9 Popular links

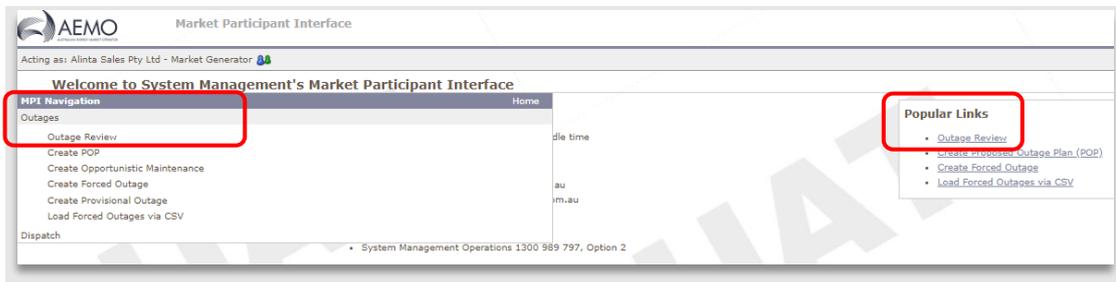
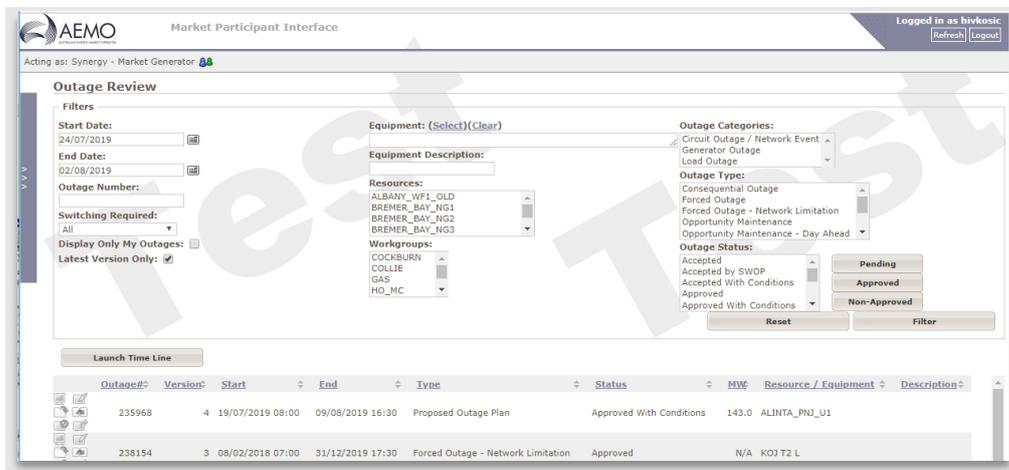


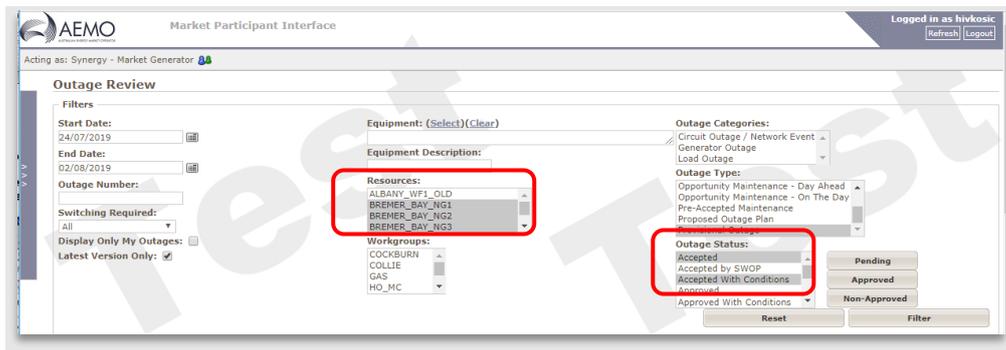
Figure 10 Outage Review screen



Fill out the search criteria as required. Note that multiple criteria can be selected.

To select or unselect, hold *Ctrl* and click on the selection with the mouse.

Figure 11 Outage search criteria



9. TYPES OF OUTAGE REQUESTS

There are three main types of outage requests that can be entered in the System Management MPI. The type of request to select depends on how far in advance of the outage the request is made. For specific timeframes, refer the Power System Operation Procedure (PSOP): Facility Outages¹.

10. CREATING A PROPOSED OUTAGE PLAN (POP)

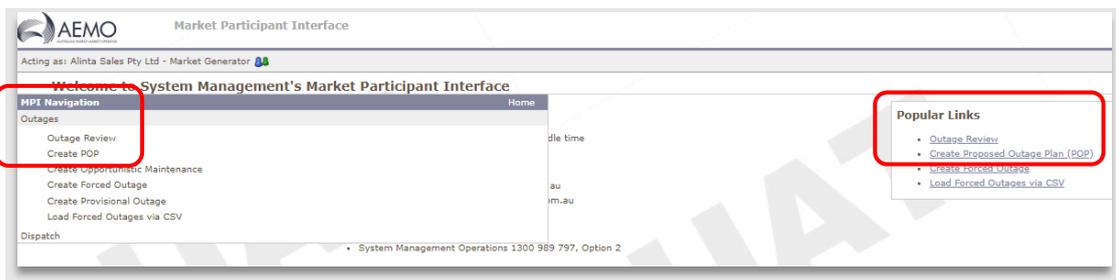
The process for Proposed Outage Plans (POP) follows:

1. Submitting a plan to conduct a proposed outage (outage scheduling).
2. Requesting approval of a proposed outage (outage approval).

10.1. Outage scheduling

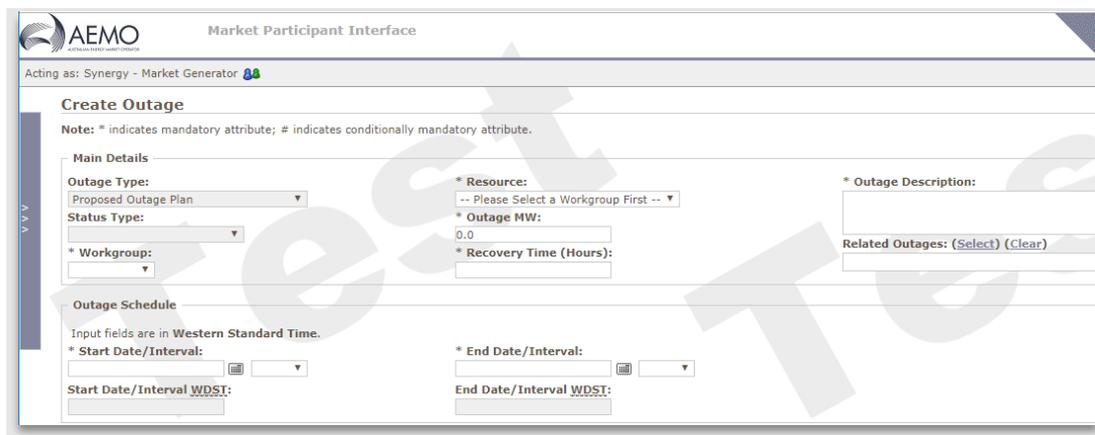
An outage can be created by selecting either *Create POP* from the left-hand side hidden menu or *Create Proposed Outage Plan (POP)* from the *Popular Links* list.

Figure 12 Menu selection for creating a Proposed Outage Plan



¹ AEMO. Available at: <https://aemo.com.au/en/energy-systems/electricity/wholesale-electricity-market-wem/procedures-policies-and-guides/procedures>

Figure 13 Create Outage screen for creating a Proposed Outage Plan



Complete the details (refer to Market Rule 3.18.6) using the drop-down boxes where applicable².

Below is a description of each field:

1. Outage Type: type of outage the user would like to submit.
2. Status Type: the Status Type appears once the outage has been created.
3. Workgroup: select from a dropdown list. It is the authority group linked to this Outage (Mandatory).
4. Resource: selected from a drop-down list. This is the resource that will be used in the Outage (Mandatory).
5. Outage MW: this is the value in MW that is unavailable. It is not the remaining capacity of the unit (Mandatory).
6. Recovery Time: this is the time it will take to bring the resource back in service if requested by AEMO to end the outage before the End Time. The time unit of measure is in hours, with a maximum allowable number of 4 digits (Mandatory).
7. Start Date: select from the calendar. Indicates the start date for the Outage (Mandatory).
8. End Date: select from the calendar. Indicates the end date for the Outage (Mandatory). Should the associated Facility be dispatched at this point, it must be able to synchronize with the power system within the times indicated in the Facility's *Standing Data*.
9. Start Time³: use drop down box. Indicates the Start Time Interval of the Outage (Mandatory).
10. End Time³: use drop down box. Indicates the End Time Interval of the Outage (Mandatory).
11. Outage Description: a descriptive text of the Outage being requested (Mandatory). Maximum characters allowed in this field is 100.
12. Related Outages: any outages that may correspond to and impact the outage. This may be a transmission line entering the power station or a transformer.

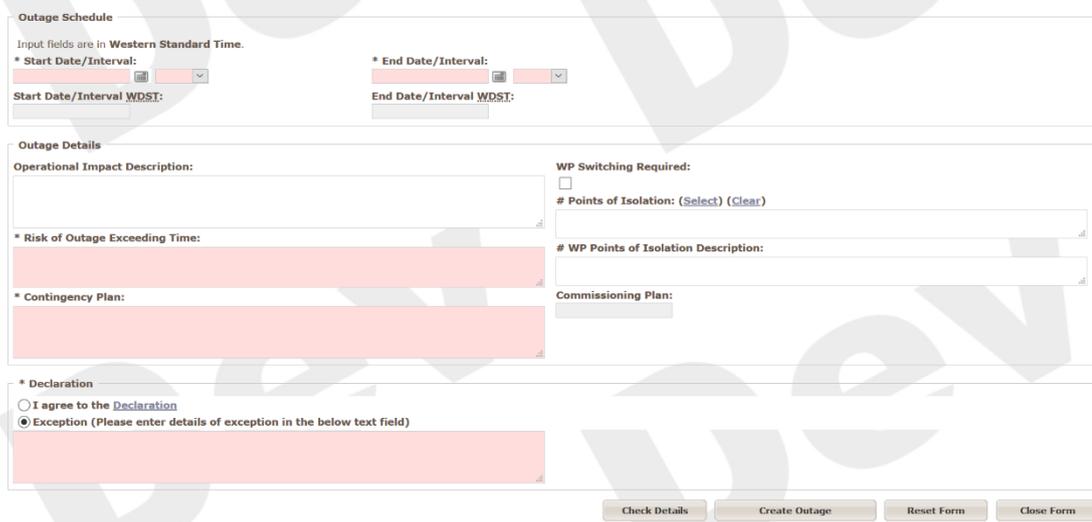
² For information on timeframes applicable to proposed outages, please refer to: <https://aemo.com.au/en/energy-systems/electricity/wholesale-electricity-market-wem/system-operations/outages-and-commissioning/rule-change-rc-2013-15>

³ Start and End Times are based on Trading Intervals. For example, Interval 08:00 is anytime between 08:00:00 and 08:29:59, and if the outage is to finish at 16:20, then interval 16:00 is to be selected.

13. Risk of outage extending beyond requested End Time: textual description indicating the risk assessment of the Outage extending past the requested End Date and End Time (Mandatory). Maximum characters allowed in this field is 250.
14. Contingency Plan: textual description indicating the approach if the unit is requested by AEMO to return from Outage sooner than scheduled (Mandatory). Maximum characters allowed in this field is 250.
15. Operational Information: textual description indicating the impact on the operation (Mandatory). Maximum characters allowed in this field is 720. If applicable, Participants should include information on whether the proposed outage is Mandatory Routine Maintenance.
16. Switching required: indication of whether a Switching Operator will be required to isolate the outage equipment.
17. Points of Isolation: required if a Switching Operator is required to do switching. Click on the 'Select' link for options.
18. Points of Isolation Description: a textual description of the Points of Isolation if specific Points of Isolation aren't known to user.
19. Declaration: required for Participants to declare that the relevant capacity or capability meets the availability requirements set out in the Market Rules, or provide an exception to this declaration, as appropriate⁴ (Mandatory).

Select the *Check Details* button once details are completed to validate entries. Any errors will be indicated in pink.

Figure 14 Create Outage screens with entry errors



Once all errors have been corrected, select the *Create Outage* button to submit the outage. The *Outage Successfully Submitted* screen should appear and an outage number will appear at the top of the screen.

⁴ AEMO. Outage declaration requirements available at: <https://aemo.com.au/en/energy-systems/electricity/wholesale-electricity-market-wem/system-operations/outages-and-commissioning/outage-declaration>

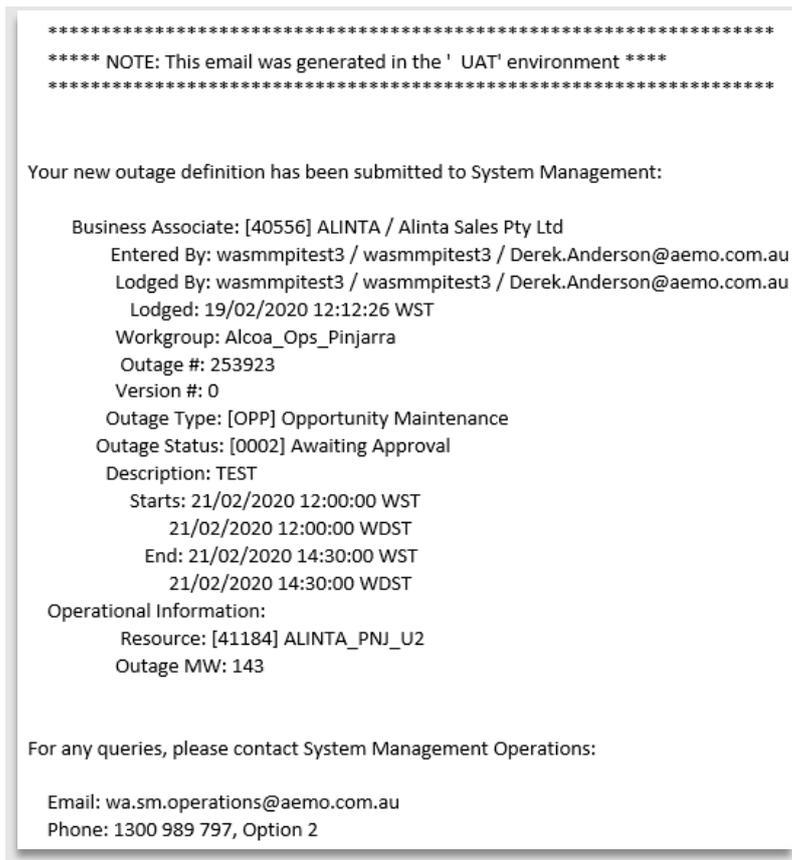
Figure 15 **Outage Successfully Submitted screen**



Please quote the *Outage Number* provided when calling AEMO regarding this outage. Once the outage has been submitted, an email will be sent to the users' inbox confirming any details of the outage along with its current status.

AEMO will evaluate the outage and advise the Participant by email whether the proposal is acceptable.

Figure 16 **Automatic receipt of confirmation of outage submission**



If the outage has been *Accepted* and the user wishes it to be cancelled, the outage may be cancelled from the *Outage Review* screen by selecting the red cancel icon to the left of the outage number  (under the action column).

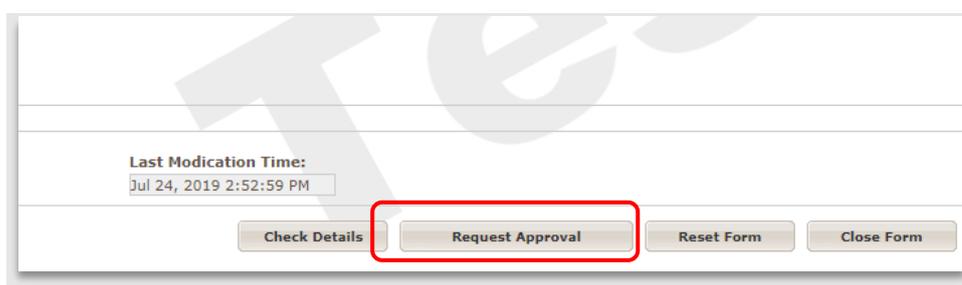
10.2. Outage Approval

After an Outage Plan has been *Accepted by AEMO* and it is still the intention of the Market Participant to go ahead with the outage, the Market Participant is required to request *Approval* from AEMO.

Once the relevant outage has been found, click the *Request Approval for Outage* icon to the left-hand side of the outage number. The icon has an orange arrow protruding from the box .

The icon will take the user to the *Outage Approval Request* page. If the details of the outage are still correct, scroll to the bottom of the page and select the *Request Approval* button.

Figure 17 **Outage Approval request**



The *Outage Successfully Submitted* will appear at the top of the page. Once the request for approval has been submitted, select *Close Form* on the bottom right of the screen. Note that if the End Time interval of the outage is estimated due to outage circumstances, the End Time can be changed by clicking on the *Shrink Outage Dates* icon. The icon has a blue arrow protruding from a white folder .

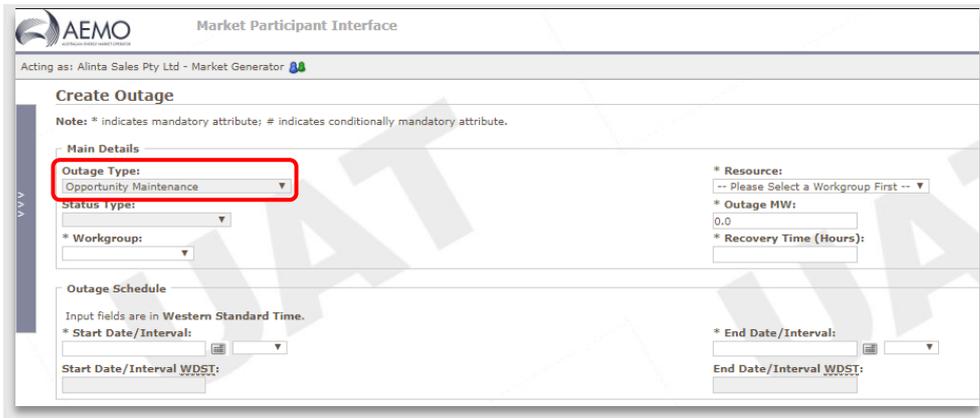
11. OPPORTUNISTIC MAINTENANCE

The information required for this form of outage is the same as that required for the *Proposed Outage Plan*.

Enter the details and click *Check Details*, then click the *Create Outage* button. The *Outage Successfully Submitted* screen should appear if there are no errors.

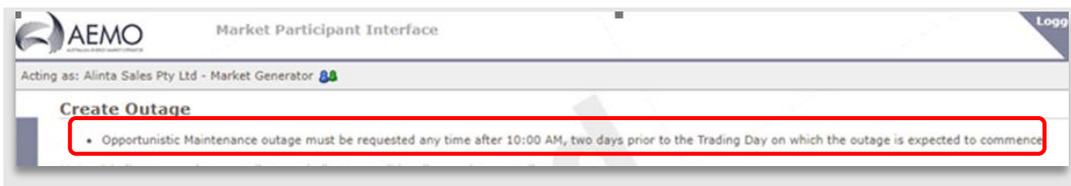
Select *Outages > Create Opportunistic Maintenance* from the hidden menu.

Figure 18 **Selecting Opportunistic Maintenance in the Outage Type drop-down menu**



If any outage has been raised before the allowable time, the message in Figure 19 will appear after you select *Check Details*.

Figure 19 **Error message for an outage request that has been raised before the allowable time**



If any outage has been raised after the allowable time, the message in Figure 20 will appear on the top of the screen after you select *Check Details*.

Figure 20 **Error message for an outage request that has been raised after the allowable time**



If any outage has been raised within 24 hours before the Start Time of any future Opportunistic Maintenance, the message in Figure 21 will appear on the top of the screen after you select *Check Details*.

Figure 21 **Error message for an outage request that has been raised within 24 hours before the Start Time of any future Opportunistic Maintenance**



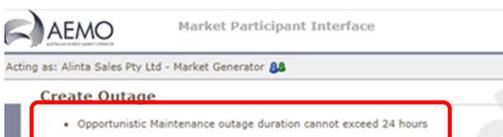
If any outage has been raised within 24 hours after the End Time of the previous Opportunistic Maintenance, the message in Figure 22 will appear on the top of the screen after you select *Check Details*.

Figure 22 **Error message for an outage request that has been raised within 24 hours after the End Time of the previous Opportunistic Maintenance**



If any outage has been raised for longer than a 24 hour period, the message in Figure 23 will appear on the top of the screen after you select *Check Details*.

Figure 23 **Error message for an outage request that has been raised for longer than a 24 hour period**



Note that if the End Time interval of the outage is estimated due to outage circumstances, the End Time can be shrunk by clicking on the *Shrink Outage Dates* icon. The icon has a blue arrow protruding from a white folder

12. FORCED OUTAGES

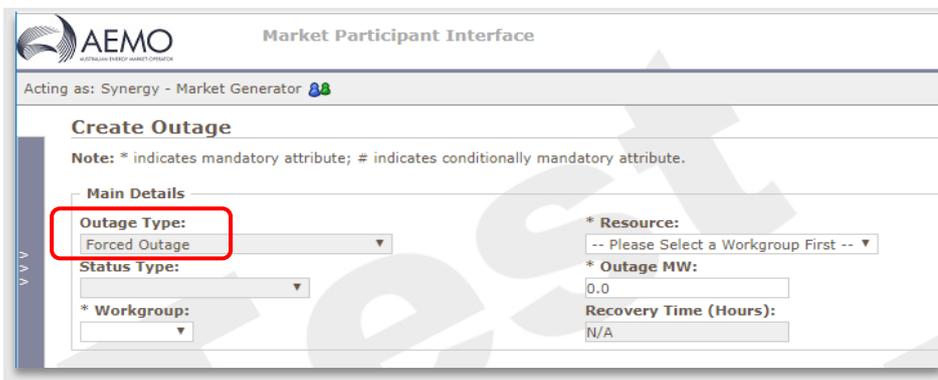
Forced Outages are outages without approval (refer to Market Rule 3.21).

Forced Outages can be submitted via the MPI a maximum of 15 days after the event and up to 60 days ahead of time.

12.1. Creating a Forced Outage

Select *Outages > Create Forced Outage* from the either the hidden menu or Popular Links.

Figure 24 **Selecting Forced Outage in the Outage Type drop-down menu**



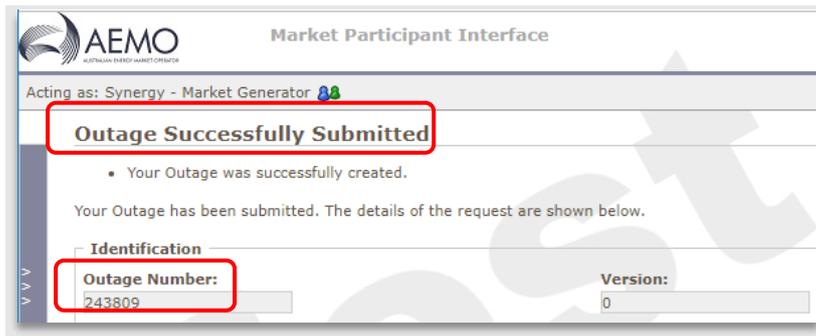
Enter details in the appropriate fields (refer to Market Rule 3.21.4).

Note that if the End Time interval of the outage is estimated due to outage circumstances, the End Time can be later shrunk by clicking on the *Shrink Outage Dates* icon. The icon has a blue arrow protruding from a white folder .

Once the details have been entered, click on the *Create Outage* button. The *Outage Successfully Submitted* screen should appear.

Please quote the *Outage Number* provided when calling AEMO regarding this outage.

Figure 25 **Outage Successfully Submitted screen**



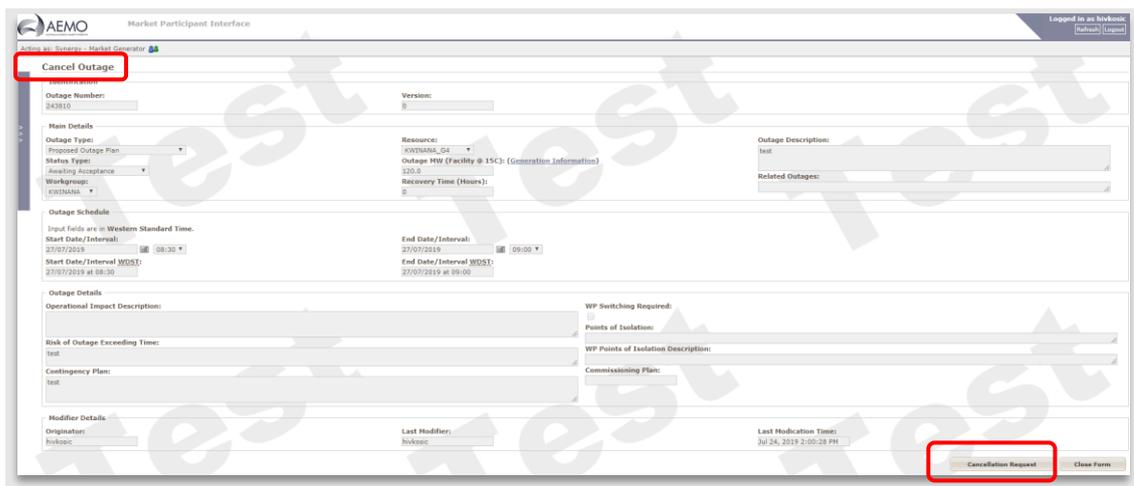
12.2. Cancelling a Forced Outage

A Forced Outage may be cancelled up to 15 Trading Days after the outage Start Time.

The outage may be cancelled from the outage review screen, by selecting the red cancel icon under the action column . Note that the red icon may not appear until approximately 5 minutes after the outage is entered, and will be a grey icon if it is after 15 Trading Days.

The *Cancel Request Screen* will then appear.

Figure 26 **Cancel Outage screen**



Select *Cancellation Request* on the bottom right of the screen. The *Outage Successfully Submitted* should then appear.

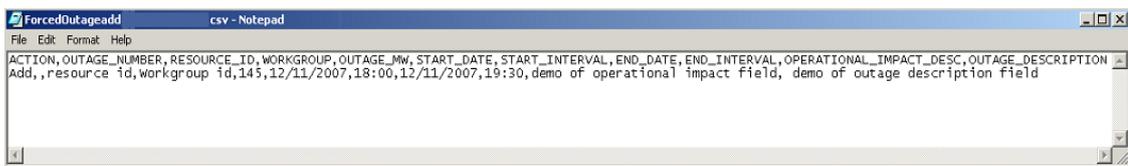
13. LOADING FORCED OUTAGES VIA CSV

A list of Forced Outages can be submitted via a CSV file upload if this file is in the format required by MPI⁵.

To upload a CSV file, select the *Load Forced Outages via CSV* from the left-hand menu. The information entered into the CSV file should be in the following format:

```
<<ACTION,OUTAGE_NUMBER,RESOURCE_ID,WORKGROUP,OUTAGE_MW,START_DATE,START_INTERVAL,END_DATE,END_INTERVAL,OPERATIONAL_IMPACT_DESC,OUTAGE_DESCRIPTION>>
```

Figure 27 Example CSV file for uploading Forced Outage details



Save the CSV file. Select the *Choose File* button and select the CSV file, then click *Load*.

Figure 28 Selecting a CSV file in Forced Outage via CSV screen

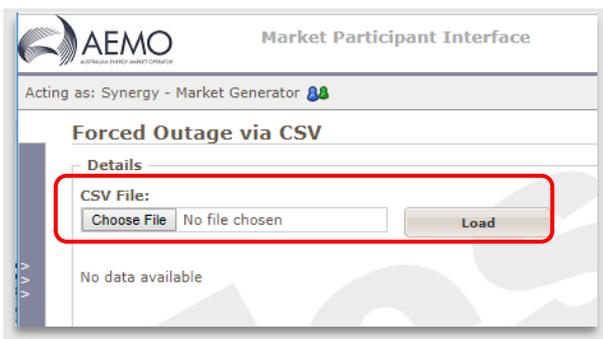
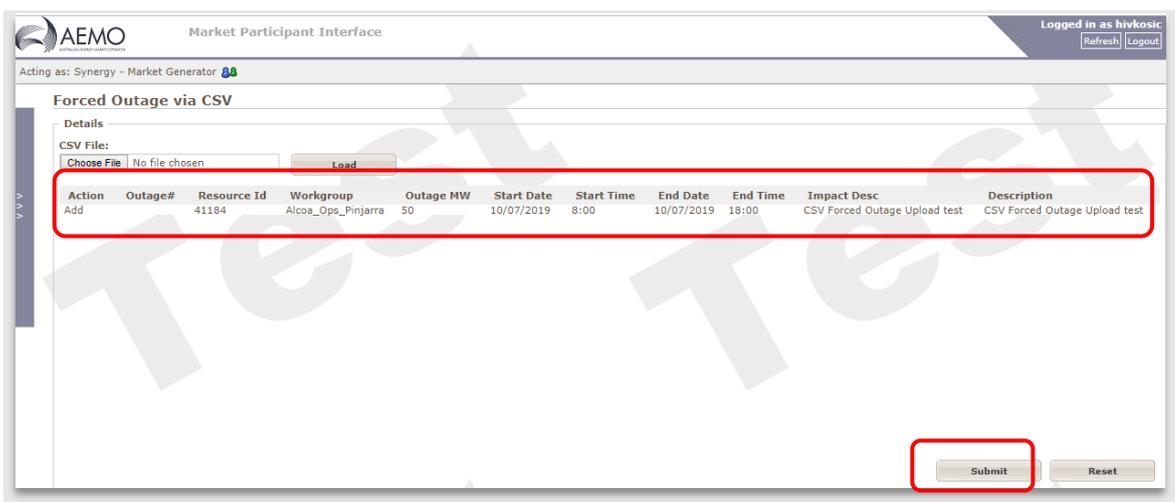


Figure 29 List of Forced Outages uploaded in Forced Outage via CSV screen



Click on the *Submit* button once the file has been loaded.

⁵ CSV template is available at: <https://www.aemo.com.au/energy-systems/electricity/wholesale-electricity-market-wem/procedures-policies-and-guides/guides>

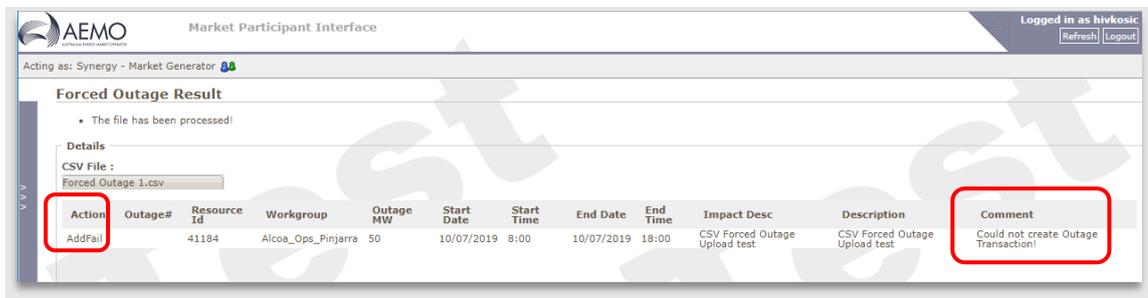
Figure 30 Forced Outage Result screen



An *Outage Number* will be created once the correct confirmation has been received.

If the upload is not successful, the result will state *AddFail* under *Action*, with a reason specified under the *Comment* field.

Figure 31 Example of a failed upload on Forced Outage via CSV screen



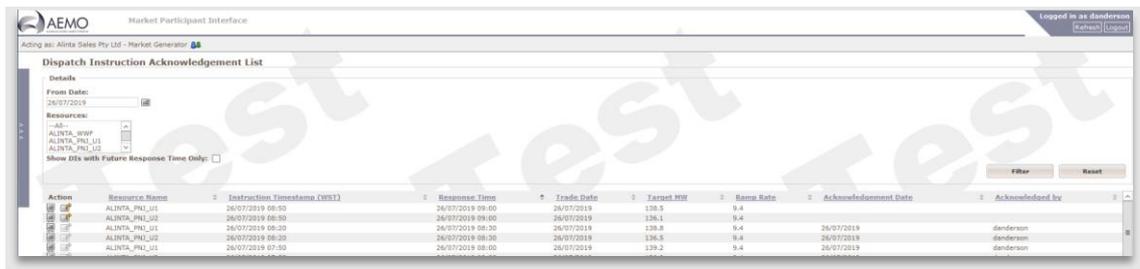
14. DISPATCH

14.1. Dispatch Instruction Acknowledgement

Dispatch Instructions are issued through the Market Participant Interface, and must be acknowledged here if the unit is not on Automatic Balancing Control or Automatic Generation Control. An email is also sent to the Market Participant confirming the details (refer to Market Rule 7.7.3).

Select the Dispatch then *Dispatch Instruction Acknowledgement* link from the hidden menu.

Figure 32 Dispatch Instruction Acknowledgement List screen



Following a review of the Dispatch Instruction, click on *Acknowledge*. The *Acknowledgement Success* screen will appear.

Figure 33 Example of a successful Dispatch Instruction acknowledgement



15. CONTACTING SYSTEM MANAGEMENT – OPERATIONAL QUERIES/TWO FACTOR AUTHENTICATION ISSUES

For operational queries or QR Code/Two Factor Authentication issues regarding the use of the System Management Market Participant Interface, please contact System Management Operations on 1300 989 797 (Option 2).

16. CONTACTING AEMO SUPPORT HUB – USER ACCESS AND PASSWORD RESET

For technical queries regarding end-user access provisioning & de-provisioning, or end-user password reset please contact AEMO Support Hub on 1300 AEMO 00 (1300 236 600).