Guide to Intermittent Generation

Version 8.01

February 2022

Provides information for Intermittent Generators to submit availability and forecast information to AEMO

Important Notice

PURPOSE

This Guide to Intermittent generation (Guide), prepared by the Australian Energy Market Operator (AEMO), provides guidance for Intermittent Generation under the National Electricity Rules (Rules).

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DISTRIBUTION

Available to the public.

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DOCUMENTS MADE OBSOLETE

The release of this document changes any previous versions of Guide to Intermittent Generation.

FEEDBACK

Your feedback is important and helps us improve our services and products. To suggest improvements, please contact AEMO's support hub.

Contents

Introduction

Purpose

Provides information for Intermittent Generators to submit availability information to AEMO.

Audience

This guide is relevant to Intermittent Generators (persons who own, operate or control a generating unit with intermittent output) submitting availability and viewing forecast information in the Intermittent Generation web application.
For help, see, NEM Operation and forecasting and dispatch handbook for wind and solar generators and Guide to Data Requirements for AWEFS and ASEFS.

What's in this guide

- About Intermittent Generation on page 10 explains the Intermittent Generation web application, who it is for, and how to access it, and how to use the common interface features such as selecting a Unit ID, date and so on.
- Availability on page 19 describes the Availability menus and how to view and submit multi-day PD/STPASA Availability (on a half-hourly basis) and MTPASA Availability (on a daily basis) information.
- Forecasts on page 64 describes the Forecasts menu and how to view forecast data.
- Needing Help on page 73 provides information to assist participants with IT related issues and provides guidance for requesting assistance from AEMO.
- References on page 78 is a resource section containing a list of references mentioned throughout this guide.

How to use this guide

- This guide is written in plain language for easy reading.
- Where there is a discrepancy between the National Electricity Rules, and information or a term in this document, the National Electricity Rules takes precedence.
- Where there is a discrepancy between the Appropriate procedures, and information or a term in this document, the Appropriate procedures take precedence.
- Text in this format indicates a resource on AEMO's website. For a list, see References on page 78

- Text in this format indicates a hyperlink. Only Registered Participants can access some hyperlinks. Non-Registered Participants can search for guides on AEMO's website.
- Actions to complete in the web portal interface are bold and dark grey.
- Rules terms used throughout this guide are listed on page 1 and defined in the National Electricity Rules.
- Glossary terms are capitalised and have the meanings listed against them (see page 1).
- References to time are Australian Eastern Standard Time (AEST).

Need To Know

The submission of availability using aseXML files via FTP will be retired 6 months after go-live of the new API in December 2021. The submission of availability via FTP is deprecated and will be retired around June 2022.

Participants are advised to use the API instead. For more information, see the API documentation.

Related Rules and Procedures

Type	Details
Rule	NER 3.7B(b) refers to a semi-scheduled generator submitting plant availability.
NEM Operational Forecasting and dispatch handbook for wind and solar generators.	nem-operational-forecasting-and-dispatch-handbook-for-wind-and-solar-generators.pdf

Type	Details
AWEFS and ASEFS Energy Conversion Model (ECM) Guidelines	https://www.aemo.com.au/energy-systems/electricity/national-electricity-market-nem/system-operations/dispatch-information/policy-and-process-documentation#forecasting
Solar and Wind energy forecasting webpage	https://aemo.com.au/en/energy-systems/electricity/national-electricity-market-nem/nem-forecasting-and-planning/operational-forecasting/solar-and-wind-energy-forecasting

Data interchange and data model resources

Market data

NEMWEB, publicly available market data at no cost. The public data published on AEMO's website is the same as distributed through the participant file server with the exception of participants' private data. The data is in CSV format in many files along with some graphical summaries.

Software

You can find Data Interchange software in the following locations:

- Data Interchange Help > Software Releases.
- Releases directory on the participant file server: FTP to 146.178.211.2 > Data Interchange, pdrBatcher, pdrLoader, or pdrMonitor.
- Full install: Data Interchange Online Help > Software Releases.

Reports

- Data Interchange Help > Data Model Reports.

Releases

- Data Interchange Help > Release Documents.

Help

- Data interchange online help

Assumed Knowledge

This guide assumes you have knowledge of:

- Knowledge of the FTP protocol
- The operating system you are using
- Connecting to AEMO's Electricity IT systems

For more information see:

- NEM Operational Forecasting and Dispatch Jamdbook for Wind and Solar Generators
- Guide to Data Requirements for AWEFS and ASEFS

Prerequisites

Before you can use Intermittent Generation you must:

1. Have a Participant ID with an effective date of registration.
2. Have a user ID and password with access rights provided by your company's participant administrator. For details, see **User rights access on the next page**.
3. Understand the procedures governing the operation of the market relating to wholesale trading of electricity and the provision of ancillary services. For details, see the NER Chapter 3, Introduction to Market Rules.
4. Be familiar with the intermittent generation documentation including the NEM Operational Forecasting and Dispatch Handbook for wind and solar generators and Guide to Data Requirements for AWEFS and ASEFS
5. Have an API gateway and a TLS certificate (to access the API).

6. Have a Participant ID. If your company is a Registered Participant, it is set up during the registration process.
7. Know your Dispatchable Unit Identifier (DUID), Interconnector or Link ID.
8. Test your submission in the pre-production environment before submitting to production. AEMO encourages participants to use the pre-production environment to test procedures and train staff.
9. Know the Participant File Server address (see Connecting to AEMO's Market Systems.)

User rights access

Your Participant ID's participant administrator (PA) grants you permission to use Intermittent Generation.

The entities required for access are:

- EMMS - Intermittent Generation - Availability
- EMMS - Intermittent Generation - Forecasts

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.

For help with participant administration and user rights access, see Guide to User Rights Management.

About Intermittent Generation

Australian Wind Energy Forecasting System (AWEFS) and the Australian Solar Energy Forecasting System (ASEFS) were established in response to the growth in intermittent generation and the increasing impact this growth has on the forecasting process.

The Rules define an Intermittent Generating Unit as a:

> Generating unit whose output is not readily predictable, including, without limitation, solar generators, wave turbine generators, wind turbine generators and hydro-generators without any material storage capability.

Clause 2.2.7(a) of the Rules allows a person to classify a group of generating units as a Semi-scheduled Generating Unit (if combined nameplate rating is greater than or equal to 30 MW) or otherwise as a Non-scheduled Generating Unit.

Clause 3.7B(a) of the Rules requires AEMO to prepare a forecast of the available capacity of each Semi-scheduled Generating Unit, called its unconstrained intermittent generation forecast (UIGF), for use in Dispatch, Predispatch, and PASA.

The participant provides the available capacity for dispatch using a SCADA Local Limit. For pre-dispatch and PASA, the participant uses the EMMS portal to provide the available capacity as an entered Upper MW Limit/Elements Available value. For more information, see Availability on page 19.

In this guide, a Semi-scheduled Generating Unit or a Non-scheduled Generating Unit is referred to as **Unit**, **Unit ID** or **DUID**.

What Intermittent Generation is for

The Australian Wind Energy Forecasting System (AWEFS) and the Australian Solar Energy Forecasting System (ASEFS) were established in response to the growth in intermittent generation and the increasing impact this growth has on the forecasting process.

AEMO uses AWEFS and ASEFS to produce unconstrained intermittent generation forecasts for all semi-scheduled and significant non-scheduled wind and solar generating units in the NEM.

AEMO hosts AWEFS and ASEFS and maintains their interfaces in the Markets Portal, providing data access to the market and to individual Units.

The systems produce various types of forecasts at regular run intervals for each type:

- Dispatch (DS)
- 5-minute Predispatch (5MPD)

- Predispatch (PD)
- Short-term Projected Assessment of System Adequacy (STPASA)

Who can use Intermittent Generation

The Intermittent Generation web application provides the following authorised parties with access to the forecasts generated by AWEFS and ASEFS:

- Intermittent Generation registered participants have full access to the Intermittent Generation web application and can access and change their availability information (Elements Available and Upper MW Limit) before the start of the relevant 30 minute interval or trading day. Availability profiles can be updated as frequently as the change occurs, but not retrospectively for historical Trading Dates. Updates to historical intervals on the current Trading Date are not accepted.
- AEMO can access and change availability profiles, if required in emergency situations, on behalf of participants.
- All registered participants have access to the View Forecasts menu to view historical data.
- Neither Intermittent Generation registered participants nor AEMO can change historical availability profiles.

Intermittent Generation registered participants can authorise their participant users to input availability information using the Administration menu in the energy market systems web portal, see User rights access on page 8.

How do you use Intermittent Generation

The Intermittent Generation web application is part of AEMO's Markets Portal and is accessed using a web browser.

When you make a submission to the Intermittent Generation web application, your last submission for a Trading Date continues to remain effective until it is replaced by a new submission for that Trading Date.

If no submission exists for a Trading Date, the forecasting systems automatically default to using the latest submission for the latest prior Trading Date, rather than defaulting to full availability.

Given this, if the farm is intended to be fully available on the Trading Date that follows a Trading Date with a reduced availability submission, then the participant must also submit a full availability profile for that following Trading Date using the "Reset availability to full capacity" option.

For help with data requirements, see Guide to Data Requirement for AWEFS and ASEFS.

Accessing Intermittent Generation

To access Intermittent Generation:

1. Sign in using the user ID and password provided by your Participant ID's PA.
2. From the left navigation pane, click EMMS > Intermittent Generation.

All participants can access View Forecasts to see historical data. Attempting to access other menus when you are not acting for a registered intermittent generator displays an error similar to the following:

Using the common interface features

Select the unit

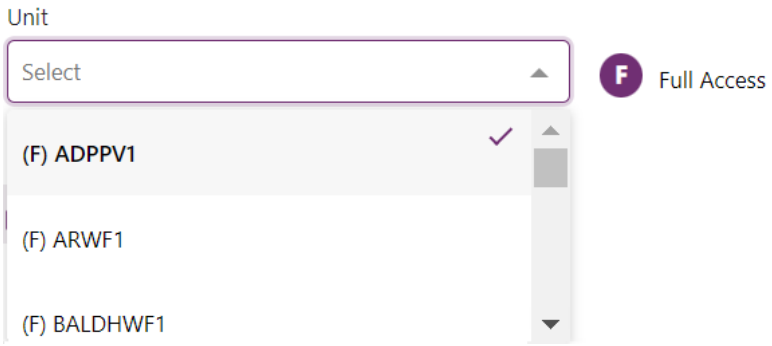
A Unit ID identifies a Semi-scheduled Generating Unit or significant intermittent Non-scheduled Generating Unit; details of each unit are displayed by selecting the relevant Unit ID. Only Intermittent Generating Units specifically made visible to you appear in the list.

To select the unit:

1. Click the drop-down arrow underneath the Unit item to show the list of units. Use the slider to scroll up and down the list. Alternatively, use the up or down arrows on your keyboard, and then press the **Enter** key.

   To the left of each unit name is a symbol indicating available access:

   - (F) for full access
   - (H) for historical access (excludes today)
   - (P) for public access



2. Click a unit name to display the availability data applicable to that unit. The specific details shown on the interface depend on which interface you are using.

   If you expect to select a unit and that unit does not appear in your list, check the following:

   - The Participant ID you signed in with (shown in the top right-hand corner).
   - Do you need to set a different participant, using the Set Participant function?
   - For each Participant ID, you can see and enter data only as permitted by the participant administrator (PA) for that Participant ID. To change what you can see and do for an effective Participant ID, contact your Participant ID's PA.

Select the type

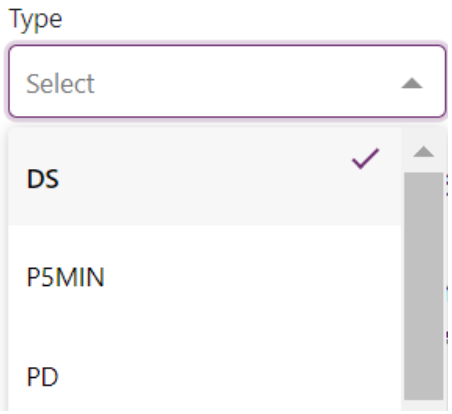
The type of forecast is the time frame and applicability of the data.

The Types are:

- DS: Dispatch forecasts
- P5MIN: 5-minute Predispatch Forecasts
- PD: Predispatch forecasts
- STPASA: Short-term PASA forecasts

To select the Type:

1. Click the down arrow to show the drop-down list of types, and then scroll up and down the list using the slider.
2. Click a type to display the forecast data. For help, see Select the graphical display on page 70 and Select the tabular display on page 71.



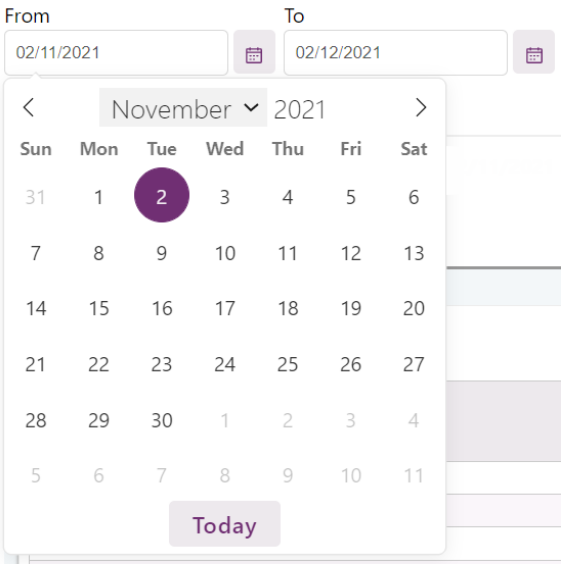
For Dispatch forecasts, there is only one interval per forecast. Therefore, the graphical or tabular display shows all Dispatch forecasts for the selected day up to the selected forecast run. The csv download for Dispatch has the same range of data.

Select a date

To select a date:

1. Click the calendar icon to the right of the date to show the calendar, and then select a date.

   - To show a different month, click a single arrow (right to go forward, and left to go back).
   - To show a different year, click a double arrow (right to go forward, and left to go back).



Alternatively, type a date in the DD/MM/YYYY format, then press the **Enter** key.

For some items, the selection is limited to future dates. Selectable dates are bold.

csv files

To understand the layout of each csv file see:

- PD/STPASA availability csv file layout on page 36
- MTPASA availability csv file layout on page 56

XML files

For a basic understanding of XML files, see Submit energy availability using FTP on page 45.

Availability

About availability

The Intermittent Generation - Availability interfaces allow participants' operational staff to submit availability information on both a farm-wide basis (as a unit Upper MW Limit) and an individual Cluster element basis (as Cluster Elements Available).

A Cluster is a group of Intermittent Generating Units. A Unit comprises one or more Clusters.

In this menu you can:

- View a summary of an Intermittent Generating Unit availability submission.
- View availability information in both table and graphical format for PD/STPASA and MTPASA as Upper MW Limit and Elements Available for each cluster for the selected unit.
- Enter availability information for PD/STPASA and MTPASA as Upper MW Limit and Elements Available for each cluster for the selected unit.

In this guide, the availability of an Intermittent Generating Unit refers to its Plant Availability over the relevant period. The Rules require a Semi-Scheduled Generator to submit Plant Availability for its Semi-scheduled Generating Unit. The Rules also allow AEMO to require a Non-Scheduled Generator to submit Plant Availability for its Non-scheduled Generating Unit, if deemed significant for forecasting purposes.

The Rules define Plant Availability as:

> The active power capability of a Generating Unit (in MW), based on the availability of its electrical power conversion process and assuming no fuel supply limitations on the energy available for input to that electrical power conversion process.

> A participant with intermittent generation cannot manage their Plant Availability in dispatch by bidding the Maximum Availability (Max Avail) in their energy offer. This is because AEMO's systems ignore this for Semi-scheduled Generating Units and instead, replace it with the dispatch UIGF from applicable forecasting systems (AWEFS/ASEFS or participant dispatch self-forecast).

Effective upper limit

Unit forecasts are capped at the Effective Upper Limit, which is:

$$\text{Min}\left(entered\ Upper\ MW\ Limit, \sum_{n=1}^{c}[registered\ Element\ MW\ AC\ Rating_n \times\ entered\ Elements\ Available_n]\right)$$

Where:

n = Cluster within unit

c = total number of clusters within unit

Elements available

Elements Available are also used to scale down the full availability forecast.

For MTPASA forecasts, participants submit this availability information on a daily peak basis using the MTPASA Availability interface. Availability information can be submitted for any day in the future, even if beyond the MTPASA forecast horizon.

For Predispatch and STPASA forecasts, participants submit this availability information on a 30-minute Interval basis over the next eight days using the PD/STPASA Availability interface. Availability information can be submitted for any interval in the future, even if beyond the PD/STPASA forecast horizon.

For Dispatch and the 5-minute Predispatch forecasts, the availability information submitted using the Intermittent Generation – Availability interface does not apply.

> The availability information submitted in the **Intermittent Generation – Availability** interface does not affect the dispatch and the 5-minute predispatch forecasts. Participants must ensure the current availability (as reflected in the SCADA Local Limit and SCADA Turbines/Inverters Available) is consistent with the availability submitted in the **Intermittent Generation – Availability** interface for the current interval.

Local limitations

In the Dispatch and 5-minute Predispatch forecast time frames, the participant must manage farm-wide local limitations and element availability information by submitting a real-time SCADA Local Limit and a SCADA Turbines Available signal (for wind) or SCADA Inverters Available signal (for solar). If these signals are unavailable and AEMO agrees, the participants may request AEMO apply a Dispatch constraint. These signals are defined in the wind and solar Energy Conversion Models, found on AEMO's Solar and Wind Energy Forecasting web page.

In the Predispatch and ST PASA forecast timeframes, participants must manage farm-wide local limitations and element availability information by entering an Upper MW Limit and Turbines/Inverters Available information in the EMMS portal.

Availability submission guidelines

Upper MW Limit submission

The Upper MW Limit for a unit (DUID) is the lower of its plant availability and all technical limits on the capacity of its connection assets to export energy, and excludes limits on the transmission and distribution network that are managed by AEMO through the central dispatch process (e.g. via constraints).

Participants must liaise with the Network Service Provider to determine if these limits have been communicated to and managed by AEMO through the central dispatch process to ensure appropriate action is taken thereafter.

Read this guide along with documents on the Solar and Wind Energy Forecasting web page.

For the Upper MW Limit, entries must be an integer value not less than -1 and not greater than the registered Max Capacity of the Unit. For example, if a Unit has a Max Capacity of 150 MW, and a participant user enters 200 MW as the Upper MW Limit and submits, the system rejects the submission and generates a suitable error message prompting them to enter the information again.

Notes:

- Zero is a valid entry meaning the Unit is restricted to a zero limit, so is not allowed to generate any electricity.
- A value of -1 means there is no availability limit in place on the Unit. This is the default situation.
- A null or negative value (other than -1) is not allowed

Elements Available submission

Elements Available is the number of elements (turbines for wind, inverters for solar) that are connected to the grid and are available to export power. Elements are considered unavailable to operate when they are:

- Not yet built.
- Still being commissioned and not released for operation.

- Out of service due to a forced or planned outage. For example, maintenance or a distribution network outage not reflected in AEMO constraints.
- Unable to generate due to unavailable connection network.

There is an Elements Available column for each registered Cluster (Cluster ID) in the Unit. The Elements Available column header reflects the Cluster element corresponding to each generation technology. For example, for wind farms the column header shows Turbines Available and for solar farms the column header shows Inverters Available. Enter the number of Available elements in the Cluster.

Adding new clusters is part of the registration process with AEMO. Cluster characteristics cannot be altered using the Markets Portal. To add new clusters, contact AEMO's support hub.

For the Elements Available entries, ensure the number of elements does not exceed the registered total number of elements installed in the Cluster.
For example, if a participant user enters six under Elements Available for a Cluster with only five registered elements, and submits, the system rejects the submission and generates an error message prompting you to enter the information again.

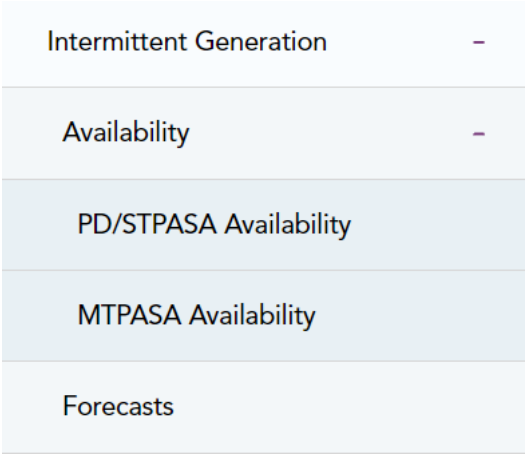
Notes:

- Enter whole numbers of Elements Available only.
- A zero entry is a valid entry (meaning none are Available or equivalently that all elements in the Cluster are unavailable).
- A null value is ignored, leaving the existing value as is.
- The submission is rejected if the value is less than zero or greater than the registered total number of elements in the Cluster.

View PD/STPASA Availability

Intermittent Generation interface

You can use the following items under the Intermittent Generation Interface menu to:



- PD/STPASA Availability– Display Availability data for a selected unit and Trading Date for PD/STPASA Availability at the interval level and create a new PD/STPASA availability submission. For help see PD/STPASA availability interface below.
- MTPASA Availability – Display Availability data for a selected unit and trading date for MTPASA availability at the date level and create a new MTPASA availability submission. For help, see MTPASA availability interface on page 50
- Forecasts – Display dispatch forecast information as of the current trading date and time. For help see, View forecasts on page 66.

PD/STPASA availability interface

The PD/STPASA availability interface displays the present availability information as of the current trading date and time. You can use this screen to:

- View PD/STPASA availability submission for any period.
- Submit the availability data by uploading a CSV file.

- Download the existing effective availability data to a CSV file.
- Edit Availability data.
- Reset Availability data to full capacity.
- Duplicate Availability data.
- View the data as a table or a graph for different time periods.

The interface displays the unit's Upper MW Limit plus, for each Cluster in the unit, the number of elements available (Turbines or Inverters). The 30 min interval is identified by the Interval (ending time of the half-hour) in the first column. The number of columns shown depends on the number of clusters within the unit.

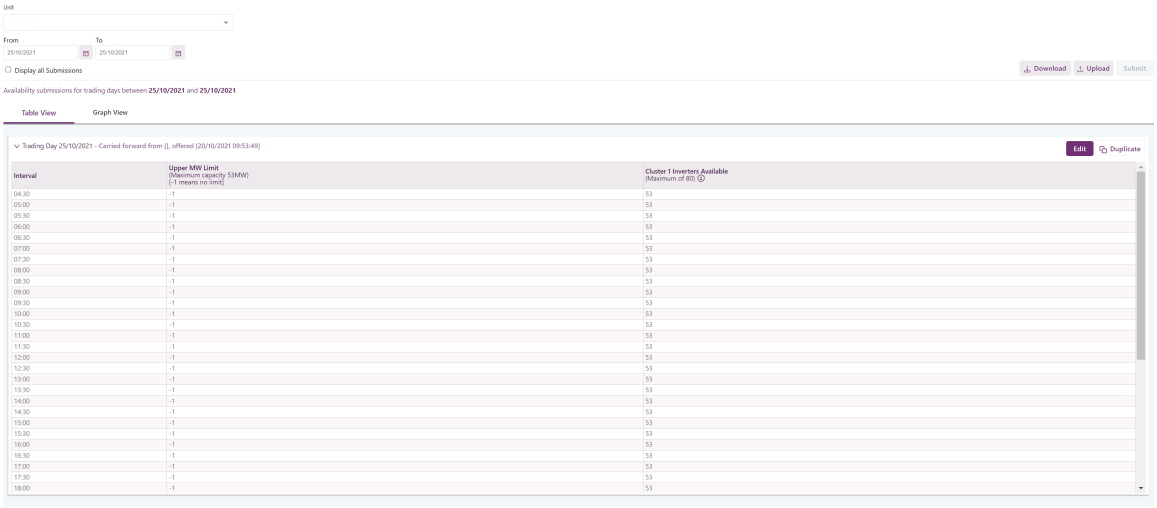
Initially the interface displays the currently effective availability for your effective Participant ID.

The interface contains the following fields and controls:

Field	Description
Unit	Specifies the forecast Unit ID.
From To	Specifies the starting trading day to show availability submissions. Defaults to the current trading day.
Display all Submissions	When selected, shows all availability submissions. The checkbox is disabled by default and shows only the latest availability submission for each day.
Download	Allows you to download the existing effective availability data to a CSV file.
Upload	Allows you to submit the availability data by uploading a CSV file.

Field	Description
Submit	Allows you to submit the availability data.
Edit	Allows you to edit availability data.
Duplicate	Allows you to duplicate Availability data.

The following is an example of the PD/STPASA Availability interface in table view:



The following is an example of the PD/STPASA Availability interface in graph view:

The graph view contains the same fields and controls as the table view plus the following controls:

Field	Description
Upper MW Limit	Ability to toggle a graph series that conveys the Upper MW Limit for each interval.
Total elements available	Ability to toggle a graph series that conveys a summation of all turbines/inverters available across all clusters in each interval.

View PD/STPASA availability

To view PD/STPASA availability:

1. Click Intermittent Generation> PD/STPASA Availability.

   The PD/STPASA availability interface displays showing the currently effective availability for your effective Participant ID.

   For help, see PD/STPASA availability interface.

2. To view further submission details, do one of the following:

   - Click Display all submissions to see all submissions not just effective submissions.
   - Click the Expand/Collapse icon (>) to view the details of a single submission.

3. To **Select another Trading Date** use the calendar icons to change the From and To dates. For help, Select a date on page 17.
4. To **View multiple Trading Dates**, use the calendar icons to adjust the To date to display the multi-day grid. For help, Select a date on page 17.

5. To Select another Unit, click the drop-down arrow to the right of the unit to display the list of available units. For help, see Select the unit on page 14.
6. To **Copy Availability**, select Duplicate on a Trading Day and select From. For help, see Duplicate an existing availability submission below.
7. To **View all Submissions,** click the Display all Submissions check box to see all submissions not just effective submissions.
8. To **Save to file**, click Download. For help, see Save the currently viewed availability on the next page.

If you want to save only the effective submissions do not select View all Submissions

Duplicate an existing availability submission

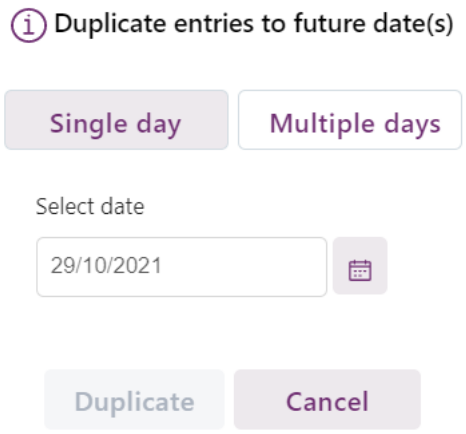
To duplicate an existing availability submission:

1. Click Intermittent Generation > PD/STPASA Availability.

The PD/STPASA Availability interface displays.

2. On the PD/STPASA Availability Interface, select the Trading Dates you want to duplicate in the From and To fields.
3. Click Duplicate on the trading day you want to duplicate.

The Duplicate entries to future dates dialog displays.



4. When prompted, select the dates you want to duplicate and then click Duplicate.

One day of data is copied to the PD/STPASA Availability Interface where you can change the data if required. For help, see Create PD/STPASA availability on the next page.

Save the currently viewed availability

To save the currently viewed availability to your local computer:

1. On the PD/STPASA Availability Interface click Download.
2. Click Save and select a location to save the file on your local computer.

Create PD/STPASA availability

About PD/STPASA availability

The PD/STPASA Availability menu item under Availability displays the availability data for a selected unit and date range, ready for updating to create a new availability submission. You have several options for creating a new PD/STPASA availability submission:

- Manually enter availability submissions, using the Create availability submissions interface. For help, see Create availability for single-day submissions on the next page or Create availability for multi-day submissions on page 34.
- Copy a previously created submission, for help, see on page 29.
- Upload a prepared file in csv format from your computer. For help, see Upload PD/STPASA availability on page 35.

PD/STPASA availability data submitted into the pre-production environment is not reflected in the pre-production forecasts. Instead, the availability data from the production environment is used in the creation of the pre-production forecasts, for the convenience of participants.
To confirm successful end-to-end loading of availability data in the pre-production environment, please subscribe to the following Data Interchange files: AVAIL_SUBMISS_DAY, AVAIL_SUBMISS_CLUSTER.

- The portal will accept submission of availability for future 30-minute intervals, covering PD and STPASA time frames. The availability entries for each interval are carried forwards to the respective interval of future trading days, until a future trading day where an availability entry exists or is entered. Therefore, it is expected submissions are made only to indicate changes to availability, not to exhaustively specify availability in each interval of each trading day. The interval datetimes in a single day do not have to be consecutive. Availability information can be submitted for any interval in the future, even if beyond the PD/STPASA forecast horizon.

Create availability for single-day submissions

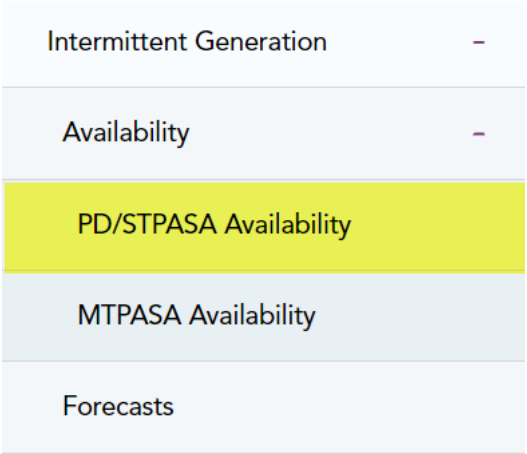
To enter availability for single-day submissions:

1. Click Intermittent Generation >Availability > PD/STPASA Availability.

   The PD/STPASA Availability Interface displays the current effective offer with the current Trading Date selected.

   At the unit level, you must enter Upper MW Limit values.

   At the cluster level, you must enter the number of available elements.



2. To view further submission details, do one of the following:

- Click Expand/Collapse to view the data for the effective submission for the Trading Date.

- Click the expand button next to the Trading Date to view the details of a single Trading Date.
- Click the collapse button to close the submission details.

Further submission details display. Click the grid to edit the cells for each Unit and Cluster (if required) and click Submit.

Alternatively, use the **Tab** and **Enter** keys on your keyboard to move through the grid and edit the cells.

Important notes:

- The data is not saved until you click Submit, the purple shading indicates unsaved data.
- The latest submission for a Trading Date continues to remain effective, until replaced by a new submission for that Trading Date.
- If no submission exists for a Trading Date, the predispatch and STPASA forecasting systems default to using the latest submission for the latest prior Trading Date.
- If the farm is intended to be fully available on the Trading Date that follows a Trading Date with a reduced availability submission, then the participant must also submit a full availability profile for that following Trading Date using the "Reset availability to full capacity" option.

You can also:

- Upload from file: Click Upload to upload a csv file from you local computer. For help, see Upload PD/STPASA availability on page 35.
- Enter multiple days: for help, see Create availability for multi-day submissions on the next page.
- Copy a previous submission: for help, see on page 29.

- Select another unit: Click the down arrow to the right of the unit item to show the list of available units. For help, see Select the unit on page 14.
- Select other Trading Dates: Use the calendar icons to change the From and To dates. For help, see Select a date on page 17.

Create availability for multi-day submissions

Using the PD/STPASA Availability Interface, you can enter availability data. For help, see Upload PD/STPASA availability on the next page

To enter availability for multi-day submissions:

1. On the PD/STPASA Availability Interface, use the calendar icons to adjust the To Date to display the multi-day grid. For help, see Select a date on page 17.

2. Next do one of the following:

- Click Expand/Collapse to view all Trading Date grids.
- Click the expand button next to the Trading Date to view the details of a single.
- Click the collapse button to close the submission details. Further submission details display.

3. Click the grid to edit the cells for each Unit and Cluster (if required) and click Submit. Alternatively, use the **Tab** and **Enter** keys on your keyboard to move through the grid and edit the cell.

Important notes:

- The data is not saved until you click Submit, the purple shading indicates unsaved data.
- The latest submission for a Trading Date continues to remain effective, until replaced by a new submission for that Trading Date.
- If no submission exists for a Trading Date, the Predispatch and STPASA forecasting systems default to using the latest submission for the latest prior Trading Date.
- If the farm is intended to be fully available on the Trading Date that follows a Trading Date with a reduced availability submission, then the participant must also submit a full availability profile for that following Trading Date using the "Reset availability to full capacity" option.

You can also:

- Select another Unit: Click the down arrow to the right of the Unit item to show the list of available units. For help, see Select the unit on page 14.
- Select other Trading Dates: Use the calendar icons to change the From and To dates. For help, see Select a date on page 17.

Upload PD/STPASA availability

Uploading PD/STPASA Availability submissions using a file upload allows you to submit availability data in one csv file.

To upload a file:

1. Prepare the file by doing one of the following:
   - Export a sample file to use as a template, see Save the currently viewed availability on page 30. Downloading a sample file provides an easy way to manipulate the data for reuse as it is important to maintain the csv format.
   - Create the file from scratch using a spreadsheet or text editor as described in PD/STPASA availability csv file layout below.
2. Save your file with a csv extension and the name of your choice. All uploaded files must have a csv extension or they are rejected.
3. Follow the instructions for Upload the availability file on page 44 section.

PD/STPASA availability csv file layout

Create PD/STPASA availability on page 31 explains the data in the PD/STPASA availability csv file.

For help with the csv format, see csv Format Standard.

For a file to be accepted for import it must contain the mandatory data identified in the first column with an asterisk (*). Do not include the asterisk in your file. For file examples, see Energy availability csv file examples on page 42.

The PD/STPASA availability csv file comprises C, I and D rows:

- C rows indicate a comment field, for example the file or application description. Participants can change data in these rows.
- I rows indicate header information, do not change the data in the row. All data must be in upper case.

- D rows indicate participant availability data. Participants can change data in the rows and all data must be in upper case.

Energy Availability csv files are validated as follows:

- Each file must contain one “C” row, as the first row.
- Each file must contain the following sections:
    - SUBMISSION
    - LIMIT
    - CLUSTERS
- For each section, one “I” row is required, above the first “D” row.
- For the SUBMISSION section, one “D” row is required for each TRADING DATE.
- For the LIMIT and CLUSTERS sections, 48 “D” rows are required for each Interval Datetime.

All csv file data must be in upper case.

PD/STAPASA availability csv file explanation

Comment header row

Column	Label	Data Entry	Validation
A*	C	Your comments, e.g. the description of the file (optional)	Do not change data in the row.

SUBMISSION section

Column	Label	Data Entry	Validation
A*	I	Header information	Do not change data in the row.
	D	Enter your data for availability	Upper case
B*	INTERMITTENT GENERATION	INTERMITTENT GENERATION	Application name
C*	SUBMISSION	SUBMISSION	Upper case
D*	PARTICIPANTID	Enter your Participant ID	Upper case
E*	DUID	Enter the Unit ID	Upper case The DUID must match the selected Unit ID on the interface.

LIMIT section

Column	Label	Data Entry	Validation
A*	I	Header information	Do not change data in the row.
	D	Enter your data for Upper MW Limit	Upper case
B*	INTERMITTENT GENERATION	INTERMITTENT GENERATION	Application name
C*	LIMIT	Section Name	Upper case
D*	DUID	Enter the Unit ID	Upper case The DUID must match the selected Unit ID on the interface.
E*	Interval DateTime		Datetime format = dd/mm/yyyy hh:mi

Column	Label	Data Entry	Validation
F	OFFERDATETIME		Datetime format = dd/mm/yyyy hh:mi. When uploading, this is automatically populated by interface
G	UPPERMWLIMIT	Enter the Upper MW Limit -1 indicates no limit	The amount must be ≤ the max capacity of the unit.

CLUSTERS section

Column	Label	Data Entry	Validation
A*	I	Header information	Do not change data in the row.
	D	Enter your data for Elements Available	Upper case
B*	INTERMITTENT GENERATION	INTERMITTENT GENERATION	Application name
C*	CLUSTERS	Section Name	Upper case

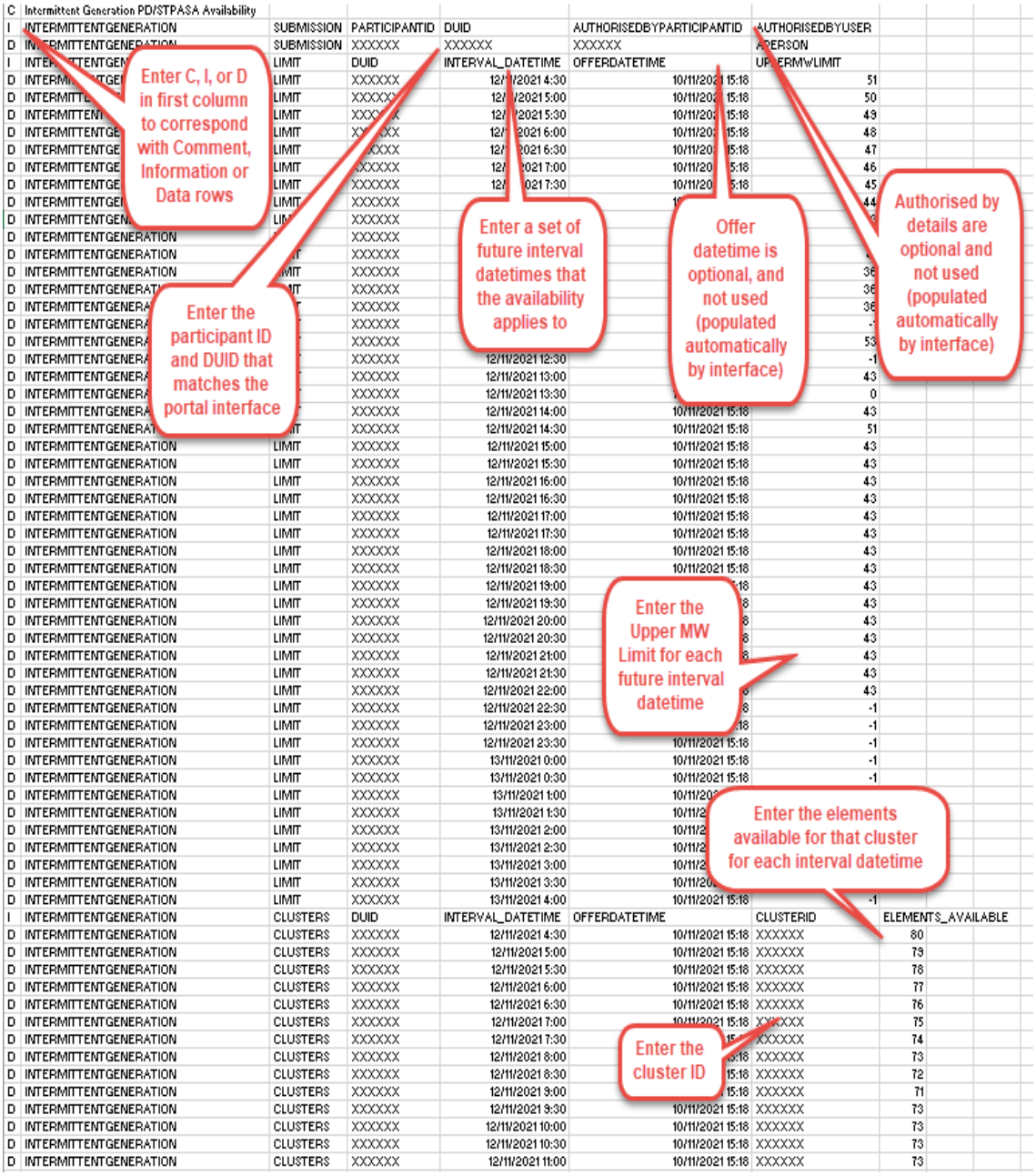
Column	Label	Data Entry	Validation
D*	DUID	Enter the Unit ID	Upper case The DUID must match the selected Unit ID on the interface.
E*	INTERVAL_ DATEIME		Datetime format = dd/mm/yyyy 00:00
F	OFFERDATETIME		Datetime format = dd/mm/yyyy hh:mi. When uploading, this is automatically populated by interface
G*	CLUSTERID	Enter the Cluster ID	Upper case
H	ELEMENTS_ AVAILABLE	Enter the number of Elements available for each Interval	>= 0 <= maximum Cluster Elements, as per current registration data

Energy availability csv file examples

Energy availability spreadsheet layout

This csv format opens in a spreadsheet application such as MS Excel. In the spreadsheet format, it is very important to match the columns. Each column is a vital placeholder and without them, the system cannot read your file. The data is case sensitive and must be included exactly as shown in the examples.

Figure 1 PD/STPASA Availability spreadsheet examples



Upload the availability file

Before you upload your file, please be aware of the following criteria:

- Uploading data from a file overwrites any existing interface data.
- Only csv formatted files are accepted for upload.
- You do not need to submit separate files for each Trading Day.
- For a file to be accepted the:
  - DUID must match the selected Unit on the interface.
  - Intervals must be contiguous in increasing time order (for example, no gaps and no overlaps).
  - You must have 48 interval datetimes corresponding to each Trading Date.

To upload the file:

1. On the PD/STPASA Availability Interface, click Upload to select the location and FileName of the file on your computer.

   The data displays in the Availability submissions grid ready for further edits or submission. Make any required changes and click Submit.

   The submission displays as an effective offer.

The uploaded data is not saved until you click Submit, the purple shading indicates unsaved data.

If your csv file contains errors, they are displayed on the interface in the Errors grid. Correct the errors in your file and retry the upload.

Submit energy availability using FTP

About using FTP

Intermittent Generators can submit their energy availability in aseXML format, using FTP, to their participant inbox directory on the Participant File Server. The aseXML file is compressed inside a .ZIP file with one aseXML file per .ZIP file.

Participants receive an acknowledgement (.ACK file) in their outbox directory advising of a successful or failed submission. The Intermittent Generation application handles the decompression of incoming files for processing and compressing of .ACK files. The message acknowledgement indicates success or failure of the incoming file (for example, does it conform to the aseXML schema?). Each transaction within the incoming aseXML file is acknowledged with a separate transaction acknowledgement file. The transaction .ACK indicates success or failure of uploading the data in the transaction (for example, Does it pass business validation rules and was it successfully added to the database?). If errors are encountered in either the message or a transaction, the .ACK file includes relevant error messages.

Attempting to submit availability data for more than 2 years from the current date, results in an error.

The submission of availability using aseXML files via FTP will be retired 6 months after go-live of the new API in December 2021. The submission of availability via FTP is deprecated and will be retired around June 2022. Participants are advised to use the API instead. For more information, see the API documentation.

It is participant's responsibility to remove the .XML file from their inbox directory after receiving the .ACK file from AEMO in their outbox directory.

The XML file must pass the following validations:

- It must be placed in the same Participant ID inbox directory on the Participant File Server as the Participant ID in the file, otherwise it will not be processed.
- There is only one Participant ID per file, you cannot submit one file for multiple participants.
- There is only one transaction section per XML file.
- The Trading Date is in the following format: YYYY-MM-DD.
- The Cluster ID must be valid.

Creating XML files

To create XML files, participants can use an application such as XML Spy. For an example of the aseXML schema and energy availability XML file. Energy availability aseXML schema examples on page 48.

In the XML file, only enter the required period IDs, you do not need to include Period IDs 1-48, see energy availability XML file example on page 49.

Uploading XML files

Participants can setup the Participant Batcher software (this is a different application to the pdrBatcher used for Data Interchange) to move files between their participant gateway and the Participant File Server.

Participants can download the Participant Batcher software and guide from AEMO's website.

For more details about the aseXML standards, guidelines and file examples, see aseXML Standards.

Energy availability aseXML schema examples

Figure 2 schema File ElectricityMMS_r33.xsd

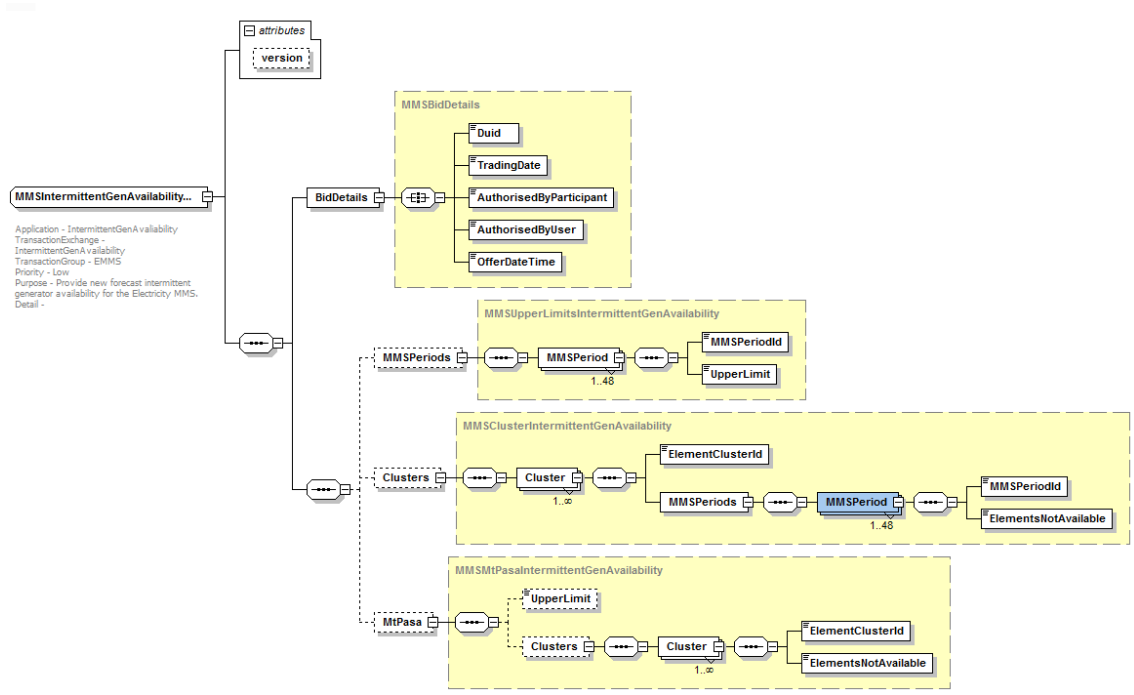


Figure 3 energy availability XML file example

```
<ase:aseXML xsi:schemaLocation="urn:aseXML:r33 H:\aseXML_Schema_Testing\aseXML_Schema_Versions\r33\aseXML_r33\Schema\aseXML_r33.xsd">
  <Header>
    <From description="Participant IntermittentGenfarm">PARTID</From>
    <To description="National Electricity Market MMS">MMS</To>
    <MessageID>PARTICIPANTID-11234569</MessageID>
    <MessageDate>2010-10-31T13:20:10.000+10:00</MessageDate>
    <TransactionGroup>EMMS</TransactionGroup>
    <Priority>High</Priority>
    <SecurityContext>ID</SecurityContext>
    <Market>NEM</Market>
  </Header>
  <Transactions>
    <Transaction transactionID="PARTICIPANTID-12348990" transactionDate="2010-10-31T13:20:09.900+10:00">
      <MMSIntermittentGenAvailabilityRequest version="r33">
        <BidDetails>
          <Duid>DUIDID</Duid>
          <TradingDate>2010-10-31</TradingDate>
          <AuthorisedByParticipant>PARTICIPANTID</AuthorisedByParticipant>
          <AuthorisedByUser>AUTHORISERID</AuthorisedByUser>
          <OfferDateTime>2010-10-31T13:20:10.000+10:00</OfferDateTime>
        </BidDetails>
        <MMSPeriods>
          <MMSPeriod>
            <MMSPeriodId>1</MMSPeriodId>
            <UpperLimit>900</UpperLimit>
          </MMSPeriod>
          <MMSPeriod>
            <MMSPeriodId>47</MMSPeriodId>
            <UpperLimit>800</UpperLimit>
          </MMSPeriod>
          <MMSPeriod>
            <MMSPeriodId>48</MMSPeriodId>
            <UpperLimit>-1</UpperLimit>
          </MMSPeriod>
        </MMSPeriods>
        <Clusters>
          <Cluster>
            <ElementClusterId>CLUSTER_ID</ElementClusterId>
            <MMSPeriods>
              <MMSPeriod>
                <MMSPeriodId>1</MMSPeriodId>
                <ElementsNotAvailable>1</ElementsNotAvailable>
              </MMSPeriod>
              <MMSPeriod>
                <MMSPeriodId>48</MMSPeriodId>
                <ElementsNotAvailable>0</ElementsNotAvailable>
              </MMSPeriod>
            </MMSPeriods>
          </Cluster>
        </Clusters>
        <MtPasa>
          <UpperLimit>900</UpperLimit>
          <Clusters>
            <Cluster>
              <ElementClusterId>CLUSTER_ID</ElementClusterId>
              <ElementsNotAvailable>1</ElementsNotAvailable>
            </Cluster>
          </Clusters>
        </MtPasa>
      </MMSIntermittentGenAvailabilityRequest>
    </Transaction>
  </Transactions>
</ase:aseXML>
```

MTPASA availability interface

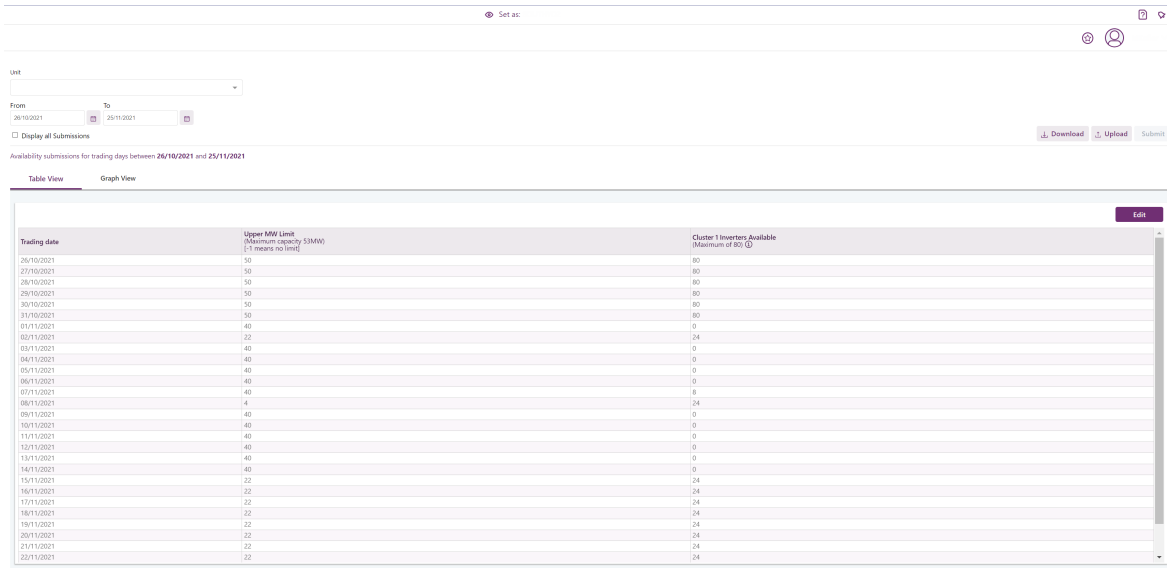
The MTPASA Availability interface displays for each Trading Date in the specified date range, the unit's Upper MW Limit plus, for each Cluster in the unit, the number of elements available. The number of columns shown depends on the number of clusters within the unit.

You may need to scroll across, as well as down, to view all the availability data.

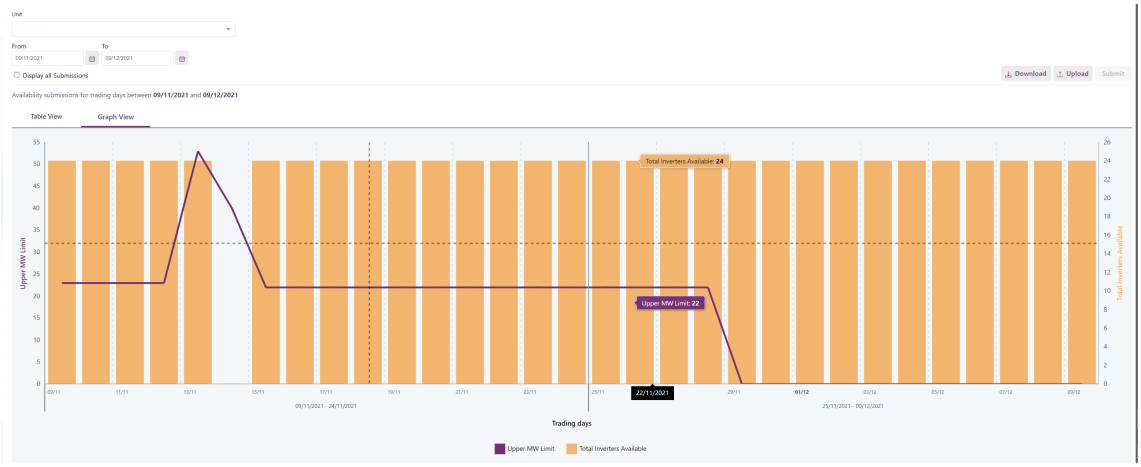
The MTPASA availability interface contains the following fields and controls:

Field	Description
Unit	Specifies the forecast unit ID.
From To	Specifies the starting trading day to show availability submissions. Defaults to the current trading day.
Display all Submissions	When selected, shows all availability submissions. The checkbox is disabled by default and shows only the latest availability submission for each day.
Download	Allows you to download the existing effective availability data to a CSV file.
Upload	Allows you to submit the availability data by uploading a CSV file.
Submit	Allows you to submit the availability data.
Edit	Allows you to edit availability data.

The following is an example of the MTPASA availability interface table view:



The following is an example of the MTPASA availability interface in graph view:



View MTPASA availability

To view the availability data for a selected unit and Trading Date range:

1. Click Intermittent Generation > Availability > MTPASA Availability.

   The displays showing the currently effective availability for your effective Participant ID. For help, see MTPASA availability interface on page 50

You can also:

- View all Submissions: Click the Display all Submissions checkbox to see all submissions not just effective submissions.

- Select other Trading Dates: Availability for the current date and beyond initially displays for your effective Participant ID. Use the calendar icons to change the From and To dates. For help, see Select a date on page 17.
- View multiple Trading Dates: Use the calendar icons to adjust the date to display multi-days. For help, see Using the common interface features
- Save to file: Save the Currently viewed Availability, see Save the currently viewed availability on page 30.
- Select another Unit: Click the down arrow to the right of the Unit item to show the list of available units, see Select the unit on page 14.

Create MTPASA availability

About MTPASA Availability

Intermittent generation forecasting in the MTPASA time frame involves predicting the intermittent generation during the peak demand half-hour period of each Trading Day. Therefore, providing MTPASA Availability means providing the maximum expected available energy from each unit in any 30 minute interval in the day (such as half-hour period), together with the number of available elements in each Cluster in the unit in that same Trading Interval.

You can enter MTPASA availability submissions manually into the Create MTPASA availability submissions interface or you can upload a prepared file in csv format from your computer, see Upload MTPASA availability on page 55.

The portal accepts submission of availability for future trading days, covering the MTPASA time frame. The availability entries for each trading day are carried forwards to future trading days, until a future trading day where an availability entry exists or is entered. Therefore, it is expected that submissions are made only to indicate changes to availability, not to exhaustively specify each trading day. The trading days in a single submission do not have to be consecutive.

Create a new availability

To create a new MTPASA Availability:

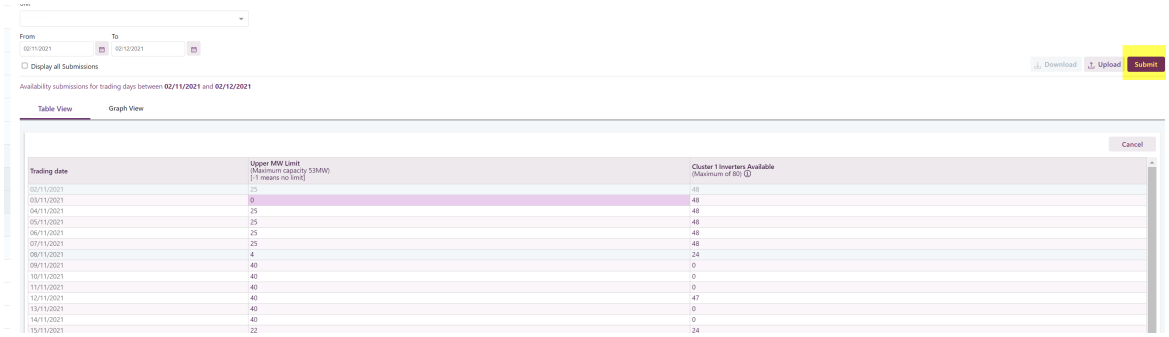
1. Click Intermittent Generation > Availability > MTPASA Availability.

The MTPASA Availability interface displays the current effective MTPASA offer dates and times.

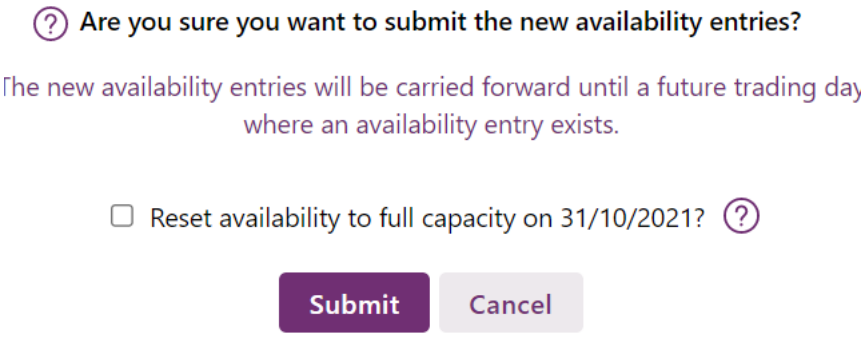
The data is not saved until you click Submit, the purple shading markers indicate unsaved data.

2. Click Edit, then click in the cells to edit the data for each Unit and Cluster in the new row and then click Submit.

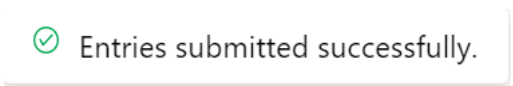
Alternatively, use the Tab and Enter keys on your keyboard to move through the grid and edit the cells.



3. When prompted confirm you want to submit the new availability dates.



The MTPASA availability submissions interface displays a message indicating the data is saved.



Important notes:

- The data is not saved until you click Submit, the purple shading indicates unsaved data.
- The latest submission for a Trading Date continues to remain effective until replaced by a new submission for that Trading Date.
- If no submission exists for a Trading Date, the MTPASA forecasting system defaults to using the latest submission for the latest prior Trading Date.
- If the farm is intended to be fully available on the Trading Date that follows a Trading Date with a reduced availability submission, the participant must also submit a full availability profile for that following Trading Date using the 'Reset availability to full capacity' option.

You can also:

- Select another Unit: Click the down arrow to the right of the **Unit** item to show the list of visible units, see Select the unit on page 14.
- Select another Date Range: Availability data starting from tomorrow initially displays for your effective Participant ID, you can choose a different date range by clicking on the icon to the right of the From or To item, see Select a date on page 17.
- Upload from file: Click Upload to upload a csv file from your local computer, see Upload MTPASA availability below.

Upload MTPASA availability

To upload a file:

1. Prepare the file by doing one of the following:

- Export a sample file to use as a template, see Save the currently viewed availability on page 30. Downloading a sample file provides an easy way to manipulate the data for reuse as it is important to maintain the csv format.
- Create the file from scratch using a spreadsheet or a text editor as described in MTPASA availability csv file layout below.

2. Save your file with a csv extension and name of your choice. All uploaded files must have a csv extension or they are rejected.
3. Follow the instructions for Upload the MTPASA availability file on page 62.

MTPASA availability csv file layout

MTPASA availability csv file explanation on the next page explains the data in the energy availability csv file. For a file to be accepted for import it must contain the mandatory data identified in the first column with an asterisk (*). Do not include the asterisk in your file, see LIMIT Section on page 58.

For help with the csv format, see csv Format Standard.

The MTPASA availability csv file comprises C, I and D rows:

- C rows indicate a comment field, for example the file or application description. Participants can change data in these rows.
- I rows indicate header information, do not change the data in the row. All data must be in upper case.
- D rows indicate participant MTPASA availability data, participants can change data in the rows and all data must be in upper case.

MTPASA Availability csv files are validated as follows:

- Each file must contain one “C” row, as the first row
- Each file must contain the following sections:
    - LIMIT
    - CLUSTERS
- For each section:
    - One “I” row is required, above the first “D” row
    - One “D” row is required for each TRADING DATE

All csv file data must be in upper case.

MTPASA availability csv file explanation

Comment header row

Column	Label	Data Entry	Validation
A*	C	Your comments, e.g. the description of the file (optional)	Do not change data in the row.

SUBMISSION section

Column	Label	Data Entry	Validation
A*	I	Header information	Do not change data in the row.
	D	Enter your data for energy availability	Upper case
B*	INTERMITTENT GENERATION	INTERMITTENT GENERATION	Application name
C*	SUBMISSION	SUBMISSION	Upper case
D*	PARTICPANTID	Enter your Participant ID	Upper case
E*	DUID	Enter the Unit ID	Upper case The DUID must match the selected Unit ID on the Interface.

LIMIT Section

Column	Label	Data Entry	Validation
A*	I	Header information	Do not change data in the row.
	D	Enter your data for availability	Upper case

Column	Label	Data Entry	Validation
B*	INTERMITTENT GENERATION	INTERMITTENT GENERATION	Application name
C*	LIMIT	Section name	Upper case
D*	DUID	Enter the Unit ID	Upper case The DUID must match the selected Unit ID on the Interface.
E*	TRADING DATE	Enter the future Trading Date, e.g. 20/09/2013 00:00	For each submission: Date format = dd/mm/yyyy Time format = 00:00
F	OFFERDATETIME		Datetime format = dd/mm/yyyy hh:mi. When uploading, this is automatically populated by interface
G	UPPERMWLIMIT	Enter the Upper MW Limit -1 indicates no limit	The amount must be ≤ the max capacity of the unit.

CLUSTERS section

Column	Label	Data Entry	Validation
A*	I	Header information	Do not change data in the row.
	D	Enter your data for availability	Upper case
B*	INTERMITTENT GENERATION	INTERMITTENT GENERATION	Application name
C*	CLUSTERS	Section name	Upper case
D*	DUID	Enter the Unit ID	Upper case The DUID must match the selected Unit ID on the Interface.
E*	TRADING DATE	Enter the future Trading Date, e.g. 20/09/2013 00:00	For each submission: Date format = dd/mm/yyyy Time format = 00:00
F*	OFFERDATETIME		Datetime format = dd/mm/yyyy hh:mi. When uploading, this is automatically populated by interface

Column	Label	Data Entry	Validation
G	CLUSTERID	Enter the Cluster ID	Upper case
H	ELEMENTS_ AVAILABLE	Enter the number of Elements available for each Interval	>= 0 <= maximum Cluster Elements, as per current registration data.

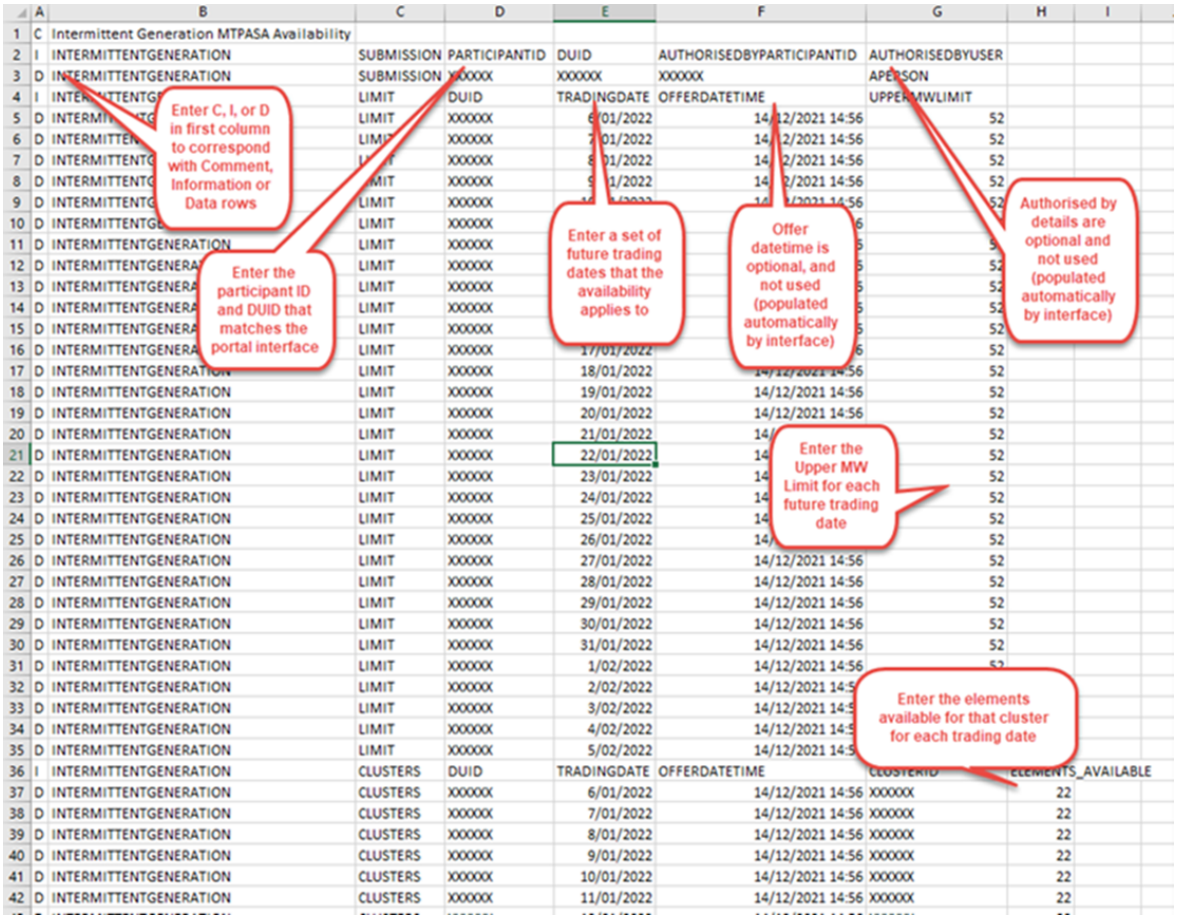
MTPASA availability csv file examples

MTPASA availability spreadsheet layout

If you are submitting multi-day MTPASA availability, insert each Trading Date below the row marked with an 'I' in column A, for each of the MTPASA and MTPASACLUSTERS sections.

This csv format opens in a spreadsheet application such as MS Excel. In the spreadsheet format, it is very important to match the columns (including any blank ones). Each column is a vital placeholder and without them, the system cannot read your file. The data is case sensitive and must be included exactly as shown in the examples.

An example of a MTPASA availability file:



	A	B	C	D	E	F	G	H	I
1	C	Intermittent Generation MTPASA Availability							
2	I	INTERMITTENTGENERATION	SUBMISSION	PARTICIPANTID	DUID	AUTHORISEDBYPARTICIPANTID	AUTHORISEDBYUSER		
3	D	INTERMITTENTGENERATION	SUBMISSION	XXXXX	XXXXX	XXXXX	APERSON		
4	I	INTERMITTENTGE	LIMIT	DUID	TRADINGDATE	OFFERDATETIME	UPPERMWLIMIT		
5	D	INTERMITTENTG	LIMIT	XXXXX	6/01/2022	14/12/2021 14:56	52		
6	D	INTERMITTEN	LIMIT	XXXXX	7/01/2022	14/12/2021 14:56	52		
7	D	INTERMITTENTG	LIMIT	XXXXX	8/01/2022	14/12/2021 14:56	52		
8	D	INTERMITTENTG	LIMIT	XXXXX	9/01/2022	14/12/2021 14:56	52		
9	D	INTERMITTENTG	LIMIT	XXXXX			52		
10	D	INTERMITTENTGE	LIMIT	XXXXX					
11	D	INTERMITTENTGENERATION	LIMIT	XXXXX					
12	D	INTERMITTENTGENERA	LIMIT	XXXXX					
13	D	INTERMITTENTGENERA	LIMIT	XXXXX					
14	D	INTERMITTENTGENERA	LIMIT	XXXXX					
15	D	INTERMITTENTGENERA	LIMIT	XXXXX					
16	D	INTERMITTENTGENERA	LIMIT	XXXXX	17/01/2022		52		
17	D	INTERMITTENTGENERATION	LIMIT	XXXXX	18/01/2022	14/12/2021 14:56	52		
18	D	INTERMITTENTGENERATION	LIMIT	XXXXX	19/01/2022	14/12/2021 14:56	52		
19	D	INTERMITTENTGENERATION	LIMIT	XXXXX	20/01/2022	14/12/2021 14:56	52		
20	D	INTERMITTENTGENERATION	LIMIT	XXXXX	21/01/2022	14/	52		
21	D	INTERMITTENTGENERATION	LIMIT	XXXXX	22/01/2022	14/	52		
22	D	INTERMITTENTGENERATION	LIMIT	XXXXX	23/01/2022	14/	52		
23	D	INTERMITTENTGENERATION	LIMIT	XXXXX	24/01/2022	14/	52		
24	D	INTERMITTENTGENERATION	LIMIT	XXXXX	25/01/2022	14/	52		
25	D	INTERMITTENTGENERATION	LIMIT	XXXXX	26/01/2022	14/	52		
26	D	INTERMITTENTGENERATION	LIMIT	XXXXX	27/01/2022	14/12/2021 14:56	52		
27	D	INTERMITTENTGENERATION	LIMIT	XXXXX	28/01/2022	14/12/2021 14:56	52		
28	D	INTERMITTENTGENERATION	LIMIT	XXXXX	29/01/2022	14/12/2021 14:56	52		
29	D	INTERMITTENTGENERATION	LIMIT	XXXXX	30/01/2022	14/12/2021 14:56	52		
30	D	INTERMITTENTGENERATION	LIMIT	XXXXX	31/01/2022	14/12/2021 14:56	52		
31	D	INTERMITTENTGENERATION	LIMIT	XXXXX	1/02/2022	14/12/2021 14:56	52		
32	D	INTERMITTENTGENERATION	LIMIT	XXXXX	2/02/2022	14/12/2021 14:5			
33	D	INTERMITTENTGENERATION	LIMIT	XXXXX	3/02/2022	14/12/2021 14:5			
34	D	INTERMITTENTGENERATION	LIMIT	XXXXX	4/02/2022	14/12/2021 14:5			
35	D	INTERMITTENTGENERATION	LIMIT	XXXXX	5/02/2022	14/12/2021 14:5			
36	I	INTERMITTENTGENERATION	CLUSTERS	DUID	TRADINGDATE	OFFERDATETIME	CLUSTERID	ELEMENTS_AVAILABLE	
37	D	INTERMITTENTGENERATION	CLUSTERS	XXXXX	6/01/2022	14/12/2021 14:56	XXXXX	22	
38	D	INTERMITTENTGENERATION	CLUSTERS	XXXXX	7/01/2022	14/12/2021 14:56	XXXXX	22	
39	D	INTERMITTENTGENERATION	CLUSTERS	XXXXX	8/01/2022	14/12/2021 14:56	XXXXX	22	
40	D	INTERMITTENTGENERATION	CLUSTERS	XXXXX	9/01/2022	14/12/2021 14:56	XXXXX	22	
41	D	INTERMITTENTGENERATION	CLUSTERS	XXXXX	10/01/2022	14/12/2021 14:56	XXXXX	22	
42	D	INTERMITTENTGENERATION	CLUSTERS	XXXXX	11/01/2022	14/12/2021 14:56	XXXXX	22	

Upload the MTPASA availability file

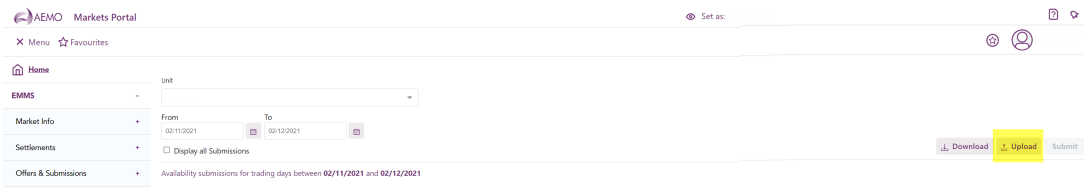
Notes:

- Uploading data from a file overwrites any existing interface data.
- Only csv formatted files are accepted for upload.
- For a file to be accepted the DUID must match the selected Unit on the interface.

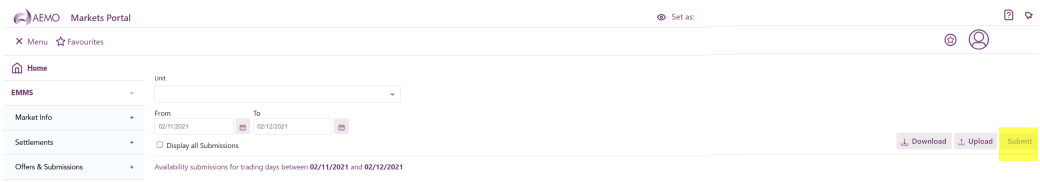
To upload the file:

1. On the Create MTPASA availability submissions interface, click Browse to select the location and File Name of the file on your computer.

2. Click Upload.



The data displays in the Create MTPASA availability submissions grid, ready for further edits or submission. Make any required changes and click Submit. The uploaded data is not saved until you click Submit, the purple shading indicates unsaved data.



The MTPASA availability submissions interface displays indicating the data is saved.

If your csv file contains errors, they are displayed on the interface in the Errors grid. Correct the errors in your file and retry the upload.

Forecasts

About forecasts

The levels of available forecast information are:

- Intermittent Generator forecast representing a forecast of a single Unit, which is owned by a participant and identified by a Participant ID.
- Regional forecast representing the sum of all wind forecasts for Semi-scheduled and significant Non-scheduled Generating Units.

Only regions with Intermittent Generating Units have data available.

Visibility of forecasts is limited, for example:

- Only owners, their participant users, and their Transmission Network Service Provider (TNSP) can see all forecast periods for a single Unit.
- TNSPs can see forecasts for all Units in their respective regions.
- The regional forecasts are available in real-time to all participants.
- The individual Unit actual MWs for a given Trading Day are made available the following Trading Day (such as after 4.00 am next day).

The types of forecasts are:

- Dispatch (DS)
- 5-minute Predispatch (5MPD)
- Predispatch (PD)
- Short-term Projected Assessment of System Adequacy (STPASA)

The DS and 5MPD forecast is at the medium reliability level (probability of exceedence - POE - of 50%). For other forecast types, the forecast information is at 3 different reliability levels, being low, medium and high POE (90%, 50%, and 10% respectively).

Notes:

- Dispatch forecast views only shows the source of dispatch used in dispatch. This can include the following dispatch forecast model sources:
  - 'PARTICIPANT' = Participant self-forecast
  - 'AWEFS' = AWEFS forecast
  - 'ASEFS' = ASEFS forecast
  - 'FCST' = Start-up dispatch forecast
  - 'SCADA' = Persistence forecast (initialMW)
  - 'LAST_TARGET' = Dispatch target from the previous dispatch interval
- The source of dispatch forecast used in dispatch depends on the implementation status of the relevant forecast model. See the Operational Forecasting and Dispatch Handbook for wind and solar generators documentation for further information.
- Dispatch and 5-minute pre-dispatch forecasts are only available to view for semi-scheduled units (not non- scheduled units). 5-minute Pre-dispatch forecasts are available to view following the implementation of the AWEFS/ASEFS dispatch forecast model.

- Availability data submitted into the pre-production environment is not reflected in the pre-production forecasts. Instead, the availability data from the production environment is used in the creation of the pre-production forecasts, for the convenience of participants. To confirm successful end-to-end loading of availability data in the pre-production environment, please subscribe to the following Data Interchange files: AVAIL_SUBMISS_DAY, AVAIL_SUBMISS_CLUSTER.

View forecasts

About viewing forecasts

In this menu you can:

- View a summary of forecasts
- View forecasts

You can view forecasts by selecting the following criteria:

- The Forecast Unit (Unit ID or region ID).
- The Forecast Type (DS, P5MIN, PD, STPASA).
- The Forecast Run date range.

You can then select from the list of forecast runs based on the selected criteria.

Intermittent Generation forecast information is available in the following forms:

- Tabular
- Graphical

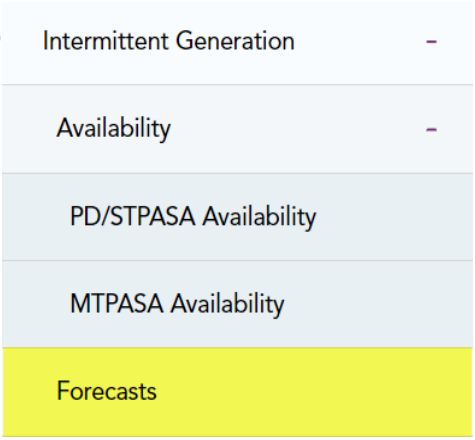
- csv download

Viewing forecasts

To view Forecasts:

1. Click Intermittent Generation > Forecasts.

   The Intermittent Forecasts interface displays where you can make your selection criteria.



Participants can view DS, PD, 5MPD, and STPASA.

- For their units for historical and current runs.
- For other units for historical runs only up to the end of previous Trading Day.

Select a set of forecasts

You can choose a set of forecast runs and show the latest in the set by selecting the:

- Unit: for help, see Select the unit on page 14.
- Type: for help, see Select the type on page 16.
- Date To: for help, see Select a date on page 17.

Select a forecast run

You can choose a particular forecast run from the set (derived above) and show the data by selecting the:

- Runs: For help, see Select runs on the next page.

Select forecast view

You can select how you want to see the forecast run by:

- Download: for help, see on the next page.
- Graphical display: for help, see Select the graphical display on page 70.
- Tabular display: for help, see Select the tabular display on page 71.

Change the date to

The initial default date is the current day. You can set the end-date of the date range.

To select another end-date for the range:

1. Click the icon to the right of the Date To item to show the calendar, and then click on a date, see Select a date on page 17.

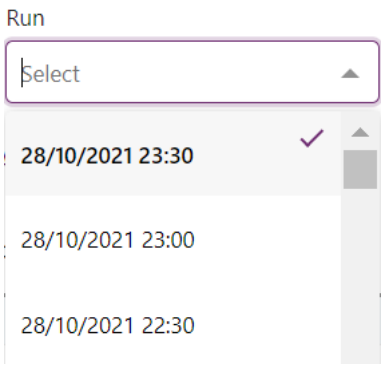
   Selecting a date causes the forecast data to display, seeSelect the graphical display on page 70 and Select the tabular display on page 71.

Select runs

Selecting the Unit, Type and Date To causes the set of relevant forecast runs to be updated. The date range depends on the Type; see Change the date to on the previous page. The most recent run in the list is shown by default. You can choose to view any run in the list.

To select a particular run:

- Click the down-arrow to the right of the Runs item to show the list of runs, and then click a run. For help, Select the graphical display on the next page and Select the tabular display on page 71.



Download forecast csv files

For all types except DS (Dispatch), the csv file is the selected forecast run. For DS, the csv file is all Dispatch forecasts for the selected day up to the selected forecast run. See Select the type on page 16.

Participants can view MTPASA region forecasts (not unit forecasts) using Data Interchange to retrieve the csv files. For more details, see Concise Guide to Data Interchange.

To download one file:

1. Click Export to CSV.

The file is exported and download to your default download location.

For help with the csv format, see csv Format Standard.

Select the graphical display

The graphical display presents the content of the Unit forecast as a time series plot with the forecasted power and targets set by NEMDE (for periods when semi-dispatch cap applies) on the vertical axis y in MW units and the date and time on the horizontal axis.

For all types except DS (Dispatch), the graphical display is the selected forecast run. For DS, the graphical display is all Dispatch forecasts for the selected day up to the selected forecast run. See Select the type on page 16.

To display the data graphically:

1. Click the Graph View tab.
2. Select a Type from the drop-down list.

   The data displays in a graphical format, for example:

Figure 4 Dispatch (DS) graphical display

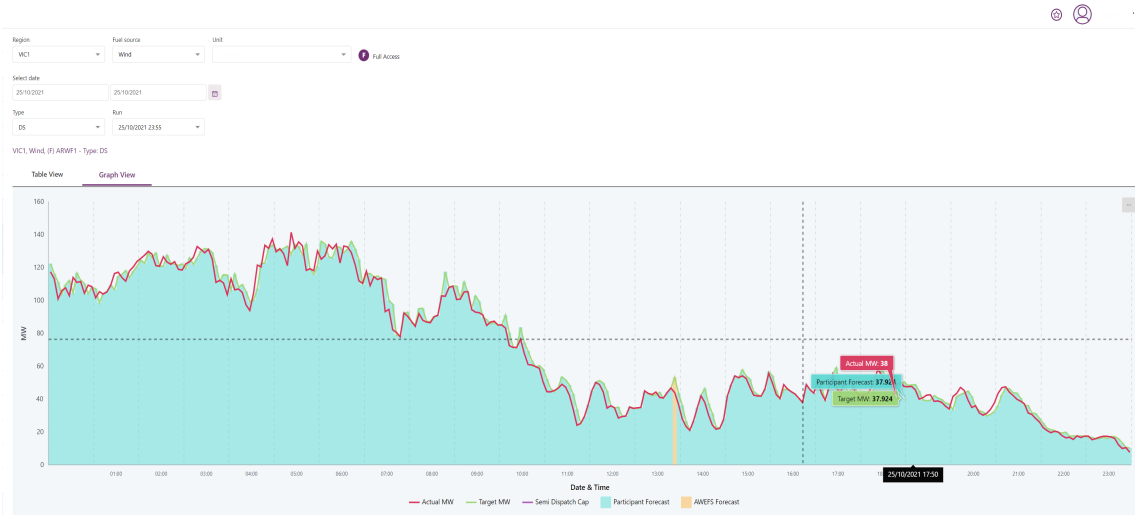
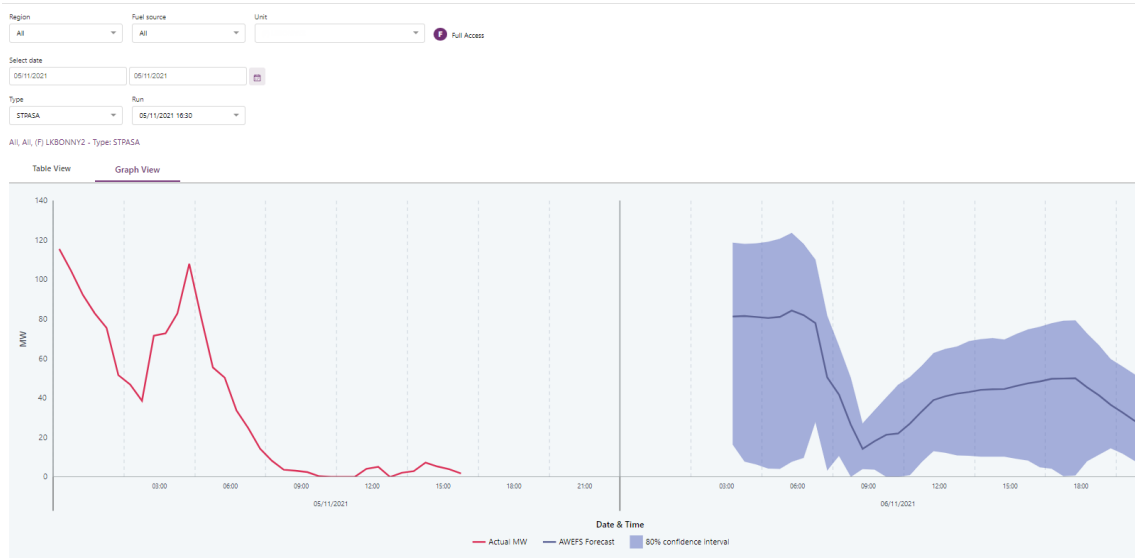


Figure 5 STPASA graphical display

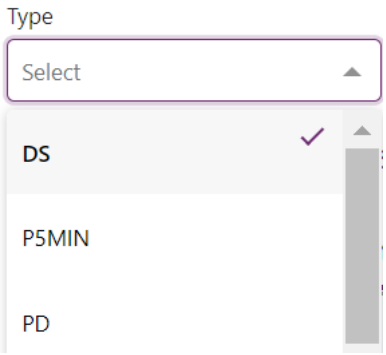


Select the tabular display

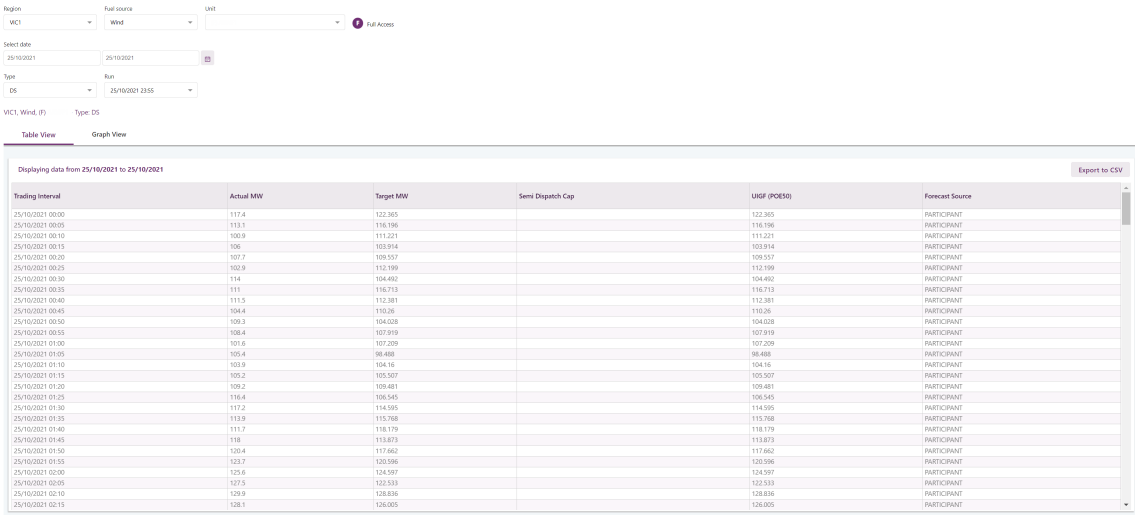
The tabular display presents all the content of the Unit forecast in a table form.

To display the data in table form:

1. Click the Table View tab.
2. Select a Type from the drop-down list, for example:



The data displays in a tabular format, for example:



Needing Help

System requirements

To access the Markets Portal, you require:

- The website address where the application is located on AEMO's network:
  - Pre-production: https://portal.preprod.nemnet.net.au
  - Production: https://portal.prod.nemnet.net.au
- A compatible web browser. For help, see Supported web browsers on page 75.
- Access to MarketNet. If your Participant ID is a Registered Participant, you probably already have access because it is set up during the registration process. For more details, see Guide to Information Systems.

The web application runs on both Windows and Unix-like operating systems.

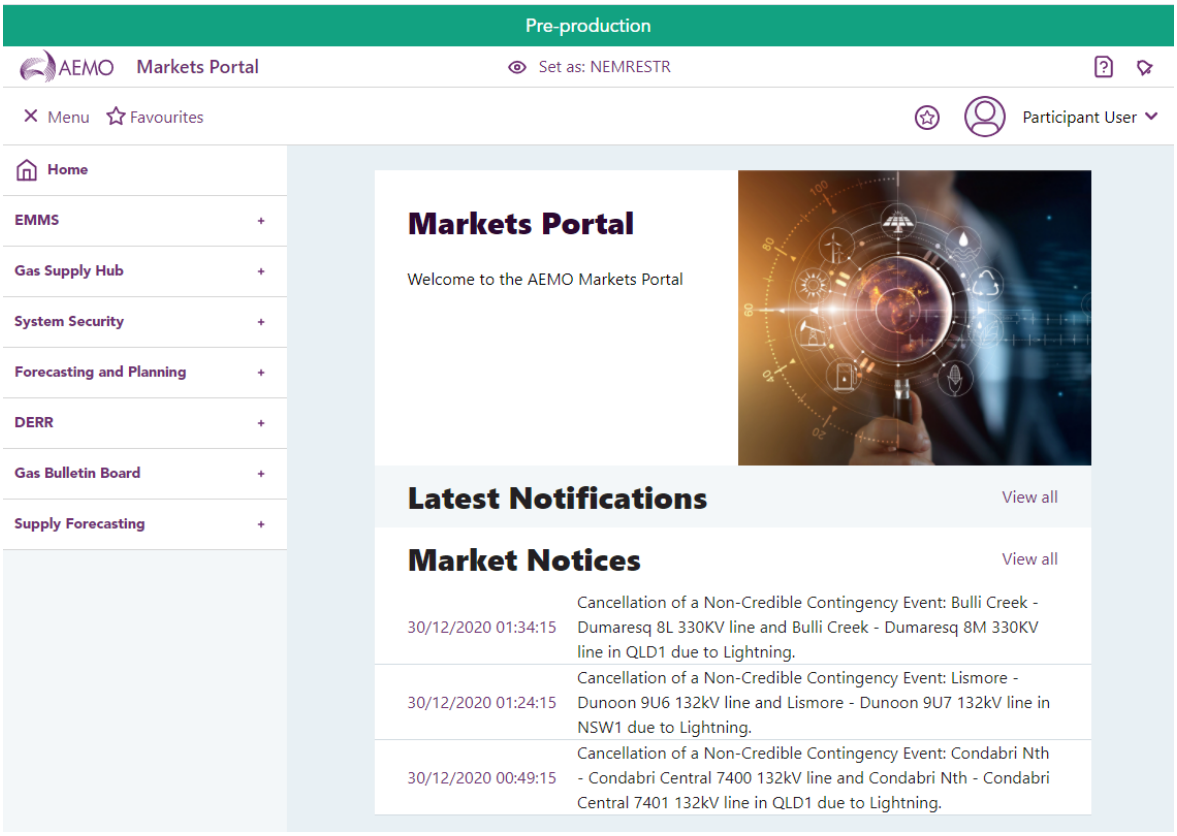
- A user ID and password provided by your Participant ID's participant administrator (PA) who controls access to AEMO's market systems. For more details see User rights access.

  PAs are set up during the registration process, if you don't know who your Participant ID's PA is, contact AEMO's support hub.

Environment access

The Markets Portal gives you a clear indication of the environment you are working in, providing a different banner colour for the menu:

- The production environment does not have a banner.
- The pre-production environment has a **green** banner at the top with the word pre-production.



Supported web browsers

For the best experience, AEMO recommends using the current or previous version of Google Chrome.

The portal runs on both Windows and Unix-like operating systems. AEMO recommends the following web browsers:

Browser	Platform	Current	More information
Microsoft Internet Explorer	Windows	IE11	What is the latest version of IE?
Microsoft Edge (Microsoft recommended)	Windows 10	Edge	What is the latest version of Edge?
Google Chrome (AEMO recommended)	All platforms	Latest	What is the latest version of Google Chrome?

AEMO's support hub

IT assistance is requested through one of the following methods:

- Phone: 1300 AEMO 00 (1300 236 600)

For non-urgent issues, normal coverage is 8:00 am to 6:00 pm on weekdays, Australian Eastern Standard Time (AEST).

- The Contact Us form on AEMO's website.

AEMO recommends participants call AEMO's support hubfor all urgent issues, whether or not you have logged a call using the contact us form.

Information to provide

Please provide the following information when requesting Support Hub assistance:

- The resolver group to direct your ticket to. You can find this information in the **Need to Know** section of the application's online help or the **Needing Help** section of the pdf guide.
- Your contact details
- Company name
- Company ID
- System or application name
- Environment: production or pre-production
- Problem description
- Screenshots

For AEMO software-related issues please also provide:

- Participant ID (if Data Interchange (DI) problem)
- Version of software
- Properties or log files
- PDR Monitor support dump and DI instance name (if DI problem)

Feedback

Your feedback is important and helps us improve our services and products. To suggest improvements, please contact AEMO's support hub.

References

You can find resources on AEMO's website.

Index

P

S

U

V

W

X