AEMO
AUSTRALIAN ENERGY MARKET OPERATOR

Guide to Intermittent Generation

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December 2018

Provides information for Intermittent Generators to submit availability and forecast override 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).

NO RELIANCE OR WARRANTY
This document does not constitute legal or business advice, and should not be relied on as a substitute for obtaining detailed advice about the National Gas or Electricity Law, the Rules or any other applicable laws, procedures or policies. While AEMO has made every effort to ensure the quality of the information in this Guide, neither AEMO, nor any of its employees, agents and consultants make any representation or warranty as to the accuracy, reliability, completeness, currency or suitability for particular purposes of that information.

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Removal of the Derivation of MW Available from elements unavailable section and screenshots because it is no longer part of the Intermittent Generation web portal, to align with the Solar ECM, relabelled Strings to Inverters, Additional terms in the glossary and rule definitions, changes to align with redesigned web portal, clarify the defaulting of availability submissions and need for a “reset availability” submission, update to new template and other improvements.
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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

Chapter 1 Introduction

Purpose

Provides information for Intermittent Generators to submit availability and forecast override 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, forecast information, and forecast override information in the Intermittent Generation web application.

How to use this guide

- Use this guide to assist your understanding of submitting availability and forecast information in the Intermittent Generation web application.
- This guide is written in plain language for easy reading. Where there is a discrepancy between the Rules, and information or a term in this document, the Rules take precedence.
- Text in this format indicates there is a resource on AEMO's website.
- Text in this format indicates a link to related information.
- Glossary terms are capitalised and have the meanings listed against them.
- *Italicised terms* are defined in the Electricity Rules. Any rules terms not in this format still have the same meaning.
- Actions to complete in the web portal interface are bold and dark grey.

What's in this guide

Chapter 2 About Intermittent Generation on page 3 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.

Chapter 3 Availability on page 12 describes the Availability menus and how to view and submit multi-day Energy Availability (for *predispatch* and STPASA) and MTPASA Availability information.

Chapter 4 Forecasts on page 48 describes the Forecasts menus and how to view forecast data, download files, and use the overrides interface.

Chapter 5 Override Forecasts on page 58 explains viewing, cancelling and overriding forecasts.

Needing Help on page 69 provides information to assist participants with IT related issues and provides guidance for requesting assistance from AEMO.

References on page 71 is a resource section containing a list of references mentioned throughout this guide.

Glossary on page 73 explains the capitalised terms used throughout this guide.

Chapter 2 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 s 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.

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 Unavailable and Upper MW Limit) before the start of the relevant trading interval. 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 accepted but not used.
- 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 the next page.

User rights access

Your company'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
- EMMS - Intermittent Generation - Forecasts - Override 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 more details about participant administration and user rights access, see Guide to User Rights Management.

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.

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.

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.

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

System requirements

You access the Intermittent Generation web application using a web browser. 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
    - Markets Portal help: https://portal.preprod.nemnet.net.au/help
- Either the current or previous versions of Microsoft Internet Explorer or Google Chrome.
- Access to MarketNet. If your company 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.
- A monitor capable of 1024 x 768 screen resolution.

  A user ID and password provided by your company's participant administrator (PA) who controls access to AEMO's web portals. For more details see Guide to User Rights Management.

  PAs are set up during the registration process, if you don't know who your company's PA is, contact AEMO's Support Hub [[[Undefined variable AEMO.Support Hub email]]].

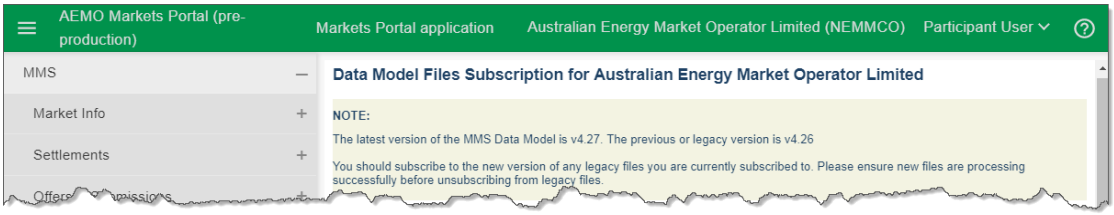
For the best experience, AEMO recommends using the current or previous version of Google Chrome.

Intermittent Generation runs on both Windows and Unix-like operating systems.

Environment access

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

- The pre-production environment has a green menu background
- The production environment has a blue menu background.



Supported web browsers

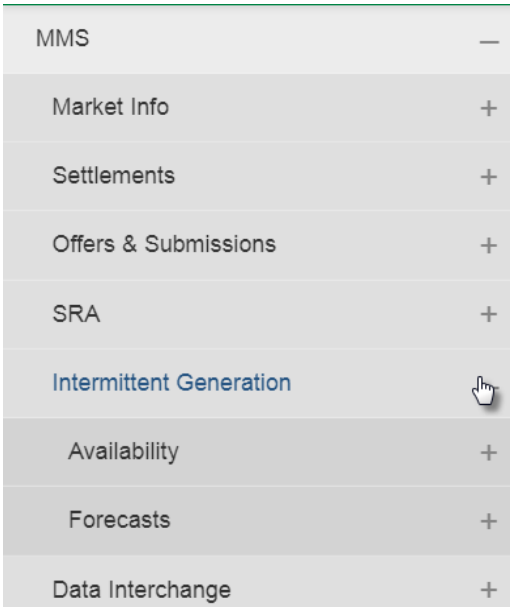
Intermittent Generation runs on both Windows and Unix-like operating systems. To access the Markets Portal, AEMO recommends the following web browsers:

Browser	Platform	Current	More information
Microsoft Internet Explorer	Windows	IE11	https://www.whatismybrowser.com/guides/the-latest-version/internet-explorer
Microsoft Edge (Microsoft recommended)	Windows 10	Edge	https://www.microsoft.com/en-au/windows/microsoft-edge
Google Chrome	All platforms	70 (Oct 2018)	https://www.whatismybrowser.com/guides/the-latest-version/chrome

Accessing Intermittent Generation

To access Intermittent Generation:

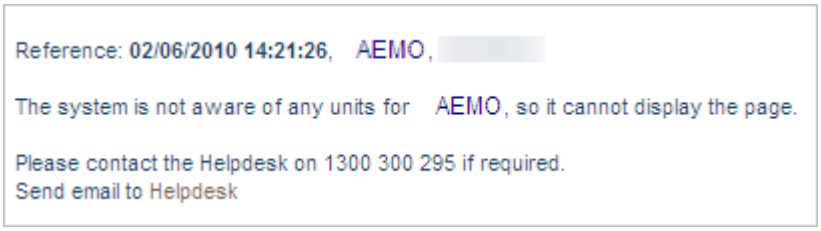
1. Using your web browser, access the Markets Portal:
   - Pre-production: **https://portal.prod.nemnet.net.au**
   - Production: **https://portal.preprod.nemnet.net.au**



The Markets Portal provides you with a clear indication of the environment you are working. For details, see How do you use Intermittent Generation on page 5.

2. Sign in using the user ID and password provided by your company's PA.
3. In the left navigation pane, click **MMS**, and then **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:

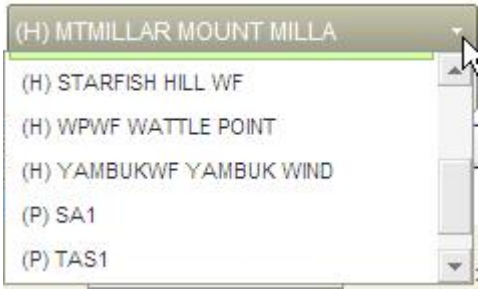


Using the common interface features

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 to the right of 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 company's PA.

Select the type

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

The Types are:

- DS: *dispatch* forecasts
- MTPASA: Medium-term *PASA* forecasts
- P5MIN: 5-minute *predispatch forecasts*
- PD: *predispatch* forecasts
- STPASA: Short-term *PASA* forecasts

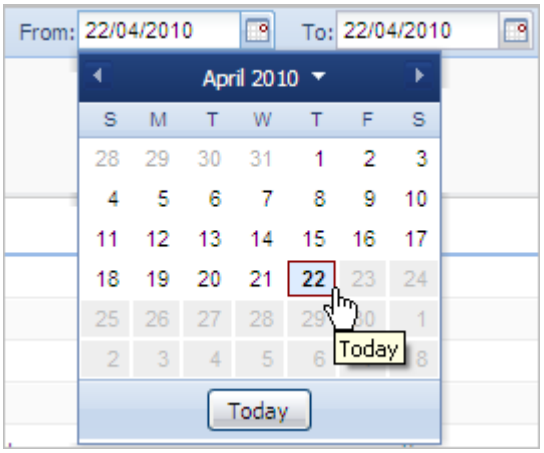
To select the **Type**:

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 and Select the tabular display.

For *dispatch* forecasts, there is only one period 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:



- 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:

- Energy availability CSV file layout on page 24.
- MTPASA availability CSV file layout on page 42.
- Forecast CSV file layout on page 53.

- For help with the CSV format, see Guide to AEMO CSV Data Format Standard.Override CSV file layout on page 63.

XML files

For a basic understanding of Intermittent Generation XML files, seeSubmit energy availability using FTP.

Chapter 3 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 Unavailable).

In this menu you can:

- View a summary of an *intermittent generating unit* availability submission.
- View availability information for Energy and MTPASA.
- Enter availability information for Energy and MTPASA.
- Enter elements unavailable for each Cluster for the selected Unit..
- Enter an upper MW limit for the selected Unit.

A Cluster is a group of *intermittent generating units*. A Unit comprises one or more Clusters.

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* by bidding the Maximum Availability in energy *dispatch* offers, because AEMO's systems ignore this for *semi-scheduled generating units*. Forecasting systems cap the unit forecasts at the Effective Upper Limit.

Effective Upper Limit

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

$$Min\left(entered\ Upper\ MW\ Limit, \sum_{n=1}^{c}[registered\ Element\ MW\ Rating_n \times (registered\ Total\ Elements_n - entered\ Elements\ Unavailable_n)]\right)$$

Where:

n = Cluster within unit

c = total number of clusters within unit

Elements Unavailable

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

For MTPASA forecasts, participants submit this availability information on a daily peak basis over the next two years using the MTPASA Availability – Enter Availability interface.

For *predispatch* and STPASA forecasts, participants submit this availability information on a 30-minute *trading interval* basis over the next eight days using the Energy Availability – Enter Availability interface.

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 have an indirect effect on *dispatch* and the 5-minute *predispatch* forecasts. This is due to ~7% blending of these forecasts with the *predispatch* forecast for the relevant period, which itself is capped at the submitted availability. Due to this blending, participants must ensure the current availability (as reflected in the SCADA Local Limit) is consistent with the availability submitted in the Intermittent Generation – Availability interface for the current interval.

SCADA Local Limit

In the *dispatch* and 5-minute *predispatch* forecast time frames. time frames, the participant must manage farm-wide and element availability by submitting a real time SCADA Local Limit (Upper MW Limit) and SCADA Turbines or Inverters Available signal, respectively. These signals are defined in the wind and solar *energy conversion models*, found on AEMO's Solar and Wind Energy Forecasting web page.

If these signals are unavailable and agreed with AEMO, participants may request AEMO apply a *dispatch* constraint.

Availability submission guidelines

Upper MW Limit submission

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

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.

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 ignored, leaving the existing value as is.

Elements unavailable submission

Elements Unavailable is the number of elements (turbines for wind, Inverters for solar) that are unavailable to operate because they are:

- Not yet built.
- Still being commissioned and not released for operation.
- Out of service due to a forced or planned outage.
- Unable to generate due to unavailable connection network

There is an Elements Unavailable column for each registered Cluster (Cluster ID) in the Unit. The Elements Unavailable column header reflects the Cluster element corresponding to each generation technology. For example, for wind farms the column header shows Turbines Unavailable and for solar farms the column header shows Inverters Unavailable. Enter the number of unavailable 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 Unavailable 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 Unavailable for a Cluster with only five, 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 Unavailable only.
- A zero entry is a valid entry (meaning none are unavailable or equivalently that all elements in the Cluster are available).
- 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.

About derivation of MW Available from elements unavailable

The MW Available column is no longer provided in the Intermittent Generation web portal so information in this section is removed from this guide.

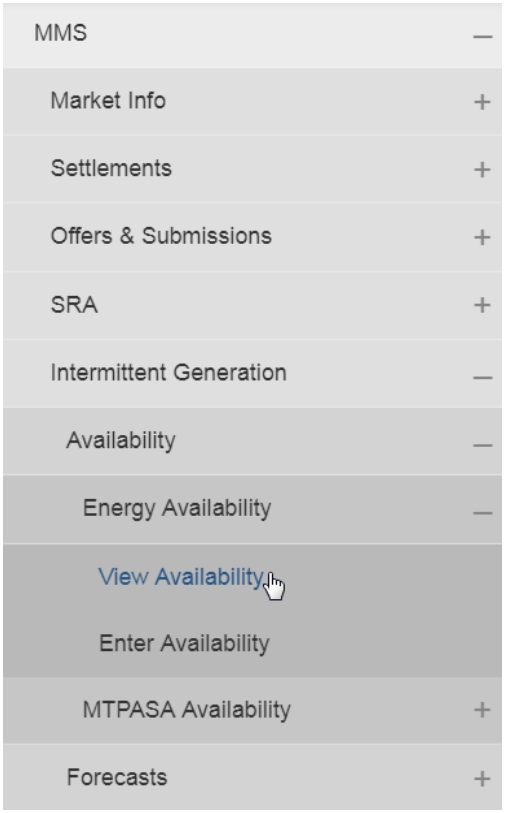
View energy availability

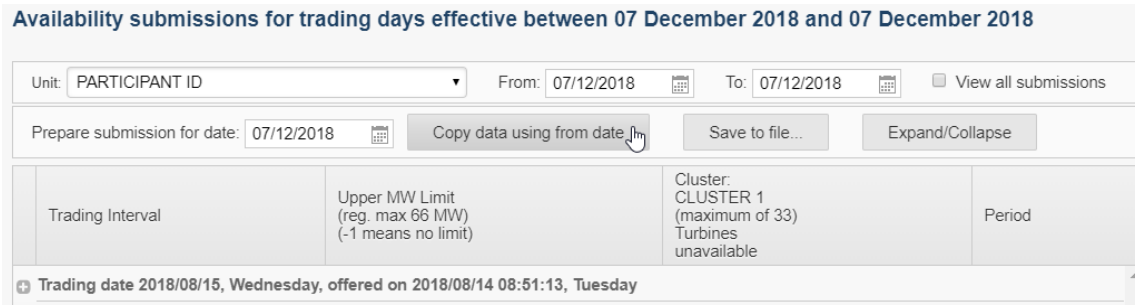
The View Availability menu under Energy Availability displays the availability data for a selected unit and Trading Date. Initially the display is for the currently effective availability for your effective Participant ID.

View availability data

To view availability data:

1. Click Intermittent Generation, then Availability, then Energy Availability and then View Availability.
2. The Availability interface displays the unit's Upper MW Limit plus, for each Cluster in the unit, the number of elements unavailable (turbines or Inverters). The trading interval is identified by the *trading interval* (ending time of the half-hour) in the first column and the period (from 1 to 48) in the last column. The number of columns shown depends on the number of clusters within the unit.



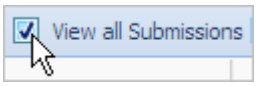


3. To view further submission details, do one of the following:
   - Click **View all submissions** to see all submission data.
   - Click **Expand/Collapse** to view submissions in the grid.
   - Click the expand button ⊞ to view the details of a single submission.
4. Further submission details display with the Trading Intervals (ending time of the half hour) in the first column and the Period (from 1 to 48) in the last column. The number of columns displayed 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.

   Click the collapse button ⊟ to close the submission details.

You can also:

- **Select another Trading Date:** Use the calendar icons to change the **From** and **To** dates. For help, Select a date on page 10.
- **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 10.



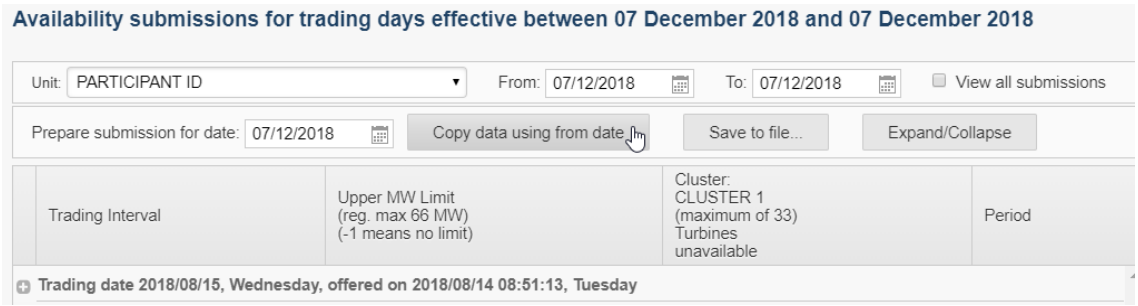
- **Select another Unit:** Click the drop-down arrow to the right of the unit to display the list of available units. For help, see Select the unit.
- **View all Submissions:** Click the View all Submissions check box to see all submissions not just effective submissions.
- **Copy Availability:** Select a Prepare Submission for date and select a From. For help, see Copy an existing availability submission.
- **Save to file:** Save the Currently viewed Availability, for help, see Save the currently viewed availability.

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

Copy an existing availability submission

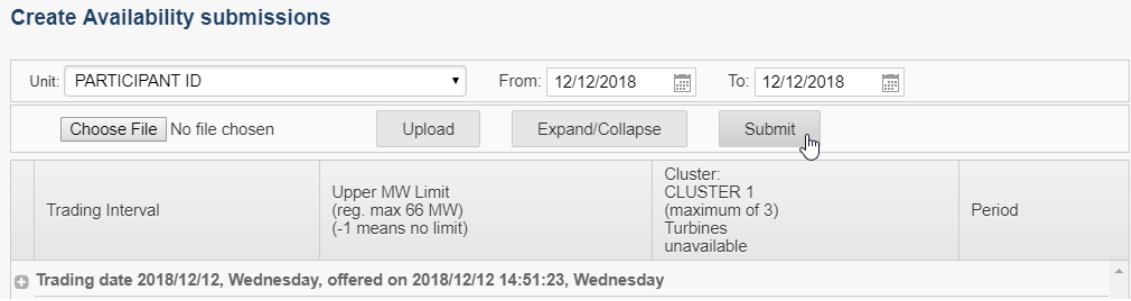
To copy an existing availability submission:

1. On the Availability interface, select the Trading Dates.
2. Click Copy data using from date.



3. One day of data is copied to the Create availability submissions interface where you can change the data if required. For help, see Create energy availability.
4. Click Submit. **Important Note**: The uploaded data is not saved until you click

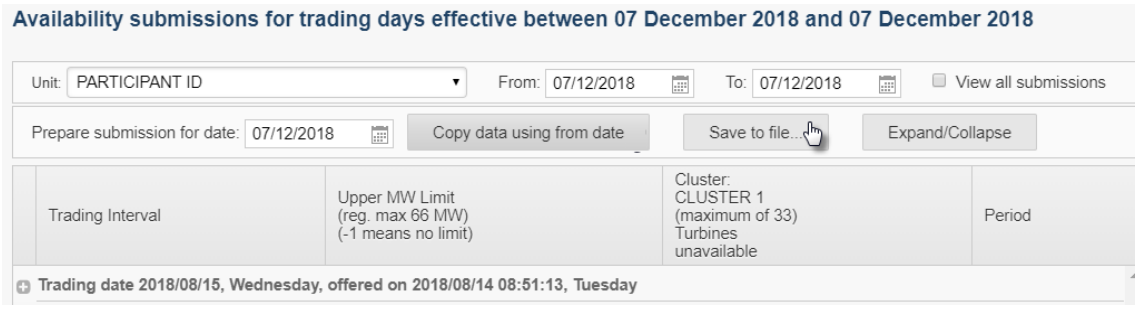
Submit, the read markers indicate unsaved data.



Save the currently viewed availability

To save the currently viewed availability to your local computer:

1. On the Availability interface, click Save to file.



2. Click Save and select a location to save the file on your local computer.

Create energy availability

About creating energy availability

The Enter Availability menu under Energy 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 energy availability submission:

- Manually enter availability submissions for up to 14 days into the future, 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 22.

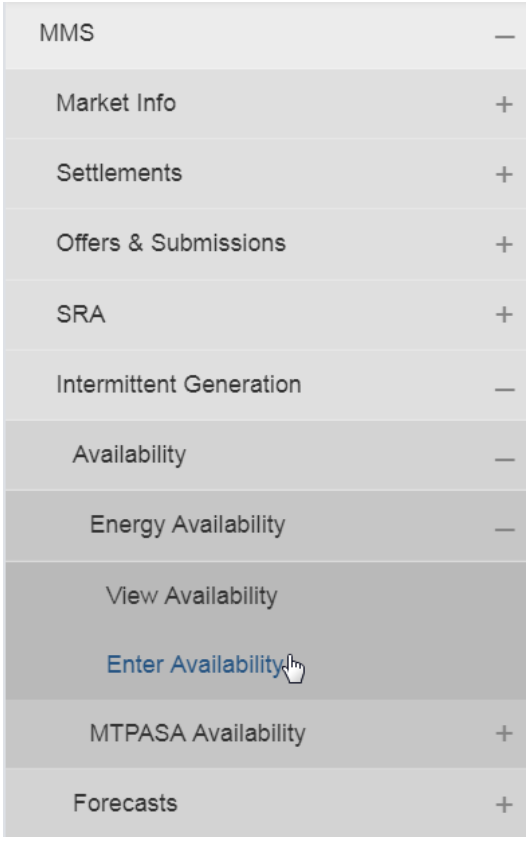
- Copy a previously created submission, for help, see Copy an existing availability submission on page 18.
- Upload a prepared file in CSV format from your computer with up to 2 years worth of availability submissions. For help, see Upload energy availability on page 23.
- Submit a prepared file in XML format from your computer to the Participant File Server using FTP. For help, see Submit energy availability using FTP on page 35.

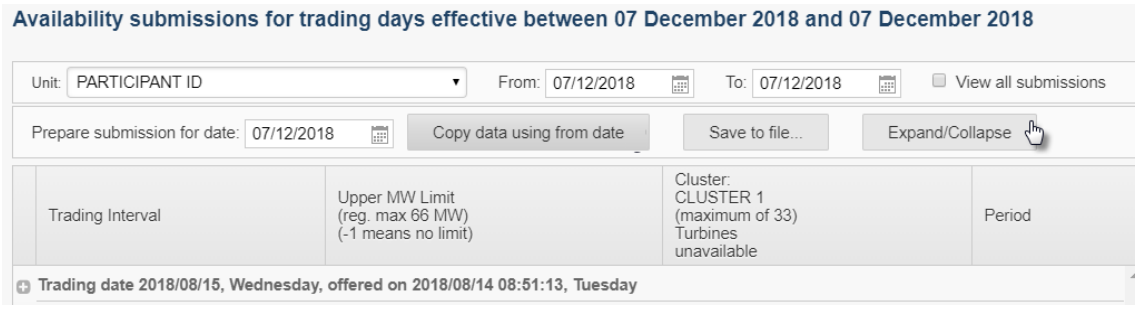
Create availability for single-day submissions

To enter availability for single-day submissions:

1. Click **Intermittent Generation**, then **Availability**, then **Energy Availability** and then click **Enter Availability**.
2. The **Create availability submissions** 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 unavailable elements.
3. 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.
   - Click the white space under the column headings next to the **Trading date**.
   - Click the collapse button to close the submission details.





4. 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 red markers indicate 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.

You can also:

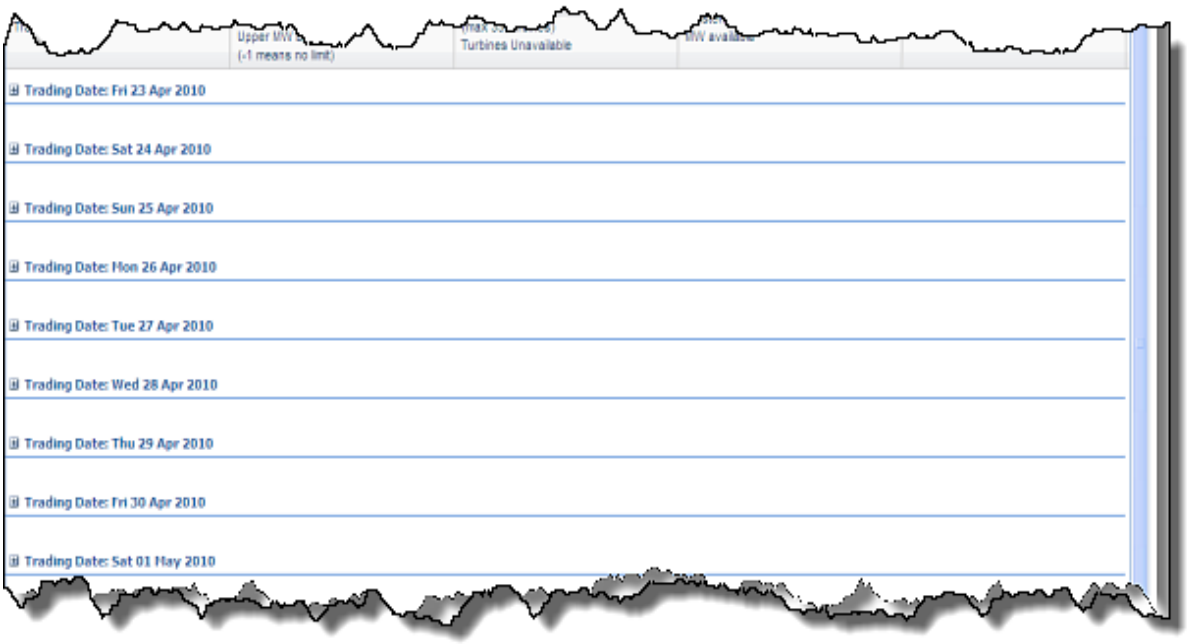
- **Upload from file:** Click **Upload** to upload a .CSV file from you local computer. For help, see Upload energy availability on page 23.
- **Enter multiple days:** for help, see Create availability for multi-day submissions on the next page.
- **Copy a previous submission:** for help, see Copy an existing availability submission on page 18.
- **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 8.
- **Select other Trading Dates:** Use the calendar icons to change the From and To dates. For help, see Select a date on page 10.

Create availability for multi-day submissions

Using the Create availability submissions interface, you can enter availability data for up to 14 days into the future in one submission or upload a .CSV file to enter up to 2 years of availability data in one submission. For help, see Upload energy availability on the next page.

To enter availability for multi-day submissions:

1. On the Create availability submissions interface, use the calendar icons to adjust the To Date to display the multi-day grid. For help, see Select a date on page 10.



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 white space under the column headings next to the Trading date.
   - Click the collapse button ⊟ to close the submission details.
3. 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 red markers indicate 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.

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 8.
- **Select other Trading Dates:** Use the calendar icons to change the From and To dates. For help, see Select a date on page 10.

Upload energy availability

Uploading Energy Availability submissions using a file upload allows you to submit up to two years of 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 19. 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 Energy availability CSV file layout on the next page.
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 energy availability file on page 34.

Energy availability CSV file layout

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. For file examples, see Energy availability CSV file examples on page 28.

For help with the CSV format, see Guide to AEMO CSV Data Format Standard.

The Energy 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 energy 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
  - PERIODS
  - 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 PERIODS and CLUSTERS sections, 48 “D” rows are required for each TRADING DATE, from PERIODID 1 to 48.

Energy availability .CSV file explanation

All CSV file data must be in upper case.

Comment header row

Column	Label	Data Entry	Validation
A*	C	Your comments, e.g. the description of the file	Upper case

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*	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
F*	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
G	OFFERDATETIME	Enter the offer date and time, e.g. 20/09/2013 14:02 If blank, the value is obtained when you upload the file	Date format = dd/mm/yyyy Time format = 00:00 The value displays on the downloaded file when using the **Save to File** option
H	AUTHORISEDBYPARTICIPANTID	Enter your Participant ID If blank, the value is obtained when you upload the file	Upper case The value displays on the downloaded file when using the **Save to File** option
I	AUTHORISEDBYUSER	Enter your Participant User ID If blank, the value is obtained from your login ID when you upload the file	Upper case. The value displays on the downloaded file when using the **Save to File** option

PERIODS 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*	PERIODS	Enter the Upper MW Limit part of the submission	Upper case You must enter data for all 48 PERIOD IDs
D*	DUID	Enter the Unit ID for each PERIOD ID	Upper case The DUID must match the selected Unit ID on the interface
E*	TRADING DATE	Enter the future Trading Date for each PERIOD ID, e.g. 20/09/2013 00:00 If submitting multi-day availability, enter each Trading Date. If blank, the value is obtained when you upload the file	Date format = dd/mm/yyyy Time format = 00:00
F	OFFERDATETIME	Enter the offer date and time for each PERIOD ID, e.g. 20/09/2013 14:02	Date format = dd/mm/yyyy Time format = 00:00
G*	PERIODID	Enter the period number from 1-48	You must have 48 periods corresponding to each Trading Date.
H*	UPPERMWLIMIT	Enter the Upper MW Limit -1 indicates no limit. This section maps the Upper MW Limit for each PERIODID	The amount must be ≤ the max capacity of the unit. A submission with a NULL value is accepted and the NULL is converted to zero

CLUSTERS section

Column	Label	Data Entry	ValidationComments
A*	I	Header information	Do not change data in the row
	D	Enter your data for Elements Unavailable	Upper case
B*	INTERMITTENT GENERATION	INTERMITTENT GENERATION	Application name
C*	CLUSTERS	Enter the Elements Unavailable for the 48 PERIOD IDs	Upper case You must enter data for all 48 PERIOD IDs
D*	DUID	Enter the Unit ID for each period ID	Upper case The DUID must match the selected Unit ID on the interface.
E*	TRADING DATE	Enter the future Trading Date, for each PERIOD ID, e.g. 20/09/2013 00:00 If submitting multi-day availability, enter each Trading Date	Date format = dd/mm/yyyy Time format = 00:00 You must enter data for all 48 PERIOD IDs
F	OFFERDATETIME	Enter the offer date and time for each PERIOD ID, e.g. 20/09/2013 14:02 If blank, the value is obtained when you upload the file	Date format = dd/mm/yyyy Time format = 00:00
G*	CLUSTERID	Enter the Cluster ID, for each PERIOD ID	Upper case You must enter data for all 48 PERIOD IDs
H*	PERIODID	Enter the period number from 1-48	You must have 48 PERIODS corresponding to each Trading Date
I*	ELEMENTS_ UNAVAILABLE	Enter the number of Elements Unavailable for each PERIOD ID	Must be a positive number. A submission with a NULL value is accepted and the NULL is converted to zero

Energy availability CSV file examples

Energy availability spreadsheet layout

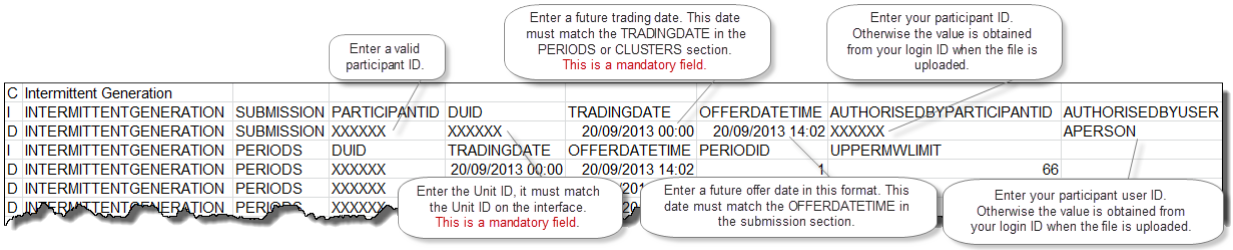
This CSV format opens in a spreadsheet application such as MS Excel. In the spreadsheet format, it is very important to match the columns (including any blank ones). Each column is a vital placeholder and without them, the system cannot read your file. The data is case sensitive and must be included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

To submit a multi-day file, copy each single day submission one after the other, see Figure 5.

Figure 1 energy availability spreadsheet example

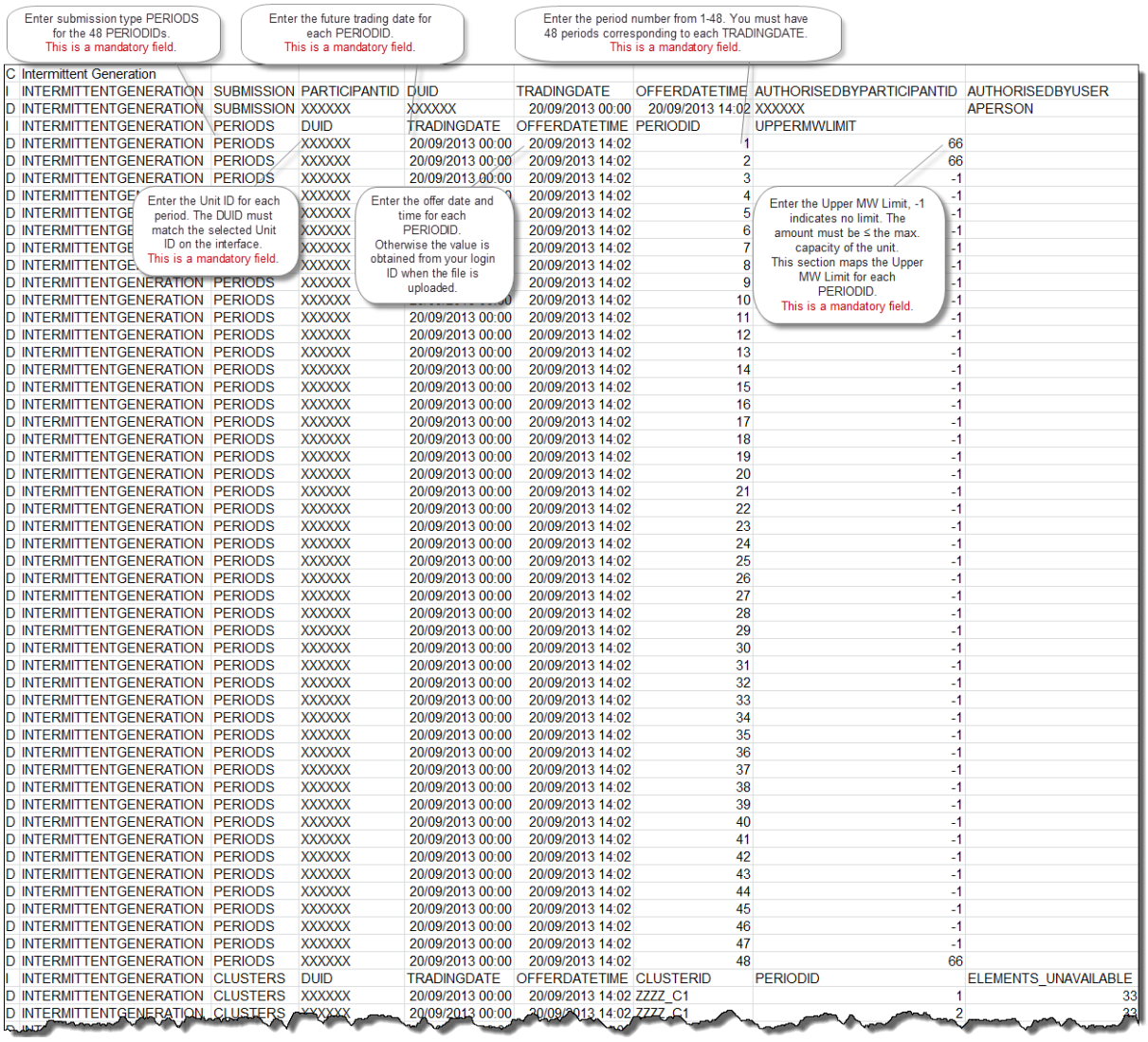
A	B	C	D	E	F	G	H	I
C	Intermittent Generation							
I	INTERMITTENTGENERATION	SUBMISSION	PARTICIPANTID	DUID	TRADINGDATE	OFFERDATETIME	AUTHORISEDBYPARTICIPANTID	AUTHORISEDBYUSER
D	INTERMITTENTGENERATION	SUBMISSION	XXXXXX	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	XXXXXX	APERSON
I	INTERMITTENTGENERATION	PERIODS	DUID	TRADINGDATE	OFFERDATETIME	PERIODID	UPPERMWLIMIT	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	1	66	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	2	66	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	3	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	4	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	5	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	6	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	7	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	8	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	9	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	10	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	11	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	12	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	13	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	14	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	15	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	16	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	17	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	18	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	19	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	20	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	21	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	22	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	23	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	24	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	25	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	26	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	27	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	28	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	29	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	30	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	31	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	32	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	33	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	34	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	35	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	36	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	37	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	38	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	39	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	40	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	41	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	42	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	43	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	44	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	45	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	46	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	47	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	48	66	
I	INTERMITTENTGENERATION	CLUSTERS	DUID	TRADINGDATE	OFFERDATETIME	CLUSTERID	PERIODID	ELEMENTS_UNAVAILABLE
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	1	33
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	2	33
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	3	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	4	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	5	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	6	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	7	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	8	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	9	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	10	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	11	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	12	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	13	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	14	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	15	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	16	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	17	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	18	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	19	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	20	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	21	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	22	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	23	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	24	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	25	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	26	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	27	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	28	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	29	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	30	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	31	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	32	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	33	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	34	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	35	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	36	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	37	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	38	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	39	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	40	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	41	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	42	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	43	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	44	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	45	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	46	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	47	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	48	33

Figure 2 energy availability spreadsheet summary section example



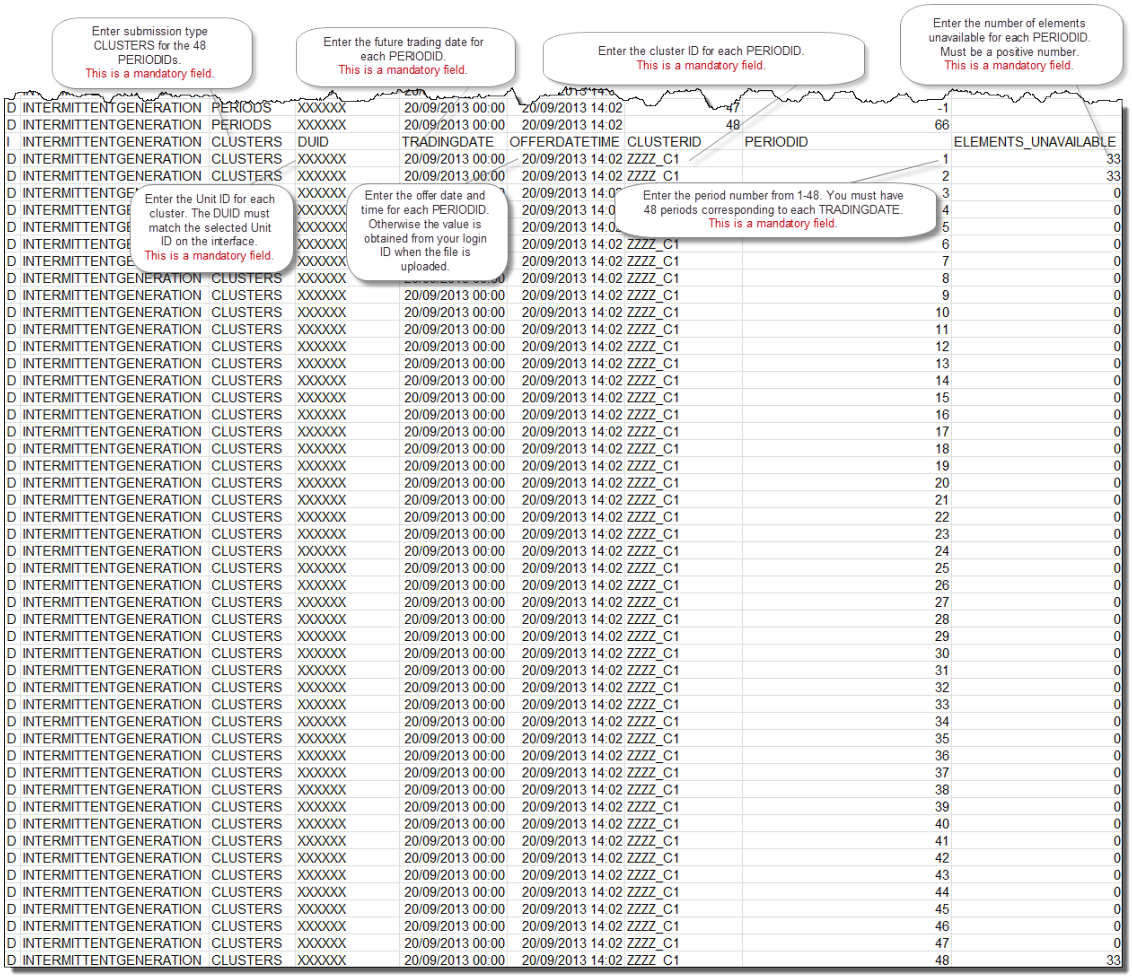
C	Intermittent Generation							
I	INTERMITTENTGENERATION	SUBMISSION	PARTICIPANTID	DUID	TRADINGDATE	OFFERDATETIME	AUTHORISEDBYPARTICIPANTID	AUTHORISEDBYUSER
D	INTERMITTENTGENERATION	SUBMISSION	XXXXXX	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	XXXXXX	APERSON
I	INTERMITTENTGENERATION	PERIODS	DUID	TRADINGDATE	OFFERDATETIME	PERIODID	UPPERMWLIMIT	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	1	66	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX		201			
D	INTERMITTENTGENERATION	PERIODS	XXXXXX		20			

Figure 3 energy availability spreadsheet periods section example



C	Intermittent Generation							
I	INTERMITTENTGENERATION	SUBMISSION	PARTICIPANTID	DUID	TRADINGDATE	OFFERDATETIME	AUTHORISEDBYPARTICIPANTID	AUTHORISEDBYUSER
D	INTERMITTENTGENERATION	SUBMISSION	XXXXXX	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	XXXXXX	APERSON
I	INTERMITTENTGENERATION	PERIODS	DUID	TRADINGDATE	OFFERDATETIME	PERIODID	UPPERMWLIMIT	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	1	66	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	2	66	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	3	-1	
D	INTERMITTENTGE	PERIODS	XXXXXX		20/09/2013 14:02	4	-1	
D	INTERMITTENTGE	PERIODS	XXXXXX		20/09/2013 14:02	5	-1	
D	INTERMITTENTGE	PERIODS	XXXXXX		20/09/2013 14:02	6	-1	
D	INTERMITTENTGE	PERIODS	XXXXXX		20/09/2013 14:02	7	-1	
D	INTERMITTENTGE	PERIODS	XXXXXX		20/09/2013 14:02	8	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX		20/09/2013 14:02	9	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX		20/09/2013 14:02	10	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	11	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	12	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	13	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	14	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	15	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	16	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	17	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	18	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	19	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	20	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	21	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	22	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	23	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	24	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	25	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	26	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	27	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	28	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	29	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	30	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	31	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	32	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	33	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	34	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	35	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	36	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	37	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	38	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	39	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	40	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	41	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	42	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	43	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	44	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	45	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	46	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	47	-1	
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	48	66	
I	INTERMITTENTGENERATION	CLUSTERS	DUID	TRADINGDATE	OFFERDATETIME	CLUSTERID	PERIODID	ELEMENTS_UNAVAILABLE
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	1	33
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	2	33

Figure 4 energy availability spreadsheet clusters section example



D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02		47	-1
D	INTERMITTENTGENERATION	PERIODS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02		48	66
I	INTERMITTENTGENERATION	CLUSTERS	DUID	TRADINGDATE	OFFERDATETIME	CLUSTERID	PERIODID	ELEMENTS_UNAVAILABLE
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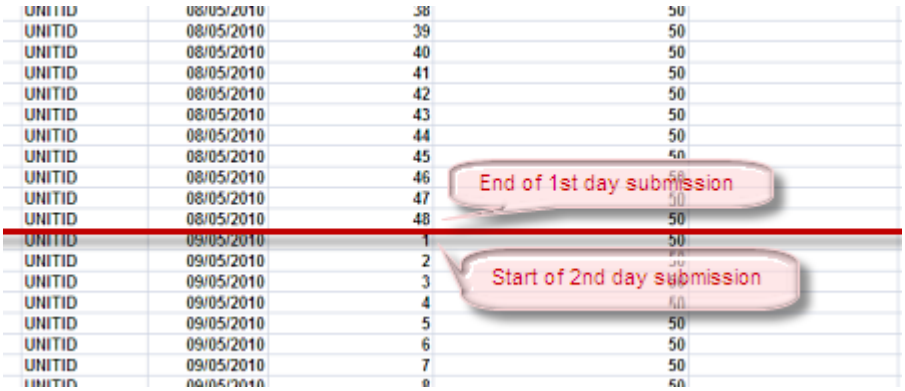
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	2	33
D	INTERMITTENTGE		XXXXXX		20/09/2013 14:0		3	0
D	INTERMITTENTGE		XXXXXX		20/09/2013 14:0		4	0
D	INTERMITTENTGE		XXXXXX		20/09/2013 14:0		5	0
D	INTERMITTENTGE		XXXXXX		20/09/2013 14:02	ZZZZ_C1	6	0
D	INTERMITTENTGE		XXXXXX		20/09/2013 14:02	ZZZZ_C1	7	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX		20/09/2013 14:02	ZZZZ_C1	8	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	9	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	10	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	11	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	12	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	13	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	14	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	15	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	16	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	17	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	18	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	19	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	20	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	21	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	22	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	23	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	24	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	25	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	26	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	27	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	28	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	29	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	30	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	31	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	32	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	33	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	34	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	35	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	36	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	37	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	38	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	39	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	40	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	41	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	42	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	43	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	44	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	45	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	46	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	47	0
D	INTERMITTENTGENERATION	CLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 14:02	ZZZZ_C1	48	33

Figure 5 energy availability spreadsheet multi-day example



Energy availability text editor layout

This CSV format opens in an application such as MS Notepad and so on. In the text editor format, it is very important to match the labels and commas. Each comma is a vital placeholder and without them, the system cannot read your file.

Notes:

- The data is case sensitive and must be included exactly as shown in Figure 6.
- To submit a multi-day file, copy each single day submission one after the other, see Figure 7.

Figure 6 energy availability text editor single-day example

```
C,"Intermittent Generation"
I,INTERMITTENTGENERATION,SUBMISSION,PARTICIPANTID,DUID,TRADINGDATE,OFFERDATETIME,AUTHORISEDBYPARTICIPANTID,AUTHORISEDBYUSER
D,INTERMITTENTGENERATION,SUBMISSION,XXXXXX,XXXXXX,"2013/09/20 00:00:00","2013/09/20 14:02:42",XXXXXX,APERSON
I,INTERMITTENTGENERATION,PERIODS,DUID,TRADINGDATE,OFFERDATETIME,PERIODID,UPPERMWLIMIT
D,INTERMITTENTGENERATION,PERIODS,XXXXXX,"2013/09/20 00:00:00","2013/09/20 14:02:42",1,66
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D,INTERMITTENTGENERATION,CLUSTERS,XXXXXX,"2013/09/20 00:00:00","2013/09/20 14:02:42",ZZZZ_C1,32,0
D,INTERMITTENTGENERATION,CLUSTERS,XXXXXX,"2013/09/20 00:00:00","2013/09/20 14:02:42",ZZZZ_C1,33,0
D,INTERMITTENTGENERATION,CLUSTERS,XXXXXX,"2013/09/20 00:00:00","2013/09/20 14:02:42",ZZZZ_C1,34,0
D,INTERMITTENTGENERATION,CLUSTERS,XXXXXX,"2013/09/20 00:00:00","2013/09/20 14:02:42",ZZZZ_C1,35,0
D,INTERMITTENTGENERATION,CLUSTERS,XXXXXX,"2013/09/20 00:00:00","2013/09/20 14:02:42",ZZZZ_C1,36,0
D,INTERMITTENTGENERATION,CLUSTERS,XXXXXX,"2013/09/20 00:00:00","2013/09/20 14:02:42",ZZZZ_C1,37,0
D,INTERMITTENTGENERATION,CLUSTERS,XXXXXX,"2013/09/20 00:00:00","2013/09/20 14:02:42",ZZZZ_C1,38,0
D,INTERMITTENTGENERATION,CLUSTERS,XXXXXX,"2013/09/20 00:00:00","2013/09/20 14:02:42",ZZZZ_C1,39,0
D,INTERMITTENTGENERATION,CLUSTERS,XXXXXX,"2013/09/20 00:00:00","2013/09/20 14:02:42",ZZZZ_C1,40,0
D,INTERMITTENTGENERATION,CLUSTERS,XXXXXX,"2013/09/20 00:00:00","2013/09/20 14:02:42",ZZZZ_C1,41,0
D,INTERMITTENTGENERATION,CLUSTERS,XXXXXX,"2013/09/20 00:00:00","2013/09/20 14:02:42",ZZZZ_C1,42,0
D,INTERMITTENTGENERATION,CLUSTERS,XXXXXX,"2013/09/20 00:00:00","2013/09/20 14:02:42",ZZZZ_C1,43,0
D,INTERMITTENTGENERATION,CLUSTERS,XXXXXX,"2013/09/20 00:00:00","2013/09/20 14:02:42",ZZZZ_C1,44,0
D,INTERMITTENTGENERATION,CLUSTERS,XXXXXX,"2013/09/20 00:00:00","2013/09/20 14:02:42",ZZZZ_C1,45,0
D,INTERMITTENTGENERATION,CLUSTERS,XXXXXX,"2013/09/20 00:00:00","2013/09/20 14:02:42",ZZZZ_C1,46,0
D,INTERMITTENTGENERATION,CLUSTERS,XXXXXX,"2013/09/20 00:00:00","2013/09/20 14:02:42",ZZZZ_C1,47,0
D,INTERMITTENTGENERATION,CLUSTERS,XXXXXX,"2013/09/20 00:00:00","2013/09/20 14:02:42",ZZZZ_C1,48,33
```
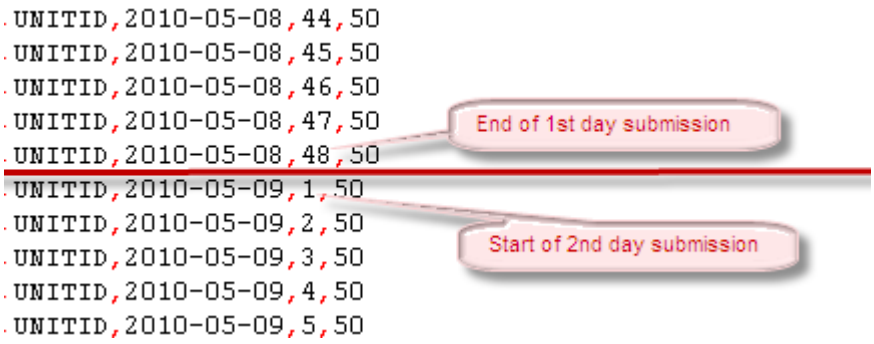

Figure 7 energy availability text editor multi-day example



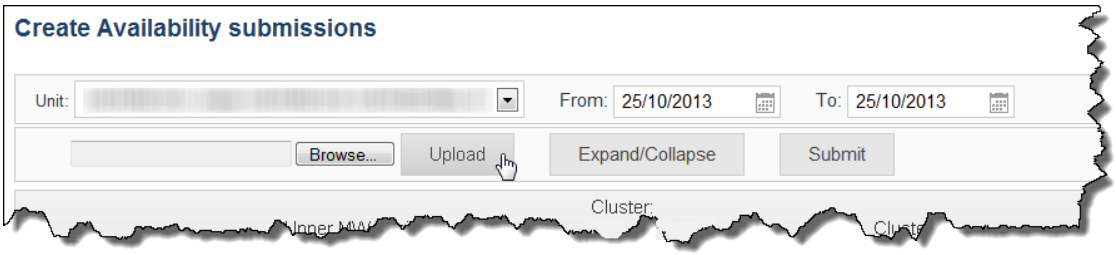
Upload the energy availability file

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 periods corresponding to each Trading Date.

To upload the file:

1. On the Create availability submissions interface, click Browse to select the location and FileName of the file on your computer.
2. Click Upload.



3. The data displays in the Create availability submissions grid ready for further edits or submission. Make any required changes and click Submit. **Important**

Note: The uploaded data is not saved until you click **Submit**, the red markers indicate unsaved data.

4. The submission displays as an effective offer.

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.

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

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 acknowedgement (.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.

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.

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 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 below.

In the XML file, only enter the required period IDs, you do not need to include Period IDs 1-48, see Figure 9.

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 8 schema File ElectricityMMS_r33.xsd

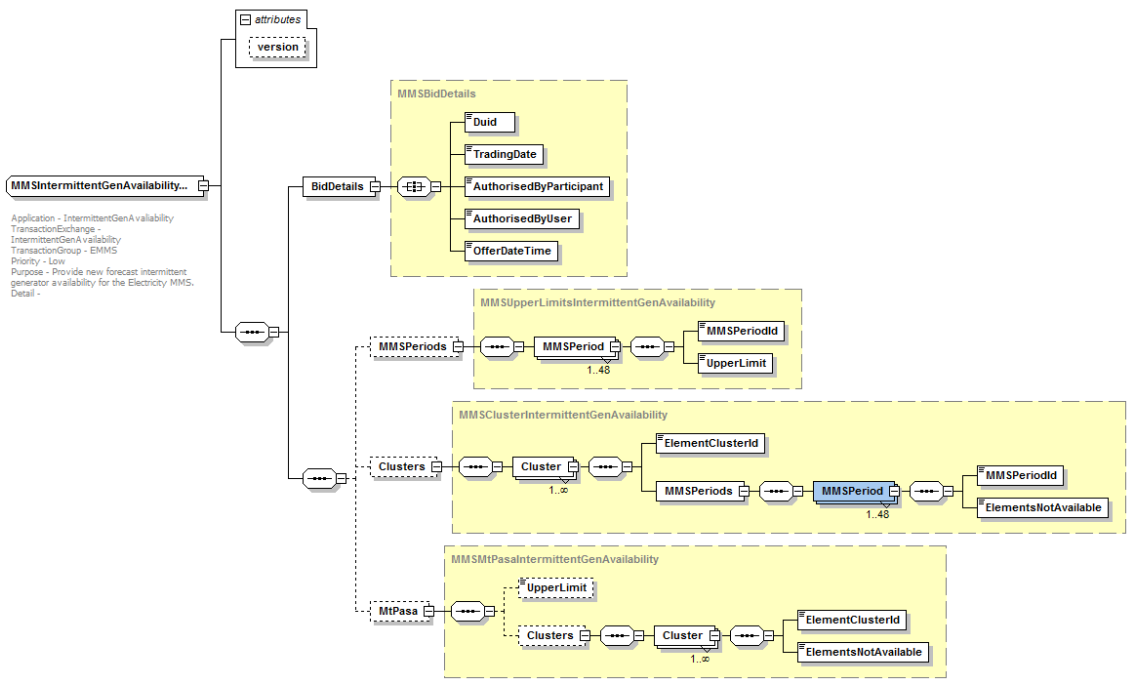


Figure 9 energy availability XML file example

```
- <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>
```

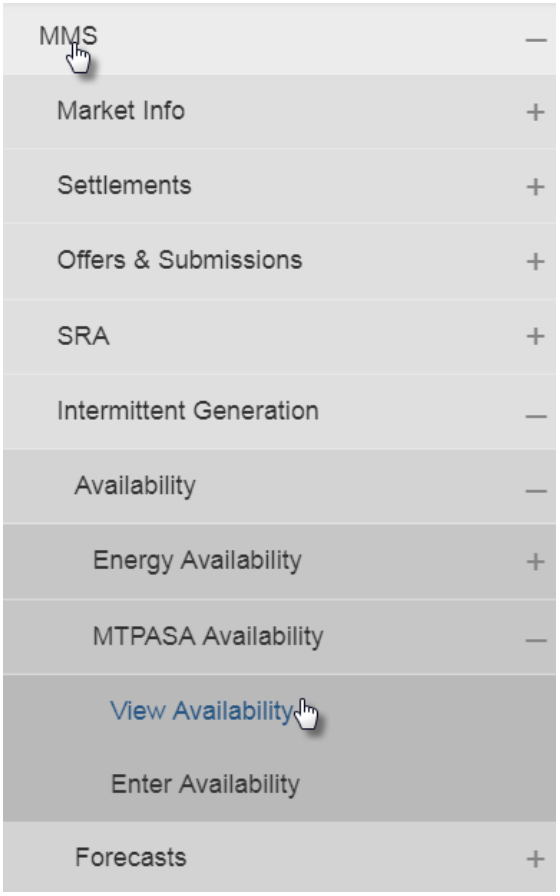
View MTPASA availability

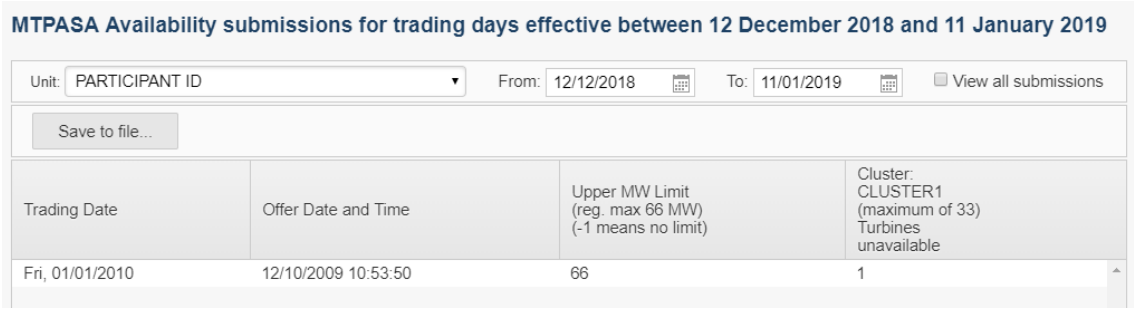
The View Availability menu under MTPASA Availability displays the availability data for a selected unit for selected Trading Dates for MTPASA.

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

1. Click Intermittent Generation, then Availability, then MTPASA Availability and then ViewAvailability.
2. The MTPASA Availability submissions 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 unavailable. The number of columns shown depends on the number of clusters within the unit.

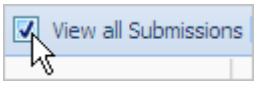
   You may need to scroll across, as well as down, to view all the availability data.





You can also:

- View all Submissions: Click the View all Submissions check box to see all submissions not just effective submissions.



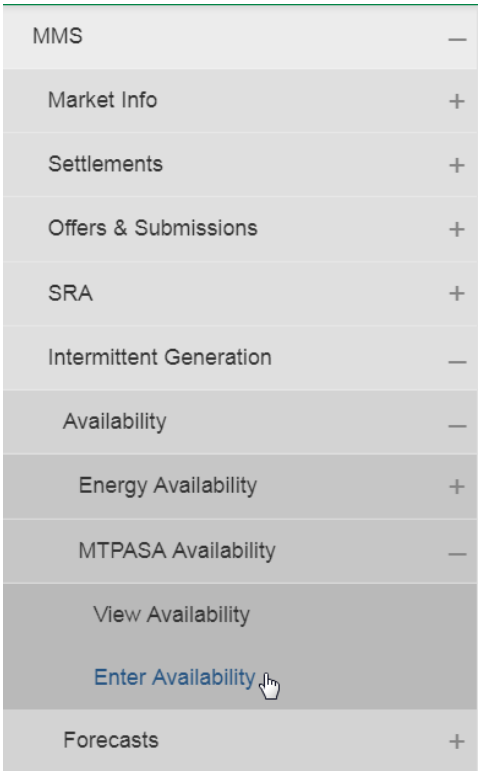
- **Select other Trading Dates:** Availability for the current date and beyond initially displays for your effective Participant ID. Use the calendar icons to change the **From** and **To** dates. For help, see Select a date on page 10.
- **View multiple Trading Dates:** Use the calendar icons to adjust the date to display multi-days. For help, seeUsing the common interface features
- **Save to file:** Save the Currently viewed Availability, see Save the currently viewed availability on page 19.
- **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 8.

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 *trading interval* in the day (such as half-hour period), together with the number of unavailable elements in each Cluster in the unit in that same *trading interval*.

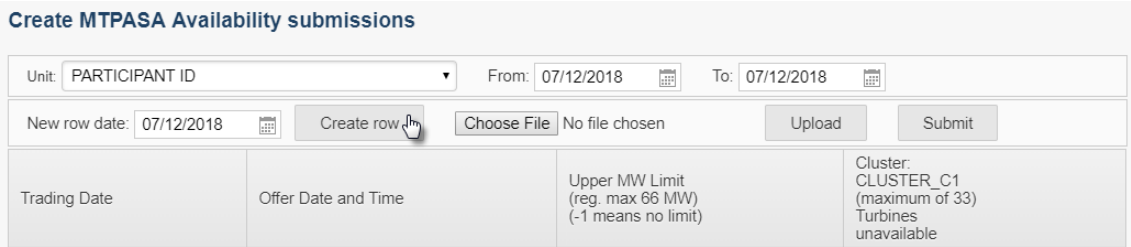
You can enter MTPASA availability submissions manually into the **Create MTPASA availability submissions** interface or you can upload a prepared file in CSV format from your computer, see Upload MTPASA availability.



Create a new availability

To create a new MTPASA availability:

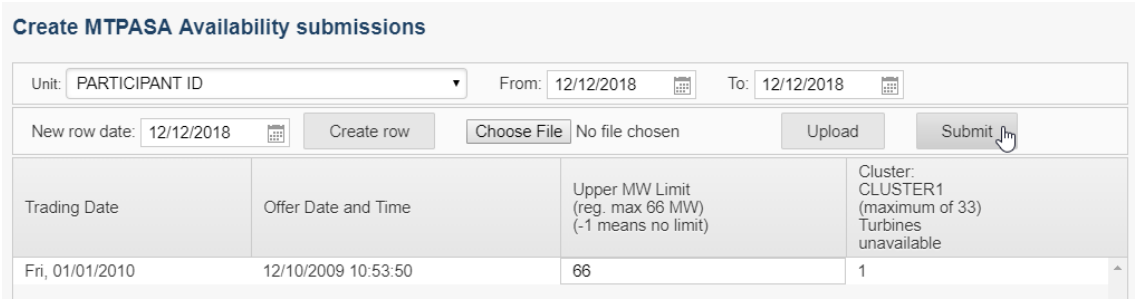
1. Click **Intermittent Generation**, then **Availability**, then **MTPASA Availability** and then **Enter Availability**.
2. The **Create MTPASA availability submissions** interface displays the current effective MTPASA offer dates and times. Click **new row date** to select a date for the new submission
3. Click **Create row** to add a new row to the grid for each Trading Date.



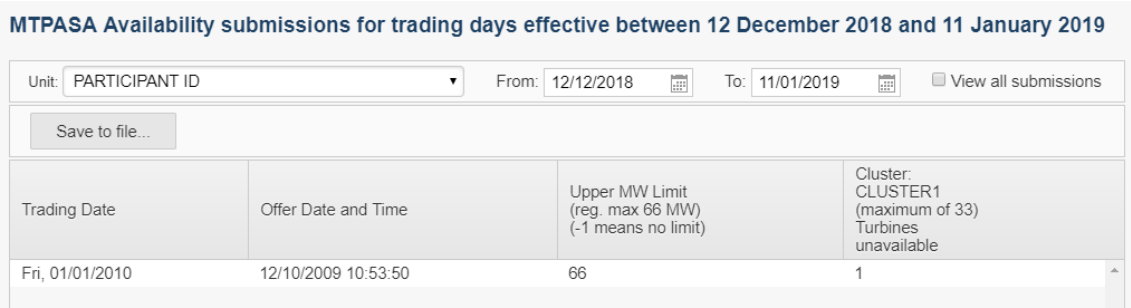
4. Click in the cells to edit the data for each **Unit** and **Cluster** in the new row and then click **Submit**.

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

   Important Note: The data is not saved until you click **Submit**, the red cell markers indicate unsaved data.



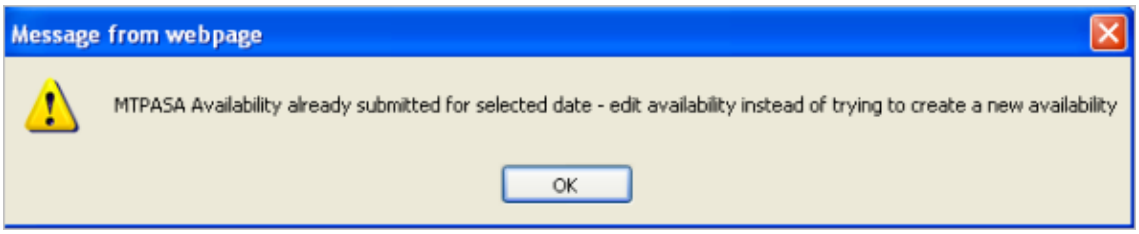
5. The **MTPASA availability submissions** interface displays indicating the data is saved.



Important notes:

- The data is not saved until you click **Submit**, the red markers indicate 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.
- If you attempt to create an availability for an existing Trading Date, an error similar to the one below displays. This message only displays when entering a submission directly to the Create MTPASA availability submissions interface. When uploading data from a file, it does not display; the duplicate data is disregarded and no changes are reflected.



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 8.
- 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 10.
- Select a New Effective Date: Click the icon to the right of the item, see Select a date on page 10.
- Upload from file: Click Upload to upload a .CSV file from your local computer, see Upload energy availability on page 23.

Upload MTPASA availability

To upload a file:

1. Prepare the file by doing one of the following:
    a. Export a sample file to use as a template, see Save the currently viewed availability on page 19. Downloading a sample file provides an easy way to manipulate the data for reuse as it is important to maintain the CSV format.

b. 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 46.

MTPASA availability CSV file layout

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 MTPASA availability CSV file examples on page 45.

For help with the CSV format, see Guide to AEMO CSV Data 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:
  - MTPASA
  - MTPASACLUSTERS
- 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	Upper case.

MTPASA 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 + Your PARTCIPANT ID	Application name Upper case
C*	MTPASA	For the 48 period IDs, enter the type of submission, either MTPASA or MTPASACLUSTER	Upper case
D*	DUID	Unit ID	Do not change The DUID must match the selected Unit ID on the interface
E*	TRADING DATE	For each submission, enter the future Trading Date, e.g. 20/09/2013 00:00	Date format = dd/mm/yyyy Time format = 00:00
F	OFFERDATETIME	Enter the offer date and time, e.g. 20/09/2013 14:02 If blank, the value is obtained when you upload the file	Date format = dd/mm/yyyy Time format = 00:00 The value displays on the downloaded file when using the **Save to File** option.

Column	Label	Data Entry	Validation
G	AUTHORISEDBYPARTICIPANTID	Enter your Participant ID If blank, the value is obtained when you upload the file	The value displays on the downloaded file when using the **Save to File** option
H	AUTHORISEDBYUSER	Enter your Participant user ID If blank, the value is obtained when you upload the file	Upper case The value displays on the downloaded file when using the **Save to File** option.
I*	UPPERMWLIMIT	Enter the Upper MW Limit	-1 indicates no limit. The amount must be ≤ the registered Max. Capacity of the unit. Must be a positive number. A submission with a NULL value is accepted and the NULL is converted to zero.

MTPASACLUSTERS 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 + Your PARTCIPANT ID	Application name Upper case
C*	MTPASACLUSTERS	For the 48 period IDs, enter the type of submission, either MTPASA or MTPASACLUSTER	Upper case
D*	DUID	Unit ID	Do not change The DUID must match the selected Unit ID on the interface
E*	TRADING DATE	For each submission, enter the future Trading Date, e.g. 20/09/2013 00:00	Date format = dd/mm/yyyy Time format = 00:00

Column	Label	Data Entry	Validation
F	OFFERDATETIME	Enter the offer date and time, e.g. 20/09/2013 14:02 If blank, the value is obtained when you upload the file	Date format = dd/mm/yyyy Time format = 00:0
G*	CLUSTERID	Enter the Cluster ID	Upper case
H*	ELEMENTS UNAVAILABLE	Enter the amount of Elements Unavailable	A submission with a NULL value is accepted and the NULL is converted to zero.

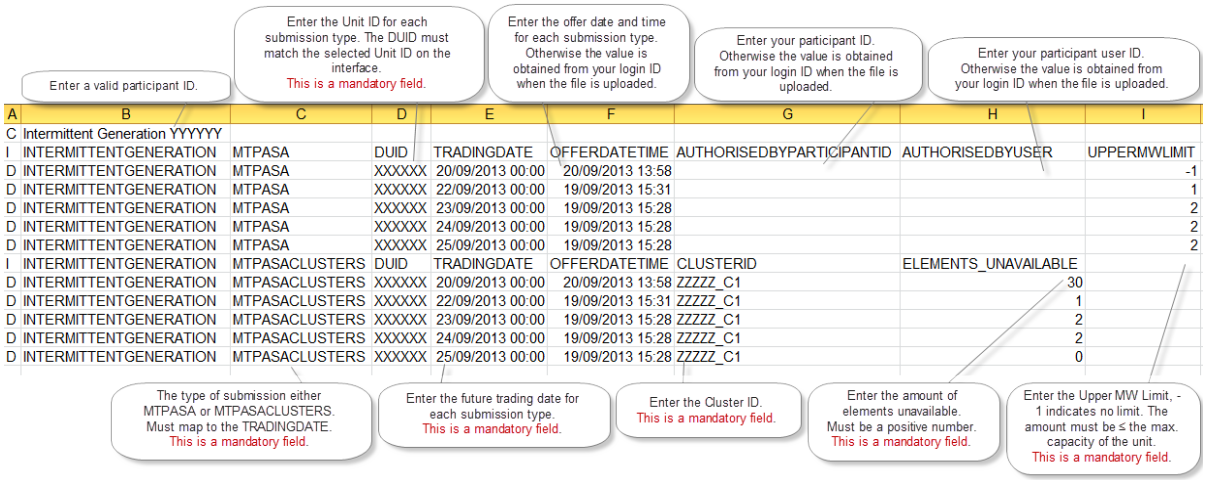
MTPASA availability CSV file examples

MTPASA 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 (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.

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.

Figure 10 MTPASA availability spreadsheet example



A	B	C	D	E	F	G	H	I
C	Intermittent Generation YYYYYY							
I	INTERMITTENTGENERATION	MTPASA	DUID	TRADINGDATE	OFFERDATETIME	AUTHORISEDBYPARTICIPANTID	AUTHORISEDBYUSER	UPPERMWLIMIT
D	INTERMITTENTGENERATION	MTPASA	XXXXXX	20/09/2013 00:00	20/09/2013 13:58			-1
D	INTERMITTENTGENERATION	MTPASA	XXXXXX	22/09/2013 00:00	19/09/2013 15:31			1
D	INTERMITTENTGENERATION	MTPASA	XXXXXX	23/09/2013 00:00	19/09/2013 15:28			2
D	INTERMITTENTGENERATION	MTPASA	XXXXXX	24/09/2013 00:00	19/09/2013 15:28			2
D	INTERMITTENTGENERATION	MTPASA	XXXXXX	25/09/2013 00:00	19/09/2013 15:28			2
I	INTERMITTENTGENERATION	MTPASACLUSTERS	DUID	TRADINGDATE	OFFERDATETIME	CLUSTERID	ELEMENTS_UNAVAILABLE	
D	INTERMITTENTGENERATION	MTPASACLUSTERS	XXXXXX	20/09/2013 00:00	20/09/2013 13:58	ZZZZZ_C1	30	
D	INTERMITTENTGENERATION	MTPASACLUSTERS	XXXXXX	22/09/2013 00:00	19/09/2013 15:31	ZZZZZ_C1	1	
D	INTERMITTENTGENERATION	MTPASACLUSTERS	XXXXXX	23/09/2013 00:00	19/09/2013 15:28	ZZZZZ_C1	2	
D	INTERMITTENTGENERATION	MTPASACLUSTERS	XXXXXX	24/09/2013 00:00	19/09/2013 15:28	ZZZZZ_C1	2	
D	INTERMITTENTGENERATION	MTPASACLUSTERS	XXXXXX	25/09/2013 00:00	19/09/2013 15:28	ZZZZZ_C1	0	

MTPASA availability text editor layout

This CSV format opens in an application such as MS Notepad and so on. In the text editor format, it is very important to match the labels and commas. Each comma 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 Figure 11.

Figure 11 MTPASA availability text editor example

```
C,"Intermittent Generation YYYYYY"
I,INTERMITTENTGENERATION,MTPASA,DUID,TRADINGDATE,OFFERDATETIME,AUTHORISEDBYPARTICIPANTID,AUTHORISEDBYUSER,UPPERMWLIMIT
D,INTERMITTENTGENERATION,MTPASA,XXXXXX,"2013/09/20 00:00:00","2013/09/20 13:58:04",,,-1
D,INTERMITTENTGENERATION,MTPASA,XXXXXX,"2013/09/22 00:00:00","2013/09/19 15:31:19",,,1
D,INTERMITTENTGENERATION,MTPASA,XXXXXX,"2013/09/23 00:00:00","2013/09/19 15:28:47",,,2
D,INTERMITTENTGENERATION,MTPASA,XXXXXX,"2013/09/24 00:00:00","2013/09/19 15:28:47",,,2
D,INTERMITTENTGENERATION,MTPASA,XXXXXX,"2013/09/25 00:00:00","2013/09/19 15:28:47",,,2
I,INTERMITTENTGENERATION,MTPASACLUSTERS,DUID,TRADINGDATE,OFFERDATETIME,CLUSTERID,ELEMENTS_UNAVAILABLE
D,INTERMITTENTGENERATION,MTPASACLUSTERS,XXXXXX,"2013/09/20 00:00:00","2013/09/20 13:58:04",ZZZZZ_C1,30
D,INTERMITTENTGENERATION,MTPASACLUSTERS,XXXXXX,"2013/09/22 00:00:00","2013/09/19 15:31:19",ZZZZZ_C1,1
D,INTERMITTENTGENERATION,MTPASACLUSTERS,XXXXXX,"2013/09/23 00:00:00","2013/09/19 15:28:47",ZZZZZ_C1,2
D,INTERMITTENTGENERATION,MTPASACLUSTERS,XXXXXX,"2013/09/24 00:00:00","2013/09/19 15:28:47",ZZZZZ_C1,2
D,INTERMITTENTGENERATION,MTPASACLUSTERS,XXXXXX,"2013/09/25 00:00:00","2013/09/19 15:28:47",ZZZZZ_C1,0
```

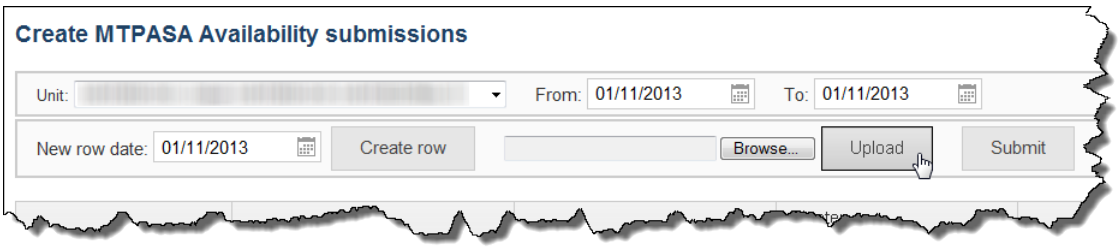
Upload the MTPASA availability file

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.

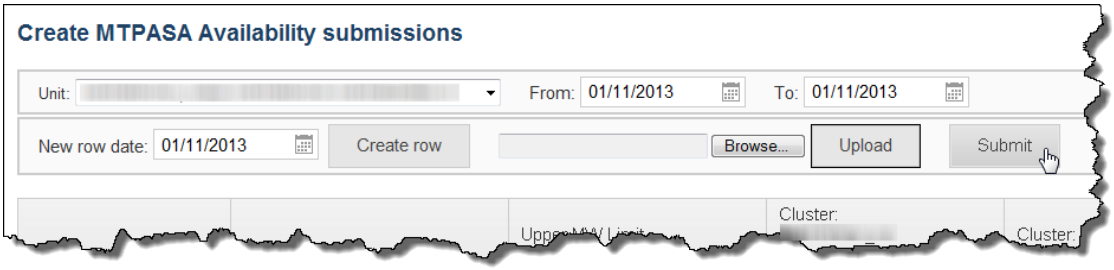
To upload the file:

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.

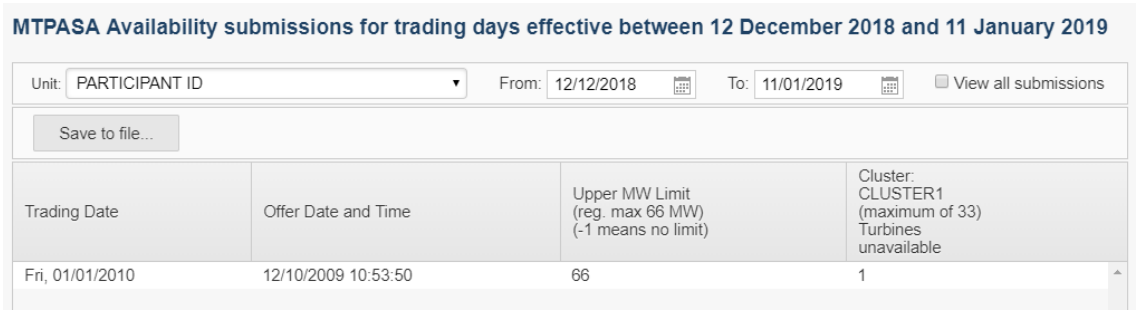


3. The data displays in the Create MTPASA availability submissions grid, ready for further edits or submission. Make any required changes and click Submit.

   Important Note: The uploaded data is not saved until you click Submit, , the red markers indicate unsaved data.



4. 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.

Chapter 4 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*.

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).

Only regions with *intermittent generating units* have data available.

The types of forecasts are:

- *Dispatch (*DS)
- 5-minute *predispatch* (5MPD)
- *Predispatch* (PD)
- Short-term Projected Assessment of System Adequacy (ST*PASA*)

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 three different reliability levels, being low, medium and high POE (90%, 50%, and 10% respectively).

Notes:

- *Dispatch* forecast views only show AWEFS and ASEFS forecasts. They do not show any participant *dispatch* self-forecasts if used in *dispatch*.
- Participants can no longer view MTPASA AWEFS and ASEFS forecasts because the MTPASA process has used forecasts from a different source since May 2018. Participants can still view historical MTPASA forecasts prior to May 2018.

View forecasts

About viewing forecasts

In this menu you can:

- View a summary of forecasts
- View forecasts
- Override forecasts
- View or cancel overrides
- Enter overrides for units

You can view forecasts by selecting the following criteria:

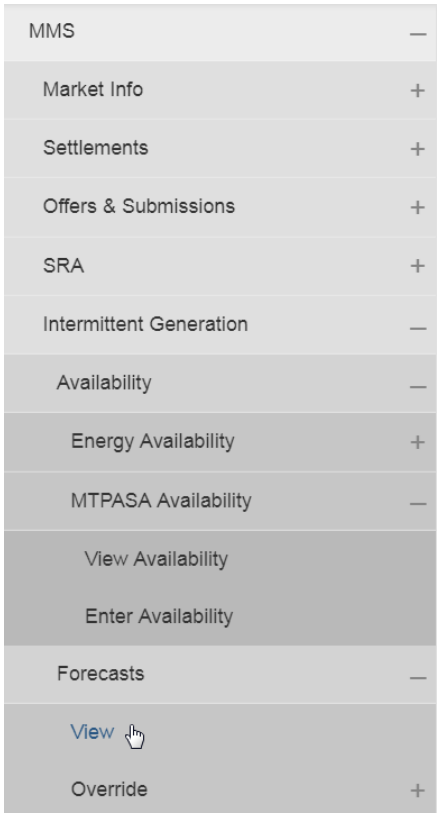
- The Forecast Unit (Unit ID or region ID).
- The Forecast Type (DS, P5MIN, PD, STPASA).
- The Forecast Run date range.

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, then Forecasts and then View.
2. The Intermittent Forecasts interface displays where you can make your selection criteria.

Participants can view DS, PD, 5MPD, STPASA, and MTPASA forecasts for MTPASA runs prior to May 2018:

- 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 8.
- Type: for help, see Select the type on page 9.
- Date To: for help, see Select a date on page 10.

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.
- Prev, Next, and Last buttons: 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 all: for help, see Download forecast CSV files on page 52.
- Download: for help, see Download forecast CSV files on page 52.
- Graphical display: for help, see Select the graphical display on page 55.

- **Tabular display**: for help, see Select the tabular display on page 56.

Change the date to

The initial default date is the most current day the user has privilege to view. You can set the end-date of the date range. The start-date is automatically chosen depending on the forecast type, so the date range is:

- One day of runs for DS, P5MIN and PD forecast types.
- Seven days of runs for STPASA forecast type.

To select another end-date for the range:

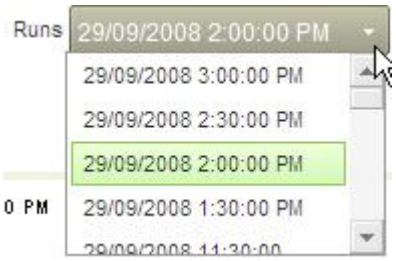
1. Click the icon to the right of the **Date To** item to show the calendar, and then click on a date, see Select a date on page 10.
2. Selecting a date causes the forecast data to display, see Select the graphical display on page 55 and Select the tabular display on page 56.

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 above. 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 page 55 and Select the tabular display on page 56.



You can also:

- **Select previous runs**: On the **Runs** list, click **Prev**. If the current run is the first run for the day, the run selection does not change.
- **Select next runs:** On the **Runs** list, click **Next**. If the current run is the last run for the day, the run selection does not change.
- **Selecting last runs:** From the **Runs** list, click **Last**. If the current run is the last run for the day, the run selection does not change.

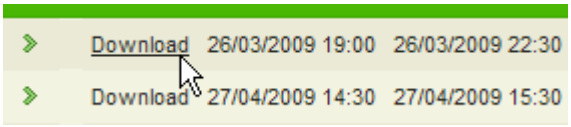
Download forecast CSV files

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 9.

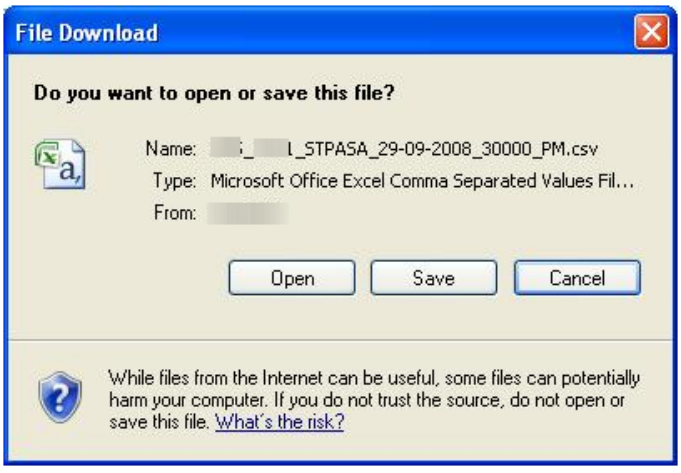
Participants can view MTPASA region forecasts (not unit forecasts) using Data Interchange to retrieve the CSV files. For more details, see Concise Guide to Data Interchange.

To download one or all files:

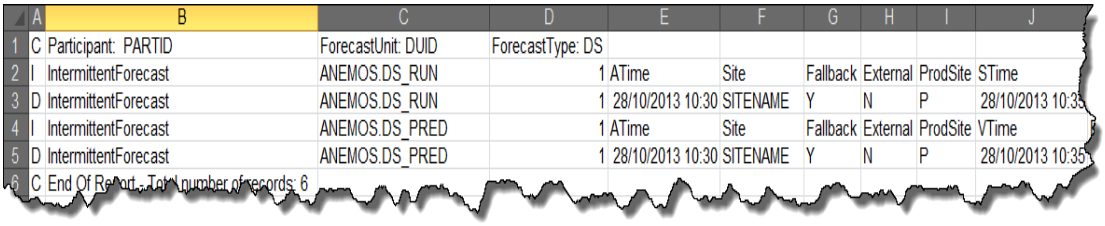
1. Click Download all or Download.



2. Choose to Open or Save the files.
   - Selecting Open causes the application associated with .CSV files on your system to open the file. Typically, the application is Microsoft Excel.
   - Selecting Save causes Windows to save the file to a location you specify.
   - Selecting Cancel stops the initiation of the file.

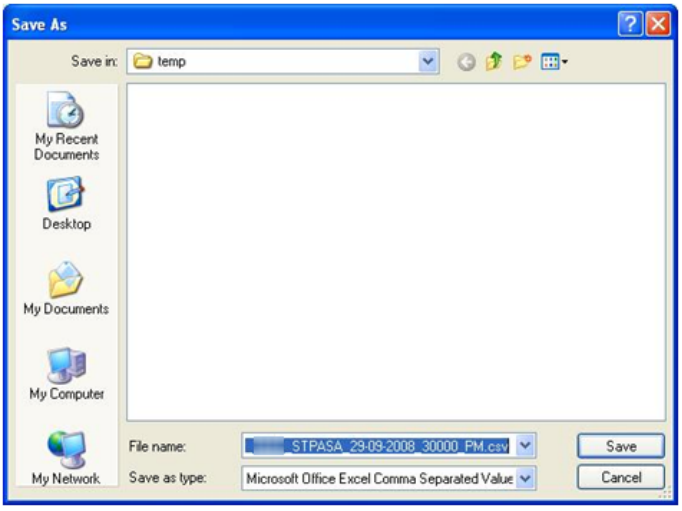


If you select Open, the associated application displays the file. For example, if Microsoft Excel is the application, expect to see something like the following:



	A	B	C	D	E	F	G	H	I	J
1	C	Participant: PARTID	ForecastUnit: DUID	ForecastType: DS						
2	I	IntermittentForecast	ANEMOS.DS_RUN	1	ATime	Site	Fallback	External	ProdSite	STime
3	D	IntermittentForecast	ANEMOS.DS_RUN	1	28/10/2013 10:30	SITENAME	Y	N	P	28/10/2013 10:35
4	I	IntermittentForecast	ANEMOS.DS_PRED	1	ATime	Site	Fallback	External	ProdSite	VTime
5	D	IntermittentForecast	ANEMOS.DS_PRED	1	28/10/2013 10:30	SITENAME	Y	N	P	28/10/2013 10:35
6	C	End Of Report , Total number of records: 6								

If you select Save, the next prompt is to choose where. Use the default location or navigate to a directory of your choice then click Save.



Forecast CSV file layout

The Forecasts Overrides Creation window allows you to Download a template file for editing or saving, see Download an override template file on page 61.

Table 1 explains the types of information and data records are in each Run CSV file.

For help with the CSV format, see Guide to AEMO CSV Data Format Standard.

Table 1 forecast CSV file RUN records explanation

Column Name	Description
IntermittentForecast	Report type
The name of the database table; forecast type followed by "_ RUN"	Report sub-type
1	Report version
Site	Region ID or Unit ID (Unit)
Fallback	Ignore

Column Name	Description
External	Was forecast overridden? (Y/N)
ProdSite	Ignore
STime	The start/first time of predictions
ETime	The end/last time of predictions
HotSite	Ignore
POELow	Ignore
POEHigh	Ignore
AOZVersion	Ignore
WTime	Timestamp

Table 2 explains the columns in the prediction (PRED) records.

Table 2 forecast CSV file columns in the prediction (PRED) records explanation

Column Name	Description
IntermittentForecast	Report type
The name of the database table; forecast type followed by "_PRED"	Report sub-type
1	Report version
ATime	Timestamp of run
Site	Region ID or Unit ID (Unit)
Fallback	Ignore
External	Was forecast overridden? (Y/N)
ProdSite	Ignore
VTime	Timestamp of end of forecast interval
PowerPOE50	Power (MW) with Medium probability of exceedence (50%)
PowerPOE90	Power (MW) with Low probability of exceedence (90%)
PowerPOE10	Power (MW) with High probability of exceedence (10%)

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.

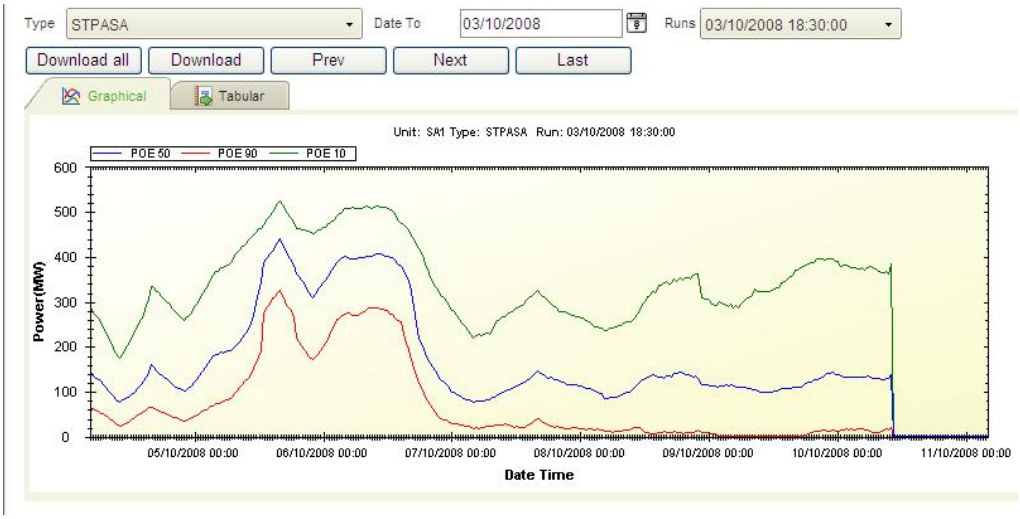
For all types except DS (*dispatch*), the graphical display is the selected forecast run. For DS, the graphical display is all *dispatch* forecasts for the selected day up to the selected forecast run. See Select the type on page 9.

To display the data graphically:

1. Click the Graphical tab.
2. Select a Type from the drop-down list.
3. The data displays in a graphical format, for example:

Figure 12 *Dispatch* (DS) graphical display

Figure 13 STPASA graphical display



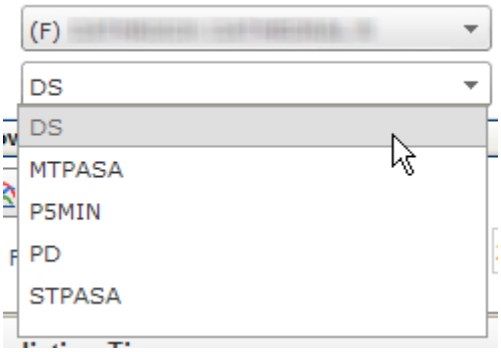
Select the tabular display

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

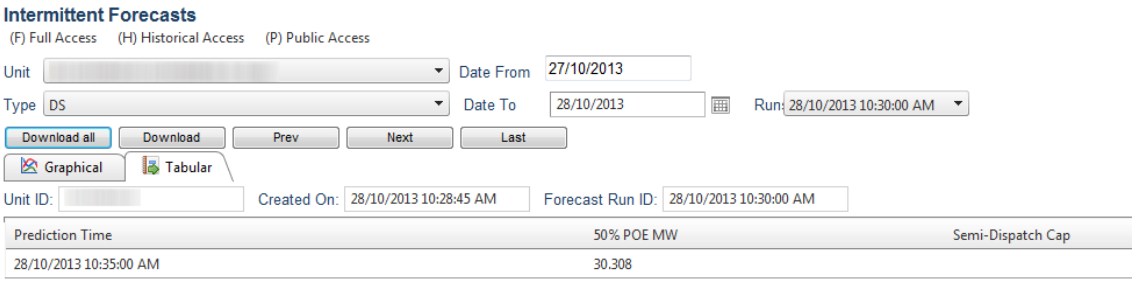
To display the data in table form:

1. Click the Tabular tab.

2. Selecting a Type from the drop-down list, for example:



3. The data displays in a tabular format, for example:


Intermittent Forecasts
(F) Full Access
(H) Historical Access
(P) Public Access
Unit
Date From
27/10/2013
Type
DS
Date To
28/10/2013
Run
28/10/2013 10:30:00 AM
Download all
Download
Prev
Next
Last
Graphical
Tabular
Unit ID:
Created On:
28/10/2013 10:28:45 AM
Forecast Run ID:
28/10/2013 10:30:00 AM
Prediction Time
50% POE MW
Semi-Dispatch Cap
28/10/2013 10:35:00 AM
30.308

Chapter 5 Override Forecasts

Enter overrides

About overriding forecasts

The Intermittent Generation Overrides Creation interface provides the ability for participants to input forecasts for their own Units covering all time frames, except *dispatch* (such as, 5MPD, *predispatch*, STPASA). If a forecast override is entered by a participant, the Intermittent Generation web application automatically applies those forecasts to the applicable time frames.

The business rules include:

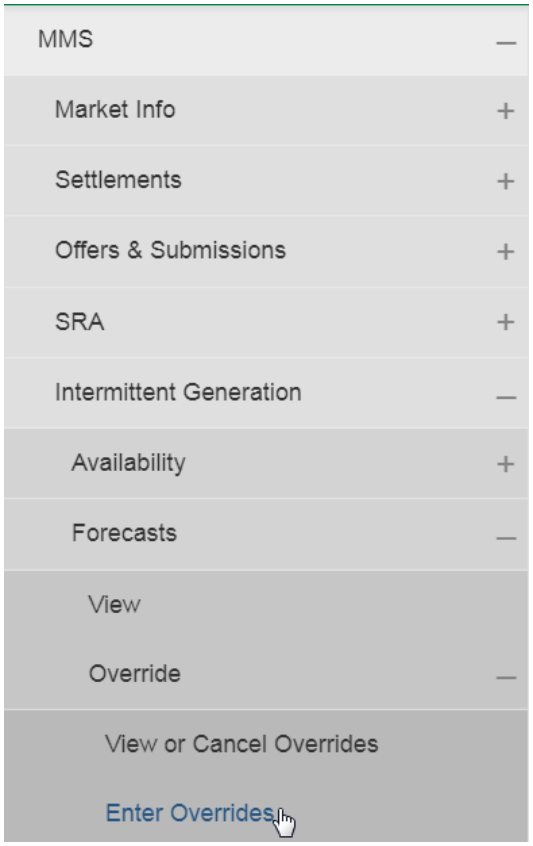
- AEMO uses discretion in using participant supplied forecasts and can cancel those forecast overrides.
- AEMO overrides always take precedence over participant overrides.

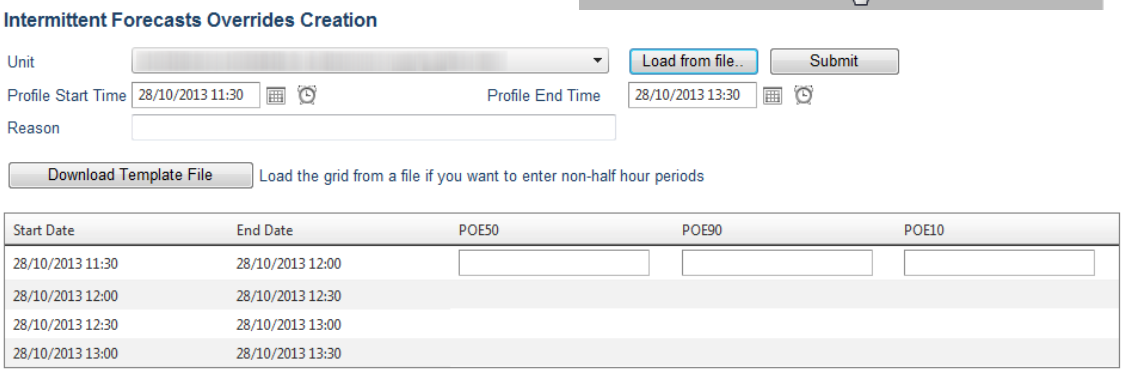
Enter an override

To create an override for a selected unit:

1. Click Intermittent Generation, then Forecasts, then Override and then click Enter Overrides.

2. The Intermittent Forecast Overrides Creation interface displays, similar to the one below. Initially the interface displays the first Unit for the participant, the Profile Start Time as the nearest half-hour time in the future, the Profile End Time as two hours from Profile Start Time and four rows of half-hour periods.
   The interface allows the entry of details to override a forecast for a nominated participant unit over a given time range.





You can also:

- Select another Unit: Click the down arrow to the right of the Unit item to show the list of visible units. Selecting a unit in the Forecasts Overrides window displays the overrides for the selected unit, according to the other selection; Select the unit.

Select a different date range

To select a different time range:

- Click the icons to the right of the Profile Start Time or Profile End Time item, see Select a date on page 10.

Notes:

- The Profile Start Time is the date and time when the forecast override takes effect, initially set to the nearest half-hour time in the future.
- The Profile End Time is the date-and-time when the forecast override ceases to be active, initially set to two hours from Profile Start Time.
- At the time of submission, the Profile Start Time must be in the future (and, since the Profile End Time must be after the Profile Start Time, so must the Profile End Time also be in the future).
- Changing either date causes the interface to show rows for each half-hour spanning from the half-hour boundary on or after the Profile Start Time to the half-hour boundary on or after the Profile End Time, with each row having empty POE fields. Each row starts and ends on a half-hour boundary.

Enter a reason

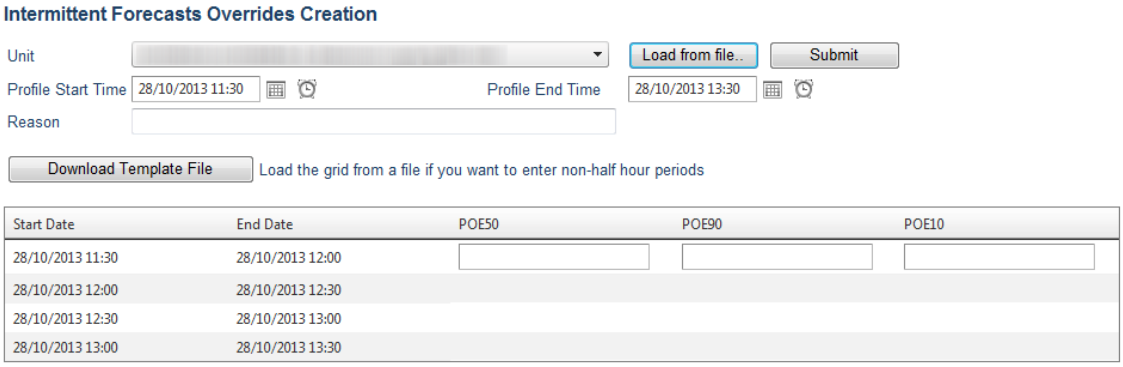
The Reason is the description of the circumstance causing the override of the forecast. For successful submission, a reason is mandatory. It can be longer than displayed on the interface but only the first 200 characters are accepted by AEMO for processing.

Upload override using a local file

To upload an override to the interface from an existing local file:

1. On the Intermittent Forecasts Overrides Creation interface, click Load from file. The Load from file to enter the data on the interface based on a locally stored file, see Forecast CSV file layout on page 53.

Uploading data from a file overwrites existing data on the interface.

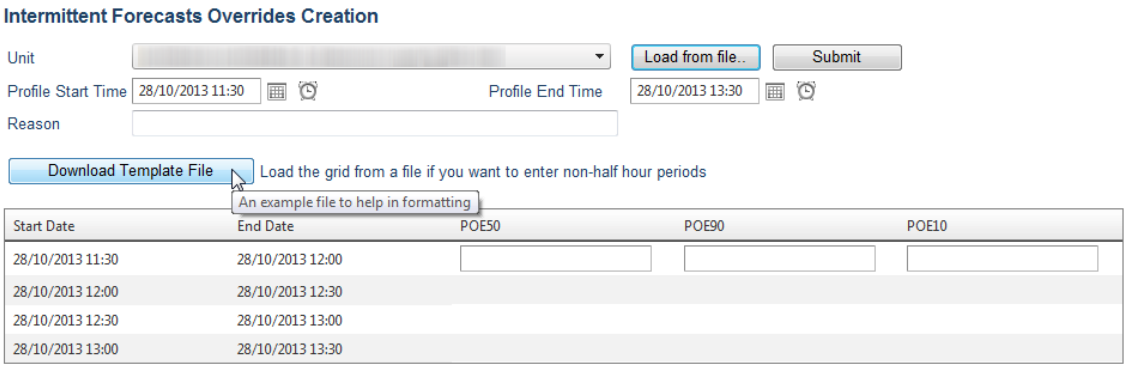


2. Select the location and name of the saved file on your computer.
3. The intervals block displays the uploaded data, ready for further edits or submission. **Important Note**: the data is not submitted until the **Submit** button is clicked.

Download an override template file

To download a template file:

- Click **Download Template File** to produce a local .CSV file ready for editing or saving. The .CSV file is in the format suitable for uploading, but does not contain useful data, see Download forecast CSV files on page 52.



Enter POE values

To enter POE values:

- Initially, the first row is ready to enter, or edit, the POE entries. To edit another row, click anywhere on that row to highlight it and show the POE entry boxes.

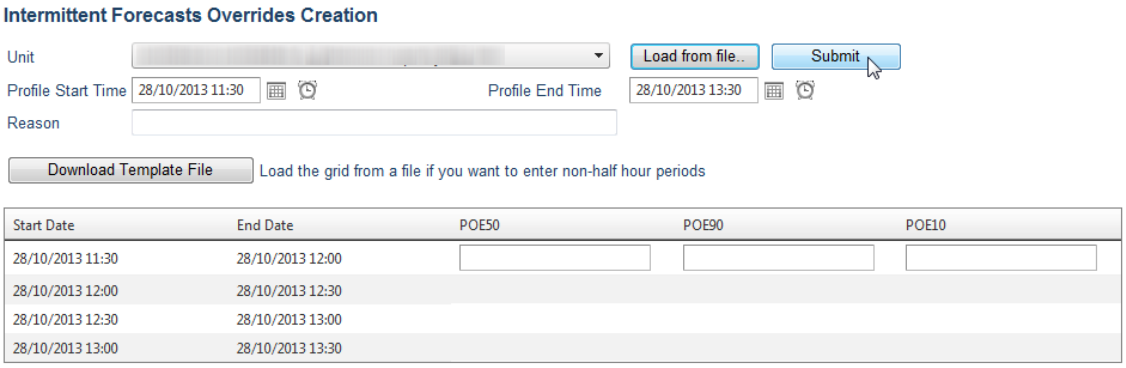
Notes:

- The POE50 is the medium reliability level, being not less than zero and not greater than the registered Max Capacity of the Unit, and not greater than POE50. Every row needs to have a POE50 value it cannot be left blank.
- The POE90 is the low reliability level, being not less than zero, not greater than the registered Max Capacity of the Unit. Every row needs to have a POE90 value it cannot be left blank.
- The POE10 is the high reliability level, being not less than zero, not greater than the registered Max Capacity of the Unit and not less than POE50. Every row needs to have a POE10 value it cannot be left blank.

Submit the currently viewed override

To submit the currently viewed override for processing by AEMO:

- Click Submit.



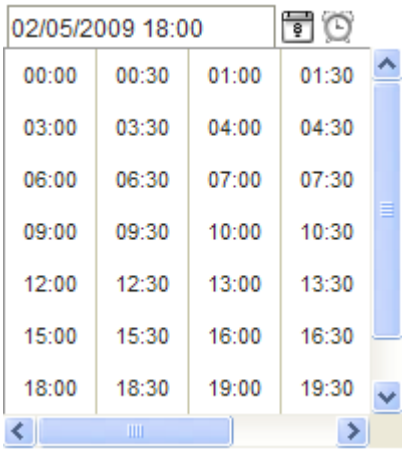
Change a date and time

To change to another date:

- Click the calendar icon to the right of the date item, see Select a date on page 10. Selecting a date displays the relevant data.

To select a time:

- Click the clock icon to the right of the date, and then click a time (sliding the scroll bars to show others, if necessary). Selecting a time displays the relevant data.



Override CSV file layout

For help with the CSV format, see Guide to AEMO CSV Data Format Standard.

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 example in Figure 14.

- C rows indicate a comment field, for example the file or application description. Participants can change data in the 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 forecast override data, participants can change data in the rows and all data must be in upper case.

Override CSV file explanation

All CSV file data must be in upper case.

Comment header row

Column	Label	Data Entry	Validation
A*	C	Your comments, e.g. the description of the file	Upper case.

SUBMISSION section

Column	Label	Data Entry	Validation
A*	I	Header information	Do not change data in the row
	D	Enter your data for forecast override	Upper case
B*	INTERMITTENT FORECASTS OVERRIDES	INTERMITTENT FORECASTS OVERRIDES	Application name Upper case
C*	SUBMISSION Type	Enter FORECASTOVERRIDE or FORECASTOVERRIDEDETAIL	Upper case
D	Participant	Enter your PARTICIPANT ID	Upper case

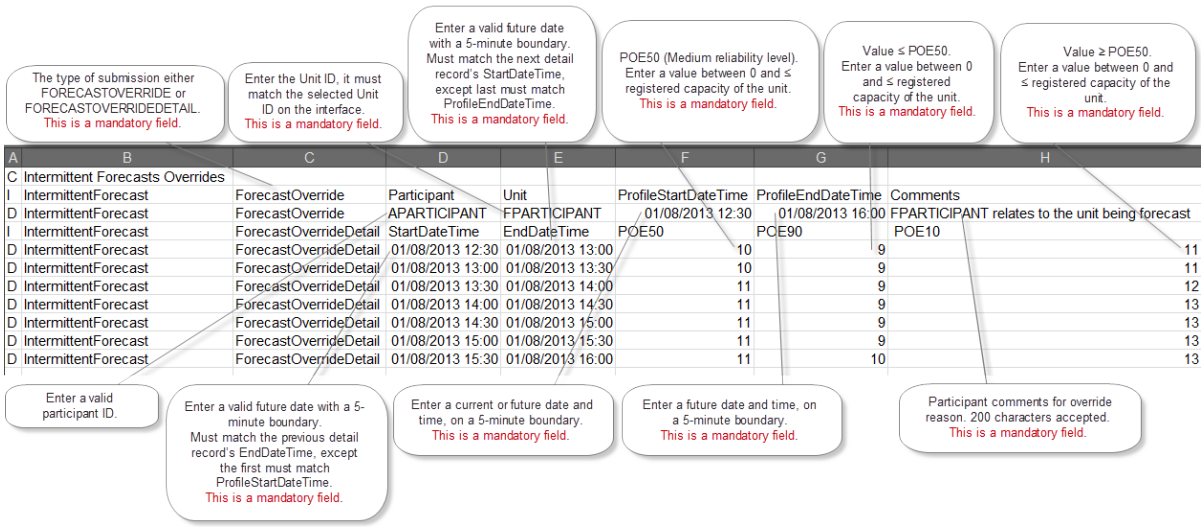
Column	Label	Data Entry	Validation
D*	StartDateTime	Enter the Start Date	Valid future date with a 5-minute boundary Must match the previous detail record's EndDateTime, except the first must match ProfileStartDateTime Date format = dd/mm/yyyy Time format = 00:00
E*	UNIT	Enter the Unit ID	Must match the interfaces Unit ID
E*	EndDateTime	Enter the End Date	A valid future date with a 5-minute boundary. Must match the next detail record's StartDateTime, except the last must match ProfileEndDateTime. Date format = dd/mm/yyyy Time format = 00:00

FORECASTOVERRIDE or FORECASTOVERRIDEDETAIL section

Column	Label	Data Entry	Comments
F*	ProfileStartDateTime	Enter the Profile Start	A current or future date and time on a 5-minute boundary Date format = dd/mm/yyyy Time format = 00:00
F*	POE50	Enter POE50 (Medium reliability level)	Required; 0<= Value entered <= registered Max Capacity of the unit.
G*	ProfileEndDateTime	Enter the Profile End	A future date and time later than the StartDateTime on a 5-minute boundary. Date format = dd/mm/yyyy Time format = 00:00

Column	Label	Data Entry	Comments
G*	POE90	POE90 (Low reliability level)	0<= Value entered <= registered Max Capacity of the Unit Value <= POE50
H*	Comments	Enter your comments for the override reason.	Required; 200 characters accepted. It can be longer than displayed on the interface but only the first 200 characters are accepted by AEMO for processing.
H*	POE10	POE10 (high reliability level)	0<= Value entered <= registered Max Capacity of the Unit Value >= POE50

Figure 14 override spreadsheet layout example



A	B	C	D	E	F	G	H
C	Intermittent Forecasts Overrides						
I	IntermittentForecast	ForecastOverride	Participant	Unit	ProfileStartDateTime	ProfileEndDateTime	Comments
D	IntermittentForecast	ForecastOverride	APARTICIPANT	FPARTICIPANT	01/08/2013 12:30	01/08/2013 16:00	FPARTICIPANT relates to the unit being forecast
I	IntermittentForecast	ForecastOverrideDetail	StartDateTime	EndDateTime	POE50	POE90	POE10
D	IntermittentForecast	ForecastOverrideDetail	01/08/2013 12:30	01/08/2013 13:00	10	9	11
D	IntermittentForecast	ForecastOverrideDetail	01/08/2013 13:00	01/08/2013 13:30	10	9	11
D	IntermittentForecast	ForecastOverrideDetail	01/08/2013 13:30	01/08/2013 14:00	11	9	12
D	IntermittentForecast	ForecastOverrideDetail	01/08/2013 14:00	01/08/2013 14:30	11	9	13
D	IntermittentForecast	ForecastOverrideDetail	01/08/2013 14:30	01/08/2013 15:00	11	9	13
D	IntermittentForecast	ForecastOverrideDetail	01/08/2013 15:00	01/08/2013 15:30	11	9	13
D	IntermittentForecast	ForecastOverrideDetail	01/08/2013 15:30	01/08/2013 16:00	11	10	13

This CSV format opens in an application such as MS Notepad and so on. In the text editor format, it is very important to match the labels and commas. Each comma 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 Figure 15.

Figure 15 override text editor layout example

```
C,Intermittent Forecasts Overrides
I,IntermittentForecast,ForecastOverride,Participant,Unit,ProfileStartDateTime,ProfileEndDateTime,Comments
D,IntermittentForecast,ForecastOverride,APARTICIPANT,FPARTICIPANT,01/08/2013 12:30,01/08/2013 16:00,FPARTICIPANT relates to the unit being forecast
I,IntermittentForecast,ForecastOverrideDetail,StartDateTime,EndDateTime,POE50,POE90, POE10
D,IntermittentForecast,ForecastOverrideDetail,01/08/2013 12:30,01/08/2013 13:00,10,9,11
D,IntermittentForecast,ForecastOverrideDetail,01/08/2013 13:00,01/08/2013 13:30,10,9,11
D,IntermittentForecast,ForecastOverrideDetail,01/08/2013 13:30,01/08/2013 14:00,11,9,12
D,IntermittentForecast,ForecastOverrideDetail,01/08/2013 14:00,01/08/2013 14:30,11,9,13
D,IntermittentForecast,ForecastOverrideDetail,01/08/2013 14:30,01/08/2013 15:00,11,9,13
D,IntermittentForecast,ForecastOverrideDetail,01/08/2013 15:00,01/08/2013 15:30,11,9,13
D,IntermittentForecast,ForecastOverrideDetail,01/08/2013 15:30,01/08/2013 16:00,11,10,13
```

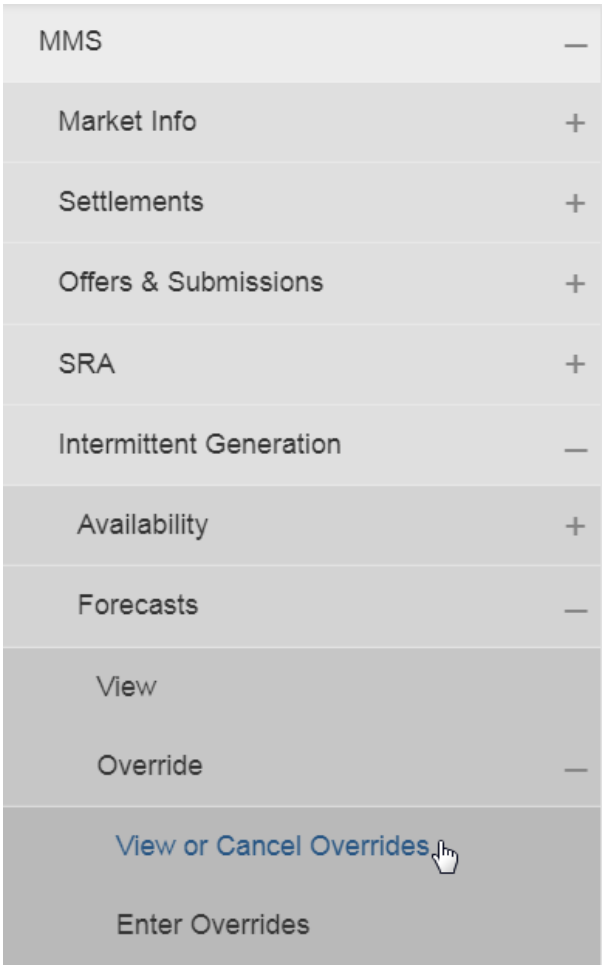
View or cancel overrides

View overrides

To view the overrides data for a selected unit:

1. Click Intermittent Generation, then Forecasts, then Override and then View or Cancel Overrides.
2. The Intermittent Forecast Overrides interface displays similar to the one below. Initially it displays the overrides for the first unit of the participant with a Profile End date not in the past, in ascending date sequence.

   Note: The interface displays the list of overrides for units belonging to the Participant ID. Any override with a Profile End date not in the past can be cancelled unless the override was created by AEMO, or it is already cancelled.



Intermittent Forecasts Overrides

Unit [redacted] Refresh

Show past/cancelled overrides

	Profile Start	Profile End	Cancelled Date	Comments	Authorised by	Cancelled by	Last Updated
Download	05/11/2012 18:40	06/11/2012 00:30	05/11/2012 21:30	[redacted]	AEMO	AEMO	05/11/2012 18:38
Download	20/11/2012 12:50	20/11/2012 13:45		Unit trip due to busfire in the area.	AEMO		20/11/2012 12:46
Download	30/11/2012 05:25	30/11/2012 08:00		[redacted]	AEMO		30/11/2012 05:23
Download	24/10/2013 14:00	24/10/2013 15:00		test	AEMO		24/10/2013 12:58

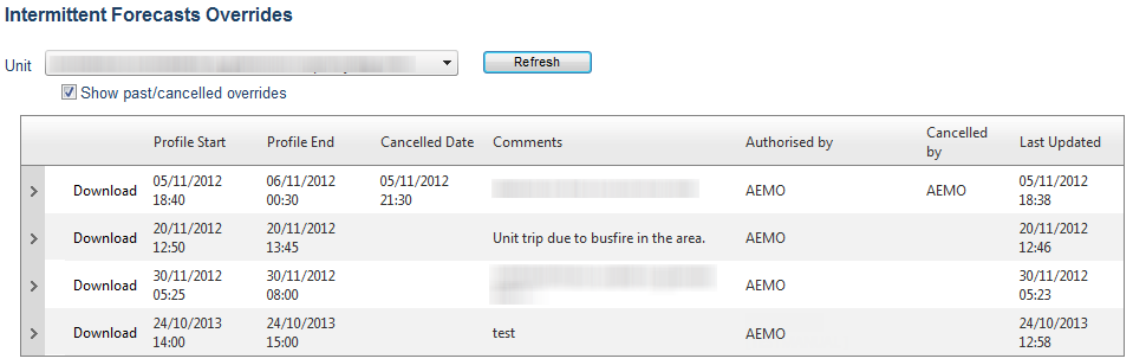
You can also:

- **Scroll through the overrides:** use the scroll bars.
- **Select another Unit:** Click the down arrow to the right of the **Unit** item to show the list of visible units. Selecting a unit in the **Intermittent Forecasts Overrides** interface displays overrides for the selected unit, according to the other selection, see Select the unit on page 8.

View past or cancelled overrides

To see past overrides:

1. Click the **Show past/cancelled overrides** checkbox, so it displays a tick.



2. The list of overrides changes to show all overrides with a Profile Start date in the last 12 months and a Profile End date not in the future.

   Note: Clicking the **Show past/cancelled overrides** checkbox toggles its state. When the **Show past/cancelled overrides** checkbox is set, old overrides display going back 12 months (based on the Profile Start date) for the chosen unit.

To restore the list to show current and future overrides:

1. Click the **Show past/cancelled overrides** checkbox, so it does not show a tick.
2. The list of overrides changes to show all overrides with a Profile End date not in the past.

View details of an override

To view the details of an override:

- Click the expand arrow next to the override to display the complete details. The expand button twists to point down. Clicking again hides the detail.

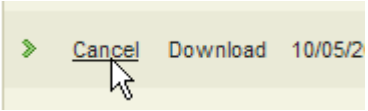
Cancel an override

All of the following conditions must be met to have an override available for cancellation:

- The Profile End date is not in the past.
- It is not already cancelled.
- The override was not created by AEMO.

To cancel an override:

1. Click the Cancel hyperlink on the selected override. If the Cancel hyperlink is not shown, the override is not available for cancellation by you.

   Important Note: Clicking the Cancel hyperlink is immediately effective and cannot be undone.

2. Next, do one of the following:
   - To confirm cancellation, click OK.
   - To reject cancellation, click Cancel.

Save the currently viewed override to a file

To download and save the currently-viewed override to a local file:

- Click the Download hyperlink, for help, see Download forecast CSV files on page 52.

Needing Help

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 Hub for 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 assistance from AEMO:

- 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

To suggest improvements to this document, please contact AEMO's Support Hub.

References

Rules, law, and government bodies

Australian Energy Market Commission (AEMC), electricity and gas rules http://www.aemc.gov.au/index.html.

Australian Energy Regulator (AER), www.aer.gov.au.

AEMO's website

aseXML Standards, links to guidelines, schemas, change process, sample files, and white papers.

You can find resources on AEMO's website.

Concise Guide to Data Interchange, assists participants to understand AEMO's Data Interchange software, describing how to set up a standard Data Interchange environment to replicate data between AEMO's wholesale energy market systems and participants' local DBMS conforming to the electricity or gas Data Models.

Guide to AEMO's CSV Data Format Standard, describes the CSV data format standard used within flat files provided to participants from AEMO's systems. Its primary function is to provide sufficient information to allow participants to understand the CSV data format used for exchanging data with AEMO.

Guide to Data Requirement for AWEFS and ASEFS, supplementary material to the Solar and Wind Energy Conversion Models. Details the Intermittent Generation (including wind and solar) data AEMO requires to prepare the Australian Wind Energy Forecasting System (AWEFS) and the Australian Solar Forecasting System (ASEFS).

Guide to Information Systems, comprehensive guide providing an overview of AEMO's market systems used by participants. It is relevant to IT decision making during participant onboarding and provides an understanding of the IT systems requiring set up.

Guide to User Rights Management, assists Participant Administrators to manage their Participant User's access to AEMO's systems. It also explains how to set up single user IDs for use with the Set Participant function in AEMO's web portals.

Participant Batcher Software and guide, moves files between participants' gateways and the Participant File Server.

Solar and Wind Energy Forecasting web page, information about the Australian Solar and Wind Energy Forecasting Systems, including a link to the **Solar and Wind Energy Conversion Model** spreadsheets.

Glossary

5-Minute predispatch
Five minute resolution, one hour ahead.

5MPD
5-minute predispatch

AEMC
Australian Energy Market Commission

AEMO
Australian Energy Market Operator

AER
The Australian Energy Regulator, established by section 44AE of the Trade Practices Act 1974.

AEST
Australian Eastern Standard Time

API
Application Programming Interface; a set of clearly defined methods of communication between various software components.

ASEFS
Australian Solar Energy Forecasting System. Designed to produce solar generation forecasts for large solar power stations and small-scale distributed photovoltaic (PV) systems, covering forecasting timeframes from 5 minutes to 2 years.

AWEFS
Australian Wind Energy Forecasting System. Established in response to the growth in intermittent generation in the NEM, and the increasing impact this growth was having on NEM forecasting processes. The system aims to provide better forecasts that will drive improved efficiency of overall NEM dispatch and pricing, and permit better network stability and security management.

Cluster
A cluster is a group of intermittent generating units; there may be more than one cluster in a Unit. AEMO may agree to have non-identical turbines in a cluster in exceptional circumstances.

CSV
Comma-separated values; a file format for exchanging data.

Dispatch
Five minutes ahead

DS
Dispatch

DUID
A semi-scheduled generating unit or a non-scheduled generating unit

ECM
Energy Conversion Model for Wind and Solar

Elements Unavailable
Required on a per cluster basis to indicate the number of elements (turbines or inverters) within each cluster unavailable for generation (due, for example, to maintenance, turbines not being built, or the inability to generate because transmission or distribution networks are unavailable).

EMMS
Wholesale Electricity Market Management System; software, hardware, network and related processes to implement the energy market.

FTP
File transfer protocol; a standard network protocol used for the transfer of computer files between a client and server on a computer network.

Intermittent Generator
A person who owns, operates or controls a generating unit

MarketNet
AEMO's private network available to participants having a participant ID

Markets Portal
Web portal for access to AEMO's wholesale web-based applications.

MTPASA
Medium-term Projected Assessment of System Adequacy. Daily resolution, two years ahead.

MW
Megawatt

NEM
National Electricity Market

NEMDE
National Electricity Market Dispatch Engine

NER
National Electricity Rules

PA
Participant Administrator; manages participant organisations user access and security.

Participant File Server
The publishing point from AEMO systems to participant systems. Each participant is allocated an account and access to private and public areas. Participants are responsible for interfacing with the Participant File Server. If uncollected, files are moved to the archive folder after a couple of days. If your Data Interchange environment is configured properly it automatically retrieves the missing files from the archive. Files are kept in the archive for approximately six months. AEMO's production and pre-production environments are independently operated, so each environment has its own IP address for its Participant File Server. For help, see Connection to AEMO's IT Systems.

Participant ID
Registered participant identifier

Participant user ID
The user ID you used to login to the system.

PASA
Projected Assessment of System Adequacy

PD
predispatch

POE
Probability of Exceedence

Pre-production
AEMO's test system available to participants

predispatch
30-minute resolution, up to 40 hours ahead.

Production
AEMO's live system

Rules
The National Electricity Rules.

SCADA
Supervisory Control and Data Acquisition

SCADA Local Limit
Same as upper MW limit.

STPASA
Short-term Projected Assessment of System Adequacy 30 minute resolution, seven days ahead.

Trading Date
Equivalent to a trading day under the Rules.

Unit
A semi-scheduled generating unit or a non-scheduled generating unit

Unit ID
A semi-scheduled generating unit or a non-scheduled generating unit

Upper MW Limit
MW Limit restriction, indicating when a facility is down regulated. An MW limit is applied in the Unit's control system to limit its MW output to below maximum capacity.

URM
User Rights Management; see the Guide to URM on AEMO's website

ZIP
The file compression format used for exchanging data with AEMO.

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