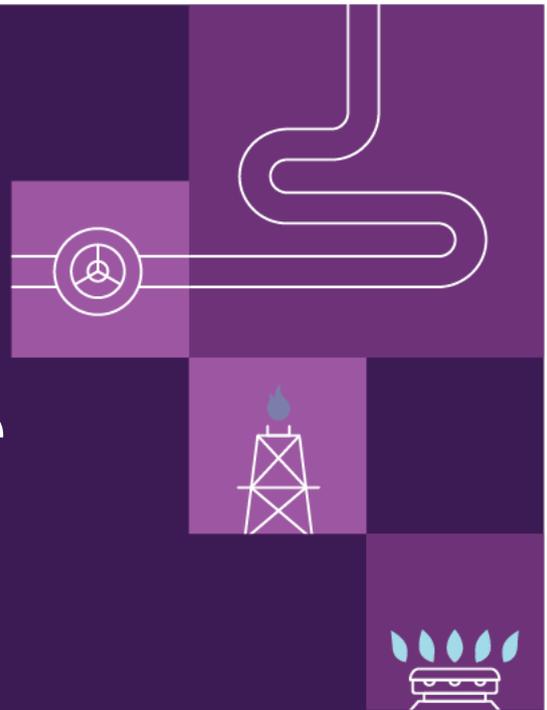




Declared Wholesale Gas Market WebExchanger User Guide



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Important notice

Purpose

AEMO has prepared this document to provide information about Declared Wholesale Gas Market (DWGM) WebExchanger, as at the date of publication.

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Current version release details

Version	Effective date	Summary of changes
8.0	1 January 2023	Updated template. Removal of AMDQ process under the AEMC rule change “DWGM improvement to AMDQ regime”

Note: There is a full version history at the end of this document.

Abbreviations and symbols

Abbreviation	Term
AEMO	Australian Energy Market Operator
BOD	beginning of day
CPP	close proximity injection point
d, d-1, d-2	today, yesterday, day before yesterday
D, D+1, D+2	current gas day, next gas day (day-ahead), gas day after next (two-days-ahead)
EST	Eastern Standard Time
GJ	gigajoule is a unit of measure of energy equal to 10^9 joule
GMS	Gas Market System
GPG	gas-fired power generation
ITR	injection tie-breaking right
MCE	Market Clearing Engine
MDQ	maximum daily quantity
MIBB	Market Information Bulletin Board
MIRN	Metering Installation Registration Number
MP	market participant
NGR	National Gas Rules
PJ	petajoule is a unit of measure of energy equal to 10^{15} joule
SDPC	supply and demand point constraint
SIP	system injection point
TJ	terajoule is a unit of measure of energy equal to 10^{12} joule
UAFG	unaccounted-for-gas
UH	uplift hedge
VOLL	value of lost load—the maximum market price

1. Introduction to WebExchanger

The WebExchanger (WEX) is a web-based application that is provided for use by market participants (MP) in the Declared Wholesale Gas Market (DWGM). Each MP must submit important market information to AEMO (withdrawal and injection bids, demand forecast) when required for each gas day in accordance with the National Gas Rules (NGR).

It is important that MPs understand these rules, the requirements, and the benefits of compliance with these rules.

AEMO will use the submitted market information as part of the input required in order to produce required scheduling instructions for the gas market. Schedule instructions will be provided to relevant market participants via the Market Information Bulletin Board (MIBB).

The WebExchanger is built on Java Enterprise technology to provide flexible and efficient interfaces with other market system components and support business processes that have been developed for the DWGM.

Main functions of WebExchanger

WebExchanger enables MPs to submit gas market information to AEMO, including:

- Controllable injection and withdrawal bids.
- Demand forecasts (uncontrollable withdrawals).

All information submitted is written directly into AEMO's internal systems for processing. Data can be entered manually, or entered by file upload, or submitted through automated processes (web services). The different methods and processes are detailed in this guide.

2. Getting Started with WebExchanger

2.1. Account registration

User access to the WebExchanger must be registered through a valid MIBB user account.

New users must apply to AEMO for an MIBB user account and request access to WebExchanger. Existing MIBB users must complete the *MIBB Account Access and Password Change Request Form* and nominate access to WebExchanger. This form can be obtained from Supporthub.

After the registration process is complete, user accounts are set up by an AEMO IT system administrator. Each market participant is given access to the market information, system interfaces, and details that are relevant to their profile. For example, drop-down lists are populated only with meters and settings that the participant has permission to access. Registered users will be issued with a username and password.

2.2. Help

For assistance with WebExchanger, contact the AEMO Information and Support Hub at supporthub@aemo.com.au or 1300 236 600 (1300 AEMO 00).

2.3. System security

AEMO applies industry-standard security measures to protect market systems and data integrity, including password security, system time-outs, bid entry start and cut-off times (in accordance with the NGR), and participant data confidentiality.

Password security measures include:

- Passwords must be changed at least every 42 days.
- Passwords must be at least six characters in length.
- The system remembers up to 13 previous passwords.
- Passwords must meet complexity requirements (see Section 2.4).

All accounts are locked on three unsuccessful attempts to login and will require an administrator to unlock.

MPs are encouraged to have individual accounts for each registered user and not generic accounts that are shared. This helps AEMO manage accounts and avoid problems such as the changing of passwords among multiple users.

Only the nominated MIBB security officer appointed by each organisation can approve account changes.

2.4. Password requirements

These requirements are applied whenever passwords are changed or created. Passwords must not contain all or part of the user's account name, and must contain characters from three of the following four categories:

- Uppercase alphabetical characters A through Z.
- Lowercase alphabetical characters a through z.
- Numerals 0 through 9.
- Non-alphabetical characters, such as !, \$, #, %.

2.5. Session time-out

The WebExchanger application will time-out if it is left inactive for more than 30 minutes. Any data entered or partly entered will be lost.

Note. Data submitted in the session before the WebExchanger time-out is processed normally—only data that has not been submitted will be lost.

3. The WebExchanger Interface

The WebExchanger interface contains several elements which change in relation to the function being performed. shows the WebExchanger home page, which contains the elements that are generic to all WebExchanger screens:

- Work area
- Main menu
- Actions menu
- Log-in details and system clock.

Figure 1 WebExchanger home page



The functions and information displayed in the Actions menu and work area will change with each tab selected in the Main menu.

3.1. Main menu

Tabs on the WebExchanger main menu provide access to all WebExchanger functions. For example, the **Bids** tab gives access all bids functions.

Tab	Functions
Home	<ul style="list-style-type: none"> • General information • Access to home page action menu items.
Bids	<ul style="list-style-type: none"> • Create new bids (injection or withdrawal). • Search for and modify existing bids (save as new). • Revise current gas day bids. • Submit bids. • Review bids.
Demand Forecast	<ul style="list-style-type: none"> • Create new demand forecasts. • Search for and modify existing forecasts (save as new). • Revise current gas day forecasts. • Submit demand forecasts. • Review demand forecasts.

3.2. General features and common tasks

3.2.1. Change password

To change your password:

1. Click the **Home** tab.
2. On the **Actions** menu, click **Change password**.
3. In the **Old Password** box, type your current password.
4. In the **New Password** box, type the new password (see Section 2.4 for requirements).
5. In the **Verify New password** box, type the password again.
6. Click **Change password**.

The change will take effect the next time you log in.

3.2.2. System clock

AEMO systems run to Eastern Standard Time (EST) all year round without adjustment for daylight-saving. Market participants must make the necessary adjustments during periods of daylight-saving. The system clock is displayed at all times in the upper right corner of the screen.

3.2.3. Calendar tool

Use the Calendar tool to select a date range when searching for existing bids, demand forecasts, or nominations. This ensures that dates are entered into the WebExchanger in the correct format.

Note. A gas day is the 24-hour period starting at 6:00 AM (ending at 6:00 AM the next day).

To select dates with the Calendar tool:

1. Click inside the field box of any date field to open the Calendar tool.

To gas day:

2. Click a date to select it.

x		March, 2012							x	
«		Today		»		»		»		
wk	Sun	Mon	Tue	Wed	Thu	Fri	Sat			
8					1	2	3			
9	4	5	6	7	8	9	10			
10	11	12	13	14	15	16	17			
11	18	19	20	21	22	23	24			
12	25	26	27	28	29	30	31			
Select date										

- To scroll forwards or backwards through the months, click the < or > controls.

- To select a specific month, hold down the > control and select the month from the drop down list.
- To scroll forwards or backwards through the years, click the << or >> controls.
- To select a specific year, hold down the >> control and select the year from the drop down list.
- To return to the current date, click the **Today** link.

Take care when selecting dates

Because a gas day starts at 6:00 AM one day and ends at 6:00 AM on the next calendar day, care must be taken when selecting date ranges in WebExchanger. For example, to retrieve all bids for the month of January, you must select the date range from 1 January to 1 February. Similarly, if you wish to submit a standing bid that would remain in effect for the month of January, you must select the date range to commence on 1 January and terminate on 1 February. This is because a To Gas Day date of the 31 January will not pick up bids between midnight of 31 January and 6:00 AM of 1 February.

3.2.4. Cancelling data entry

Because WebExchanger is an online application, its behaviour is similar to any web page. And so, to cancel out of a data entry process, simply click out of the data entry screen (click the Home tab, for example). The data entry screen will close and the unsubmitted data will be discarded.

Note. You can still cancel the entry during the final confirmation step.

3.3. File upload

The WebExchanger file upload function enables MPs to enter bidding and demand forecasts by uploading a CSV file (comma-separated values).

Note. The uploaded file only populates the screen (bid price, quantity steps, and dates). All data must be manually submitted, regardless of how the data is input.

The MP prepares a data file with a third-party tool, such as Microsoft® Excel™ or any text editor. Each file can contain only one of the following:

- A single bid.
- A single non-site-specific demand forecast or a single site-specific demand forecast.

Details of file formats and the upload function can be found in *DWGM Participant Build Pack*, which can be requested from the AEMO Supporthub.

3.3.1. Excel file compatibility

WebExchanger only accepts CSV files with the date format DD MMM YYYY. When a file is saved in Excel, Excel might automatically change the date format to DD-MM-YY. This includes files created in other applications, which are opened and saved in Excel. If a file is opened in Excel without saving, the date formats are not affected.

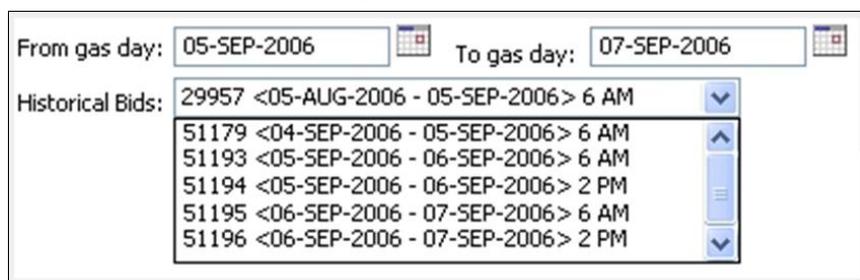
3.4. Searching and retrieving historical data

All submissions are stored in AEMO file systems for up to 18 months. AEMO records all submissions, including multiple submissions for the same schedule, within that period. Market participants, however, can only access the last-approved submission for each schedule of each day with a specified date range. This applies to historical bid, forecast and nomination data.

For example, if an MP submits three sets of data for the 6:00 AM schedule on a gas day, AEMO records all three entries. But the MP can only view the last-approved submission in the list of historical bids.

However, if the MP submits one entry for the 6:00 AM schedule on a gas day, and then submits revised data for the 2:00 PM schedule for the same day, both submissions will appear in the historical bids list.

Figure 2 Results of a search, showing all (last-approved) entries that fall wholly or partially within the date range



The WebExchanger user can select an existing submission from a previous day, modify it (if necessary), and then save it as a new submission for the current day or days ahead or as a new standing submission. The search criteria available with each data type are listed in Table 1.

Table 1 Search criteria

Data type	Search criteria
Bids	<ul style="list-style-type: none"> • Bid type • Meter (withdrawal or injection point) • Date range
Demand Forecast	<ul style="list-style-type: none"> • Forecast type • Date range

3.5. Web Services

There are two methods by which market participants can interact with AEMO’s market systems:

- WebExchanger provides an interactive user interface accessed from a web browser. This mode allows users to view and submit data and upload CSV files. This guide describes the WebExchanger user interface.
- WebExchanger Web Services provides a protocol by which the market participant’s systems can communicate directly with AEMO’s market systems.

The WebExchanger Web Services are divided into a number of discrete services relating to particular areas of functionality:

- Bid service.
- Demand forecast service.

For information about Web Services, including details of input and output parameters and error messages, refer to the *DWGM Participant Build Pack*.

3.6. MIBB reports

Reports triggered by processes in WebExchanger can be accessed on the MIBB. These reports allow MPs to verify that submitted data (bids and demand forecasts) has been received and processed by AEMO.

MIBB reports are summarised in Table 2. For a complete description, refer to *User Guide to MIBB Reports*.

Table 2 Summary of MIBB reports

MIBB Report	Name	Details
INT103a	Bid Confirmation	This is an MP report, produced after an MP withdrawal or injection bid is accepted by the market system.
INT103c	Demand Forecast Confirmation	This is an MP report, produced after an MP's demand forecast is accepted by the market system.

Access to market participant reports is strictly controlled through the permissions granted to each user.

4. Data submissions

4.1. Rules for data submission

Market participants must comply with the relevant rules when submitting the required market information. The AER monitors compliance by market participants and AEMO. The National Gas Rules¹ (NGR) set out an MP's obligations in relation to market data provisions:

- Rule 207 Requirement to submit bids and demand forecasts.
- Rule 208 Demand forecasts.
- Rule 209 Bids.
- Rule 210 Accreditation (of controllable injections and withdrawals).
- Rule 211 Timing of submissions by Market Participants.
- Rule 213 Other requirements for submissions by Market Participants.

4.2. Understanding scheduling intervals and horizons

The terms 'schedule', 'scheduling interval', and 'scheduling horizon' are related, but they are not the same.

Scheduling interval

There are five scheduling intervals in the current gas day market. 6:00 AM – 10:00 AM, 10:00 AM - 2:00 PM, 2:00 PM – 6:00 PM, 6:00 PM – 10:00 PM, and 10:00 PM – 6:00 AM.

Scheduling horizon

The scheduling horizon refers to the period of time over which a bid applies. For example, 6:00 AM bids (also referred to as beginning-of-day or BOD bids) are applied to the 6:00 AM – 6:00 AM scheduling horizon (the whole gas day). However, 2:00 PM revised bids for the current gas day, apply to the 2:00 PM – 6:00 AM scheduling horizon.

Schedule

For the current gas day, a schedule is run for each scheduling horizon at the start of each scheduling interval. There are therefore, on a normal gas day, five schedules run for the current gas day at 6:00 AM (BOD), 10:00 AM, 2:00 PM, 6:00 PM, and 10:00 PM. Additional day-ahead and two-day-ahead schedules are also run.

Which scheduling horizon do I enter the bid into?

BOD (current day) bids, day-ahead bids, and standing bids are only entered in the 6:00 AM scheduling horizon. Revised bids (rebids) are entered in the remaining scheduling horizons (10:00 AM, 2:00 PM, and so forth).

¹ <http://www.aemc.gov.au/Gas/National-Gas-Rules/Current-Rules.html>

4.3. Schedule types

AEMO prepares and publishes two types of schedules at each schedule time:

Pricing schedule

The key output in a pricing schedule (PS) is the market price.

Operating schedule

The key outputs from the operating schedule (OS) are the scheduled injection and withdrawal quantities for each MP at each system injection and withdrawal point. These are issued to each MP in the scheduling instructions.

4.4. Market timeline

4.4.1. Schedule publishing times

The schedule times, schedule types, and scheduling horizons are summarised in Table 3 and described below:

- Each day at 6:00 AM, the beginning-of-day (BOD) pricing schedule (PS) and operating schedule (OS) are published by AEMO. These schedules cover the scheduling horizon from 6:00 AM to 6:00 AM for the current gas day.
- At 8:00 AM, the day-ahead (D+1) PS and OS are published. These schedules cover the scheduling horizon from 6:00 AM to 6:00 AM for the next gas day.
- At 10:00 AM, the first revised PS and OS are published for the current gas day, covering the scheduling horizon from 10:00 AM to 6:00 AM (that is, the remaining hours of the current gas day). The revised data replaces the beginning-of-day schedule data going forward and becomes the last-approved schedule.
- At 12:00 PM, the two-day-ahead (D+2) PS and OS are published. These schedules cover the scheduling horizon from 6:00 AM to 6:00 AM for the day after the next gas day.
- At 2:00 PM, the second revised PS and OS are published for the current gas day, covering the scheduling horizon from 2:00 PM to 6:00 AM (the remaining hours of the current gas day). This is now the last-approved schedule.
- The process continues throughout the day (at 4:00 PM, 6:00 PM, 10:00 PM and 12:00 AM). As schedules are revised, market instructions are updated.

Although AEMO publishes revised schedules for each of the scheduling horizons, it is not mandatory for MPs to provide revised data for these later schedules.

Important. AEMO systems operate on Eastern Standard Time (EST) and are not adjusted for periods of daylight saving.

Table 3 Gas day scheduling times and horizons

Schedules published at	Contain these schedule types	For this scheduling horizon
6:00 AM	Beginning-of-day (BOD) PS and OS for current gas day (D)	Gas day D 6:00 AM – 6:00 AM 24-hour horizon

Schedules published at	Contain these schedule types	For this scheduling horizon
8:00 AM	PS and OS for next gas day (D+1)	Gas day D+1 6:00 AM – 6:00 AM 24-hour horizon
10:00 AM	Revised PS and OS for current gas day (D)	Gas day D 10:00 AM – 6:00 AM 20-hour horizon
12:00 PM noon	PS and OS for two-days ahead (D+2)	Gas day D+2 6:00 AM – 6:00 AM 24-hour horizon
2:00 PM	Revised PS and OS for current gas day (D)	Gas day D 2:00 PM – 6:00 AM 16-hour horizon
4:00 PM	Revised PS and OS for next gas day (D+1)	Gas day D+1 6:00 AM – 6:00 AM 24-hour horizon
6:00 PM	Revised PS and OS for current gas day (D)	Gas day D 6:00 PM – 6:00 AM 12-hour horizon
10:00 PM	Revised PS and OS for current gas day (D)	Gas day D 10:00 PM – 6:00 AM 8-hour horizon
12:00 AM midnight	Revised PS and OS for next gas day (D+1)	Gas day D+1 6:00 AM – 6:00 AM 24-hour horizon

4.4.2. Data submission time frames

There is a defined window within which bids, demand forecasts, and nominations for each scheduling horizon can be entered into WebExchanger. These timeframes are listed in Table 4, which, referring to the column labels *S*, *G*, *V* and *W* in the table, are read as “Data *V* for schedule *S* on gas day *G* must be submitted before *W*2 and not before *W*1”.

The cut-off time for each round of submissions is one hour before the publishing time for that schedule with the exception of the revised D+1 12:00 AM (midnight) schedule, for which the bid cut-off time is 10:00 PM. Data cannot be submitted after the cut-off time using WebExchanger—the software only permits input into the next available scheduling interval (or horizon).

Similarly, each scheduling horizon has a submission start time, before which data cannot be entered for that horizon.

Table 4 Data submission time frames

Submissions for schedules published today at	For gas day (D)	For these types of submission data		Must be submitted before		And not earlier than	
S	G	V		W2		W1	
	D = current gas day D+1 = next gas day D+2 = gas day after next	Bids	Demand Forecasts	d = today d-1 = yesterday d-2 = day before yesterday			
6:00 AM	D	■	▲	5:00 AM	d	10:01 PM	d-1
8:00 AM	D+1	■	▲	7:00 AM	d	10:01 PM	d-1
10:00 AM	D	□	□	9:00 AM	d	5:01 AM	d
12:00 PM	D+2	■	▲	11:00 AM	d	10:01 PM	d-1
2:00 PM	D	□	□	1:00 PM	d	9:01 AM	d
4:00 PM	D+1	□	□	3:00 PM	d	7:01 PM	d-1
6:00 PM	D	□	□	5:00 PM	d	1:01 PM	d
10:00 PM	D	□	□	9:00 PM	d	5:01 PM	d
12:00 AM	D+1	□	□	10:00 PM	d	3:01 PM	d

- = mandatory submission by injecting MP or withdrawing MP with controllable demand
- ▲ = mandatory submission by withdrawing MP with uncontrollable demand
- = optional submission

4.5. Standing data

Standing data entries can be made for market bids and demand forecasts. There are two strategies that are commonly employed for standing data:

- Standing data can be used as a back-up in the event of a system failure. AEMO encourages MPs to submit standing entries for back-up purposes.
- Standing data can save time when submitting the same data for an extended period—days, weeks or perhaps months.

Note. To commence a standing data entry on the current gas day, the submission must be made prior to 5:00 AM (beginning-of-day cut-off time).

Duration and precedence of standing data

- The standing bid or demand forecast commences at 6:00 AM on the commencement date.
- The standing bid or demand forecast terminates at 6:00 AM on the termination date.
- An individual bid or demand forecast that is submitted after and overlaps with an existing standing data entry takes precedence over standing data. The standing data entry takes effect again when there are no superseding individual entries.
- A standing bid or demand forecast that is submitted after and overlaps with an existing individual entry takes precedence over the individual entry.

Example

Market participant A has a standing bid where:

- Commencement Date = 1st of a new month.
- Termination Date = 1st of the following month.

On the 15th, market participant A submits a bid for the current gas day (commencing on the 15th at 6:00 AM and ending on the 16th at 5:59 AM).

The bids will function as follows:

- Standing bid commences 6:00 AM on the 1st.
- Current gas day bid takes effect on the 15th at 6:00 AM.

Standing bid recommences on 6:00 AM on the 16th and continues until the end of the month (until 6:00 AM on the morning of the 1st of the following month) unless further current gas day bids are specified.

5. Market bids

MPs who intend to inject gas into or withdraw controllable (or price responsive) gas from the Declared Transmission System (DTS) must submit bids to AEMO to indicate their intention to do so. Bids are submitted from the WebExchanger **Bids** tab.

Bids for the current gas day are submitted prior to the beginning of each gas day, and optional revised bids can be entered at any of the four subsequent scheduling intervals throughout the gas day. Revised bids are entered at the discretion of the MP – beginning-of-day bids in the 6:00 AM schedule will apply to the full gas day if no revised bids are subsequently submitted. This allows MPs to shift their position if market conditions change during the gas day.

Day-ahead (D+1), two-day-ahead (D+2) and standing bids are also submitted from the WebExchanger **Bids** tab. When entering bids for D+1 or D+2 schedules, MPs must enter the data against the 6:00 AM schedule for that gas day.

AEMO collates all bids, produces the operating and pricing schedules and publishes the scheduling instructions to the Market Information Bulletin Board. Bids are accepted by AEMO contingent on a range of market and operating conditions being met over the course of the gas day.

5.1. Types of market bids

Injection bids

A separate injection bid must be submitted for each system injection point at which the MP intends to inject gas on a gas day. All system injection points that the MP has access to will be available from a drop-down list on the injection bids entry screen.

Each injection bid must specify:

- The gas day to which the injection bid applies.
- The identity of the MP submitting the injection bid.
- The system injection point at which the MP intends to inject gas.
- Up to 10 bid steps for that schedule.

Withdrawal bids

A separate withdrawal bid must be submitted for each system withdrawal point from which the MP intends to withdraw gas on a gas day. All system withdrawal points that the MP has access to will be available from a drop-down list on the withdrawal bids entry screen.

Each withdrawal bid must specify:

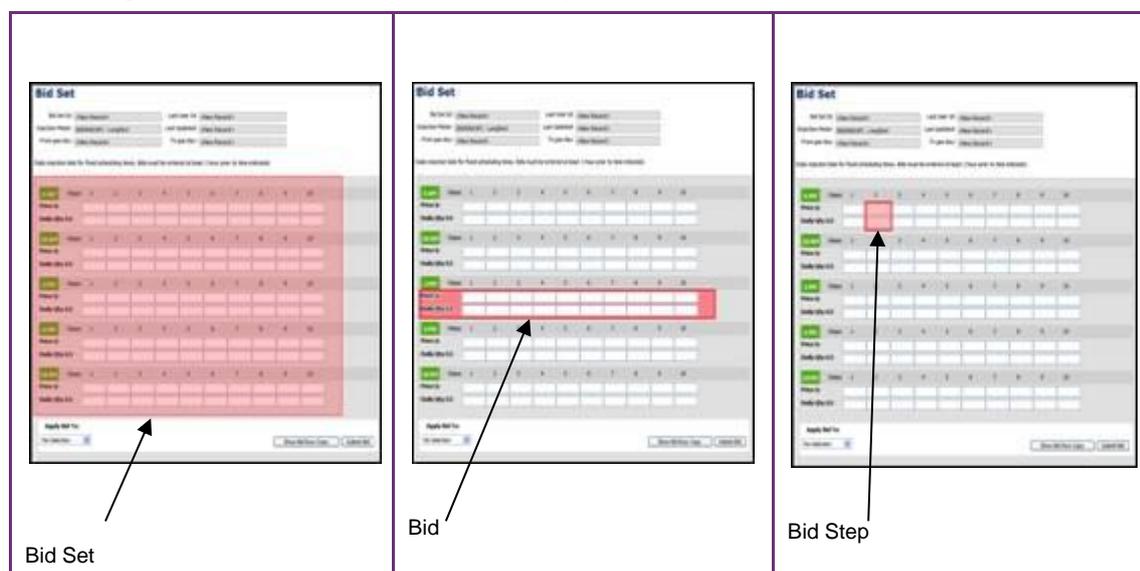
- The gas day to which the withdrawal bid applies.
- The identity of the MP submitting the withdrawal bid.
- The system withdrawal point from which the MP proposes to withdraw gas.
- Up to 10 bid steps for that schedule.

5.2. Bid sets, bids, and bid steps

The following terms are used to describe bidding information:

- **Bid set.** The bid set is defined as the collection of all bids for the gas day. For example, if the MP enters beginning-of-day bids, and subsequently enters revised bids for the 10:00 AM and 2:00 PM scheduling horizons, the bid set contains all three entries.
- **Bid.** A bid is a price-ordered collection of up to ten bid steps for a specific scheduling horizon.
- **Bid step.** A bid step is a price-quantity step in a bid.

Figure 3 Bid set, bid and bid step



Bids contain up to 10 bid steps specifying a price in \$/GJ to four decimal places and a daily quantity in whole gigajoules (GJ) that the MP proposes to inject or withdraw at that price.

The example in Figure 4 indicates that the MP is prepared to inject up to:

- 200 GJ at a price of 3.55 \$/GJ, or
- 250 GJ at a price of 3.80 \$/GJ, or
- 300 GJ at a price of 4.00 \$/GJ.

Figure 4 Bid step example

6 AM	Steps:	1	2	3
Price \$:		3.5500	3.8000	4.0000
Daily Qty GJ:		200	250	300

Each bid step applies for the entire gas day if no other bids are subsequently entered. When rebidding (at, say, the 2 PM schedule), the quantities are daily quantities, and the price is only applied to that scheduling horizon (from 2 PM to 6 AM, for example). Consequently, the rebid quantity cannot be less than the quantity that the MP has already been scheduled to inject or withdraw in earlier scheduling intervals. The number of bid steps, quantities, and prices in a rebid are otherwise independent to any previously submitted or scheduled bid.

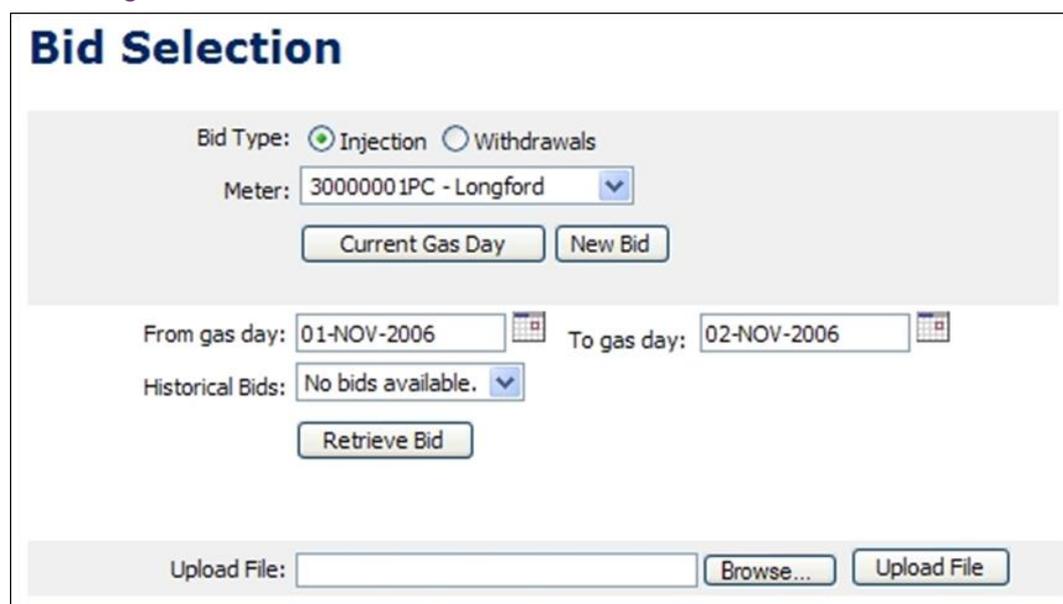
5.3. Bid Selection screen

When the WebExchanger **Bids** tab is selected, the **Bid Selection** screen is displayed (Figure 5), from which the user can:

- Select the **Bid Type** as either **Injection** or **Withdrawals**.
- From the **Meter** drop down list, select the injection or withdrawal meter – only meters that they have already registered with AEMO are displayed.
- Create a new or revised bid using one of the following methods:
 - To create a new current day, day-ahead or two-days-ahead bid, click New Bid to open the Bid Set screen. For more information, see Section 5.6.
 - To revise bids for the current gas day in the Bid Set screen, click Current Gas Day. For more information, see Section 5.7.
 - To revise day-ahead bids in the Bid Set screen, click Retrieve Bid. For more information, see Section 5.7.
 - To use a historical bid as a new bid, select the From gas day and To gas day search range, and then select a bid from the Historical Bids drop-down list. Click Retrieve Bid to load the bid data to the Bid Set screen, where it can then be modified. For more information, see Section 5.8
 - To upload a prepared CSV file to the Bid Set screen, click Browse to locate the CSV file, and then click Upload File. For more information, see Section 5.9.

Refer to *DWGM Participant Build Pack* for specifications of the CSV file format.

Figure 5 Bid Selection screen



The screenshot shows the 'Bid Selection' interface with the following elements:

- Bid Type:** Radio buttons for 'Injection' (selected) and 'Withdrawals'.
- Meter:** A dropdown menu showing '3000000 IPC - Longford'.
- Buttons:** 'Current Gas Day' and 'New Bid' buttons.
- From gas day:** A date input field with '01-NOV-2006' and a calendar icon.
- To gas day:** A date input field with '02-NOV-2006' and a calendar icon.
- Historical Bids:** A dropdown menu showing 'No bids available.'.
- Buttons:** 'Retrieve Bid' button.
- Upload File:** A text input field, a 'Browse...' button, and an 'Upload File' button.

5.4. Bid set screen

On the Bid Selection screen, after selecting the type of bid and the applicable meter or an historical bid, when the user clicks either **Current Gas Day**, **New Bid**, or **Retrieve Bid**, the Bid Set screen is displayed (Figure 6). This screen has three sections:

- The top section contains details that are generated by the system during and after the bid submission. For more information, see Section 5.4.1.
- The middle section is where the user enters bid price and bid quantity for each bid step. There are five rows corresponding to five schedules for the gas day. The applicable fields are enabled or disabled for data entry once the **Apply Bid To** function (see Section 5.4.2) is selected. This defines whether the bid is current gas day, day ahead, standing and such.
- Other functions are shown at the bottom of the Bid Set screen.

Users can type the bid data directly in to the selected scheduling horizon or copy the details of an existing bid in the Bid Set screen using the **Bid Row Copy** function (see Section 5.4.2) and then paste the data to the row for the selected scheduling horizon. When complete, the user clicks **Submit Bid** (see section 5.4.4) to submit the bid set for validation and processing.

Figure 6 Bid Set screen

Bid Set

Bid Set Id: <New Record>	Last User Id: <New Record>
Injection Meter: 3000000 IPC - Longford	Last Updated: <New Record>
From gas day: <New Record>	To gas day: <New Record>

Selection Criterion: 165885 <01-JUL-2011 - 01-JAN-2012> 6 AM, modified by Visy02 on 27-JUN-2011 17:19:50

Daily injection bids for fixed scheduling times. Bids must be entered at least 1 hour prior to time indicated.

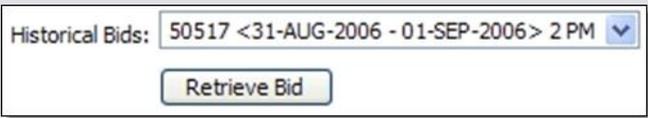
6 AM	Steps:	1	2	3	4	5	6	7	8	9	10	165885
Price \$:		<input type="text" value="0.0000"/> <input type="text"/>										
Daily Qty GJ:		<input type="text" value="8,000"/> <input type="text"/>										
10 AM	Steps:	1	2	3	4	5	6	7	8	9	10	
Price \$:		<input type="text"/>										
Daily Qty GJ:		<input type="text"/>										
2 PM	Steps:	1	2	3	4	5	6	7	8	9	10	
Price \$:		<input type="text"/>										
Daily Qty GJ:		<input type="text"/>										
6 PM	Steps:	1	2	3	4	5	6	7	8	9	10	
Price \$:		<input type="text"/>										
Daily Qty GJ:		<input type="text"/>										
10 PM	Steps:	1	2	3	4	5	6	7	8	9	10	
Price \$:		<input type="text"/>										
Daily Qty GJ:		<input type="text"/>										

Apply Bid To:

No Selection

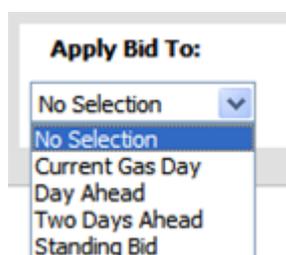
5.4.1. System displayed information

The following details will be displayed automatically by the system for user reference and data tracking purposes:

Bid Set ID	A unique identifier for the overall bid set. The Bid Set Id is generated when the first set of bids for the gas day is successfully submitted. Note that each bid entered will have a unique Bid ID (see Bid ID below).
Injection/Withdrawal Meter	As selected on Bid Selection screen.
Last User ID	Displays the last user to modify the bid set.
Last Updated	Displays the time the bid set was last modified.
From Gas Day	As selected on Bid Selection screen or the Apply Bid To field.
To Gas Day	As selected on Bid Selection screen or the Apply Bid To field.
Bid ID	Each individual bid entry (for a scheduling horizon) has a unique Bid ID (shown in red). When searching for existing bids, the Bid ID is displayed by WebExchanger—not the Bid Set ID. The example below shows “Bid ID <from date – to date> schedule run time”. 

5.4.2. Apply Bid To function

The gas day is selected using the **Apply Bid To** function at the bottom-left corner of the screen:



Current Gas Day	Select this option to enter the beginning-of-day bids for the current gas day.
Day Ahead	Select this option to enter the initial one-day-ahead bids.
Two Days Ahead	Select this option to enter the initial two-days-ahead bids.
Standing Bid	Select this option to enter a new standing bid. Date range fields are displayed to select the period for which the bids are to stand.

If the day-ahead or two-day-ahead options are selected, only the row for the 6:00 AM scheduling horizon is available for data entry (see Figure 7).

Figure 7 Bid Set screen for day-ahead and two-day-ahead bids

6 AM	Steps:	1	2	3	4	5	6	7	8	9	10
Price \$:											
Daily Qty GJ:											
10 AM	Steps:	1	2	3	4	5	6	7	8	9	10
Price \$:											
Daily Qty GJ:											
2 PM	Steps:	1	2	3	4	5	6	7	8	9	10
Price \$:											
Daily Qty GJ:											
6 PM	Steps:	1	2	3	4	5	6	7	8	9	10
Price \$:											
Daily Qty GJ:											
10 PM	Steps:	1	2	3	4	5	6	7	8	9	10
Price \$:											
Daily Qty GJ:											

5.4.3. Bid Row Copy function

The **Bid Row Copy** function allows the user to copy the data from any bid row on the screen to the current selected scheduling horizon.

To copy bid data to the current selected scheduling horizon:

1. Click the **Show Bid Row Copy** button. The **Copy From Interval** function is displayed.

Copy From Interval: 6 AM 10 AM 2 PM 6 PM 10 PM

2. Select the scheduling horizon to be copied.
3. Click the **Copy To <time> Interval** button, where <time> is the current selected scheduling horizon.

The screen refreshes with the copied data displayed.

5.4.4. Submit Bid function

The **Submit Bid** function allows the user to submit the bid information they have created. The **Bidding Information and Confirmation** message is then displayed. Click **Confirm Bid** to proceed with the submission or **Cancel Bid** to cancel the submission.

Figure 8 Bid Information and Confirmation screen for current gas day submission

Bidding Information and Confirmation

Are you sure? Note that only one bid out of the entire bid set will be taken for consideration by WebExchanger.

Meter: **3000001PC - Longford**
 Apply To Gas Day: **Current Gas Day**
 Bid Type: **Injection**
 Commencement Date: **14-JUN-2006**
 Termination Date: **15-JUN-2006**

Please cancel or confirm your bid using the buttons below.

5.5. Bid data validation rules

The following rules apply to Bid Step data entry:

Price \$	<ul style="list-style-type: none"> • Price in \$/GJ to four decimal places—the system auto-completes entries under four decimal places. • Must be greater than or equal to zero and less than VOLL
Daily Qty GJ	<ul style="list-style-type: none"> • Daily quantity in whole gigajoules. • Positive value or zero if the first or only bid step. • Consistent with any prevailing supply and demand point constraints SPDCs.
Available data fields	Depending on the time of day and the bid type and gas day (Apply Bid To) selected, the system will enable or disable the relevant fields for data entry. Disabled fields are greyed-out.

The NGR also stipulates that price and quantity value entries must follow these guidelines:

For an injection bid:

- The quantity of gas specified in a price step must be at least as much as the quantity specified for a price step specifying a lower price (NGR Clause 209[6]).
- For the current gas day, an updated bid must be for the whole of the gas day, and must be consistent with the quantity scheduled in respect of that bid for the current and preceding scheduling intervals on that gas day (NGR Clause 211[5]).

For a withdrawal bid:

- The quantity of gas specified in a price step must be no more than the quantity specified for a price step specifying a lower price (NGR Clause 209[7])
- For the current gas day, an updated bid must be for the whole of the gas day, and must be consistent with the quantity scheduled in respect of that bid for the current and preceding scheduling intervals on that gas day (NGR Clause 211[5]).

What this means is that for an injection bid, the price and quantity must both begin at the lowest amount and increase with each step, as shown below:

6 AM	Steps:	1	2	3	4
Price \$:		3.5000	3.7500	4.0000	4.2500
Daily Qty GJ:		300	500	700	800

For a withdrawal bid, the price must start at the highest amount and decrease with each step, and the quantity must start at the lowest and increase with each step, as shown below:

6 AM	Steps:	1	2	3	4
Price \$:		4.2500	4.0000	3.7500	3.5000
Daily Qty GJ:		300	500	700	800

When MPs enter injection or withdrawal bids, the data must be entered for each applicable scheduling horizon as indicated below:

For gas day	If the bid type is	Enter bids into this scheduling horizon	For example
Current (D)	BOD	6:00 AM only	At 4:00 AM the user can enter current gas day bids for the 6:00 AM scheduling horizon only.
Current (D)	Revised	Next scheduling horizon	At 12:00 PM the user can enter current gas day bids for the 2:00 PM scheduling horizon only.
Day Ahead (D+1)	New or revised	6:00 AM only	Bids apply to the whole gas day.
Two-Day Ahead (D+2)		6:00 AM only	Bids apply to the whole gas day.
Any future gas day	Standing bids	6:00 AM only	Bids apply to the whole gas day.

5.6. Creating new bids

This section describes how to create a new submission for:

- BOD bids for the current gas day.
- Day-ahead bids.
- Two-day-ahead bids.
- Standing bids.

Note. When the user selects to create a new bid, the Meter drop-down list is automatically populated with the market participant’s registered injection points or withdrawal points.

To create a new bid:

1. Click the **Bids** tab.

The **Bid Selection** screen is displayed (**Error! Reference source not found.**).

2. Select the **Bid Type**—Injection or Withdrawal.
3. Select the **Meter** from the drop-down list.
4. Click **New Bid**.

The **Bid Set** screen is displayed (**Error! Reference source not found.**).

5. From the **Apply Bid To** drop-down list, and select the gas day:
 - Select Current Gas Day to create a BOD bid for “current” gas day.

Note. The submission window for current day (gas day D) BOD bids is 10:01 PM to 5:00 AM on gas day D-1 (see **Error! Reference source not found.**).

- Select Day Ahead to create an initial day-ahead bid.

Note. The submission window for day-ahead (gas day D+1) bids is 10:01 PM on gas day D-1 through to 7:00 AM on gas day D (see **Error! Reference source not found.**).

- Select Two Days Ahead to create an initial two-day-ahead bid.

Note. The submission window for two-days-ahead (gas day D+2) bids is 10:01 PM on gas day D-1 through to 11:00 AM on gas day D (see **Error! Reference source not found.**)

- Select Standing Bid to create a bid over a date range.

Note. The submission window for a standing bid that commences on gas day D closes at 5:00 AM on gas day D-1 (see **Error! Reference source not found.**).

6. If a standing bid, the screen refreshes to show the date range fields.

Apply Bid To:	Commencement Gas Day:	Termination Gas Day:
Standing Bid	<input type="text"/>	<input type="text"/>

Click in the commencement and termination gas day boxes to select the required dates with the calendar tool (see Section 3.2.3). The commencement date must be at least one day after of the date of data entry. For more information about standing data, see Section 4.5.

7. In the 6:00 AM schedule row, type the **Price** and **Daily Qty** in bid step 1.

6 AM	Steps: 1
Price \$:	<input type="text"/>
Daily Qty GJ:	<input type="text"/>

Type additional bids steps as required (up to 10 steps allowed). Bids steps must be entered consecutively, with no gaps between steps. See Section 5.5 for data entry rules.

8. When complete, click **Submit Bid**.

The **Bid Information and Confirmation** screen (**Error! Reference source not found.**) is displayed.

9. Verify that all details are correct, and then click **Confirm Bid** to proceed. A message is displayed if errors are detected. If required, correct the errors and then resubmit.

10. A message is displayed confirming that the bid was submitted successfully.

5.7. Revising bids

Market participants can submit revised bids for:

- Current gas day for the 10:00 AM, 2:00 PM, 6:00 PM and 10:00 PM schedules (Section 5.7.1).

- The day-ahead 4:00 PM and 12:00 AM schedules (Section 5.7.2).

Note. It is not mandatory to revise bids. Beginning-of-day bids stay in effect until revised bids are submitted.

5.7.1. Revising current gas day bids

Depending on the time of day, only the data entry row for the next available schedule is enabled. Previous bid data is displayed for user reference or can be copied into the current scheduling horizon (see Section 5.4.3). For example, Figure 9 shows the Bid Set screen for gas day 21 December 2011 for the 2 PM scheduling horizon. Only the row for 2 PM scheduling horizon is available for receiving bid data.

Figure 9 Bid Set screen for current gas day for 2 PM scheduling horizon

Bid Set

Bid Set Id: Last User Id:

Injection Meter: Last Updated:

From gas day: To gas day:

Daily injection bids for fixed scheduling times. Bids must be entered at least 1 hour prior to time indicated.

6 AM	Steps: 1 2 3 4 5 6 7 8 9 10
Price \$:	<input type="text"/>
Daily Qty GJ:	<input type="text"/>
10 AM	Steps: 1 2 3 4 5 6 7 8 9 10
Price \$:	<input type="text"/>
Daily Qty GJ:	<input type="text"/>
2 PM	Steps: 1 2 3 4 5 6 7 8 9 10
Price \$:	<input type="text"/>
Daily Qty GJ:	<input type="text"/>
6 PM	Steps: 1 2 3 4 5 6 7 8 9 10
Price \$:	<input type="text"/>
Daily Qty GJ:	<input type="text"/>
10 PM	Steps: 1 2 3 4 5 6 7 8 9 10
Price \$:	<input type="text"/>
Daily Qty GJ:	<input type="text"/>

Apply Bid To: **Note:** If you submit this bid for the current gas day (21-DEC-2011), it will be considered for the scheduling horizon starting at 2 PM.

To revise current gas day bids:

1. Click the **Bids** tab.
- The **Bid Selection** screen is displayed.
2. Select the **Bid Type**—Injection or Withdrawal.
 3. Select the **Meter** from the drop-down list.

4. Click **Current Gas Day**.

The **Bid Set** screen is displayed. Depending on the time of submission, the next available scheduling horizon row is enabled. Existing bid data for the selected Meter and Bid Type for the current day is shown for reference purposes only.

5. In the next available scheduling horizon row, type the **Price** and **Daily Qty** in bid step 1. Type additional bids steps as required (up to 10 steps allowed). Bids steps must be entered consecutively, with no gaps between steps. Refer to Section 5.5 for data validation rules.
6. When complete, click **Submit Bid**.

The **Bid Information and Confirmation** screen is displayed.

7. Verify that all details are correct, and then click **Confirm Bid** to proceed. A message is displayed if errors are detected. If required, correct the errors and then resubmit.
8. A message is displayed confirming that the bid was submitted successfully.

5.7.2. Revising day-ahead (D+1) bids

Previously submitted day-ahead bids can be retrieved, revised and submitted as a new day-ahead bid using the **Retrieve Bid** function. Refer to Section 5.8 for details.

5.8. Creating a bid from historical data

The search and retrieve historical bid function on the Bid Selection screen (Figure 10) allows users to search historical submitted bids. Retrieved bids can be used to create new bids. For more information about using this function, see Section 3.4.

Figure 10 Search and retrieve bid function



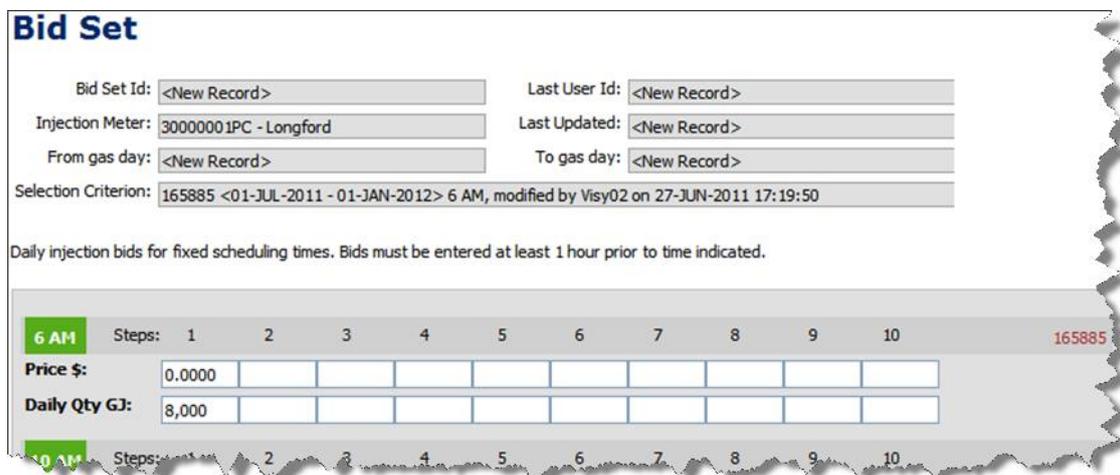
To create a bid from historical data:

1. Click the **Bids** tab.

The **Bid Selection** screen is displayed.

2. Select the **Bid Type** – Injection or Withdrawal.
3. Select the **Meter** from the drop-down list.
4. Select the **From Gas Date** and **To Gas Date**.
5. The screen refreshes and all available bids for the specified range are listed in the **Historical Bids** drop-down list. Select the required bid from the list.
6. Click **Retrieve Bid**.

The **Bid Set** screen opens with all details for the selected bid. The example below shows the standing bid information submitted for the 6:00 AM scheduling horizon for 1 Jul 2011 to 1 Jan 2012 with a bid ID = 165885.



7. From the **Apply Bid To** drop-down list, and select the gas day.
8. Modify the bids steps as required. Refer to Section 5.5 for data validation rules.
9. When complete, click **Submit Bid**.

The **Bid Information and Confirmation** screen is displayed.

10. Verify that all details are correct, and then click **Confirm Bid** to proceed.
11. A message is displayed confirming that the bid was submitted successfully.

5.9. Uploading a bid file

Bid data can be uploaded from a correctly formatted CSV file. For more information, refer to Section 3.3.

Figure 11 The File Upload tool



For details of CSV file format and specifications, refer to the "Injection Bid Interface Definition" and "Withdrawal Bid Interface Definition" in *DWGM Participant Build Pack*.

To upload a bid data CSV file:

1. Click the **Bids** tab.

The **Bid Selection** screen is displayed.

2. On the **File Upload** tool, click **Browse**.
3. Locate and select the file to be uploaded and click **Open**.
4. Click **Upload File**.

The **Bid Set** screen opens with all details from the uploaded file. The bids step data can be modified, if required. Refer to Section 5.5 for data validation rules.

5. Click **Submit Bid**.

The **Bid Information and Confirmation** screen is displayed.

6. Verify that all details are correct, and then click **Confirm Bid** to proceed.
7. A message is displayed confirming that the bid was submitted successfully.

5.10. Cancelling bids

Bids cannot be cancelled, but an MP can enter a zero-quantity bid to overwrite a previous bid. The MCE always takes the most recently submitted bids when it runs the scheduling processes, so a zero-quantity bid can be used in several ways, depending on the timing of the bid and whether any gas has been scheduled to flow on the previous bid. Consider the following scenarios in which an MP decides to cancel a bid:

Scenario 1: MP temporarily cancels a standing bid

The individual zero-quantity bid takes precedence over an existing standing bid for that day.

For example, an MP has a standing bid to inject 300 GJ per day, but wants to cancel the bid for a single day within the period covered by the standing bid. The MP enters a zero quantity current gas day BOD bid, and the standing bid will be ignored for that day. The standing bid takes effect again on the following gas day.

Scenario 2: MP cancels a BOD bid

A zero-quantity bid is submitted before the 5:00 AM cut-off.

For example, an MP has submitted a bid to inject 300 GJ for the current day in the 6:00 AM schedule and decides to cancel that bid. The MP enters a new zero-quantity bid in the 6:00 AM schedule and overwrites the original bid. The zero-quantity bid must be submitted before the 5:00 AM bid cut-off time. If the MP misses the bid cut-off time, the original offer of 300 GJ will stand (for at least the first scheduling horizon—see next scenario for cancelling the bid at a later schedule).

Scenario 3: MP zeroes a bid during the gas day

Cancelling or zeroing a bid during the gas day depends on whether gas has been scheduled to flow on that bid in the preceding scheduling intervals.

For example, if an MP misses the bid cut-off time (as described in Scenario 2), the MP can rebid at the next available (10:00 AM) scheduling interval. But the quantity of the rebid depends on what was scheduled to flow in the 6:00 AM schedule.

If AEMO schedules the beginning-of-day bid of 300 GJ, where 50 GJ of the bid is scheduled in the first scheduling interval, then the MP can submit a 50 GJ bid for the 10:00 AM schedule, which effectively zeroes the remaining scheduling intervals.

If AEMO does not schedule any of the 300 GJ in the first interval, the MP can submit a zero bid at the 10:00 AM scheduling interval, which effectively cancels the original bid.

6. Demand forecast

MPs who supply uncontrollable withdrawals must submit hourly site- and non-site-specific demand forecasts in WebExchanger.

Uncontrollable withdrawals refer to the quantities of gas that the customers of MPs will withdraw regardless of market price. This applies to most customers in the residential, commercial and industrial sectors. Uncontrollable withdrawals also include demand from gas-fired power generators.

AEMO aggregates the demand forecasts from all MPs and compares it with its own demand forecasts. AEMO can apply demand forecast overrides, if required, in accordance with the *Wholesale Market Gas Scheduling Procedures*.

MPs supplying uncontrollable withdrawals must submit current gas day, day-ahead and two-day-ahead demand forecasts in accordance with NGR 208 and must comply with the data submission timeline outlined in Section 4.4.

The demand forecast functions are accessed from the **Demand Forecast** tab on the WebExchanger main menu. These functions enable users to:

- Create and submit new demand forecasts.
- Update demand forecast information for the current gas day (as the day progresses).
- Search for existing historical demand forecasts.
- Upload demand forecast data by CSV file.

6.1. Types of demand forecasts

MPs who supply uncontrollable withdrawals must submit (unless exempted by AEMO):

- Hourly site-specific demand forecasts for each Tariff D site that has an accredited point-specific maximum daily quantity (MDQ) of 5 TJ/d or more *and* a volatile withdrawal pattern—for example, power generators and large refineries).
- Hourly aggregated demand forecasts for the remaining system-wide uncontrollable withdrawals of their customers.

6.2. Demand Forecast Selection screen

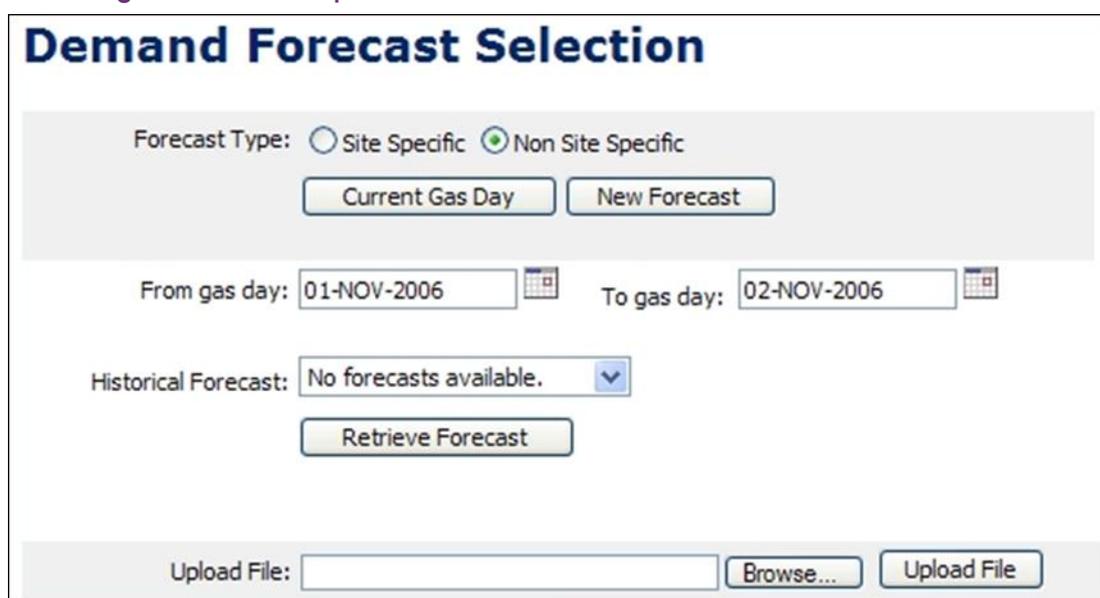
When the user selects the WebExchanger **Demand Forecast** tab, the **Demand Forecast Selection** screen (Figure 12) is displayed, from which the user can:

- Specify the demand **Forecast Type**—either **Site specific** or **Non site specific**.
- Create or revise demand forecasts using one of the following methods:
 - To create a new demand forecast, click New Forecast to open the Demand Forecast screen. For more information, see Section 6.5.
 - To revise current gas day forecasts, click Current Gas Day. For more information, see Section 6.6.

- To revise day-ahead demand forecasts in the Demand Forecast screen, click Retrieve Forecast. For more information, see Section 6.6.
- To use historical data as a new forecast, select the From gas day and To gas day search range, and then select a demand forecast from the Historical Forecast drop-down list. Click Retrieve Forecast to load the forecast data to the Demand Forecast screen, where it can then be modified. For more information, see Section 6.7.
- To upload a prepared CSV file to the Demand Forecast screen, click Browse to locate the CSV file, and then click Upload File. For more information, see Section 6.8.

Refer to *DWGM Participant Build Pack* for specifications of the CSV file format.

Figure 12 Non-site-specific demand forecast selected

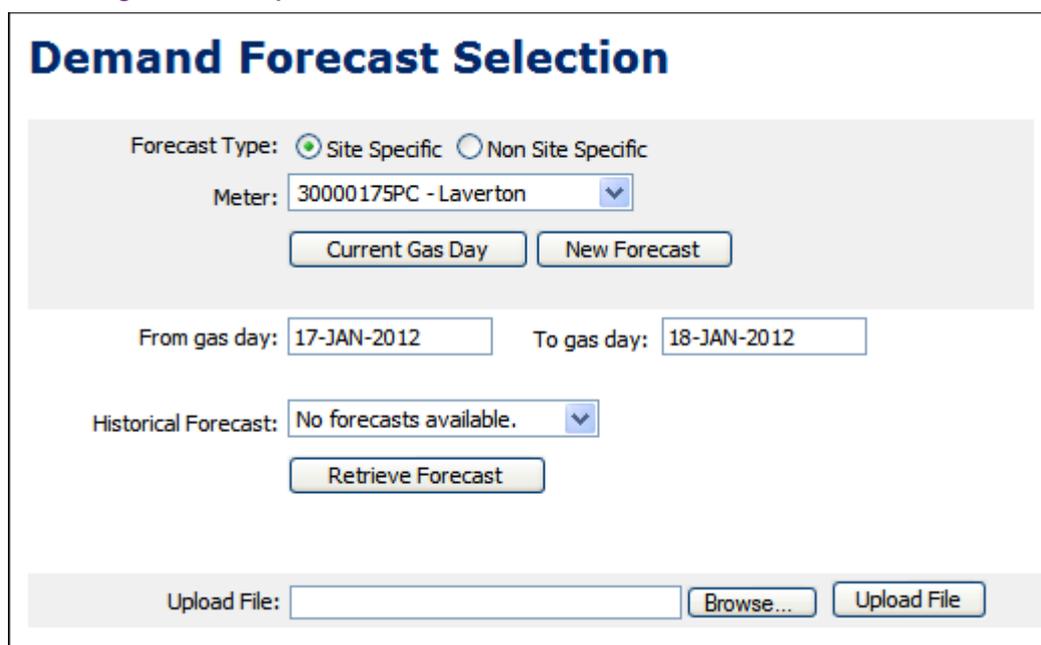


The screenshot shows the 'Demand Forecast Selection' interface. At the top, the title 'Demand Forecast Selection' is displayed in a large, bold, blue font. Below the title, there are two radio buttons for 'Forecast Type': 'Site Specific' (unselected) and 'Non Site Specific' (selected). Underneath these are two buttons: 'Current Gas Day' and 'New Forecast'. Below that, there are two date input fields: 'From gas day:' with the value '01-NOV-2006' and 'To gas day:' with the value '02-NOV-2006'. Below the date fields is a dropdown menu for 'Historical Forecast' with the text 'No forecasts available.' and a downward arrow. Below the dropdown is a 'Retrieve Forecast' button. At the bottom of the form, there is an 'Upload File:' label, an empty text input field, a 'Browse...' button, and an 'Upload File' button.

Note. Standing submissions for the current gas day must be made prior to 5:00 AM.

If a site-specific demand forecast type is selected, the **Demand Forecast Selection** screen is refreshed to show the **Meter** drop-down list (see Figure 13). Only those meters that have been registered by that MP with AEMO are listed.

Figure 13 Site-specific demand forecast selected



6.3. Demand Forecast screen

On the Demand Forecast Selection screen, after selecting the type of forecast and the applicable meter or an historical forecast, when the user clicks either **Current Gas Day**, **New Forecast**, or **Retrieve Forecast**, the Demand Forecast screen (Figure 14) is displayed, from which the user enters hourly demand forecasts. This screen has three sections:

- The top section contains details that are generated by the system during and after the demand forecasts submission (see Section 6.3.1).
- The middle section is where the user enters the hourly demand forecasts. There are twenty-four boxes corresponding to the hours of the gas day. The applicable fields are enabled or disabled for data entry once the **Apply Demand Forecast To** function (see Section 6.3.2) is selected. This defines whether the forecast is for the current gas day, day ahead, standing and such.
- Other functions are shown at the bottom of the Demand Forecast screen.

Users type the demand forecast data directly in to each hour. Values must be entered for each hour of the day. As the day progresses, elapsed time values will become uneditable, but the values for the remaining hours of the day can be modified and resubmitted. All submissions must be made before the relevant cut-off time for the upcoming schedule (see Section 4.4.2).

When completed, the user clicks **Submit Forecast** (see section 6.3.3) to submit the forecast for validation and processing.

Figure 14 Demand Forecast screen

Demand Forecast

Forecast Id:

Meter:

From gas day:

Last User Id:

Last Updated:

To gas day:

Hourly Demand Forecast (GJ)

06:00 AM <input type="text"/>	06:00 PM <input type="text"/>
07:00 AM <input type="text"/>	07:00 PM <input type="text"/>
08:00 AM <input type="text"/>	08:00 PM <input type="text"/>
09:00 AM <input type="text"/>	09:00 PM <input type="text"/>
10:00 AM <input type="text"/>	10:00 PM <input type="text"/>
11:00 AM <input type="text"/>	11:00 PM <input type="text"/>
12:00 PM <input type="text"/>	12:00 AM <input type="text"/>
01:00 PM <input type="text"/>	01:00 AM <input type="text"/>
02:00 PM <input type="text"/>	02:00 AM <input type="text"/>
03:00 PM <input type="text"/>	03:00 AM <input type="text"/>
04:00 PM <input type="text"/>	04:00 AM <input type="text"/>
05:00 PM <input type="text"/>	05:00 AM <input type="text"/>

Daily Total (GJ)

0

NOTE: AEMO may reject a portion of the forecast if it is outside the scheduling horizon according to the AEMO system clock.

Apply Demand Forecast To:

Note that the process of creating a site-specific or non-site-specific forecast on this screen is the same—the only difference is on the Demand Forecast Selection screen where the meter for a site-specific demand forecast is selected.

6.3.1. System displayed information

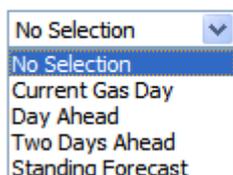
The following details will be displayed automatically by the system. These values are provided for user reference and data tracking purposes:

Forecast ID	A unique identifier is generated when the forecast data is submitted.
Meter	As selected on Demand Forecast Selection screen (site-specific only).
Last User ID	Displays the last user to modify the forecast.
Last Updated	Displays the time the forecast was last modified.
From Gas Day	As selected on Demand Forecast Selection screen or the Apply Demand Forecast To field.
To Gas Day	As selected on Demand Forecast Selection screen or the Apply Demand Forecast To field.

6.3.2. Apply Demand Forecast To function

The gas day is selected using the **Apply Demand Forecast To** function at the bottom-left corner of the screen:

Apply Demand Forecast To:



Current Gas Day	Select this option to enter the beginning-of-day demand forecast for the current gas day.
Day Ahead	Select this option to enter the initial one-day-ahead demand forecast.
Two Days Ahead	Select this option to enter the initial two-days-ahead demand forecast.
Standing Forecast	Select this option to enter a new standing demand forecast. Date range fields are displayed to select the period for which the demand forecast stands.

6.3.3. Submit Demand Forecast function

The **Submit Demand Forecast** function allows the user to submit the demand forecasts they have created. The **Forecast Information and Confirmation** message is then displayed. Click **Confirm Forecast** to proceed with the submission or **Cancel Forecast** to cancel the submission.

Figure 15 Forecast Information and Confirmation screen for day ahead submission

Forecast Information and Confirmation

Please check the details below before confirming the demand forecast submission.

This forecast will be used as an input to the regular Day Ahead schedule to be published at 12 AM on the gas day 16-JAN-2012 with a start date of 17-JAN-2012.

Meter: **N/A**
 Apply To Gas Day: **Day Ahead**
 Forecast Type: **Non-site specific forecast**
 Commencement Date: **17-JAN-2012**
 Termination Date: **18-JAN-2012**

Please cancel or confirm your forecast using the buttons below.

6.4. Demand forecast validation rules

The following rules apply to demand forecast data entry:

Hourly Demand Forecast (GJ)	<ul style="list-style-type: none"> Hourly quantity in whole gigajoules. Non-negative (positive or zero value). A value must be entered for every hour—no blank entries.
Daily Total (GJ)	<ul style="list-style-type: none"> Calculated automatically by system.

6.4.1. Validation limits

MPs can submit hourly demand forecast validation limits to AEMO. Their demand forecast submissions will then be validated against these limits at each system injection point for which limits have been supplied.

For information about submitting demand forecast validation limits, refer to *DWGM Participant Build Pack* or contact the AEMO Supporthub.

6.5. Creating a new demand forecast

This section describes how to create a new submission for:

- BOD demand forecast for the current gas day.
- Day-ahead demand forecast.
- Two-day-ahead demand forecast.
- Standing demand forecast.

Note. When the user selects to create a new site-specific demand forecast, the Meter drop-down list is automatically populated with the market participant’s registered site meters.

To create a new demand forecast:

1. Click the **Demand Forecast** tab.

The **Demand Forecast Selection** screen is displayed (**Error! Reference source not found.**).

2. Select the **Forecast Type**—Site Specific or Non Site Specific.
3. If Site Specific selected, select the **Meter** from the drop-down list.
4. Click **New Forecast**.

The **Demand Forecast** screen is displayed (**Error! Reference source not found.**).

5. From the **Apply Demand Forecast To** drop-down list, and select the gas day:

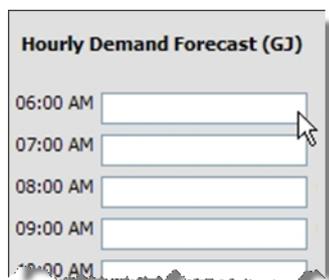
Note. See **Error! Reference source not found.** for submission timelines for each demand forecast type.

- Select Current Gas Day to create a BOD demand forecast for current gas day.
 - Select Day Ahead to create an initial day-ahead demand forecast.
 - Select Two Days Ahead to create an initial two-day-ahead demand forecast.
 - Select Standing Forecast to create a demand forecast over a date range.
6. If a standing demand forecast, the screen refreshes to show the date range fields.

Apply Demand Forecast To:	Commencement Gas Day:	Termination Gas Day:
Standing Forecast ▾	<input type="text"/>	<input type="text"/>

Click in the commencement and termination gas day boxes to select the required dates using the calendar tool (see Section 3.2.3). The commencement date must be at least one day ahead of the date of data entry. For more information about standing data, see Section 4.5.

7. Type the **Hourly Demand Forecast** quantities for each and every hour. See Section 6.4 for data entry rules.



8. When complete, click **Submit Forecast**.

The **Forecast Information and Confirmation** screen (**Error! Reference source not found.**) is displayed.

9. Verify that all details are correct, and then click **Confirm Forecast** to proceed. A message is displayed if errors are detected. If required, correct the errors and then resubmit.
10. A message is displayed confirming that the forecast was submitted successfully.

6.6. Revising demand forecasts

Market participants can submit revised demand forecasts for:

- Current gas day for the 10:00 AM, 2:00 PM, 6:00 PM and 10:00 PM schedules (Section 6.6.1).
- The day-ahead 4:00 PM and 12:00 AM schedules (Section 6.6.2).

Note. It is not mandatory to revise demand forecasts. The beginning-of-day forecast stays in effect until a revised demand forecast is submitted.

6.6.1. Revising current gas day demand forecasts

Depending on the time of day, only the data entry boxes for the hours in and following the next available scheduling horizon are available. Previous data is displayed for user reference. For example, Figure 16 shows the Demand Forecast screen for the current gas day. Only the entry boxes from 6 PM to 5 AM are available for receiving data.

Figure 16 Demand Forecast screen for revised current gas day demand forecasts

Demand Forecast

Forecast Id: <New Record>	Last User Id: <New Record>
Meter: Non-specific forecast	Last Updated: <New Record>
From gas day: 17-JAN-2012	To gas day: 18-JAN-2012

Hourly Demand Forecast (GJ)		Daily Total (GJ)
06:00 AM <input type="text"/>	06:00 PM <input type="text"/>	0
07:00 AM <input type="text"/>	07:00 PM <input type="text"/>	NOTE: AEMO may reject a portion of the forecast if it is outside the scheduling horizon according to the AEMO system clock.
08:00 AM <input type="text"/>	08:00 PM <input type="text"/>	
09:00 AM <input type="text"/>	09:00 PM <input type="text"/>	
10:00 AM <input type="text"/>	10:00 PM <input type="text"/>	
11:00 AM <input type="text"/>	11:00 PM <input type="text"/>	
12:00 PM <input type="text"/>	12:00 AM <input type="text"/>	
01:00 PM <input type="text"/>	01:00 AM <input type="text"/>	
02:00 PM <input type="text"/>	02:00 AM <input type="text"/>	
03:00 PM <input type="text"/>	03:00 AM <input type="text"/>	
04:00 PM <input type="text"/>	04:00 AM <input type="text"/>	
05:00 PM <input type="text"/>	05:00 AM <input type="text"/>	

Apply Demand Forecast To:

To revise current day demand forecasts:

1. Click the **Demand Forecast** tab.

The **Demand Forecast Selection** screen is displayed.

2. Select the **Forecast Type**—Site Specific or Non Site Specific.
3. If Site Specific selected, select the **Meter** from the drop-down list.
4. Click **Current Gas Day**.

The **Demand Forecast** screen is displayed. Existing demand forecast data for the selected Forecast Type (and meter) for the current day is shown.

5. Review and amend the **Hourly Demand Forecast** quantities for the available hours. See Section 6.4 for data validation rules.
6. When completed, click **Submit Forecast**.

The **Forecast Information and Confirmation** screen is displayed.

7. Verify that all details are correct, and then click **Confirm Forecast** to proceed. A message is displayed if errors are detected. If required, correct the errors and then resubmit.
8. A message is displayed confirming that the demand forecast was submitted successfully.

6.6.2. Revising day-ahead demand forecasts

Previously submitted day-ahead demand forecasts can be retrieved, revised and submitted as a new day-ahead demand forecast using the **Retrieve Forecast** function. Refer to Section 6.7 for details.

6.7. Creating a demand forecast from historical data

The search and retrieve historical forecasts function on the Demand Forecast Selection screen (Figure 17) allows users to search historical submitted demand forecasts. Retrieved forecasts can be used to create new forecasts. For more information about using this function, see Section 3.4.

Figure 17 Historical forecasts selection



To create a demand forecast from historical data:

1. Click the **Demand Forecast** tab.

The **Demand Forecast Selection** screen is displayed.

2. Select the **Forecast Type** – Site Specific or Non Site Specific.
3. If Site Specific selected, select the **Meter** from the drop-down list.
4. Select the **From Gas Date** and **To Gas Date**.
5. The screen refreshes and all available demand forecasts for the specified range are listed in the **Historical Forecast** drop-down list. Select the required demand forecast from the list.
6. Click **Retrieve Forecast**.

The **Demand Forecast** screen opens with all details for the selected forecast.

7. From the **Apply Demand Forecast To** drop-down list, and select the gas day.
8. Review and edit the **Hourly Demand Forecast** quantities as required. See Section 6.4 for data validation rules.
9. When completed, click **Submit Forecast**.

The **Forecast Information and Confirmation** screen is displayed.

10. Verify that all details are correct, and then click **Confirm Forecast** to proceed.
11. A message is displayed confirming that the forecast was submitted successfully.

6.8. Uploading a demand forecast file

Demand forecast data can be uploaded from a correctly formatted CSV file. For more information, refer to Section 3.3.

Figure 18 The File Upload tool



For details of CSV file format and specifications, refer to the 'Site Specific Demand Forecast' and 'Non- Site Specific Demand Forecast' sections under 'Demand Forecast' in *DWGM Participant Build Pack*.

To upload a demand forecast data CSV file:

1. Click the **Demand Forecast** tab.

The **Demand Forecast Selection** screen is displayed.

2. On the **File Upload** tool, click **Browse**.
3. Locate and select the file to be uploaded and click **Open**.
4. Click **Upload File**.

The **Demand Forecast** screen opens with all details from the uploaded file.

5. Review and edit the **Hourly Demand Forecast** quantities as required. See Section 6.4 for data validation rules.
6. When completed, click **Submit Forecast**.

The **Forecast Information and Confirmation** screen is displayed.

7. Verify that all details are correct, and then click **Confirm Forecast** to proceed.
8. A message is displayed confirming that the forecast was submitted successfully.

Appendix A. References

Unless otherwise indicated, the following documents are AEMO publications and are available from the AEMO website at www.aemo.com.au or by application to AEMO at Level 22, 530 Collins Street, Melbourne, Victoria 3000. These documents are updated regularly, hence the date of publication has been omitted (check the website to obtain the most recent version).

Title	Location
DWGM Technical Guide	AEMO website
DWGM Participant Build Pack	AEMO website
User Guide to MIBB Reports	AEMO website
Wholesale Market Uplift Payment Procedures	AEMO website
Wholesale Market Gas Scheduling Procedures	AEMO website
Wholesale Market Electronic Communication Procedures	AEMO website

Appendix B. Bidding Checklists

Use the following checklists to verify that all data has been correctly submitted.

B.1 Injection bid checklist

Task/Function	Steps/Details
Bids	<p>MPs can have multiple injection points in their portfolio—a set of bids must be submitted for <i>every point</i> at which the participant intends to inject gas into the system.</p> <p>Bid steps must be entered within the following guidelines:</p> <ul style="list-style-type: none"> • Price in \$/GJ to four decimal places (e.g. 4.5500). • Price can be zero if the <i>first</i> or only step in the bid. • Quantity in whole GJs (e.g. 120) • <i>Both</i> price and quantity <i>increase</i> with each step. • Consecutive (i.e. no gaps). • Bid step 1 quantity must be \geq MDQ
Demand Forecast	Demand forecast applies to uncontrollable withdrawals only.

B.2 Withdrawal bid checklist

Task/Function	Steps/Details
Bids	<p>MPs can have multiple withdrawal points in their portfolio—a set of bids must be submitted for <i>every point</i> at which the participant intends to withdraw gas from the system.</p> <p>Bid steps must be entered within the following guidelines:</p> <ul style="list-style-type: none"> • Price in \$/GJ to four decimal places (e.g. 4.5500). • Price can be zero if the <i>last</i> or only step in the bid. • Quantity in whole GJs (e.g. 120) • <i>Quantity increases</i> and <i>price decreases</i> with each step. • Consecutive (i.e. no gaps). • Bid step 1 quantity must be \geq MDQ.
Demand Forecast	<p>Demand forecast values must be entered within the following guidelines:</p> <ul style="list-style-type: none"> • Quantity in whole GJs only (e.g. 20) • Values must be submitted for all hourly intervals. • Don't leave field blank, enter 0. • Check meter is correct. • Check dates.

Appendix C. Error Messages

The fault descriptions and error messages enlisted here are for WebExchanger only. To see WebServices' fault descriptions for the fault codes enlisted in Section C.2 to C.8, please refer to *DWGM Participant Build Pack*.

The notation [text] is a system-generated value that forms part of the error message.

C.1 CSV file upload error messages

Fault Description
WebExchanger Generic Upload Messages
Please supply a valid CSV file.
Please supply a CSV file that has [number] rows of data and corresponds to AEMO's bid upload requirements.
Please supply a valid [file type] in the file header of the CSV file.
Invalid [file type] file type in the CSV file. Please use a valid bid file type: '[file type symbol]' (see note below)
Note: [file type] = 'bid', 'demand forecast', 'injection hedge' [file type symbol] = 'INJ' or 'WDL' for 'bid', 'DFS' or 'DFN' for 'demand forecast'
Please supply numeric/positive [file type and corresponding description] in the CSV file. (see note below)
Note: [file type and corresponding description] = 'bid prices and bid quantities for the bid (step(s))', 'demand forecast values'.
Please supply a CSV file that has [a number or "the correct number of"] columns of data in the [file header]. Fields that are not mandatory still require a blank column. (see note below)
Note: [file header] can be "bid steps row", "demand forecast row".
Please supply a valid market participant id in the file header of the CSV file.
Please supply a valid Close Proximity Point in the file header of the CSV file.
Please supply a valid date range. Commencement date and termination date cannot be the same.
Please supply a valid date range. Commencement date must be supplied if a termination date is supplied in the CSV file.
Invalid commencement date in the CSV file. Please use a 'DD-MMM-YYYY' format.
Invalid commencement date in the CSV file: [submitted date]. Commencement date is before the current date: [current date].
Invalid termination date in the CSV file: [submitted date]. Please use a 'DD-MMM-YYYY' format.
Invalid termination date in the CSV file: [submitted date]. Termination date is earlier than the commencement date: [commencement date].
Invalid market participant id in the CSV file: [market participant ID]. You can only supply your own market participant id: [submitting market participant's ID].
Invalid market participant id in the CSV file: [market participant ID]. Please ensure this is a valid number before submitting.
WebExchanger Bid Upload Messages
Please supply a bid price and quantity for the first bid step.
Please supply a scheduling interval that is numeric and between 1 to 5.
WebExchanger Demand Forecast Upload Messages
Invalid demand forecast. Please specify three rows of data according to the format in the DWGM Participant Build Pack.
Invalid demand forecast. Please specify at least 5 header columns according to the format in the DWGM Participant Build Pack.

Fault Description

Please supply a valid demand forecast value in column [column number for the hour in question]. All twenty four demand forecast values are mandatory.

C.2 Common error messages

Fault Code	Fault Description
3001	Failed to retrieve data: [data retrieval attempted]
3100	Invalid <u>username</u> or password.
3102	You do not have permission to view [this bid / the scheduled quantity / this forecast] information.
3103	You do not have permission to view this meter information.
3104	An invalid apply-to option has been selected: [selected value]. <i>Or</i> ; Please select an option from the Apply To menu before submitting. (see note below) Note: the apply to value must be either of the following values: 'Current Day', 'Day Plus One', 'Day Plus Two', or 'Standing'.
3105	Please supply a valid commencement date and termination date before submitting.
3109	The commencement date for a standing [bid / demand forecast] must be at least one day after the current gas day. <i>Or</i> ; The termination date for the standing [bid / forecast] must be at least a day later than the commencement date (the termination date is non-inclusive).
3110	The deadline for current gas day submissions has passed. Current Gas Day submissions cannot be made between [time] and [time].
3111	Please only supply positive [hourly demand forecast] values. Negative values are not permitted.
3112	The specified date '[entered date value]' is invalid – please use a 'DD-MMM-YYYY' format.
3113	Invalid quantity value supplied. The quantity exceeded maximum input value.
3114	Submitted duplicate meter(s) / CPP(s) for the current market participant.
3115	Submitted invalid CPP(s) for the current market participant.
3116	Invalid NMI(s) supplied for the current market participant.

C.3 Bid error messages

Web Service Fault Code	Error Message
3502	The interval provided is not available. Please re-enter data and resubmit if appropriate. <i>Or</i> ; The gas day you previously selected has since been closed. Please re-enter data and resubmit if appropriate.
3504	Price for step [bid step number] must be a positive value: [entered price \$/GJ]
3505	Price for step [bid step number] (\$[entered price \$/GJ]) must be less than or equal to the value of lost load (VoLL price).
3506	Bid contains a price gap at step [bid step number].
3507	Daily quantity for step [bid step number] must be a positive value: [entered quantity GJ].
3508	Invalid daily quantity - quantity of gas associated with the highest priced bid step must be equal to or exceed the sum of the scheduled quantity over all preceding and current scheduling intervals of the current gas day: [submitted quantity GJ] < [minimum rebid quantity GJ].
3509	Invalid daily quantity - quantity of gas associated with the lowest priced bid step must be equal to or exceed the sum of the scheduled quantity over all preceding and current scheduling intervals of the current gas day: [submitted quantity GJ] < [minimum rebid quantity GJ].
3510	Bid contains a quantity gap at step [bid step number].
3514	A bid step is invalid. Bid steps for an injection bid must have a price and quantity that is higher than the previous bid step.

Web Service Fault Code	Error Message
3515	A bid step is invalid. Bid steps for a withdrawal bid must have a price that is lower and a quantity that is higher than the previous bid step.
3516	Bid contains an invalid quantity at step [bid step number].
3517	Invalid bid step - at least one bid step with price and quantity must be supplied.
3518	Minimum daily quantity value is invalid: [entered quantity GJ].
3519	Minimum daily quantity must be zero: Please edit the supplied value to zero.

C.4 Demand forecast error messages

Web Service Fault Code	Error Message Description
3600	Please enter a forecast value for all hours of the day.
3601	Please only supply positive hourly demand forecast values. Negative values are not permitted.
3603	The meter passed in is not available for your company. Please contact AEMO if you need access to this meter.
3604	The value [gas quantity in GJ] for hour [an hour between 1-24] exceeds the limits you have specified for a demand forecast.
3605	The demand forecast data is not valid. Please contact the AEMO Supporthub for further information. Or; The forecast type is invalid. Please contact the AEMO Supporthub for further information.
3606	Last interval cutoff has been passed. Forecast cannot be submitted at this time.

Version release history

Version	Effective Date	Summary of Changes
7.1	29 October 2020	Updated template Technical Document in the Wholesale Market Electronic Communication Procedure.
7.0	December 2016	Updated to incorporate the manual process for terminating a standing AIHN.
6.3	July 2013	Updated to add a note about submitting an AMIQ profile approaching the upper limit between the 2 PM – 10 PM scheduling interval.
6.2	March 2013	Revised and updated for April 2013 release of market systems.
6.1	October 2012	Revised and updated for October 2012 release of market systems.
6.0	May 2012	Revised and updated for May 2012 release of market systems.
5.1	January 2012	Updated for changes in Build 30.
1.0 5.0	September 2006 – January 2007	Earlier versions are available by contacting AEMO Support Hub at supporthub@aemo.com.au or call 1300 236 600.