GUIDE TO NATIONAL GAS BULLETIN BOARD CSV FILE TRANSACTIONS

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The release of this document changes only the version of Guide to National Gas Bulletin Board CSV File Transactions.

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Abbreviations and Symbols

These abbreviations, symbols, and special terms assist the reader's understanding of the terms used in this document. For definitions of these terms, the reader should always refer to the applicable market Rules.

Abbreviation	Abbreviation explanation
AEMO	Australian Energy Market Operator
AEST	Australian Eastern Standard Time
ASCII	American Standard Code for Information Interchange. A standard coding scheme that assigns numeric values to letters, numbers, punctuation marks, and control characters, to achieve compatibility among different computers and peripherals
BB	The Natural Gas Services Bulletin Board
BBO	The Natural Gas Services Bulletin Board Operator
BBWG	The Natural Gas Services Bulletin Board Working Group
CSV	Comma-separated file. Stores tabular data (numbers and text) in plain-text form. Plain text means the file is a sequence of characters, with no data that has to be interpreted instead, as binary numbers
FTP	File Transfer Protocol – a protocol that allows users to copy files between any system they can reach on the network
GUI	Graphical User Interface
M	Mandatory, in the context of this document, indicates that the field's value must be provided
NA	Non Applicable
NGR	National Gas Rules; also often just called the Rules.
NR	Not required, in the context of this document, indicates that the value is ignored by the parsing application even if it is provided.
O	Optional, in the context of this document, indicates that a field's value is not required, but is processed if provided.

Special terms

Term	Definition
Default flow	The direction that gas normally flows through a pipeline (as per the Schedule of Default Pipeline Flow Direction, found in the references section). Those flows in the opposite direction will be shown as either negative values or labelled as Reverse flows
Demand Zone	A region where the natural gas load is delivered by one or more BB pipelines.
Procedures	The Bulletin Board procedures made under Part 18 of the National Gas Rules
Production Zone	A region in which natural gas is produced from one or more facilities and is injected into one or more BB pipelines that transport the gas to other Production or Demand Zones
Rules	The National Gas Rules
TJ	1 Terrajoule, 1000 Gigajoules, 1000000 Joules, Joule is a unit of energy

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1 Introduction

1.1 Purpose

The purpose of this document is to specify the data formats and the rules of information exchange between the Bulletin Board Operator and Participants in the context of the Natural Gas Services Bulletin Board (BB).

1.2 Audience

The primary audiences for this document are business users and IT developers from Bulletin Board Participant organisations who will interface and use the BB, and the Bulletin Board Operator.

1.3 How to use this guide

This guide describes the CSV data exchange between AEMO and BB participants. Use this guide to help you understand the technical specifications of BB CSV transactions.

Text in this format indicates a direct hyperlink with details of the resource listed in “References“

1.4 What’s in this guide

- Chapter 2 “Overview” provides a brief overview of the BB CSV interface.
- Chapter 3 “CSV Data Format” provides the technical specifications for the CSV transaction file format.
- Chapter 4 “Transactions and Acknowledgements” contains the general requirements and validations of each CSV transaction.
- Chapter 5 “References” is a list of related information and documents mentioned throughout this guide.

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2 Overview

2.1 What the BB CSV interface is for

The BB CSV interface provides a file gateway allowing BB participants to submit market data to AEMO using FTP.

The available BB CSV transactions are:

Transaction name	Description
StandingCapacity	Nameplate rating information (in the form of MDQ) of natural gas production and storage facilities and natural gas transmission pipelines
StandingDemand	Forecast winter and summer peak day standing data by Demand Zone or Jurisdiction prepared by BB operator
LinepackAdequacy	Represents the actual or expected ability of each transmission pipeline to meet the nominated deliveries over the outlook period. It will take the form of “traffic light” reporting system. (For the Victorian PTS this is related to the rate of LNG scheduled)
CapacityOutlook	A seven day capacity outlook (in the form of MDQ) for each included production and storage facility
DeliveryNomination	Delivery / demand nomination data (inclusive of Gas-fired power generation) aggregated and posted at the demand zone level
Actualflow	Represents actual daily metered data for each production facility, gas storage facility and pipeline gas deliveries (or injections in Victoria)
ShipperUG	The aggregated allocated delivered quantities for each shipper by BB pipeline during the previous invoice period *Note: This transaction is delivered to AEMO via email only. There is no provision made for this file to be delivered via FTP*

2.2 How do you use the BB CSV interface

The BB provides BB Participants with the following submission options for their CSV files:

1. CSV file upload using FTP
2. CSV file upload using the website upload page

2.2.1 CSV file upload using FTP

The process for uploading a CSV file using FTP includes the following steps:

- The BB Participant prepares a data file in CSV format utilising any available third-party tool, for example Microsoft® Excel[1], or any text editor.

[1] When a text file with .CSV extension is opened in Microsoft Excel, Excel changes the date format to dd-MM-YY, that would make it incompatible with the date format specification as defined in this document, i.e. YYYY-MM-dd

- Each file can contain multiple records but may only contain data pertaining to the transaction type specified in the <TRANSACTIONNAME> component of the filename.
- The BB participant connects to one of the following FTP servers manually or via automated system/s by specifying a username and password:
    - Pre-producton – ftp.preprod.gbb.aemo.com.au
    - Production – ftp.gbb.aemo.com.au

AEMO recommends the use of PASSIVE mode for FTP connections.

- Once connected, the BB Participant is directed to the default directory (refer to Figure 1 - GBB FTP Folder structure). The BB Participant transfers files using FTP into the “Upload” subdirectory within their own private organisation directory.
- The BB systems continually poll each ‘Upload’ subdirectory for any new files and processes them accordingly.
- The BB Participant is advised of the success or failure (including details of any error found within the submitted file/s) of the transaction via the BB Participant’s INT944 Transaction Log. The INT944 Transaction Log is deposited into the participants private organisation directory for consumption

The CSV transaction file will only be accepted by the system if **all** its records have passed all validations.

Figure 1 - GBB FTP Folder structure

2.2.2 CSV file upload using website upload page

The process for uploading a CSV file using the website upload page includes the following steps:

- The BB Participant selects the web-upload file function from the appropriate screen on the BB website, which results in a “file open” dialogue being presented.
- Using the “file open” dialogue, the required CSV file (that has already been prepared) is located and selected by the BB Participant.
- Using the web browser interface, the BB Participant submits the selected file by clicking on the upload button (using HTTP).
- The BB Participant is advised of the success or failure (including details of any error found within the submitted file/s) of the transaction via messages displayed on the same web-upload page.

For further details on submitting CSV files using the website, see Guide to Gas Bulletin Board Website.

2.3 Who can use the BB CSV interface

All BB registered participants can use the CSV interface.

2.4 What are the alternatives to the BB CSV interface

AEMO provides web forms in the BB website for direct data entry as an alternative to the CSV interface. The table below lists the BB CSV transactions with equivalent website submission functionality:

Transaction	Direct data entry using the BB website	CSV file upload using FTP or the BB website
StandingCapacity	Yes	Yes
CapacityOutlook	Yes	Yes
LinepackAdequacy	Yes	Yes
DeliveryNomination	Yes	Yes
Actualflow	Yes	Yes
StandingDemand	No	Yes
ShipperUG	No	No

For further details on submitting data using the website web forms, see Guide to Gas Bulletin Board Website.

2.5 System requirements

Use of the CSV interface requires:

- Access credentials to the BB file server
- Public internet access (AEMO network access is not required)
- FTP client software

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2.6 Rules and Procedures

This document details the BB interface requirements (between the BB Participants and BB Operator) as required by rule 163(1) of the National Gas Rules and the BB Procedures.

2.6.1 Data Provision

The following matrix details the data provision responsibilities of all parties as defined within Division 5 of the Rules.

BB Participant / Transaction	Frequency	Facility Operators	Pipeline Operators	BB Operator	Submission Cut-off times
Capacity Outlook	D	●	●		7:00 pm on the evening before the gas day begins
Linepack Adequacy	D		●		7:00 pm on the evening before the gas day begins
Delivery Nomination[1]	D		●		7:00 pm on the evening before the gas day begins
Actual Flow	D	●	●		12:00 pm on the day after the relevant gas day ends
Standing Capacity	A	●	●		NA (submission is annually)
Shippers Allocated Aggregated Deliveries	A		●		NA (submission is annually via email)
Standing Demand[2]	A			●	NA (submission is twice annually)

Legend

● Obligation under the Rules to provide data to BBO.

[1] Pipeline operators aggregate shippers' nominations / forecast delivery data for "Delivery Nomination"

[2] The BBO will provide the standing demand transactions (i.e. peak day demand forecasts by zone) but may consult other BB Participants in this process.

D Data to be provided Daily with potential for within-day updates

A Data to be provided Annually by set dates or when material longer term changes occur

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2.6.2 Inconsistencies

Where inconsistencies exist between this document and the Rules or Procedures, then the requirements or definitions as defined in the Rules or Procedures shall take precedence.

2.6.3 Update Process

This document forms Annexure A to the BB Procedures and changes are subject to the National Gas Rules. Once this document has been formally approved, subsequent changes shall follow the process as defined in section 162 of the Rules relating to the process for non-material amendments.

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3 CSV Data Format

3.1 General Requirements

3.1.1 File format

Interface files for the Bulletin Board will be in comma separated values (CSV) format. A CSV file contains the values in a table as a series of ASCII text lines organised so that each column value is separated by a comma from the next column's value and each row starts a new line. Each file can contain multiple records but may only contain data pertaining to the transaction type specified in the <TRANSACTIONNAME> component of the filename.

3.1.2 Character Set

Any uploaded file must be in 7-bit ASCII format. Neither non-printable characters nor Unicode formats should be used.

3.1.3 Line delimiters

Lines in the uploaded file should be delimited by a combination of Carriage Return (CR, ASCII code decimal 13) and Line Feed characters (LF, ASCII code decimal 10). This combination is chosen to cater for the “lowest common denominator” in producing CSV files, the Microsoft® Excel™ application that uses this behaviour as default.
Empty lines, i.e. lines containing just CR and LF, are not allowed.

3.1.4 Field delimiters

Fields in a row must be delimited by commas (ASCII code decimal 44). If a comma must occur inside a literal, then the entire literal must be surrounded by double quotes as per “3.1.8 Treatment of literals”. The last field in the row may be followed the field delimiter (comma), however, it must be followed by a line delimiter (CR+LF)[2].

[2] Note: this is in line with Uncontrolled Withdrawal File format (1998) that requires every field, including the last field in a row, to be comma-delimited.

3.1.5 Header

The very first line in a CSV file must contain a set of column designators that can be used for further processing. The column designators make CSV files more human readable and facilitate tracking of import problems. Only one header per CSV file is allowed.

3.1.6 Footer

No footer is required for a CSV file. However, the application that parses CSV must be able to handle End-Of-File mark (EOF, ASCII decimal code 26) at the end of the file, if present.

3.1.7 Optional fields

If a field is declared as optional its value needs not to be specified, however the field delimiter must be present.

3.1.8 Treatment of literals

The CSV import application must be able to parse literals irrespectively whether they are surrounded by double-quotes, single-quotes, or not.

Rule	Example	Treatment
Commas can only be used in the literal if surrounded by double quotes.	123,"This is a sample field with a , inside it",456,	√
	123,This is a sample field with a , inside it,456,	×
	123,’This is a sample field with a , inside it’,456,	×
Double quotes should wrap the entire literal. They should not be used as part of field contents.	123,"This is a sample field with a , inside it",456,	√
	123,"This is a sample field with a " inside it",456,	×
Single quotes are not a special character and will parse literally. So whilst single quotes can wrap the entire literal (as shown in the last example), they perform no function and will parse as written.	123, This is a sample field with a ‘ inside it,456,	√
	123,’This is a sample field with a , inside it’,456,	×
	123,’This is how this sample field will appear‘,456,	√

3.1.9 Leading and trailing spaces

In the case of numeric values the use of a leading, embedded or trailing space is inappropriate. Spaces should not be used where a value has a Numeric characteristic.
Where the value has a “text” characteristic that by its nature it can have a space or spaces as part of the structure, only embedded spaces are permitted. Leading and trailing space-characters immediately adjacent to the comma field separators should not be included in the CSV file. Therefore “John Citizen”... resolves to ---,John Citizen,--- or ---,”John Citizen”,---.

3.1.10 Tab characters

Tab characters shall not be used in CSV files.

3.1.11 Positive and negative numeric values

Positive numbers in CSV file shall be unsigned. Negative numbers shall be prefixed with a negative sign.

3.1.12 Leading and trailing zeroes

There shall be no leading zeroes in numeric values unless a specific data format requires this.

3.1.13 Format

The numeric format is defined as ***numeric*** [(*precision* [, *scale*])]. The *precision* (referred to as "length") and *scale* (referred to as "decimal places) determine the range of values that can be stored in a numeric field:

- The precision specifies the maximum number of decimal digits that can be stored in the column. It includes *all* digits, both to the right and to the left of the decimal point. Precisions can range from 1 digit to 38 digits or the default precision of 18 digits can be used.
- The scale specifies the maximum number of digits that can be stored to the right of the decimal point. The scale must be less than or equal to the precision. You can specify a scale ranging from 0 digits to 38 digits or use the default scale of 0 digits.
- The number of digits to the left of the decimal point cannot exceed *precision – scale*

An *Integer* can be represented as a numeric value with the *scale* of 0, i.e. Numeric(11,0)
Below are examples of **valid** values for a numeric type defined as Numeric(5,3)

```
12.345
12.345
-12.345
12.345
12.100
12.000
```

Here are some examples of **invalid** values for the type defined as Numeric(5,3):

```
1,200
12-
12.345678
123456.78
```

3.2 File naming convention

The general format of the filename is:

```
[COMPID]_[TRANSACTIONNAME]_[CCYYMMDDHHMMSS].CSV
```

The format of each component in the filename is:

Name part	Description	Format
COMPID	The CSV file originator identifier	Text
TRANSACTIONNAME	The name of the transaction to which the CSV file is supplied, with no white spaces	Text
CCYYMMDDHHMMSS	Date/time stamp in the format CCYYMMDDHHmmSS when the file has been generated, 24-hour format, local time	Datetime (CCYYMMDDhhmmss)
CSV	The file extension of "CSV", separated from the file name with a period "."	

Example of a filename for a CSV BB transaction:

```
123_LINEPACKADEQUACY_ 20070503131500.CSV
```

3.3 Identifiers (Id's)

Plant and Zone identifiers used within the Transactions and Reports subscribe to the following format:

Item	Description	Values
1	Energy type identifier	5 Gas
2	State Code of element	2 NSW and ACT 3 Victoria 4 Queensland 5 South Australia 6 Western Australia 7 Tasmania 8 Northern Territory
3	Unique identifying Number	1 to 9999 including leading zeros

For example, Id 520345 relates to an element (Facility or Zone) within NSW / ACT with a unique identifier of 0345 which is related to the gas industry.

3.4 Data dictionary

Field type	Description	
ActualQuantity	The actual flow quantity expressed in TJ	
CapacityQuantity	Standing capacity quantity expressed in TJ	
CapacityType	**Value**	**Description**
	HCAP	Holding capacity in storage
	MDQ	Daily maximum firm capacity (name plate) under the expected operating conditions adjusted for any plant that is 'mothballed' , decommissioned or down-rated and / or cannot be recalled within 1 week, planned maintenance excepted. Reflects any long terms changes (i.e. >12 months)
	RMDQ	Reverse direction daily maximum capacity (name plate) under normal operating conditions (if reverse flows occur)
	WMDQ	Withdrawal into UGS or liquefaction of LNG. Daily maximum daily capacity (name plate) under normal operating conditions
DemandQuantity	Standing Forecast Demand quantity expressed in TJ	
DemandType	**Value**	**Description**
	PSUMM	1 in 2 summer (November to March) peak day demand (by Zone)
	PWINT	1 in 2 winter (May to September) peak day demand (by Zone)
Description	Free text field used to provide additional information	
EffectiveDate	**Value**	**Description**
	yyyy-mm-dd	Gas day date that corresponding record takes effect. Any time component supplied will be ignored.
Flag	**Value**	**Description**
	RED	Involuntary load shedding happening or likely. Additionally in Victoria, where LNG is scheduled at a rate >100 tonnes/h to meet system security requirements
	AMBER	Voluntary / contractual load shedding. Additionally in Victoria, where LNG is scheduled at a rate >0 and <=100 tonnes/h to meet system security requirements
	GREEN	Adequate linepack / capacity available to meet expected demand
FlowType	**Value**	**Description**
	OPFLW	Operational daily flow. (NOT settlement quality data)
GasDate	**Value**	**Description**
	yyyy-mm-dd	Date of gas day. Any time component supplied will be ignored. The gas day is that applicable under the pipeline contract or market rules as the case may be
HighRange	A percentage value that is applied to the Facility Standing Quantities which is used for validation purposes for corresponding daily quantities. The default value is 120% but can be modified on advice from NGERAC or the respective Facility Operator. Even though an OutlookQuantity of 105TJ exceeds the CapacityQuantity of 100TJ, it is still valid where the HighRange is set to 120%. Eg. 105TJ <= (100TJ x 120%)	
LowRange	A percentage value that is applied to the Facility Standing Quantities which is used for validation purposes for corresponding daily quantities. The default value is 20% but can be modified on advice from NGERAC or the respective Facility Operator. A NominationQuantity of 15TJ fails validation where the DemandQuantity is set to 100TJ and LowRange is set to 20%. Eg. 15TJ <= (100TJ x 20%)	
NominationQuantity	Delivery Nomination quantity expressed in TJ	
NominationType	**Value**	**Description**
	FIRMN	Firm nomination for the following gas day

Field type	Description	
	FIRMR	Firm renomination, an update within the gas day
	FCNOM	Forecast nomination for the (contracted) outlook period
	D+0	The forecast for the gas day. Victorian market only
	D+1	The next day's forecast. Victorian market only
	D+2	2 day ahead forecast. Victorian market only
OutlookQuantity	Capacity Outlook quantity expressed in TJ	
OutlookType	**Value**	**Description**
	PRODC	Production capacity
	TRANC	Transmission capacity
	REVC	Reverse direction transmission capacity
PlantId	A unique Plant identifier. Refer to section 4.1.15 for details.	
PlantType	**Value**	**Description**
	PIPE	Pipeline – a physical pipeline linking a production or demand zone to another production or demand zone which normally covers the whole pipeline system including laterals
	PROD	Production – a facility where gas is processed and injected into a pipeline
	STOR	Storage – a facility where gas is withdrawn from a pipeline and held in storage for subsequent re-injection
Quality	**Value**	**Description**
	OK	Data quality satisfactory. This is the only valid entry for Participant transactions
	OOR	Data Out of Range. System generated
	S1	Data substituted with previous day's values. System generated
	S2	Data substituted with values from 2 days prior. System generated
TG	**Value**	**Description**
	567.8	The total gas delivered from all BB pipelines operated by the Pipeline Operator, in the preceding invoice period.
UG	**Value**	**Description**
	123.4	The total gas delivery allocated to the Shipper from all BB pipelines operated by the Pipeline Operator, which provided it with a pipeline service in the previous invoice period
Units	**Value**	**Description**
	TJ	Terajoules. This is the only energy unit used throughout the BB and will always utilise a precision of 1 decimal place
ZoneId	A unique Zone identifier. Refer ZoneType for inclusions.	
ZoneType	**Value**	**Description**
	JURI	Jurisdiction – an area typically aligned to state or territory boundaries
	DZONE	Demand Zone – an area (usually greater city area) supplied by one or more BB pipelines
	PZONE	Production Zone – an area where gas is injected into 1 or more BB pipelines

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3.5 File processing validations

The following generic validations apply across all transaction types:

Validation	Error code	Error message
The submitted file passed all validations without errors and has been accepted by the system	0	File processed without errors or alarms, [NO_OF_ROWS] rows accepted
Unknown file processing error occured	1	Unexpected file processing error
Unknown data processing error occured	2	Unexpected data processing error
The filename provided must comply with the file naming convention.	3	File name provided does not comply with COMPID_TRANSACTIONNAME_CCYYMMDDHHMMSS.CSV naming convention
The transaction name provided in the filename must be an existing known transaction type	4	The transaction name [TRANSACTION_NAME] within the file name provided is not of a known type
All mandatory fields for the transaction must be provided, and the fields provided within the transaction file must match those associated to the transaction name	5	The transaction fields do not match those associated to the transaction name
The data types provided for the transaction file fields must be valid data types for the specified fields	8	Invalid data provided [INVALID_DATA] for type [DATA_TYPE]
The submitted file contains multiple rows with the same primary key	89	Rows with duplicate key information are present in the file

Where:

Label	Description
[NO_OF_ROWS]	The total number of rows accepted by the system in the valid file
[TRANSACTION_NAME]	The transaction name within the file name of the uploaded file
[INVALID_DATA]	The invalid data provided for a field in the uploaded file
[DATA_TYPE]	The data type for a field in the uploaded file

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4 Transactions and Acknowledgements

4.1 Capacity Outlook

The Capacity Outlook transaction is primarily used to provide the 7 day capacity outlook data for the Capacity Outlook 7 Day report. It is a requirement that Facility Operators provide this information daily for the gas day and the next 6 gas days.

Where multiple OutlookTypes apply to individual plant (eg. bidirectional pipelines or interconnects will have a corresponding TRANC and REVC), then all details are required to be provided.

4.1.1 Transaction definition

Transaction name	From	To	Submission Cut-off
CAPACITYOUTLOOK	Facility/ Pipeline Operator	BBO	7:00 pm on the evening before the gas day begins

4.1.2 Informational records

Field	Primary Key	M/O/NR	Data type	Example
PlantId	Yes	M	int	1234
GasDate	Yes	M	datetime	2007-01-23
OutlookType	Yes	M	char(5)	PRODC; TRANC; REVC
OutlookQuantity	No	M	numeric(18,1)	1234.5
Description	No	O	varchar(256)	Free text field to provide additional information
Quality	No	M	char(5)	OK

4.1.3 Examples

```
PlantId,GasDate,OutlookType,OutlookQuantity,Description,Quality
540066,2014-06-22,PRODC,38.2,,OK
540066,2014-06-23,PRODC,41.2,,OK
540066,2014-06-24,PRODC,42.0,,OK
540066,2014-06-25,PRODC,42.0,,OK
540066,2014-06-26,PRODC,42.0,,OK
540066,2014-06-27,PRODC,42.0,,OK
540066,2014-06-28,PRODC,42.0,,OK
540067,2014-06-22,PRODC,45.5,,OK
540067,2014-06-23,PRODC,49.1,,OK
540067,2014-06-24,PRODC,50.0,,OK
540067,2014-06-25,PRODC,50.0,,OK
540067,2014-06-26,PRODC,50.0,,OK
540067,2014-06-27,PRODC,50.0,,OK
540067,2014-06-28,PRODC,50.0,,OK
540068,2014-06-22,PRODC,38.2,,OK
540068,2014-06-23,PRODC,41.2,,OK
540068,2014-06-24,PRODC,42.0,,OK
540068,2014-06-25,PRODC,42.0,,OK
540068,2014-06-26,PRODC,42.0,,OK
540068,2014-06-27,PRODC,42.0,,OK
540068,2014-06-28,PRODC,42.0,,OK
```

```
540065,2014-06-22,PRODC,0.0,,OK
540065,2014-06-23,PRODC,0.0,,OK
540065,2014-06-24,PRODC,3.0,,OK
540065,2014-06-25,PRODC,7.2,,OK
540065,2014-06-26,PRODC,7.2,,OK
540065,2014-06-27,PRODC,7.2,,OK
540065,2014-06-28,PRODC,7.2,,OK
540073,2014-06-22,PRODC,0.0,,OK
540073,2014-06-23,PRODC,0.0,,OK
540073,2014-06-24,PRODC,0.0,,OK
540073,2014-06-25,PRODC,0.0,,OK
540073,2014-06-26,PRODC,0.0,,OK
540073,2014-06-27,PRODC,0.0,,OK
540073,2014-06-28,PRODC,0.0,,OK
540080,2014-06-22,PRODC,0.0,,OK
540080,2014-06-23,PRODC,0.0,,OK
540080,2014-06-24,PRODC,0.0,,OK
540080,2014-06-25,PRODC,25.0,,OK
540080,2014-06-26,PRODC,45.0,,OK
540080,2014-06-27,PRODC,45.0,,OK
540080,2014-06-28,PRODC,45.0,,OK
540074,2014-06-22,PRODC,7.0,,OK
540074,2014-06-23,PRODC,7.0,,OK
540074,2014-06-24,PRODC,7.0,,OK
540074,2014-06-25,PRODC,7.0,,OK
540074,2014-06-26,PRODC,7.0,,OK
540074,2014-06-27,PRODC,7.0,,OK
540074,2014-06-28,PRODC,7.0,,OK
540076,2014-06-22,PRODC,111.0,,OK
540076,2014-06-23,PRODC,111.0,,OK
540076,2014-06-24,PRODC,111.0,,OK
540076,2014-06-25,PRODC,111.0,,OK
540076,2014-06-26,PRODC,111.0,,OK
540076,2014-06-27,PRODC,101.0,,OK
540076,2014-06-28,PRODC,107.0,,OK
```

4.1.4 Transaction validations

Field	Validation	Error code	Error message
GasDate	The gas date provided must be a valid date	8	Invalid data provided [GAS_DATE] for type date
PlantId	The plant id provided must be a valid PlantId on the database	40	Plant ID [PLANT_ID] does not exist in the database
PlantId	The provider of the file must be the assigned operator of the plant in question	41	Participant is not the registered operator of plant [PLANT_ID]
OutlookType	The outlook type provided must be a valid OutlookType on the database	63	Outlook type [OUTLOOK_TYPE] for plant [PLANT_ID] is not valid
OutlookQuantity	The outlook quantity provided must be greater than or equal to (LowRange x CapacityQuantity) This is a warning only. In the event of validation failure, the value is accepted but tagged as OOR.	84	Quantity for plant [PLANT_ID] is less than the low range x MDQ capacity

Field	Validation	Error code	Error message
OutlookQuantity	The outlook quantity provided must be less than or equal to (HighRange xCapacityQuantity) This is a warning only. In the event of validation failure, the value is accepted but tagged as OOR.	85	Quantity for plant [PLANT_ID] exceeds the high range x MDQ capacity
Quality	The quality type provided must be a valid Quality type on the database	69	Quality type [QUALITY] for plant [PLANT_ID] is not valid

Where:

Label	Description
[GAS_DATE]	The gas date specified in the record
[PLANT_ID]	The plant id specified in the record
[OUTLOOK_TYPE]	The outlook type specified in the record
[QUALITY]	The quality specified in the record

4.2 Linepack Adequacy Flag

The Linepack Adequacy transaction is primarily used to provide the data for the Linepack Adequacy Data report. It is a requirement that Pipeline Operators update this information during a gas day if there is a change in status otherwise the flag will remain unchanged.

4.2.1 Transaction definition

Transaction name	From	To	Submission Cut-off
LINEPACKADEQUACY	Pipeline Operator	BBO	7:00 pm on the evening before the gas day begins

4.2.2 Informational records

Field	Primary Key	M/O/NR	Data type	Example
PlantId	Yes	M	int	1234
GasDate	Yes	M	datetime	2007-01-23
Flag	No	M	char(5)	RED; AMBER; GREEN
Description	No	O	varchar(256)	Free text field to provide additional information

4.2.3 Examples

```
PlantId,GasDate,Flag,Description
550052,2013-06-20,GREEN,
```

4.2.4 Transaction validations

Field	Validation	Error code	Error message
GasDate	The gas date provided must be a valid date	8	Invalid data provided [GAS_DATE] for type date
PlantId	The plant id provided must be a valid PlantId on the database	40	Plant ID [PLANT_ID] does not exist in the database
PlantId	The provider of the file must be the assigned operator of the plant in question	41	Participant is not the registered operator of plant [PLANT_ID]
Flag	The flag provided must be a valid flag on the database	68	Flag type [FLAG_TYPE] for plant [PLANT_ID] is not valid

Where:

Label	Description
[GAS_DATE]	The gas date specified in the record
[PLANT_ID]	The plant id specified in the record
[FLAG]	The flag specified in the record

4.3 Delivery Nomination

The Delivery Nomination transaction is primarily used to provide the data for the Forecast Pipeline Flows report. It is a requirement that Pipeline Operators provide:

Data	Period	Frequency	Relevant code
Forecast deliveries by zone for the outlook period for each BB pipeline	As determined by the relevant contracts or market arrangements[2]	As determined by the relevant contracts or market arrangements[2]	FCNOM
Firm delivery nomination by zone for the gas day	The gas day	Daily	FIRMN
Renominations by zone within the gas day	Within the gas day	Within day	FIRMR

Typically, NominationQuantity values are associated with a Demand Zone, however in some cases, such quantities can relate to deliveries into Production Zones. Where the forecast applies to a bidirectional pipeline or interconnect, the NominationQuantity reported would be positive for flow in the default direction and negative by exception. Default flow is defined as per the Schedule of Default Pipeline Flow Direction (see References).

[2] There is no limit to the end of the outlook period, however, typically it is expected to be a 7 day period. (in which case this forecast data would be uploaded weekly). The Victorian market operator will provide scheduled injections on its BB pipelines (including LNG injections) as a proxy for delivery nominations. The outlook period for the Victorian market is 3 days, being the gas day and the next 2 gas days.

The following example illustrates a scenario where multiple Production Zones deliver gas to a common Demand Zone or hub. Using the conventions established in this example, it should be possible to interpret the data required to be provided for any BB scenario.

The region serviced by the MAP pipeline and its laterals is shown as Nom. 200 and is inclusive of the corresponding Adelaide hub value shown as Nom. 140. Similarly, the region serviced by the SEA Gas pipeline and its laterals is shown as Nom. 210 and is inclusive of the corresponding Adelaide hub value shown as Nom. 180. (By inference, the total forecast for the Adelaide hub is the aggregation of the 140 and 180 nominations). An associated PlantId is required to be provided with each of these records so that it is possible to associate each of the forecasts with the respective pipeline and, by inference, the gas source.

4.3.1 Transaction definition

Transaction name	From	To	Submission Cut-off
DELIVERYNOMINATION	Pipeline Operator	BBO	For VIC Market the cut-off time is determined by the Gas Scheduling, for all other markets the cut-off is 7:00 pm on the evening before the gas day begins

4.3.2 Informational records

Field	Primary Key	M/O/NR	Data type	Example
PlantId	Yes	M	int	1234
ZoneId	Yes	M	Int	5678
GasDate	Yes	M	datetime	2007-01-23
NominationType	Yes	M	char(5)	D+0; D+1; D+2 for Victorian market only. FIRMN; FIRMR; FCNOM for all other markets.
NominationQuantity	No	M	numeric(18,1)	1234.5
Description	No	O	varchar(256)	Free text field to provide additional information
Quality	No	M	char(5)	OK

4.3.3 Examples

```
PlantId,ZoneId,GasDate,NominationType,NominationQuantity,Description,Quality
550052,550016,2013-06-19,FIRMR,221.7,,OK
550052,550016,2013-06-20,FIRMN,205.5,,OK
550052,550016,2013-06-21,FCNOM,195.5,,OK
550052,550016,2013-06-22,FCNOM,155.5,,OK
550052,550016,2013-06-23,FCNOM,155.5,,OK
550052,550019,2013-06-19,FIRMR,234.8,,OK
550052,550019,2013-06-20,FIRMN,209.1,,OK
550052,550019,2013-06-21,FCNOM,199.1,,OK
550052,550019,2013-06-22,FCNOM,160.7,,OK
550052,550019,2013-06-23,FCNOM,160.7,,OK
```

4.3.4 Transaction validations

Field	Validation	Error code	Error message
GasDate	The gas date provided must be a valid date	8	Invalid data provided [GAS_DATE] for type date
PlantId	The plant id provided must be a valid PlantId on the database	40	Plant ID [PLANT_ID] does not exist in the database
PlantId	The provider of the file must be the assigned operator of the plant in question	41	Participant is not the registered operator of plant [PLANT_ID]
ZoneId	The zone id provided must be a valid ZoneId on the database	42	Zone ID [ZONE_ID] does not exist in the database
ZoneId	The provider of the file must be one of the assigned operators of plant that is associated to the Zone in question	43	Zone ID [ZONE_ID] is not associated with Plant ID [PLANT_ID]
NominationType	The nomination type provided must be a valid NominationType on the database	62	Nomination type [NOMINATION_TYPE] or plant [PLANT_ID] is not valid
NominationQuantity	The NominationQuantity must be >= (LowRange x CapacityQuantity) where the CapacityQuantity applies to the pipeline corresponding to the Demand Zone. This is a warning only. In the event of validation failure, the value is accepted but tagged as OOR.	86	Quantity for plant [PLANT_ID] is less than the low range x capacity
NominationQuantity	The NominationQuantity must be <= (HighRange x CapacityQuantity) where the CapacityQuantity applies to the pipeline corresponding to the Demand Zone. This is a warning only. In the event of validation failure, the value is accepted but tagged as OOR.	87	Quantity for plant [PLANT_ID] exceeds the high range x capacity
Quality	The quality type provided must be a valid Quality type on the database	69	Quality type [QUALITY] for plant [PLANT_ID] is not valid

Where:

Label	Description
[GAS_DATE]	The gas date specified in the record
[PLANT_ID]	The plant id specified in the record
[ZONE_ID]	The zone id specified in the record
[NOMINATION_TYPE]	The nomination type specified in the record
[QUALITY]	The quality specified in the record

4.4 Actual Flow

The Actual flow transaction is primarily used to provide the data for the Actual flow reports. It is a requirement that the Plant Operators provide this information for all plant they operate (BB pipelines and BB production and BB storage facilities) within the Bulletin Board system. Data should be provided daily for the previous gas day and no more than one day in arrears.

Where the flow applies to a bidirectional pipeline or interconnect, the ActualQuantity provided should be positive for flow in the default direction and negative by exception. Default flow is defined as per the Schedule of Default Pipeline Flow Direction (see References).

4.4.1 Transaction definition

Transaction name	From	To	Submission Cut-off
ACTUALFLOW	Facility/Pipeline Operator	BBO	12:00 pm on the day after the relevant gas day ends

4.4.2 Informational records

Field	Primary Key	M/O/NR	Data type	Example
PlantId	Yes	M	int	1234
ZoneId	Yes	M	int	5678
GasDate	Yes	M	datetime	2007-01-23
FlowType	No	M	char(5)	OPFLW
ActualQuantity	No	M	numeric(18,1)	1234.5
Quality	No	M	char(5)	OK

4.4.3 Examples

```
PlantId,ZoneId,GasDate,FlowType,ActualQuantity,Quality
520047,520008,"2013-06-18","OPFLW",158.3,"OK"
520047,520009,"2013-06-18","OPFLW",18.8,"OK"
520047,520011,"2013-06-18","OPFLW",274.3,"OK"
```

4.4.4 Transaction validations

Field	Validation	Error code	Error message
GasDate	The gas date provided must be a valid date	8	Invalid data provided [GAS_DATE] for type date
GasDate	The gas date provided must be an historical date	26	Gas Date [GAS_DATE] for plant [PLANT_ID] is not a historical date
PlantId	The plant id provided must be a valid PlantId on the database	40	Plant ID [PLANT_ID] does not exist in the database
PlantId	The provider of the file must be the assigned operator of the plant in question	41	Participant is not the registered operator of plant [PLANT_ID]
ZoneId	The zone id provided must be a valid ZoneId on the database	42	Zone ID [ZONE_ID] does not exist in the database

Field	Validation	Error code	Error message
ZoneId	The provider of the file must be one of the assigned operators of plant that is associated to the Zone in question	43	Zone ID [ZONE_ID] is not associated with Plant ID [PLANT_ID]
FlowType	The flow type provided must be a valid FlowType on the database	64	Flow type [FLOW_TYPE] for plant [PLANT_ID] is not valid
Quality	The quality provided must be a valid Quality type on the database	69	Quality type [QUALITY] for plant [PLANT_ID] is not valid

Where:

Label	Description
[GAS_DATE]	The gas date specified in the record
[PLANT_ID]	The plant id specified in the record
[ZONE_ID]	The zone id specified in the record
[QUALITY]	The quality specified in the record

4.5 Standing Capacity

The Standing Capacity transaction is used to provide the nameplate capacity data for the Standing Capacity Data report. Facility Operators must provide this 'nameplate' capacity information annually or when there is a material change to the capacity of the plant that is expected to remain in force for 12 months or longer (i.e. excludes short term maintenance). With respect to production capacity, Standing Capacity should take long term field performance trends into account.

Where multiple Capacity Types apply to individual plant (eg. bidirectional pipelines or interconnects will have a corresponding MDQ and RMDQ whereas storage facilities will have corresponding MDQ, HCAP and WMDQ), then all the relevant nameplate capacity details are required to be provided.

4.5.1 Transaction definition

Transaction name	From	To	Submission Cut-off
STANDINGCAPACITY	Facility/ Pipeline Operator	BBO	NA (submission is annually)

4.5.2 Informational records

Field	Primary Key	M/O/NR	Data type	Example
PlantId	Yes	M	int	1234
CapacityType	Yes	M	char(5)	HCAP; MDQ; RMDQ; WMDQ
CapacityQuantity	No	M	numeric(18,1)	1234.5
EffectiveDate	Yes	M	datetime	2007-01-23
Comments	No	O	varchar(256)	Free text field to provide additional information

4.5.3 Examples

```
PlantId,CapacityType,CapacityQuantity,EffectiveDate,Comments
540066,MDQ,75,2014-06-23,
540067,MDQ,90,2014-06-23,
540068,MDQ,75,2014-06-23,
540065,MDQ,15,2014-06-23,
540073,MDQ,30,2014-06-23,
540080,MDQ,180,2014-06-23,
540074,MDQ,30,2014-06-23,
540076,MDQ,120,2014-06-23,
```

4.5.4 Transaction validations

Field	Validation	Error code	Error message
PlantId	The plant id provided must be a valid PlantId on the database	40	Plant ID [PLANT_ID] does not exist in the database
PlantId	The provider of the file must be the assigned operator of the plant in question	41	Participant is not the registered operator of plant [PLANT_ID]
CapacityType	The capacity type provided must be a valid CapacityType on the database	60	Capacity type [CAPACITY_TYPE] for plant [PLANT_ID] is not valid
CapacityQuantity	The capacity quantity provided must be greater than or equal to 0	80	CapacityQuantity for plant [PLANT_ID] must be >= 0
CapacityQuantity	The capacity quantity provided must be Must be less than 2000 except where PlantType (corresponding to specified PlantId) is 'STOR' in which case no validation is performed	81	CapacityQuantity for plant [PLANT_ID] must be < 2000 TJ
EffectiveDate	The effective date provided must be a valid date	22	The EffectiveDate [EFFECTIVE_DATE] provided is not a valid date
EffectiveDate	The effective date provided must be a current or future date	23	Effective Date [EFFECTIVE_DATE] for plant [PLANT_ID] is in the past

Where:

Label	Description
[PLANT_ID]	The plant id specified in the record
[CAPACITY_TYPE]	The capacity type specified in the record
[EFFECTIVE_DATE]	The effective date specified in the record

4.6 Shipper's Allocated Aggregated Deliveries

In accordance with section 196 of the Rules, each Pipeline Operator must provide the BBO with the aggregated allocated delivered quantities for each shipper during the previous invoice period for each

BB pipeline that it operates or operated. The Shipper's Allocated Aggregated Deliveries transaction is used for this purpose.

The BBO should be consulted where the Pipeline Operator is unsure of the Company_Id that applies to the Shipper/s within this report.

The Pipeline Operators should email the CSV file to the BBO (at the email address defined within the Contact Us tab on the BB) as no provision has been made for these files to be submitted via FTP or HTTP.

4.6.1 Transaction definition

Transaction name	From	To	Submission Cut-off
SHIPPERUG	Pipeline Operator	BBO	NA (submission is annually via email)

4.6.2 Informational records

Field	Primary Key	M/O/NR	Data type	Example
PlantId	Yes	M	int	1234
Company_Id	Yes	M	int	Shipper identifier eg. 5678
Start_Date	No	M	date	Invoice start date (inclusive) eg. 2007-07-01
End_Date	No	M	date	Invoice end date (inclusive) eg. 2008-06-30
UG	No	M	numeric(18,1)	Shipper's Gas allocation eg. 123.4
TG	No	M	numeric(18,1)	Total Gas delivered by Pipeline Operator eg. 567.8

4.6.3 Examples

NA

4.6.4 Transaction validations

NA

4.7 Standing Demand

The Standing Demand transaction is primarily used to provide the gas peak day demand data for the Standing Peak Day Demand Forecast report. The BBO will provide the standing demand data (i.e. peak day demand forecasts by zone) but may consult other BB Participants in this process.

The transaction is to include a 1 in 2 Peak Summer day and/or Winter day demand forecast (or peak day forecasts other than 1in2 as defined. For the purpose of this transaction, the summer period is considered to be from November to March (inclusive) and the winter period is considered to be from May to September (inclusive).

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4.7.1 Transaction definition

Transaction name	From	To	Submission Cut-off
STANDINGDEMAND	BBO	BBO	NA (submission is twice annually)

4.7.2 Informational records

Field	Primary Key	M/O/NR	Data type	Example
ZoneId	Yes	M	int	5678
DemandType	Yes	M	char(5)	PSUMM; PWINT
DemandQuantity	No	M	numeric(18,1)	1234.5

4.7.3 Examples

```
ZoneId,DemandType,DemandQuantity
550019,PWINT,356
550018,PWINT,485
550016,PWINT,345
520011,PWINT,482
520010,PWINT,474
520009,PWINT,60
520008,PWINT,329
540023,PWINT,211
540022,PWINT,107
540021,PWINT,168
540020,PWINT,219
530012,PWINT,1135
570028,PWINT,61
```

4.7.4 Transaction validations

Field	Validation	Error code	Error message
File name	The provider of the file is not authorised to upload standing demand transactions	48	The file provider is not authorised to upload transactions of this type
ZoneId	The zone id provided must be a valid ZoneId on the database	42	Zone ID [ZONE_ID] does not exist in the database
DemandType	The demand type provided must be a valid DemandType on the database	61	Demand type [DEMAND_TYPE] for plant [PLANT_ID] is not valid
DemandQuantity	The demand quantity provided must be less than or equal to 0	82	Demand Quantity for zone [ZONE_ID] must be >= 0
DemandQuantity	The demand quantity provided must be less than 2000	83	Demand Quantity for zone [ZONE_ID] must be < 2000 TJ

Where:

Label	Description
[ZONE_ID]	The zone id specified in the record
[DEMAND_TYPE]	The demand type specified in the record
[PLANT_ID]	The plant id specified in the record

4.8 Transaction acknowledgement

The transaction acknowledgement type for the submission of the CSV transaction files varies depending on the submission method as the following:

- If the BB participants upload their CSV transaction file via FTP using the BB FTP server, then an INT944 transaction log report is generated for each FTP file upload and it is available in the participant's private FTP folder. The INT944 Transaction Log files will remain in participant's private download folder either until they are consumed (downloaded and deleted from the folder) by the participant, or until they exceed their retention period which is currently seven days. Files that exceed their retention period will be automatically moved into the Archive folder.

  If the CSV transaction file passed all validations then the file is accepted and the INT944 transaction log file is generated with a success message which has the error code 0. Otherwise, if at least one record in the submitted CSV transaction file fails validation then the file is rejected and the INT944 transaction log file is generated with a list of the error codes, which were found during the validation.

  Each INT944 Transaction Log contains details of the last submitted file only.

  For further details on the format of INT944 Transaction Log, see Guide to National Gas Bulletin Board Reports.

- If the BB participants upload their CSV transaction file through the BB website upload functionality then the acknowledgement of their submission is in the form of a success message or error messages, which are displayed to the participant on the BB website GUI. An INT944 Transaction Log is not generated for CSV files uploaded via the BB website.

The CSV transaction file will only be accepted by the system if **all** its records have passed all validations.

5 References

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

- AEMO Information and Support Hub: phone: 1300 AEMO 00 (1300 236 600), and follow the prompts; email: supporthub@aemo.com.au.

5.1 AEMO's website

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

- *Guide to Information Systems*, http://www.aemo.com.au/About-the-Industry/~/media/Files/Other/registration/Guide%20to%20Information%20Systems.ashx (Home>About the Industry>Information Systems>Using Energy Market Information Systems).

5.2 National Gas Bulletin Board website

User guides for the Gas Bulletin Board can be found within the Bulletin Board Information Tab on the GBB website, (here: https://gbb.aemo.com.au/Bulletin%20Board%20Information/Documents.aspx).

This includes:

- Guide to GBB CSV File Transactions (this document) – detailed explanation for uploading CSV Files to provide data to AEMO for the GBB website
- Guide to GBB Reports – detailed explanation for accessing, viewing, and saving data reports available on the GBB website
- GBB Participation Registration Kit – information for prospective participants in the GBB and National gas systems
- GBB Procedures – the procedures that regulate the operation of the GBB website
- Guide to GBB Website– guide to using the GBB website
- Guide to Using the Self Service Password Management Facility – guide for how to use the self-service password management facilty, once registered, for those with secure access only
- Guide to Register to use the Self Service Password Management Facility – guide for how to register to use the self service password management facility, for those with secure access only
- Schedule of Default Pipeline Flow Direction– schedule that defines the default direction for all BB Pipelines.

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

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