

24 – 30 January 2010

## Preface

As part of its monitoring roles for the National Gas Market Bulletin Board (Bulletin Board) and Victorian Gas Market, the AER publishes a weekly gas market report. Part A of the report looks at gas usage and flows of registered facilities in southern and eastern Australia (as reported on the Bulletin Board). Part B provides a summary of operational and market data in the Victorian Gas Market.

This report will evolve over time and the nature of information presented may change. The AER welcomes feedback on the report from interested parties. Feedback can be sent to [aerinqury@er.gov.au](mailto:aerinqury@er.gov.au), and headed 'Comments on weekly gas report'.

## Summary

### National Gas Market Bulletin Board

As shown in Figure A2, there was only one instance of missing flow data on the Bulletin Board this week. BHP Billiton Petroleum failed to submit data for the Minerva Gas Plant on Tuesday.

Figure 4 shows changes in gas demand and production and pipeline flows compared to the previous week. Total average daily gas demand fell by 90 TJ (7 per cent) compared to the previous week. Falls of 85 MW (23 per cent) and 31 MW (9 per cent) were recorded in Victoria and NSW/ACT respectively, while increases of 18 TJ (7 per cent) and 8 TJ (21 per cent) were recorded in South Australia and Tasmania respectively. Average daily gas demand in Queensland was very close to the previous week.

Total Gas Powered Generation (GPG) gas usage fell by 35 TJ (7 per cent) compared to the previous week. While falls were recorded in Victoria 45 TJ (74 per cent) and NSW/ACT 23 TJ (23 per cent), increases were recorded in South Australia 26 TJ (18 per cent) and Tasmania 8 TJ (36 per cent). Queensland remained steady.

Average production volumes decreased by 82 TJ (6 per cent) compared to the previous week. The largest fall was in South Australia 45 TJ (19 per cent). Small increases were recorded at the Queensland production facilities. Average daily flows were lower than the previous week.

### Victorian Gas Market

Total average gas injections in the Victorian gas market fell by 71 TJ (17 per cent) compared to the previous week. Although small increases were recorded in Culcairn and Otway, falls were recorded at all other injection points. (See Figure V3).

The average imbalance price fell from \$2.47/GJ in the previous week to \$1.56/GJ in line with the fall in demand.

There were no bids from Bass Gas this week due to a scheduled maintenance outage. Directional Flow Point Constraints were applied to injections/withdrawals at Iona on Saturday and SEA Gas on Sunday and Tuesday. In addition, Supply Demand Point Constraints (SDPCs) were issued for SEA Gas withdrawals on Sunday and Iona injections and withdrawals on Saturday. SDPCs were also issued for injections at Culcairn on

Wednesday, while Thursday saw SDPCs applied at the Longford injection point and at Vic Hub injection and withdrawal points due to maintenance being carried out on the Eastern Gas Pipeline.

## Part A: National Gas Market Bulletin Board

### Overview of pipeline and production flows

Figure 1 sets out the average daily pipeline flows into each key demand region across the National Gas Market. (A list of pipeline facilities for each demand region is provided in Figure A1 of the Appendix.)

**Figure 1: Average daily pipeline flows (TJ) into each demand region**

Average daily flows	NSW	ACT	VIC	SA	TAS	QLD		
						Brisbane	Mt Isa	Gladstone
Current week (24 - 30 January)	314	6	287	262	46	179	86	79
Financial Year-to-date 2009-10*	374	22	595	282	37	167	86	70
Financial Year-to-date 2008-09**	328	23	652	307	34	171	83	68

\*Average daily estimated gas consumption measured from 1 July 2009 to the current week (inclusive)

\*\*Average daily estimated gas consumption measured from 1 July 2008 to the equivalent week in 2008 (inclusive)

Source: National Gas Market Bulletin Board <http://www.gasbb.com.au>

Figure 2 provides the average daily amount of gas used for GPG (gas-powered generators) in each state.

**Figure 2: Average daily gas (TJ) used by gas-powered generators in each state**

Average daily gas for GPG usage^	NSW	VIC	SA	TAS	QLD
Current week (24 - 30 January)	78	16	172	30	182
Financial Year-to-date 2009-10*	84	45	163	22	159
Financial Year-to-date 2008-09**	34	70	188	24	111

^Estimated values based on application of implied heat rates for generators within the demand region sourced from ACIL Tasman's 2009 Final Report 'Fuel resource, new entry and generation costs in the NEM'

\*Average daily estimated gas consumption measured from 1 July 2009 to the current week (inclusive)

\*\*Average daily estimated gas consumption measured from 1 July 2008 to the equivalent week in 2008 (inclusive)

Source: <http://www.aemo.com.au>

Notes: Data for each state collected on the following basis:

1. NSW - Smithfield Energy, Uranquinty, Hunter Valley GT, Colongra and Tallawarra power stations
2. VIC - Laverton North, Valley Power, Jeeralang A, Jeeralang B, Somerton, Bairnsdale, and Newport power stations.
3. SA - Dry Creek GT, Hallet, Pelican Point, Torrens Island, Mintaro, Osborne, Ladbroke Grove, and Quarantine power stations.
4. TAS - Tamar Valley power stations.
5. QLD - Braemar 1, Braemar 2, Roma, Oakey, Barcaldine, and Swanbank power stations.

Figure 3 sets out the daily average flows from production and storage facilities from each production zone across the National Gas Market. (A list of production/storage facilities for each zone is provided in Figure A2 of the Appendix.)

**Figure 3: Daily average production flows (TJ) for each production zone**

Average daily flows	Roma (QLD)	Eastern Victoria	Otway Basin (VIC)	Moomba (SA/QLD)
Current week (24 - 30 January)	474	493	227	202
Financial Year-to-date 2009-10*	445	697	287	283
Financial Year-to-date 2008-09**	314	763	311	325

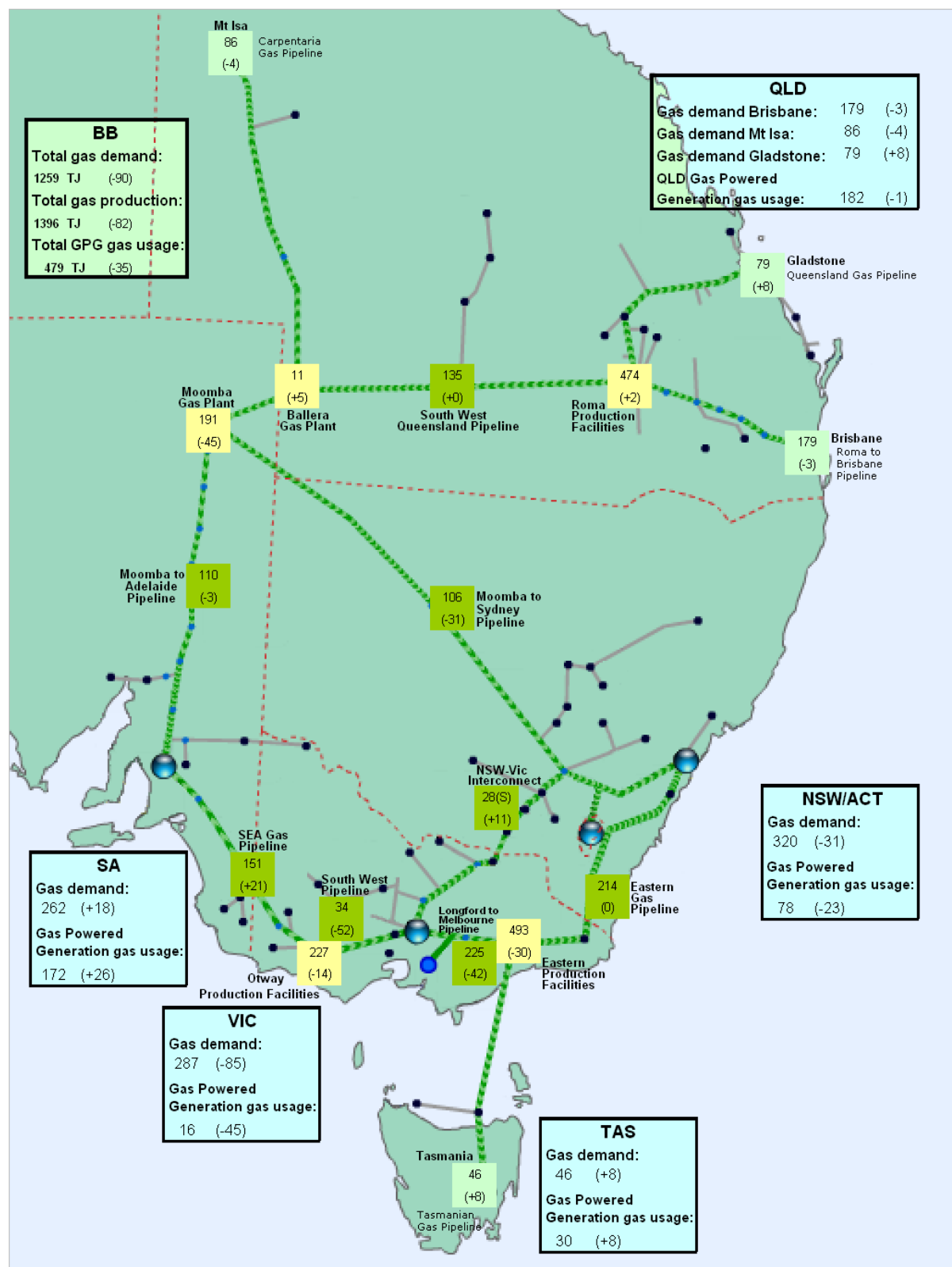
\*Average daily estimated gas consumption measured from 1 July 2009 to the current week (inclusive)

\*\*Average daily estimated gas consumption measured from 1 July 2008 to the equivalent week in 2008 (inclusive)

Source: National Gas Market Bulletin Board <http://www.gasbb.com.au>

Figure 4 shows the changes in average daily pipeline and production flows compared to the previous week, as well as the gas demand and GPG usage of gas in each region.

**Figure 4: Changes in gas demand and production and pipeline flows (TJ)**



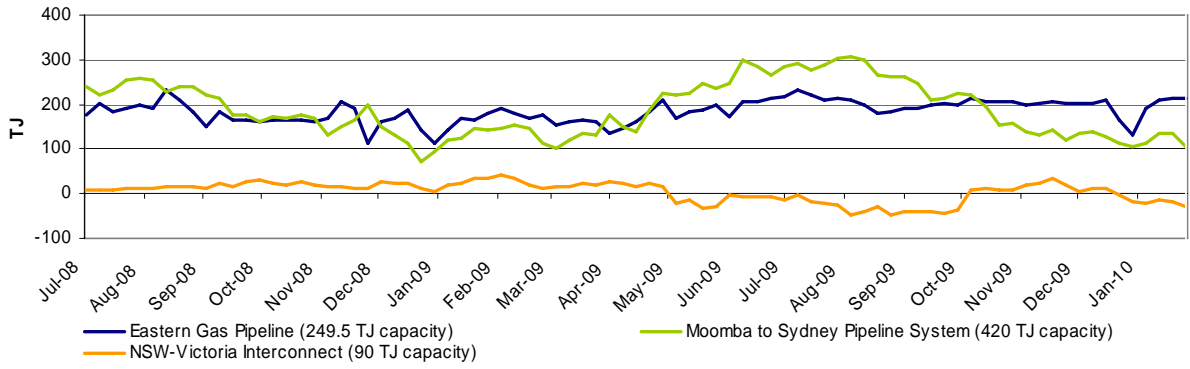
Source: Natural Gas Market Bulletin Board <http://www.gasbb.com.au>

Notes: Direction of aggregate daily flows along the NSW-Vic Interconnect indicated on map by S (South) or N (North).

### Gas flows into demand regions

The figures below provide the average daily flows into each of the demand regions served by multiple pipelines and supply sources.

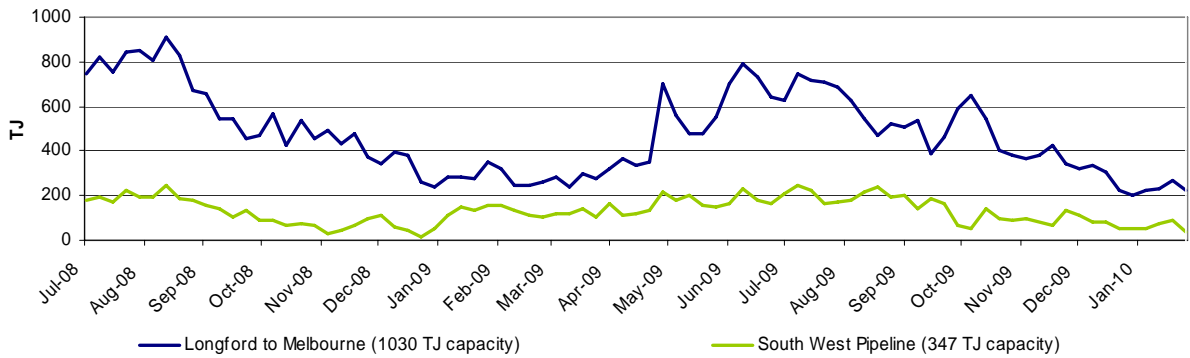
**Figure 5: Average daily flows (TJ) into NSW/ACT demand region**



Source: Natural Gas Market Bulletin Board <http://www.gasbb.com.au>

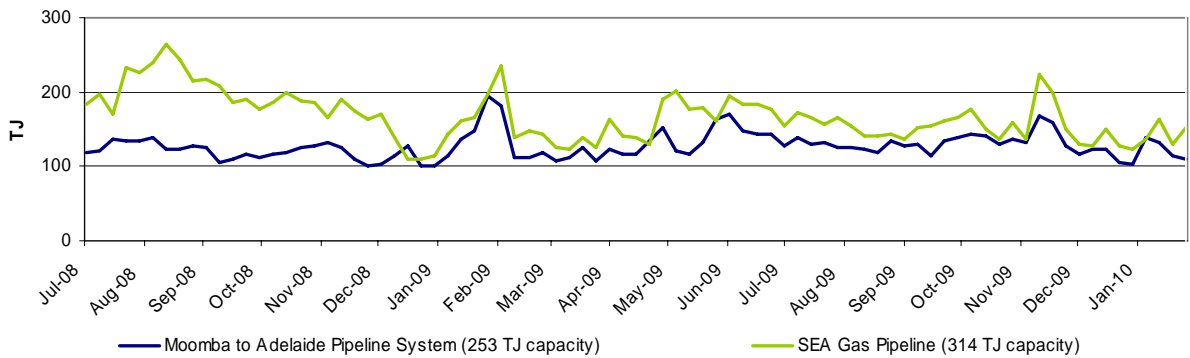
Notes: Negative flows on the NSW-Victoria Interconnect represent flows out of NSW into VIC.

**Figure 6: Average daily flows (TJ) into VIC demand region**



Source: Natural Gas Market Bulletin Board <http://www.gasbb.com.au>

**Figure 7: Average daily flows (TJ) into SA demand region**



Source: Natural Gas Market Bulletin Board <http://www.gasbb.com.au>

## Part B: Victorian Gas Market

### Participation in the market

Figure V1 shows participant bids submitted at the start of the gas day (6am) at injection and withdrawal points on the Victorian Principal Transmission System (VPTS). The orange shaded boxes indicate that the participant submitted bids at that location on at least one occasion during the week. An “S” indicates that some of this nominated gas was scheduled into the gas market, while “NS” indicates that none of the gas was scheduled. Green shading below indicates where a change has occurred from the previous week.

**Figure V1: Injection and withdrawal point bids in the VIC Gas Market<sup>^</sup>**

Market Participant	Participant type	No. of injection / withdrawal bid points	Injection bids in the VPTS							Withdrawal bids in the VPTS					
			BassGas	Culcairn	IONA	LNG	Longford	SEA Gas	VichHub	Otway	Culcairn	IONA	SEA Gas	VichHub	
AETV Power	Trader	1								NS					S
AGL (Qld)	Retailer	1				NS									
AGL	Retailer	4		NS	NS	NS	S					NS	S		
Aust. Power & Gas	Retailer	3				NS	S						S		
Country Energy	Transmission Customer	1										S			
Energy Australia	Retailer	2			S		S								
International Power	Transmission Customer	1												S	
Simply Energy	Retailer	3				NS	S	NS							
Origin (Vic)	Retailer	6		S	NS	NS	S	S			S	S	S		
Origin (Uranquinty)	Trader	1					S								
Red Energy	Retailer	1					S								
Santos	Retailer	2						S	S						
TRU Energy	Retailer	4			S	NS	S		NS				NS		
Victoria Electricity	Trader	1											S		
Victoria Electricity	Retailer	5		S	S	NS		S	S						
Visy Paper	Distribution Customer	2					S					S			
Coogee Energy	Transmission Customer	1					S								

<sup>^</sup>Bids taken from 6am data for each gas day during the current week.

Source: <http://www.aemo.com.au> (INT131)

Notes: Comparison is approximate since data represents whether bids were under or over the scheduled market clearing price at 6am. Bids are scheduled in price merit order — this means injection bids which are less than the market clearing price will be scheduled, while withdrawal bids which are greater than the market clearing price will be scheduled into the market.

### Market Prices

Figure V2 displays volume-weighted average daily imbalance prices, compared to the 2009-10 financial year-to-date average and the 2008-09 financial year-to-date equivalent. Daily imbalance prices for each day during the current week are also noted.

**Figure V2: Imbalance Weighted Prices (\$/GJ)**

	Current Week (24 - 30 January)	Previous Week (17 - 23 January)	2009-10 Financial YTD*	2008-09 Financial YTD**
<b>Average daily price</b>	1.56	2.47	1.58	3.11

Current Week (24 - 30 January)	Sun	Mon	Tue	Wed	Thu	Fri	Sat
<b>Daily price</b>	1.67	1.64	0.53	1.98	1.64	1.70	1.77

\*Average daily estimated gas consumption measured from 1 July 2009 to the current week (inclusive)

\*\*Average daily estimated gas consumption measured from 1 July 2008 to the equivalent week in 2008 (inclusive)

Source: <http://www.aemo.com.au> (INT 041)

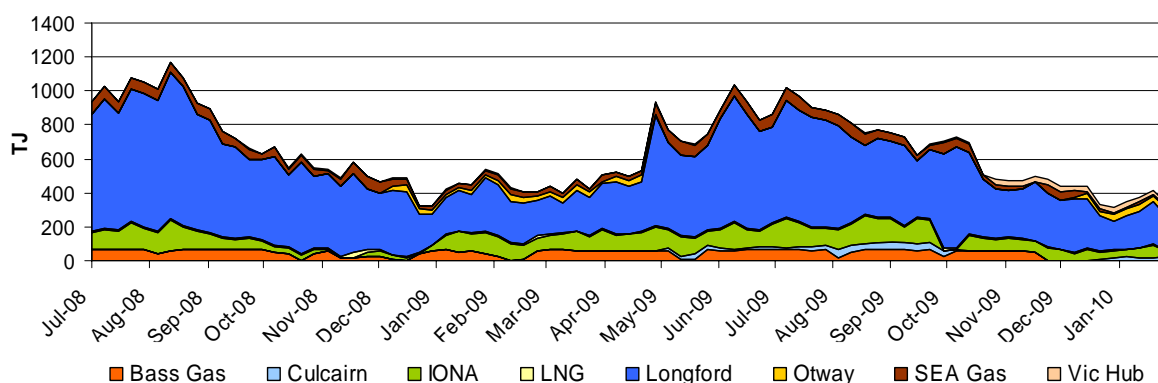
Notes: The daily average market price is a volume weighted imbalance price taking account of trading amounts at five times through the gas day — 6am, 10am, 2pm, 6pm and 10pm.

## System Injections

Figure V3 notes the average daily injections into the VPTS for the current week, compared with the 2009-10 and 2008-09 equivalent financial year-to-date daily averages

**Figure V3: Average daily flows (TJ) from Injection Points on the VPTS**

Injection Point:	Current Week (24 - 30 January)	Previous Week (17 - 23 January)	2009-10 Financial YTD*	2008-09 Financial YTD**
<b>Culcairn</b>	28	19	19	0.4
<b>Longford</b>	206	243	399	501
<b>LNG</b>	7	8	8	9
<b>IONA</b>	27	76	86	70
<b>VicHub</b>	21.1	25.9	14.2	1.6
<b>SEAGas</b>	7	10	40	50
<b>Bass Gas</b>	0	0	38	47
<b>Otway</b>	47	33	9	6
<b>TOTAL</b>	<b>343</b>	<b>415</b>	<b>614</b>	<b>686</b>



\*Average daily estimated gas consumption measured from 1 July 2009 to the current week (inclusive)

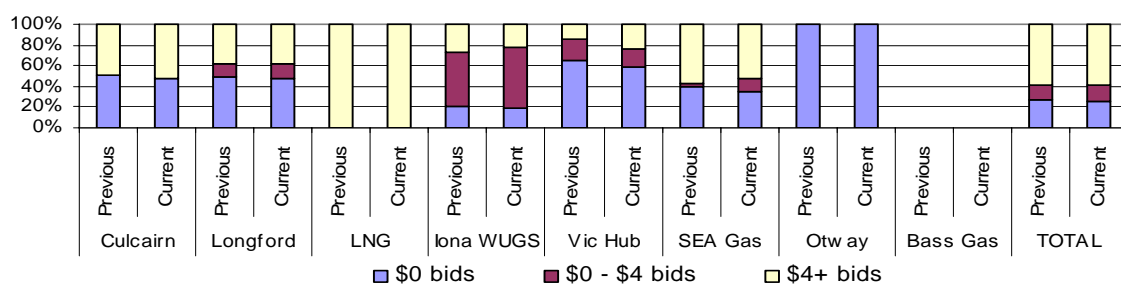
\*\*Average daily estimated gas consumption measured from 1 July 2008 to the equivalent week in 2008 (inclusive)

Source: <http://www.aemo.com.au> (INT 150)

## Bidding Activity

Figure V4 compares the price structure of gas bid at each of the injection points on the VPTS, within three price bands of \$0/GJ, \$0/GJ to \$4/GJ, and \$4/GJ and above, for the current week and for the previous week.

**Figure V4: Price structure of bids by injection points**



Source: <http://www.aemo.com.au> (INT 131) - bids submitted for the 6am schedule on each day of the week.

Notes: Figures in the table are rounded off the nearest round number (TJ); the maximum allowable bid is \$800/GJ.

Figure V5 provides a table of injection points on the VPTS where market participants submitted intra-day renominations, for each day of the week.

**Figure V5: Intra-day rebidding of gas injections**

Injection Point:	Sun	Mon	Tue	Wed	Thu	Fri	Sat
<b>Culcairn</b>	Origin						
<b>Longford</b>	AGL Origin	Origin		Origin TRU	Origin	Origin	AGL Origin TRU
<b>LNG</b>		Simply		Simply TRU APG	TRU APG	TRU	TRU APG
<b>Iona</b>	TRU	TRU	TRU	TRU	Origin TRU	TRU	
<b>VicHub</b>		AETV	AETV		AETV	AETV	
<b>SEAGas</b>	Simply Origin	Simply	Simply		Simply	Simply	Simply
<b>Otway</b>	Origin						

Source: <http://www.aemo.com.au> (INT 131)

Notes: Origin = Origin Energy | AGL = AGL Sales | TRU = TRUenergy | Simply = Simply Energy | AETV = AETV Power | APG = Australian Power & Gas

## System withdrawals

Figure V6 notes the average daily gas usage on the VPTS for this week, compared with the 2009-10 financial year-to-date daily average, as well as the 2008-09 equivalent.

**Figure V6: Average daily withdrawals (TJ) from system demand zones on the VPTS**

System withdrawal zone:	Current Week (24 - 30 January)	Previous Week (17 - 23 January)	2009-10 Financial YTD*	2008-09 Financial YTD**
<b>Ballarat</b>	9	10	24	25
<b>Geelong<sup>^</sup></b>	56	78	82	90
<b>Gippsland</b>	31	40	47	65
<b>Melbourne</b>	219	256	406	439
<b>Northern</b>	27	32	54	68
<b>TOTAL</b>	<b>343</b>	<b>416</b>	<b>614</b>	<b>687</b>

<sup>^</sup>Data presented also includes withdrawals for the Western system withdrawal zone or Western Transmission System (WTS).

\*Average daily estimated gas consumption measured from 1 July 2009 to the current week (inclusive)

\*\*Average daily estimated gas consumption measured from 1 July 2008 to the equivalent week in 2008 (inclusive)

Source: <http://www.aemo.com.au> (INT 150).

# APPENDIX

Figures A1 and A2 display the daily gas flows from each pipeline and production/storage facility in the National Gas Market over the current week. The nameplate capacity or MDQ (Maximum Daily Quantity) for each facility are also provided, along with the proportion of MDQ used on average over the current week and the year to date at each facility. Flow data not provided by bulletin board polling time is indicated by N/A.

**Figure A1: Daily flows (TJ) for pipeline facilities capacity**

Demand zone and pipeline facility	Sun	Mon	Tue	Wed	Thu	Fri	Sat	MDQ (TJ)	YTD average capacity usage (%)	Current week average daily flows	Current YTD average daily flows*	Previous YTD average daily flows**
<b>QLD</b>												
Carpentaria Pipeline	93	93	84	85	85	82	80	117	73	86	86	83
QLD Gas Pipeline	65	72	82	81	75	81	85	79	88	79	70	68
Roma to Brisbane Pipeline	162	181	171	196	197	184	164	214	78	179	167	171
South West QLD Pipeline	156	142	134	179	129	98	109	181	80	135	146	64
<b>NSW/ACT</b>												
Eastern Gas Pipeline	201	217	211	229	224	212	191	250	80	214	200	173
Moomba to Sydney Pipeline	110	129	83	132	108	102	78	420	47	106	196	178
NSW-VIC Interconnect <sup>^</sup>	-35	-40	-22	-28	-23	-26	-26	90	-14	-28	-13	18
<b>VIC</b>												
Longford to Melbourne	197	222	191	291	250	215	206	1030	44	225	449	531
South West Pipeline	41	32	16	33	50	57	10	347	37	34	128	121
<b>SA</b>												
Moomba to Adelaide Pipeline	88	104	101	127	128	124	101	253	51	110	129	123
SEA Gas Pipeline	98	180	153	143	157	153	176	314	49	151	153	184
<b>TAS</b>												
Tasmanian Gas Pipeline	38	46	46	48	48	44	45	129	29	46	37	34

\*Average daily estimated gas consumption measured from 1 July 2009 to the current week (inclusive)

\*\*Average daily estimated gas consumption measured from 1 July 2008 to the equivalent week in 2008 (inclusive)

<sup>^</sup>Negative figure represents a reverse flow of gas along the pipeline

Source: Natural Gas Market Bulletin Board <http://www.gasbb.com.au>

Notes: Operational ranges for each pipeline facility range from a minimum of 20% to a maximum of 120% of the respective MDQs. The exceptions are the South West Queensland Pipeline and the NSW-VIC Interconnect which have minimum operational ranges of 40% and 0% of MDQ respectively.



**Figure A2: Daily flows (TJ) for BB production / storage facilities compared to operational ranges and use of production/storage capacity**

Production zone and production / storage facility	Sun	Mon	Tue	Wed	Thu	Fri	Sat	MDQ (TJ)	YTD average capacity usage* (%)	Current week average daily flows	Current YTD average daily flows*	Previous YTD average daily flows**
<b>Roma (QLD)</b>												
Berwyndale South	91	93	87	95	102	92	89	140	65	93	91	63
Fairview	123	118	113	123	118	123	123	115	99	120	114	62
Kenya^	72	72	73	72	73	72	66	160	31	72	49	
Kincora	0	10	10	10	10	10	1	25	6	7	1	6
Kogan North	10	8	8	7	7	8	8	12	68	8	8	12
Peat	7	9	10	10	10	10	10	15	55	9	8	11
Rolleston	10	11	12	12	11	11	11	30	38	11	11	11
Scotia	27	27	27	27	27	27	27	27	82	27	22	21
Spring Gully	35	35	34	34	42	44	46	60	74	39	44	55
Strathblane	35	35	34	34	42	44	46	60	74	39	44	46
Talooka	21	21	21	21	25	27	28	36	75	23	27	0
Wallumbilla	11	11	11	11	11	11	11	20	53	11	11	13
Yellowbank	15	14	15	15	15	15	14	30	46	15	14	14
<b>Moomba (SA/QLD)</b>												
Moomba Gas Plant	210	216	157	223	186	199	149	430	64	191	275	283
Ballera	0	7	10	0	4	19	35	150	5	11	8	42
<b>Eastern (VIC)</b>												
Orbost Gas Plant	28	28	30	30	28	28	32	92	16	29	15	0
Lang Lang Gas Plant	0	0	0	0	0	0	0	70	54	0	38	47
Longford Gas Plant	427	451	475	526	399	546	414	1140	57	463	644	715
LNG Storage Dandenong	0	0	0	4	0	3	0	158	0	1	0	1
<b>Otway Basin (VIC)</b>												
Minerva Gas Plant	61	81	N/A	76	87	87	76	94	79	78	74	89
Otway Gas Plant	79	127	135	133	126	128	128	206	62	122	127	144
Iona Underground Gas Storage	38	22	16	20	44	47	0	320	27	27	87	77

\*Average daily estimated gas consumption measured from 1 July 2009 to the current week (inclusive)

\*\*Average daily estimated gas consumption measured from 1 July 2008 to the equivalent week in 2008 (inclusive)

^Commissioned as a Bulletin Board facility from 6 July 2009 (Facility began reporting flows from 7 July 2009)

Notes: Operational ranges for each production and storage facility range from minimum of 0% to a maximum of 120 per cent of the respective MDQs. The exception is the Longford Gas Plant which has a minimum operational range of 20% of its MDQ.

Figure A3 provides the average minimum and maximum temperatures for each of the demand regions for the current week. The average temperatures for the previous week are also provided. (Note: only the demand regions where temperature is a driver of gas demand are included).

**Figure A3: Average daily temperatures (°C) at each demand region**

Average daily temperatures (°C)		QLD (Brisbane)	NSW (Sydney)	ACT (Canberra)	VIC (Melbourne)	SA (Adelaide)	TAS (Hobart)
Current week (24 - 30 Jan)	Average min.	22.2	20.8	15.6	14.7	17.2	12.0
	Average max.	32.6	27.0	32.1	25.5	32.5	23.0
Previous week (17 - 23 Jan)	Average min.	21.0	19.6	13.3	14.7	17.8	11.6
	Average max.	32.7	30.0	30.5	25.9	29.3	22.1

Source: <http://www.bom.gov.au/climate/dwo>

Figure A4 shows the market prices at each of the scheduling intervals on each day during the current week. The imbalance weighted average prices for each gas day are also provided.

**Figure A4: Daily Victorian gas market prices (\$/GJ) at each scheduling interval**

Current Week (24 - 30 January)	Scheduling Interval					Daily Imbalance Weighted Average Price
	6am	10am	2pm	6pm	10pm	
<b>Sun</b>	1.67	1.68	1.68	1.68	2.98	1.67
<b>Mon</b>	1.66	1.67	1.48	1.11	0.88	1.64
<b>Tue</b>	0.50	0.50	0.99	2.31	2.90	0.53
<b>Wed</b>	1.90	1.90	3.22	3.20	3.49	1.98
<b>Thu</b>	1.60	1.48	2.38	2.90	2.29	1.64
<b>Fri</b>	1.68	2.00	2.32	2.32	2.32	1.70
<b>Sat</b>	1.69	2.98	2.97	2.98	3.50	1.77

Source: <http://www.aemo.com.au> (INT 041).

Figure A5 compares the market participants and market operator demand forecasts and each of the scheduling intervals on each gas day during the current week. Total actual demand for each gas day is also provided, along with the total demand override (if any) from AEMO.

**Figure A5: Daily demand forecasts (TJ) and daily demand overrides (TJ)**

Gas Day	Demand Forecasts (TJ)	Schedule					Total Demand Override (TJ)
		1	2	3	4	5	
24-Jan	MP:	291	291	294	294	294	0
	AEMO:	300	301	307	307	298	
	MP as % of AEMO	97%	97%	96%	96%	99%	
25-Jan	MP:	390	390	381	384	384	0
	AEMO:	420	391	367	366	370	
	MP as % of AEMO	93%	100%	104%	105%	104%	
26-Jan	MP:	279	278	278	278	277	0
	AEMO:	293	302	305	311	287	
	MP as % of AEMO	95%	92%	91%	89%	97%	
27-Jan	MP:	380	372	385	380	380	0
	AEMO:	410	398	398	391	379	
	MP as % of AEMO	93%	93%	97%	97%	100%	
28-Jan	MP:	376	375	381	380	380	0
	AEMO:	398	397	397	394	402	
	MP as % of AEMO	94%	94%	96%	96%	95%	
29-Jan	MP:	385	383	378	377	377	0
	AEMO:	403	387	392	405	368	
	MP as % of AEMO	96%	99%	96%	93%	102%	
30-Jan	MP:	268	266	266	265	264	0
	AEMO:	284	285	286	270	277	
	MP as % of AEMO	94%	93%	93%	98%	95%	

Source: <http://www.aemo.com.au> (INT 108, INT 126, INT 153)