

27 Dec 2009 – 2 Jan 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 [aerinquiry@aer.gov.au](mailto:aerinquiry@aer.gov.au), and headed 'Comments on weekly gas report'.

## Summary

### National Gas Market Bulletin Board

Figure A1 shows that there were seven instances of missing flow data on the Bulletin Board this week. For the second week in a row, Tas Gas Networks failed to submit any data for the week for the Tasmanian Gas Pipeline.

Figure 4 shows that total average daily gas demand fell by 76 TJ compared to the previous week, with all regions recording falls except Tasmania, which remained steady. NSW/ACT recorded the largest fall compared to the previous week (44 TJ).

Total average daily demand for gas for Gas Powered Electricity Generation (GPG) fell by 62 TJ (around 20 per cent) across all regions compared to the previous week, most likely as a result of some industry closing down over the Christmas period. The largest percentage reductions were in NSW/ACT and Queensland where demand for gas for GPG fell by 64 per cent and 12 per cent respectively.

Average daily production volumes fell by 137 TJ compared to the previous week. Falls were recorded in all regions with the largest falls percentage falls being recorded in the Eastern Victoria and Moomba production regions, (16 per cent and 35 per cent respectively). Average daily flows were either the same as or lower than the previous week except for on the NSW-Vic interconnect and the South West Queensland pipelines which both experienced increased flows.

### Victorian Gas Market

Total average daily flows from injection points on the Victorian Principal Transmission System (VPTS) fell by 16 TJ (five per cent) compared to the previous week (see Figure V3). There was a new participant, Coogee Energy, offering injection bids in at Longford. Figure V6 shows that total average daily withdrawals were also down by 20 TJ or six per cent compared to the previous week. The average imbalance price increased from \$1.21/GJ in the previous week to \$1.29/GJ.

There were no bids from Bass Gas this week due to a scheduled maintenance outage. The Australian Energy Market Operator (AEMO) issued negative demand overrides on 30 and 31 December for a total of 12 TJ, due to market participant demand forecasts falling outside AEMO's demand forecast thresholds (see Figure A5).

# 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	QLD							
	NSW	ACT	VIC	SA	TAS	Brisbane	Mt Isa	Gladstone
Current week (27 Dec - 2 Jan)	228	6	268	226	0	151	99	68
Financial Year-to-date 2009-10*	381	25	637	284	37	165	85	69
Financial Year-to-date 2008-09**	334	25	686	307	33	171	82	67

\*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 <sup>^</sup>	NSW	VIC	SA	TAS	QLD
Current week (27 Dec - 2 Jan)	23	33	136	26	173
Financial Year-to-date 2009-10*	84	45	162	22	156
Financial Year-to-date 2008-09**	31	65	185	23	110

<sup>^</sup>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 (27 Dec - 2 Jan)	426	387	207	164
Financial Year-to-date 2009-10*	443	728	294	293
Financial Year-to-date 2008-09**	313	803	310	333

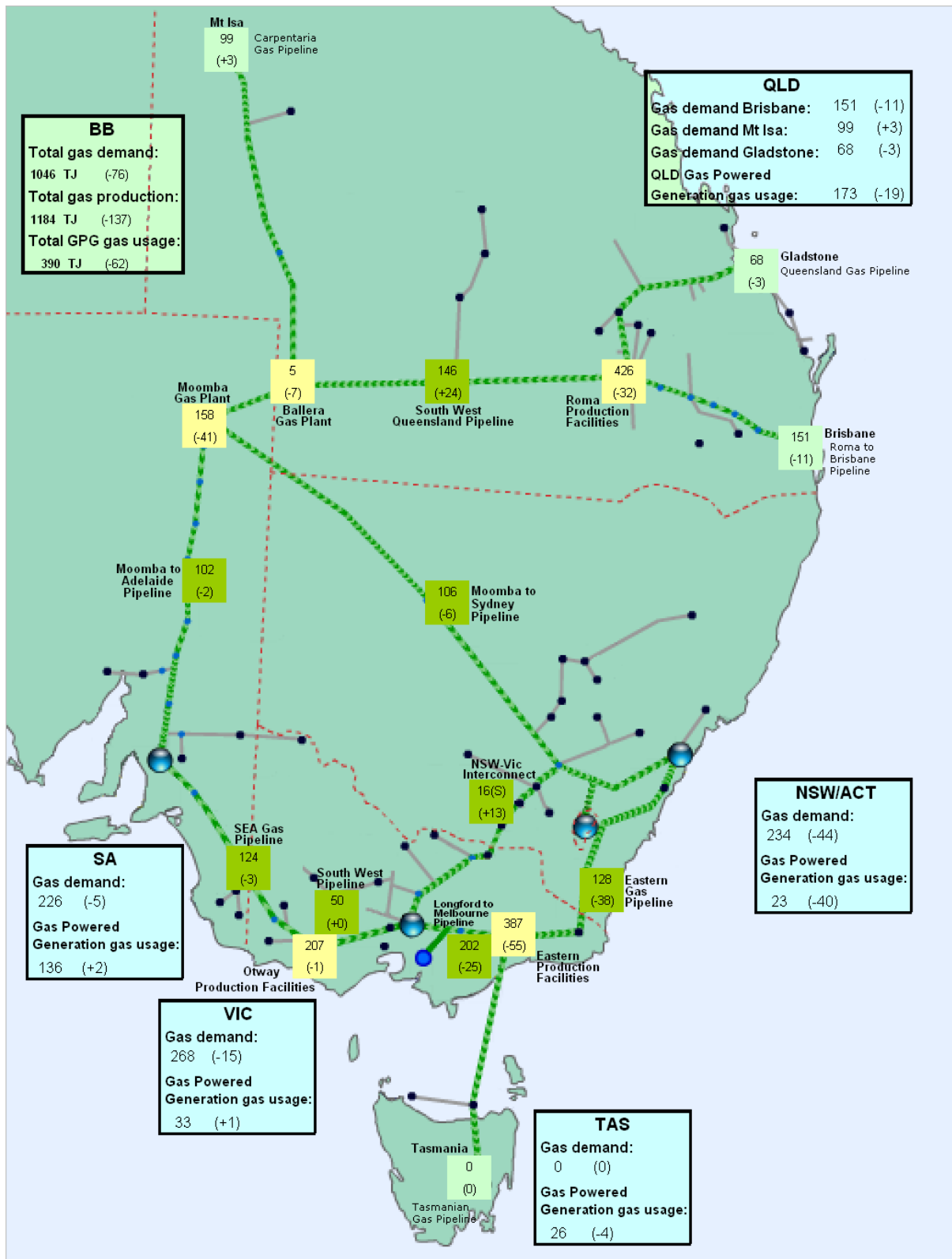
\*Average daily estimated gas consumption measured from 1 July 2009 to the current week (inclusive)

\*\*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)**



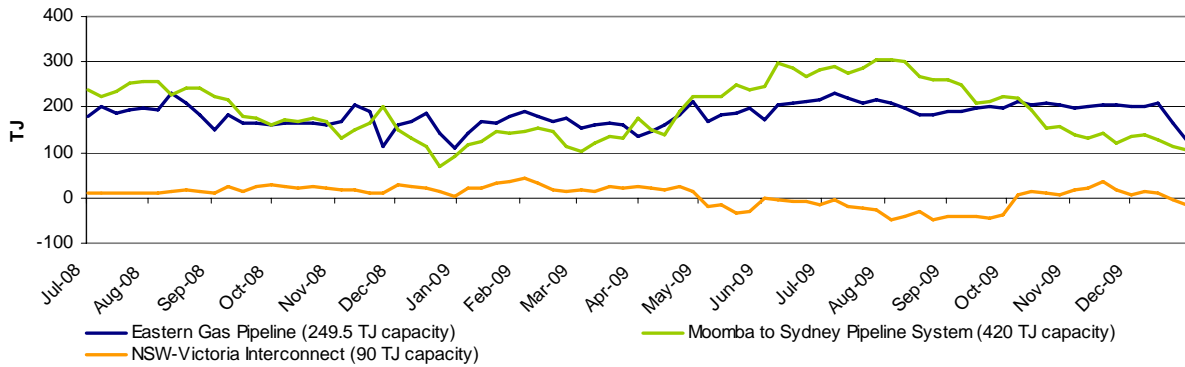
Source: Natural Gas Market Bulletin Board <http://www.gasbb.com.au>

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.

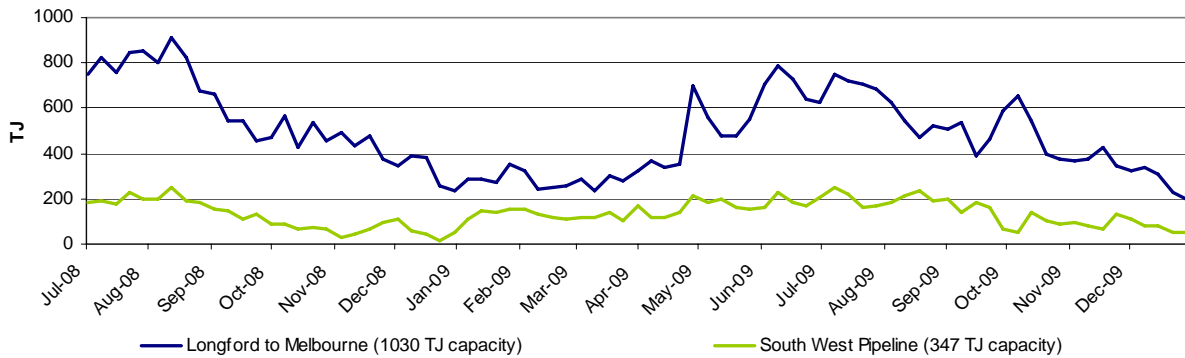
**Figure 5: Average daily flows (TJ) into NSW/ACT demand region**



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

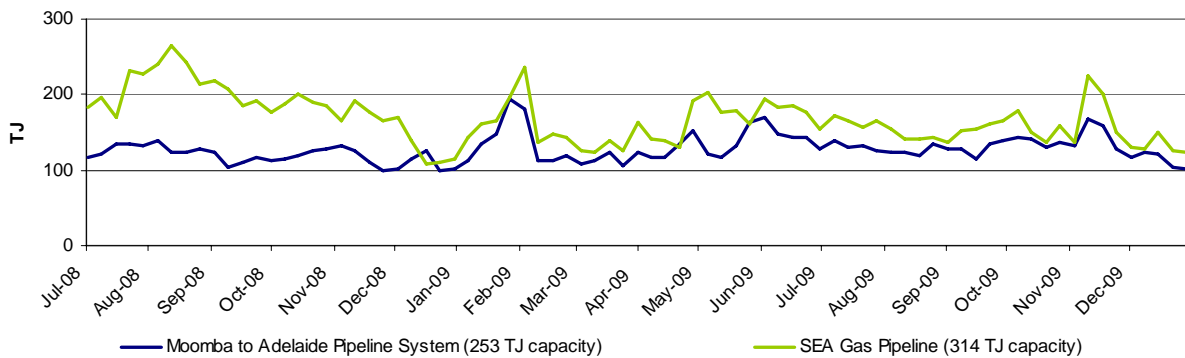
Notes: Negative flows on the NSW-Victoria Interconnect represent flows out of NSW into VIC.

**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								S				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	S						
Origin (Vic)	Retailer	6		S	NS	NS	S	S		S	NS	NS		
Origin (Uranquinty)	Trader	1					S							
Red Energy	Retailer	2				NS	S							
Santos	Retailer	2						S	S					
TRU Energy	Retailer	3			S	NS	S					NS		
Victoria Electricity	Trader	1										S		
Victoria Electricity	Retailer	5			S	NS	S	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 (27 Dec-2 Jan)	Previous Week (20-26 December)	2009-10 Financial YTD*	2008-09 Financial YTD**
Average daily price	1.29	1.21	1.57	3.12

Current Week (20 - 26 December)	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Daily price	0.50	1.49	3.00	1.47	0.54	1.57	0.50

\*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)

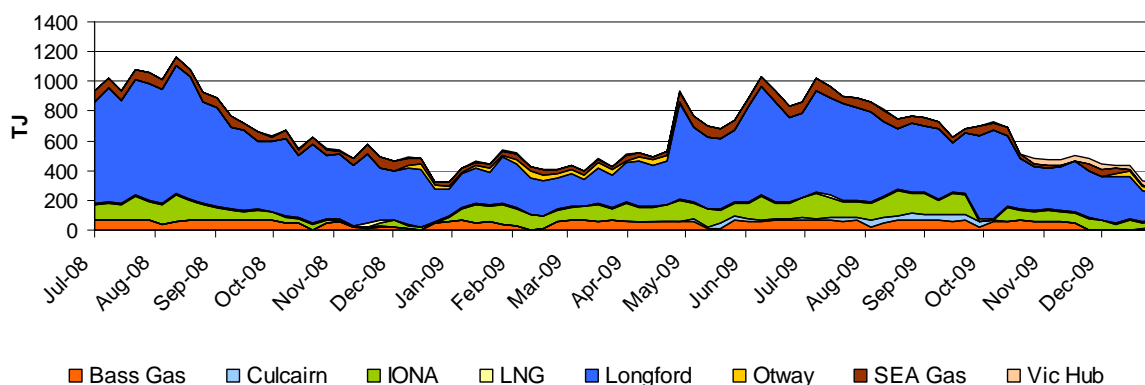
Notes: The daily average market price is a volume weighted imbalance price taking account of trading amounts at five times through the gas day — 6am, 10am, 2pm, 6pm and 10pm.

## 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 (27 Dec-2 Jan)	Previous Week (20-26 December)	2009-10 Financial YTD*	2008-09 Financial YTD**
Culcairn	16	9	18	0.4
Longford	170	203	427	540
LNG	7	9	9	9
IONA	42	40	92	65
VicHub	32.8	24.0	12.4	1.5
SEAGas	8	10	44	53
Bass Gas	0	0	44	46
Otway	35	32	4	5
<b>TOTAL</b>	<b>311</b>	<b>327</b>	<b>650</b>	<b>720</b>



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

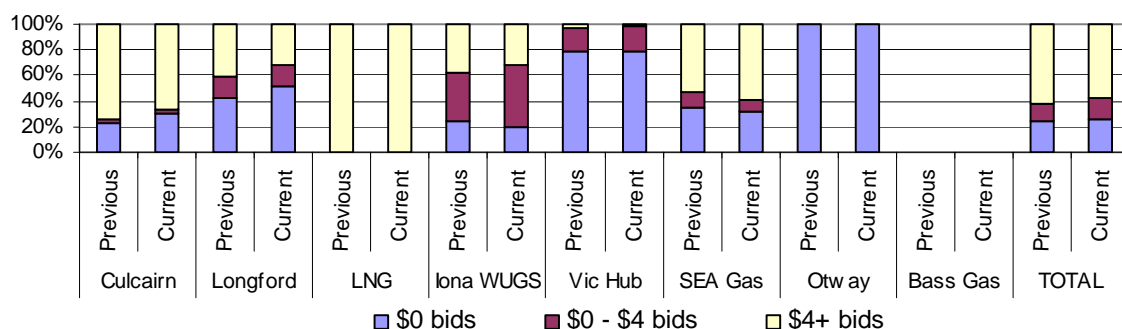
\*\*Average daily estimated gas consumption measured from 1 July 2008 to the equivalent week in 2008 (inclusive)

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>				CE	CE		
<b>Longford</b>					AGL Origin		
<b>LNG</b>							
<b>Iona</b>	TRU	TRU	TRU	TRU	TRU	TRU	TRU
<b>VicHub</b>	AETV	AETV	AETV	AETV	AETV	AETV	
<b>SEAGas</b>	Simply	Simply		Simply		Simply	Simply
<b>Bass Gas</b>							

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

Notes: Origin = Origin Energy | AGL = AGL Sales | TRU = TRUenergy | Simply = Simply Energy | AETV = AETV Power | CE = Country Energy

## 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 (27 Dec-2 Jan)	Previous Week (20-26 December)	2009-10 Financial YTD*	2008-09 Financial YTD**
<b>Ballarat</b>	7	9	27	28
<b>Geelong^</b>	58	57	84	93
<b>Gippsland</b>	32	25	49	63
<b>Melbourne</b>	195	213	433	468
<b>Northern</b>	18	28	58	70
<b>TOTAL</b>	<b>311</b>	<b>331</b>	<b>651</b>	<b>722</b>

^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	99	99	96	95	103	103	97	117	73	99	85	82
QLD Gas Pipeline	68	69	65	72	73	67	64	79	87	68	69	67
Roma to Brisbane Pipeline	149	153	131	155	163	154	153	214	77	151	165	171
South West QLD Pipeline	154	154	165	157	158	109	128	181	81	146	146	62
<b>NSW/ACT</b>												
Eastern Gas Pipeline	119	124	136	131	136	124	127	250	80	128	199	174
Moomba to Sydney Pipeline	93	100	119	96	107	144	83	420	49	106	207	185
NSW-VIC Interconnect <sup>^</sup>	-18	-18	-21	0	-9	-20	-29	90	-13	-16	-12	17
<b>VIC</b>												
Longford to Melbourne	167	166	188	248	245	197	202	1030	47	202	481	567
South West Pipeline	52	77	60	49	26	43	43	347	40	50	138	119
<b>SA</b>												
Moomba to Adelaide Pipeline	89	92	101	123	130	86	94	253	51	102	130	120
SEA Gas Pipeline	82	88	147	184	173	112	79	314	49	124	154	187
<b>TAS</b>												
Tasmanian Gas Pipeline	N/A	N/A	N/A	N/A	N/A	N/A	N/A	129 <sup>#</sup>	29	0	37	33

\*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

<sup>#</sup>Stated MDQ used as an estimate for actual data for the week

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	92	94	87	94	89	52	52	140	66	80	92	63
Fairview	115	120	125	122	110	112	111	115	99	116	114	61
Kenya <sup>^</sup>	62	62	62	62	62	69	70	160	28	64	45	
Kincora	0	0	0	0	0	0	0	25	5	0	1	7
Kogan North	10	10	4	9	10	10	8	12	67	9	8	12
Peat	7	7	7	7	7	6	7	15	56	7	8	11
Rolleston	12	12	12	12	12	12	12	30	38	12	11	11
Scotia	27	26	9	26	27	27	26	27	80	24	22	21
Spring Gully	34	34	34	34	34	34	34	60	75	34	45	55
Strathblane	34	34	34	34	34	34	34	60	75	34	45	46
Talooka	21	21	21	20	21	21	21	36	76	21	27	0
Wallumbilla	11	11	11	11	11	11	11	20	53	11	11	13
Yellowbank	15	15	14	15	15	14	13	30	46	14	14	14
<b>Eastern (VIC)</b>												
Orbost Gas Plant	30	32	34	36	38	38	40	92	13	35	12	0
Lang Lang Gas Plant	0	0	0	0	0	0	0	70	62	0	43	46
Longford Gas Plant	319	301	312	398	404	355	369	1140	59	351	673	755
LNG Storage Dandenong	0	0	0	0	0	0	0	158	0	0	0	1
<b>Otway Basin (VIC)</b>												
Minerva Gas Plant	45	43	51	60	N/A	54	49	94	78	51	73	89
Otway Gas Plant	78	89	123	151	150	122	86	206	63	114	129	150
Iona Underground Gas Storage	38	61	61	42	25	40	28	320	29	42	92	71
<b>Moomba (SA/QLD)</b>												
Moomba Gas Plant	132	165	192	141	188	152	139	430	66	158	284	290
Ballera	0	8	0	2	0	18	10	150	6	5	8	43

\*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>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 (27 Dec - 2 Jan)	Average min.	22.8	20.2	15.9	17.1	19.0	13.9
	Average max.	29.2	26.0	28.9	27.2	33.1	26.5
Previous week (20 - 26 Dec)	Average min.	21.6	19.7	14.9	15.4	16.8	11.5
	Average max.	29.7	25.6	28.9	26.5	30.4	22.0

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 (27 Dec - 2 Jan)	Scheduling Interval					Daily Imbalance Weighted Average Price
	6am	10am	2pm	6pm	10pm	
<b>Sun</b>	0.50	0.50	0.69	0.50	0.50	0.50
<b>Mon</b>	1.49	1.48	1.48	1.48	1.50	1.49
<b>Tue</b>	3.12	2.68	1.49	0.50	0.50	3.00
<b>Wed</b>	1.50	1.48	0.50	0.49	0.99	1.47
<b>Thu</b>	0.49	0.99	1.00	1.50	0.20	0.54
<b>Fri</b>	1.56	1.50	2.38	2.38	2.38	1.57
<b>Sat</b>	0.49	0.57	0.65	0.65	0.65	0.50

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	
27-Dec	MP:	282	281	281	281	281	0
	AEMO:	269	269	271	275	259	
	MP as % of AEMO	105%	104%	104%	102%	108%	
28-Dec	MP:	296	296	295	295	295	0
	AEMO:	356	292	292	291	278	
	MP as % of AEMO	83%	101%	101%	101%	106%	
29-Dec	MP:	359	358	352	352	352	0
	AEMO:	314	345	349	337	316	
	MP as % of AEMO	114%	104%	101%	104%	111%	
30-Dec	MP:	365	367	365	361	363	-2
	AEMO:	343	351	354	342	342	
	MP as % of AEMO	106%	105%	103%	106%	106%	
31-Dec	MP:	350	363	367	381	375	-10
	AEMO:	310	332	335	351	329	
	MP as % of AEMO	113%	109%	110%	109%	114%	
1-Jan	MP:	300	301	301	300	299	0
	AEMO:	266	262	281	287	285	
	MP as % of AEMO	113%	115%	107%	105%	105%	
2-Jan	MP:	319	318	318	317	317	0
	AEMO:	310	311	314	297	295	
	MP as % of AEMO	103%	102%	101%	107%	107%	

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