

3 – 9 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. Tas Gas Networks failed to submit any data for the first three days of the week for the Tasmanian Gas Pipeline. For two days Jemena failed to submit any data for the Queensland and Eastern Gas pipelines.

Figure 4 shows that total average daily gas demand increased by 187 TJ compared to the previous week, with all regions recording increases. The largest increase was recorded in NSW/ACT (68 TJ).

Total average daily demand for gas for Gas Powered Electricity Generation (GPG) increased by 78 TJ (around 20 per cent) across all regions compared to the previous week, most likely as a result of some industry returning after closing down over the Christmas period. The largest percentage increases were in NSW/ACT and Victoria where demand for gas for GPG increased by 226 per cent and 33 per cent respectively. Queensland and Tasmania both had reductions in demand for GPG by around 10 TJ compared to the previous week.

Average daily production volumes increased by 161 TJ compared to the previous week. Increases were recorded in all regions, except Ballera and Roma, with the largest percentage increases being recorded in Moomba and the Eastern Victoria production regions, (49 per cent and 21 per cent respectively). The increase in demand saw average daily flows increase on all pipelines compared to the previous week except the South West Queensland pipelines which experienced a small reduction in flows. The increased production at Moomba and Eastern production facilities saw the largest increase in flows across the Moomba to Adelaide and Eastern Gas pipelines, 37 per cent and 45 per cent respectively.

### Victorian Gas Market

Total average daily flows from injection points on the Victorian Principal Transmission System (VPTS) increased by 40 TJ (13 per cent) compared to the previous week (see Figure V3). Figure V6 shows that total average daily withdrawals were up by 39 TJ or 12 per cent compared to the previous week. The average imbalance price fell from \$1.29/GJ in the previous week to \$0.75/GJ.

On Tuesday a Supply Demand Point Constraint (SPDC) was applied at the Otway withdrawal point and a Directional Flow Point Constraint was applied to SEAGas. TRUenergy's Iona gas plant underwent maintenance from Thursday to Sunday but an SDPC was not required.

# 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 (3 - 9 Jan)	305	6	302	277	21	168	93	71
Financial Year-to-date 2009-10*	378	24	625	284	37	165	86	69
Financial Year-to-date 2008-09**	331	24	675	305	34	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 (3 - 9 Jan)	75	43	172	14	163
Financial Year-to-date 2009-10*	83	45	162	22	156
Financial Year-to-date 2008-09**	31	65	183	23	111

<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 (3 - 9 Jan)	412	469	225	239
Financial Year-to-date 2009-10*	442	718	292	291
Financial Year-to-date 2008-09**	314	791	309	330

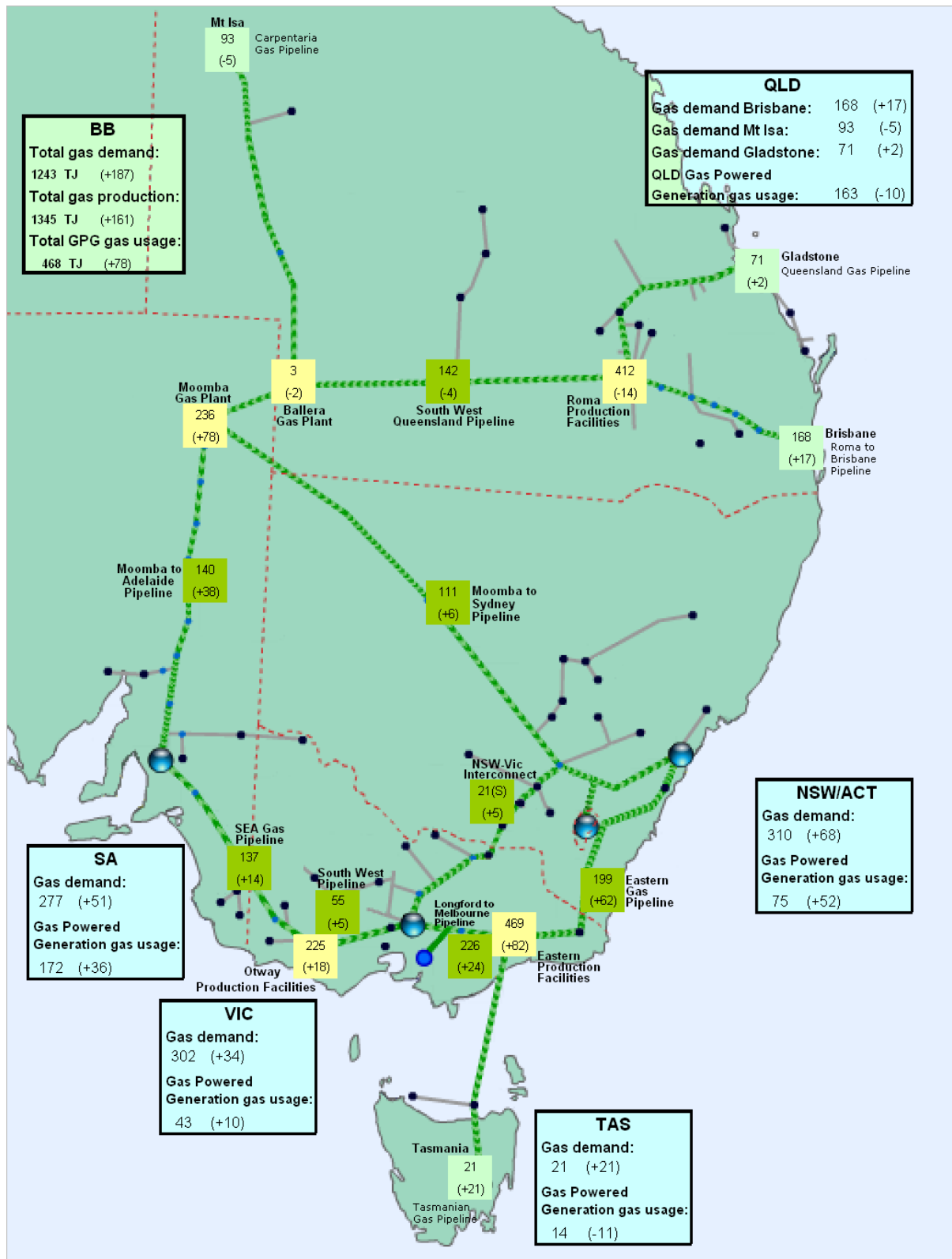
\*Average daily estimated gas consumption measured from 1 July 2009 to the current week (inclusive)

\*\*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)**



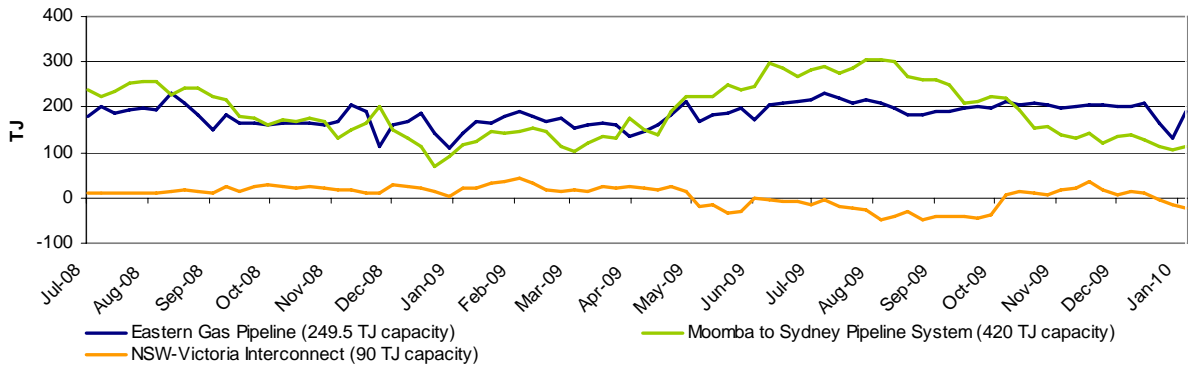
Source: Natural Gas Market Bulletin Board <http://www.gasbb.com.au>

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.

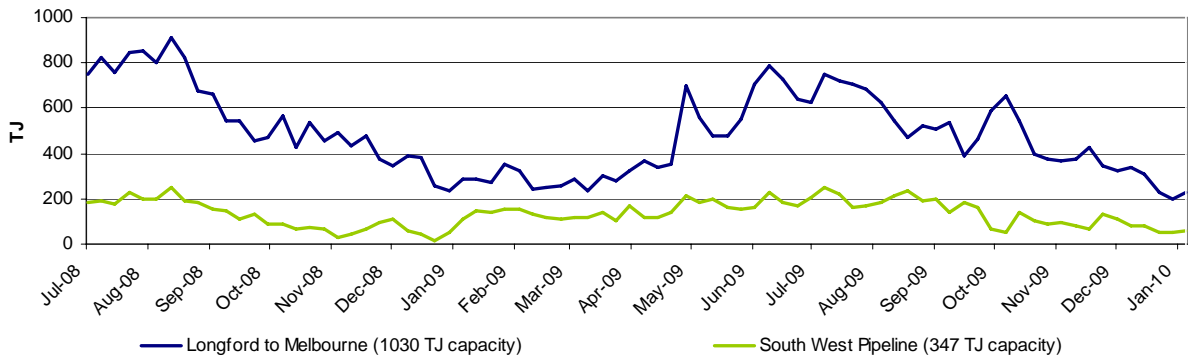
**Figure 5: Average daily flows (TJ) into NSW/ACT demand region**



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

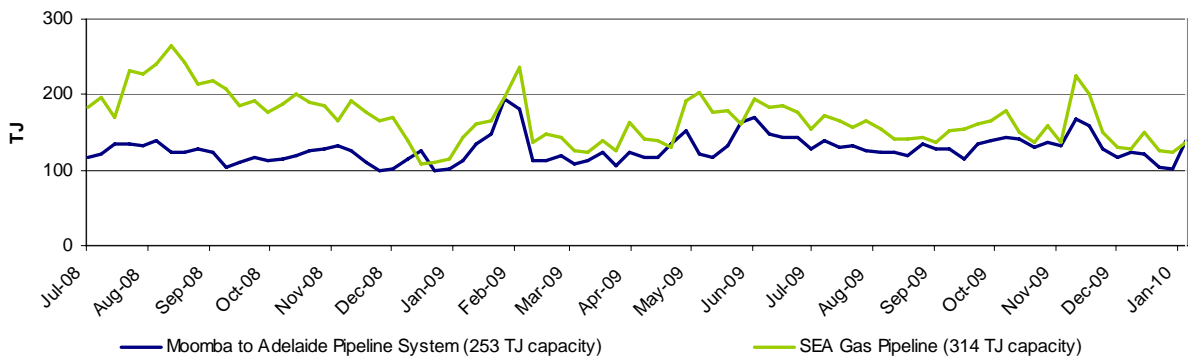
Notes: Negative flows on the NSW-Victoria Interconnect represent flows out of NSW into VIC.

**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	Retailer	4		NS	NS		S				NS	S		
AGL (Qld)	Retailer	0												
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	NS	S		
Origin (Uranquinty)	Trader	1					S							
Red Energy	Retailer	2					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					
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 (3 -9 January)	Previous Week (27 Dec-2 Jan)	2009-10 Financial YTD*	2008-09 Financial YTD**
<b>Average daily price</b>	0.75	1.29	1.54	3.11

Current Week	Sun	Mon	Tue	Wed	Thu	Fri	Sat
<b>Daily price</b>	0.57	0.70	0.65	0.99	0.60	1.50	0.25

\*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)

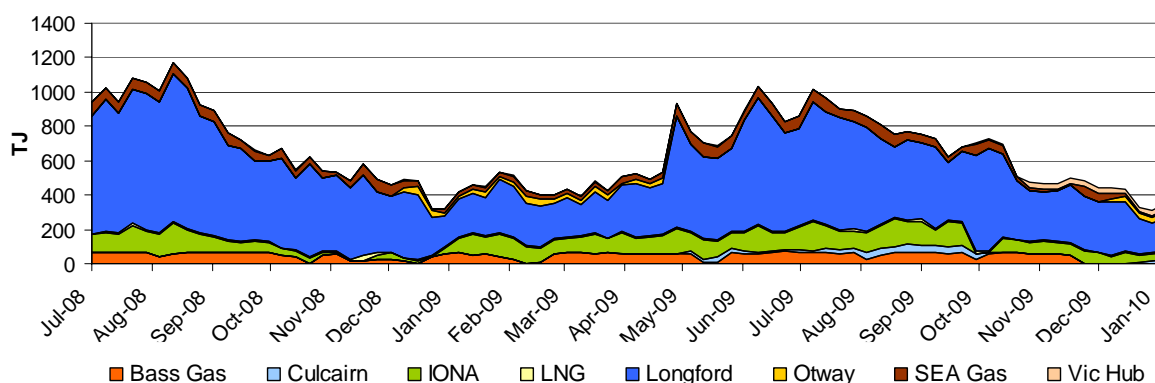
Notes: The daily average market price is a volume weighted imbalance price taking account of trading amounts at five times through the gas day — 6am, 10am, 2pm, 6pm and 10pm.

## 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 (3 -9 January)	Previous Week (27 Dec-2 Jan)	2009-10 Financial YTD*	2008-09 Financial YTD**
<b>Culcairn</b>	21	16	18	0.4
<b>Longford</b>	196	170	418	529
<b>LNG</b>	7	7	8	9
<b>IONA</b>	41	42	90	65
<b>VicHub</b>	32.1	32.8	13.1	1.6
<b>SEAGas</b>	14	8	43	52
<b>Bass Gas</b>	0	0	42	47
<b>Otway</b>	39	35	6	5
<b>TOTAL</b>	<b>351</b>	<b>311</b>	<b>639</b>	<b>709</b>



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

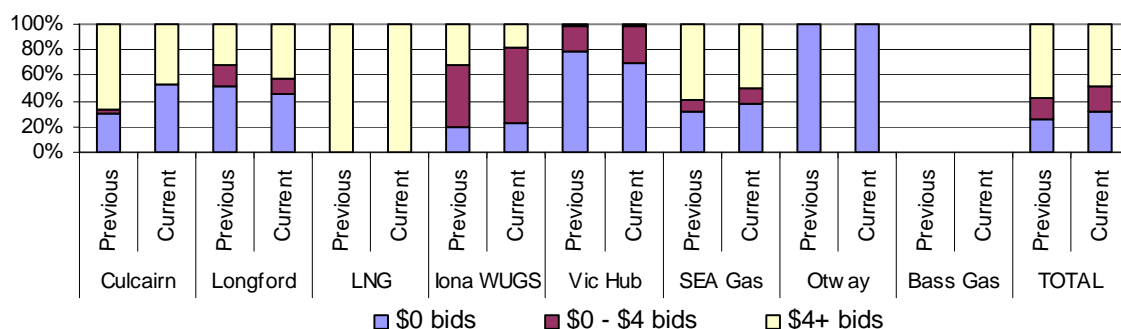
\*\*Average daily estimated gas consumption measured from 1 July 2008 to the equivalent week in 2008 (inclusive)

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	Origin
<b>Longford</b>		AGL	Origin	Origin	Origin		
<b>LNG</b>							
<b>Iona</b>	TRU	TRU	TRU	TRU	TRU	Origin TRU	TRU
<b>VicHub</b>	AETV	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 (3 -9 January)	Previous Week (27 Dec-2 Jan)	2009-10 Financial YTD*	2008-09 Financial YTD**
<b>Ballarat</b>	8	7	26	27
<b>Geelong^</b>	72	58	84	92
<b>Gippsland</b>	39	32	48	63
<b>Melbourne</b>	206	195	425	459
<b>Northern</b>	25	18	57	69
<b>TOTAL</b>	<b>350</b>	<b>311</b>	<b>640</b>	<b>711</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	96	93	90	91	94	94	94	117	73	93	86	82
QLD Gas Pipeline	74	76	67	N/A	76	66	N/A	79	88	71	69	67
Roma to Brisbane Pipeline	155	171	171	172	167	170	170	214	77	168	165	171
South West QLD Pipeline	124	143	152	142	151	140	145	181	81	142	146	62
<b>NSW/ACT</b>												
Eastern Gas Pipeline	162	200	196	N/A	196	205	N/A	250	80	199	199	173
Moomba to Sydney Pipeline	88	116	113	106	122	126	109	420	48	111	204	183
NSW-VIC Interconnect <sup>^</sup>	-29	-29	-23	-10	-25	-25	-8	90	-13	-21	-12	17
<b>VIC</b>												
Longford to Melbourne	205	225	213	227	231	248	233	1030	46	226	471	557
South West Pipeline	53	66	71	52	40	66	38	347	39	55	135	119
<b>SA</b>												
Moomba to Adelaide Pipeline	105	125	144	147	125	163	170	253	52	140	130	119
SEA Gas Pipeline	68	111	108	115	170	201	187	314	49	137	154	186
<b>TAS</b>												
Tasmanian Gas Pipeline	N/A	N/A	N/A	19	14	19	31	129#	28	21	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

#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	53	59	68	68	69	64	54	140	65	62	91	63
Fairview	27	122	125	125	122	122	121	115	99	109	113	61
Kenya^	71	71	71	70	72	73	74	160	29	72	46	
Kincora	0	0	5	0	0	0	0	25	5	1	1	7
Kogan North	8	8	10	10	10	10	10	12	67	9	8	12
Peat	7	7	7	7	7	7	6	15	55	7	8	11
Rolleston	12	12	12	12	12	12	12	30	38	12	11	11
Scotia	25	23	22	26	27	27	27	27	81	25	22	21
Spring Gully	34	34	34	34	34	33	35	60	75	34	45	55
Strathblane	34	34	34	34	34	33	35	60	75	34	45	46
Talooka	21	21	21	21	21	20	21	36	75	21	27	0
Wallumbilla	11	11	11	11	11	11	11	20	53	11	11	13
Yellowbank	15	15	15	15	15	15	15	30	46	15	14	14
<b>Eastern (VIC)</b>												
Orbost Gas Plant	40	40	40	40	40	40	40	92	14	40	13	0
Lang Lang Gas Plant	0	0	0	0	0	0	0	70	60	0	42	47
Longford Gas Plant	355	421	528	425	426	424	422	1140	58	429	664	743
LNG Storage Dandenong	0	0	0	0	0	0	0	158	0	0	0	1
<b>Otway Basin (VIC)</b>												
Minerva Gas Plant	49	69	69	75	75	75	75	94	78	70	73	89
Otway Gas Plant	79	104	93	103	152	118	139	206	62	113	128	148
Iona Underground Gas Storage	28	35	42	42	26	89	38	320	28	43	90	71
<b>Moomba (SA/QLD)</b>												
Moomba Gas Plant	190	245	241	241	209	271	256	430	66	236	283	288
Ballara	16	3	0	4	0	0	0	150	5	3	8	42

\*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 (3 - 9 Jan)	Average min.	22.5	20.0	15.4	15.7	17.9	12.3
	Average max.	29.4	26.0	30.8	28.2	34.2	23.4
Previous 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

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 (3 - 9 January)	Scheduling Interval					Daily Imbalance Weighted Average Price
	6am	10am	2pm	6pm	10pm	
Sun	0.52	0.64	1.48	2.36	3.49	0.57
Mon	0.66	0.68	1.50	3.26	3.26	0.70
Tue	0.58	0.68	0.72	1.00	3.26	0.65
Wed	1.00	0.99	0.58	0.88	0.60	0.99
Thu	0.60	0.59	0.58	0.58	0.58	0.60
Fri	1.48	0.60	2.62	2.62	0.58	1.50
Sat	0.19	0.58	0.58	0.58	2.98	0.25

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	
3-Jan	MP:	315	315	314	314	314	0
	AEMO:	306	307	324	328	313	
	MP as % of AEMO	103%	103%	97%	96%	100%	
4-Jan	MP:	334	328	328	327	327	0
	AEMO:	359	347	341	341	339	
	MP as % of AEMO	93%	95%	96%	96%	96%	
5-Jan	MP:	328	328	328	336	341	0
	AEMO:	362	361	366	366	346	
	MP as % of AEMO	91%	91%	90%	92%	99%	
6-Jan	MP:	357	356	354	354	353	0
	AEMO:	382	382	368	376	355	
	MP as % of AEMO	93%	93%	96%	94%	99%	
7-Jan	MP:	369	366	357	358	358	0
	AEMO:	379	384	375	366	342	
	MP as % of AEMO	97%	95%	95%	98%	105%	
8-Jan	MP:	441	441	436	435	435	0
	AEMO:	420	444	433	415	393	
	MP as % of AEMO	105%	99%	101%	105%	111%	
9-Jan	MP:	313	312	319	323	323	0
	AEMO:	293	308	310	307	331	
	MP as % of AEMO	107%	101%	103%	105%	98%	

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