

17 – 23 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 [aer.inquiry@er.gov.au](mailto:aer.inquiry@er.gov.au), and headed 'Comments on weekly gas report'.

## Summary

### National Gas Market Bulletin Board

There were two instances of missing flow data on the Bulletin Board this week. BHP Billiton Petroleum failed to submit data for the Minerva Gas Plant on Wednesday and Saturday gas days (see Figure A2).

Figure 4 shows that average daily total gas demand increased by around two per cent compared to the previous week. South Australia was the only region which recorded a fall compared to the previous week (18 per cent). The largest percentage increase was recorded in Victoria (17 per cent).

Average daily demand for gas for Gas Powered Electricity Generation (GPG) fell by 10 per cent compared to the previous week, with South Australia and Victoria experiencing falls of 27 per cent and 19 per cent respectively. Demand for GPG in NSW/ACT and Queensland increased slightly compared to the previous week, while demand in Tasmania was the same as the previous week (at 23 TJ).

Average daily production volumes increased by 2 per cent compared to the previous week, with all facilities except Otway recording an increase in production. The Moomba production region recorded the largest percentage increase of 16 per cent, while the Otway facility recorded a fall of 15 per cent.

### Victorian Gas Market

Total average gas injections in the Victorian gas market increased by 11 per cent compared to the previous week. (See Figure V3).

The average imbalance price rose from \$1.86/GJ in the previous week to \$2.47/GJ (see Figure V2) with prices on Tuesday, Wednesday and Thursday exceeding \$3/GJ coincident with constraints on SEA Gas. While there was an increase in the overall volume of gas bid into the market, lower volumes were offered at \$0/GJ. Volumes at Longford fell by around 40 per cent across all price ranges compared to the previous week.

There were no bids from Bass Gas this week due to a scheduled maintenance outage. Supply Demand Point Constraints were issued for SEA Gas withdrawals and injections at Otway on

Tuesday, and SEA Gas withdrawals on Thursday. SEA Gas was also constrained on Wednesday due to the declaration of a Directional Flow Point Constraint.

No demand overrides were issued this week (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	NSW	ACT	VIC	SA	TAS	Brisbane	QLD	
							Mt Isa	Gladstone
Current week (17 - 23 January)	346	6	372	244	39	182	90	72
Financial Year-to-date 2009-10*	376	23	606	283	37	166	86	69
Financial Year-to-date 2008-09**	328	23	658	305	34	172	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 <sup>^</sup>	NSW	VIC	SA	TAS	QLD
Current week (17 - 23 January)	102	60	146	23	184
Financial Year-to-date 2009-10*	84	46	163	22	158
Financial Year-to-date 2008-09**	33	67	184	24	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**

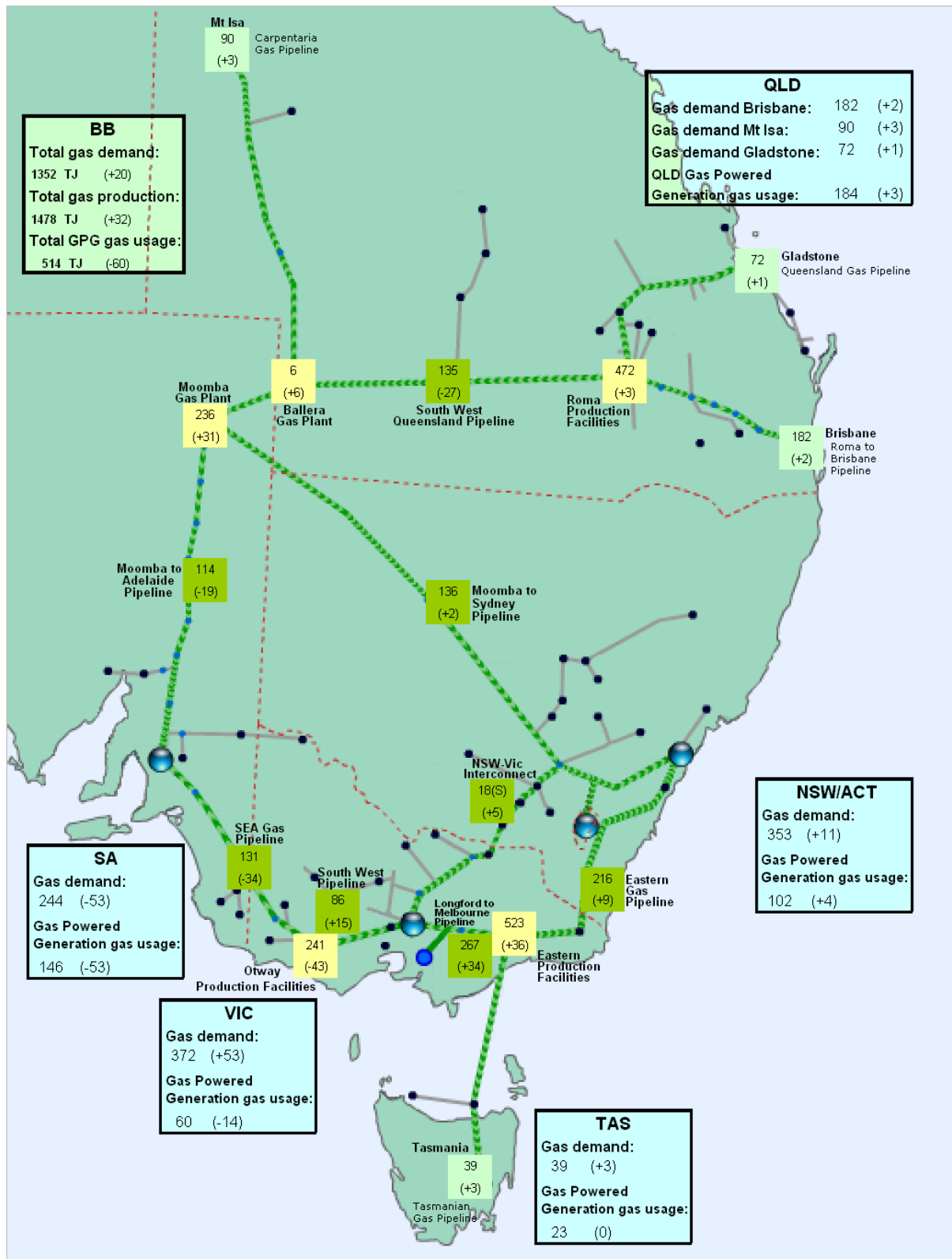
Average daily flows	Roma (QLD)	Eastern Victoria	Otway Basin (VIC)	Moomba (SA/QLD)
Current week (17 - 23 January)	472	523	241	242
Financial Year-to-date 2009-10*	444	704	290	286
Financial Year-to-date 2008-09**	314	770	309	326

\*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)**



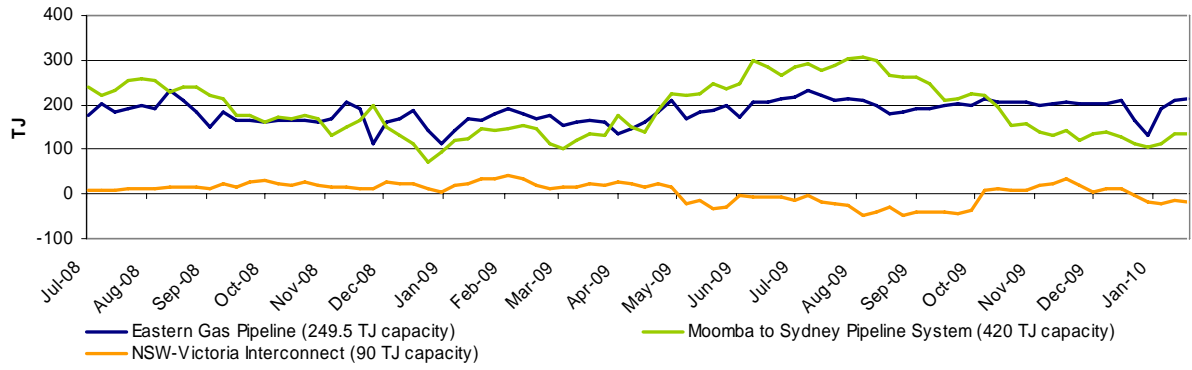
Source: Natural Gas Market Bulletin Board <http://www.gasbb.com.au>

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.

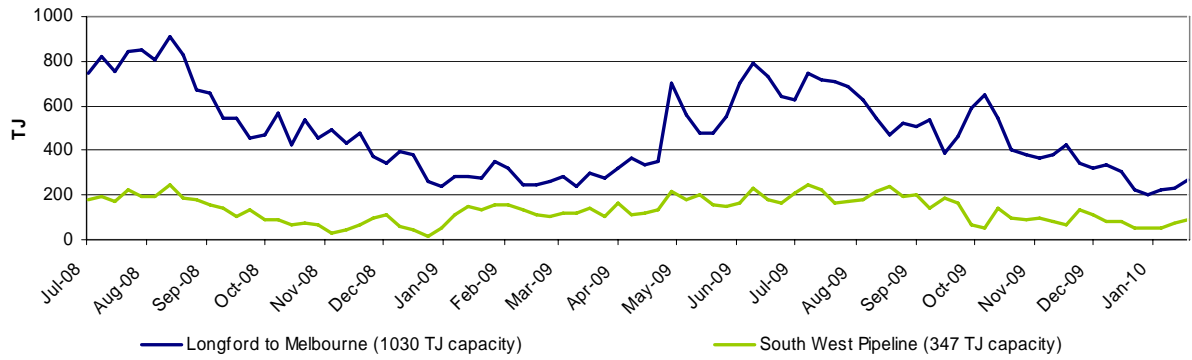
**Figure 5: Average daily flows (TJ) into NSW/ACT demand region**



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

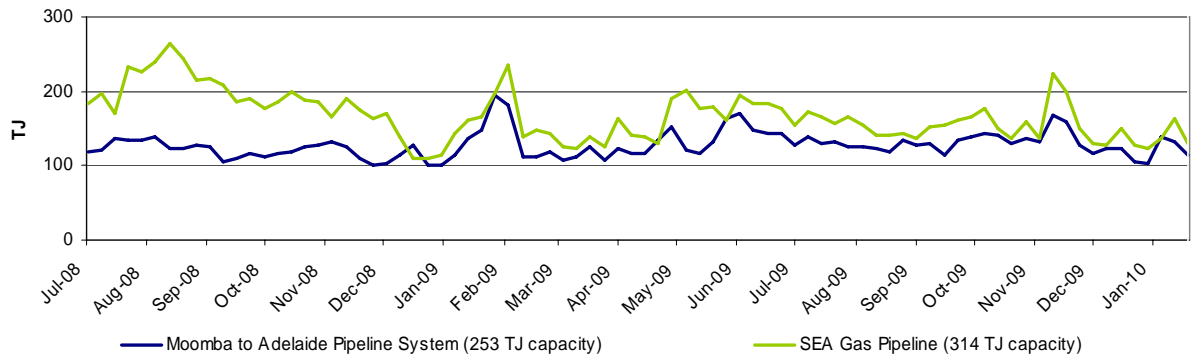
Notes: Negative flows on the NSW-Victoria Interconnect represent flows out of NSW into VIC.

**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	VicHub	Otway	Culcairn	IONA	SEA Gas	VicHub	
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	NS							
Origin (Vic)	Retailer	6		S	S	NS	S	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											NS		
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 (17 - 23 January)	Previous Week (10 - 16 January)	2009-10 Financial YTD*	2008-09 Financial YTD**
Average daily price	2.47	1.86	1.58	3.11

Current Week (17 - 23 January)	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Daily price	1.50	1.80	3.02	3.38	3.25	2.54	1.80

\*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)

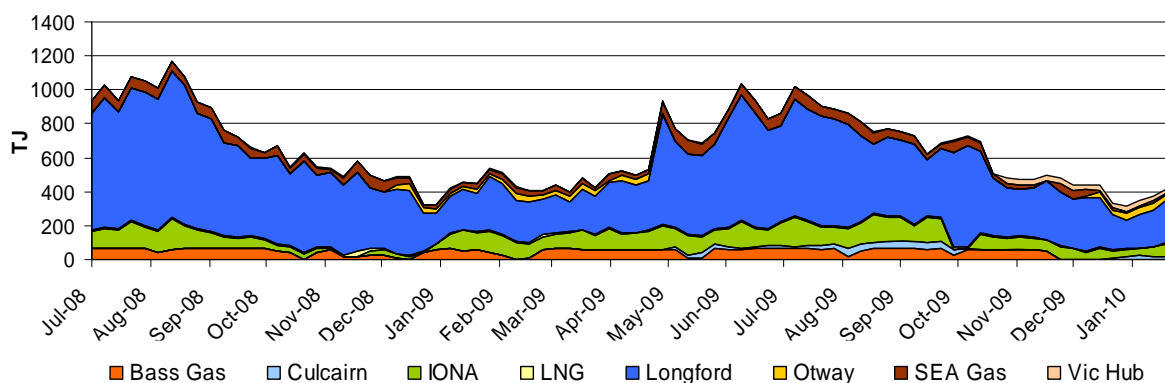
Notes: The daily average market price is a volume weighted imbalance price taking account of trading amounts at five times through the gas day — 6am, 10am, 2pm, 6pm and 10pm.

## 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 (17 - 23 January)	Previous Week (10 - 16 January)	2009-10 Financial YTD*	2008-09 Financial YTD**
Culcairn	19	14	18	0.4
Longford	243	209	405	508
LNG	8	7	8	9
IONA	76	56	88	68
VicHub	25.9	25.4	14.0	1.5
SEAGas	10	15	41	50
Bass Gas	0	0	39	48
Otway	33	47	8	6
<b>TOTAL</b>	<b>415</b>	<b>374</b>	<b>623</b>	<b>692</b>



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

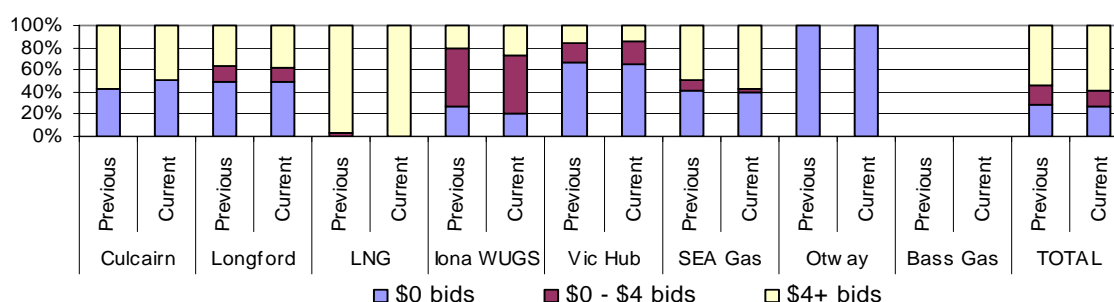
\*\*Average daily estimated gas consumption measured from 1 July 2008 to the equivalent week in 2008 (inclusive)

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			Origin	Origin		
<b>Longford</b>			AGL	AGL Origin	AGL Origin	AGL Origin	
<b>LNG</b>		APG	APG	APG Origin	Origin	APG	APG Origin
<b>Iona</b>	TRU	Origin TRU	Origin TRU	Origin TRU	Origin TRU	Origin TRU	Origin TRU
<b>VicHub</b>	AETV	AETV					AETV
<b>SEAGas</b>		Simply	Simply Origin VE		Origin	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 | CE = Country Energy | VE = Victoria Electricity | 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 (17 - 23 January)	Previous Week (10 - 16 January)	2009-10 Financial YTD*	2008-09 Financial YTD**
<b>Ballarat</b>	10	8	25	26
<b>Geelong^</b>	78	79	83	90
<b>Gippsland</b>	40	44	48	63
<b>Melbourne</b>	256	217	412	446
<b>Northern</b>	32	28	55	69



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<b>TOTAL</b>	<b>416</b>	<b>375</b>	<b>623</b>	<b>693</b>
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^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	92	89	87	87	88	95	93	117	73	90	86	83
QLD Gas Pipeline	70	66	71	72	75	77	74	79	88	72	69	68
Roma to Brisbane Pipeline	164	197	187	184	194	190	161	214	78	182	166	172
South West QLD Pipeline	115	138	133	132	127	147	153	181	81	135	146	63
<b>NSW/ACT</b>												
Eastern Gas Pipeline	192	217	216	215	212	221	215	250	80	216	200	173
Moomba to Sydney Pipeline	106	152	148	153	158	133	105	420	47	136	199	179
NSW-VIC Interconnect <sup>^</sup>	-31	-26	-24	-41	-5	3	1	90	-13	-18	-12	18
<b>VIC</b>												
Longford to Melbourne	210	279	302	287	285	284	223	1030	44	267	456	538
South West Pipeline	31	101	106	71	112	110	75	347	38	86	131	120
<b>SA</b>												
Moomba to Adelaide Pipeline	96	122	121	117	136	113	91	253	51	114	130	121
SEA Gas Pipeline	98	110	116	121	184	168	116	314	49	131	153	184
<b>TAS</b>												
Tasmanian Gas Pipeline	39	40	38	38	38	39	38	129	28	39	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	84	82	99	104	104	111	91	140	65	97	91	64
Fairview	110	111	120	107	123	123	122	115	99	117	114	61
Kenya^	69	71	72	67	72	74	72	160	30	71	48	
Kincora	0	0	0	0	0	0	0	25	5	0	1	7
Kogan North	10	8	8	10	10	10	10	12	68	9	8	12
Peat	7	6	7	7	6	7	6	15	54	7	8	11
Rolleston	12	11	12	12	12	11	12	30	38	12	11	11
Scotia	27	27	27	27	27	27	27	27	82	27	22	21
Spring Gully	34	43	42	42	42	42	42	60	74	41	44	55
Strathblane	34	43	42	42	42	42	42	60	74	41	44	46
Talona	21	26	26	26	25	25	25	36	75	25	27	0
Wallumbilla	11	11	11	11	11	11	11	20	53	11	11	13
Yellowbank	15	14	15	15	15	15	15	30	46	15	14	14
<b>Moomba (SA/QLD)</b>												
Moomba Gas Plant	187	250	248	275	237	239	216	430	65	236	278	283
Ballera	23	7	0	1	12	0	0	150	5	6	8	43
<b>Eastern (VIC)</b>												
Orbost Gas Plant	34	34	34	32	28	29	30	92	15	32	14	0
Lang Lang Gas Plant	0	0	0	0	0	0	0	70	56	0	39	47
Longford Gas Plant	409	519	544	485	492	525	463	1140	57	491	651	722
LNG Storage Dandenong	0	0	2	0	0	2	0	158	0	0	0	1
<b>Otway Basin (VIC)</b>												
Minerva Gas Plant	76	71	81	N/A	92	92	N/A	94	78	82	74	89
Otway Gas Plant	87	101	59	0	99	138	99	206	62	83	127	145
Iona Underground Gas Storage	30	31	77	106	115	101	68	320	28	75	89	75

\*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 major demand regions for the current week. The average temperatures for the previous week are also provided.

**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 (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
Previous week (10 - 16 Jan)	Average min.	21.4	21.9	18.3	18.0	19.4	14.7
	Average max.	30.5	26.8	33.9	30.7	31.1	26.4

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 (17 - 23 January)	Scheduling Interval					Daily Imbalance Weighted Average Price
	6am	10am	2pm	6pm	10pm	
Sun	1.50	1.51	1.51	1.48	1.48	1.50
Mon	1.70	2.97	3.26	3.49	3.63	1.80
Tue	2.98	3.26	3.26	3.26	3.65	3.02
Wed	3.40	3.22	3.16	3.16	3.26	3.38
Thu	3.26	3.45	3.26	2.56	3.26	3.25
Fri	2.42	3.26	3.26	2.56	3.30	2.54
Sat	1.70	2.58	2.98	3.50	3.25	1.80

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	
17-Jan	MP:	325	324	324	323	323	0
	AEMO:	326	326	326	309	317	
	MP as % of AEMO	100%	99%	99%	105%	102%	
18-Jan	MP:	415	418	420	417	417	0
	AEMO:	417	456	443	447	453	
	MP as % of AEMO	100%	92%	95%	93%	92%	
19-Jan	MP:	406	407	407	408	407	0
	AEMO:	444	446	473	473	450	
	MP as % of AEMO	91%	91%	86%	86%	90%	
20-Jan	MP:	385	394	393	395	395	0
	AEMO:	408	407	409	409	405	
	MP as % of AEMO	94%	97%	96%	97%	98%	
21-Jan	MP:	432	432	436	436	436	0
	AEMO:	448	437	442	436	426	
	MP as % of AEMO	96%	99%	99%	100%	102%	
22-Jan	MP:	410	468	468	470	470	0
	AEMO:	416	458	474	464	464	
	MP as % of AEMO	99%	102%	99%	101%	101%	
23-Jan	MP:	357	357	356	355	355	0
	AEMO:	376	361	362	368	379	
	MP as % of AEMO	95%	99%	98%	96%	94%	

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