

7 – 13 March 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@ aer.gov.au](mailto:aer inquiry@ aer.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. Jemena failed to submit data for the Queensland Gas Pipeline for the Sunday gas day and APA failed to submit data for the Moomba to Sydney Pipeline for the Tuesday gas day (see Figure A1).

Figure 4 shows changes in gas demand and production and pipeline flows compared to the previous week. Total average daily demand for gas increased by 117 TJ (10 per cent) compared to the previous week. A significant increase of 118 TJ (46 per cent) was recorded in Victoria. All other regions had small changes.

Total Gas Powered Generation (GPG) gas usage fell by 4 TJ (1 per cent) compared to the previous week. South Australia and Victoria recorded small decreases while the remaining regions record a small increase.

Average production volumes increased by 36 TJ (3 per cent) compared to the previous week. Significant increases were recorded at Eastern and Roma production facilities of 58 TJ (11 per cent) and 25 TJ (6 per cent) respectively. The Otway production facility recorded a fall of 50 TJ (24 per cent). Average daily flows were higher than the previous week with significant increases in flow occurring on the Longford to Melbourne (16 per cent), and Moomba to Adelaide (6 per cent) pipelines. A significant fall was recorded across the South West pipeline (36 per cent).

### Victorian Gas Market

Total average gas injections in the Victorian gas market increased by 15 TJ (4 per cent) compared to the previous week (See Figure V3).

The average imbalance price fell from \$1.50/GJ in the previous week to \$1.46/GJ.

There were no bids from Bass Gas and Otway again this week.

Supply Demand Point Constraints (SDPCs) were applied to injections/withdrawals at VicHub and to Longford for injection on Friday. In addition, SDPCs were issued for Iona injections/withdrawals on Wednesday to Friday. SDPCs were also issued for injections/withdrawals at WUGS from Wednesday to Saturday.

During this week AEMO were still operating from their disaster recovery site as a result of the events of 5 March. Due to IT problems AEMO did not publish several demand schedules for 7 and 8 March. As a result, data for these days in figure A5 is not available. The AER is continuing discussions with AEMO on this issue.

## 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 (7 - 13 Mar)	337	8	373	226	43	185	64	74
Financial Year-to-date 2009-10*	366	20	554	282	38	169	85	70
Financial Year-to-date 2008-09**	322	20	610	303	35	170	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^	NSW	VIC	SA	TAS	QLD
Current week (7 - 13 Mar)	83	1	110	28	190
Financial Year-to-date 2009-10*	84	43	165	23	164
Financial Year-to-date 2008-09**	38	69	188	25	112

^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**

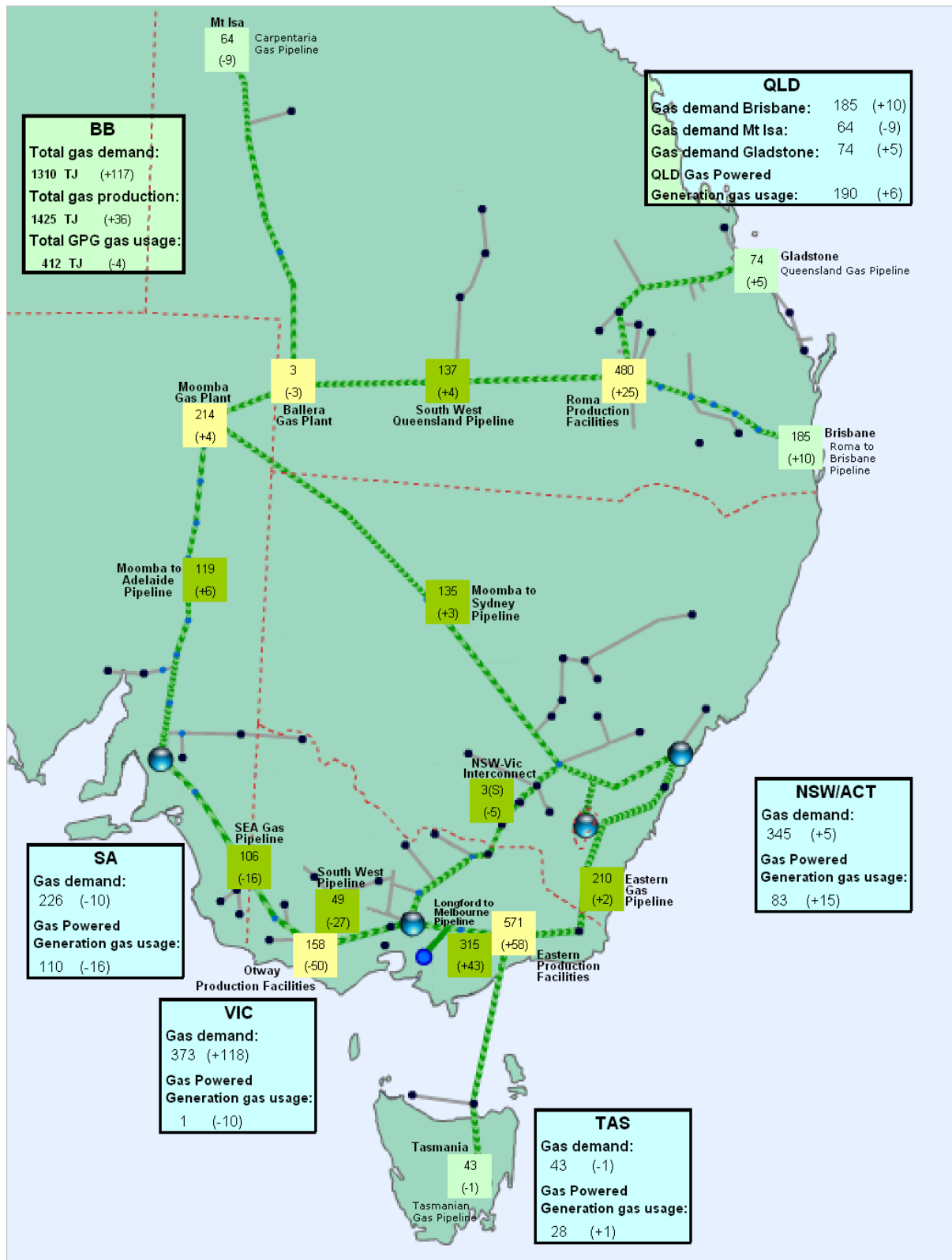
Average daily flows	Roma (QLD)	Eastern Victoria	Otway Basin (VIC)	Moomba (SA/QLD)
Current week (7 - 13 Mar)	480	571	158	217
Financial Year-to-date 2009-10*	453	669	281	278
Financial Year-to-date 2008-09**	321	719	311	312

\*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)

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.

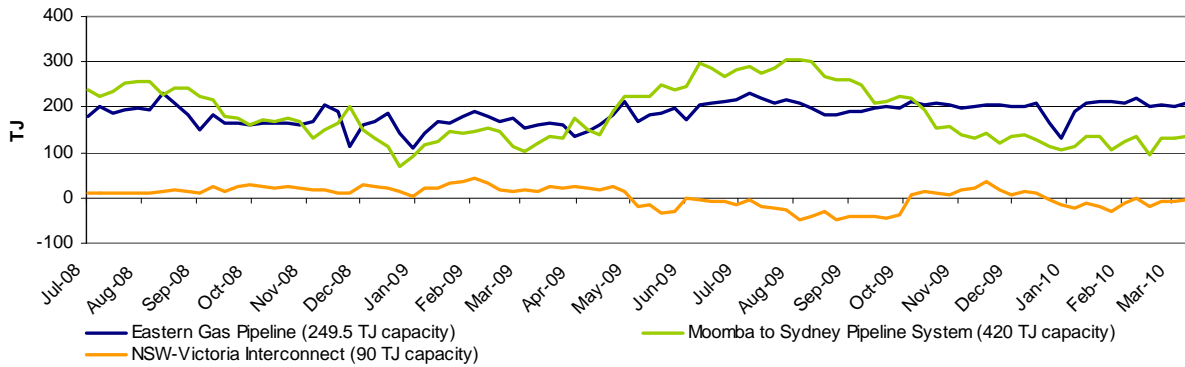
**Figure 4: Changes in gas demand and production and pipeline flows (TJ)**



## 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.

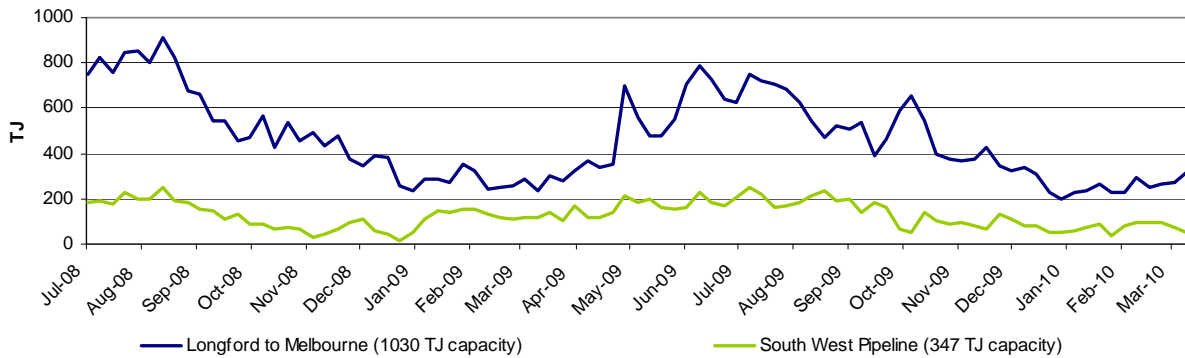
**Figure 5: Average daily flows (TJ) into NSW/ACT demand region**



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

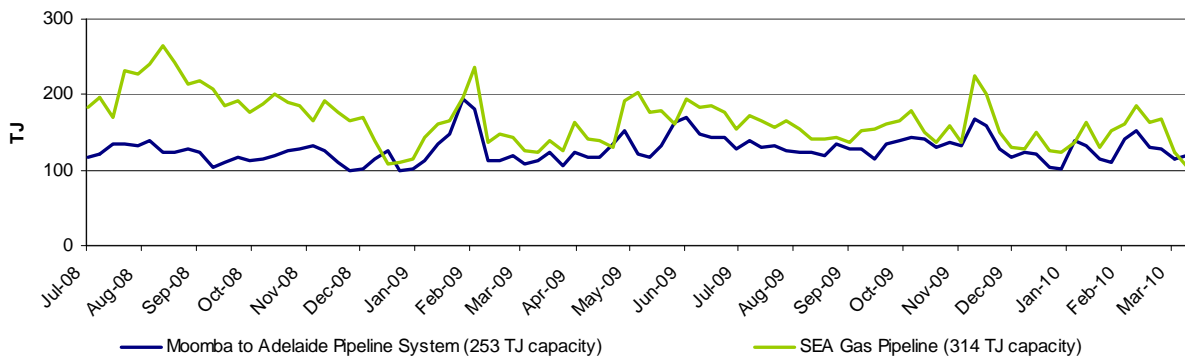
Notes: Negative flows on the NSW-Victoria Interconnect represent flows out of NSW into VIC.

**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			
Coogee Energy	Transmission Customer	1					S								
Country Energy	Transmission Customer	1									S				
Energy Australia	Retailer	2			S		S								
International Power	Transmission Customer	1												S	
Origin (Vic)	Retailer	5		S	NS	NS	S	S			S	S			
Origin (Uranquinty)	Trader	1					S								
Red Energy	Retailer	1					S								
Santos	Retailer	2						S	S						
Simply Energy	Retailer	3				NS	S	NS							
TRU Energy	Retailer	4			S	NS	S		NS			NS			
Victoria Electricity	Trader	1										S			
Victoria Electricity	Retailer	4			S	NS			S						
Visy Paper	Distribution Customer	2					S				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)**

	7 – 13 Mar	28 Feb – 6 Mar	2009-10 Financial YTD*	2008-09 Financial YTD**
<b>Average daily price</b>	1.46	1.50	1.63	3.08

7 – 13 Mar	Sun	Mon	Tue	Wed	Thu	Fri	Sat
<b>Daily price</b>	1.10	2.55	2.00	1.17	1.87	0.47	1.01

\*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)

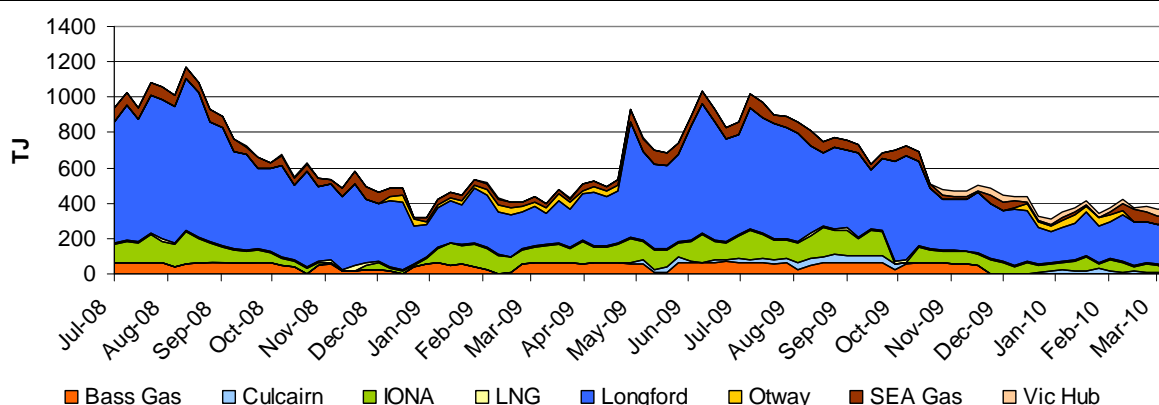
Notes: The daily average market price is a volume weighted imbalance price taking account of trading amounts at five times through the gas day — 6am, 10am, 2pm, 6pm and 10pm.

## 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:	6 – 13 Mar	28 Feb – 6 Mar	2009-10 Financial YTD*	2008-09 Financial YTD**
<b>Culcairn</b>	9	9	18	0.3
<b>Longford</b>	276	225	376	465
<b>LNG</b>	9	8	8	9
<b>IONA</b>	3	36	80	73
<b>VicHub</b>	37.9	39.5	16.0	1.8
<b>SEAGas</b>	46	50	41	47
<b>Bass Gas</b>	0	0	33	45
<b>Otway</b>	0	0	10	10
<b>TOTAL</b>	<b>382</b>	<b>367</b>	<b>581</b>	<b>652</b>



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

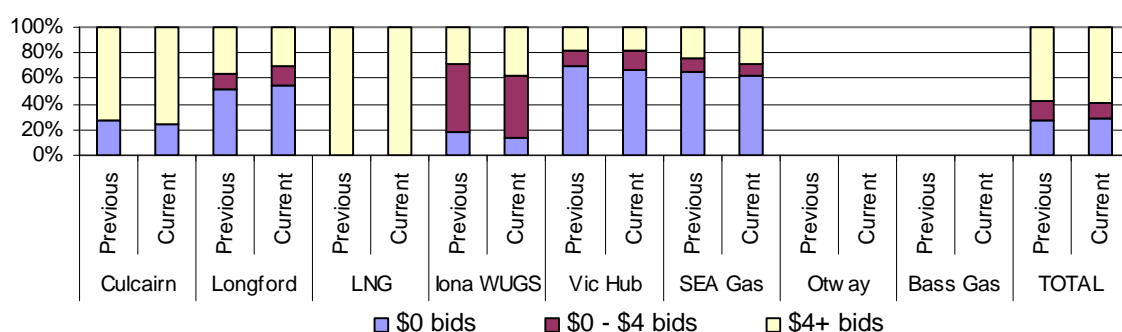
\*\*Average daily estimated gas consumption measured from 1 July 2008 to the equivalent week in 2008 (inclusive)

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

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:	7 – 13 Mar	28 Feb – 6 Mar	2009-10 Financial YTD*	2008-09 Financial YTD**
<b>Ballarat</b>	13	11	22	23
<b>Geelong^</b>	62	58	80	86
<b>Gippsland</b>	33	29	45	62
<b>Melbourne</b>	242	234	378	408
<b>Northern</b>	40	35	51	67
<b>TOTAL</b>	<b>389</b>	<b>367</b>	<b>577</b>	<b>646</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	61	62	59	62	66	66	73	117	73	96	86	81
QLD Gas Pipeline	N/A	70	72	73	76	77	76	79	89	78	70	67
Roma to Brisbane Pipeline	163	231	181	188	187	178	169	214	78	178	168	171
South West QLD Pipeline	162	141	146	142	119	122	124	181	78	80	141	66
<b>NSW/ACT</b>												
Eastern Gas Pipeline	196	206	210	215	221	210	197	250	81	204	201	174
Moomba to Sydney Pipeline	102	134	N/A	154	166	144	111	420	45	95	189	175
NSW-VIC Interconnect <sup>^</sup>	-15	-16	-13	-15	29	14	-6	90	-14	-18	-12	19
<b>VIC</b>												
Longford to Melbourne	248	295	331	379	396	305	248	1030	42	252	432	508
South West Pipeline	1	14	71	55	63	77	62	347	36	93	124	123
<b>SA</b>												
Moomba to Adelaide Pipeline	115	111	131	129	130	118	103	253	51	130	130	124
SEA Gas Pipeline	84	98	104	133	121	130	75	314	49	164	155	184
<b>TAS</b>												
Tasmanian Gas Pipeline	40	37	42	44	45	46	44	129	29	42	38	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	86	114	110	111	111	110	101	140	65	105	91	64
Fairview	127	121	127	129	129	121	127	115	98	84	112	64
Kenya Gas Plant	69	69	73	73	73	74	71	160	32	62	51	
Kincora	5	5	0	0	5	5	5	25	6	6	1	6
Kogan North	10	10	10	10	11	11	11	12	69	11	8	11
Peat	7	7	7	7	11	10	10	15	56	10	8	11
Rolleston	11	11	12	11	12	12	11	30	38	11	11	11
Scotia	29	29	29	29	29	29	29	27	84	28	23	22
Spring Gully	34	35	35	40	38	38	44	60	73	43	44	55
Strathblane	34	35	35	40	38	38	44	60	73	43	44	46
Talona	21	21	21	24	23	23	27	36	74	26	27	0
Wallumbilla	11	11	11	11	11	11	11	20	54	11	11	13
Yellowbank	0	0	5	6	6	5	6	30	47	14	14	14
Talinga	0	0	13	14	20	23	24	50	10	13	N/A	N/A
<b>Moomba (SA/QLD)</b>												
Moomba Gas Plant	193	225	211	241	247	219	165	430	63	215	273	280
Ballera	0	0	0	0	7	7	6	150	6	30	9	42
<b>Eastern (VIC)</b>												
Orbost Gas Plant	48	48	48	48	48	48	48	92	17	11	16	0
Lang Lang Gas Plant	0	0	0	0	0	0	0	70	49	0	34	44
Longford Gas Plant	449	527	532	615	625	444	467	1140	55	491	631	696
LNG Storage Dandenong	0	0	0	0	0	0	0	158	0	0	0	1
<b>Otway Basin (VIC)</b>												
Minerva Gas Plant	50	40	52	67	74	81	59	94	79	83	75	90
Otway Gas Plant	62	66	111	101	109	124	88	206	63	155	129	144
Iona Underground Gas Storage	1	14	6	0	0	0	0	320	26	20	84	81

\*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)
<b>7 – 13 Mar</b>	Average min.	21.2	19.9	13.0	14.7	14.9	13.8
	Average max.	29.4	25.7	22.2	24.0	24.3	21.5
<b>28 Feb – 6 Mar</b>	Average min.	22.0	19.2	12.8	16.7	15.8	11.9
	Average max.	27.1	24.4	23.9	25.3	26.9	22.2

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**

<b>7 – 13 Mar</b>	Scheduling Interval					Daily Imbalance Weighted Average Price
	6am	10am	2pm	6pm	10pm	
<b>Sun</b>	1.11	1.11	1.11	1.10	0.01	1.10
<b>Mon</b>	2.56	2.56	3.10	2.25	3.10	2.55
<b>Tue</b>	2.01	2.01	1.75	1.75	1.88	2.00
<b>Wed</b>	1.11	1.75	2.77	2.77	4.14	1.17
<b>Thu</b>	1.81	3.25	2.98	3.50	0.01	1.87
<b>Fri</b>	0.39	1.89	2.54	1.88	1.00	0.47
<b>Sat</b>	0.89	2.56	2.98	3.50	1.88	1.01

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	
7-Mar	MP:	N/A	N/A	N/A	N/A	N/A	0
	AEMO:	N/A	N/A	N/A	N/A	N/A	
	MP as % of AEMO	N/A	N/A	N/A	N/A	N/A	
8-Mar	MP:	N/A	N/A	N/A	N/A	N/A	0
	AEMO:	N/A	N/A	N/A	N/A	N/A	
	MP as % of AEMO	N/A	N/A	N/A	N/A	N/A	
9-Mar	MP:	415	420	419	418	418	0
	AEMO:	392	393	395	406	406	
	MP as % of AEMO	106	107	106	103	103	
10-Mar	MP:	436	435	437	433	433	0
	AEMO:	395	396	417	441	452	
	MP as % of AEMO	110	110	105	98	96	
11-Mar	MP:	423	421	421	417	417	0
	AEMO:	413	410	412	413	417	
	MP as % of AEMO	102	103	102	101	100	
12-Mar	MP:	378	381	379	379	378	0
	AEMO:	380	382	382	371	368	
	MP as % of AEMO	99	100	99	102	103	
13-Mar	MP:	293	293	292	291	291	0
	AEMO:	309	309	308	318	311	
	MP as % of AEMO	95	95	95	92	94	

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