

14 – 20 February 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. Jemena failed to submit data for the Queensland Gas Pipeline on the Friday and Saturday gas days (see Figure A2).

Figure 4 shows changes in average daily gas demand and production and pipeline flows compared to the previous week. Total average daily demand for gas fell by 104 TJ (7 per cent) compared to the previous week. All regions except for Queensland recorded falls with significant falls of 51 TJ (15 per cent) and 42 TJ (13 per cent) recorded in NSW/ACT and South Australia respectively.

Total average daily Gas Powered Generation (GPG) gas usage fell by 119 TJ (19 per cent) compared to the previous week. While GPG usage increased in Queensland by 11 TJ, all other regions recorded significant falls of 57 TJ (66 per cent), 25 TJ (26 per cent) and 47 TJ (20 per cent) in Victoria, NSW/ACT and respectively.

Average daily production volumes fell by 102 TJ (6 per cent) compared to the previous week. The largest fall was in Victoria 104 TJ (12 per cent). A 47 TJ (10 per cent) increase was recorded at the Queensland production facilities. Average daily flows were lower than the previous week with falls in flow occurring on all pipelines except the NSW Vic Interconnect. Significant falls were recorded across the Moomba to Sydney pipeline (29 per cent) and the South West Queensland Pipeline (27 per cent).

A new gas production facility in Queensland, Talinga Gas Plant, owned by Origin Energy started production during the week.

### Victorian Gas Market

In line with lower Victorian GPG demand, total average daily gas injections into the Victorian gas market fell by 52 TJ (12 per cent) compared to the previous week. The largest falls were recorded at Iona, 30 TJ (55 per cent) and at VicHub, 20 TJ (67 per cent) as well as at the Otway injection point where injections fell by 21 TJ to zero this week.

Exceptions to the general downward trend were the SEAGas injection point, where injections increased by 29 TJ (71 per cent) and Culcairn, where injections increased by 10 TJ (125 per cent). (See Figure V3).

The average imbalance price fell from \$2.77/GJ in the previous week to \$1.88/GJ, in line with decreases in demand.

AEMO issued a negative demand override of 7 TJ on Friday, due to market participants demand forecasts falling outside AEMO demand forecast thresholds.

An SDPC was issued for injections at Culcairn on Wednesday 17 February and subsequently revised twice on that gas day.

## 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.)

**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 (14 - 20 Feb)	291	7	364	294	42	178	96	78
Financial Year-to-date 2009-10*	369	21	574	285	38	168	86	70
Financial Year-to-date 2008-09**	328	21	631	308	34	171	81	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 (14 - 20 Feb)	73	30	185	31	198
Financial Year-to-date 2009-10*	84	46	167	23	161
Financial Year-to-date 2008-09**	38	72	191	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**

<b>Average daily flows</b>	<b>Roma (QLD)</b>	<b>Eastern Victoria</b>	<b>Otway Basin (VIC)</b>	<b>Moomba (SA/QLD)</b>
Current week (14 - 20 Feb)	468	502	258	246
Financial Year-to-date 2009-10*	451	681	287	282
Financial Year-to-date 2008-09**	317	741	315	322

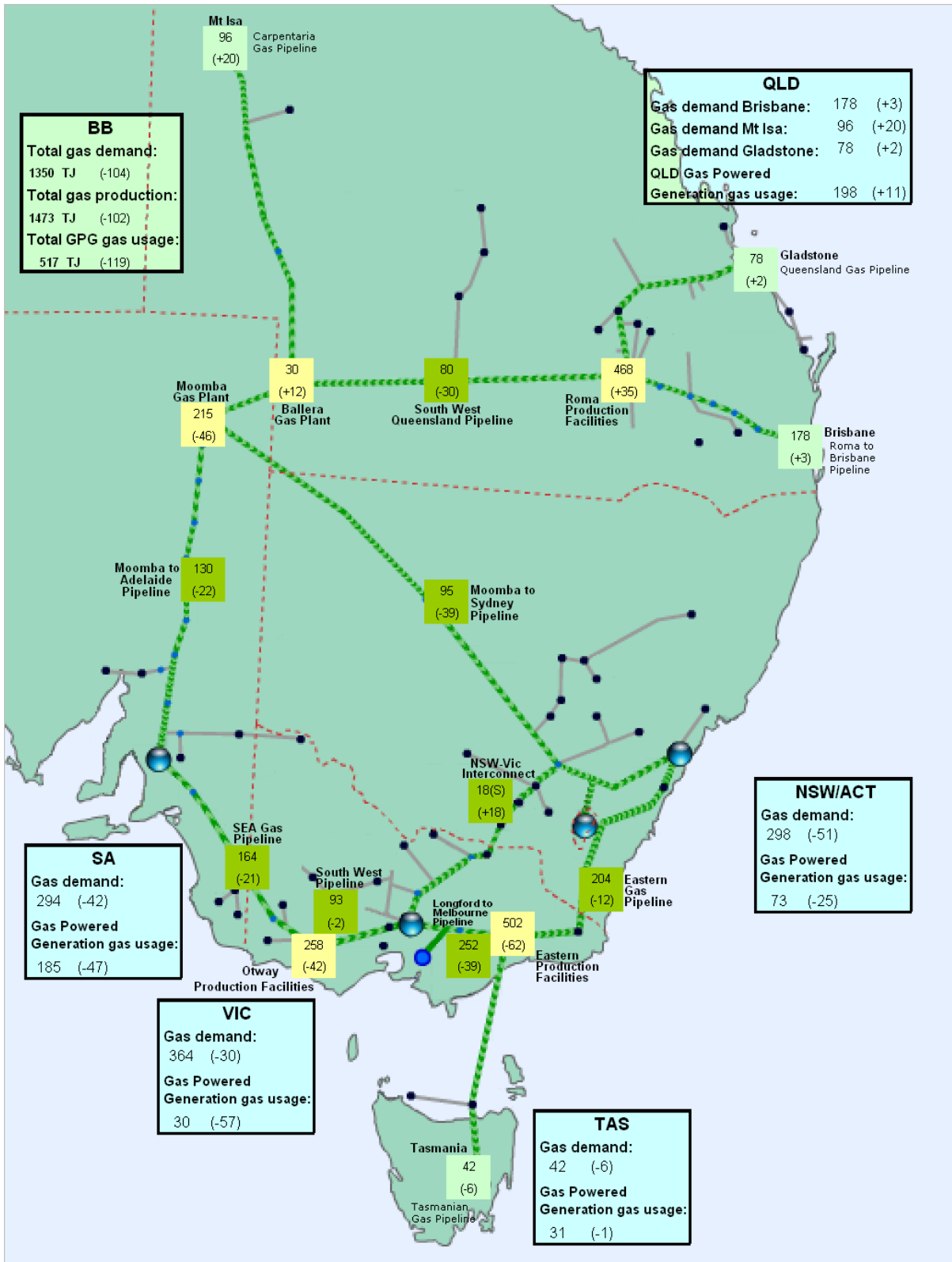
\*Average daily estimated gas consumption measured from 1 July 2009 to the current week (inclusive)

\*\*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 gas demand and GPG usage of gas in each region.

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



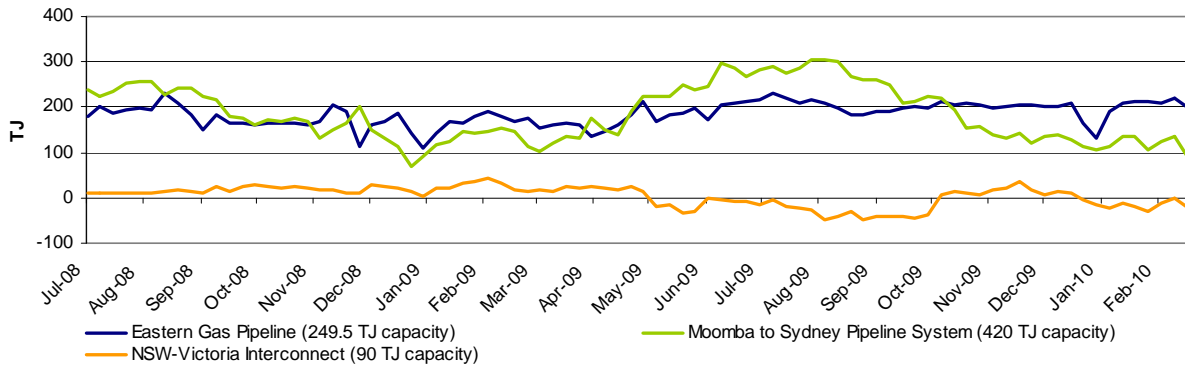
Source: Natural Gas Market Bulletin Board <http://www.gasbb.com.au>

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.

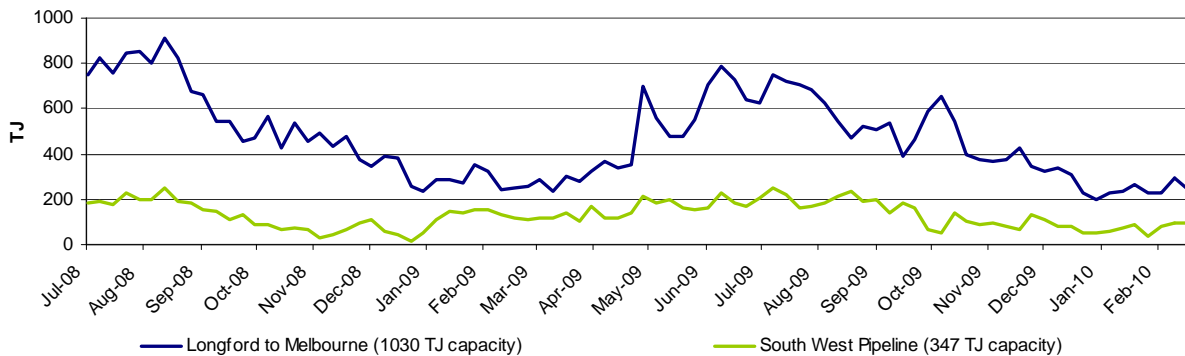
**Figure 5: Average daily flows (TJ) into NSW/ACT demand region**



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

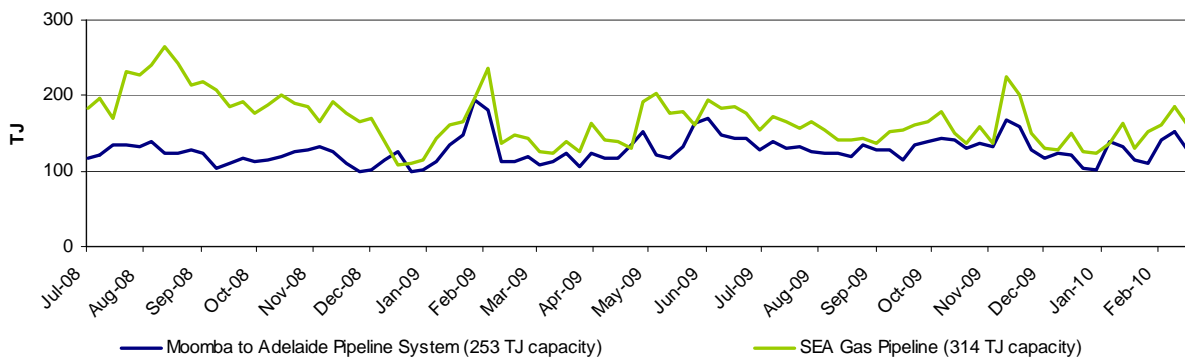
Notes: Negative flows on the NSW-Victoria Interconnect represent flows out of NSW into VIC.

**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	NS						
Origin (Vic)	Retailer	6		S	S	NS	S	S			S	S		
Origin (Uranquinty)	Trader	1					S							
Red Energy	Retailer	1					S							
Santos	Retailer	3		S				S	S					S
TRU Energy	Retailer	4			S	NS	S		NS			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 (14 - 20 Feb)	Previous Week (7 - 13 Feb)	2009-10 Financial YTD*	2008-09 Financial YTD**
<b>Average daily price</b>	1.88	2.77	1.63	3.13

Current week	Sun	Mon	Tue	Wed	Thu	Fri	Sat
<b>Daily price</b>	0.11	0.72	3.13	3.01	1.86	1.78	2.56

\*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)

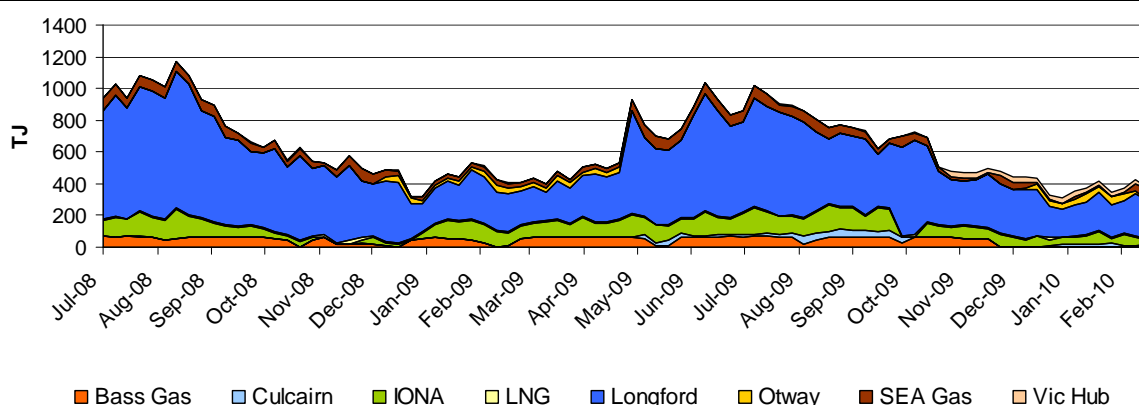
Notes: The daily average market price is a volume weighted imbalance price taking account of trading amounts at five times through the gas day — 6am, 10am, 2pm, 6pm and 10pm.

## 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 (14 - 20 Feb)	Previous Week (7 - 13 Feb)	2009-10 Financial YTD*	2008-09 Financial YTD**
<b>Culcairn</b>	18	8	18	0.3
<b>Longford</b>	243	264	384	480
<b>LNG</b>	8	9	8	9
<b>IONA</b>	24	54	83	73
<b>VicHub</b>	9.8	29.5	15.0	1.9
<b>SEAGas</b>	70	41	40	48
<b>Bass Gas</b>	0	0	35	44
<b>Otway</b>	0	21	10	9
<b>TOTAL</b>	<b>373</b>	<b>425</b>	<b>594</b>	<b>666</b>



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

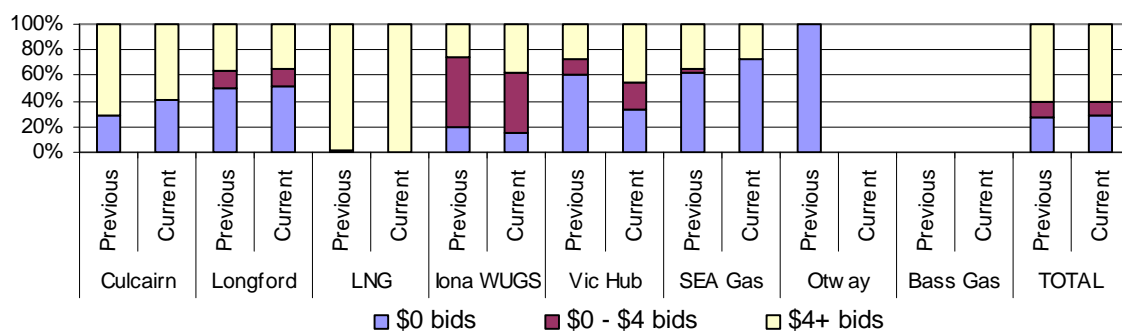
\*\*Average daily estimated gas consumption measured from 1 July 2008 to the equivalent week in 2008 (inclusive)

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	AGL TRU	AGL TRU	AGL TRU		Origin	
<b>LNG</b>							
<b>Iona</b>			Origin	AGL TRU Origin	TRU Origin	TRU Origin	TRU
<b>VicHub</b>	AETV	AETV TRU	TRU	AETV	AETV	AETV	AETV
<b>SEAGas</b>		Simply		Simply	Simply	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:	Current week (14 - 20 Feb)	Previous Week (7 - 13 Feb)	2009-10 Financial YTD*	2008-09 Financial YTD**
<b>Ballarat</b>	10	10	23	24
<b>Geelong^</b>	83	82	82	88
<b>Gippsland</b>	32	56	47	64
<b>Melbourne</b>	220	239	390	423
<b>Northern</b>	33	36	52	68
<b>TOTAL</b>	<b>377</b>	<b>423</b>	<b>594</b>	<b>667</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	87	94	96	93	95	101	104	117	73	96	86	81
QLD Gas Pipeline	76	78	77	81	77	N/A	N/A	79	89	78	70	67
Roma to Brisbane Pipeline	157	188	176	184	188	185	169	214	78	178	168	171
South West QLD Pipeline	88	60	103	84	66	69	94	181	78	80	141	66
<b>NSW/ACT</b>												
Eastern Gas Pipeline	180	214	209	208	214	193	184	250	81	204	201	174
Moomba to Sydney Pipeline	78	98	107	113	106	94	66	420	45	95	189	175
NSW-VIC Interconnect <sup>^</sup>	-3	-13	-20	-23	-21	-22	-26	90	-14	-18	-12	19
<b>VIC</b>												
Longford to Melbourne	220	286	320	313	242	219	167	1030	42	252	432	508
South West Pipeline	58	73	81	90	149	117	85	347	36	93	124	123
<b>SA</b>												
Moomba to Adelaide Pipeline	112	137	130	120	121	151	139	253	51	130	130	124
SEA Gas Pipeline	97	166	180	173	167	201	166	314	49	164	155	184
<b>TAS</b>												
Tasmanian Gas Pipeline	45	42	42	42	43	42	42	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	84	113	111	110	108	109	99	140	65	105	91	64
Fairview	55	56	91	98	97	93	96	115	98	84	112	64
Kenya Gas Plant	72	72	63	63	59	51	56	160	32	62	51	
Kincora	0	10	10	5	10	10	0	25	6	6	1	6
Kogan North	11	11	10	11	11	11	11	12	69	11	8	11
Peat	10	10	10	10	10	10	10	15	56	10	8	11
Rolleston	12	12	11	11	11	10	12	30	38	11	11	11
Scotia	22	28	27	29	29	29	29	27	84	28	23	22
Spring Gully	34	38	46	46	50	49	40	60	73	43	44	55
Strathblane	34	38	46	46	50	49	40	60	73	43	44	46
Talona	21	23	28	28	30	29	24	36	74	26	27	0
Wallumbilla	11	12	11	11	11	11	11	20	54	11	11	13
Yellowbank	14	14	14	14	14	14	14	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	177	220	248	202	197	241	222	430	63	215	273	280
Ballera	29	48	10	16	41	43	26	150	6	30	9	42
<b>Eastern (VIC)</b>												
Orbost Gas Plant	37	37	0	0	0	0	0	92	17	11	16	0
Lang Lang Gas Plant	0	0	0	0	0	0	0	70	49	0	34	44
Longford Gas Plant	428	481	555	549	486	549	387	1140	55	491	631	696
LNG Storage Dandenong	2	0	0	0	0	0	0	158	0	0	0	1
<b>Otway Basin (VIC)</b>												
Minerva Gas Plant	61	87	83	94	94	94	66	94	79	83	75	90
Otway Gas Plant	106	154	181	184	148	190	125	206	63	155	129	144
Iona Underground Gas Storage	0	0	2	-5	70	35	35	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)
Current week (14 - 20 Feb)	Average min.	22.5	19.9	13.4	18.0	19.5	13.1
	Average max.	30.5	26.7	25.3	28.6	32.2	24.6
Previous week (7 - 13 Feb)	Average min.	21.6	21.8	17.7	19.0	21.5	14.1
	Average max.	29.7	28.5	28.9	29.8	34.2	21.9

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 (14 - 20 Feb)	Scheduling Interval					Daily Imbalance Weighted Average Price
	6am	10am	2pm	6pm	10pm	
Sun	0.01	1.74	1.79	2.75	4.76	0.11
Mon	0.62	1.78	2.74	2.74	2.97	0.72
Tue	3.11	3.50	3.24	3.47	3.47	3.13
Wed	3.10	3.50	3.24	3.47	0.01	3.01
Thu	1.83	2.78	2.79	3.05	3.05	1.86
Fri	1.76	1.76	2.65	2.65	1.69	1.78
Sat	2.56	2.56	2.59	2.75	2.98	2.56

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	
14-Feb	MP:	287	292	291	291	290	0
	AEMO:	282	289	287	286	295	
	MP as % of AEMO	102	101	101	102	98	
15-Feb	MP:	355	362	366	366	365	0
	AEMO:	368	370	375	372	369	
	MP as % of AEMO	96	98	98	98	99	
16-Feb	MP:	422	425	431	430	430	0
	AEMO:	423	430	436	435	432	
	MP as % of AEMO	100	99	99	99	100	
17-Feb	MP:	409	408	404	404	404	0
	AEMO:	408	413	409	403	407	
	MP as % of AEMO	100	99	99	100	99	
18-Feb	MP:	402	400	405	401	401	0
	AEMO:	393	389	389	400	403	
	MP as % of AEMO	102	103	104	100	100	
19-Feb	MP:	374	371	371	370	363	-7
	AEMO:	359	360	370	367	368	
	MP as % of AEMO	104	103	100	101	99	
20-Feb	MP:	280	278	278	277	277	0
	AEMO:	241	238	286	290	281	
	MP as % of AEMO	116	117	97	96	99	

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