

1 August – 7 August 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), with the subject title 'Comments on weekly gas report'.

## Summary

### National Gas Market Bulletin Board

There were a number of instances of missing flow data on the Bulletin Board this week. Epic Energy failed to submit data for two of its pipeline facilities from Tuesday 3 August, the South West Queensland Pipeline and the Moomba to Adelaide Pipeline.

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 81 TJ (4 per cent) compared to the previous week. Reduced demand was recorded in NSW/ACT (43 TJ or 8 per cent) and in Gladstone (13 TJ or 14 per cent). Most other regions recorded increases as a result of cool conditions, including Victoria by 91 TJ (10 per cent) and South Australia 33 TJ (10 per cent).

Total average daily Gas Powered Generation (GPG) gas usage increased by 60 TJ (13 per cent) compared to the previous week. GPG gas usage increased in each region, with more significant increases recorded in Victoria (12 TJ or 39 per cent), South Australia (24 TJ or 13 per cent) and Queensland (21 TJ or 15 per cent).

Average daily production volumes rose by 110 TJ (5 per cent) compared to the previous week. Production volumes at the Eastern Production Facility increased by 59 TJ (6 per cent) and at the Moomba Gas Plant by 25 TJ (7 per cent). Despite the increased production at Moomba, a 44 TJ (14 per cent) reduction was recorded on the Moomba to Sydney pipeline as a result of decreased demand. Average flows to Adelaide and Victoria increased significantly this week. The flow increases were recorded on the Moomba to Adelaide Pipeline (15 TJ or 11 per cent), the SEA Gas Pipeline (18 TJ or 10 per cent), the South West Pipeline (22 TJ or 15 per cent) and the Longford to Melbourne Pipeline (69 TJ or 9 per cent).

### Victorian Gas Market

In line with the increase in demand in Victoria, average gas injections rose by 93 TJ (10 per cent) compared to the previous week (See Figure V3). The average imbalance price increased from \$2.43/GJ the previous week to \$3.30/GJ (see Figure V2). This occurred despite an increase in low priced gas offered to the market compared to the previous week (see Figure V4).

AEMO issued a negative demand override of 14 TJ on Sunday 1 August (see figure A5).

A Demand Point Constraint (SDPC) was applied to withdrawals at Culcairn on Friday 6 August.

# 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
1 August – 7 August	464	47	974	351	51	188	88	85
Financial Year-to-date 2010-11*	472	51	940	330	50	185	91	85
Financial Year-to-date 2009-10**	464	46	922	294	25	128	92	69

\*Average daily estimated gas consumption measured from 1 July 2010 to the current week (inclusive)

\*\*Average daily estimated gas consumption measured from 1 July 2009 to the equivalent week in 2009 (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
1 August – 7 August	88	41	203	36	163
Financial Year-to-date 2010-11*	86	25	190	34	157
Financial Year-to-date 2009-10**	92	67	153	11	85

^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 2010 to the current week (inclusive)

\*\*Average daily estimated gas consumption measured from 1 July 2009 to the equivalent week in 2009 (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)
1 August – 7 August	560	1098	364	366
Financial Year-to-date 2010-11*	555	1061	372	370
Financial Year-to-date 2009-10**	402	947	365	376

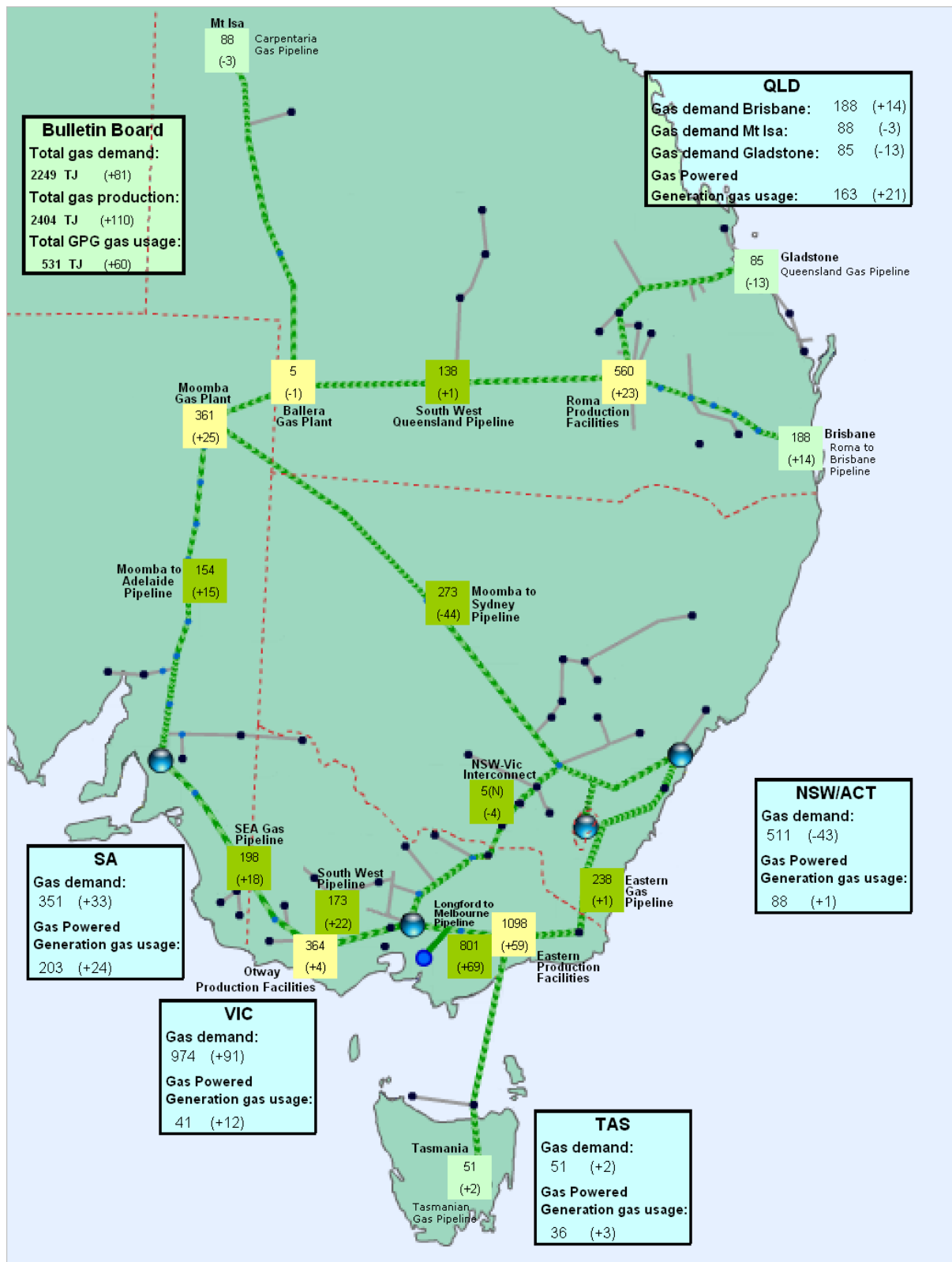
\*Average daily estimated gas consumption measured from 1 July 2010 to the current week (inclusive)

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



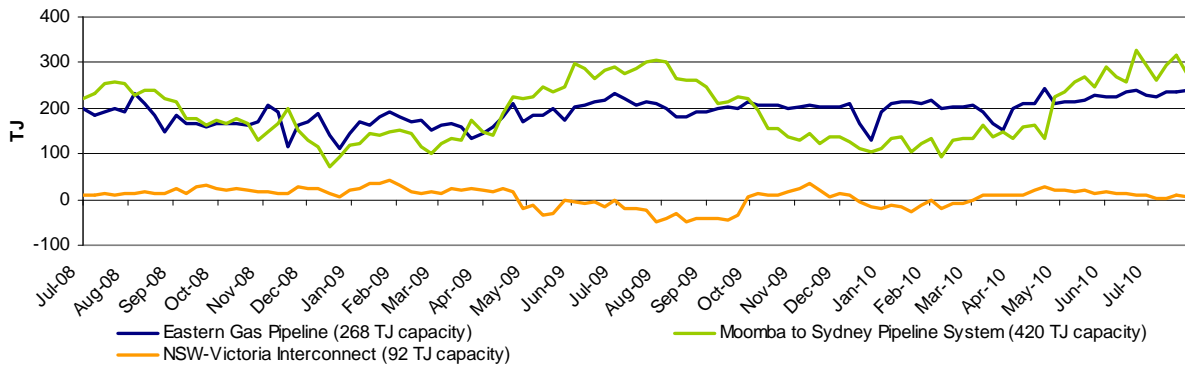
Source: Natural Gas Market Bulletin Board <http://www.gasbb.com.au>

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.

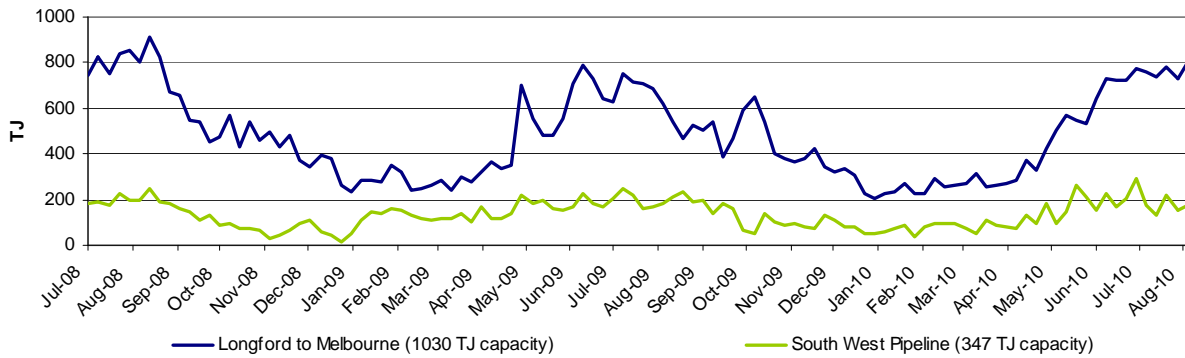
**Figure 5: Average daily flows (TJ) into NSW/ACT demand region**



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

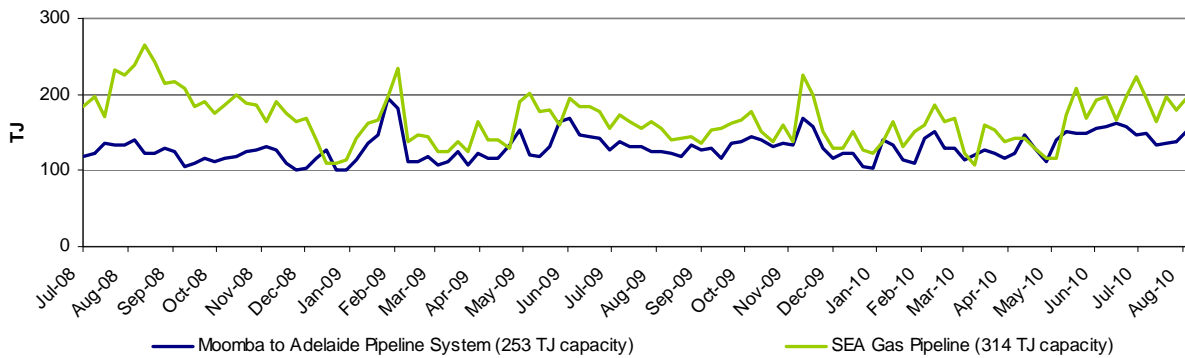
Notes: Negative flows on the NSW-Victoria Interconnect represent flows out of NSW into VIC.

**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				
			Bass Gas	Culcairn	IONA	LNG	Longford	SEA Gas	VicHub	Otway	Culcairn	IONA	SEA Gas	VicHub
AETV Power	Trader	2					S		S					NS
AGL (Qld)	Retailer	1				NS								
AGL	Retailer	4		NS	NS	NS	S				NS	NS		
Aurora Energy	Retailer	1					S							
Aust. Power & Gas	Retailer	3			S	NS	S					NS		
Coogee Energy	Transmission Customer	1					S							
Country Energy	Transmission Customer	1									S			
Energy Australia	Retailer	3			S		S		NS					NS
International Power	Transmission Customer	1											NS	
Lumo Energy	Retailer	5		NS	S	NS		S	S					
Lumo Energy	Trader	2			S				NS			NS		
Origin (Vic)	Retailer	6	S	NS	S	NS	S	S			NS	S		
Origin (Uranquinty)	Trader	1					S							
Red Energy	Retailer	1					S							
Santos	Retailer	2						S	S					
Simply Energy	Retailer	4			S	NS	S	NS						
TRU Energy	Retailer	4			S	NS	S					NS		NS
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 2010-11 financial year-to-date average and the 2009-10 financial year-to-date equivalent. Daily imbalance prices for each day during the current week are also noted.

**Figure V2: Imbalance Weighted Prices (\$/GJ)**

	1 August – 7 August	25 July – 31 July	2010-11 Financial YTD*	2009-10 Financial YTD**
<b>Average daily price</b>	3.30	2.43	2.83	1.82

1 August – 7 August	Sun	Mon	Tue	Wed	Thu	Fri	Sat
<b>Daily price</b>	3.09	3.37	3.28	3.27	3.32	3.27	3.54

\*Average daily estimated gas consumption measured from 1 July 2010 to the current week (inclusive)

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

Source: <http://www.aemo.com.au> (INT 041)

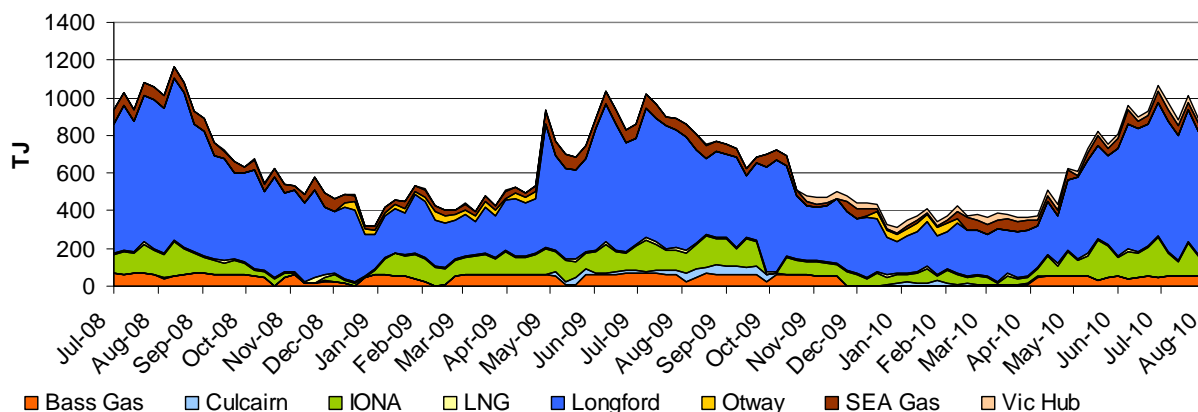
Notes: The daily average market price is a volume weighted imbalance price taking account of trading amounts at five times through the gas day — 6am, 10am, 2pm, 6pm and 10pm.

## System Injections

Figure V3 notes the average daily injections into the VPTS for the current week, compared with the 2010-11 and 2009-10 equivalent financial year-to-date daily averages.

**Figure V3: Average daily flows (TJ) from Injection Points on the VPTS**

Injection Point:	1 August – 7 August	25 July – 31 July	2010-11 Financial YTD*	2009-10 Financial YTD**
<b>Culcairn</b>	0	0	1	23
<b>Longford</b>	721	661	686	641
<b>LNG</b>	10	7	8	9
<b>IONA</b>	112	105	122	131
<b>VicHub</b>	31	22	30	1
<b>SEAGas</b>	59	44	55	69
<b>Bass Gas</b>	51	52	51	57
<b>Otway</b>	0	0	0	0
<b>TOTAL</b>	<b>984</b>	<b>891</b>	<b>953</b>	<b>931</b>



\*Average daily estimated gas consumption measured from 1 July 2010 to the current week (inclusive)

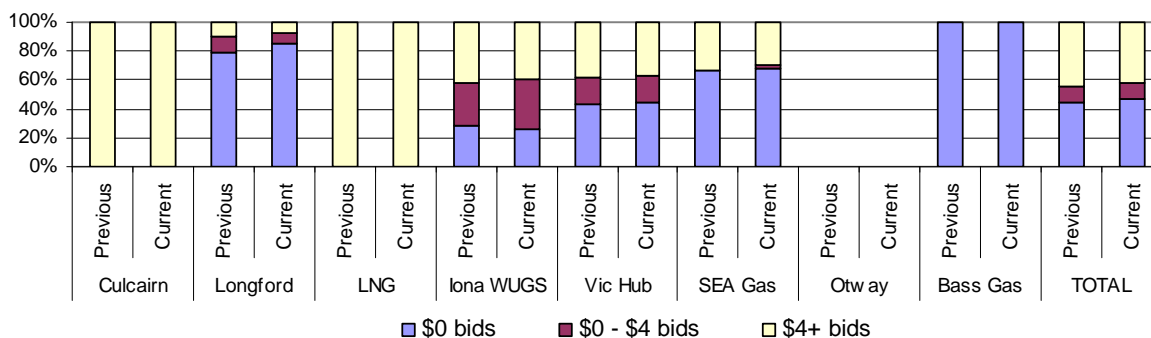
\*\*Average daily estimated gas consumption measured from 1 July 2009 to the equivalent week in 2009 (inclusive)

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>	AGL TRU	AGL Origin TRU	AGL Origin	AGL TRU	AGL TRU	AGL Origin TRU	TRU
<b>LNG</b>							
<b>Iona</b>	TRU APG Lumo	TRU APG Lumo	Origin TRU APG Lumo	Origin TRU APG Lumo	TRU APG Lumo	Origin TRU APG Lumo	TRU APG Lumo
<b>VicHub</b>	AETV	AETV	AETV	AETV TRU	AETV Lumo		
<b>SEAGas</b>	Simply	Simply	Origin Simply	Origin 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  
APG = Australian Power & Gas | CE = Country Energy | Lumo = Lumo Energy (formerly Victoria Electricity)

## 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:	1 August – 7 August	25 July – 31 July	2010-11 Financial YTD*	2009-10 Financial YTD**
<b>Ballarat</b>	47	41	45	43
<b>Geelong^</b>	110	96	109	102
<b>Gippsland</b>	64	54	58	61
<b>Melbourne</b>	683	616	657	652
<b>Northern</b>	83	85	87	77
<b>TOTAL</b>	<b>987</b>	<b>891</b>	<b>956</b>	<b>934</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 2010 to the current week (inclusive)

\*\*Average daily estimated gas consumption measured from 1 July 2009 to the equivalent week in 2009 (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	89	93	89	85	87	87	85	117	77	88	91	92
QLD Gas Pipeline	80	77	72	76	76	97	120	142	60	85	85	69
Roma to Brisbane Pipeline	169	200	196	199	198	191	165	219	85	188	185	128
South West QLD Pipeline	130	147	N/A	N/A	N/A	N/A	N/A	181	80	138	146	158
<b>NSW/ACT</b>												
Eastern Gas Pipeline	224	243	225	253	251	244	225	268	87	238	232	217
Moomba to Sydney Pipeline	218	302	306	277	301	299	211	420	69	273	290	293
NSW-VIC Interconnect <sup>^</sup>	6	2	2	0	2	15	10	92	6	5	6	-21
<b>VIC</b>												
Longford to Melbourne	755	788	796	829	839	809	794	1030	74	801	762	696
South West Pipeline	133	165	169	173	211	185	172	347	51	173	176	203
<b>SA</b>												
Moomba to Adelaide Pipeline	141	167	N/A	N/A	N/A	N/A	N/A	253	55	154	140	131
SEA Gas Pipeline	146	215	232	192	224	220	154	314	60	198	190	163
<b>TAS</b>												
Tasmanian Gas Pipeline	40	50	50	50	53	56	61	129	38	51	50	25

\*Average daily estimated gas consumption measured from 1 July 2010 to the current week (inclusive)

\*\*Average daily estimated gas consumption measured from 1 July 2009 to the equivalent week in 2009 (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	76	85	89	86	96	102	103	140	66	91	93	87
Fairview	131	130	131	131	128	128	124	130	95	129	123	105
Kenya Gas Plant	66	54	57	68	69	69	68	160	35	64	56	17
Kincora	0	0	0	5	0	0	6	25	19	2	5	1
Kogan North	10	10	10	8	9	10	10	12	80	10	10	5
Peat	11	11	11	11	11	11	11	15	71	11	11	11
Rolleston	12	12	11	11	11	12	11	30	39	11	12	12
Scotia	29	29	29	29	29	29	29	29	94	29	27	7
Spring Gully	44	49	53	53	53	54	53	60	88	51	53	52
Strathblane	44	49	53	53	53	54	53	60	88	51	53	52
Taloona	26	30	32	32	32	33	32	36	88	31	32	32
Wallumbilla	10	10	9	9	10	9	9	20	47	9	9	7
Yellowbank	14	13	13	13	13	13	13	30	43	13	13	15
Talinga	36	50	63	63	61	62	64	81	74	57	60	
<b>Moomba (SA/QLD)</b>												
Moomba Gas Plant	311	354	384	376	374	377	351	430	85	361	364	374
Ballera	17	3	0	0	0	0	14	150	4	5	5	2
<b>Eastern (VIC)</b>												
Orbost Gas Plant	0	0	0	0	0	0	0	100	0	0	0	0
Lang Lang Gas Plant	52	52	51	52	52	51	51	70	73	52	51	55
Longford Gas Plant	956	996	1055	1037	1102	1088	1091	1145	88	1046	1010	892
LNG Storage Dandenong	0	0	0	0	0	0	0	158	0	0	0	0
<b>Otway Basin (VIC)</b>												
Minerva Gas Plant	78	94	88	94	94	94	80	94	91	89	85	80
Otway Gas Plant	119	149	169	166	165	198	82	206	75	150	155	151
Iona Underground Gas Storage	73	116	136	141	141	125	147	440	30	126	132	134

\*Average daily estimated gas consumption measured from 1 July 2010 to the current week (inclusive)

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

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>1 August – 7 August</b>	Average min.	10.8	8.4	1.6	7.7	6.1	5.0
	Average max.	21.8	17.5	11.6	14.5	13.1	13.4
<b>25 July – 31 July</b>	Average min.	15.1	10.9	2.7	7.5	7.8	5.4
	Average max.	23.1	17.7	14.2	16.1	16.7	14.3

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>1 August – 7 August</b>	Scheduling Interval					Daily Imbalance Weighted Average Price
	6am	10am	2pm	6pm	10pm	
<b>Sun</b>	3.24	1.12	0.33	0.35	0.69	3.09
<b>Mon</b>	3.47	3.48	1.37	1.37	3.71	3.37
<b>Tue</b>	3.29	3.28	3.28	3.66	2.11	3.28
<b>Wed</b>	3.28	2.95	2.96	3.27	3.56	3.27
<b>Thu</b>	3.30	3.56	3.56	3.56	3.77	3.32
<b>Fri</b>	3.31	3.30	3.40	1.51	1.51	3.27
<b>Sat</b>	3.56	3.56	3.79	3.56	1.72	3.54

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	
1-Aug	MP:	931	947	945	939	925	-14
	AEMO:	893	881	888	896	861	
	MP as % of AEMO	104	107	106	105	108	
2-Aug	MP:	998	979	949	959	963	0
	AEMO:	1024	980	961	964	944	
	MP as % of AEMO	97	100	99	99	102	
3-Aug	MP:	965	963	979	979	976	0
	AEMO:	963	971	992	1004	979	
	MP as % of AEMO	100	99	99	98	100	
4-Aug	MP:	1034	1034	1025	1019	1019	0
	AEMO:	1038	1032	1020	1027	1028	
	MP as % of AEMO	100	100	100	99	99	
5-Aug	MP:	1052	1047	1049	1043	1042	0
	AEMO:	1059	1056	1064	1049	1050	
	MP as % of AEMO	99	99	99	99	99	
6-Aug	MP:	1014	1008	1018	1006	1005	0
	AEMO:	1014	996	1013	993	984	
	MP as % of AEMO	100	101	100	101	102	
7-Aug	MP:	964	964	963	962	961	0
	AEMO:	946	954	966	924	932	
	MP as % of AEMO	102	101	100	104	103	

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