

4 July – 10 July 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 9 instances of missing flow data on the Bulletin Board this week for 3 facilities.

Figure 4 shows changes in gas demand and production and pipeline flows compared to the previous week. Total average daily demand for gas decreased by 177 TJ (7 per cent) compared to the previous week. Significant reductions were recorded in Victoria 128 TJ (12 per cent), South Australia 27 TJ (7 per cent) and NSW/ACT 44 TJ (8 per cent). Tasmania's demand rose 8 TJ (20 per cent) and Brisbane increased 8 TJ (4 per cent).

Total average daily Gas Powered Generation (GPG) gas usage decreased by 52 TJ (10 per cent) compared to the previous week. In Queensland, GPG usage increased 4 TJ, but the most significant rise was Tasmania, with an increase of 9 TJ (30 per cent). Decreased GPG gas usage was recorded in Victoria (22 TJ or 70 per cent), South Australia (30 TJ or 13.2 per cent) and NSW/ACT (13 TJ or 13.2 per cent).

Average daily production volumes fell by 57 TJ (2 per cent) compared to the previous week. Gas production at the Otway Basin decreased 66 TJ (14 per cent) with an increase at Moomba of 19 TJ (5 per cent). Flows decreased significantly on the South West Pipeline (116 TJ), SEA Gas Pipeline (28 TJ) and Eastern Gas Pipeline (13 TJ), as restrictions on pipeline flows imposed during the previous week were lifted.

### Victorian Gas Market

In line with the decreased demand in Victoria, average gas injections fell by 94 TJ (9 per cent) compared to the previous week (See Figure V3). The average imbalance price increased from \$2.58/GJ for the previous week to \$3.50/GJ (see Figure V2). This coincided with an increase in high priced gas offered to the market (see Figure V4). The number of participants rebidding gas at the Iona injection point remained high this week with multiple participants submitting rebids on a number of days (see Figure V5).

AEMO issued demand overrides on Tuesday 6 July (-5 TJ), Wednesday 7 July (3 TJ), Thursday 8 July (-4 TJ) and Friday 9 July (-6 TJ) (see figure A5).

Demand Point Constraints (SDPCs) were applied to Culcairn withdrawals on 6 & 7 July, and supply was constrained at Longford from 6 to 10 July.

# 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
4 July – 10 July	474	48	942	343	52	192	93	79
Full Financial Year 2009-10	375	21	585	288	39	168	87	71

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
4 July – 10 July	85	9	196	37	163
Full Financial Year 2009-10	85	36	171	24	162

^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'

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, Barcardine, 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.)

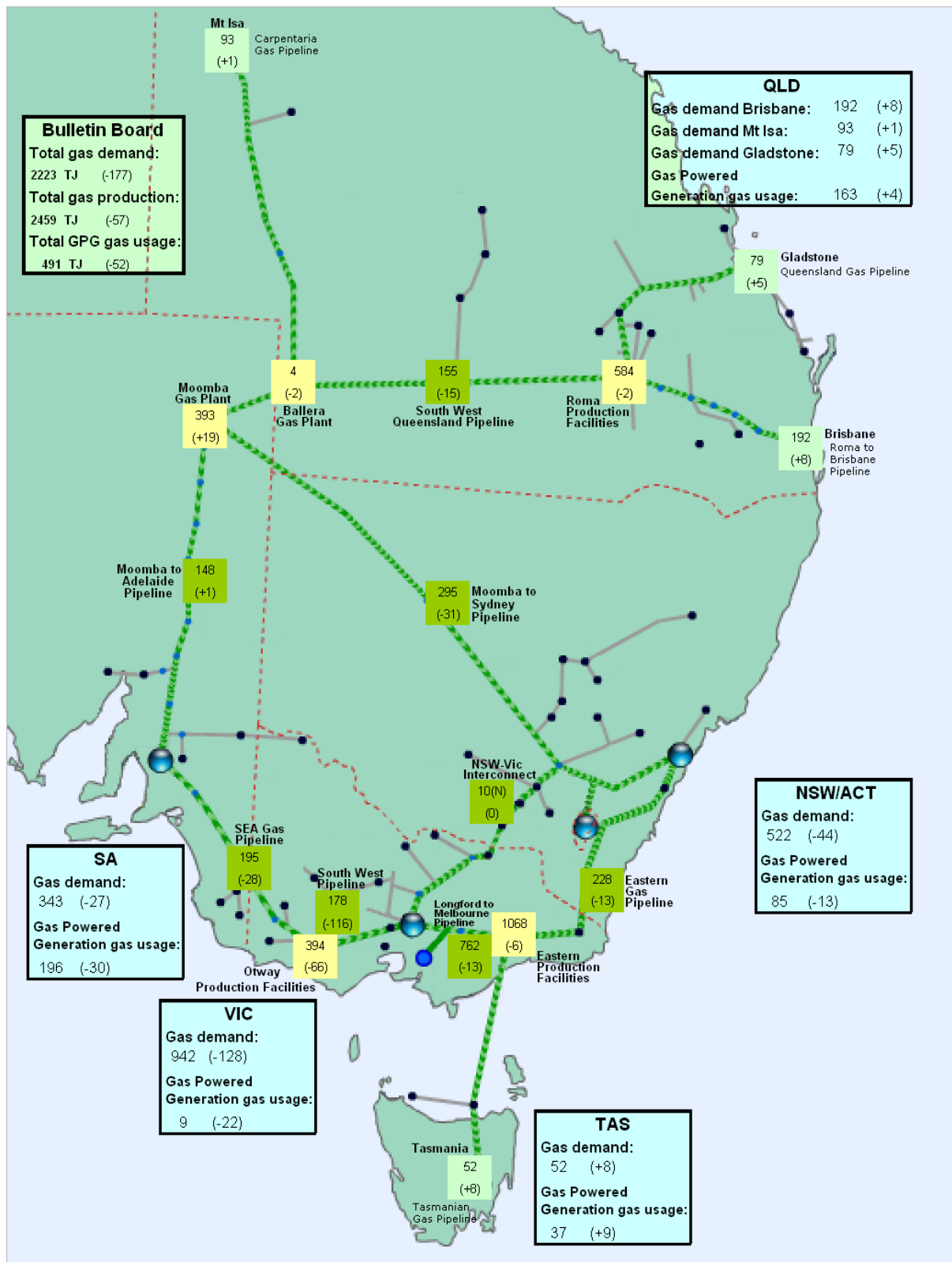
**Figure 3: Daily average production flows (TJ) for each production zone**

Average daily flows	Roma (QLD)	Eastern Victoria	Otway Basin (VIC)	Moomba (SA/QLD)
4 July – 10 July	584	1068	394	397
Full Financial Year 2009-10	475	692	290	284

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)



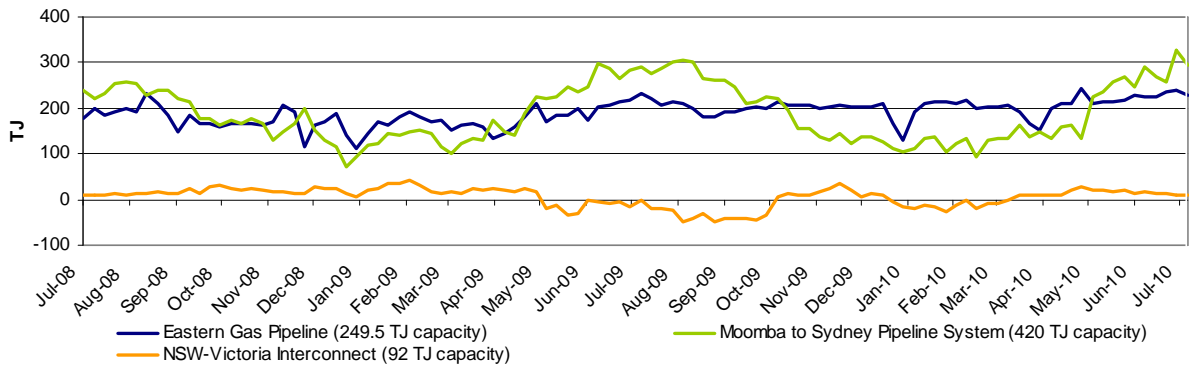
Source: Natural Gas Market Bulletin Board <http://www.gasbb.com.au>

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.

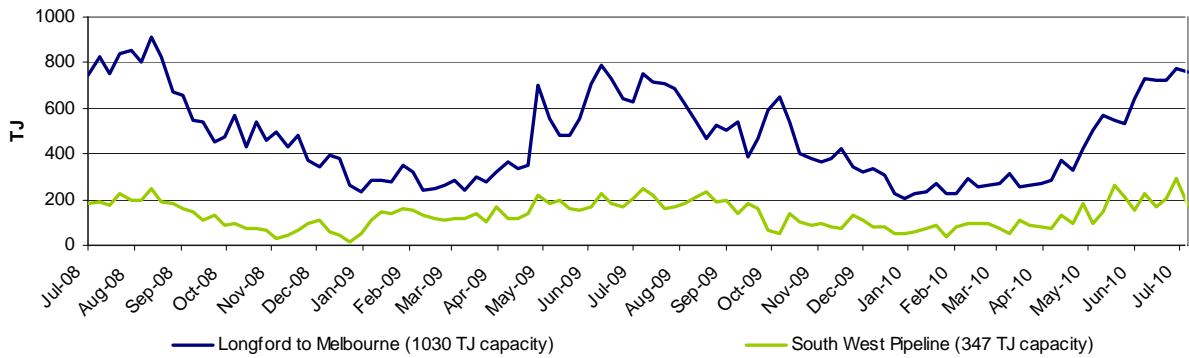
**Figure 5: Average daily flows (TJ) into NSW/ACT demand region**



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

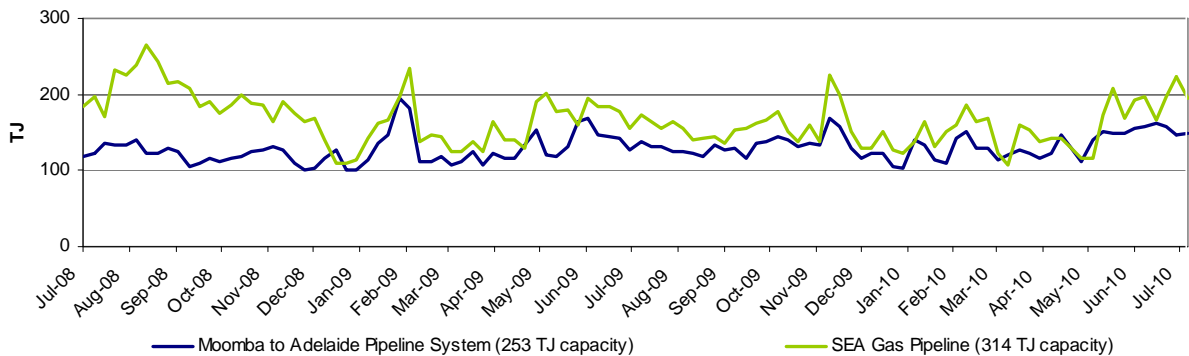
Notes: Negative flows on the NSW-Victoria Interconnect represent flows out of NSW into VIC.

**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				NS
AGL (Qld)	Retailer	1				NS								
AGL	Retailer	4		NS	S	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		
Origin (Vic)	Retailer	6	S	S	S	NS	S	S			S	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
Victoria Electricity	Trader	2			S				NS			NS		
Victoria Electricity	Retailer	5		NS	S	NS		S	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 total 2009-10 financial year average. Daily imbalance prices for each day during the current week are also noted.

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

	4 July – 10 July	27 June – 3 July	2009-2010 Financial Year
<b>Average daily price</b>	3.50	2.58	1.83

4 July – 10 July	Sun	Mon	Tue	Wed	Thu	Fri	Sat
<b>Daily price</b>	3.45	2.85	3.85	3.87	3.23	3.41	3.83

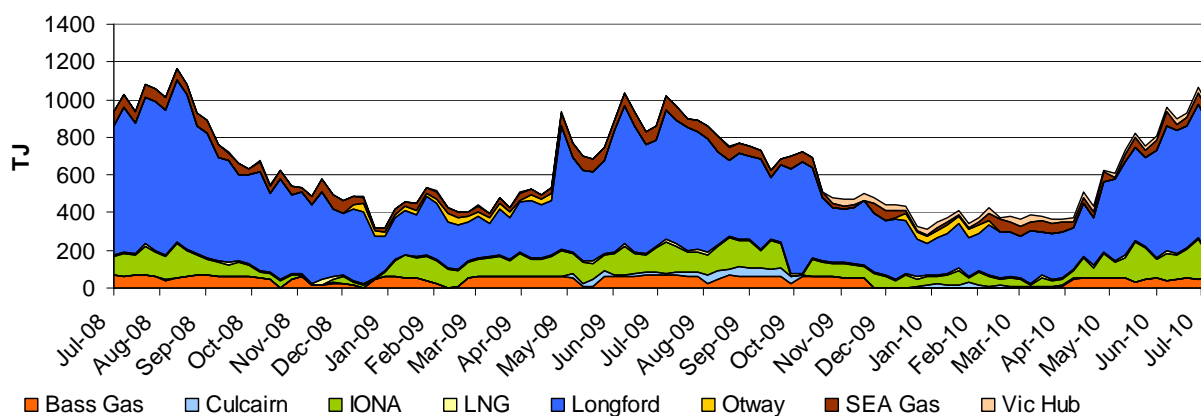
Notes: The daily average market price is a volume weighted imbalance price taking account of trading amounts at five times through the gas day — 6am, 10am, 2pm, 6pm and 10pm.

### System Injections

Figure V3 notes the average daily injections into the VPTS for the current week, compared with the total 2009-10 financial year daily averages.

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

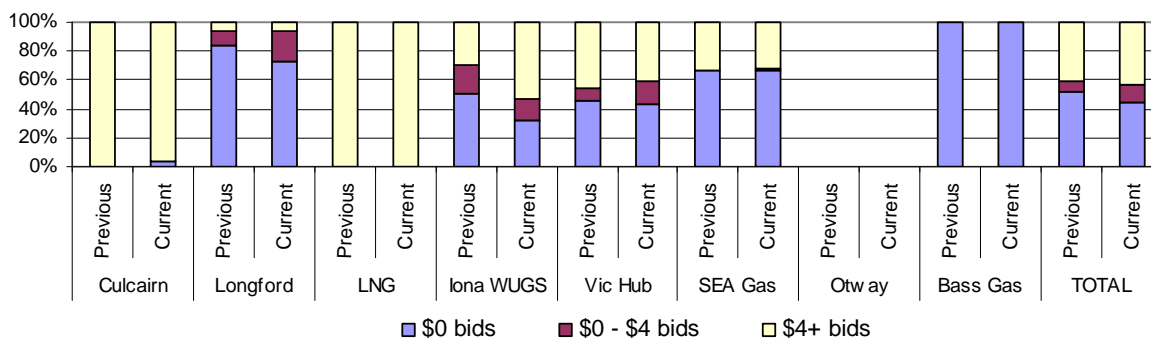
<b>Injection Point:</b>	4 July – 10 July	27 June – 3 July	2009-10 Financial Year
Culcairn (I)	1	0	13
Longford (I)	690	703	389
LNG (I)	8	13	9
IONA (I)	124	209	87
Vic Hub (I)	33	26	19
SEA Gas (I)	62	67	42
Bass Gas (I)	52	46	34
Otway (I)	0	0	7
<b>TOTAL</b>	<b>970</b>	<b>1064</b>	<b>600</b>



### 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>						AGL	
<b>Longford</b>	Origin	TRU	TRU	TRU	TRU	AGL Origin TRU	AGL Origin TRU
<b>LNG</b>		APG				APG	
<b>IONA</b>	TRU APG	AGL Origin TRU APG Vic Elec	AGL Origin TRU APG Vic Elec	AGL Origin TRU APG Vic Elec	AGL Origin TRU APG Vic Elec	AGL Origin TRU APG Vic Elec	AGL TRU APG
<b>VicHub</b>	AETV	AETV	AETV	AETV	AETV	AETV	AETV
<b>SEA Gas</b>		Origin	Origin		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 | Vic Elec = Victoria Electricity | CE = Country Energy

### System withdrawals

Figure V6 notes the average daily gas usage on the VPTS for this week, compared with the total 2009-10 financial year daily average.

**Figure V6: Average daily withdrawals (TJ) from system demand zones on the VPTS**

System withdrawal zone:	4 July – 10 July	27 June – 3 July	2009-10 Financial Year
Ballarat	47	51	24
Geelong	114	120	82
Gippsland	57	59	45
Melbourne	663	739	393
Northern	93	97	57
<b>TOTAL</b>	<b>974</b>	<b>1068</b>	<b>601</b>

^Data presented also includes withdrawals for the Western system withdrawal zone or Western Transmission System (WTS).

# 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	2009-10 Financial Year average daily flows
<b>QLD</b>											
Carpentaria Pipeline	94	93	94	92	94	93	93	117	80	93	87
QLD Gas Pipeline	74	74	83	83	80	80	79	79	96	79	71
Roma to Brisbane Pipeline	177	198	205	202	199	192	168	219	87	192	168
South West QLD Pipeline	173	146	155	165	165	149	130	181	88	155	138
<b>NSW/ACT</b>											
Eastern Gas Pipeline	216	240	233	240	232	224	208	250	92	228	204
Moomba to Sydney Pipeline	257	332	310	306	309	298	252	420	72	295	193
NSW-VIC Interconnect <sup>^</sup>	19	N/A	N/A	9	17	10	-6	92	14	10	-4
<b>VIC</b>											
Longford to Melbourne	739	N/A	N/A	802	791	784	694	1030	74	762	441
South West Pipeline	149	N/A	N/A	230	175	169	168	347	59	178	131
<b>SA</b>											
Moomba to Adelaide Pipeline	131	165	162	153	154	143	128	253	57	148	133
SEA Gas Pipeline	193	223	219	240	207	169	111	314	65	195	156
<b>TAS</b>											
Tasmanian Gas Pipeline	48	50	51	59	55	52	48	129	38	52	39

\*Average daily estimated gas consumption measured from 1 July 2010 to the current week (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	2009-10 Financial Year average daily flows
<b>Roma (QLD)</b>											
Berwyndale South	108	106	106	105	105	106	102	140	75	105	93
Fairview	128	128	126	128	121	126	91	130	95	121	113
Kenya Gas Plant	53	53	53	53	53	53	53	160	36	53	56
Kincora	15	15	15	15	15	15	0	25	54	13	2
Kogan North	11	11	11	11	11	11	11	12	88	11	9
Peat	11	11	10	11	11	11	11	15	73	11	9
Rolleston	12	11	12	12	12	13	11	30	40	12	11
Scotia	25	29	29	29	29	29	29	29	96	29	23
Spring Gully	53	53	53	53	53	53	50	60	88	53	43
Strathblane	53	53	53	53	53	53	50	60	88	53	43
Talooka	32	32	32	32	32	32	30	36	88	32	26
Wallumbilla	10	10	10	10	10	10	10	20	51	10	10
Yellowbank	13	14	14	13	13	12	12	30	43	13	13
Talinga	71	71	71	70	69	70	66	75	88	70	23
<b>Moomba (SA/QLD)</b>											
Moomba Gas Plant	389	409	409	404	398	393	350	430	93	393	272
Ballera	0	0	0	0	0	0	25	150	2	4	12
<b>Eastern (VIC)</b>											
Orbost Gas Plant	1	0	0	0	0	0	0	100	0	0	17
Lang Lang Gas Plant	52	52	52	54	52	52	52	70	70	52	34
Longford Gas Plant	1004	1031	105 4	1035	1029	1021	935	1145	89	949	641
LNG Storage Dandenong	0	0	0	0	0	0	0	158	0	0	0
<b>Otway Basin (VIC)</b>											
Minerva Gas Plant	94	94	94	94	94	83	54	94	94	90	72
Otway Gas Plant	183	177	N/A	N/A	N/A	N/A	N/A	206	90	141	126
Iona Underground Gas Storage	74	147	178	172	110	81	131	440	33	163	92

\*Average daily estimated gas consumption measured from 1 July 2010 to the current week (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>4 July – 10 July</b>	Average min.	12.0	8.9	-1.5	5.5	5.3	3.8
	Average max.	21.3	16.1	12.6	14.7	15.6	13.2
<b>27 June – 3 July</b>	Average min.	10.3	6.1	-2.7	6.7	4.7	3.4
	Average max.	18.6	15.2	9.9	12.4	13.8	13.1

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>4 July – 10 July</b>	Scheduling Interval					Daily Imbalance Weighted Average Price
	6am	10am	2pm	6pm	10pm	
<b>Sun</b>	3.50	1.19	0.81	3.50	0.22	3.40
<b>Mon</b>	2.85	3.90	2.37	2.38	2.40	2.85
<b>Tue</b>	3.91	2.84	2.84	2.84	2.85	3.85
<b>Wed</b>	3.91	3.64	3.64	3.64	2.53	3.87
<b>Thu</b>	3.27	2.87	2.54	2.39	1.01	3.23
<b>Fri</b>	3.50	3.62	2.98	0.26	2.53	3.41
<b>Sat</b>	3.87	3.60	3.50	3.85	2.62	3.83

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	
4-Jul	MP:	935	918	921	925	924	0
	AEMO:	863	875	888	882	880	
	MP as % of AEMO	108	105	104	105	105	
5-Jul	MP:	1011	1020	1015	1015	1014	0
	AEMO:	977	1009	1005	986	999	
	MP as % of AEMO	103	101	101	103	102	
6-Jul	MP:	1055	1048	1043	1040	1040	-5
	AEMO:	1022	1008	1007	990	1018	
	MP as % of AEMO	103	104	104	105	102	
7-Jul	MP:	1056	1077	1072	1063	1062	3
	AEMO:	1056	1057	1054	1070	1017	
	MP as % of AEMO	100	102	102	99	104	
8-Jul	MP:	1062	1036	1038	1040	1040	-4
	AEMO:	1022	1016	1006	1003	975	
	MP as % of AEMO	104	102	103	104	107	
9-Jul	MP:	994	1000	988	972	983	-6
	AEMO:	920	931	934	930	953	
	MP as % of AEMO	108	107	106	105	103	
10-Jul	MP:	906	921	906	895	895	0
	AEMO:	931	878	889	892	847	
	MP as % of AEMO	97	105	102	100	106	

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