WEEKLY GAS MARKET ANALYSIS

AUSTRALIAN ENERGY REGULATOR

18 July – 24 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 aerinquiry@aer.gov.au, and headed 'Comments on weekly gas report'.

Summary

National Gas Market Bulletin Board

There were no instances of missing flow data on the Bulletin Board this week.

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 211 TJ (10 per cent) compared to the previous week, as colder temperatures returned to the southern states. Increases were recorded in South Australia 36 TJ (12 per cent) and NSW/ACT 42 TJ (9 per cent), with a more significant rise in Victoria of 132 TJ (15 per cent).

Total average daily Gas Powered Generation (GPG) gas usage increased by 53 TJ (12 per cent) compared to the previous week. Overall demand in Queensland decreased slightly this week, influenced by a 37 TJ reduction in demand for GPG. Increased usage of GPG was seen in other states, with more significant increases recorded in South Australia (42 TJ or 27 per cent) and Victoria (37 TJ or 1400 per cent).

Average daily production volumes rose by 133 TJ (6 per cent) compared to the previous week. Production increased at most facilities, while facilities in Roma decreased their average output by 53 TJ. Gas production at the Otway Basin increased significantly, up 114 TJ (38 percent), with less significant increases recorded at Moomba (16 TJ or 50 per cent) and in Victoria's Eastern production zone (53 TJ or 5 per cent). Significant flow increases were observed on the South West Pipeline (86 TJ), Longford to Melbourne Pipeline (45 TJ), SEA Gas Pipeline (34 TJ) and the Moomba to Sydney Pipeline (32 TJ).

Victorian Gas Market

Victoria Electricity submitted bids and offers, and rebid gas in the market for the first time under its new name Lumo Energy during this week. There was significantly increased demand in Victoria with average daily flows returning to above 1 PJ per day. Flows rose by 133 TJ (15 per cent) compared to the previous week (See Figure V3). The average imbalance price increased from $1.85/GJ for the previous week to $2.97/GJ (see Figure V2). This coincided with a decrease in low priced gas offered to the market (see Figure V4). An increased number of participants rebidding gas at the Iona injection point occurred again this week with multiple participants submitting rebids on a number of days (see Figure V5).

AEMO issued demand overrides on Tuesday 20 July (23 TJ), Wednesday 21 July (-3 TJ), Thursday 22 July (2 TJ) and Friday 23 July (-1 TJ) (see figure A5).

A Directional Flow Point Constraint (DFPC) was applied to the SEA Gas injection/withdrawal point on the 18 July gas day. Supply/Demand Point Constraints (SDPCs) were applied to Bass Gas injections on 21 July, Culcairn withdrawals on 22 July, and SEA Gas injections and withdrawals on 23 and 24 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

						QLD		
Average daily flows	**NSW**	**ACT**	**VIC**	**SA**	**TAS**	Brisbane	Mt Isa	Gladstone
18 July – 24 July	478	50	1005	335	51	181	92	85
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
18 July – 24 July	85	40	202	35	140
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, 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.)

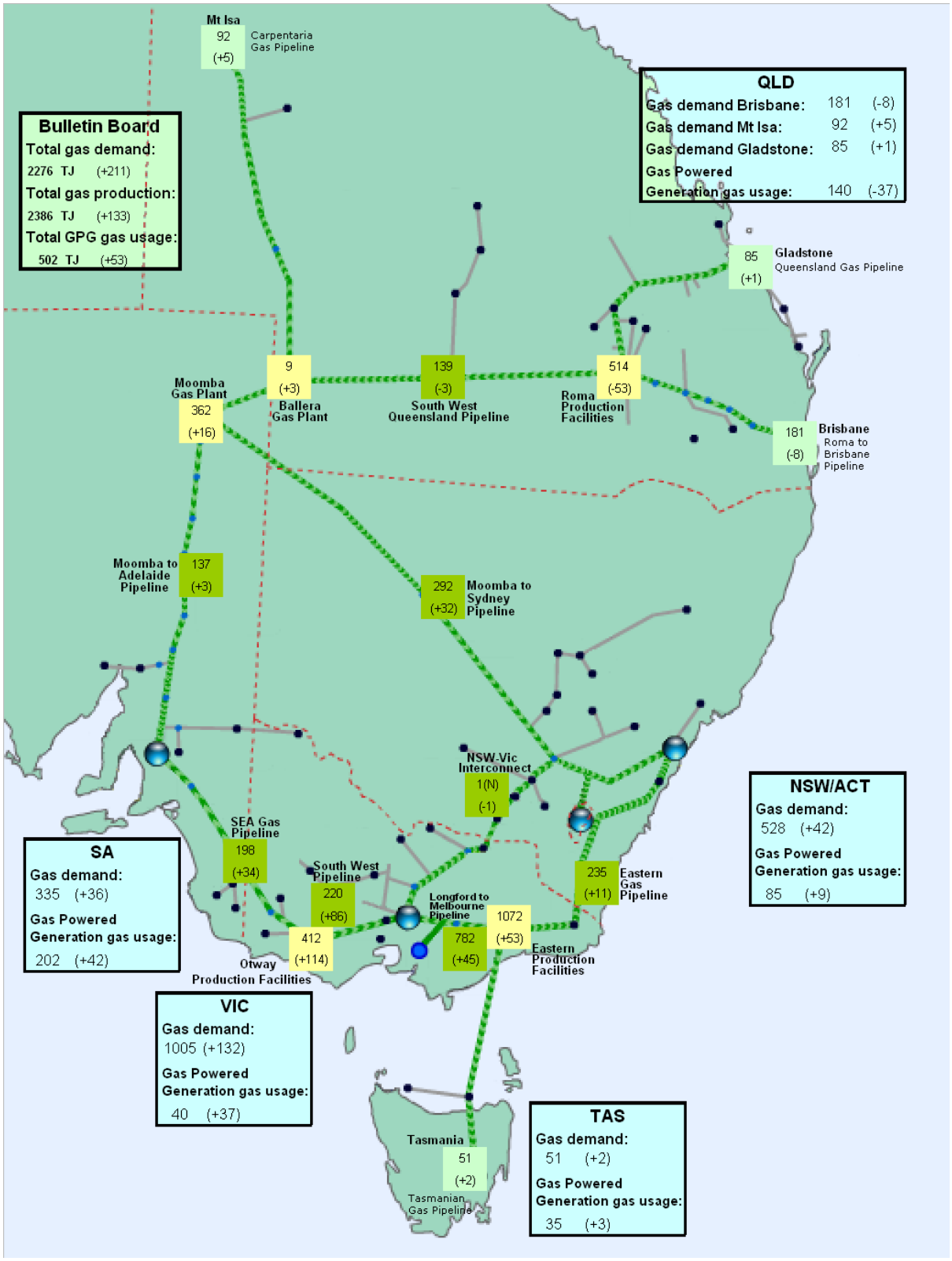
Figure 3: Daily average production flows (TJ) for each production zone

Average daily flows	Roma (QLD)	Eastern Victoria	Otway Basin (VIC)	Moomba (SA/QLD)
18 July – 24 July	514	1072	412	371
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)

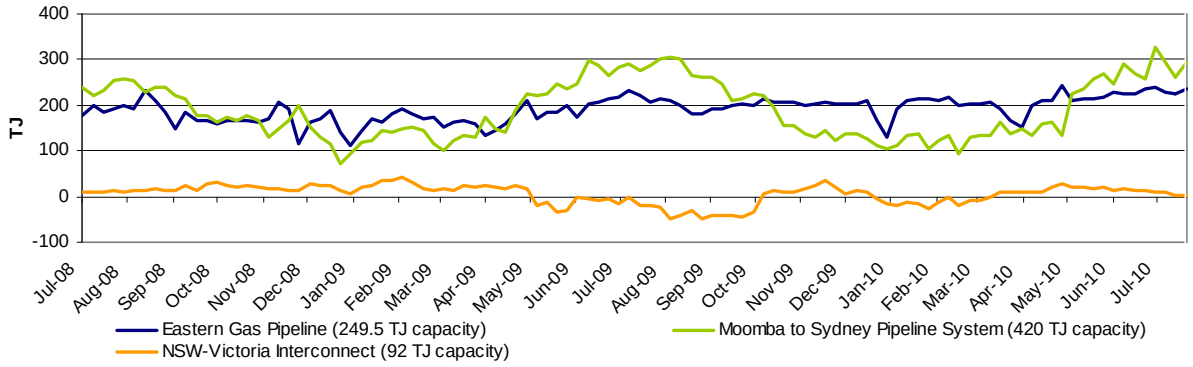


Source: Natural Gas Market Bulletin Board http://www.gasbb.com.au
Notes: Direction of aggregate daily flows along the NSW-Vic Interconnect indicated on map by S (South) or N (North).

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.

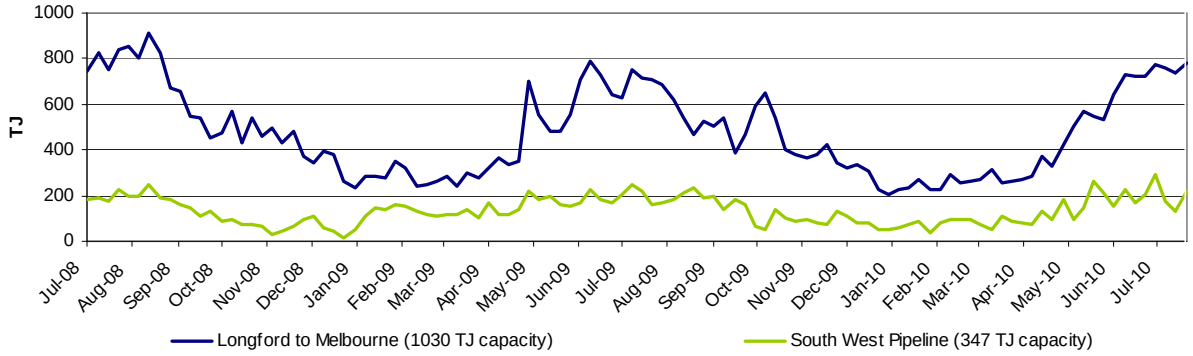
Figure 5: Average daily flows (TJ) into NSW/ACT demand region



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

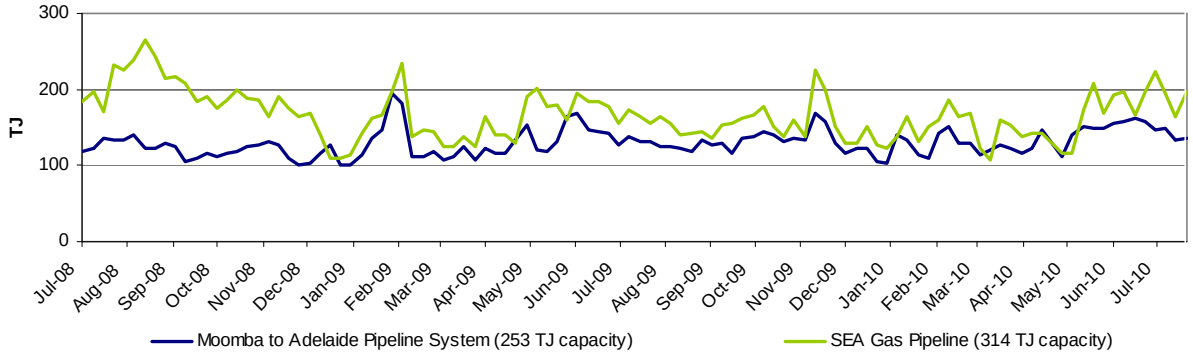
Notes: Negative flows on the NSW-Victoria Interconnect represent flows out of NSW into VIC.

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

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^

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	2					S		S					S
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	4		S	S		S		NS					NS
International Power	Transmission Customer	1											S	
Lumo Energy	Retailer	5		NS	S	NS		S	S					
Lumo Energy	Trader	2			S				NS			NS		
Origin (Vic)	Retailer	6	S	S	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
Victoria Electricity	Trader	2			S				NS			S		
Victoria Electricity	Retailer	5		NS	S	NS		S	S					
Visy Paper	Distribution Customer	2					S				S			

^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)

	18 July – 24 July	11 July – 17 July	2009-2010 Financial Year
Average daily price	2.97	1.85	*1.83*

18 July – 24 July	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Daily price	1.08	3.37	3.34	3.16	3.45	3.14	3.26

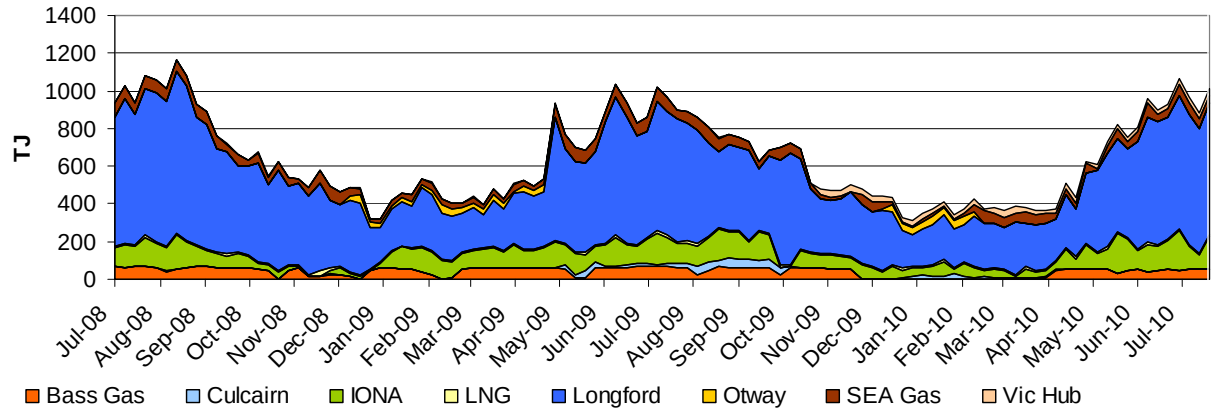
Notes: The daily average market price is a volume weighted imbalance price taking account of trading amounts at five times through the gas day — 6am, 10am, 2pm, 6pm and 10pm.

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

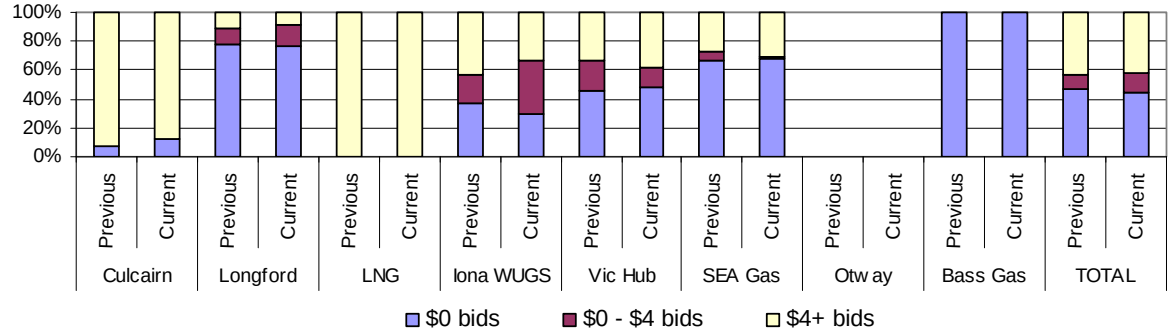
Injection Point:	18 July – 24 July	11 July – 17 July	2009-10 Financial Year
Culcairn (I)	4	3	13
Longford (I)	700	657	389
LNG (I)	8	8	9
IONA (I)	172	76	87
Vic Hub (I)	36	28	19
SEA Gas (I)	44	57	42
Bass Gas (I)	50	52	34
Otway (I)	0	0	7
TOTAL	**1013**	**881**	**600**



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
Culcairn		Vic Elec	Vic Elec Lumo				
Longford	TRU	TRU	AGL TRU	AGL TRU	AGL	AGL TRU	AGL
LNG			APG				
IONA	Origin TRU APG Simply	AGL Origin TRU APG Vic Elec	AGL Origin TRU APG Vic Elec	Origin TRU APG Vic Elec Lumo	Origin TRU APG Lumo	Origin TRU APG Lumo	Origin TRU APG Lumo
VicHub	AETV	AETV	AETV	AETV	AETV	AETV	AETV
SEA Gas	Origin Simply	Simply	Simply			Origin	
Bass Gas							

Source: http://www.aemo.com.au (INT 131)

Notes: Origin = Origin Energy | AGL = AGL Sales | TRU = TRUenergy | Simply = Simply Energy | Lumo = Lumo Energy
AETV = AETV Power | APG = Australian Power & Gas I 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:	18 July – 24 July	11 July – 17 July	2009-10 Financial Year
Ballarat	47	44	24
Geelong	112	108	82
Gippsland	61	53	45
Melbourne	711	600	393
Northern	85	83	57
TOTAL	**1015**	**888**	**601**

^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
QLD											
Carpentaria Pipeline	92	93	93	89	88	94	96	117	78	92	87
QLD Gas Pipeline	83	96	81	92	86	74	84	79	103	85	71
Roma to Brisbane Pipeline	184	197	195	195	202	160	133	219	86	181	168
South West QLD Pipeline	151	149	126	126	136	144	140	181	82	139	138
NSW/ACT											
Eastern Gas Pipeline	220	243	233	243	247	240	223	250	92	235	204
Moomba to Sydney Pipeline	252	312	307	318	327	283	249	420	68	292	193
NSW-VIC Interconnect^	-17	-10	6	7	10	9	-1	92	5	1	-4
VIC											
Longford to Melbourne	774	780	806	763	781	781	786	1030	74	782	441
South West Pipeline	179	189	330	258	268	181	130	347	54	220	131
SA											
Moomba to Adelaide Pipeline	127	137	142	136	138	148	129	253	55	137	133
SEA Gas Pipeline	140	198	216	215	233	198	185	314	61	198	156
TAS											
Tasmanian Gas Pipeline	49	51	47	51	52	52	52	129	38	51	39

*Average daily estimated gas consumption measured from 1 July 2010 to the current week (inclusive)
^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
Roma (QLD)											
Berwyndale South	106	87	79	77	78	78	76	140	70	83	93
Fairview	91	128	129	128	128	128	95	130	93	118	113
Kenya Gas Plant	66	47	19	38	37	38	31	160	33	40	56
Kincora	0	0	0	0	0	5	5	25	24	1	2
Kogan North	10	10	8	10	11	9	6	12	82	9	9
Peat	11	11	10	10	9	6	9	15	70	9	9
Rolleston	12	12	12	12	12	12	12	30	39	12	11
Scotia	29	29	30	29	29	12	11	29	94	24	23
Spring Gully	52	53	53	53	49	53	55	60	88	53	43
Strathblane	52	53	53	53	49	53	55	60	88	53	43
Taloona	32	32	32	32	30	32	33	36	88	32	26
Wallumbilla	10	10	10	10	10	6	6	20	48	9	10
Yellowbank	13	13	13	13	13	13	14	30	43	13	13
Talinga	37	61	77	56	56	55	63	75	83	58	23
Moomba (SA/QLD)											
Moomba Gas Plant	356	349	369	363	372	381	346	430	87	362	272
Ballera	11	1	9	12	16	7	9	150	4	9	12
Eastern (VIC)											
Orbost Gas Plant	0	0	0	0	0	0	0	100	0	0	17
Lang Lang Gas Plant	51	53	51	38	52	52	52	70	72	50	34
Longford Gas Plant	1004	1014	1021	1017	1046	1030	1024	1145	88	1022	641
LNG Storage Dandenong	0	0	0	0	0	0	0	158	0	0	0
Otway Basin (VIC)											
Minerva Gas Plant	58	78	94	88	94	83	80	94	88	82	72
Otway Gas Plant	87	130	173	188	195	130	103	206	75	144	126
Iona Underground Gas Storage	170	182	260	192	204	173	125	440	31	187	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)
18 July – 24 July	Average min.	10.2	7.9	-2.9	7.0	6.5	4.7
	Average max.	21.4	17.1	12.7	13.5	13.8	13.7
11 July – 17 July	Average min.	10.4	10.0	1.1	8.7	9.2	6.8
	Average max.	22.4	18.2	12.8	14.9	16.4	14.8

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

18 July – 24 July	Scheduling Interval					Daily Imbalance Weighted Average Price
	6am	10am	2pm	6pm	10pm	
Sun	1.02	1.02	1.02	3.20	3.43	1.08
Mon	3.44	3.00	1.06	0.70	2.99	3.37
Tue	3.31	3.50	3.90	3.97	3.31	3.34
Wed	3.19	1.29	3.50	1.83	3.50	3.16
Thu	3.43	3.78	3.78	3.78	3.32	3.45
Fri	3.20	1.33	3.30	3.30	3.00	3.14
Sat	3.30	1.19	3.50	3.75	3.75	3.26

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	
18-Jul	**MP:**	888	894	921	923	922	
	AEMO:	911	890	915	928	933	
	MP as % of AEMO	98	100	101	99	99	**0**
19-Jul	**MP:**	1038	1032	1027	1035	1035	
	AEMO:	1006	1010	1013	1019	1003	
	MP as % of AEMO	103	102	101	102	103	**0**
20-Jul	**MP:**	1038	1054	1089	1102	1091	
	AEMO:	1033	1079	1132	1142	1111	
	MP as % of AEMO	100	98	96	97	98	**23**
21-Jul	**MP:**	1015	1002	1033	1024	1024	
	AEMO:	998	1005	1038	1009	1009	
	MP as % of AEMO	102	100	100	101	101	**- 3**
22-Jul	**MP:**	1004	1025	1013	1030	1013	
	AEMO:	1004	1038	1058	1067	1005	
	MP as % of AEMO	100	99	96	97	101	**2**
23-Jul	**MP:**	989	967	981	988	991	
	AEMO:	974	973	982	955	979	
	MP as % of AEMO	102	99	100	103	101	**-1**
24-Jul	**MP:**	931	919	940	942	940	
	AEMO:	889	888	918	910	919	
	MP as % of AEMO	105	104	102	104	102	**0**

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