WEEKLY GAS MARKET ANALYSIS

AUSTRALIAN ENERGY REGULATOR

25 July – 31 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, with the subject title '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 decreased by 124 TJ (5 per cent) compared to the previous week. A significant reduction was recorded in Victoria with demand 122 TJ (12 per cent) lower than the previous week.

Total average daily Gas Powered Generation (GPG) gas usage decreased by 31 TJ (6 per cent) compared to the previous week. The most significant reductions to GPG gas usage were recorded in Victoria (10 TJ or 25 per cent) and South Australia (23 TJ or 11 per cent).

Average daily production volumes fell by 95 TJ (4 per cent) compared to the previous week. Gas production decreased at the Otway Basin by 56 TJ (13 percent) and the Moomba Gas Plant by 26TJ (7 percent), with an increase at Roma Production Facilities of 24TJ (5 percent). Flows decreased significantly on the Longford to Melbourne Pipeline (49 TJ), the South West Pipeline (69 TJ) and the SEA Gas Pipeline (18 TJ).

Victorian Gas Market

In line with the decreased demand in Victoria, average gas injections fell by 123 TJ (12 percent) compared to the previous week (See Figure V3). The average imbalance price decreased from $2.97/GJ for the previous week to $2.43/GJ (see Figure V2). However the value of gas offered into the market remained consistent with the figures seen in the previous week (see Figure V4). The number of participants rebidding gas at the Iona injection point remained high with multiple participants submitting rebids on a number of days (see Figure V5).

AEMO issued demand overrides on Wednesday 28 July (8 TJ), Thursday 29 July (-10 TJ), and Saturday 31 July (-7 TJ) (see figure A5).

Supply Demand Point Constraints (SDPCs) were applied to injections and withdrawals at Iona and SEA Gas this week. Iona injections and withdrawals were constrained on 26 July, while injections and withdrawals at SEA Gas were constrained from 27 July onwards due to a

valve re-build requirement. Injections at Longford were also constrained on the 29 July gas day, in addition to Directional Flow Point Constraints (DFPCs) being applied to injections and withdrawals at Vic Hub on 29 and 30 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
25 July – 31 July	513	41	883	319	49	174	91	82
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
25 July – 31 July	88	30	179	33	142
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.)

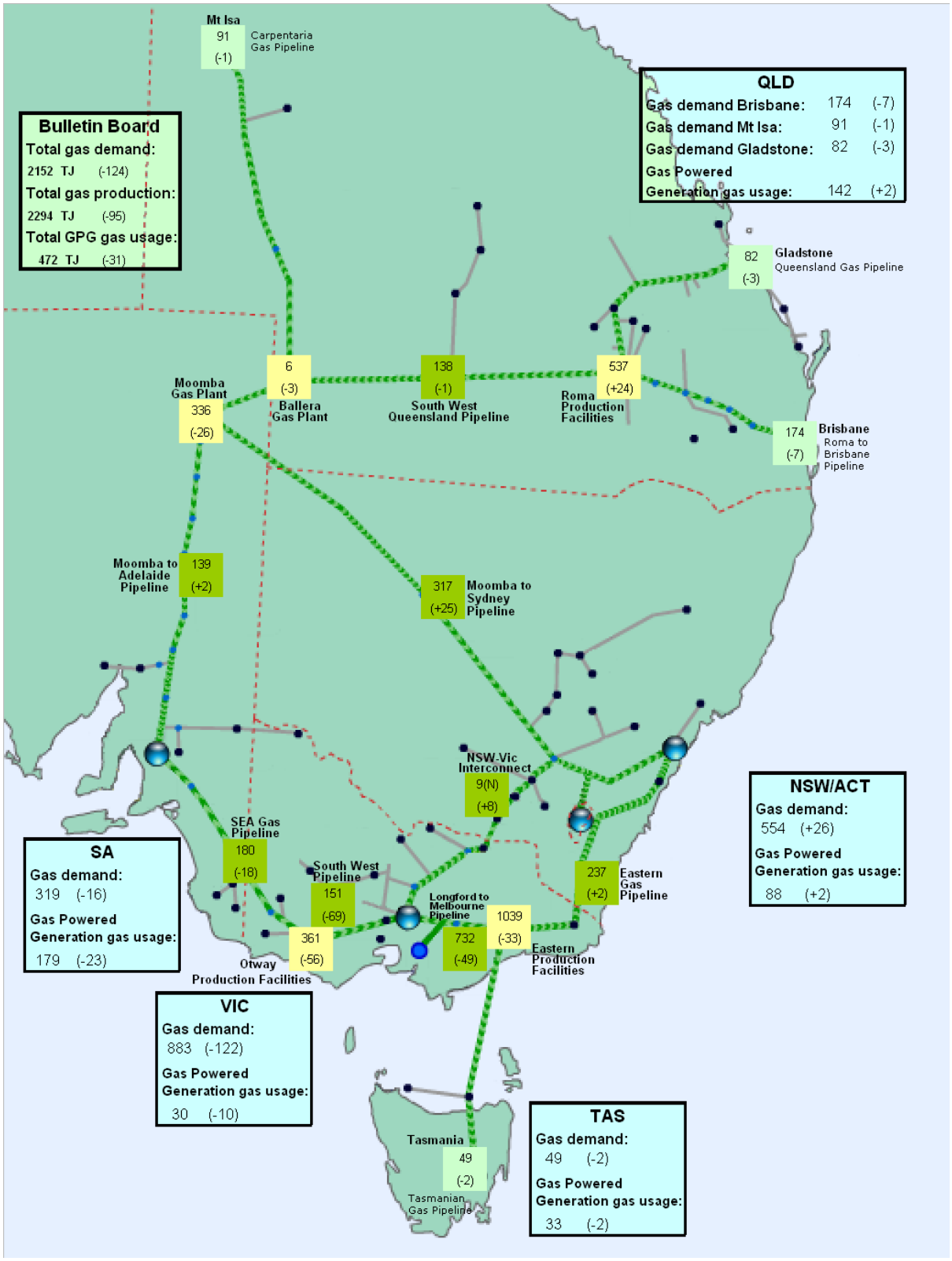
Figure 3: Daily average production flows (TJ) for each production zone

Average daily flows	Roma (QLD)	Eastern Victoria	Otway Basin (VIC)	Moomba (SA/QLD)
25 July – 31 July	537	1039	361	342
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)

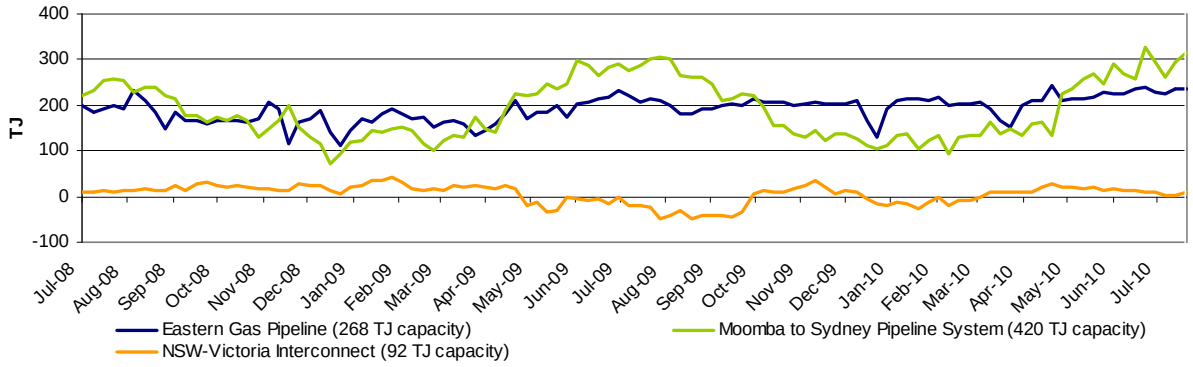


Source: Natural Gas Market Bulletin Board http://www.gasbb.com.au
Notes: Direction of aggregate daily flows along the NSW-Vic Interconnect indicated on map by S (South) or N (North).

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.

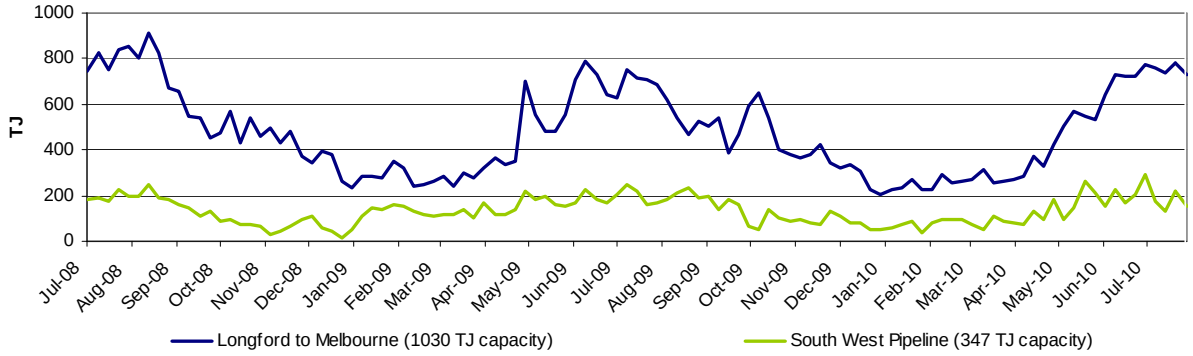
Figure 5: Average daily flows (TJ) into NSW/ACT demand region



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

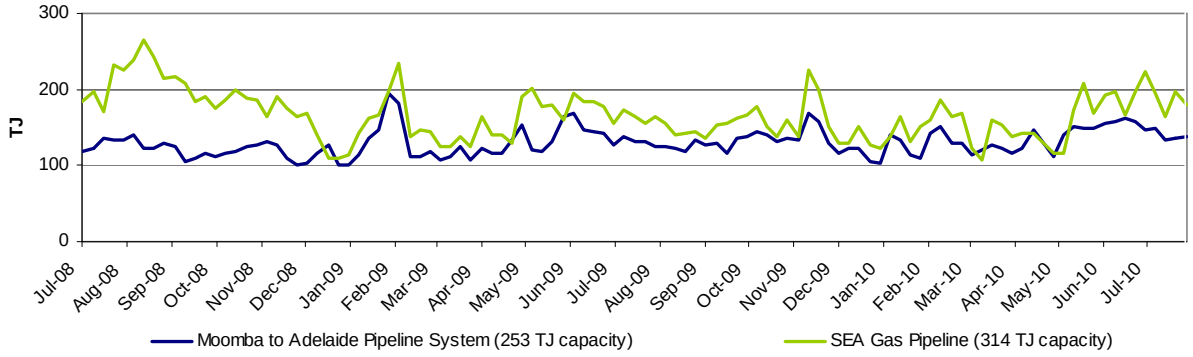
Notes: Negative flows on the NSW-Victoria Interconnect represent flows out of NSW into VIC.

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
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					S		
Coogee Energy	Transmission Customer	1					S							
Country Energy	Transmission Customer	1									S			
Energy Australia	Retailer	4			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			S		
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						
Simply Energy	Retailer	4			S	NS	S	NS						
TRU Energy	Retailer	4			S	NS	S					NS		NS
Victoria Electricity	Trader	2												
Victoria Electricity	Retailer	5												
Visy Paper	Distribution Customer	0					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)

	25 July – 31 July	18 July – 24 July	2009-2010 Financial Year
Average daily price	2.43	2.97	*1.83*

25 July – 31 July	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Daily price	3.38	3.49	3.69	3.31	0.95	0.67	1.56

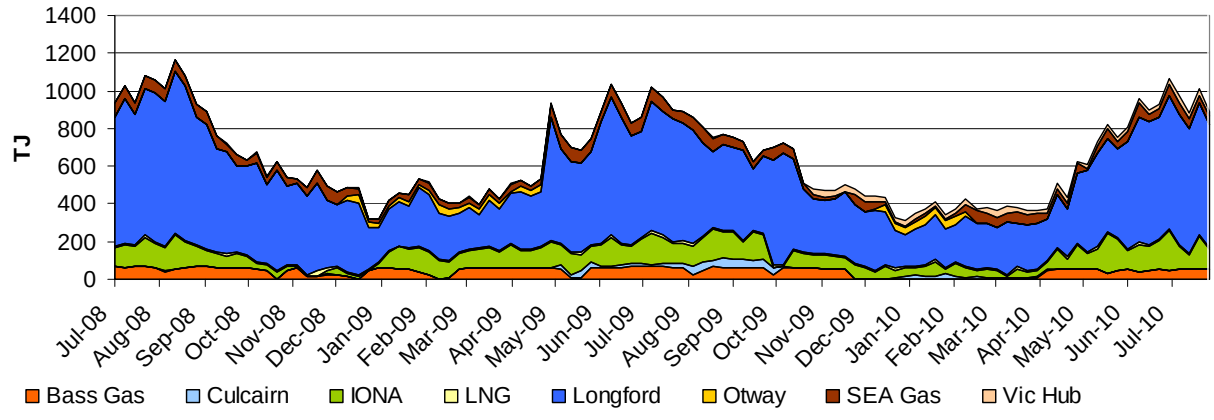
Notes: The daily average market price is a volume weighted imbalance price taking account of trading amounts at five times through the gas day — 6am, 10am, 2pm, 6pm and 10pm.

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

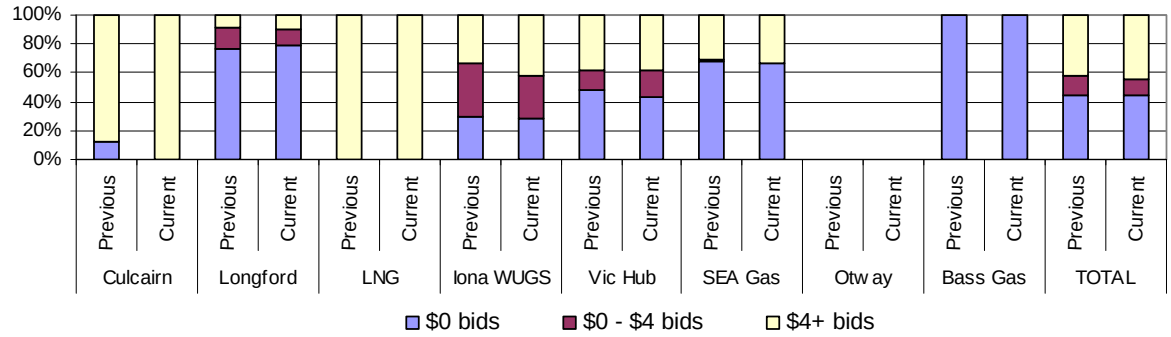
Injection Point:	25 July – 31 July	18 July – 24 July	2009-10 Financial Year
Culcairn (I)	0	4	13
Longford (I)	661	700	389
LNG (I)	7	8	9
IONA (I)	105	172	87
Vic Hub (I)	22	36	19
SEA Gas (I)	44	44	42
Bass Gas (I)	52	50	34
Otway (I)	0	0	7
TOTAL	**891**	**1013**	**600**



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							
Longford	Origin TRU	Origin TRU	AGL	Origin	AGL	AGL	TRU
LNG							
IONA	TRU APG	AGL Origin TRU APG Lumo	Origin TRU APG Lumo	AGL TRU APG Lumo	AGL TRU APG Lumo	TRU APG Lumo	TRU APG
VicHub	AETV	AETV	AETV	AETV	AETV	AETV	AETV
SEA Gas		Origin	Origin Santos Lumo	Simply	Simply	Simply	Simply
Bass Gas							

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 I 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 total 2009-10 financial year daily average.

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

System withdrawal zone:	25 July – 31 July	18 July – 24 July	2009-10 Financial Year
Ballarat	41	47	24
Geelong	96	112	82
Gippsland	54	61	45
Melbourne	616	711	393
Northern	85	85	57
TOTAL	**891**	**1015**	**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	96	97	88	88	88	85	94	117	78	91	87
QLD Gas Pipeline	84	88	115	74	74	72	72	142	57	82	71
Roma to Brisbane Pipeline	126	195	198	195	167	174	163	219	84	174	168
South West QLD Pipeline	152	167	129	140	118	119	139	181	81	138	138
NSW/ACT											
Eastern Gas Pipeline	225	245	248	241	246	240	216	268	86	237	204
Moomba to Sydney Pipeline	216	286	284	289	271	676	200	420	70	317	193
NSW-VIC Interconnect^	8	2	7	4	17	14	12	92	6	9	-4
VIC											
Longford to Melbourne	743	794	803	784	721	639	643	1030	73	732	441
South West Pipeline	128	216	234	203	99	96	79	347	51	151	131
SA											
Moomba to Adelaide Pipeline	120	139	158	149	144	135	127	253	55	139	133
SEA Gas Pipeline	185	210	189	182	188	161	143	314	60	180	156
TAS											
Tasmanian Gas Pipeline	49	53	54	51	51	48	36	129	38	49	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	76	69	77	77	77	77	77	140	67	76	93
Fairview	127	128	121	129	127	127	129	130	94	127	113
Kenya Gas Plant	37	51	70	68	69	56	54	160	34	58	56
Kincora	5	5	5	5	1	0	0	25	21	3	2
Kogan North	6	10	8	10	10	10	10	12	80	9	9
Peat	10	11	11	11	10	10	11	15	70	11	9
Rolleston	12	10	10	12	12	12	12	30	39	11	11
Scotia	11	29	29	29	29	29	29	29	93	27	23
Spring Gully	54	53	54	53	54	54	50	60	88	53	43
Strathblane	54	53	54	53	54	54	50	60	88	53	43
Taloona	33	32	32	32	32	32	30	36	88	32	26
Wallumbilla	6	10	10	10	10	10	10	20	47	9	10
Yellowbank	13	13	13	14	13	13	13	30	43	13	13
Talinga	62	54	55	54	53	60	53	75	81	56	23
Moomba (SA/QLD)											
Moomba Gas Plant	309	354	355	359	356	339	281	430	85	336	272
Ballera	2	1	10	0	9	7	12	150	4	6	12
Eastern (VIC)											
Orbost Gas Plant	0	0	0	0	0	0	0	100	0	0	17
Lang Lang Gas Plant	52	52	52	51	53	52	52	70	72	52	34
Longford Gas Plant	994	1039	1061	1012	993	926	882	1145	88	987	641
LNG Storage Dandenong	0	0	0	0	0	0	0	158	0	0	0
Otway Basin (VIC)											
Minerva Gas Plant	94	94	94	94	94	78	68	94	90	88	72
Otway Gas Plant	173	188	195	150	163	136	93	206	76	157	126
Iona Underground Gas Storage	80	182	240	151	52	61	43	440	30	116	92

*Average daily estimated gas consumption measured from 1 July 2010 to the current week (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)
25 July – 31 July	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
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

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

25 July – 31 July	Scheduling Interval					Daily Imbalance Weighted Average Price
	6am	10am	2pm	6pm	10pm	
Sun	3.44	3.31	3.19	1.00	0.50	3.38
Mon	3.52	3.63	2.52	2.63	3.80	3.49
Tue	3.75	3.31	3.41	1.51	1.51	3.69
Wed	3.29	3.61	3.53	3.61	3.75	3.31
Thu	1.00	0.11	0.11	0.01	0.01	0.95
Fri	0.69	0.44	0.46	0.09	0.09	0.67
Sat	1.66	0.76	0.11	0.01	0.11	1.56

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	
25-Jul	**MP:**	910	911	911	911	921	
	AEMO:	896	896	892	842	865	
	MP as % of AEMO	102	102	102	108	107	**0**
26-Jul	**MP:**	1012	1015	1013	1004	1004	
	AEMO:	1003	990	979	979	1022	
	MP as % of AEMO	101	102	104	103	98	**0**
27-Jul	**MP:**	1029	1014	1027	1032	1031	
	AEMO:	1005	993	1018	1027	1013	
	MP as % of AEMO	102	102	101	101	102	**0**
28-Jul	**MP:**	954	971	965	968	965	
	AEMO:	999	1008	997	993	994	
	MP as % of AEMO	96	96	97	97	97	**8**
29-Jul	**MP:**	917	903	899	897	887	
	AEMO:	962	911	879	847	822	
	MP as % of AEMO	95	99	102	106	108	**-10**
30-Jul	**MP:**	796	766	767	766	768	
	AEMO:	789	800	762	763	735	
	MP as % of AEMO	101	96	101	100	104	**0**
31-Jul	**MP:**	798	779	759	753	758	
	AEMO:	768	781	741	737	734	
	MP as % of AEMO	104	100	102	102	103	**-7**

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