WEEKLY GAS MARKET ANALYSIS

AUSTRALIAN ENERGY REGULATOR

25 April – 1 May 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 160 TJ (11 per cent) compared to the previous week. A significant increase was recorded in Victoria of 179 TJ (42 per cent). Other regions recorded minor variations.

Total average daily Gas Powered Generation (GPG) gas usage fell by 83 TJ (17 per cent) compared to the previous week. Falls were recorded in all regions with the largest falls in Victoria (of 28 TJ or 57 per cent) and South Australia (26 TJ or 16 per cent).

Average daily production volumes increased by 153 TJ (10 per cent) compared to the previous week. All production facilities recorded an increase except for Moomba which recorded a decrease (of 106 TJ or 42 per cent). Significant increases were recorded at Otway Basin (84 TJ or 39 per cent) and the Eastern production facility (127 TJ of 21 per cent). Total average daily flows were higher than the previous week by 198 TJ or 16 per cent. Increases occurred on most pipelines with Moomba to Adelaide, Moomba to Sydney and SEAGas the only ones to record a fall. Significant increases in flow were recorded on the South West pipeline (89 TJ or 97 per cent) and the Longford to Melbourne gas pipeline (92 TJ or 28 per cent).

Victorian Gas Market

The average minimum and maximum temperatures in Victoria this week were much lower than the previous week (see Figure A3). Consequently, average gas injections in the Victorian gas market increased by 186 TJ (43 per cent) compared to the previous week (See Figure V3). The average imbalance price increased from $1.67/GJ the previous week to $2.47/GJ (see Figure V2). Prices were above $3/GJ on Tuesday, Wednesday and Thursday.

Rebidding continued at Bass Gas this week (see Figure V5).

AEMO issued multiple demand overrides on four days this week — on Sunday (-6 TJ), Monday (-37 TJ), Wednesday (16 TJ) and Thursday (6 TJ) (see figure A5).

A Demand Point Constraints (SDPCs) was applied to BassGas and Longford injections for the Sunday gas day. A SDPC also applied to Culcairn withdrawals for the Wednesday and Friday gas days.

Moomba Incident

There was an unplanned outage on the Moomba to Sydney Pipeline (MSP) operated by APA Group on 28 April due to problems at the upstream Santos operated Moomba production facility.

As appears on the bulletin board — after 5 pm on 27 April, APA Group revised its Linepack Capacity Adequacy (LCA) forecast for the MSP. This re-forecast caused the LCA flag for the MSP to be changed from GREEN to AMBER, for the 28 and 29 April gas days, signalling the potential for gas shortages and inability to meet gas demand. Subsequent forecasts submitted by APA Group also indicated the same issue would continue to affect supply to Sydney on the 30 April and 1 May gas days.

APA supplied comments with its Amber LCA flags. When it first placed an AMBER flag it noted "depending on Santos' assessment on required repairs, may turn to RED". APA then provided an updated description before 6 pm on 29 April: "Issue at Moomba Plant". Just after 3 pm on 30 April, APA Group removed the AMBER flag, indicating a return to sufficient capacity for the supply of Gas to Sydney from Moomba.

The AER has requested and received further information from APA Group and Santos. In brief, Santos has advised that there was a production issue over the period which related to defects on the main inlet header to both the MSP and the Moomba Adelaide Pipeline.

The AER is reviewing the information it has received to date in the context of the information provided at the time of the event through the bulletin board and the bulletin board requirements under national gas legislation.

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 Apr – 1 May	360	25	604	229	44	171	101	74
Financial Year-to-date 2009-10*	361	18	537	280	38	170	85	71
Financial Year-to-date 2008-09**	321	19	595	297	33	170	82	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**
25 Apr – 1 May	82	21	136	27	148
Financial Year-to-date 2009-10*	83	39	165	24	164
Financial Year-to-date 2008-09**	40	66	183	23	114

^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.)

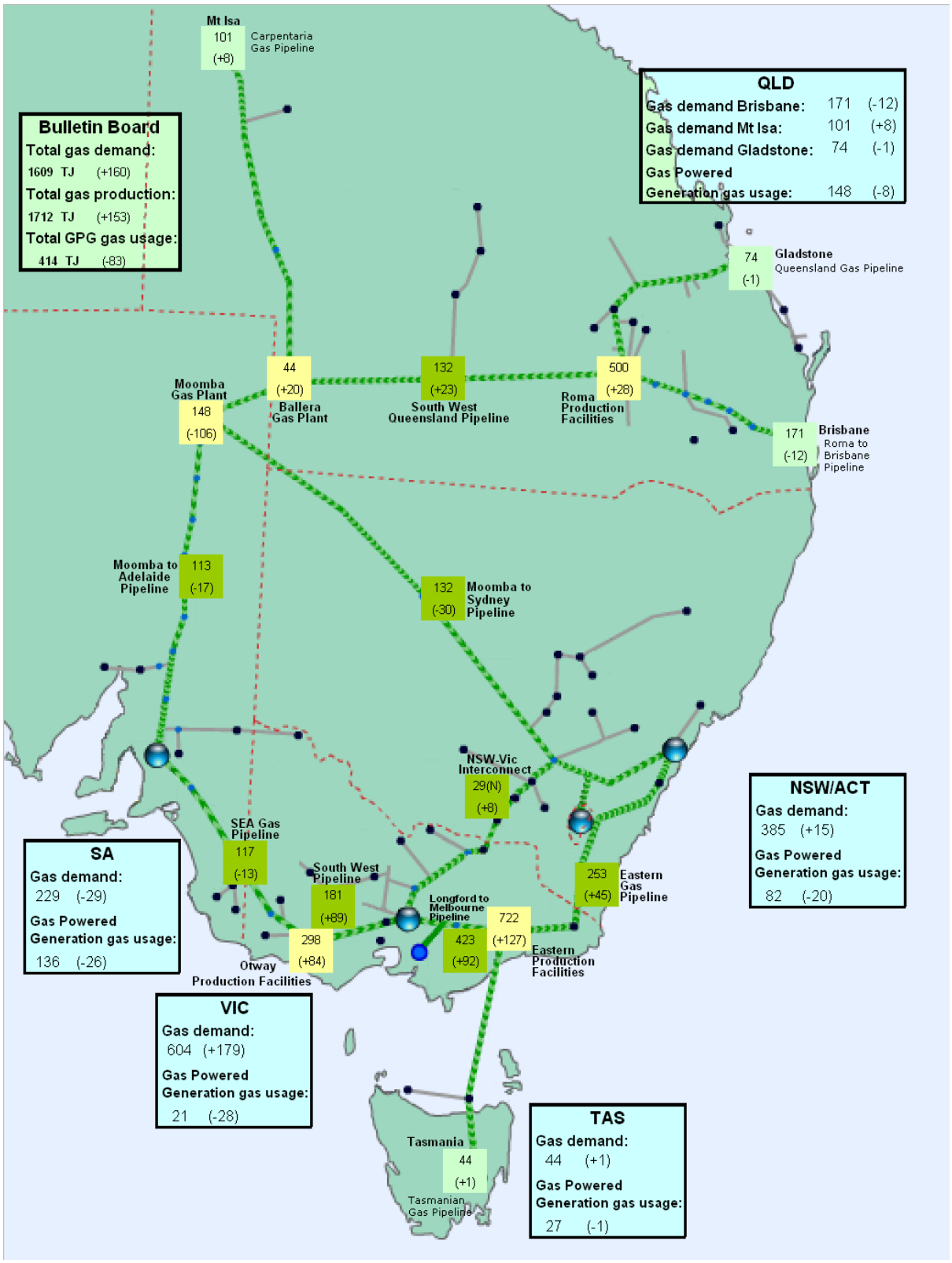
Figure 3: Daily average production flows (TJ) for each production zone

Average daily flows	**Roma (QLD)**	**Eastern Victoria**	**Otway Basin (VIC)**	**Moomba (SA/QLD)**
25 Apr – 1 May	500	722	298	193
Financial Year-to-date 2009-10*	455	651	275	273
Financial Year-to-date 2008-09**	333	694	311	303

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

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

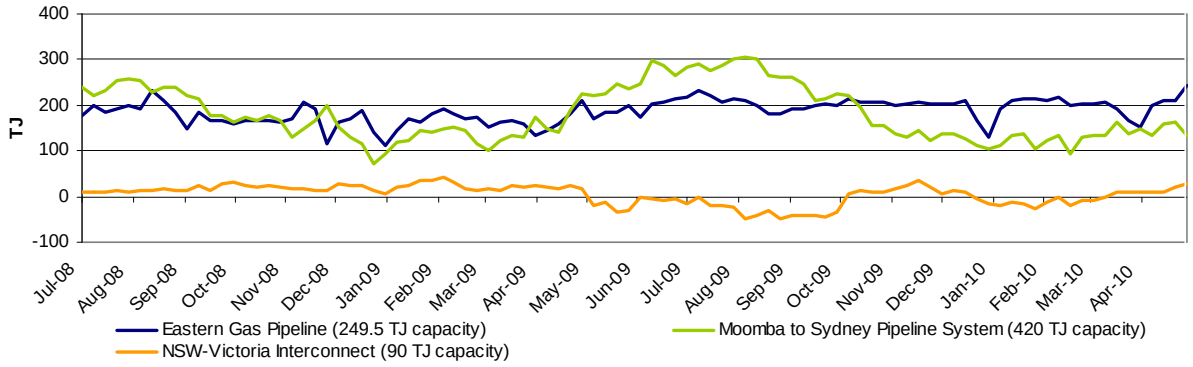


Source: Natural Gas Market Bulletin Board http://www.gasbb.com.au
Notes: Direction of aggregate daily flows along the NSW-Vic Interconnect indicated on map by S (South) or N (North).

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.

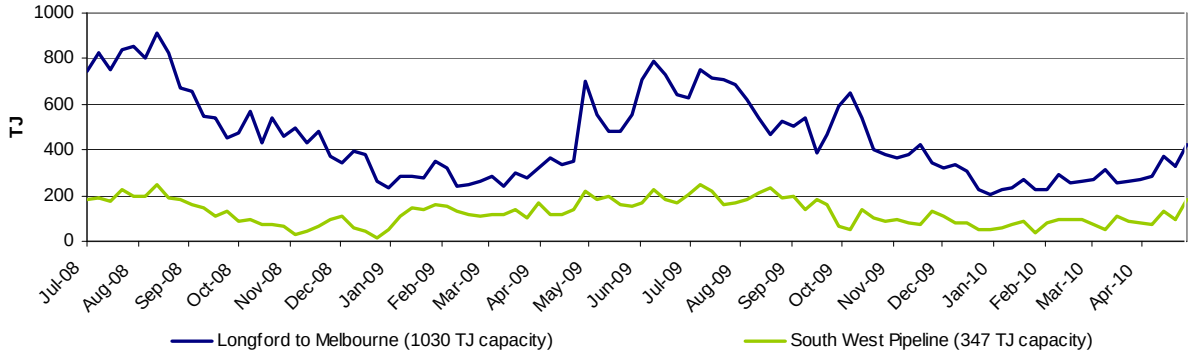
Figure 5: Average daily flows (TJ) into NSW/ACT demand region



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

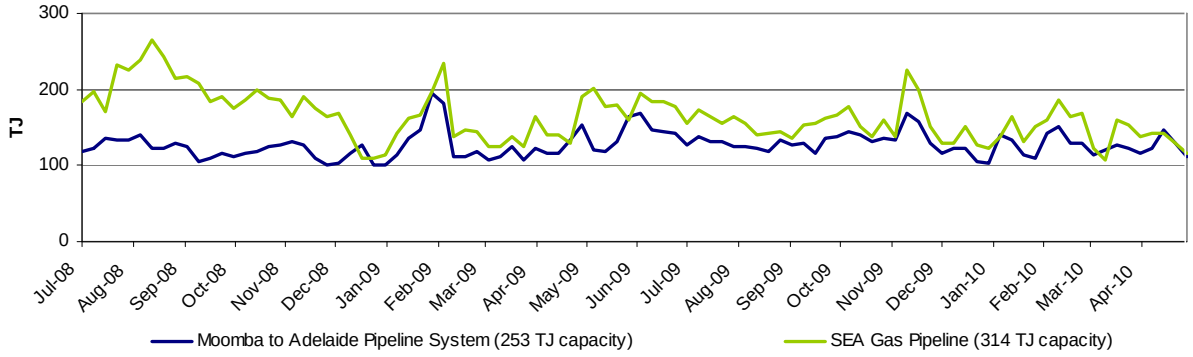
Notes: Negative flows on the NSW-Victoria Interconnect represent flows out of NSW into VIC.

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^

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	1							S					
AGL (Qld)	Retailer	1				NS								
AGL	Retailer	4		NS	NS	NS	S				S	S		
Aust. Power & Gas	Retailer	3			NS	NS	S					S		
Coogee Energy	Transmission Customer	1					S							
Country Energy	Transmission Customer	1									S			
Energy Australia	Retailer	3			S		S				S			
International Power	Transmission Customer	1											NS	
Origin (Vic)	Retailer	6	S	NS	S	NS	S	S			S	S		
Origin (Uranquinty)	Trader	1					S							
Red Energy	Retailer	1					S							
Santos	Retailer	1												
Simply Energy	Retailer	4			S	NS	S	S						
TRU Energy	Retailer	4			S	NS	S		NS			NS		
Victoria Electricity	Trader	1			S							S		
Victoria Electricity	Retailer	4			S	NS		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 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)

	25 Apr – 1 May	18 - 24 Apr	2009-10 Financial YTD*	2008-09 Financial YTD**
Average daily price	2.47	1.67	1.66	*3.08*

25 Apr – 1 May	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Daily price	2.81	0.05	3.07	3.18	3.41	1.95	2.82

*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)

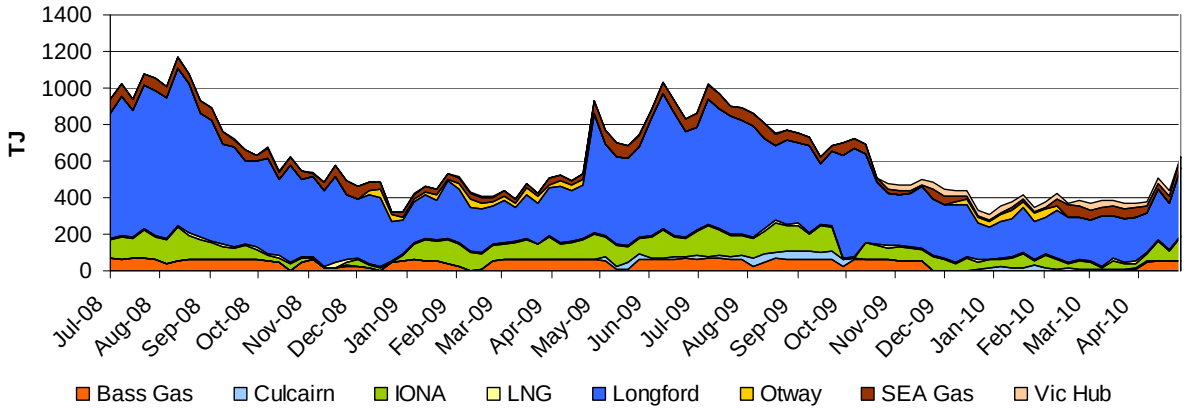
Notes: The daily average market price is a volume weighted imbalance price taking account of trading amounts at five times through the gas day — 6am, 10am, 2pm, 6pm and 10pm.

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:	25 Apr – 1 May	18 - 24 Apr	2009-10 Financial YTD*	2008-09 Financial YTD**
Culcairn	0	2	15	0.3
Longford	368	253	355	434
LNG	10	10	9	9
IONA	128	56	76	80
VicHub	2.5	29.0	17.7	1.6
SEAGas	60	35	42	44
Bass Gas	53	51	32	48
Otway	0	0	8	13
TOTAL	**622**	**436**	**554**	**629**

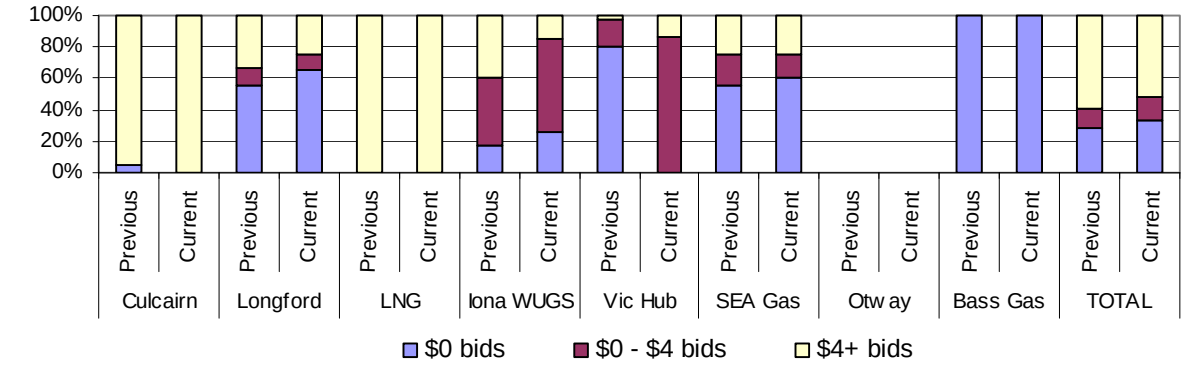


*Average daily estimated gas consumption measured from 1 July 2009 to the current week (inclusive)
**Average daily estimated gas consumption measured from 1 July 2008 to the equivalent week in 2008 (inclusive)
Source: http://www.aemo.com.au (INT 150)

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
Culcairn				AGL			
Longford	AGL TRU		AGL TRU	AGL TRU	AGL TRU	TRU	AGL
LNG				Origin AGL			
Iona		Origin TRU	TRU Origin Vic Elec	AGL TRU Origin Vic Elec	TRU Origin Vic Elec	TRU Vic Elec	TRU
VicHub	AETV	AETV	AETV		AETV	AETV	AETV
SEAGas	Simply	Simply	Simply	Simply	Origin Simply	Simply	Simply
Bass Gas			Origin		Origin		

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 Vic Elec = 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:	25 Apr – 1 May	18 - 24 Apr	2009-10 Financial YTD*	2008-09 Financial YTD**
Ballarat	24	12	21	22
Geelong^	86	82	78	83
Gippsland	40	36	44	59
Melbourne	393	249	360	400
Northern	77	59	52	66
TOTAL	**620**	**438**	**555**	**630**

^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**
QLD												
Carpentaria Pipeline	105	94	102	102	102	101	99	117	73	101	85	82
QLD Gas Pipeline	72	76	74	74	75	72	75	79	90	74	71	67
Roma to Brisbane Pipeline	152	156	184	186	184	184	153	214	80	171	170	170
South West QLD Pipeline	131	104	88	97	149	193	165	181	75	132	136	78
NSW/ACT												
Eastern Gas Pipeline	186	200	259	289	286	290	197	250	80	253	200	171
Moomba to Sydney Pipeline	111	136	205	121	116	108	126	420	43	132	179	168
NSW-VIC Interconnect^	23	27	36	33	38	39	10	90	-9	29	-8	19
VIC												
Longford to Melbourne	425	482	449	450	395	387	376	1030	39	423	404	469
South West Pipeline	43	0^^	225	311	273	279	136	347	34	181	118	125
SA												
Moomba to Adelaide Pipeline	94	95	144	143	127	98	88	253	51	113	129	124
SEA Gas Pipeline	83	71	137	129	151	151	94	314	48	117	151	174
TAS												
Tasmanian Gas Pipeline	38	39	46	45	48	45	39	129	30	44	38	33

*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)
^Negative figure represents a reverse flow of gas along the pipeline
^^ The AER highlights this data entry as possibly being an error – further enquiries are being undertaken.

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**
Roma (QLD)												
Berwyndale South	98	87	91	84	77	99	98	140	66	91	92	70
Fairview	117	101	110	117	121	121	128	115	97	116	111	70
Kenya Gas Plant	72	69	69	70	69	67	65	160	35	69	56	
Kincora	0	0	10	10	10	0	0	25	7	4	2	5
Kogan North	10	11	11	11	11	11	11	12	73	11	9	11
Peat	0	0	10	11	8	11	11	15	57	7	8	11
Rolleston	12	12	12	11	12	11	12	30	38	12	11	11
Scotia	27	26	27	28	28	29	29	27	88	28	24	22
Spring Gully	34	35	46	47	48	50	50	60	72	44	43	58
Strathblane	34	35	46	47	48	50	50	60	72	44	43	48
Taloona	21	21	28	28	29	30	30	36	73	27	26	0
Wallumbilla	10	10	10	10	10	11	11	20	53	10	11	13
Yellowbank	13	9	7	7	7	7	14	30	42	9	13	14
Talinga	0	27	32	31	31	34	34	50	13	27	7	
Moomba (SA/QLD)												
Moomba Gas Plant	165	204	143	138	75	0	313	430	60	148	260	266
Ballera	25	30	51	65	72	67	0	150	8	44	12	36
Eastern (VIC)												
Orbost Gas Plant	0	0	0	0	0	0	1	92	22	0	20	0
Lang Lang Gas Plant	52	50	54	52	55	57	54	70	44	53	31	47
Longford Gas Plant	609	663	703	717	668	662	656	1145	52	668	599	646
LNG Storage Dandenong	0	0	0	0	0	0	0	158	0	0	0	1
Otway Basin (VIC)												
Minerva Gas Plant	43	43	43	48	39	39	0	94	74	37	69	88
Otway Gas Plant	89	91	101	138	156	171	144	206	62	127	128	138
Iona Underground Gas Storage	0	-53	185	255	205	236	113	440	18	134	78	85

*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)
25 Apr – 1 May	Average min.	16.3	13.7	5.2	10.8	11.9	8.4
	Average max.	27.7	22.2	17.9	18.9	20.9	17.4
18 - 24 Apr	Average min.	18.1	17.5	9.1	17.6	16.7	12.1
	Average max.	26.0	26.3	23.6	27.2	26.5	20.6

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 Apr – 1 May	Scheduling Interval					Daily Imbalance Weighted Average Price
	6am	10am	2pm	6pm	10pm	
Sun	3.16	0.60	0.04	0.02	0.00	2.81
Mon	0.05	0.02	0.02	0.00	0.00	0.05
Tue	3.09	2.80	2.75	3.07	3.45	3.07
Wed	3.09	3.50	4.00	3.96	3.26	3.18
Thu	3.45	3.17	3.08	3.08	3.45	3.41
Fri	1.84	1.84	2.54	3.26	3.49	1.95
Sat	2.77	3.26	3.43	3.05	3.26	2.82

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-Apr	**MP:**	502	506	502	499	493	
	AEMO:	440	441	434	450	415	
	MP as % of AEMO	114	115	116	111	119	**-6**
26-Apr	**MP:**	508	514	508	505	508	
	AEMO:	469	450	465	455	475	
	MP as % of AEMO	108	114	109	111	107	**-37**
27-Apr	**MP:**	610	607	622	623	624	
	AEMO:	592	571	588	624	630	
	MP as % of AEMO	103	106	106	100	99	**0**
28-Apr	**MP:**	582	608	662	661	644	
	AEMO:	600	629	755	744	728	
	MP as % of AEMO	97	97	88	89	88	**20**
29-Apr	**MP:**	622	631	632	628	629	
	AEMO:	702	603	603	618	645	
	MP as % of AEMO	89	104	105	102	97	**6**
30-Apr	**MP:**	560	561	558	577	577	
	AEMO:	578	593	597	617	620	
	MP as % of AEMO	97	95	93	94	93	**0**
1-May	**MP:**	424	433	431	450	448	
	AEMO:	427	450	461	463	482	
	MP as % of AEMO	99	96	93	97	93	**0**

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