WEEKLY GAS MARKET ANALYSIS

AUSTRALIAN ENERGY REGULATOR

28 March – 3 April 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 three instances of missing flow data on the Bulletin Board this week. Jemena failed to submit data for the Queensland Gas Pipeline for the Wednesday and Thursday gas days and APA failed to submit data for the Moomba to Sydney pipeline for the Sunday gas day (see Figure A1).

Figure 4 shows changes in gas demand and production and pipeline flows compared to the previous week. Total average daily demand for gas fell by 50 TJ (4 per cent) compared to the previous week. Significant falls were recorded in South Australia of 20 TJ (7 per cent) and Tasmania of 13 TJ (31 per cent).

Total Gas Powered Generation (GPG) gas usage fell by 51 TJ (12 per cent) compared to the previous week. Falls were recorded across all regions with Victoria averaging only 2 TJ of GPG per day.

Average production volumes fell by 62 TJ (4 per cent) compared to the previous week. Significant falls were recorded at the Roma production facility 49 TJ (10 per cent) and the Otway Basin production facilities 23 TJ (9 per cent). The Ballera Gas plant recorded a 22 TJ (574 per cent) increase in production. Average daily flows were lower than the previous week with significant falls in flow occurring on the South West Queensland pipeline 37 TJ (28 per cent) and the Tasmanian gas pipeline 13 TJ (31 per cent). The Moomba to Sydney and Longford to Melbourne pipelines recorded minor increases in flow.

Victorian Gas Market

Total average gas injections in the Victorian gas market fell by 2 TJ compared to the previous week (See Figure V3).

The average imbalance price fell from $2.06/GJ in the previous week to $1.57/GJ. The price fell to $0.02/GJ on Saturday.

There were no bids from Otway again this week.

Bass Gas resumed production on Friday and Saturday this week having not produced gas since last year. All capacity at BassGas was bid in by Origin and all of it was priced at $0/GJ.

AEMO issued a negative demand override of between 2 TJ and 9 TJ on Tuesday through to Friday, due to market participant demand forecasts falling outside AEMO demand forecast threshold (see figure A5).

Supply Demand Point Constraints (SDPCs) were applied to injections/withdrawals at VicHub and to Longford for injection on Wednesday.

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
28 Mar – 3 Apr	292	9	351	255	29	170	70	79
Financial Year-to-date 2009-10*	366	19	544	282	38	170	84	71
Financial Year-to-date 2008-09**	320	19	597	299	34	170	81	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
28 Mar – 3 Apr	36	2	145	18	167
Financial Year-to-date 2009-10*	82	41	165	23	165
Financial Year-to-date 2008-09**	38	67	185	24	113

^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.)

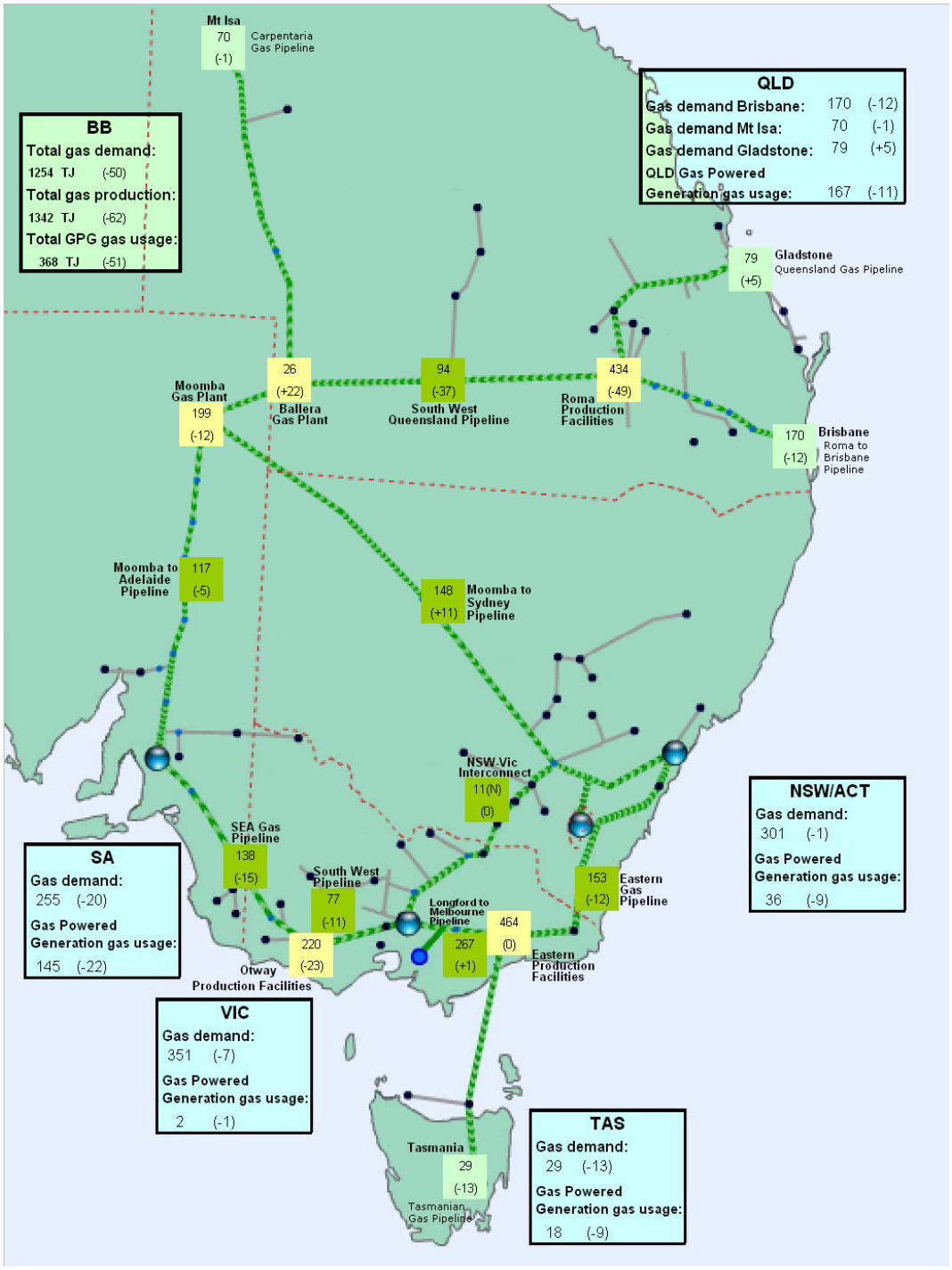
Figure 3: Daily average production flows (TJ) for each production zone

Average daily flows	Roma (QLD)	Eastern Victoria	Otway Basin (VIC)	Moomba (SA/QLD)
28 Mar – 3 Apr	434	464	220	225
Financial Year-to-date 2009-10*	453	654	278	274
Financial Year-to-date 2008-09**	325	700	310	307

*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)

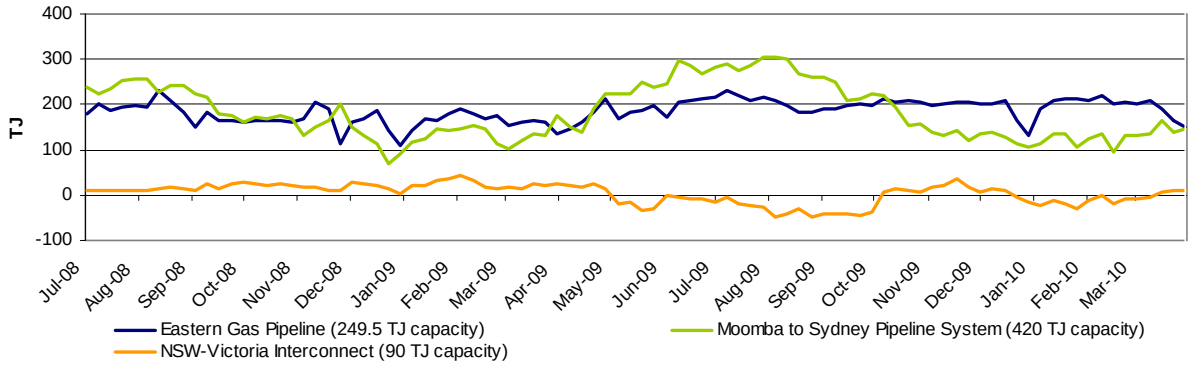


Source: Natural Gas Market Bulletin Board http://www.gasbb.com.au
Notes: Direction of aggregate daily flows along the NSW-Vic Interconnect indicated on map by S (South) or N (North).

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.

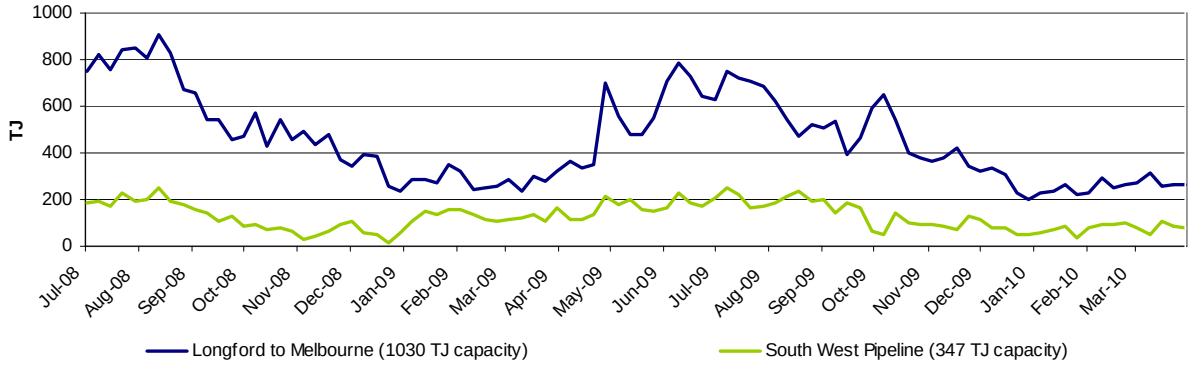
Figure 5: Average daily flows (TJ) into NSW/ACT demand region



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

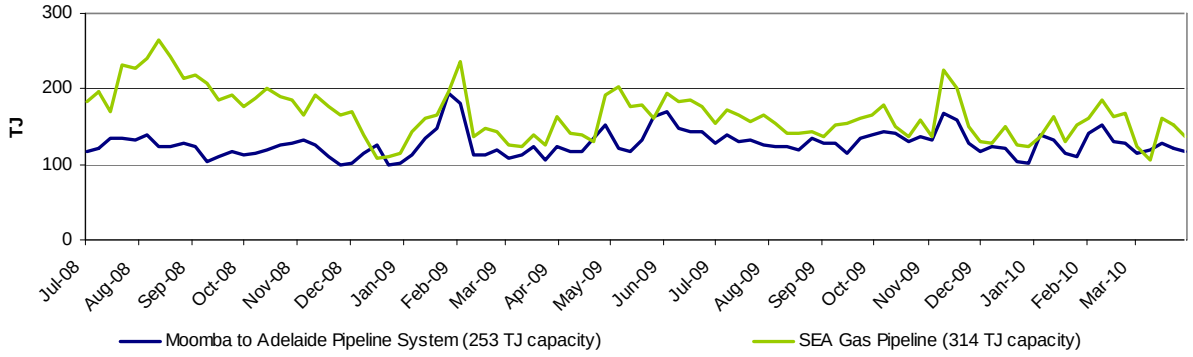
Notes: Negative flows on the NSW-Victoria Interconnect represent flows out of NSW into VIC.

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

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							NS					S
AGL (Qld)	Retailer	1				NS								
AGL	Retailer	4		NS	NS	NS	S				NS	S		
Aust. Power & Gas	Retailer	3				NS	S					S		
Coogee Energy	Transmission Customer	1					S							
Country Energy	Transmission Customer	1									S			
Energy Australia	Retailer	2			S		S							
International Power	Transmission Customer	1											S	
Origin (Vic)	Retailer	6	S	S	NS	NS	S	S			S	S		
Origin (Uranquinty)	Trader	1					S							
Red Energy	Retailer	1					S							
Santos	Retailer	2						S	S					
Simply Energy	Retailer	3				NS	S	NS						
TRU Energy	Retailer	4			S	NS	S		NS			NS		
Victoria Electricity	Trader	1			S							S		
Victoria Electricity	Retailer	3			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)

	28 Mar – 3 Apr	21 – 27 Mar	2009-10 Financial YTD*	2008-09 Financial YTD**
Average daily price	1.57	2.06	1.65	*3.07*

21 – 27 Mar	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Daily price	2.05	1.95	0.45	2.06	2.09	2.35	0.02

*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)

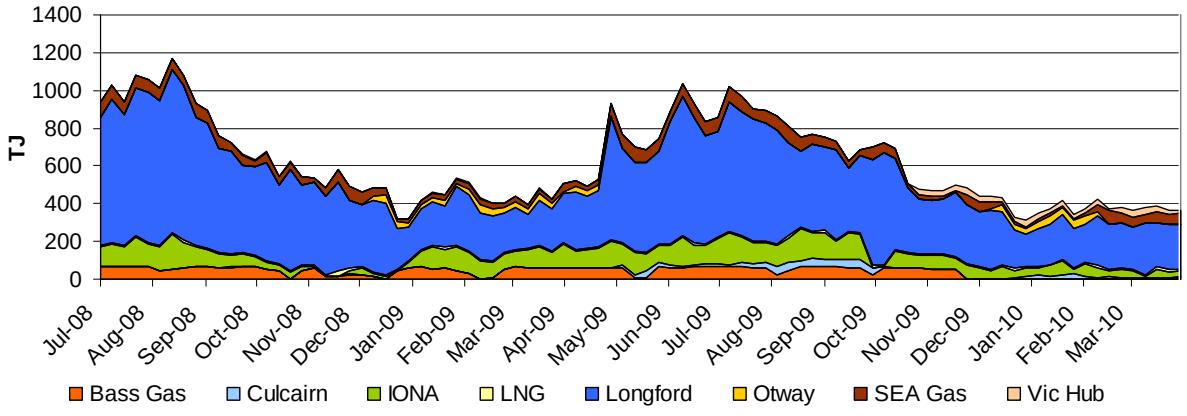
Notes: The daily average market price is a volume weighted imbalance price taking account of trading amounts at five times through the gas day — 6am, 10am, 2pm, 6pm and 10pm.

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:	28 Mar – 3 Apr	21 – 27 Mar	2009-10 Financial YTD*	2008-09 Financial YTD**
Culcairn	8	5	17	0.3
Longford	241	239	363	441
LNG	11	9	8	9
IONA	28	35	75	76
VicHub	19.4	27.9	17.2	1.7
SEAGas	53	52	42	45
Bass Gas	6	0	30	47
Otway	0	0	9	12
TOTAL	**366**	**368**	**561**	**631**

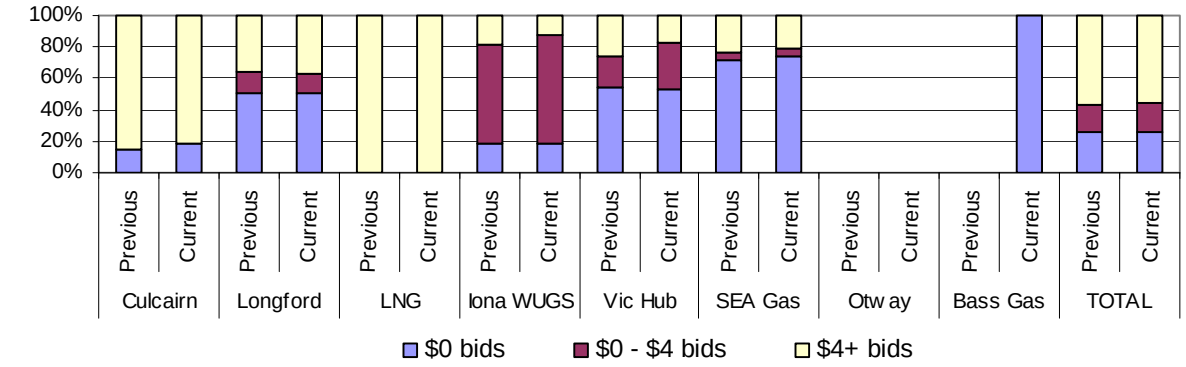


*Average daily estimated gas consumption measured from 1 July 2009 to the current week (inclusive)
**Average daily estimated gas consumption measured from 1 July 2008 to the equivalent week in 2008 (inclusive)
Source: http://www.aemo.com.au (INT 150)

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

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:	28 Mar – 3 Apr	21 – 27 Mar	2009-10 Financial YTD*	2008-09 Financial YTD**
Ballarat	12	11	21	22
Geelong^	58	53	79	84
Gippsland	33	31	44	60
Melbourne	218	222	366	399
Northern	52	53	51	66
TOTAL	**372**	**369**	**561**	**632**

^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	74	76	73	68	64	66	67	117	72	70	84	81
QLD Gas Pipeline	79	81	78	N/A	N/A	77	79	79	90	79	71	67
Roma to Brisbane Pipeline	169	182	177	188	178	149	149	214	79	170	170	170
South West QLD Pipeline	137	142	131	102	60	47	38	181	76	94	138	72
NSW/ACT												
Eastern Gas Pipeline	144	160	159	165	155	139	141	250	80	153	199	171
Moomba to Sydney Pipeline	N/A	151	167	167	151	151	103	420	44	148	186	168
NSW-VIC Interconnect^	-16	37	35	22	34	-23	-16	90	-11	11	-10	19
VIC												
Longford to Melbourne	212	261	289	268	281	292	265	1030	40	267	409	473
South West Pipeline	55	121	116	125	103	15	3	347	34	77	118	123
SA												
Moomba to Adelaide Pipeline	95	127	130	135	120	103	107	253	51	117	129	123
SEA Gas Pipeline	132	143	152	154	156	99	129	314	49	138	153	176
TAS												
Tasmanian Gas Pipeline	41	45	44	47	18	10	11	129	30	29	38	34

*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

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	109	106	108	108	106	80	140	66	102	93	67
Fairview	113	118	107	119	32	32	33	115	98	79	112	67
Kenya Gas Plant	71	73	72	71	71	73	69	160	34	71	54	
Kincora	0	0	0	0	0	0	5	25	6	1	2	5
Kogan North	11	11	10	8	11	11	11	12	71	10	9	11
Peat	11	11	11	11	12	11	11	15	57	11	9	11
Rolleston	12	12	12	12	12	12	12	30	38	12	11	11
Scotia	29	29	29	29	26	26	26	27	87	28	23	22
Spring Gully	34	34	34	34	43	46	38	60	72	38	43	57
Strathblane	34	34	34	34	43	46	38	60	72	38	43	47
Taloona	21	21	21	21	26	28	23	36	73	23	26	0
Wallumbilla	11	11	11	11	11	11	11	20	53	11	11	13
Yellowbank	11	12	13	13	12	5	10	30	42	11	13	14
Talinga	0	0	0	0	0	0	0	50	7	0	3	
Moomba (SA/QLD)												
Moomba Gas Plant	169	202	190	228	230	214	160	430	61	199	264	267
Ballera	5	0	0	27	0	72	75	150	7	26	10	39
Eastern (VIC)												
Orbost Gas Plant	29	29	29	32	36	36	34	92	21	32	19	0
Lang Lang Gas Plant	0	0	0	0	0	14	30	70	42	6	29	46
Longford Gas Plant	388	436	443	392	542	406	372	1140	53	426	606	654
LNG Storage Dandenong	0	0	0	0	0	0	0	158	0	0	0	1
Otway Basin (VIC)												
Minerva Gas Plant	71	71	76	74	76	61	61	94	79	70	74	90
Otway Gas Plant	103	120	148	136	151	71	85	206	63	116	129	138
Iona Underground Gas Storage	42	85	36	72	16	-9	-11	440	17	33	75	83

*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)
28 Mar – 3 Apr	Average min.	20.1	18.8	11.5	15.4	15.8	11.6
	Average max.	27.6	24.6	22.7	23.9	25.5	20.0
21 – 27 Mar	Average min.	20.0	20.2	9.5	14.9	14.4	13.4
	Average max.	28.9	27.3	26.9	25.6	29.1	21.8

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

28 Mar – 3 Apr	Scheduling Interval					Daily Imbalance Weighted Average Price
	6am	10am	2pm	6pm	10pm	
Sun	2.10	1.89	1.89	0.44	0.44	2.05
Mon	2.11	0.45	0.45	0.51	0.00	1.95
Tue	0.45	0.34	0.47	1.16	0.01	0.45
Wed	2.09	1.36	2.10	2.10	1.36	2.06
Thu	2.09	2.69	2.69	2.12	0.01	2.09
Fri	2.55	1.89	0.45	0.50	0.01	2.35
Sat	0.01	0.06	0.10	2.05	0.01	0.02

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	
28-Mar	**MP:**	306	324	333	333	333	
	AEMO:	267	258	294	289	279	
	MP as % of AEMO	115	126	113	115	119	**0**
29-Mar	**MP:**	405	406	398	398	398	
	AEMO:	374	364	366	364	352	
	MP as % of AEMO	108	112	109	109	113	**0**
30-Mar	**MP:**	420	413	416	414	408	
	AEMO:	388	375	378	381	383	
	MP as % of AEMO	108	110	110	109	107	**-6**
31-Mar	**MP:**	394	397	401	399	394	
	AEMO:	385	382	388	384	383	
	MP as % of AEMO	102	104	104	104	103	**-4**
1-Apr	**MP:**	404	399	404	401	394	
	AEMO:	339	356	365	361	345	
	MP as % of AEMO	119	112	111	111	114	**-9**
2-Apr	**MP:**	358	347	344	345	345	
	AEMO:	321	312	311	327	322	
	MP as % of AEMO	111	111	111	106	107	**-2**
3-Apr	**MP:**	332	330	328	331	325	
	AEMO:	290	292	293	299	300	
	MP as % of AEMO	114	113	112	111	108	**-13**

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