WEEKLY GAS MARKET ANALYSIS

AUSTRALIAN ENERGY REGULATOR

14 – 20 March 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 Saturday gas days and APA failed to submit data for the Moomba to Sydney pipeline (MSP) for the Friday gas day (see Figure A1).

APA submitted a flow for the MSP of 1289 TJ for Sunday. This value is three times the registered Maximum Daily Quantity of the pipeline on the Bulletin Board (420 TJ). The AER has excluded this data from the report and will examine this issue, along with the instance of missing data on Friday.

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 79 TJ (6 per cent) compared to the previous week. A significant increase was recorded in South Australia of 63 TJ (28 per cent). Tasmania recorded a fall of 4 TJ (9 per cent).

Total Gas Powered Generation (GPG) gas usage increased by 102 TJ (25 per cent) compared to the previous week. Significant increases were recorded in Victoria of 30 TJ (3000 per cent) and South Australia of 75 TJ (68 per cent).

Average production volumes increased by 71 TJ (5 per cent) compared to the previous week. The Otway Basin production facilities increased production by a total of 106 TJ (67 per cent) and the Eastern production facility reduced production by 57 TJ (10 per cent). Average daily flows were higher than the previous week with significant increases in flow occurring on the South West pipeline 60 TJ (122 per cent) and SEAGas 54 TJ (51 per cent). The Longford to Melbourne pipeline reduced average daily flows by 57 TJ (18 per cent).

On the NSW-Vic interconnect flows were southwards on Sunday but from Monday to Thursday the gas flow direction changed with as much as 38 TJ of gas flowing North into NSW on Thursday. Flows on Friday and Saturday were southwards into Victoria.

Victorian Gas Market

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

The average imbalance price increased from $1.46/GJ in the previous week to $1.74/GJ.

There were no bids from Bass Gas and Otway again this week.

Supply Demand Point Constraints (SDPCs) were applied to injections/withdrawals at VicHub and to Longford for injection on Monday and Thursday. In addition, SDPCs were issued for Culcairn injections on Friday and withdrawals on Friday and Saturday.

On Monday AEMO identified an unexpected scheduling event and will be conducting an investigation. On Tuesday, the publication of the 12 pm day plus two schedule was delayed.

Compared to the previous week, a relatively higher proportion of gas at the IONA injection point was offered in to the market in the $0/GJ and $0 to $4/GJ price ranges and a relatively smaller proportion of gas was offered in to the market at above $4/GJ. This change in bidding strategy at IONA, along with higher average prices across the week is the likely reason that injections at IONA increased by an average of 46 TJ/day across the week.

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
14 - 20 Mar	345	9	374	289	39	183	73	76
Financial Year-to-date 2009-10*	370	19	550	282	38	169	85	71
Financial Year-to-date 2008-09**	322	19	606	302	35	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
14 - 20 Mar	83	31	185	25	188
Financial Year-to-date 2009-10*	84	43	165	23	164
Financial Year-to-date 2008-09**	38	68	187	25	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.)

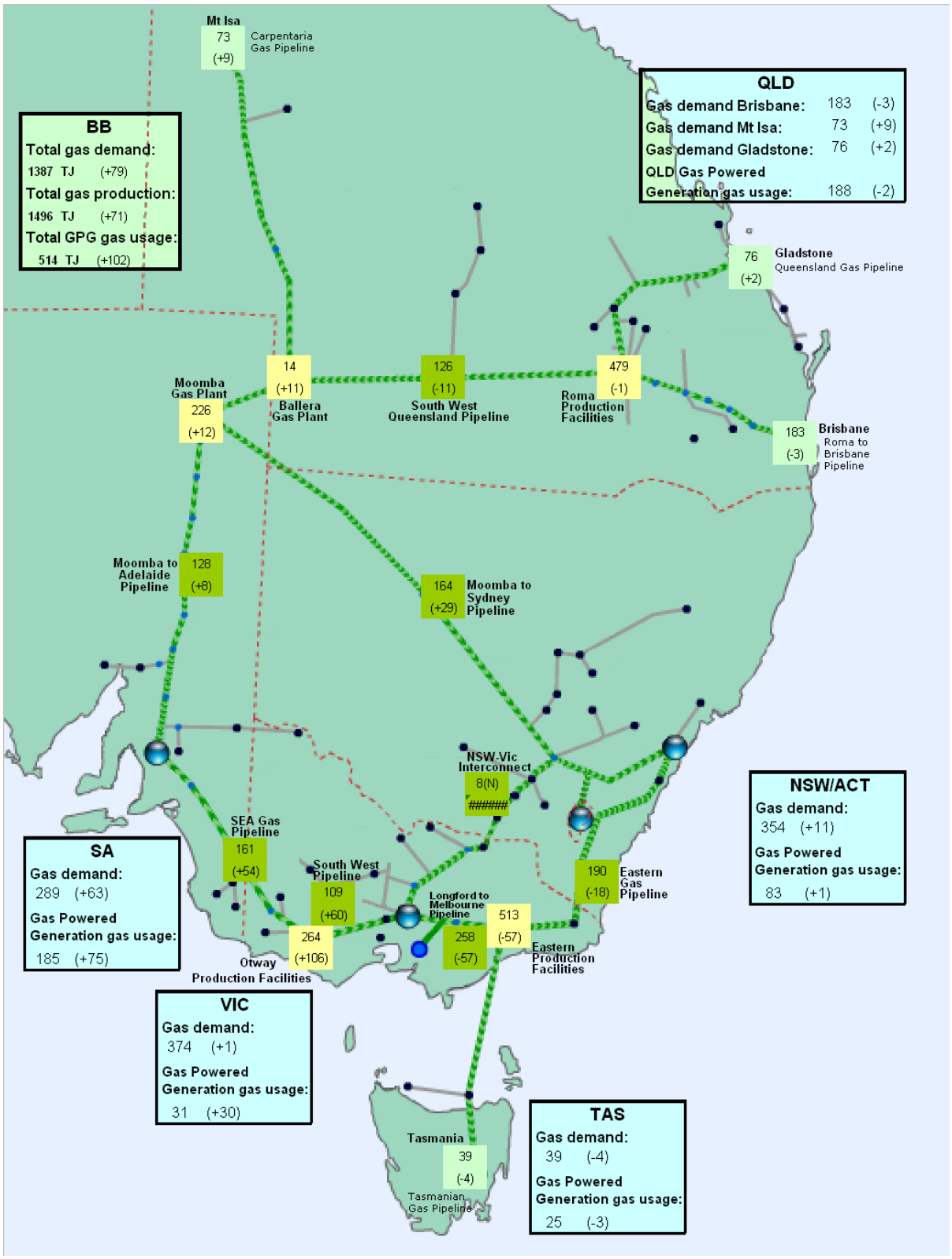
Figure 3: Daily average production flows (TJ) for each production zone

Average daily flows	Roma (QLD)	Eastern Victoria	Otway Basin (VIC)	Moomba (SA/QLD)
14 - 20 Mar	479	513	264	240
Financial Year-to-date 2009-10*	453	665	280	277
Financial Year-to-date 2008-09**	322	713	311	311

*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)

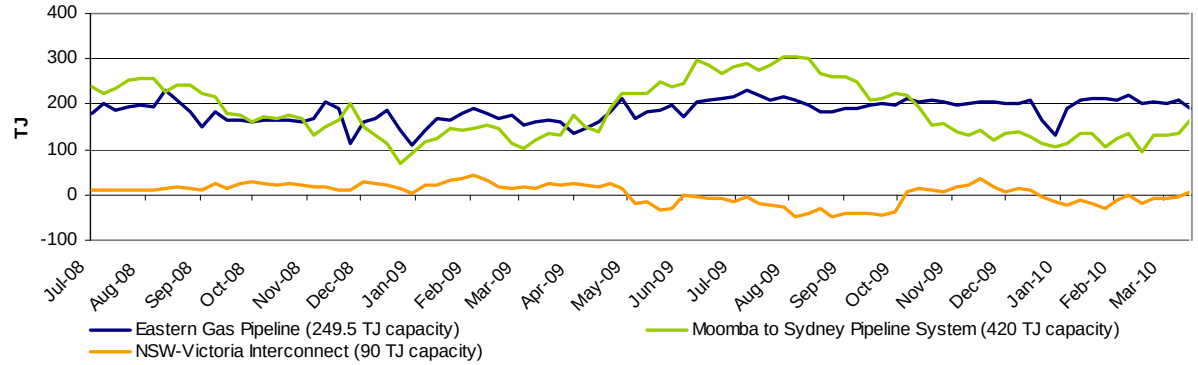


Source: Natural Gas Market Bulletin Board http://www.gasbb.com.au
Notes: Direction of aggregate daily flows along the NSW-Vic Interconnect indicated on map by S (South) or N (North).

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.

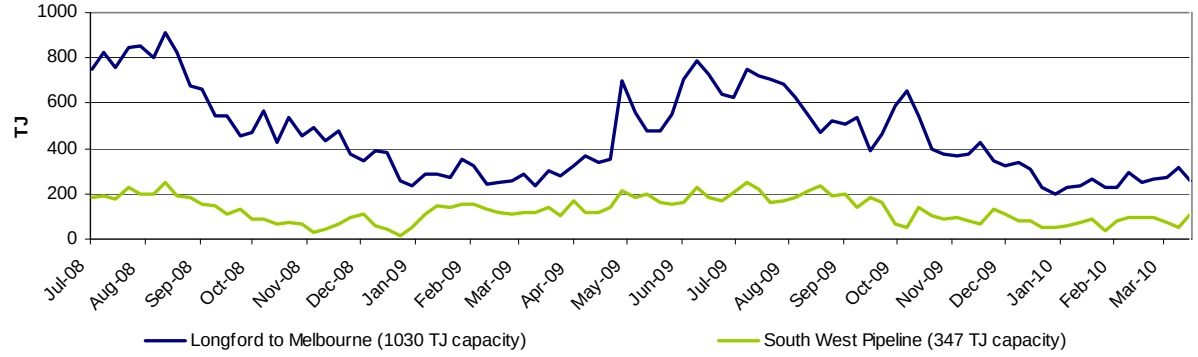
Figure 5: Average daily flows (TJ) into NSW/ACT demand region



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

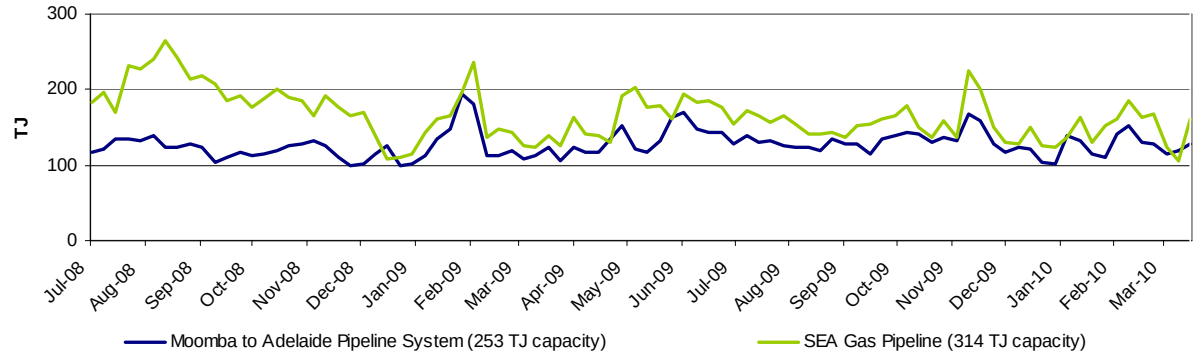
Notes: Negative flows on the NSW-Victoria Interconnect represent flows out of NSW into VIC.

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							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	5		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		
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)

	14 – 20 Mar	7 – 13 Mar	2009-10 Financial YTD*	2008-09 Financial YTD**
Average daily price	1.74	1.46	1.64	*3.08*

14 – 20 Mar	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Daily price	1.22	1.34	2.56	1.93	1.85	2.06	1.20

*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)

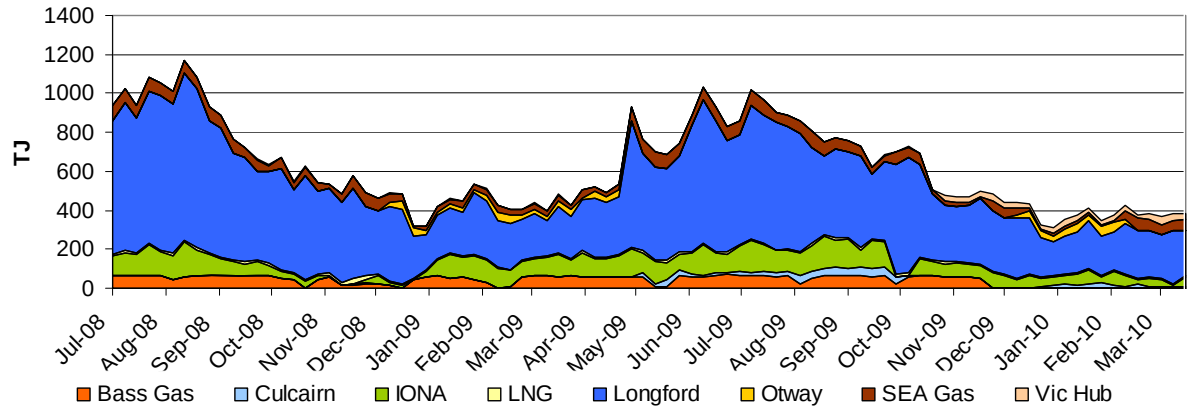
Notes: The daily average market price is a volume weighted imbalance price taking account of trading amounts at five times through the gas day — 6am, 10am, 2pm, 6pm and 10pm.

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:	14 – 20 Mar	7 – 13 Mar	2009-10 Financial YTD*	2008-09 Financial YTD**
Culcairn	7	9	17	0.3
Longford	232	276	369	452
LNG	10	9	8	9
IONA	49	3	78	75
VicHub	26.6	37.9	16.9	1.8
SEAGas	60	46	41	46
Bass Gas	0	0	31	46
Otway	0	0	9	11
TOTAL	**384**	**382**	**571**	**640**

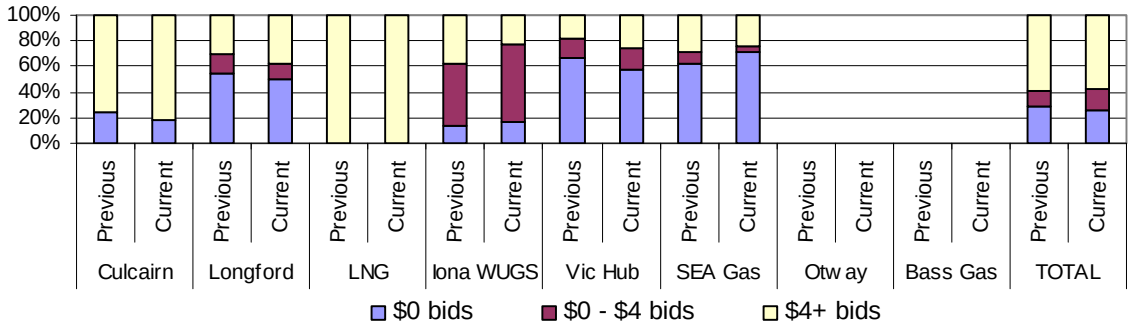


*Average daily estimated gas consumption measured from 1 July 2009 to the current week (inclusive)
**Average daily estimated gas consumption measured from 1 July 2008 to the equivalent week in 2008 (inclusive)
Source: http://www.aemo.com.au (INT 150)

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

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:	14 – 20 Mar	7 – 13 Mar	2009-10 Financial YTD*	2008-09 Financial YTD**
Ballarat	10	13	22	23
Geelong^	56	62	80	85
Gippsland	30	33	45	61
Melbourne	238	242	374	405
Northern	50	40	51	67
TOTAL	**384**	**389**	**572**	**641**

^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	69	75	72	71	74	78	72	117	73	73	85	82
QLD Gas Pipeline	77	72	81	N/A	72	80	N/A	79	89	76	71	67
Roma to Brisbane Pipeline	159	191	191	188	198	183	167	214	79	183	169	170
South West QLD Pipeline	131	105	127	117	122	125	152	181	77	126	139	70
NSW/ACT												
Eastern Gas Pipeline	197	209	215	215	200	160	142	250	81	190	201	173
Moomba to Sydney Pipeline	1289	176	187	176	159	N/A	121	420	45	164	188	169
NSW-VIC Interconnect^	-2	7	38	31	32	-15	-31	90	-13	8	-11	19
VIC												
Longford to Melbourne	248	289	286	291	267	241	183	1030	40	258	416	483
South West Pipeline	66	103	145	133	118	127	71	347	35	109	120	122
SA												
Moomba to Adelaide Pipeline	108	154	141	140	144	113	96	253	51	128	129	123
SEA Gas Pipeline	90	150	190	185	194	181	134	314	49	161	153	178
TAS												
Tasmanian Gas Pipeline	45	40	40	40	40	39	38	129	30	39	38	35

*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	111	107	109	108	109	82	140	66	103	92	65
Fairview	103	101	125	128	129	129	129	115	98	121	113	66
Kenya Gas Plant	70	72	68	67	67	67	69	160	33	68	53	
Kincora	0	0	0	0	0	0	0	25	6	0	2	5
Kogan North	11	11	11	8	8	8	10	12	70	10	9	11
Peat	10	10	10	11	11	10	10	15	57	10	8	11
Rolleston	12	11	12	12	12	11	11	30	38	12	11	11
Scotia	29	29	29	29	29	29	29	27	86	29	23	22
Spring Gully	44	38	38	46	48	44	42	60	72	43	43	57
Strathblane	44	38	38	46	48	44	42	60	72	43	43	47
Taloona	27	23	23	28	29	27	26	36	73	26	26	0
Wallumbilla	11	11	11	2	0	11	11	20	53	8	11	13
Yellowbank	6	6	6	6	5	6	6	30	43	6	13	14
Talinga	0	0	0	0	0	0	0	50	9	0	4	
Moomba (SA/QLD) Moomba Gas Plant	179	248	260	245	262	215	175	430	62	226	267	270
Ballera	24	46	2	13	13	0	0	150	6	14	10	40
Eastern (VIC)												
Orbost Gas Plant	48	48	48	34	34	30	30	92	20	39	19	0
Lang Lang Gas Plant	0	0	0	0	0	0	0	70	44	0	31	45
Longford Gas Plant	485	421	564	544	395	509	404	1140	54	475	615	667
LNG Storage Dandenong	0	0	0	0	0	0	0	158	0	0	0	1
Otway Basin (VIC)												
Minerva Gas Plant	59	85	79	79	79	76	71	94	79	75	74	90
Otway Gas Plant	83	142	164	189	180	160	75	206	63	142	129	139
Iona Underground Gas Storage	7	27	77	61	42	63	48	320	24	46	77	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)
^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)
14 – 20 Mar	Average min.	18.3	17.5	10.1	18.8	19.2	14.5
	Average max.	28.2	26.3	26.3	30.2	31.8	25.2
7 – 13 Mar	Average min.	21.2	19.9	13.0	14.7	14.9	13.8
	Average max.	29.4	25.7	22.2	24.0	24.3	21.5

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

14 – 20 Mar	Scheduling Interval					Daily Imbalance Weighted Average Price
	6am	10am	2pm	6pm	10pm	
Sun	1.10	3.12	3.20	2.80	3.20	1.22
Mon	1.11	2.87	3.10	3.18	3.21	1.34
Tue	2.56	2.24	2.70	2.25	2.25	2.56
Wed	1.89	2.10	2.56	2.78	2.73	1.93
Thu	1.84	1.84	1.84	2.18	2.17	1.85
Fri	2.06	2.09	2.06	2.06	2.09	2.06
Sat	1.18	1.90	1.80	1.88	2.09	1.20

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	
14-Mar	**MP:**	287	288	287	286	286	
	AEMO:	298	303	297	303	300	
	MP as % of AEMO	96	95	97	94	95	**0**
15-Mar	**MP:**	375	377	379	380	380	
	AEMO:	379	385	371	388	387	
	MP as % of AEMO	99	98	102	98	98	**0**
16-Mar	**MP:**	389	395	394	394	393	
	AEMO:	384	393	396	391	388	
	MP as % of AEMO	101	101	99	101	101	**0**
17-Mar	**MP:**	370	368	375	374	374	
	AEMO:	372	372	384	394	386	
	MP as % of AEMO	99	99	98	95	97	**0**
18-Mar	**MP:**	379	380	382	383	382	
	AEMO:	378	377	378	377	364	
	MP as % of AEMO	100	101	101	102	105	**0**
19-Mar	**MP:**	392	391	390	394	394	
	AEMO:	397	400	400	406	386	
	MP as % of AEMO	99	98	98	97	102	**0**
20-Mar	**MP:**	303	303	299	300	299	
	AEMO:	299	311	310	302	296	
	MP as % of AEMO	101	97	96	99	101	**0**

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