WEEKLY GAS MARKET ANALYSIS

AUSTRALIAN ENERGY REGULATOR

11 – 17 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 was one instance of missing flow data on the Bulletin Board this week. Tas Gas failed to submit data for the Tasmanian Gas Pipeline for the Thursday gas (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 increased by 228 TJ (17 per cent) compared to the previous week. All regions recorded an increase with significant increases in Victoria of 139 TJ (38 per cent) and NSW/ACT of 36 TJ (11 per cent).

Total Gas Powered Generation (GPG) gas usage increased by 74 TJ (17 per cent) compared to the previous week. All regions recorded an increase with significant increases in South Australia 27 TJ (17 per cent), Victoria 15 TJ (419 per cent) and Tasmania 13 TJ (79 per cent).

Average production volumes increased by 312 TJ (23 per cent) compared to the previous week. Significant increases were recorded at all production facilities except the Ballera Gas plant which recorded a reduction of 21 TJ (41 per cent). Average daily flows were higher than the previous week with significant increases in flow occurring on the Longford to Melbourne gas pipeline 84 TJ (29 per cent) and the South West pipeline 56 TJ (76 per cent). Only SEAGas recorded a minor reduction in flow.

Victorian Gas Market

The average minimum and maximum temperatures in Victoria this week were significantly lower than the previous week (see Figure A3).

With the colder weather, total average gas injections in the Victorian gas market increased by 135 TJ (36 per cent) compared to the previous week (See Figure V3). Also, the average imbalance price increased from $1.25/GJ to $2.01/GJ (see Figure V2).

The average imbalance price rose despite a significant increase in the percentage of gas bid in at $0/GJ at Longford (see Figure V4).

Multiple parties continued to rebid at Iona this week, with three participants rebidding on Monday, Tuesday, Wednesday and Friday. Rebidding also occurred at other system points but involved less participants (see Figure V5).

Supply Demand Point Constraints (SDPCs) were applied to injections at SEAGas on Monday and to injections/withdrawals at SEAGas on Thursday. A SDPC also applied to BassGas for injections on Tuesday. A Directional Flow Point Constraint (DFPC) was applied to SEAGas injections/withdrawals on Friday and Saturday.

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
11 – 17 Apr	358	14	505	289	44	178	98	77
Financial Year-to-date 2009-10*	361	18	539	281	38	170	84	71
Financial Year-to-date 2008-09**	318	18	590	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**
11 – 17 Apr	102	19	191	29	170
Financial Year-to-date 2009-10*	82	40	165	23	165
Financial Year-to-date 2008-09**	38	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.)

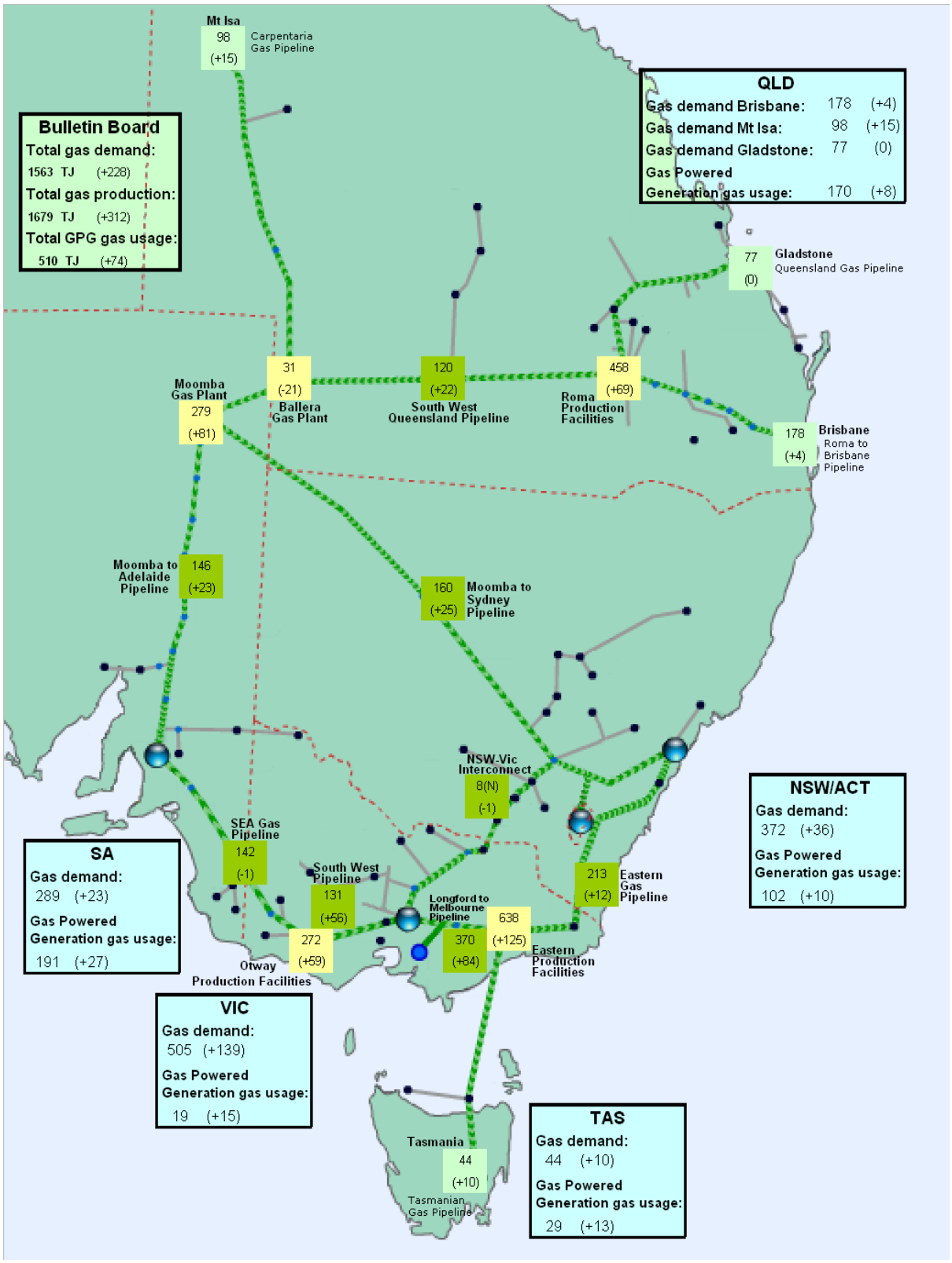
Figure 3: Daily average production flows (TJ) for each production zone

Average daily flows	Roma (QLD)	Eastern Victoria	Otway Basin (VIC)	Moomba (SA/QLD)
11 – 17 Apr	458	638	272	310
Financial Year-to-date 2009-10*	451	651	276	274
Financial Year-to-date 2008-09**	329	692	309	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)

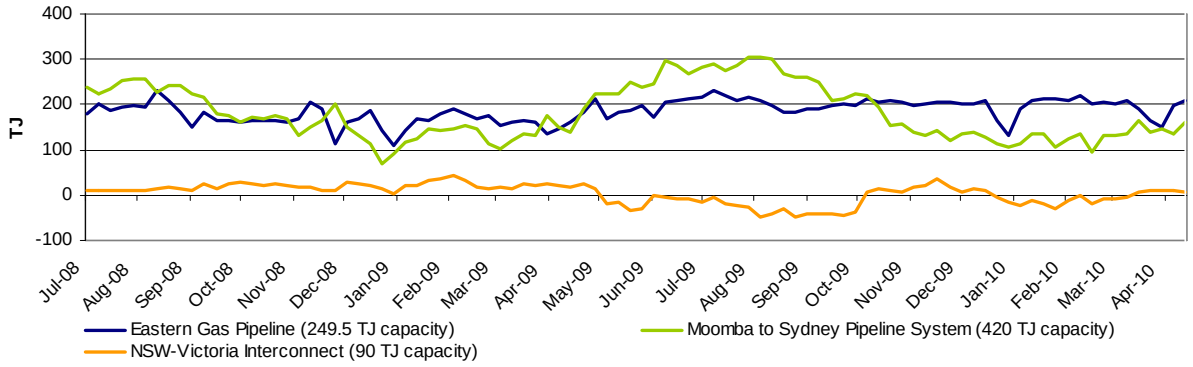


Source: Natural Gas Market Bulletin Board http://www.gasbb.com.au
Notes: Direction of aggregate daily flows along the NSW-Vic Interconnect indicated on map by S (South) or N (North).

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.

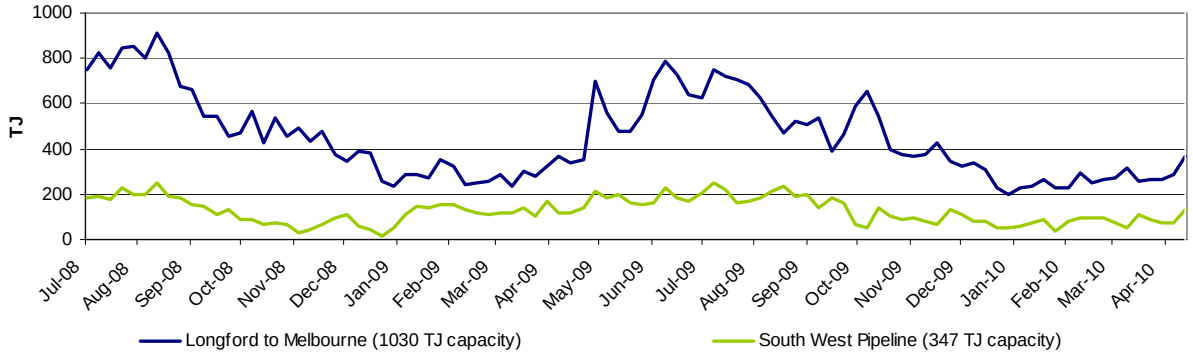
Figure 5: Average daily flows (TJ) into NSW/ACT demand region



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

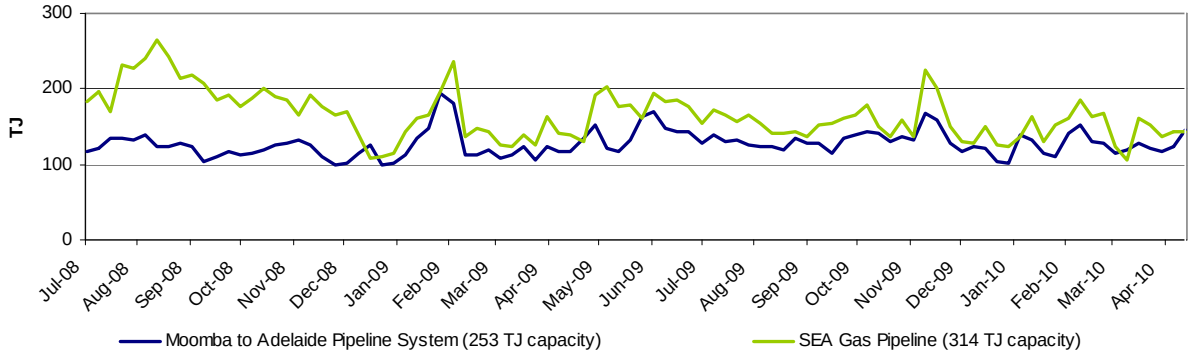
Notes: Negative flows on the NSW-Victoria Interconnect represent flows out of NSW into VIC.

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

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					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	S	NS	S	S			S	S		
Origin (Uranquinty)	Trader	1					S							
Red Energy	Retailer	1					S							
Santos	Retailer	2							S					
Simply Energy	Retailer	3				NS	S	S						
TRU Energy	Retailer	3			S	NS	S					NS		
Victoria Electricity	Trader	1			NS							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)

	11 - 17 Apr	4 -10 Apr	2009-10 Financial YTD*	2008-09 Financial YTD**
Average daily price	2.01	1.25	1.64	*3.06*

11 - 17 Apr	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Daily price	1.86	2.56	2.12	2.61	2.76	1.05	1.09

*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)

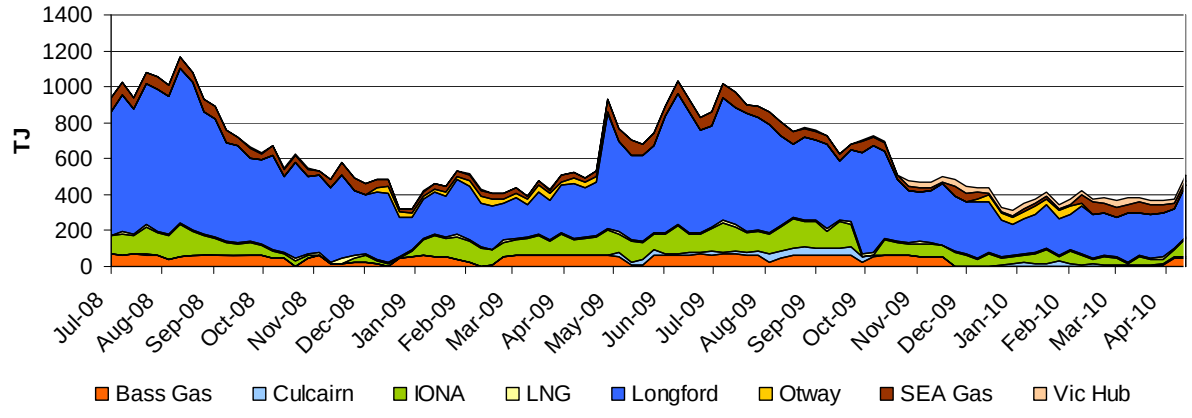
Notes: The daily average market price is a volume weighted imbalance price taking account of trading amounts at five times through the gas day — 6am, 10am, 2pm, 6pm and 10pm.

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:	11 -17 Apr	4 -10 Apr	2009-10 Financial YTD*	2008-09 Financial YTD**
Culcairn	5	6	16	0.3
Longford	284	216	357	434
LNG	6	9	8	9
IONA	104	39	75	77
VicHub	35.3	23.9	17.8	1.7
SEAGas	26	35	41	44
Bass Gas	51	46	31	47
Otway	0	0	8	13
TOTAL	**511**	**376**	**555**	**625**

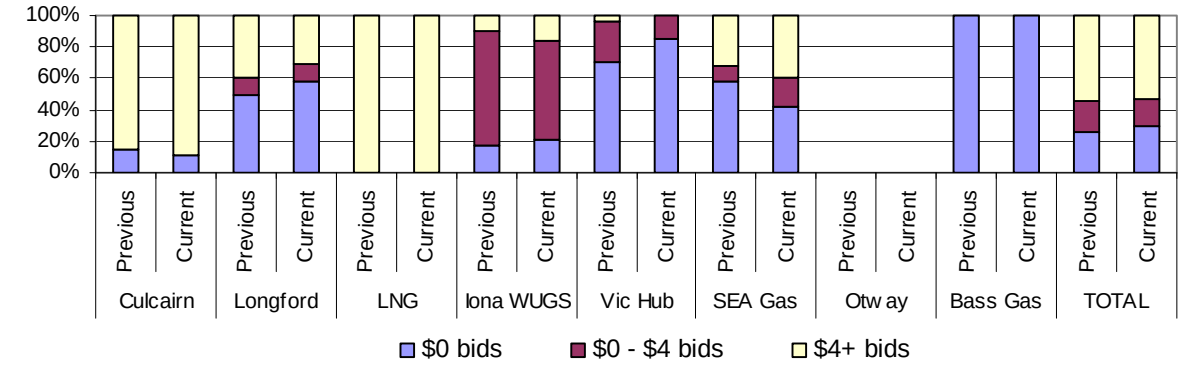


*Average daily estimated gas consumption measured from 1 July 2009 to the current week (inclusive)
**Average daily estimated gas consumption measured from 1 July 2008 to the equivalent week in 2008 (inclusive)
Source: http://www.aemo.com.au (INT 150)

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	AGL	AGL TRU	AGL TRU	AGL TRU	TRU	
LNG							
Iona	TRU	TRU Origin Vic Elec	TRU Origin Vic Elec	TRU Origin Vic Elec	TRU Vic Elec	TRU Origin Vic Elec	TRU
VicHub	AETV	AETV	AETV	AETV	AETV	AETV	AETV
SEAGas	Simply	Simply	Origin Simply	Simply	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:	11 -17 Apr	4 -10 Apr	2009-10 Financial YTD*	2008-09 Financial YTD**
Ballarat	20	12	21	22
Geelong^	76	61	78	83
Gippsland	39	33	44	59
Melbourne	320	223	362	396
Northern	58	48	51	66
TOTAL	**513**	**377**	**556**	**626**

^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	89	89	97	103	103	102	102	117	72	98	84	82
QLD Gas Pipeline	75	75	79	75	80	76	75	79	90	77	71	67
Roma to Brisbane Pipeline	159	180	177	190	192	189	164	214	79	178	170	170
South West QLD Pipeline	143	150	73	125	121	102	128	181	75	120	137	75
NSW/ACT												
Eastern Gas Pipeline	197	218	216	213	214	216	198	250	80	213	199	170
Moomba to Sydney Pipeline	103	173	196	161	193	171	119	420	43	160	180	167
NSW-VIC Interconnect^	-16	5	26	12	24	23	-16	90	-10	8	-9	19
VIC												
Longford to Melbourne	347	393	396	422	392	362	280	1030	39	370	405	468
South West Pipeline	83	182	194	177	161	83	34	347	34	131	118	123
SA												
Moomba to Adelaide Pipeline	109	161	168	162	153	142	128	253	51	146	129	123
SEA Gas Pipeline	83	139	160	170	174	162	108	314	48	142	152	175
TAS												
Tasmanian Gas Pipeline	38	41	44	46	N/A	45	44	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

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	72	78	63	89	97	95	95	140	66	84	92	68
Fairview	111	86	52	98	115	114	104	115	97	97	111	69
Kenya Gas Plant	68	67	64	60	60	62	73	160	34	65	55	
Kincora	0	0	0	10	10	10	0	25	7	4	2	5
Kogan North	11	11	11	11	11	11	11	12	72	11	9	11
Peat	7	7	11	12	12	10	8	15	58	10	9	11
Rolleston	12	12	12	12	12	12	12	30	38	12	11	11
Scotia	25	27	25	25	27	25	25	27	87	26	24	22
Spring Gully	36	42	46	48	49	51	35	60	72	44	43	58
Strathblane	36	42	46	48	49	51	35	60	72	44	43	48
Taloona	22	25	28	29	30	31	21	36	73	27	26	0
Wallumbilla	11	11	11	11	11	11	11	20	53	11	11	13
Yellowbank	13	13	13	13	11	14	14	30	42	13	13	14
Talinga	0	0	0	26	27	27	0	50	8	11	4	
Moomba (SA/QLD)												
Moomba Gas Plant	183	296	287	327	311	298	254	430	61	279	263	265
Ballera	5	0	82	36	27	37	30	150	8	31	11	37
Eastern (VIC)												
Orbost Gas Plant	45	46	47	47	47	47	47	92	22	47	21	0
Lang Lang Gas Plant	50	50	44	49	52	55	55	70	43	51	30	47
Longford Gas Plant	505	547	557	639	538	515	486	1140	53	541	600	645
LNG Storage Dandenong	0	0	0	0	0	0	0	158	0	0	0	1
Otway Basin (VIC)												
Minerva Gas Plant	0	0	0	0	0	0	0	94	76	0	72	89
Otway Gas Plant	93	103	153	177	149	126	73	206	62	125	128	137
Iona Underground Gas Storage	83	211	192	163	202	123	59	440	17	147	76	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)
11 – 17 Apr	Average min.	18.6	15.2	5.4	12.9	10.7	10.4
	Average max.	26.9	24.6	21.1	20.6	22.5	19.3
4 – 10 Apr	Average min.	18.8	17.0	9.9	15.6	17.0	11.9
	Average max.	28.5	25.0	21.3	24.4	25.3	20.8

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

11 – 17 Apr	Scheduling Interval					Daily Imbalance Weighted Average Price
	6am	10am	2pm	6pm	10pm	
Sun	1.84	2.09	2.10	2.09	2.53	1.86
Mon	2.52	2.65	2.65	3.14	3.13	2.56
Tue	2.10	1.84	2.49	2.49	3.10	2.12
Wed	2.56	2.55	3.11	3.11	3.25	2.61
Thu	2.77	2.56	2.56	2.56	3.14	2.76
Fri	1.07	1.07	1.07	0.28	0.08	1.05
Sat	1.07	2.09	2.10	2.10	1.84	1.09

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	
11-Apr	**MP:**	412	435	441	440	439	
	AEMO:	423	433	435	435	447	
	MP as % of AEMO	97	100	101	101	98	**0**
12-Apr	**MP:**	510	528	528	532	537	
	AEMO:	588	580	560	575	564	
	MP as % of AEMO	87	91	94	93	95	**0**
13-Apr	**MP:**	556	556	555	555	553	
	AEMO:	593	567	558	588	569	
	MP as % of AEMO	94	98	99	94	97	**0**
14-Apr	**MP:**	521	504	512	531	530	
	AEMO:	534	534	556	585	579	
	MP as % of AEMO	98	94	92	91	92	**0**
15-Apr	**MP:**	505	519	519	527	528	
	AEMO:	538	520	526	518	517	
	MP as % of AEMO	94	100	99	102	102	**0**
16-Apr	**MP:**	442	444	443	441	441	
	AEMO:	429	448	442	429	416	
	MP as % of AEMO	103	99	100	103	106	**0**
17-Apr	**MP:**	334	333	332	332	331	
	AEMO:	309	311	315	329	331	
	MP as % of AEMO	108	107	105	101	100	**0**

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