

4 – 10 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 aer inquiry@ 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. BHP Billiton failed to submit data for the Minerva Gas plant on Monday, Jemena failed to submit data for the Queensland Gas Pipeline for the Wednesday gas days and Queensland Gas failed to submit data for the Kenya Gas plant for the Sunday gas day (see Figure A1 and A2).

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 80 TJ (6 per cent) compared to the previous week. Significant increases were recorded in NSW/ACT of 32 TJ (11 per cent) and Tasmania of 7 TJ (25 per cent).

Total Gas Powered Generation (GPG) gas usage increased by 68 TJ (19 per cent) compared to the previous week. A significant increase was recorded in New South Wales 55 TJ (151 per cent).

Average production volumes increased by 24 TJ (2 per cent) compared to the previous week. The Eastern Production facility recorded a 49 TJ (11 per cent) increase in production. A fall of 45 TJ (10 per cent) was recorded at the Roma production facility. Average daily flows were higher than the previous week with significant increases in flow occurring on the Eastern Gas pipeline 45 TJ (29 per cent) and the Tasmanian gas pipeline 7 TJ (25 per cent).

Victorian Gas Market

Total average gas injections in the Victorian gas market increased by 10 TJ compared to the previous week (See Figure V3).

The average imbalance price fell from \$1.57/GJ in the previous week to \$1.25/GJ.

There were no bids from Otway again this week.

Bass Gas increased production this week to average daily flows of 46 TJ after starting production again the previous week, with all capacity priced at \$0/GJ.

AEMO issued a negative demand override of 4 TJ and 20 TJ on Sunday and Monday, respectively, due to market participant demand forecasts falling outside AEMO demand forecast threshold (see figure A5). The demand override on Easter Monday was particularly

large with the Market Participant demand forecast reducing over the day (and the AEMO forecast increasing over the day).

The greatest amount of rebidding the week was at IONA. AETV Power rebid everyday this week at VicHub having rebid on most days last week.

Supply Demand Point Constraints (SDPCs) were applied to injections/withdrawals at SEAGas on Wednesday. A Directional Flow Point Constraint (DFPC) was applied to SEAGas withdrawals on Tuesday.

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

Average daily flows	NSW	ACT	VIC	SA	TAS	QLD		
						Brisbane	Mt Isa	Gladstone
4 – 10 Apr	328	9	366	266	33	174	83	77
Financial Year-to-date 2009-10*	365	19	539	281	38	170	84	71
Financial Year-to-date 2008-09**	319	19	594	298	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
4 – 10 Apr	92	4	164	16	161
Financial Year-to-date 2009-10*	82	40	165	23	165
Financial Year-to-date 2008-09**	38	67	184	24	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)
4 – 10 Apr	389	513	214	251
Financial Year-to-date 2009-10*	451	651	276	274
Financial Year-to-date 2008-09**	327	697	310	305

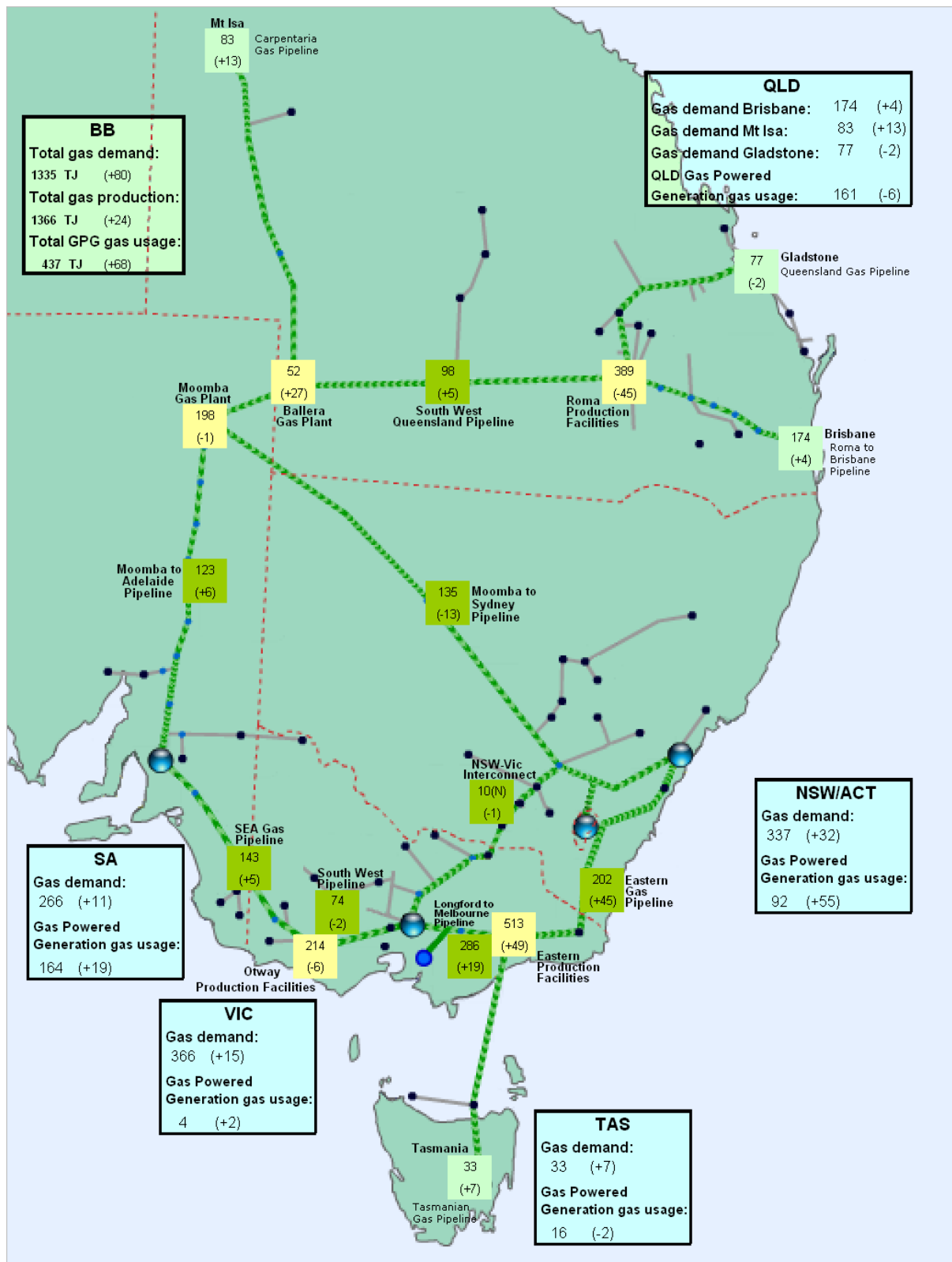
*Average daily estimated gas consumption measured from 1 July 2009 to the current week (inclusive)

**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)



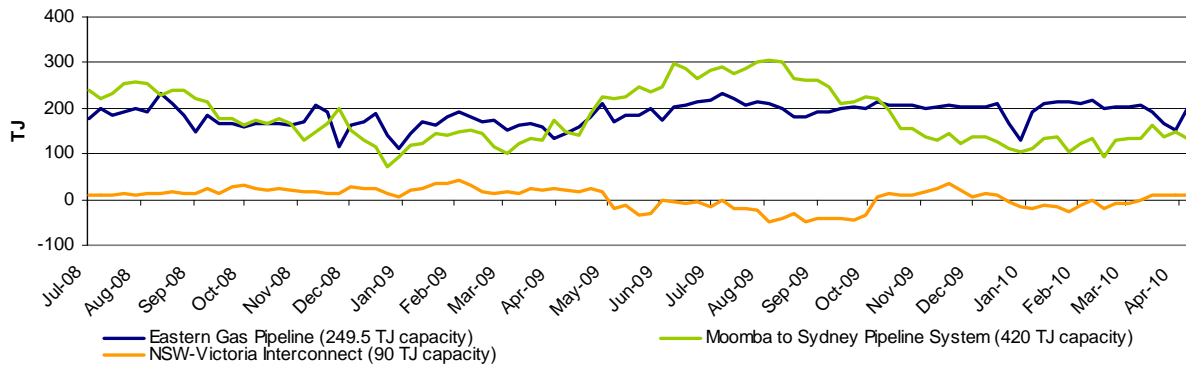
Source: Natural Gas Market Bulletin Board <http://www.gasbb.com.au>

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.

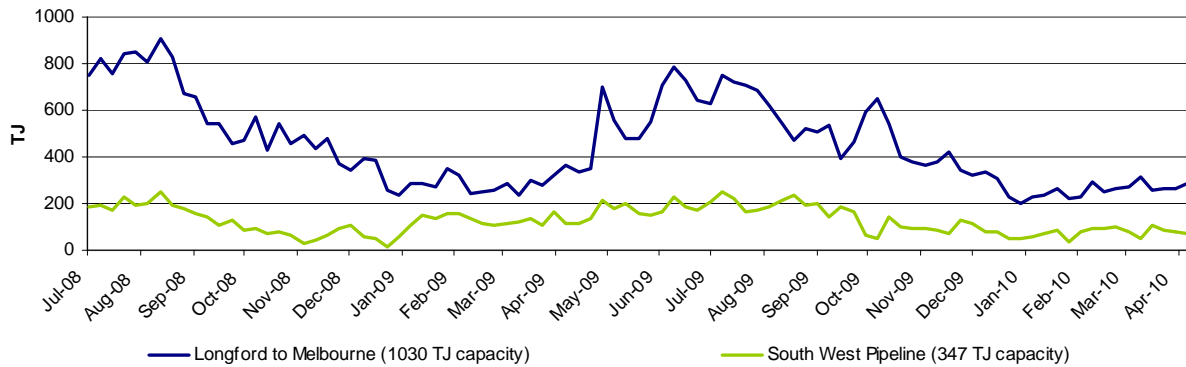
Figure 5: Average daily flows (TJ) into NSW/ACT demand region



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

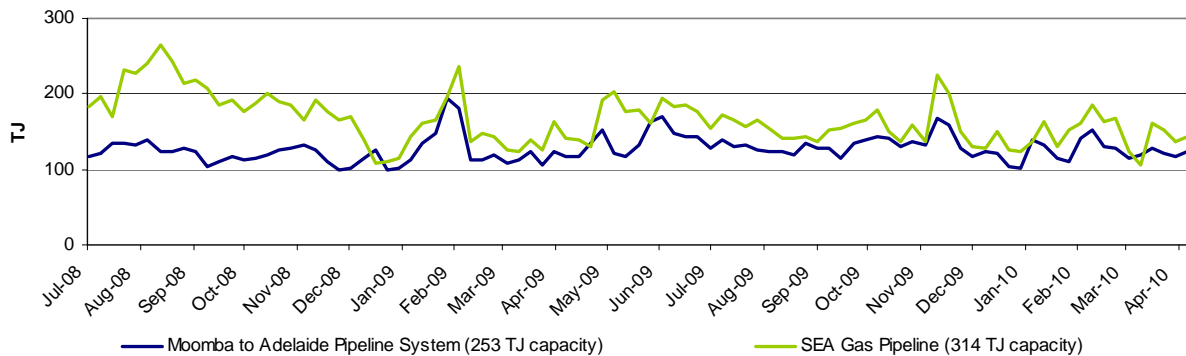
Notes: Negative flows on the NSW-Victoria Interconnect represent flows out of NSW into VIC.

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				
			Bass Gas	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	S	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	S						
TRU Energy	Retailer	4			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)

	4 -10 Apr	28 Mar – 3 Apr	2009-10 Financial YTD*	2008-09 Financial YTD**
Average daily price	1.25	1.57	1.64	3.07

4 -10 Apr	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Daily price	1.17	0.48	2.08	2.07	1.48	1.13	0.34

*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)

Source: <http://www.aemo.com.au> (INT 041)

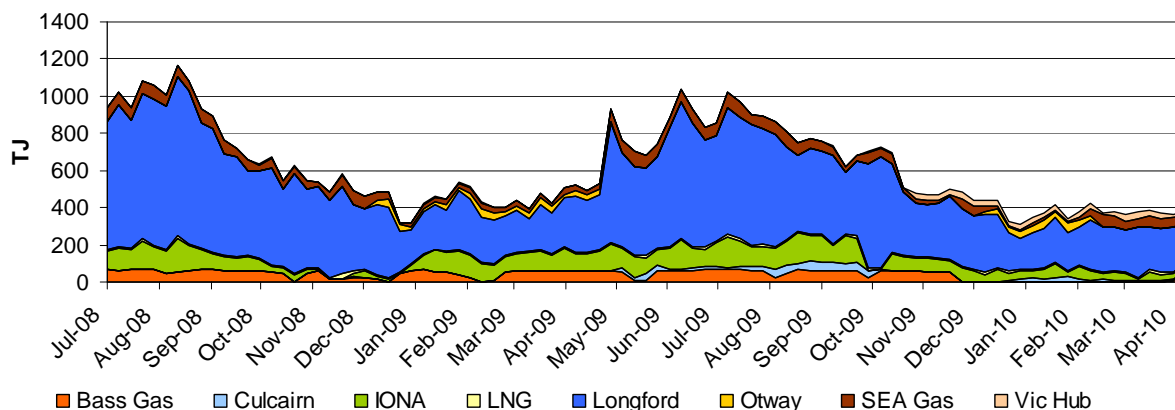
Notes: The daily average market price is a volume weighted imbalance price taking account of trading amounts at five times through the gas day — 6am, 10am, 2pm, 6pm and 10pm.

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:	4 -10 Apr	28 Mar – 3 Apr	2009-10 Financial YTD*	2008-09 Financial YTD**
Culcairn	6	8	16	0.3
Longford	216	241	359	438
LNG	9	11	9	9
IONA	39	28	74	77
VicHub	23.9	19.4	17.4	1.7
SEAGas	35	53	42	45
Bass Gas	46	6	30	47
Otway	0	0	9	12
TOTAL	376	366	556	629



*Average daily estimated gas consumption measured from 1 July 2009 to the current week (inclusive)

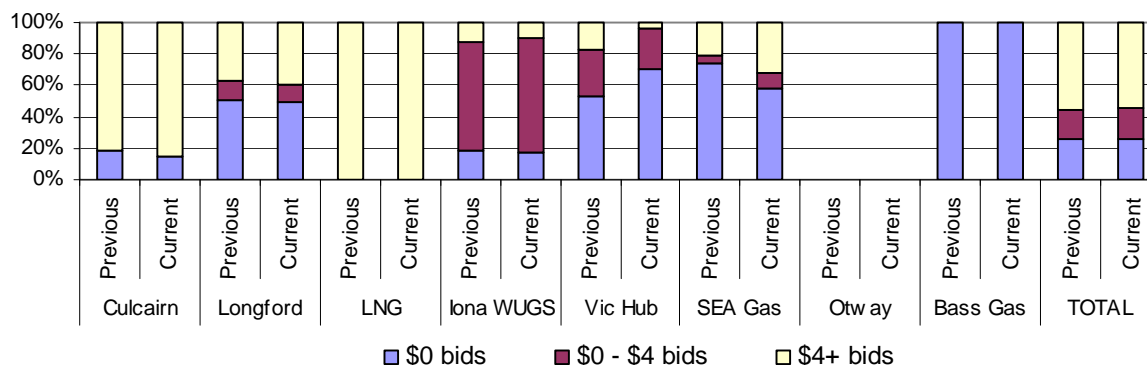
**Average daily estimated gas consumption measured from 1 July 2008 to the equivalent week in 2008 (inclusive)

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							
Longford	AGL		Origin		AGL	AGL Origin	
LNG							
Iona	TRU	TRU	TRU Origin Vic Elec	TRU Origin Vic Elec	TRU Vic Elec	TRU	TRU
VicHub	AETV	AETV	AETV	AETV	AETV	AETV	AETV
SEAGas			Origin Simply	Origin	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 | 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:	4 -10 Apr	28 Mar – 3 Apr	2009-10 Financial YTD*	2008-09 Financial YTD**
Ballarat	12	12	21	22
Geelong^	61	58	78	84
Gippsland	33	33	44	60
Melbourne	223	218	363	398
Northern	48	52	51	66
TOTAL	377	372	557	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	72	83	86	85	83	83	86	117	72	83	84	81
QLD Gas Pipeline	80	80	79	N/A	73	77	76	79	90	77	71	67
Roma to Brisbane Pipeline	153	163	191	194	192	176	150	214	79	174	170	170
South West QLD Pipeline	76	67	77	98	111	136	123	181	76	98	137	74
NSW/ACT												
Eastern Gas Pipeline	176	187	211	208	204	209	192	250	80	202	199	171
Moomba to Sydney Pipeline	99	108	167	162	156	164	89	420	44	135	185	167
NSW-VIC Interconnect^	-16	-14	28	24	23	33	-11	90	-11	10	-10	19
VIC												
Longford to Melbourne	232	229	302	326	317	324	274	1030	39	286	406	471
South West Pipeline	54	31	86	84	106	105	54	347	34	74	117	123
SA												
Moomba to Adelaide Pipeline	104	106	126	131	141	142	111	253	51	123	129	123
SEA Gas Pipeline	123	133	170	172	170	151	83	314	49	143	152	176
TAS												
Tasmanian Gas Pipeline	10	10	24	47	38	40	37	129	30	33	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	81	85	57	60	62	59	64	140	66	67	92	67
Fairview	25	34	55	86	96	112	113	115	97	74	111	68
Kenya Gas Plant	68	67	72	70	72	N/A	66	160	34	69	55	
Kincora	0	0	0	3	3	0	0	25	6	1	2	5
Kogan North	11	11	11	11	11	11	11	12	72	11	9	11
Peat	11	11	11	11	11	11	11	15	58	11	9	11
Rolleston	12	12	12	12	12	12	11	30	38	12	11	11
Scotia	26	26	27	27	27	27	27	27	87	26	23	22
Spring Gully	35	35	35	38	40	38	34	60	72	36	43	57
Strathblane	35	35	35	38	40	38	34	60	72	36	43	48
Talooka	21	21	21	23	24	23	20	36	73	22	26	0
Wallumbilla	11	11	11	11	10	11	11	20	53	11	11	13
Yellowbank	12	12	14	12	13	13	11	30	42	12	13	14
Talinga	0	0	0	0	0	0	0	50	6	0	3	
Moomba (SA/QLD)												
Moomba Gas Plant	155	162	221	226	218	223	182	430	61	198	263	267
Ballera	80	87	83	66	27	9	17	150	7	52	11	38
Eastern (VIC)												
Orbost Gas Plant	34	34	34	34	34	36	38	92	22	35	20	0
Lang Lang Gas Plant	35	40	47	51	50	51	51	70	42	46	30	46
Longford Gas Plant	323	363	457	485	485	488	421	1140	53	432	601	650
LNG Storage Dandenong	0	0	0	0	0	0	0	158	0	0	0	1
Otway Basin (VIC)												
Minerva Gas Plant	61	N/A	66	87	94	57	0	94	78	61	74	89
Otway Gas Plant	96	96	77	75	110	121	76	206	62	93	128	138
Iona Underground Gas Storage	29	14	81	85	69	85	58	440	17	60	74	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)
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
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

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

4 – 10 Apr	Scheduling Interval					Daily Imbalance Weighted Average Price
	6am	10am	2pm	6pm	10pm	
Sun	1.21	0.51	0.52	0.55	0.55	1.17
Mon	0.50	0.01	0.11	0.65	0.11	0.48
Tue	2.10	1.84	1.84	1.88	1.90	2.08
Wed	2.18	2.01	2.55	0.28	0.28	2.07
Thu	1.50	0.45	1.84	1.50	1.84	1.48
Fri	1.07	1.90	2.09	1.92	2.15	1.13
Sat	0.29	0.46	2.10	2.17	2.55	0.34

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	
4-Apr	MP:	327	322	323	324	324	-4
	AEMO:	288	287	290	288	285	
	MP as % of AEMO	114	112	112	112	114	
5-Apr	MP:	318	309	305	299	295	-24
	AEMO:	269	270	271	270	285	
	MP as % of AEMO	118	115	113	111	104	
6-Apr	MP:	374	373	372	371	371	0
	AEMO:	358	340	352	353	345	
	MP as % of AEMO	104	110	106	105	107	
7-Apr	MP:	383	383	385	386	386	0
	AEMO:	363	369	372	374	375	
	MP as % of AEMO	106	104	104	103	103	
8-Apr	MP:	396	402	403	403	402	-1
	AEMO:	371	373	374	395	399	
	MP as % of AEMO	107	108	108	102	101	
9-Apr	MP:	382	394	390	388	388	0
	AEMO:	369	376	375	381	395	
	MP as % of AEMO	104	105	104	102	98	
10-Apr	MP:	324	324	324	324	324	0
	AEMO:	318	317	323	335	343	
	MP as % of AEMO	102	102	100	97	94	

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