WEEKLY GAS MARKET ANALYSIS

AUSTRALIAN ENERGY REGULATOR

20 – 26 December 2009

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

Figure A1 shows that there were eight instances of missing flow data on the Bulletin Board this week. Tas Gas Networks failed to submit data for the Tasmanian Gas Pipeline for the entire week and APA group failed to submit data for the Moomba to Sydney pipeline for Friday.

As shown in Figure 4, average daily gas demands were lower in all regions compared to the previous week except for Queensland, where there was no change. Victoria recorded the largest reduction (38 per cent). In line with the falls in demand, there were reductions in average daily gas production (down by 192 TJ), and average daily flows across most pipelines compared to the previous week, with the Longford to Melbourne pipeline experiencing the largest reduction in flows (83 TJ).

While average daily demand for gas for Gas Powered Electricity Generation (GPG) remained steady in Queensland it fell in all other regions compared to the previous week, most likely as a result of industry shutting down over the Christmas period. Total average daily demand for gas for GPG fell by 106 TJ compared to the previous week (with the vast majority of this fall occurring in Victoria, SA and NSW/ACT at around 35 TJ each).

Victorian Gas Market

Total average daily gas injections into the Victorian Principal Transmission System (VPTS) fell by 108 TJ compared to the previous week with the main reduction occurring at Longford (83 TJ). (See Figure V3). Figure V6 shows that average daily withdrawals from system demand zones on the VPTS also fell by 108 TJ (or 25 per cent) compared to the previous week. As shown in figure V2, the average imbalance price fell from $1.41/GJ in the previous week to $1.21/GJ.

As shown in Figure V2 there were no bids from Bass Gas this week. This was due to a scheduled maintenance outage.

Figure A5 shows daily demand forecasts and demand overrides. Due to market participant demand forecasts falling outside AEMO demand forecast thresholds, the Australian Energy Market Operator (AEMO) issued negative demand overrides on three days; 24, 25 and 26 December, for a total of 55 TJ.).

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
Current week (20 - 26 December)	272	6	283	231	0	162	96	72
Financial Year-to-date 2009-10*	388	25	651	286	37	166	85	69
Financial Year-to-date 2008-09**	340	26	702	311	33	173	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**
Current week (20 - 26 December)	63	32	134	30	192
Financial Year-to-date 2009-10*	86	45	163	22	155
Financial Year-to-date 2008-09**	31	67	187	23	111

^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.)

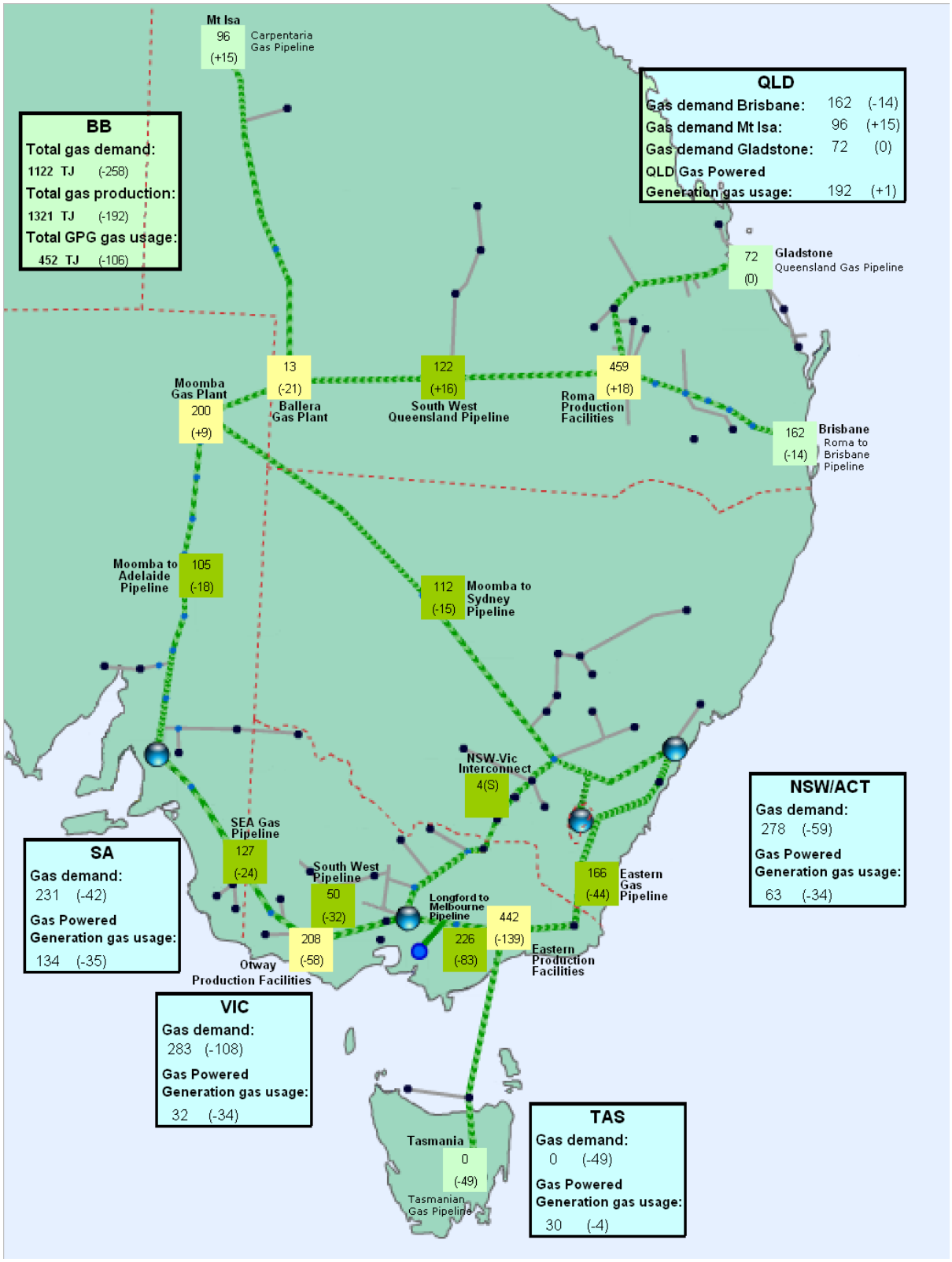
Figure 3: Daily average production flows (TJ) for each production zone

Average daily flows	**Roma (QLD)**	**Eastern Victoria**	**Otway Basin (VIC)**	**Moomba (SA/QLD)**
Current week (20 - 26 December)	459	442	208	213
Financial Year-to-date 2009-10*	443	741	297	298
Financial Year-to-date 2008-09**	314	819	316	337

*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)

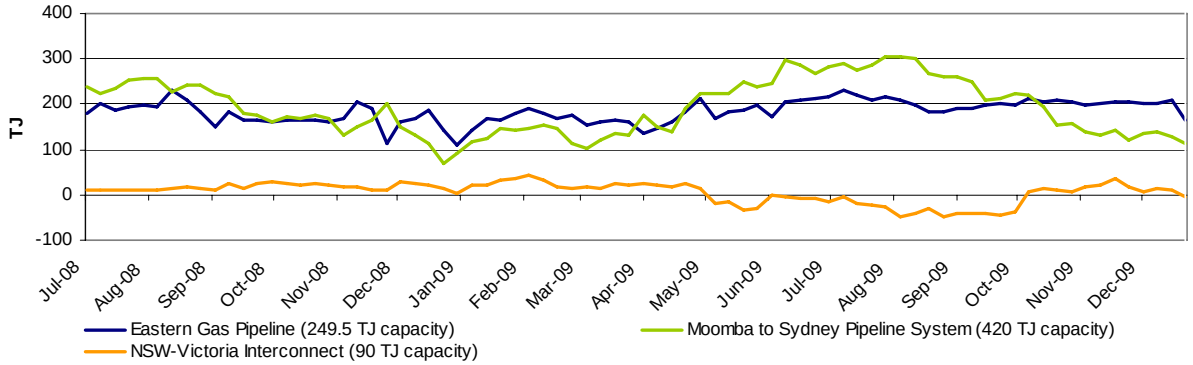


Source: Natural Gas Market Bulletin Board http://www.gasbb.com.au
Notes: Direction of aggregate daily flows along the NSW-Vic Interconnect indicated on map by S (South) or N (North).

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.

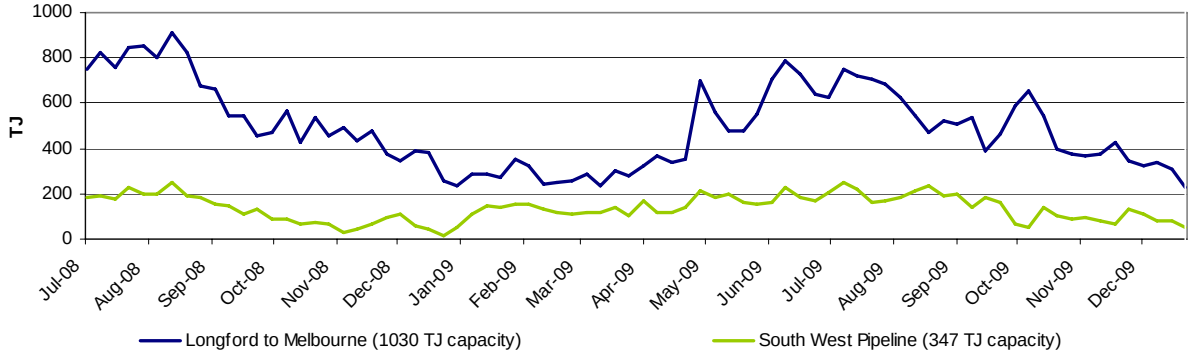
Figure 5: Average daily flows (TJ) into NSW/ACT demand region



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

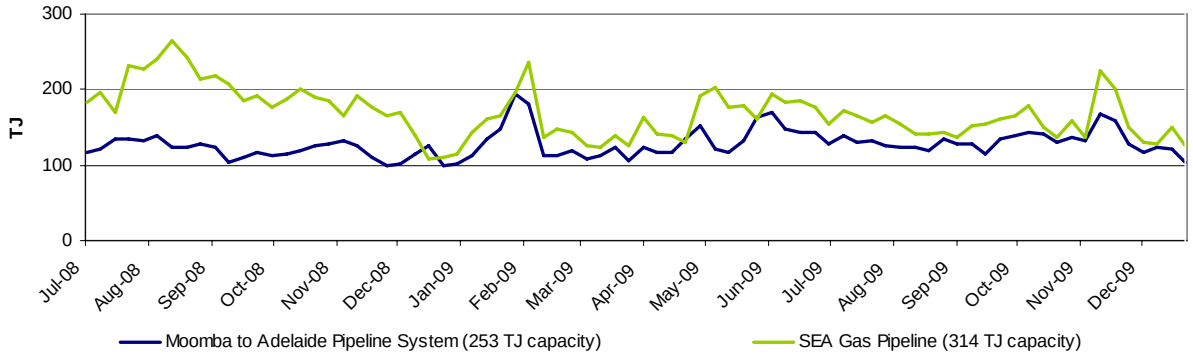
Notes: Negative flows on the NSW-Victoria Interconnect represent flows out of NSW into VIC.

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 (6 am) 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		
Country Energy	Transmission Customer	1		S										
Energy Australia	Retailer	2			S		S							
International Power	Transmission Customer	1											S	
Simply Energy	Retailer	3				NS	S	S						
Origin (Vic)	Retailer	6		S	NS	NS	S	S		S	NS	NS		
Origin (Uranquinty)	Trader	1					S							
Red Energy	Retailer	2				NS	S							
Santos	Retailer	2						S	S					
TRU Energy	Retailer	3			S	NS	S					NS		
Victoria Electricity	Trader	1										S		
Victoria Electricity	Retailer	5			S	NS	S	S	S					
Visy Paper	Distribution Customer	2					S				S			
Coogee Energy	Transmission Customer	1					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)

	Current Week (20-26 December)	Previous Week (13-19 December)	2009-10 Financial YTD*	2008-09 Financial YTD**
Average daily price	1.21	1.41	1.58	*3.18*

Current Week (20 - 26 December)	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Daily price	0.54	2.62	0.52	1.49	1.43	0.47	1.40

*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)

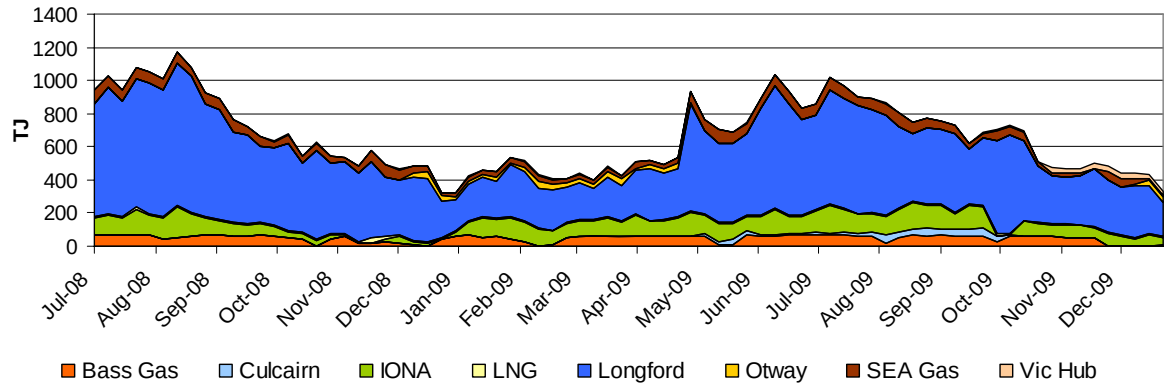
Notes: The daily average market price is a volume weighted imbalance price taking account of trading amounts at five times through the gas day — 6am, 10am, 2pm, 6pm and 10pm.

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:	Current Week (20-26 December)	Previous Week (13-19 December)	2009-10 Financial YTD*	2008-09 Financial YTD**
Culcairn	9	0	18	0.4
Longford	203	286	437	554
LNG	9	8	9	10
IONA	40	67	94	66
VicHub	24.0	25.9	11.6	1.6
SEAGas	10	14	46	54
Bass Gas	0	0	46	46
Otway	32	34	3	4
TOTAL	**327**	**435**	**664**	**736**

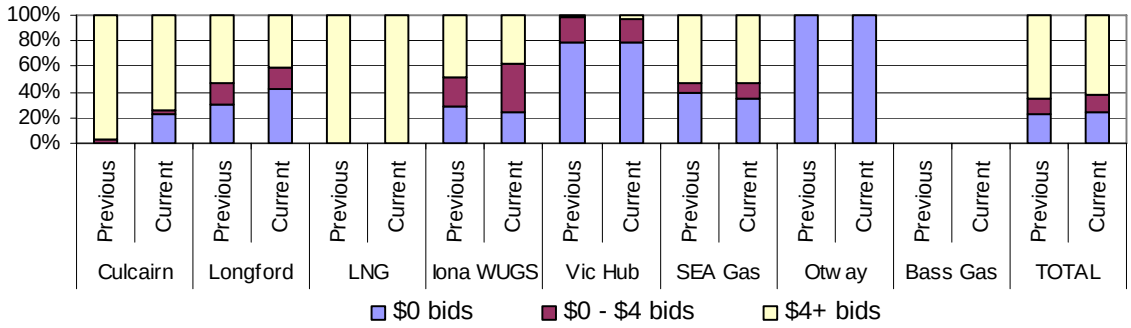


*Average daily estimated gas consumption measured from 1 July 2009 to the current week (inclusive)
**Average daily estimated gas consumption measured from 1 July 2008 to the equivalent week in 2008 (inclusive)
Source: http://www.aemo.com.au (INT 150)

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		CE	CE		CE		
Longford	TRU		Origin TRU	Origin			
LNG							
Iona	TRU	TRU	TRU	Origin TRU	TRU	TRU	AGL TRU
VicHub	AETV	AETV	AETV	AETV	AETV	AETV	AETV
SEAGas	Simply	Simply		Simply	Simply		Simply
Bass Gas							

Source: http://www.aemo.com.au (INT 131)

Notes: Origin = Origin Energy | AGL = AGL Sales | TRU = TRUenergy | Simply = Simply Energy | AETV = AETV Power | CE = Country Energy

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:	Current Week (20-26 December)	Previous Week (13-19 December)	2009-10 Financial YTD*	2008-09 Financial YTD**
Ballarat	9	12	27	28
Geelong^	57	78	85	94
Gippsland	25	43	49	64
Melbourne	213	264	443	479
Northern	28	43	60	72
TOTAL	**331**	**439**	**664**	**738**

^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 Maximum Daily Quantity (MDQ) 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	90	88	98	100	101	97	98	117	72	96	85	82
QLD Gas Pipeline	72	75	72	73	75	70	65	79	87	72	69	67
Roma to Brisbane Pipeline	155	178	180	172	160	145	147	214	77	162	166	173
South West QLD Pipeline	126	113	106	115	120	131	144	181	81	122	146	61
NSW/ACT												
Eastern Gas Pipeline	181	210	208	193	139	113	117	250	81	166	202	177
Moomba to Sydney Pipeline	84	120	133	134	113	N/A	88	420	50	112	211	189
NSW-VIC Interconnect^	-16	-14	4	13	-4	5	-14	90	-13	-4	-11	17
VIC												
Longford to Melbourne	243	281	302	241	203	152	164	1030	48	226	492	579
South West Pipeline	39	43	30	104	60	34	40	347	41	50	141	122
SA												
Moomba to Adelaide Pipeline	99	114	118	137	92	86	87	253	52	105	131	120
SEA Gas Pipeline	95	158	179	168	119	83	84	314	49	127	155	190
TAS												
Tasmanian Gas Pipeline	N/A	N/A	N/A	N/A	N/A	N/A	N/A	129	29	0	37	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	97	109	102	107	110	105	106	140	66	105	92	64
Fairview	118	116	122	122	122	123	123	115	99	121	113	61
Kenya^	60	62	62	62	62	62	61	160	27	62	44	
Kincora	0	0	0	0	0	0	0	25	5	0	1	7
Kogan North	9	10	10	10	10	10	10	12	66	10	8	12
Peat	7	7	7	7	7	7	7	15	56	7	8	10
Rolleston	12	12	12	11	12	12	12	30	38	12	11	11
Scotia	27	27	27	27	27	27	27	27	80	27	22	21
Spring Gully	34	34	35	34	34	34	35	60	76	34	46	55
Strathblane	34	34	35	34	34	34	35	60	76	34	46	46
Taloona	21	21	21	21	21	21	21	36	77	21	28	0
Wallumbilla	11	12	11	11	11	11	11	20	53	11	11	13
Yellowbank	13	15	15	15	15	15	15	30	46	15	14	14
Eastern (VIC)												
Orbost Gas Plant	28	28	28	28	28	28	28	92	12	28	11	0
Lang Lang Gas Plant	0	0	0	0	0	0	0	70	64	0	45	46
Longford Gas Plant	463	498	521	451	392	314	258	1140	60	414	685	772
LNG Storage Dandenong	0	0	0	0	0	0	0	158	0	0	0	1
Otway Basin (VIC)												
Minerva Gas Plant	47	67	N/A	67	57	47	47	94	79	56	74	90
Otway Gas Plant	92	115	140	146	135	80	79	206	63	113	130	153
Iona Underground Gas Storage	31	31	25	96	45	21	26	320	29	39	94	73
Moomba (SA/QLD)												
Moomba Gas Plant	218	246	229	234	201	150	120	430	67	200	289	295
Ballera	6	9	19	33	14	5	3	150	6	13	9	43

*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)
Current week (20 - 26 Dec)	Average min.	21.6	19.7	14.9	15.4	16.8	11.5
	Average max.	29.7	25.6	28.9	26.5	30.4	22.0
Previous week (13 - 19 Dec)	Average min.	22.3	20.0	13.5	15.0	16.8	11.4
	Average max.	31.0	26.4	31.6	25.9	29.3	20.7

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

Current Week (20 - 26 December)	Scheduling Interval					Daily Imbalance Weighted Average Price
	6am	10am	2pm	6pm	10pm	
Sun	0.50	1.57	1.48	0.99	0.12	0.54
Mon	2.70	1.53	1.48	0.50	0.12	2.62
Tue	0.50	0.49	0.99	0.99	0.65	0.52
Wed	1.49	1.49	1.49	1.49	1.49	1.49
Thu	1.49	0.79	1.39	0.50	0.50	1.43
Fri	0.49	0.49	0.49	0.12	0.00	0.47
Sat	1.49	0.99	0.50	0.49	0.19	1.40

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	
20-Dec	**MP:**	340	343	342	341	341	
	AEMO:	325	325	324	328	330	
	MP as % of AEMO	105%	106%	106%	104%	103%	**0**
21-Dec	**MP:**	399	399	402	402	402	
	AEMO:	380	380	381	381	363	
	MP as % of AEMO	105%	105%	106%	106%	111%	**0**
22-Dec	**MP:**	403	402	408	410	410	
	AEMO:	408	373	377	382	380	
	MP as % of AEMO	99%	108%	108%	107%	108%	**0**
23-Dec	**MP:**	434	417	423	423	423	
	AEMO:	404	385	403	384	375	
	MP as % of AEMO	107%	108%	105%	110%	113%	**0**
24-Dec	**MP:**	376	373	378	379	379	
	AEMO:	336	330	329	325	341	
	MP as % of AEMO	112%	113%	115%	117%	111%	**-4**
25-Dec	**MP:**	301	301	298	279	263	
	AEMO:	271	269	265	258	230	
	MP as % of AEMO	111%	112%	112%	108%	114%	**-34**
26-Dec	**MP:**	289	290	290	291	287	
	AEMO:	267	255	250	245	236	
	MP as % of AEMO	108%	114%	116%	119%	122%	**-17**

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