WEEKLY GAS MARKET ANALYSIS

AUSTRALIAN ENERGY REGULATOR

29 November - 5 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

For the third week in a row there was no missing flow data on the Bulletin Board.

This week was again characterised by mild temperatures, and average daily temperatures fell, albeit slightly, compared to the previous week in all demand regions (see Figure A3).

Coincident with the milder temperatures, average daily demand for gas for gas powered generation (GPG) fell compared to the previous week in all regions except Queensland, where there was an increase in average daily demand for GPG of 8 TJ.

Average daily total demand fell compared to last week in Victoria and SA driven by the fall in average daily demand for gas for GPG. The fall in overall average daily demand in these two regions outweighed the largest increase in average daily demand of 12 TJ, which occurred in NSW/ACT (despite a fall in average daily demand for GPG there of 14 TJ).

Both of the production hubs in Victoria experienced a fall in average daily demand of close to 30 TJ this week compared to last week due to decreased demand in Victoria and SA. Increased average daily demand in the NSW/ACT region was supplied through increased average daily production at Moomba and increased average daily flows along the Moomba to Sydney Pipeline.

Victorian gas market

Total average daily gas injections and withdrawals in the Victorian gas market were 8 per cent lower this week than the previous week. (See Figure V3).

Coinciding with the decrease in average daily demand, the average imbalance price fell slightly this week compared to last week from $1.67/GJ to $1.61/GJ. There was a reduction of gas bid into the market at $0/GJ both in total volume and also as a proportion of all gas bids (See Figure V4).

Due to a scheduled maintenance outage, no gas was bid in from Bass Gas this week. This outage is planned to finish on 20 February 2010. No other constraints were applied to Victorian facilities.

The Australian Energy Market Operator (AEMO) issued a negative demand override of 17 TJ on the 29 November gas day, due to market participant demand forecasts falling outside AEMO demand forecast thresholds (See Figure A5).

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 (29 Nov - 5 Dec)	329	9	435	246	51	182	78	72
Financial Year-to-date 2009-10*	397	28	697	291	37	165	84	69
Financial Year-to-date 2008-09**	350	29	743	321	33	175	80	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 generation) in each demand region.

Figure 2: Average daily gas (TJ) used for GPG in each demand region

Average daily gas for GPG usage^	NSW	VIC	SA	TAS	QLD
Current week (29 Nov - 5 Dec)	94	55	136	34	191
Financial Year-to-date 2009-10*	86	46	165	21	150
Financial Year-to-date 2008-09**	30	73	195	22	112

^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 - Bell Bay Three, and Tamar Valley power stations.
5. QLD - Braemar 1, Braemar 2, Roma, Oakey, Barcaldine, and Swanbank power stations.
6. ACT – no column added since there is no GPG in the demand region.

Figure 3 sets out the daily average flows 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).

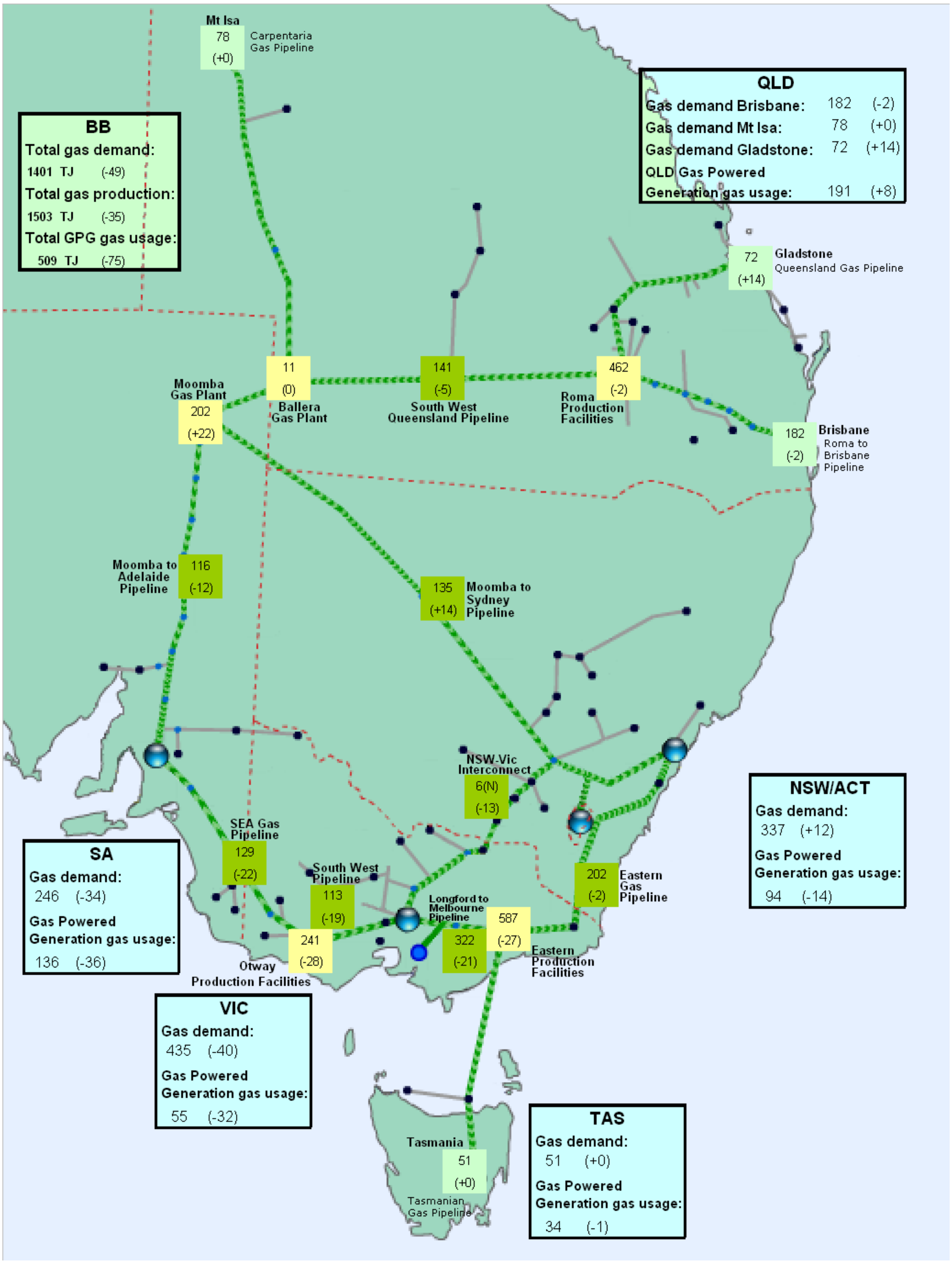
Figure 3: Daily average production flows (TJ) for each production zone

Average daily flows	Roma (QLD)	Eastern Victoria	Otway Basin (VIC)	Moomba (SA/QLD)
Current week (29 Nov - 5 Dec)	462	587	241	213
Financial Year-to-date 2009-10*	441	767	306	307
Financial Year-to-date 2008-09**	317	851	332	349

*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

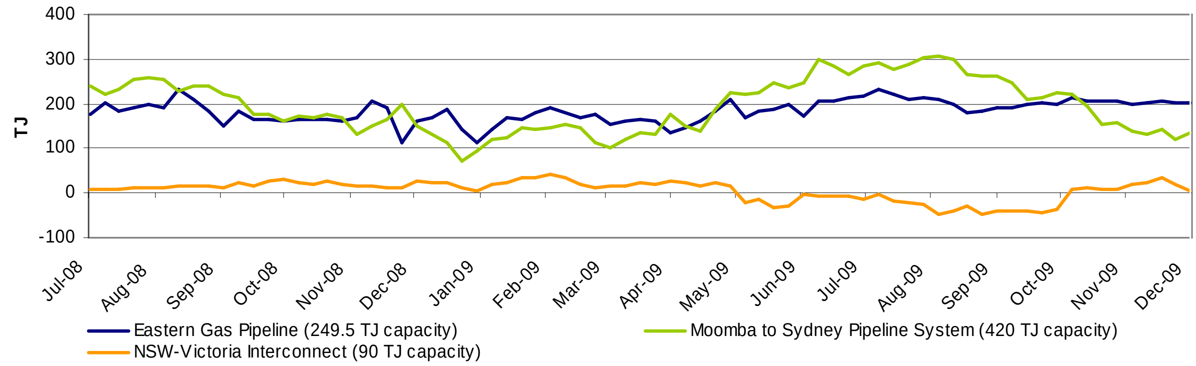
Notes: Direction of aggregate daily flows along the NSW-Vic Interconnect indicated on map by S (South) or N (North).

Overall average daily production decreased this week by 35 TJ, largely influenced by reductions at Victorian facilities. Although average daily production fell at the Victorian facilities, increased average daily production at Moomba provided gas supplies to NSW/ACT. While total average daily flows increased on the Moomba to Sydney Pipeline they fell on all other pipelines on the Bulletin Board.

Gas flows into demand regions

Figures 5-7 show the average daily flows into each of the demand region served by multiple pipelines and supply sources since July 2008.

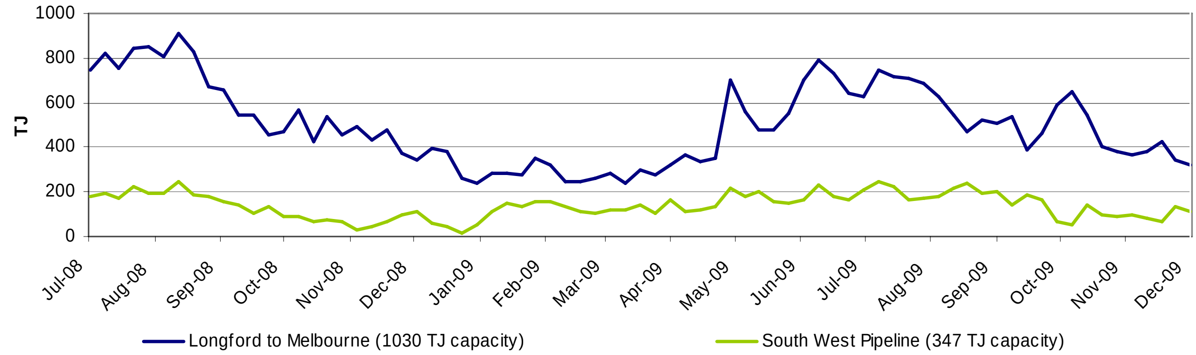
Figure 5: Average daily flows (TJ) into NSW/ACT demand region



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

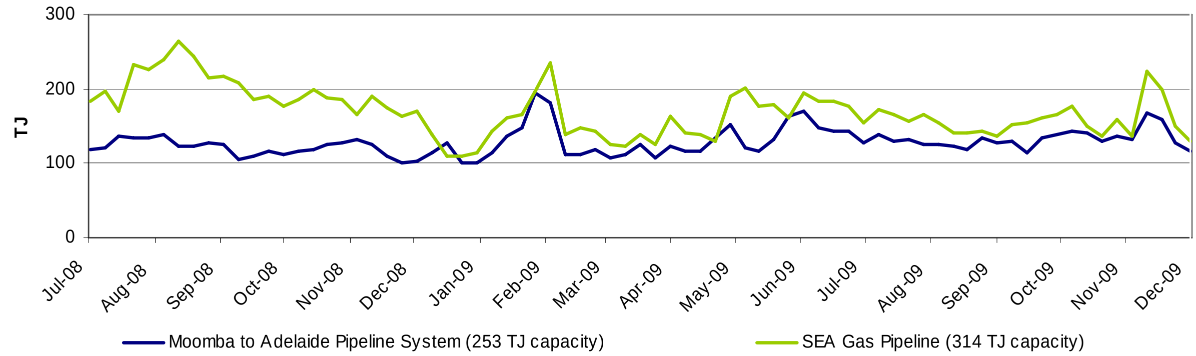
Notes: Negative flows on the NSW-Victoria Interconnect represent flows out of NSW into VIC.

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 (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 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					NS
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	1					S							
International Power	Transmission Customer	1											S	
Simply Energy	Retailer	3				NS	S	NS						
Origin (Vic)	Retailer	6		NS	NS	NS	S	S			S	S		
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			

^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 compares the volume-weighted average daily imbalance price for the current week with the previous week, 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 shown.

Figure V2: Volume-weighted average daily imbalance prices ($/GJ)

	Current week (29 Nov - 5 Dec)	Previous week (22 - 28 November)	2009-10 Financial YTD*	2008-09 Financial YTD**
Average daily price	1.61	1.67	1.59	*3.34*

Current Week (29 Nov - 5 Dec)	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Daily price	0.54	3.15	1.54	1.52	1.51	1.50	1.54

*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)

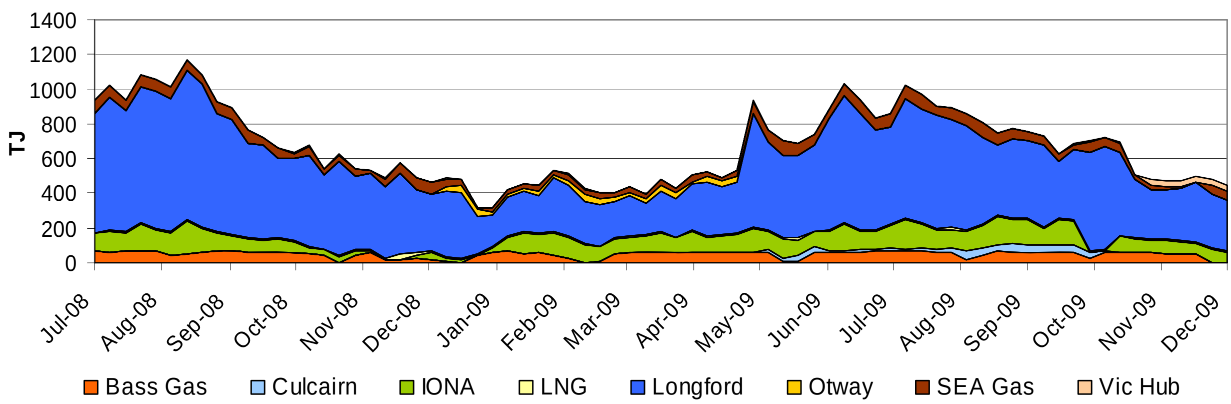
Notes: The daily average market price is a volume weighted imbalance price taking account of trading amounts at five times through the gas day — 6am, 10am, 2pm, 6pm and 10pm.

System injections

Figure V3 compares the average daily injections into the VPTS for the current week, with the previous week, 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 (29 Nov - 5 Dec)	Previous week (22 - 28 November)	2009-10 Financial YTD*	2008-09 Financial YTD**
Culcairn	0	0	21	0.5
Longford	290	311	459	583
LNG	7	7	9	10
IONA	62	76	99	74
VicHub	34.3	34.0	9.8	1.5
SEAGas	49	54	49	57
Bass Gas	0	1	52	50
Otway	0	0	0	0
TOTAL	**443**	**483**	**699**	**776**



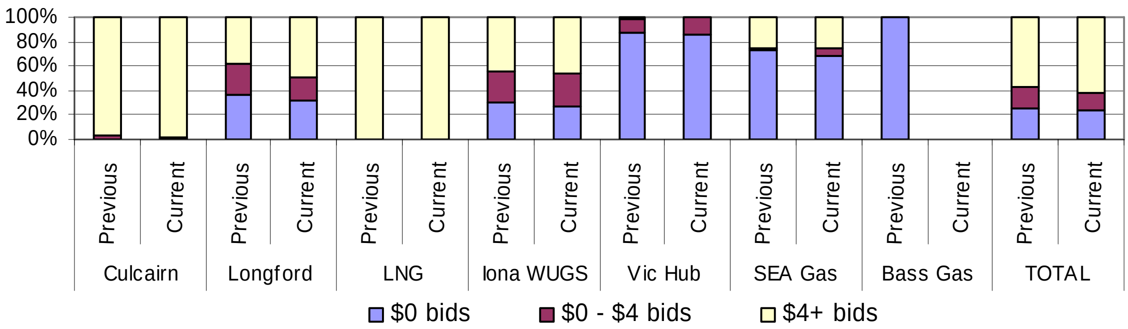
*Average daily estimated gas consumption measured from 1 July 2009 to the current week (inclusive)

**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 bids at each of the injection points on the VPTS for the current week to 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 shows where market participants submitted intra-day renominations at injection points on the VPTS.

Figure V5: Intra-day rebidding of gas injections

Injection Point:	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Culcairn							
Longford	AGL Origin	AGL	AGL	AGL	AGL	AGL	AGL TRU
LNG							
Iona	TRU	TRU	TRU	TRU	TRU	TRU	
VicHub	AETV	AETV	AETV			AETV	
SEAGas	Simply	Simply	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

System withdrawals

Figure V6 compares the average daily gas usage on the VPTS for the current week to the previous week, the 2009-10 financial year-to-date, and the 2008-09 equivalent.

Figure V6: Average daily withdrawals (TJ) from system demand zones on the VPTS

System withdrawal zone:	Current Week (29 Nov - 5 Dec)	Previous Week (22 - 28 November)	2009 Financial YTD*	2008 Financial YTD**
Ballarat	13	11	29	30
Geelong^	84	94	87	98
Gippsland	35	42	51	66
Melbourne	275	286	469	508
Northern	40	51	63	74
TOTAL	**446**	**484**	**699**	**777**

^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	58	72	79	82	84	89	86	117	72	78	84	80
QLD Gas Pipeline	67	69	73	73	74	74	73	79	87	72	69	67
Roma to Brisbane Pipeline	164	187	191	192	189	182	170	208	79	182	165	175
South West QLD Pipeline	144	149	137	143	144	129	138	168	89	141	150	62
NSW/ACT												
Eastern Gas Pipeline	187	212	213	212	210	199	179	250	81	202	203	178
Moomba to Sydney Pipeline	63	149	144	168	171	155	99	420	53	135	222	200
NSW-VIC Interconnect^	21	10	4	3	0	0	3	90	-15	6	-14	17
VIC												
Longford to Melbourne	265	364	362	333	331	310	292	1030	50	322	518	610
South West Pipeline	98	155	136	119	103	118	61	347	43	113	150	133
SA												
Moomba to Adelaide Pipeline	105	111	124	119	129	127	99	253	53	116	133	121
SEA Gas Pipeline	90	148	138	149	136	126	118	314	50	129	158	200
TAS												
Tasmanian Gas Pipeline	51	53	52	51	51	50	46	129	29	51	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
Flow on Tasmanian Gas Pipeline for Thursday has not been included in average flow calculations for the current week

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	112	113	98	109	85	101	140	65	100	91	65
Fairview	122	122	122	122	121	122	122	115	98	122	113	61
Kenya^	52	65	67	66	69	70	71	160	25	66	41	
Kincora	6	6	8	8	8	8	8	25	5	7	1	8
Kogan North	8	8	8	8	8	8	9	12	65	8	8	12
Peat	7	7	7	7	7	7	7	15	57	7	9	10
Rolleston	11	8	11	11	11	11	11	30	38	11	11	11
Scotia	27	27	27	27	27	27	27	27	77	27	21	21
Spring Gully	35	35	34	34	35	35	34	60	78	35	47	55
Strathblane	35	35	34	34	35	35	34	60	78	35	47	46
Taloona	21	21	21	21	21	21	21	36	79	21	29	0
Wallumbilla	12	12	12	12	11	11	11	20	53	11	11	13
Yellowbank	14	14	15	15	13	8	8	30	47	12	14	14
Moomba (SA/QLD)												
Moomba Gas Plant	174	163	215	225	259	208	168	430	70	202	301	307
Ballera	2	2	15	0	16	30	14	150	4	11	6	42
Eastern (VIC)												
Orbost Gas Plant	29	29	29	39	46	29	28	92	9	33	8	0
Lang Lang Gas Plant	0	0	0	0	0	0	0	70	73	0	51	49
Longford Gas Plant	494	577	600	546	580	536	547	1140	62	554	707	800
LNG Storage Dandenong	0	0	0	0	0	0	0	158	0	0	0	2
Otway Basin (VIC)												
Minerva Gas Plant	68	88	82	79	77	73	68	94	81	76	76	91
Otway Gas Plant	99	124	109	106	106	105	79	206	64	104	131	159
Iona Underground Gas Storage	38	87	84	65	60	66	26	320	31	61	100	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)
Source: Natural Gas Market Bulletin Board http://www.gasbb.com.au

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 shows the average minimum and maximum daily temperatures for each of the demand regions for the current week. The average daily temperatures for the previous week are also provided.

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 (29 Nov - 5 Dec)	Average min.	19.9	16.6	9.6	13.1	13.4	10.0
	Average max.	30.4	24.0	24.1	24.6	24.0	17.5
Previous Week (22 - 28 November)	Average min.	21.9	20.2	14.3	15.2	14.8	12.2
	Average max.	31.0	28.4	27.2	24.8	26.2	20.2

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 (29 Nov - 5 Dec)	Scheduling Interval					Daily Imbalance Weighted Average Price
	6 am	10 am	2 pm	6 pm	10 pm	
Sun	0.56	0.49	0.33	0.61	0.14	0.54
Mon	3.16	2.71	2.70	3.14	3.16	3.15
Tue	1.50	1.77	2.70	1.81	3.07	1.54
Wed	1.51	1.49	1.49	2.70	2.71	1.52
Thu	1.50	1.49	1.50	1.50	3.14	1.51
Fri	1.50	1.52	1.52	1.53	2.79	1.50
Sat	1.53	3.00	1.53	3.14	1.53	1.54

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

Figure A5 compares the market participants (MP) 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)

Current week (29 Nov – 5 Dec)	Demand Forecasts (TJ)	Schedule					Total Demand Override Applied (TJ)
		1	2	3	4	5	
Sun	**MP**	401	400	400	399	382	**-17**
	AEMO	349	367	369	365	340	
	MP as % of AEMO	115%	109%	108%	109%	112%	
Mon	**MP**	513	521	519	529	529	**0**
	AEMO	494	509	512	521	504	
	MP as % of AEMO	104%	102%	101%	102%	105%	
Tue	**MP**	490	487	486	487	497	**0**
	AEMO	471	473	470	471	477	
	MP as % of AEMO	104%	103%	103%	103%	104%	
Wed	**MP**	454	456	455	458	458	**0**
	AEMO	441	442	443	449	444	
	MP as % of AEMO	103%	103%	103%	102%	103%	
Thu	**MP**	442	440	439	438	437	**0**
	AEMO	446	439	440	447	446	
	MP as % of AEMO	99%	100%	100%	98%	98%	
Fri	**MP**	438	440	433	432	432	**0**
	AEMO	455	443	438	430	424	
	MP as % of AEMO	96%	99%	99%	100%	102%	
Sat	**MP**	354	354	351	351	351	**0**
	AEMO	367	354	369	351	339	
	MP as % of AEMO	96%	100%	95%	100%	104%	

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