WEEKLY GAS MARKET ANALYSIS

AUSTRALIAN ENERGY REGULATOR

1 - 7 November 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. 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 no missing flow data on the Bulletin Board this week.

High temperatures persisted this week, with further significant increases in New South Wales and the ACT. With the high temperatures there was increased demand for gas powered electricity generation in Victoria and NSW/ACT, however overall there was a decrease in demand for gas from the previous week. Average production at gas processing facilities fell by 57 TJ this week.

Production from Santos's Orbost Gas Plant in Eastern Victoria re-commenced last week, with daily average production this week of around 30 TJ.

Flows across the NSW-VIC interconnect continued to deliver gas north into New South Wales at an increased rate from last week.

Victorian Gas Market

Total gas injections and withdrawals in the Victorian gas market declined by a further 2 per cent from the previous week. (See Figure V3).

The total volume of gas offered at $0/GJ and up to $4/GJ both decreased this week, with an increase in the volume of gas offered above $4/GJ. The decreased volume of lower priced gas offered into the market this week contributed to an increase in the average daily price from $0.33/GJ in the previous week to $0.68/GJ, despite lower demand.

AEMO issued a negative demand override of 13 TJ on the 2 November gas day due to market participant demand forecasts falling outside AEMO demand forecast thresholds. A Supply Demand Point Constraint (SDPC) was applied at the SEAGas system withdrawal point on 1 November.

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 (1 - 7 November)	329	8	461	270	51	180	63	71
Financial Year-to-date 2009-10*	412	32	737	285	33	160	86	69
Financial Year-to-date 2008-09**	355	33	797	329	34	176	78	66

*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 (1 - 7 November)	87	47	158	35	203
Financial Year-to-date 2009-10*	83	35	155	17	140
Financial Year-to-date 2008-09**	25	80	199	23	115

^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, Bell Bay Three, and 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).

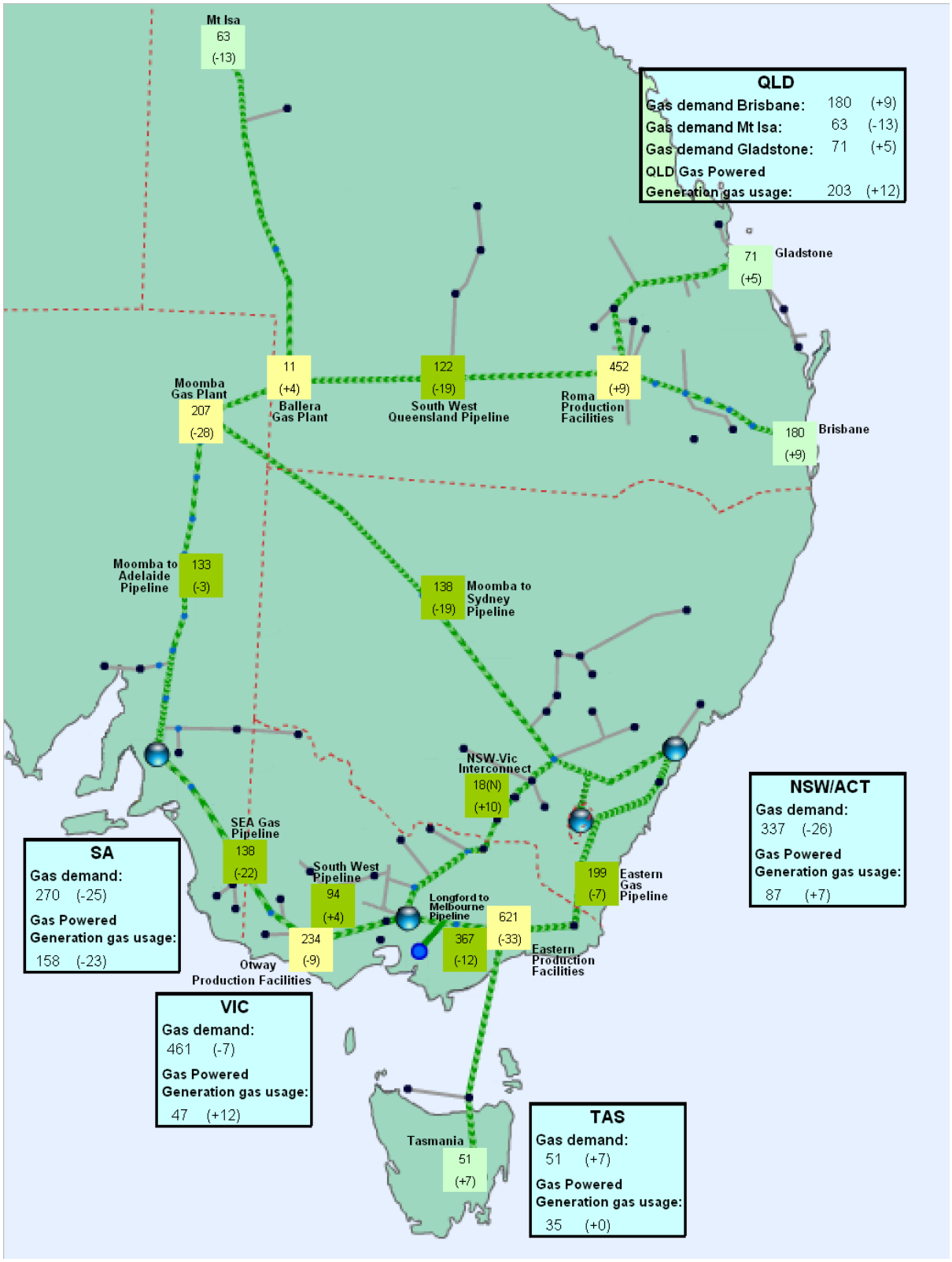
Figure 3: Daily average production flows (TJ) for each production zone

Average daily flows	**Roma (QLD)**	**Eastern Victoria**	**Otway Basin (VIC)**	**Moomba (SA/QLD)**
Current week (1 - 7 November)	452	621	234	218
Financial Year-to-date 2009-10*	434	795	314	323
Financial Year-to-date 2008-09**	320	901	349	356

*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)



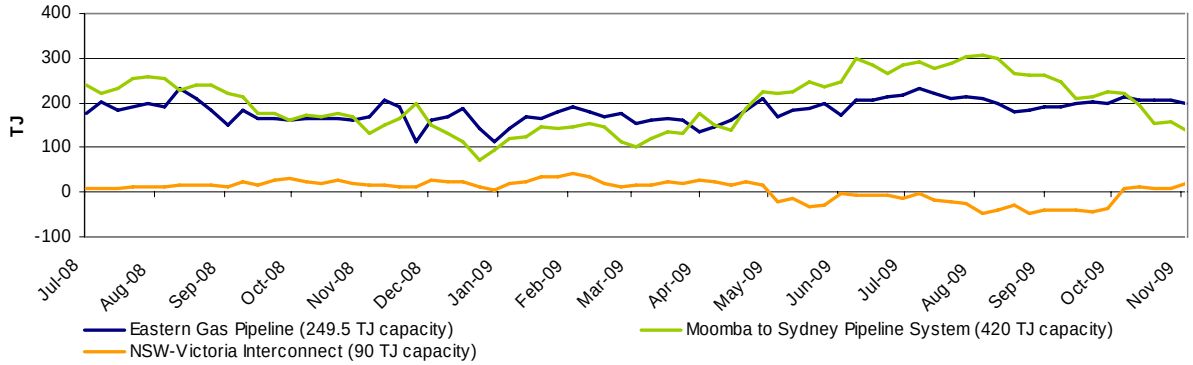
Source: Natural Gas Market Bulletin Board http://www.gasbb.com.au
Notes: Direction of aggregate daily flows along the NSW-Vic Interconnect indicated on map by S (South) or N (North).

As overall production decreased this week, flows generally decreased across Bulletin Board pipelines. With the exception of Tasmaina and Queensland, high temperatures seem to have had a significant influence on the reduced demand for gas during the week.

Gas flows into demand regions

The figures below provide the average daily flows into each of the demand region served by multiple pipelines and supply sources.

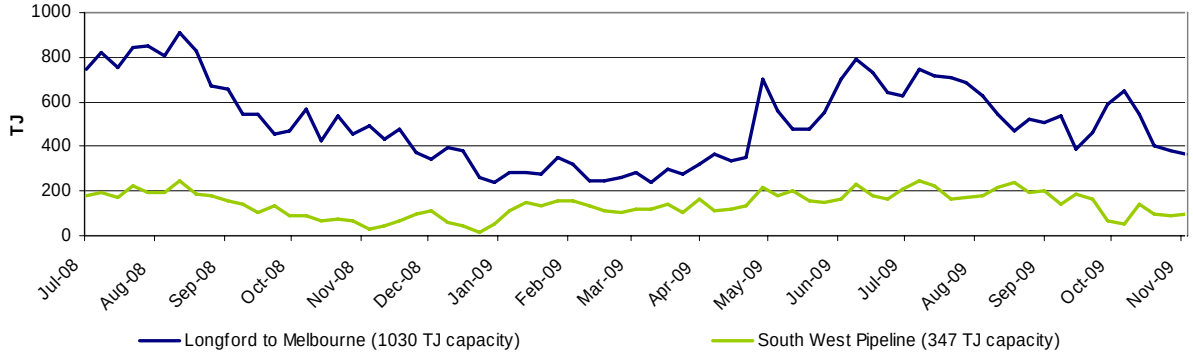
Figure 5: Average daily flows (TJ) into NSW/ACT demand region



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

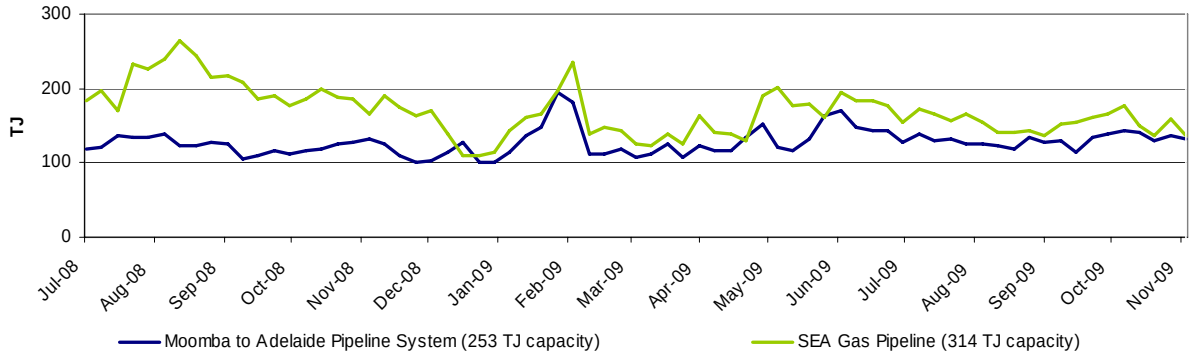
Notes: Negative flows on the NSW-Victoria Interconnect represent flows out of NSW into VIC.

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 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	NS		
Aust. Power & Gas	Retailer	3				NS	S					S		
Energy Australia	Retailer	1					S							
International Power	Transmission Customer	1											S	
Simply Energy	Retailer	4				NS	S	NS						
Origin (Vic)	Retailer	6	S	NS	NS	NS	S	S			S	NS		
Origin (Uranquinty)	Trader	1					S							
Red Energy	Retailer	2				NS	S							
Santos	Retailer	3						S						
TRU Energy	Retailer	4			S	NS	S		NS			S		
Victoria Electricity	Trader	1			S							S		
Victoria Electricity	Retailer	6		S	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 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 (1 - 7 November)	Previous Week (25 - 31 October)	2009-10 Financial YTD*	2008-09 Financial YTD**
Average daily price	0.68	0.33	1.63	*3.03*

Current Week (1 - 7 November)	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Daily price	2.66	0.23	0.25	0.54	0.51	0.52	0.06

*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)

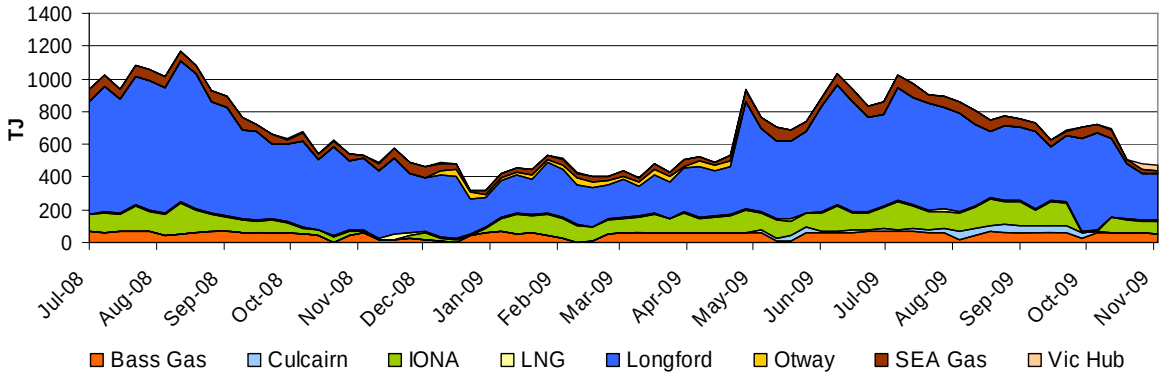
Notes: The daily average market price is a volume weighted imbalance price taking account of trading amounts at five times through the gas day — 6am, 10am, 2pm, 6pm and 10pm.

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 (1 - 7 November)	Previous Week (25 - 31 October)	2009-10 Financial YTD*	2008-09 Financial YTD**
Culcairn	0	0	25	0.1
Longford	280	288	492	624
LNG	9	9	9	9
IONA	74	66	106	86
VicHub	32.6	32.3	4.8	1.5
SEAGas	19	23	53	56
Bass Gas	55	60	57	56
Otway	0	0	0	0
TOTAL	**470**	**478**	**747**	**833**

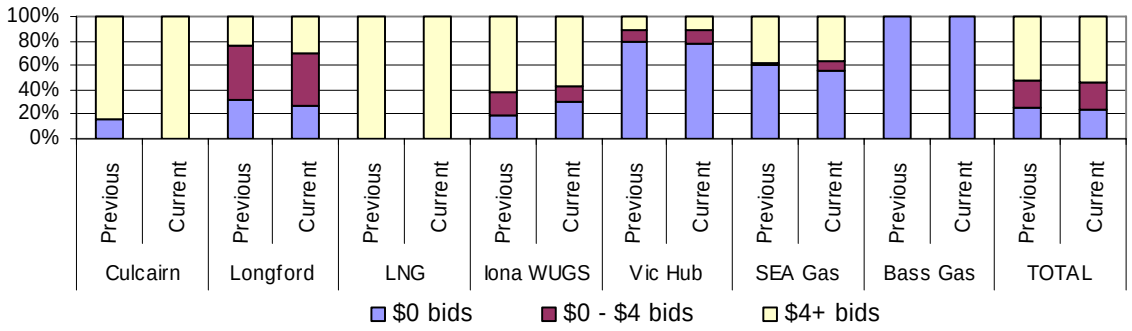


*Average daily estimated gas consumption measured from 1 July 2009 to the current week (inclusive)
**Average daily estimated gas consumption measured from 1 July 2008 to the equivalent week in 2008 (inclusive)
Source: http://www.aemo.com.au (INT 150)

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	Origin TRU	Origin TRU	Origin TRU	Origin TRU	Origin TRU	TRU	AGL Origin TRU
LNG							
Iona	TRU	TRU	TRU		TRU	TRU	TRU
VicHub	AETV TRU		AETV	AETV	AETV		AETV
SEAGas	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 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 (1 - 7 November)	Previous Week (25 - 31 October)	2009 Financial YTD*	2008 Financial YTD**
Ballarat	13	16	33	34
Geelong^	74	66	88	103
Gippsland	46	39	52	67
Melbourne	283	320	510	553
Northern	48	43	65	79
TOTAL	**463**	**484**	**749**	**835**

^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	64	61	58	60	58	68	73	117	73	63	86	78
QLD Gas Pipeline	69	71	70	72	72	70	74	79	87	71	69	66
Roma to Brisbane Pipeline	148	180	184	188	191	190	175	208	77	180	160	176
South West QLD Pipeline	156	145	130	101	109	102	113	168	91	122	153	64
NSW/ACT										**337**	**444**	**388**
Eastern Gas Pipeline	154	209	221	213	206	210	185	250	81	199	203	180
Moomba to Sydney Pipeline	94	154	179	145	151	136	103	420	57	138	241	208
NSW-VIC Interconnect^	13	20	17	19	18	20	19	90	-23	18	-21	17
VIC										**461**	**737**	**797**
Longford to Melbourne	342	362	332	441	458	351	280	1030	53	367	551	653
South West Pipeline	95	87	125	103	89	107	54	347	47	94	162	144
SA										**270**	**285**	**329**
Moomba to Adelaide Pipeline	124	159	134	139	139	125	110	253	52	133	131	124
SEA Gas Pipeline	144	144	132	148	138	127	130	314	49	138	154	206
TAS												
Tasmanian Gas Pipeline	51	51	50	52	51	52	51	129	26	51	33	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 / Ballera (QLD)										**463**	**438**	**360**
Berwyndale South	95	113	115	115	110	110	85	140	63	106	88	66
Fairview	122	122	125	122	122	122	122	115	97	123	112	62
Kenya^	52	59	53	53	59	60	60	160	22	56	35	
Kincora	0	0	5	0	0	0	0	25	3	1	1	8
Kogan North	7	7	7	7	7	7	7	12	66	7	8	12
Peat	6	6	7	7	7	7	7	15	60	7	9	10
Rolleston	12	12	12	11	12	12	12	30	38	12	11	12
Scotia	22	27	26	27	27	27	25	27	72	26	19	21
Spring Gully	38	34	36	35	34	34	34	60	81	35	48	55
Strathblane	38	34	36	35	34	34	34	60	81	35	48	47
Taloona	23	21	22	21	21	21	21	36	82	21	29	0
Wallumbilla	12	12	12	12	12	12	12	20	52	12	10	13
Yellowbank	13	13	11	10	10	10	9	30	48	11	14	14
Ballera	0	0	0	27	5	17	26	150	3	11	4	40
Eastern (VIC)										**621**	**795**	**901**
Orbost Gas Plant	30	32	30	30	30	30	30	92	4	30	3	0
Lang Lang Gas Plant	55	55	55	55	55	55	55	70	80	55	56	56
Longford Gas Plant	470	511	539	597	625	571	436	1140	64	536	735	844
LNG Storage Dandenong	0	0	0	0	0	0	0	158	0	0	1	0
Otway Basin (VIC)										**234**	**314**	**349**
Minerva Gas Plant	51	51	51	51	51	51	51	94	79	51	74	91
Otway Gas Plant	105	125	106	110	121	100	90	206	65	108	134	162
Iona Underground Gas Storage	99	64	79	76	76	79	46	320	33	74	105	96
Moomba (SA)												
Moomba Gas Plant	147	240	253	227	231	203	151	430	74	207	319	316

*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 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)		NSW (Sydney)	ACT (Canberra)	VIC (Melbourne)	SA (Adelaide)	TAS (Hobart)
Current Week (1 - 7 November)	Average min.	17.8	12.0	12.8	15.3	9.5
	Average max.	24.4	26.3	23.8	27.9	18.2
Previous Week (25 - 31 October)	Average min.	16.3	9.5	12.9	14.7	9.3
	Average max.	21.1	22.1	24.6	27.7	18.1

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 (1 - 7 November)	Scheduling Interval					Daily Imbalance Weighted Average Price
	6am	10am	2pm	6pm	10pm	
Sun	0.03	1.49	2.45	2.70	3.16	0.25
Mon	2.65	2.65	2.65	2.65	3.46	2.66
Tue	0.03	0.48	3.12	0.48	0.03	0.23
Wed	0.48	1.49	1.99	0.63	0.06	0.52
Thu	0.05	0.05	0.48	0.49	0.55	0.06
Fri	0.50	1.49	0.49	0.49	0.11	0.51
Sat	0.48	1.57	1.55	1.50	0.06	0.54

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	Forecasts (TJ)	Schedule					Total Demand Override Applied (TJ)
		1	2	3	4	5	
1-Nov	MP Demand:	371	370	378	385	385	0
	AEMO Demand:	376	379	391	417	413	
	MP demand forecast as % of AEMO	99%	98%	97%	92%	93%	
2-Nov	MP:	425	440	464	450	449	-13
	AEMO:	385	402	426	419	420	
	MP demand forecast as % of AEMO	110%	109%	109%	107%	107%	
3-Nov	MP:	375	378	395	393	393	0
	AEMO:	383	403	411	431	445	
	MP demand forecast as % of AEMO	98%	94%	96%	91%	88%	
4-Nov	MP:	537	558	562	563	562	0
	AEMO:	525	527	545	526	521	
	MP demand forecast as % of AEMO	102%	106%	103%	107%	108%	
5-Nov	MP:	579	585	583	582	582	0
	AEMO:	571	571	569	569	564	
	MP demand forecast as % of AEMO	101%	102%	102%	102%	103%	
6-Nov	MP:	435	434	432	432	432	0
	AEMO:	436	437	440	435	421	
	MP demand forecast as % of AEMO	100%	99%	98%	99%	103%	
7-Nov	MP:	332	330	333	334	334	0
	AEMO:	318	294	296	333	322	
	MP demand forecast as % of AEMO	104%	112%	113%	100%	104%	

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