WEEKLY GAS MARKET ANALYSIS

AUSTRALIAN ENERGY REGULATOR

22 - 28 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 (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 second week in a row, there was no missing flow data on the Bulletin Board.

With the exception of Brisbane in the Queensland region where gas demand remained the same as last week, overall demand for gas fell compared to the previous week. The fall in demand ranged from 1 TJ in Tasmania to 79 TJ in South Australia..

Mild temperatures have also seen a fall in the demand for gas from gas powered generation (GPG). Compared to the previous week, average daily demand for gas for GPG fell by 71 TJ, 29 TJ and 25 TJ in South Australia, Victoria and Queensland, respectively. Much smaller falls occurred in New South Wales/ACT (3 TJ) and Tasmania (1 TJ).

Victorian gas market

Total average daily gas injections in the Victorian gas market fell by around 3 percent compared to the previous week. (See Figure V3). Despite the fall in demand, the average imbalance price for the week increased from $1.18/GJ the previous week, to $1.67/GJ. Less gas bid at $0/GJ, compared to the previous week contributed to the increase in gas prices (see total column in Figure V4). This was influenced to a large extent by a reduction in $0/GJ bids at the Longford injection point, the largest source of injections in the Victorian Gas Market.

A Supply Demand Point Constraint (SDPC) was imposed at the Bass Gas injection point for a scheduled maintenance outage. As a result, production at the Bass Gas facility was constrained down to 0 TJ from 22 November 2009. This outage, which is planned to continue until 20 February 2010, is expected to put upward pressure on prices over the outage period, since historically Origin has bid in around 60 TJ of gas each day at Bass Gas, and offers all gas at $0/GJ.

No demand overrides were issued by the Australian Energy Market Operator (AEMO) this week.

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. Figure 2 provides the average daily volume of gas used by GPG in each state. (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 (22 - 28 November)	318	7	475	279	50	184	78	58
Financial Year-to-date 2009-10*	400	29	701	293	36	164	85	68
Financial Year-to-date 2008-09**	352	30	756	324	32	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: Average daily gas (TJ) used for GPG in each state

Average daily gas for GPG usage^	**NSW**	**VIC**	**SA**	**TAS**	**QLD**
Current week (22 - 28 November)	108	87	172	34	183
Financial Year-to-date 2009-10*	86	45	166	20	148
Financial Year-to-date 2008-09**	29	75	197	21	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 demand region 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, 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 E power stations.
6. ACT – does not appear since there is no gas powered generation

Figure 3 sets out the daily average flows from each production zone across the National Gas Market. (A list of production/storage facilities in each zone is provided in Figure A2 of the Appendix).

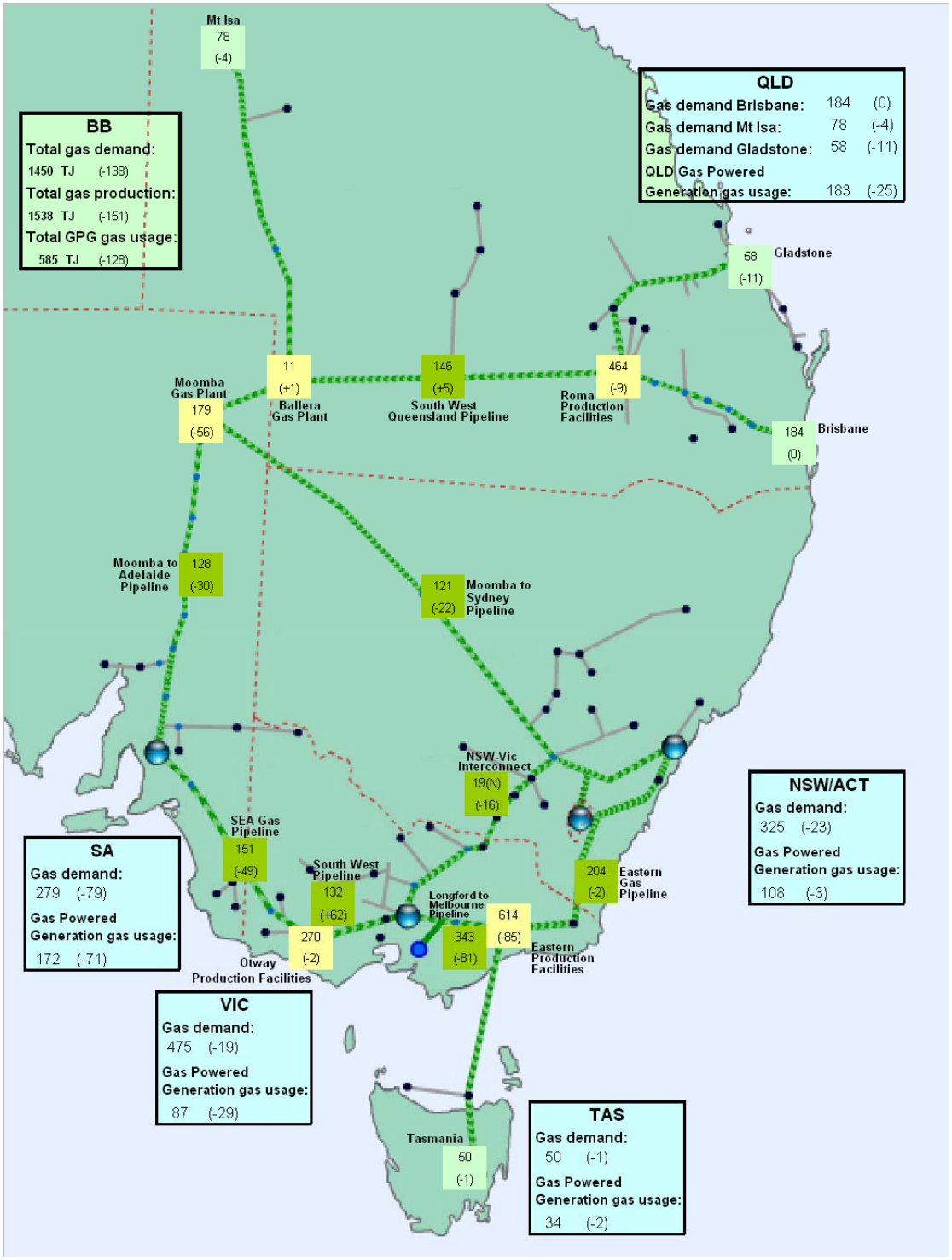
Figure 3: Daily average production flows (TJ) for each production zone

Average daily flows	**Roma (QLD)**	**Eastern Victoria**	**Otway Basin (VIC)**	**Moomba (SA/QLD)**
Current week (22 - 28 November)	464	614	270	191
Financial Year-to-date 2009-10*	440	775	309	311
Financial Year-to-date 2008-09**	318	866	335	350

*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 gas usage in each region.

Figure 4: Changes in gas demand and production and pipeline flows (TJ)



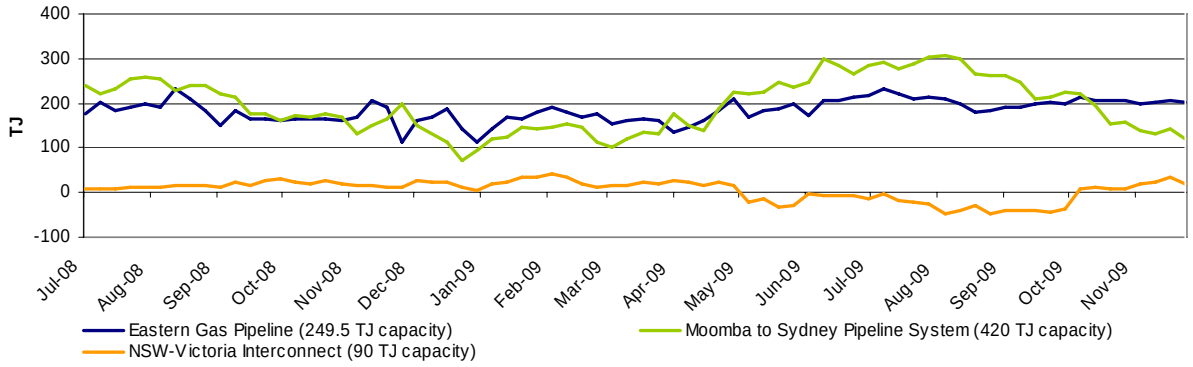
Source: Natural Gas Market Bulletin Board http://www.gasbb.com.au
Notes: Direction of aggregate daily flows along the NSW-Vic Interconnect indicated on map by S (South) or N (North).

Overall average daily production for the week fell by more than 150 TJ compared to the previous week. There was an 85 TJ reduction in output from facilities in eastern Victoria and a reduction of 56 TJ at Moomba. While average daily pipeline flows fell in most regions, there was a small increase in flows on the South West Queensland Pipeline and a large increase on the South West Pipeline from the Otway basin. This partly offset the fall in gas from the eastern production facilities.

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.

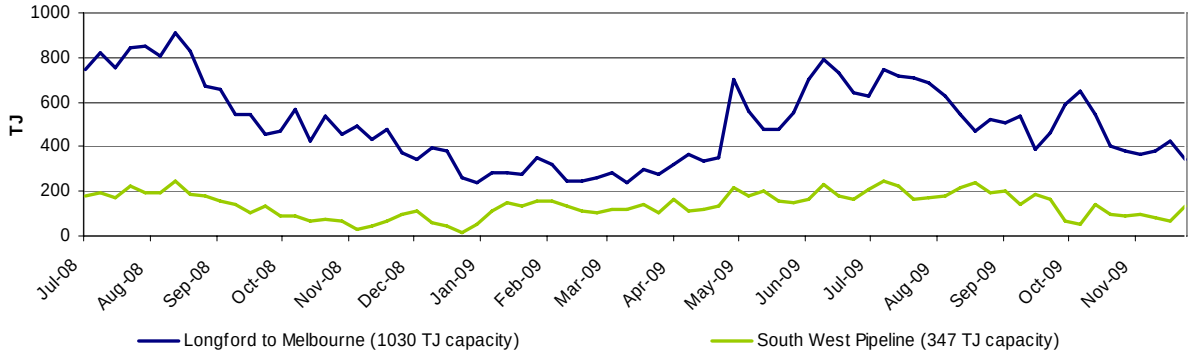
Figure 5: Average daily flows (TJ) into the NSW/ACT demand region



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

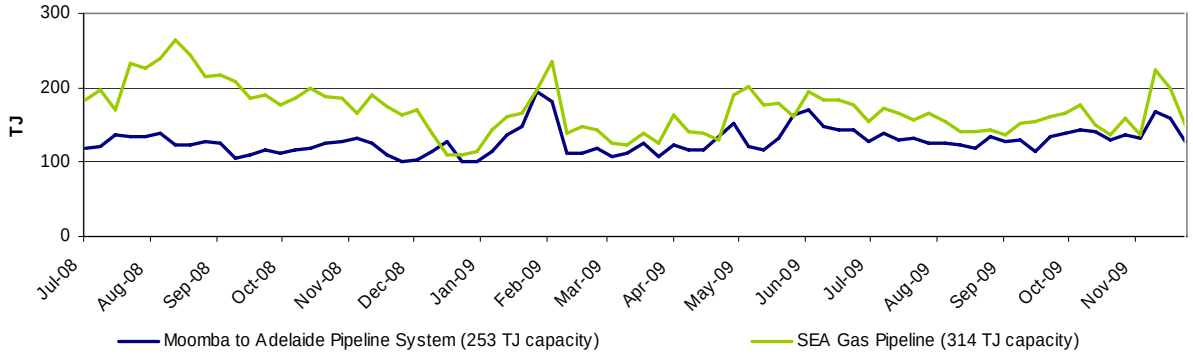
Notes: Negative flows on the NSW-Victoria Interconnect represent flows out of NSW into VIC.

Figure 6: Average daily flows (TJ) into the VIC demand region



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

Figure 7: Average daily flows (TJ) into the 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 boxes shaded orange 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 bids in the Victorian 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					
AGL (Qld)	Retailer	1				NS								
AGL	Retailer	4		NS	NS	NS	S				S	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	S	NS	NS	NS	S	S			S	S	S	
Origin (Uranquinty)	Trader	1					S							
Red Energy	Retailer	2				NS	S							
Santos	Retailer	1						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 (22 - 28 November)	Previous week (15 - 21 November)	2009-10 Financial YTD*	2008-09 Financial YTD**
Average daily price	1.67	1.18	1.58	*3.40*

Current week (22 - 28 November)	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Daily price	0.47	1.04	0.41	3.11	3.11	2.58	1.00

*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)

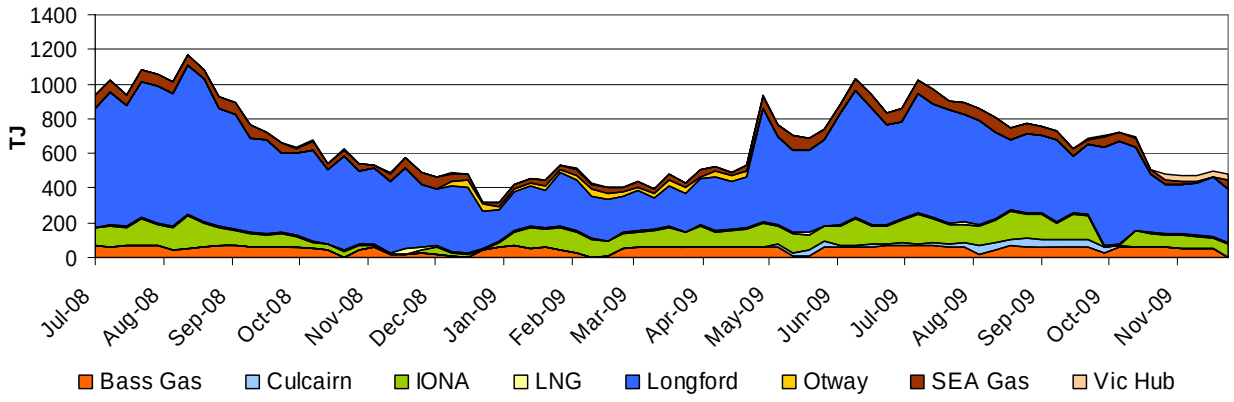
Notes: The daily average market price is a volume weighted imbalance price taking account of trading amounts at five times through the gas day — 6am, 10am, 2pm, 6pm and 10pm.

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 (22 - 28 November)	Previous week (15 - 21 November)	2009-10 Financial YTD*	2008-09 Financial YTD**
Culcairn	0	0	21	1
Longford	311	343	467	595
LNG	7	5	9	10
IONA	76	63	101	75
VicHub	34	32	9	2
SEAGas	54	5	49	57
Bass Gas	1	52	54	51
Otway	0	0	0	0
TOTAL	**483**	**500**	**710**	**790**

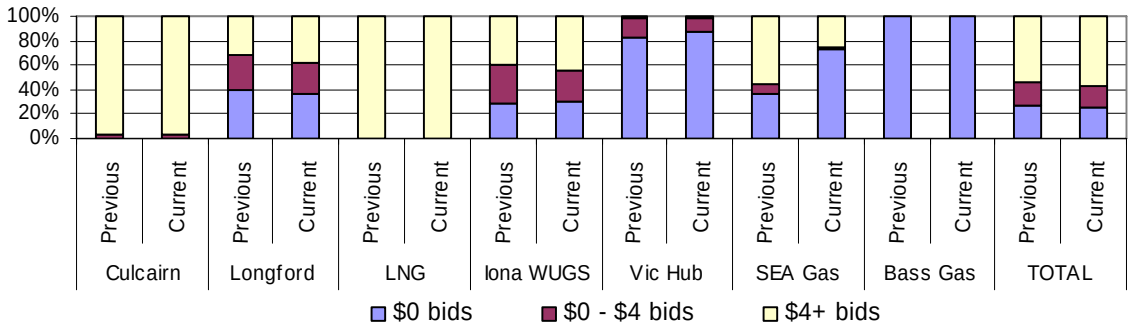


*Average daily estimated gas consumption measured from 1 July 2009 to the current week (inclusive)
**Average daily estimated gas consumption measured from 1 July 2008 to the equivalent week in 2008 (inclusive)
Source: http://www.aemo.com.au (INT 150)

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.

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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			CE				
Longford	AGL Origin TRU	AGL	AGL Origin	AGL Origin	AGL	AGL Origin	AGL Origin
LNG							
Iona	TRU	TRU	TRU	TRU	TRU	TRU	TRU
VicHub				AETV	AETV		
SEAGas	Simply Origin		Simply Origin	Simply		Simply Origin	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 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 (22 - 28 November)	Previous week (15 - 21 November)	2009 Financial YTD*	2008 Financial YTD**
Ballarat	11	10	30	31
Geelong^	94	87	87	99
Gippsland	42	49	52	67
Melbourne	286	279	478	519
Northern	51	64	64	75
TOTAL	**484**	**489**	**711**	**792**

^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	83	79	77	74	76	80	78	117	72	78	85	80
QLD Gas Pipeline	0	71	65	69	73	66	64	79	87	58	68	67
Roma to Brisbane Pipeline	165	190	184	187	208	192	164	208	79	184	164	175
South West QLD Pipeline	157	156	158	146	136	131	136	168	90	146	151	63
NSW/ACT												
Eastern Gas Pipeline	191	210	209	214	209	205	187	250	81	204	203	179
Moomba to Sydney Pipeline	99	128	130	131	140	132	89	420	54	121	226	203
NSW-VIC Interconnect^	42	18	0	5	10	34	22	90	-16	19	-15	17
VIC												
Longford to Melbourne	373	389	369	358	313	338	263	1030	51	343	527	622
South West Pipeline	110	136	126	144	152	123	133	347	44	132	152	134
SA												
Moomba to Adelaide Pipeline	114	138	134	134	139	124	115	253	53	128	134	122
SEA Gas Pipeline	115	156	160	183	171	157	115	314	51	151	159	202
TAS												
Tasmanian Gas Pipeline	47	52	53	53	52	48	47	129	28	50	36	32

*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: Average 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	86	112	105	90	89	105	104	140	64	99	90	66
Fairview	119	119	122	122	121	121	123	115	98	121	112	61
Kenya^	63	65	64	61	64	53	54	160	25	60	39	
Kincora	0	0	0	0	0	0	0	25	3	0	1	8
Kogan North	7	8	7	7	7	8	8	12	65	7	8	12
Peat	7	7	7	7	7	7	7	15	58	7	9	10
Rolleston	11	11	11	11	11	11	11	30	38	11	11	11
Scotia	27	27	27	27	27	26	26	27	76	27	20	21
Spring Gully	42	41	42	42	42	42	34	60	79	41	48	55
Strathblane	42	41	42	42	42	42	34	60	79	41	48	46
Taloona	25	25	26	26	26	25	21	36	80	25	29	0
Wallumbilla	12	12	12	12	12	12	12	20	53	12	11	13
Yellowbank	10	12	14	14	15	15	15	30	47	14	14	14
Eastern (VIC)												
Orbost Gas Plant	24	32	30	29	29	29	29	92	8	29	7	0
Lang Lang Gas Plant	5	0	0	0	0	0	0	70	76	1	53	51
Longford Gas Plant	568	614	589	607	530	655	532	1140	63	585	714	814
LNG Storage Dandenong	0	0	0	0	0	0	0	158	0	0	0	2
Otway Basin (VIC)												
Minerva Gas Plant	68	88	94	83	83	83	68	94	81	81	76	91
Otway Gas Plant	85	129	127	121	145	159	103	206	64	124	132	160
Iona Underground Gas Storage	74	72	61	88	0	89	66	320	32	64	101	84
Moomba (SA/QLD)												
Moomba Gas Plant	143	168	189	201	234	162	158	430	71	179	305	309
Ballera	3	0	0	16	23	28	10	150	4	11	6	41

*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.

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 (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
Previous week (15 - 21 November)	Average min.	21.2	19.4	14.4	17.6	19.5	10.6
	Average max.	30.9	27.3	33.5	29.1	33.5	21.4

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 (22 - 28 November)	Scheduling interval					Daily imbalance weighted average price
	6 am	10 am	2 pm	6 pm	10 pm	
Sun	0.31	0.11	1.50	3.14	3.47	0.47
Mon	0.99	1.49	1.55	2.70	3.17	1.04
Tue	0.33	2.36	2.70	3.14	3.13	0.41
Wed	3.17	1.57	1.57	3.16	3.04	3.11
Thu	3.16	1.57	1.57	3.16	2.70	3.11
Fri	2.70	1.55	1.50	1.50	1.48	2.58
Sat	0.99	0.99	0.49	0.98	2.71	1.00

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 (22 - 28 November)	Demand forecasts (TJ)	Schedule					Total demand override applied (TJ)
		1	2	3	4	5	
Sun	**MP**	387	386	401	400	400	**0**
	AEMO	411	404	452	472	439	
	MP as % of AEMO	94%	96%	89%	85%	91%	
Mon	**MP**	480	489	486	484	483	**0**
	AEMO	515	502	500	523	502	
	MP as % of AEMO	93%	97%	97%	93%	96%	
Tue	**MP**	465	467	466	466	465	**0**
	AEMO	463	461	466	463	482	
	MP as % of AEMO	100%	101%	100%	101%	96%	
Wed	**MP**	498	493	498	497	497	**0**
	AEMO	487	479	493	505	487	
	MP as % of AEMO	102%	103%	101%	98%	102%	
Thu	**MP**	467	470	473	473	472	**0**
	AEMO	445	461	467	470	462	
	MP as % of AEMO	105%	102%	101%	101%	102%	
Fri	**MP**	451	450	454	455	454	**0**
	AEMO	430	433	435	437	420	
	MP as % of AEMO	105%	104%	104%	104%	108%	
Sat	**MP**	391	387	387	385	385	**0**
	AEMO	368	360	364	369	364	
	MP as % of AEMO	106%	108%	106%	104%	106%	

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