WEEKLY GAS MARKET ANALYSIS

AUSTRALIAN ENERGY REGULATOR

13 – 19 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

There were 4 instances of missing flow data on the Bulletin Board this week. Tas Gas Networks failed to submit data for the Tasmanian Gas Pipeline from the 16 December gas day onwards.

Maximum average daily temperatures for the week were slightly above the December averages in all regions. In South Australia (SA) the daily average maximum temperature was over six degrees higher than the previous week whilst in Victoria and the Australian Capital Territory (ACT) average increases of about three degrees were recorded. In other regions temperatures were relatively unchanged. Figure A3 shows average daily temperatures for this week and the previous week.

Consistent with higher temperatures, the demand for Gas Powered Electricity Generation (GPG) increased in Victoria and SA by a daily average of 38 TJ and 35 TJ respectively. Slightly lower temperatures in Queensland resulted in a fall in GPG demand of 16 TJ per day.

Average daily total gas demand was almost unchanged from the previous week. Increases recorded in South Australia and Tasmania this week (SA had the largest increase of 22 TJ per day) were offset by decreases elsewhere.

Average production volumes decreased slightly by 17 TJ per day compared to the previous week. Significant declines were recorded in the Moomba and Eastern Victoria production regions (Moomba had the biggest decrease of 30 TJ). Conversely, production at the Otway Basin rose by 50 TJ or 23 percent. This production supplied increased gas demand in South Australia and offset reductions in production at the Eastern Victoria Facility. Figure 4 shows changes in demand and production and pipeline flows.

Victorian Gas Market

Total average gas injections in the Victorian gas market were similar to the previous week. (See Figure V3).

The average imbalance price decreased from $1.94/GJ in the previous week to $1.41/GJ. There was a reduction of gas bid into the market at both $0/GJ and in the $0-$4/GJ price range and slightly less gas was bid in overall. Increased volumes of lower priced gas bid in at IONA and Otway injection points, combined with a slight decrease in daily scheduled injections contributed to the lower gas prices.

Due to a scheduled maintenance outage there were no bids from Bass Gas this week. Bids and injections through the Otway Injection Point continued this week. Previously this year Otway Basin gas has only been injected through other injection points (Iona and SEAGas). Now, given the lower line pack required over the summer period, and consequent reductions in pressure at the Otway Injection Point, injections may also occur at this location.

A Demand Point Constraint was issued at the SEA Gas withdrawal point on the 15 December gas day, and a Supply Point Constraint applied to the Longford injection point for the 16 December Gas day.

The Australian Energy Market Operator (AEMO) issued a negative demand override of 3 TJ for the 16 December 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 (13 - 19 December)	331	6	391	273	49	176	81	72
Financial Year-to-date 2009-10*	392	26	666	289	37	166	84	69
Financial Year-to-date 2008-09**	345	27	719	315	33	174	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**
Current week (13 - 19 December)	97	66	169	34	192
Financial Year-to-date 2009-10*	87	45	163	22	154
Financial Year-to-date 2008-09**	31	68	189	22	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.)

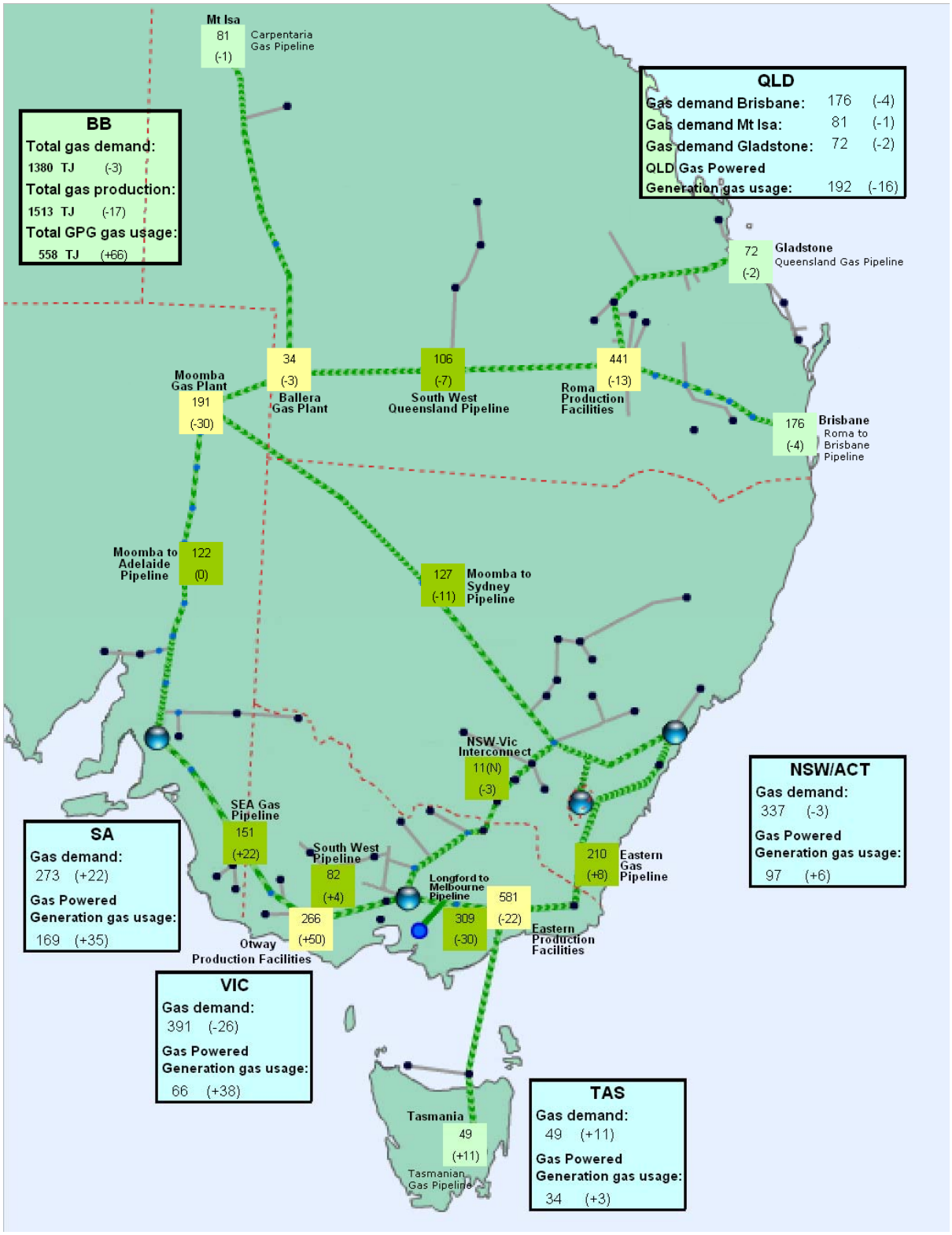
Figure 3: Daily average production flows (TJ) for each production zone

Average daily flows	**Roma (QLD)**	**Eastern Victoria**	**Otway Basin (VIC)**	**Moomba (SA/QLD)**
Current week (13 - 19 December)	441	581	266	225
Financial Year-to-date 2009-10*	442	753	301	301
Financial Year-to-date 2008-09**	315	832	322	343

*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)



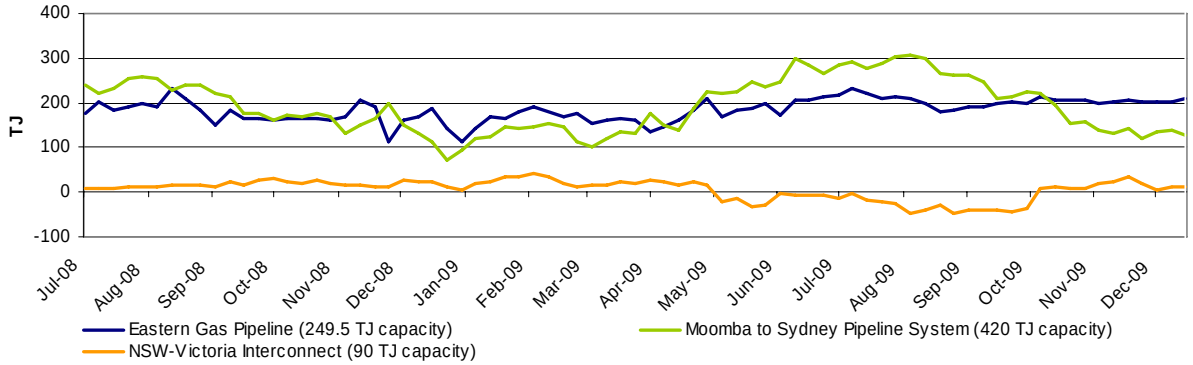
Source: Natural Gas Market Bulletin Board http://www.gasbb.com.au
Notes: Direction of aggregate daily flows along the NSW-Vic Interconnect indicated on map by S (South) or N (North).

Increased gas production this week at Otway Basin facilities increased flows along the SEA Gas Pipeline to supply increased demand in South Australia and to offset decreases in production at Eastern Production facilities. Production at Moomba declined by 30 TJ this week after a significant increase in the previous week.

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.

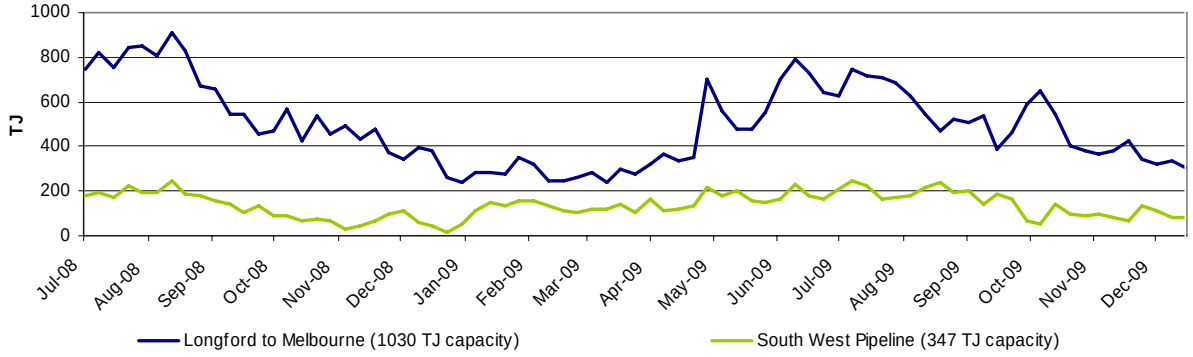
Figure 5: Average daily flows (TJ) into NSW/ACT demand region



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

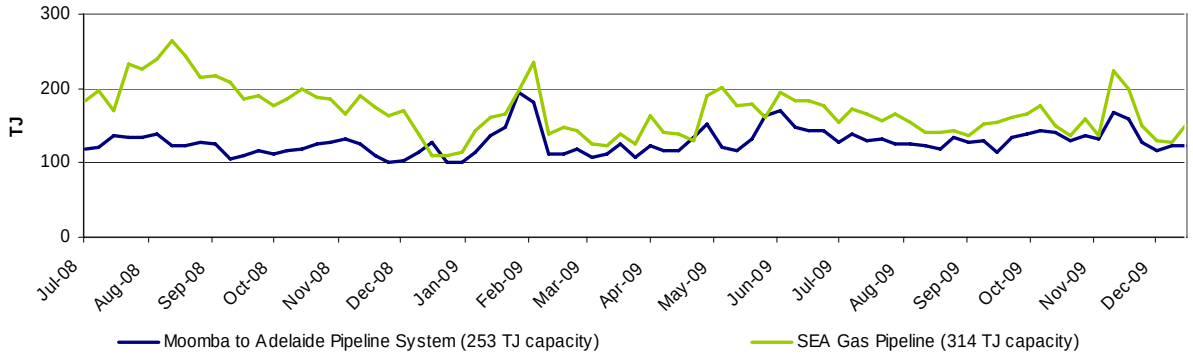
Notes: Negative flows on the NSW-Victoria Interconnect represent flows out of NSW into VIC.

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			
			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		NS										
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	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 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 (13 - 19 December)	Previous Week (6 - 12 December)	2009-10 Financial YTD*	2008-09 Financial YTD**
Average daily price	1.41	1.94	1.59	*3.28*

Current Week (13 - 19 December)	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Daily price	0.50	1.56	1.55	1.51	2.67	1.52	0.56

*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)

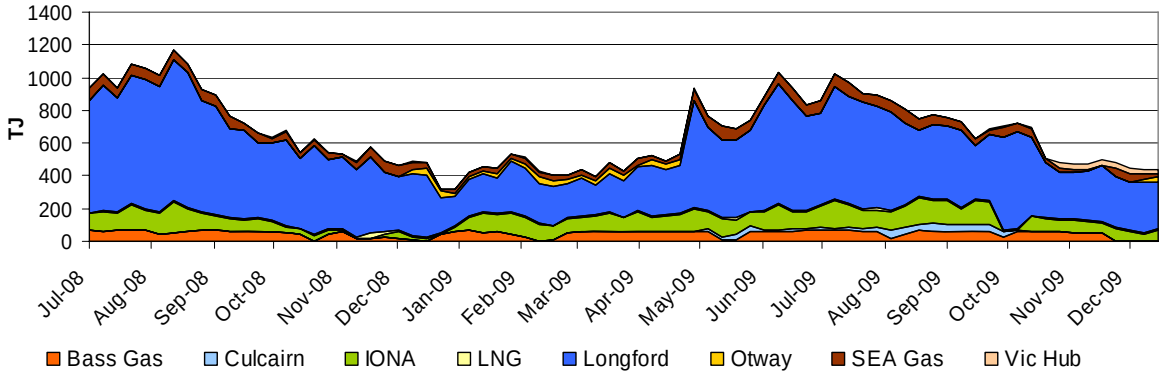
Notes: The daily average market price is a volume weighted imbalance price taking account of trading amounts at five times through the gas day — 6am, 10am, 2pm, 6pm and 10pm.

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 (13 - 19 December)	Previous Week (6 - 12 December)	2009-10 Financial YTD*	2008-09 Financial YTD**
Culcairn	0	0	19	0.5
Longford	286	314	446	567
LNG	8	8	9	10
IONA	67	41	96	69
VicHub	25.9	27.2	11.1	1.6
SEAGas	14	36	47	56
Bass Gas	0	0	47	46
Otway	34	12	2	3
TOTAL	**435**	**439**	**677**	**752**

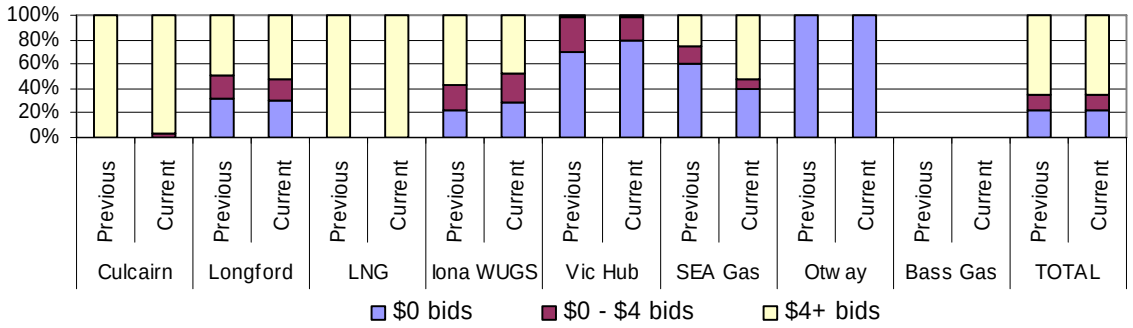


*Average daily estimated gas consumption measured from 1 July 2009 to the current week (inclusive)
**Average daily estimated gas consumption measured from 1 July 2008 to the equivalent week in 2008 (inclusive)
Source: http://www.aemo.com.au (INT 150)

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		
Longford	TRU	AGL	AGL	Origin	AGL	AGL	AGL Origin TRU
LNG							
Iona	TRU	TRU	TRU	TRU	TRU	TRU	TRU
VicHub	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 (13 - 19 December)	Previous Week (6 - 12 December)	2009-10 Financial YTD*	2008-09 Financial YTD**
Ballarat	12	14	28	29
Geelong^	78	77	86	96
Gippsland	43	36	50	65
Melbourne	264	264	452	491
Northern	43	48	61	73
TOTAL	**439**	**438**	**678**	**754**

^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	84	74	79	82	82	83	87	117	72	81	84	81
QLD Gas Pipeline	73	70	68	71	71	74	76	79	87	72	69	67
Roma to Brisbane Pipeline	143	181	187	195	200	175	155	208	80	176	166	174
South West QLD Pipeline	127	102	113	92	94	103	113	181	81	106	147	61
NSW/ACT												
Eastern Gas Pipeline	190	206	213	216	235	217	193	250	81	210	203	178
Moomba to Sydney Pipeline	85	130	126	169	171	119	90	420	51	127	215	194
NSW-VIC Interconnect^	4	0	3	29	35	5	3	90	-13	11	-12	18
VIC												
Longford to Melbourne	251	338	349	356	329	302	238	1030	49	309	502	592
South West Pipeline	59	105	86	114	104	54	54	347	42	82	145	126
SA												
Moomba to Adelaide Pipeline	108	141	129	155	116	108	99	253	52	122	132	121
SEA Gas Pipeline	82	166	213	198	156	142	97	314	50	151	157	194
TAS												
Tasmanian Gas Pipeline	49	50	48	N/A	N/A	N/A	N/A	129	29	49	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	86	98	87	99	117	112	102	140	65	100	92	64
Fairview	111	119	114	109	120	116	116	115	98	115	113	61
Kenya^	58	14	64	69	70	62	62	160	27	57	43	
Kincora	0	0	0	0	0	0	0	25	5	0	1	8
Kogan North	8	9	9	9	9	10	10	12	66	9	8	12
Peat	7	7	7	7	7	7	7	15	56	7	8	10
Rolleston	12	12	12	12	12	12	12	30	38	12	11	11
Scotia	27	27	27	27	27	27	27	27	79	27	21	21
Spring Gully	34	35	34	34	34	34	35	60	77	34	46	55
Strathblane	34	35	34	34	34	34	35	60	77	34	46	46
Taloona	21	21	21	21	21	21	21	36	78	21	28	0
Wallumbilla	11	11	11	11	12	11	11	20	53	11	11	13
Yellowbank	12	13	12	14	14	15	11	30	46	13	14	14
Eastern (VIC)												
Orbost Gas Plant	26	26	26	28	28	28	28	92	11	27	10	0
Lang Lang Gas Plant	0	0	0	0	0	0	0	70	67	0	47	46
Longford Gas Plant	509	602	595	474	635	602	462	1140	61	554	696	785
LNG Storage Dandenong	0	0	0	0	0	0	0	158	0	0	0	2
Otway Basin (VIC)												
Minerva Gas Plant	49	64	64	75	62	57	40	94	80	59	75	91
Otway Gas Plant	97	130	156	188	156	117	110	206	63	136	130	155
Iona Underground Gas Storage	39	79	82	123	92	41	38	320	30	71	96	76
Moomba (SA/QLD)												
Moomba Gas Plant	157	214	212	242	212	161	138	430	68	191	293	300
Ballera	27	31	29	51	35	41	23	150	6	34	8	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 (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
Previous week (6 - 12 Dec)	Average min.	22.4	19.3	10.9	13.3	13.0	10.8
	Average max.	31.8	27.2	28.2	22.9	23.0	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 (13 - 19 December)	Scheduling Interval					Daily Imbalance Weighted Average Price
	6am	10am	2pm	6pm	10pm	
Sun	0.49	0.50	0.53	0.73	1.49	0.50
Mon	1.51	1.51	2.70	2.70	2.95	1.56
Tue	1.50	2.70	1.52	1.52	3.08	1.55
Wed	1.50	0.73	1.50	2.98	2.98	1.51
Thu	2.70	1.52	2.98	2.90	1.53	2.67
Fri	1.53	1.54	1.55	1.55	0.49	1.52
Sat	0.49	0.99	2.39	2.39	1.50	0.56

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	
13-Dec	**MP:**	340	339	339	338	338	**0**
	AEMO:	326	350	350	347	346	
	MP as % of AEMO	104%	97%	97%	97%	98%	
14-Dec	**MP:**	452	455	470	470	469	**0**
	AEMO:	443	452	463	459	479	
	MP as % of AEMO	102%	101%	102%	102%	98%	
15-Dec	**MP:**	460	475	469	471	471	**0**
	AEMO:	446	458	460	449	451	
	MP as % of AEMO	103%	104%	102%	105%	104%	
16-Dec	**MP:**	498	498	501	509	498	**-3**
	AEMO:	464	464	469	480	472	
	MP as % of AEMO	107%	107%	107%	106%	106%	
17-Dec	**MP:**	438	449	438	444	443	**0**
	AEMO:	446	453	452	426	428	
	MP as % of AEMO	98%	99%	97%	104%	104%	
18-Dec	**MP:**	413	413	412	416	415	**0**
	AEMO:	408	408	410	394	380	
	MP as % of AEMO	101%	101%	100%	106%	109%	
19-Dec	**MP:**	343	342	348	348	347	**0**
	AEMO:	345	345	345	339	337	
	MP as % of AEMO	99%	99%	101%	103%	103%	

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