

WEEKLY GAS MARKET ANALYSIS



AUSTRALIAN ENERGY
REGULATOR

31 January – 6 February 2010

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 4 shows changes in gas demand and production and pipeline flows compared to the previous week. Total average daily gas increased by 92 TJ (7 per cent) compared to the previous week. Significant increases of 40 MW (15 per cent) and 33 MW (11 per cent) were recorded in South Australia and Victoria respectively, while the other regions had minor changes.

Total Gas Powered Generation (GPG) gas usage increased by 39 TJ (8 per cent) compared to the previous week. While increases were recorded in Victoria 28 TJ (102 per cent), South Australia 22 MW (13 per cent) and NSW/ACT 6 TJ (8 per cent), a fall was recorded in Queensland 16 TJ (11 per cent). Tasmania remained steady.

Average production volumes increased by 113 TJ (8 per cent) compared to the previous week. The largest increases were in South Australia 63 TJ (33 per cent) and Victoria 60 TJ (8 per cent). A small fall was recorded at the Queensland production facilities. Average daily flows were higher than the previous week with significant increases in flow occurring on the South West Pipeline (135 per cent) and Moomba to Adelaide (29 per cent). The South West Queensland Pipeline flow reduced by 40 TJ (30 per cent).

Victorian Gas Market

Total average gas injections in the Victorian gas market increased by 32 TJ (9 per cent) compared to the previous week. The largest increase was recorded at Iona 43 TJ (159 per cent). The largest fall was recorded at Culcairn 15 TJ (54 per cent) (See Figure V3).

The average imbalance price increased from \$1.56/GJ in the previous week to \$1.75/GJ in line with the increase in demand.

There were no bids from Bass Gas this week due to a scheduled maintenance outage.

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

Average daily flows	NSW	ACT	VIC	SA	TAS	Brisbane	QLD	
							Mt Isa	Gladstone
Current week (31 Jan - 6 Feb)	330	6	320	302	47	181	85	77
Financial Year-to-date 2009-10*	372	22	587	283	37	167	86	70
Financial Year-to-date 2008-09**	328	22	647	311	34	171	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 (31 Jan - 6 Feb)	85	44	193	30	166
Financial Year-to-date 2009-10*	84	45	164	22	159
Financial Year-to-date 2008-09**	36	73	192	24	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 (31 Jan - 6 Feb)	455	489	290	273
Financial Year-to-date 2009-10*	446	690	288	283
Financial Year-to-date 2008-09**	315	757	314	324

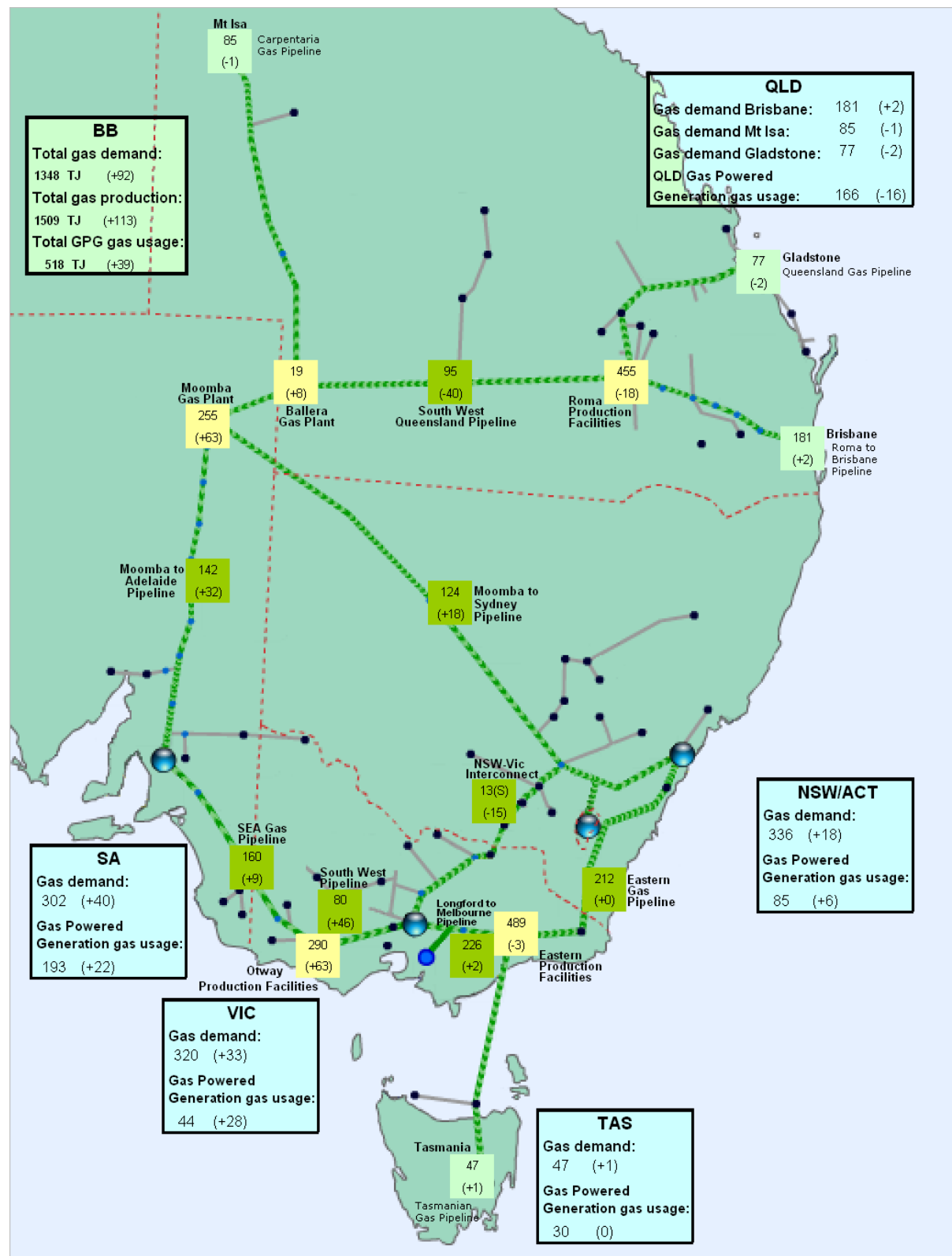
*Average daily estimated gas consumption measured from 1 July 2009 to the current week (inclusive)

**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)



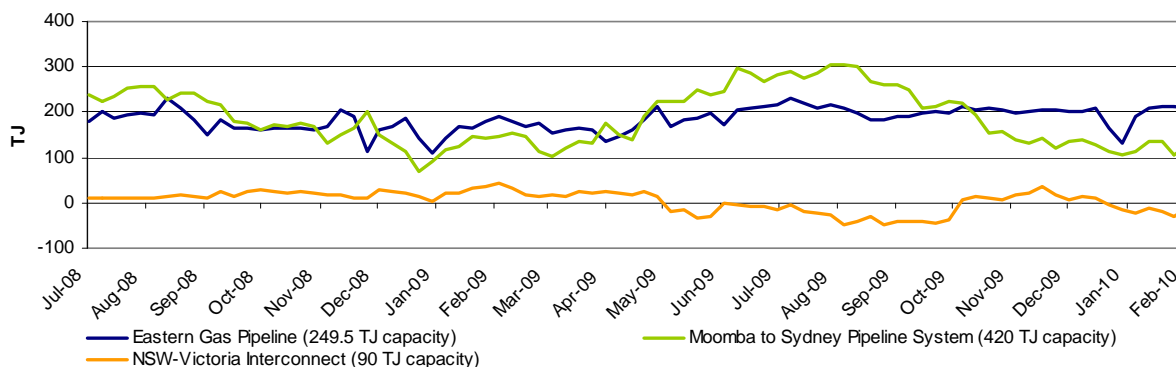
Source: Natural Gas Market Bulletin Board <http://www.gasbb.com.au>

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.

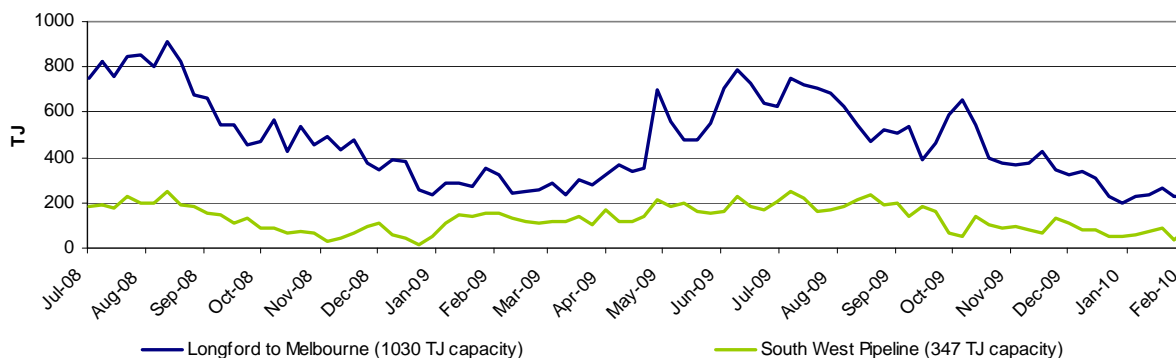
Figure 5: Average daily flows (TJ) into NSW/ACT demand region



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

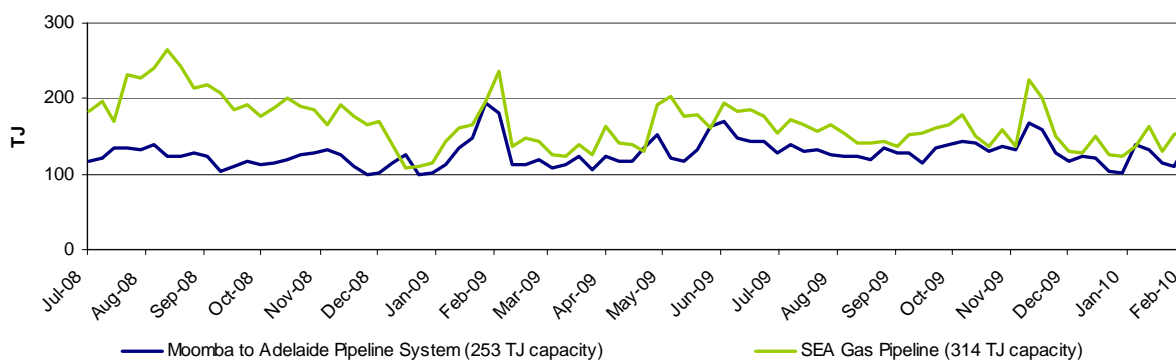
Notes: Negative flows on the NSW-Victoria Interconnect represent flows out of NSW into VIC.

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 (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							NS					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	NS						
Origin (Vic)	Retailer	6		S	NS	NS	S	S		S	NS	S		
Origin (Uranquinty)	Trader	1					S							
Red Energy	Retailer	1					S							
Santos	Retailer	2						S	S					
TRU Energy	Retailer	4			S	NS	S		NS			NS		
Victoria Electricity	Trader	1										NS		
Victoria Electricity	Retailer	5		S	S	NS		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 (31 Jan - 6 Feb)	Previous Week (24 - 30 January)	2009-10 Financial YTD*	2008-09 Financial YTD**
Average daily price	1.75	1.56	1.58	3.12

Current week (31 Jan - 6 Feb)	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Daily price	1.43	1.68	1.92	2.01	1.76	1.70	1.78

*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)

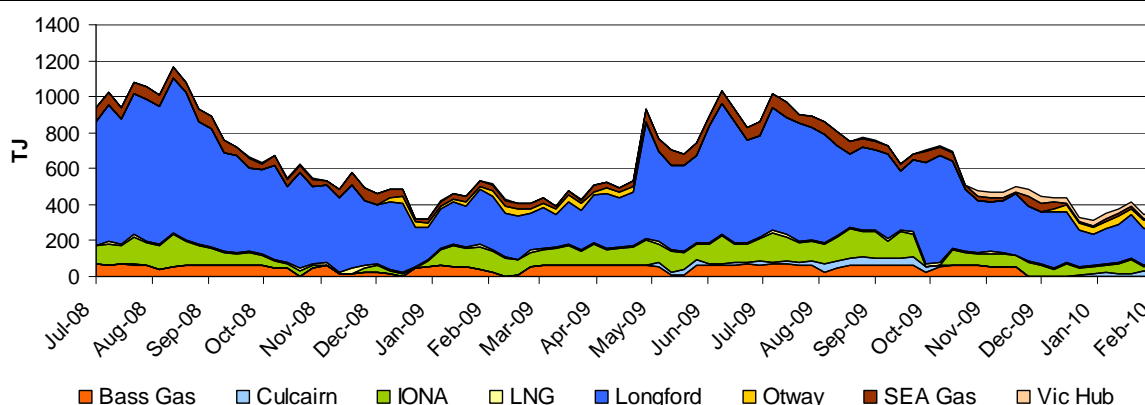
Notes: The daily average market price is a volume weighted imbalance price taking account of trading amounts at five times through the gas day — 6am, 10am, 2pm, 6pm and 10pm.

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 (31 Jan - 6 Feb)	Previous Week (24 - 30 January)	2009-10 Financial YTD*	2008-09 Financial YTD**
Culcairn	13	28	18	0.4
Longford	200	206	393	495
LNG	8	7	8	9
IONA	70	27	86	72
VicHub	28.0	21.1	14.7	1.8
SEAGas	10	7	39	49
Bass Gas	0	0	37	47
Otway	45	47	10	7
TOTAL	375	343	606	681



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

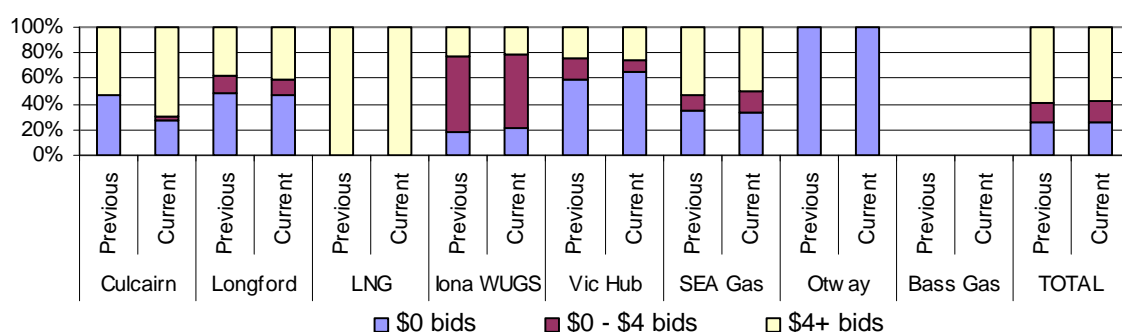
**Average daily estimated gas consumption measured from 1 July 2008 to the equivalent week in 2008 (inclusive)

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		AGL	Origin	AGL		Origin	
LNG		APG	APG				
Iona	TRU	TRU	Origin TRU	Origin TRU	TRU	TRU	TRU
VicHub	AETV	AETV		AETV	AETV	AETV	AETV
SEAGas	Simply	Simply	Simply Origin			Simply	
Otway							

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

Notes: Origin = Origin Energy | AGL = AGL Sales | TRU = TRUenergy | Simply = Simply Energy |
AETV = AETV Power | APG = Australian Power & Gas

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 (31 Jan - 6 Feb)	Previous Week (24 - 30 January)	2009-10 Financial YTD*	2008-09 Financial YTD**
Ballarat	10	9	24	25
Geelong^	69	56	82	89
Gippsland	35	31	47	65
Melbourne	235	219	400	434
Northern	29	27	54	69
TOTAL	377	343	607	682

^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	82	83	87	92	89	89	77	117	73	85	86	82
QLD Gas Pipeline	78	85	79	76	73	75	75	79	88	77	70	67
Roma to Brisbane Pipeline	168	184	197	195	188	176	159	214	78	181	167	171
South West QLD Pipeline	119	123	99	85	89	67	86	181	80	95	144	65
NSW/ACT												
Eastern Gas Pipeline	198	215	221	219	205	208	202	250	80	212	200	173
Moomba to Sydney Pipeline	93	136	156	141	147	107	87	420	46	124	194	177
NSW-VIC Interconnect^	-26	-20	0	-12	-7	-10	-16	90	-14	-13	-13	19
VIC												
Longford to Melbourne	184	233	245	273	248	215	187	1030	43	226	442	525
South West Pipeline	39	56	131	119	82	72	65	347	36	80	126	122
SA												
Moomba to Adelaide Pipeline	119	127	173	178	143	140	114	253	51	142	130	125
SEA Gas Pipeline	142	158	193	205	168	140	118	314	49	160	153	186
TAS												
Tasmanian Gas Pipeline	44	46	44	45	49	47	49	129	29	47	37	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 (QLD)												
Berwyndale South	92	94	92	91	84	83	82	140	65	88	91	64
Fairview	116	123	106	113	112	94	100	115	99	109	114	63
Kenya^	72	73	73	72	72	71	73	160	31	72	50	
Kincora	0	0	0	0	0	0	0	25	5	0	1	6
Kogan North	8	8	8	8	8	7	8	12	68	8	8	11
Peat	10	10	10	10	10	11	10	15	55	10	8	11
Rolleston	10	11	11	11	11	11	11	30	38	11	11	11
Scotia	27	27	27	27	27	27	27	27	83	27	22	21
Spring Gully	46	39	38	38	37	42	42	60	74	40	44	55
Strathblane	46	39	38	38	37	42	42	60	74	40	44	46
Talooka	28	23	23	23	23	26	25	36	74	24	27	0
Wallumbilla	11	11	11	11	11	11	11	20	53	11	11	13
Yellowbank	15	15	14	14	14	13	14	30	47	14	14	14
Moomba (SA/QLD)												
Moomba Gas Plant	153	285	282	292	275	245	251	430	64	255	275	282
Ballera	14	-10	14	25	24	38	26	150	6	19	8	42
Eastern (VIC)												
Orbost Gas Plant	34	37	37	37	37	37	37	92	17	37	15	0
Lang Lang Gas Plant	0	0	0	0	0	0	0	70	52	0	36	46
Longford Gas Plant	412	503	437	480	520	421	397	1140	56	453	638	710
LNG Storage Dandenong	0	0	0	0	0	0	0	158	0	0	0	1
Otway Basin (VIC)												
Minerva Gas Plant	76	79	85	87	87	87	71	94	79	82	74	90
Otway Gas Plant	128	158	134	160	184	124	70	206	62	137	127	145
Iona Underground Gas Storage	36	53	112	118	69	57	59	320	27	72	86	80

*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 (31 Jan - 6 Feb)	Average min.	22.4	22.0	17.1	18.7	18.2	14.9
	Average max.	30.0	26.5	28.4	30.0	30.6	25.4
Previous Week (24 - 30 January)	Average min.	22.2	20.8	15.6	14.7	17.2	12.0
	Average max.	32.6	27.0	32.1	25.5	32.5	23.0

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 (24 - 30 January)	Scheduling Interval					Daily Imbalance Weighted Average Price
	6am	10am	2pm	6pm	10pm	
Sun	1.39	1.48	1.62	1.62	2.97	1.43
Mon	1.66	1.66	2.08	2.78	2.97	1.68
Tue	1.72	2.55	3.15	3.50	3.65	1.92
Wed	1.76	3.26	3.16	3.14	3.46	2.01
Thu	1.74	2.00	2.38	2.71	1.84	1.76
Fri	1.65	2.04	2.78	2.98	3.15	1.70
Sat	1.76	2.08	2.08	2.56	2.98	1.78

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	
31-Jan	MP:	288	287	289	288	288	0
	AEMO:	301	279	298	302	310	
	MP as % of AEMO	96%	103%	97%	95%	93%	
1-Feb	MP:	347	336	337	337	336	0
	AEMO:	357	357	359	363	341	
	MP as % of AEMO	97%	94%	94%	93%	99%	
2-Feb	MP:	347	354	383	382	382	0
	AEMO:	335	342	374	383	413	
	MP as % of AEMO	104%	104%	102%	100%	92%	
3-Feb	MP:	378	430	430	435	435	0
	AEMO:	355	411	416	434	457	
	MP as % of AEMO	106%	105%	103%	100%	95%	
4-Feb	MP:	396	399	398	397	397	0
	AEMO:	388	390	398	408	394	
	MP as % of AEMO	102%	102%	100%	97%	101%	
5-Feb	MP:	346	345	350	349	349	0
	AEMO:	375	340	365	369	362	
	MP as % of AEMO	92%	101%	96%	95%	96%	
6-Feb	MP:	293	293	292	291	290	0
	AEMO:	300	305	302	297	297	
	MP as % of AEMO	98%	96%	97%	98%	98%	

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