WEEKLY GAS MARKET ANALYSIS

AUSTRALIAN ENERGY REGULATOR

18 - 24 October 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 were no instances of missing flow data on the Bulletin Board this week. This week marks the second occasion since the AER commenced publishing this report in July that full compliance has been achieved.

Temperatures increased in all regions this week contributing to a significant decrease in gas demand for regions other than Queensland and Tasmania, while demand for gas powered generation remained relatively steady in each state.

Production dropped by almost 60 TJ from Moomba and other gas production facilities to its north in Queensland. In Victoria, close to 200 TJ less gas was produced compared to the previous week. Flows across the NSW-VIC interconnect continued to deliver gas north into New South Wales however at a reduced rate.

Victorian Gas Market

Total gas injections and withdrawals in the Victorian gas market declined by 27 per cent from the previous week (See Figure V3).

In percentage terms, the total volume of gas offered into the market decreased in the $0/GJ and $0 to $4/GJ price bands from the previous week. Consequently there was an increased volume of gas offered above $4/GJ.

Despite the relative increases to the price of gas offered, a considerable decrease in demand during the week resulted in a significantly reduced average daily price, falling from $2.02/GJ in the previous week to just $0.76/GJ.

AEMO issued a positive demand override of 3 TJ on the 21 October gas day due to market participant demand forecasts falling outside AEMO demand forecast thresholds.

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 (18 - 24 October)	348	13	501	268	48	175	78	73
Financial Year-to-date 2009-10*	421	35	770	285	31	159	88	69
Financial Year-to-date 2008-09**	361	36	831	333	31	175	76	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 (18 - 24 October)	86	8	158	31	187
Financial Year-to-date 2009-10*	83	35	154	15	133
Financial Year-to-date 2008-09**	24	80	199	20	116

^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).

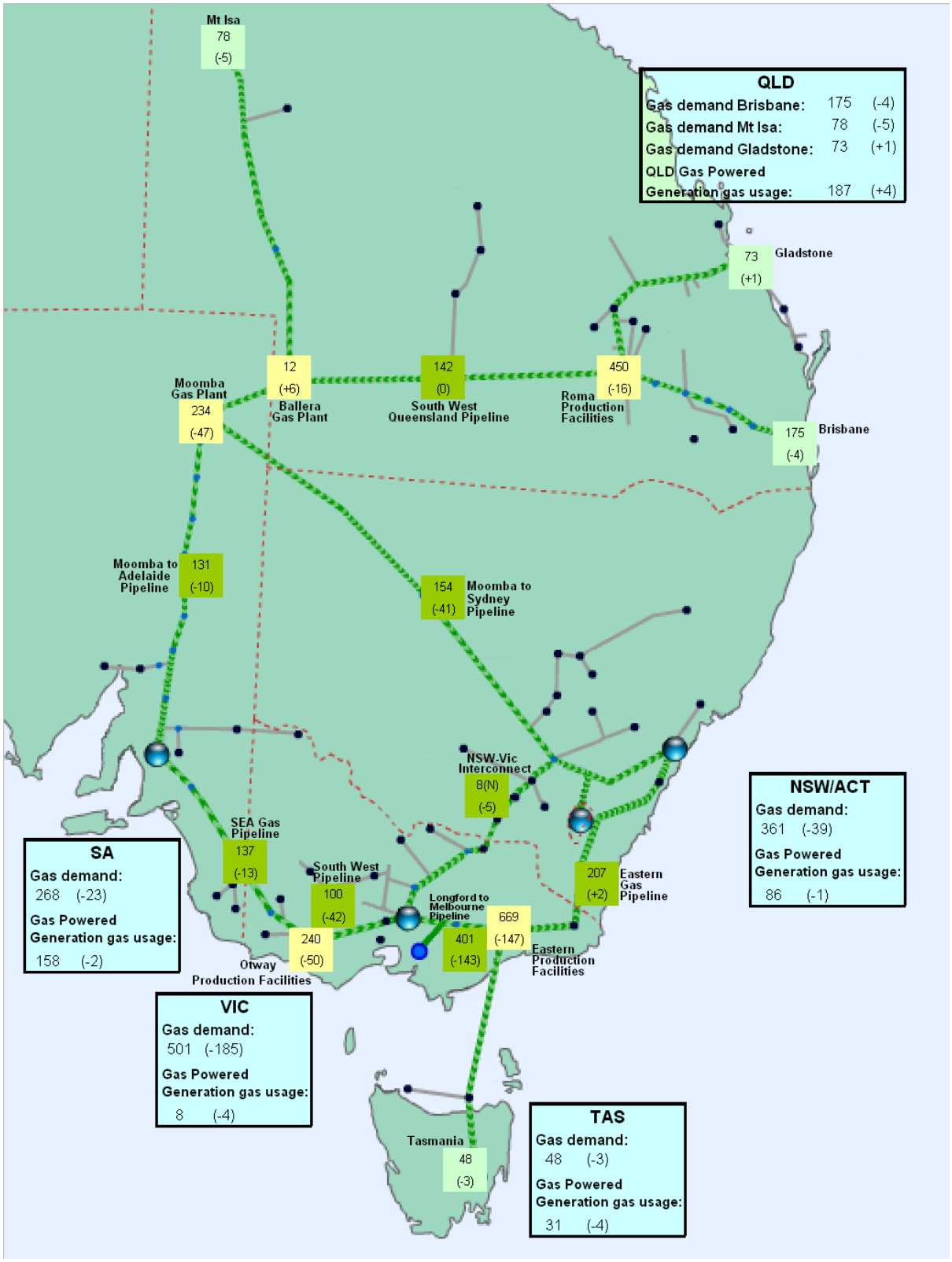
Figure 3: Daily average production flows (TJ) for each production zone

Average daily flows	**Roma (QLD)**	**Eastern Victoria**	**Otway Basin (VIC)**	**Moomba (SA/QLD)**
Current week (18 - 24 October)	461	669	240	234
Financial Year-to-date 2009-10*	435	814	323	331
Financial Year-to-date 2008-09**	361	925	364	322

*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)



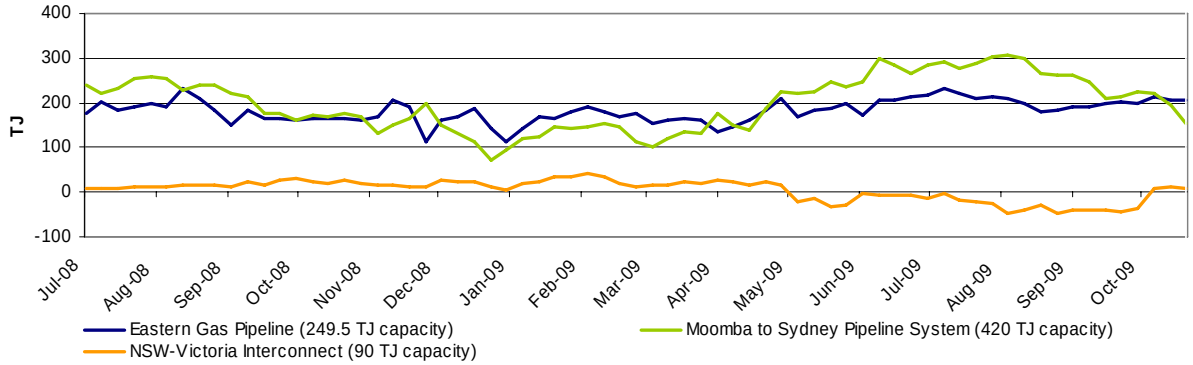
Source: Natural Gas Market Bulletin Board http://www.gasbb.com.au
Notes: Direction of aggregate daily flows along the NSW-Vic Interconnect indicated on map by S (South) or N (North).

With the exception of a slight increase to average flows on the Eastern Gas and Queensland Gas Pipelines, flows through each of the major Bulletin Board pipelines experienced a decrease in flows this week, as overall production declined significantly by close to 255 TJ.

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.

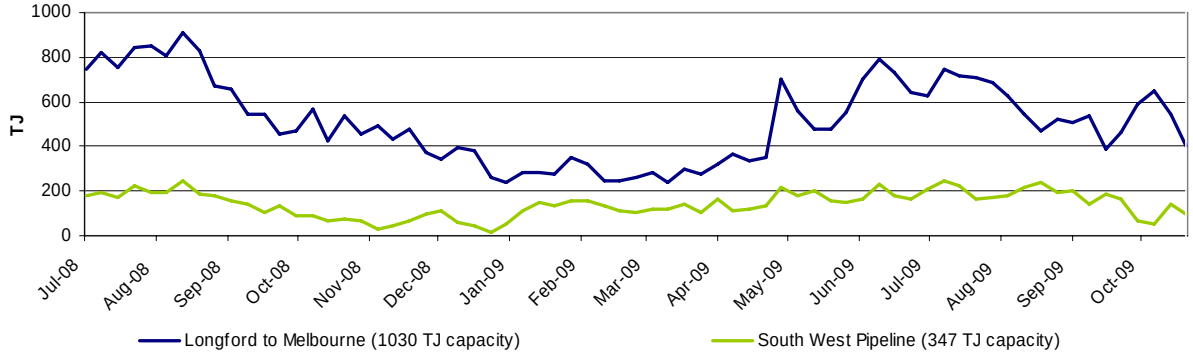
Figure 5: Average daily flows (TJ) into NSW/ACT demand region



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

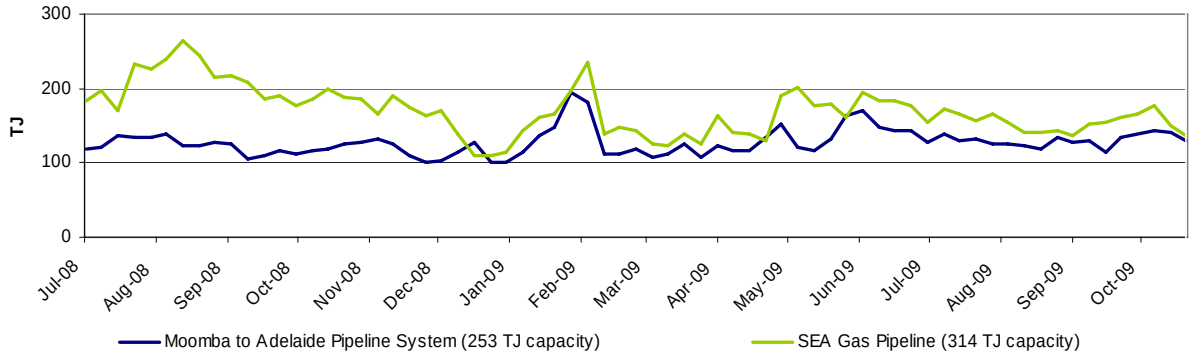
Notes: Negative flows on the NSW-Victoria Interconnect represent flows out of NSW into VIC.

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							NS					S
AGL (Qld)	Retailer	1				NS								
AGL	Retailer	4		NS	NS	NS	S				NS	NS		
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	4			S	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	1						S						
TRU Energy	Retailer	4			S	NS	S		NS			S		
Victoria Electricity	Trader	1			NS							S		
Victoria Electricity	Retailer	5		S	S	NS	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 (18 - 24 October)	Previous Week (11 - 17 October)	2009-10 Financial YTD*	2008-09 Financial YTD**
Average daily price	0.76	2.02	1.78	*3.03*

Current Week (18 - 24 October)	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Daily price	0.59	0.06	0.54	1.63	1.52	0.48	0.52

*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)

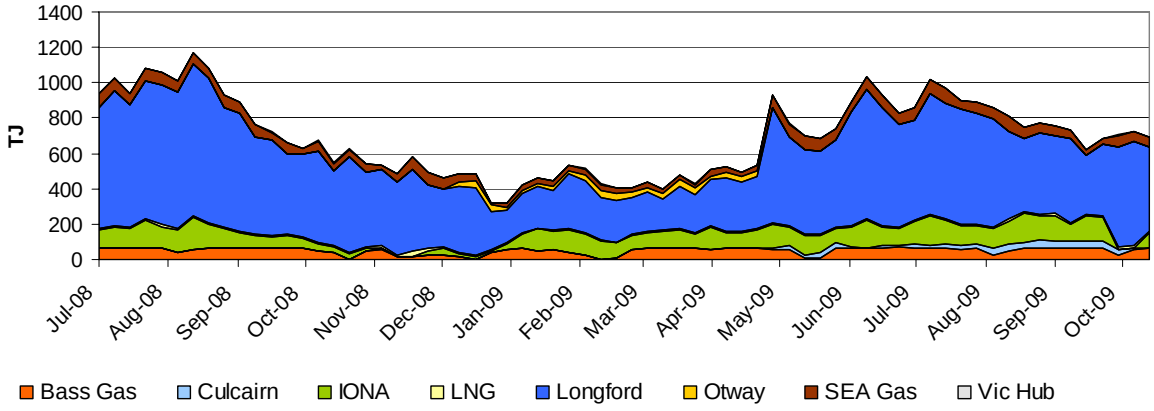
Notes: The daily average market price is a volume weighted imbalance price taking account of trading amounts at five times through the gas day — 6am, 10am, 2pm, 6pm and 10pm.

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 (18 - 24 October)	Previous Week (11 - 17 October)	2009-10 Financial YTD*	2008-09 Financial YTD**
Culcairn	0	0	28	0.1
Longford	339	481	517	649
LNG	7	6	9	8
IONA	74	89	111	95
VicHub	1.7	3.2	1.5	1.5
SEAGas	26	52	57	59
Bass Gas	62	61	57	57
Otway	0	0	0	0
TOTAL	**509**	**693**	**780**	**870**

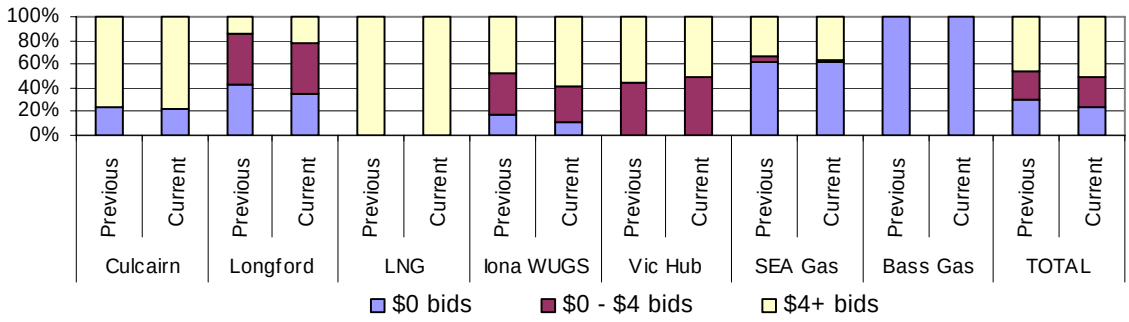


*Average daily estimated gas consumption measured from 1 July 2009 to the current week (inclusive)
**Average daily estimated gas consumption measured from 1 July 2008 to the equivalent week in 2008 (inclusive)
Source: http://www.aemo.com.au (INT 150)

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 TRU	AGL TRU	TRU	AGL Origin TRU	AGL TRU	AGL TRU	AGL Origin TRU
LNG							APG
Iona	TRU	TRU		Simply TRU	Simply	Simply TRU VE	Simply TRU
VicHub			AETV		TRU		AETV TRU
SEAGas	Simply		Origin	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 | APG = Australian Power & Gas | VE = Victoria Electricity

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 (18 - 24 October)	Previous Week (11 - 17 October)	2009 Financial YTD*	2008 Financial YTD**
Ballarat	21	32	36	36
Geelong^	72	84	90	105
Gippsland	47	48	54	65
Melbourne	323	458	535	584
Northern	48	71	67	82
TOTAL	**510**	**693**	**782**	**872**

^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	80	78	75	79	79	78	76	117	75	78	88	76
QLD Gas Pipeline	70	73	71	75	75	71	74	79	87	73	69	66
Roma to Brisbane Pipeline	167	187	167	190	186	169	156	208	76	175	159	175
South West QLD Pipeline	138	139	157	133	151	142	132	168	93	142	155	66
NSW/ACT										**361**	**456**	**397**
Eastern Gas Pipeline	195	207	210	214	204	202	220	250	81	207	203	182
Moomba to Sydney Pipeline	130	167	191	172	172	147	97	420	60	154	253	215
NSW-VIC Interconnect^	8	3	14	26	2	3	4	90	-28	8	-25	17
VIC										**501**	**770**	**831**
Longford to Melbourne	426	349	333	424	454	445	375	1030	56	401	572	675
South West Pipeline	141	128	123	126	66	48	70	347	49	100	170	156
SA										**268**	**285**	**333**
Moomba to Adelaide Pipeline	109	124	118	152	144	142	126	253	52	131	130	123
SEA Gas Pipeline	118	152	149	161	154	144	82	314	49	137	155	210
TAS												
Tasmanian Gas Pipeline	44	35	50	51	53	52	50	129	24	48	31	31

*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
#QGP figure for Sunday revised to 70 TJ for the analysis in this report

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)										**461**	**435**	**361**
Berwyndale South	95	101	103	103	102	108	95	140	62	101	86	66
Fairview	117	108	113	110	118	109	118	115	96	113	110	63
Kenya^	53	54	54	53	52	52	52	160	20	53	31	
Kincora	0	0	0	0	0	0	0	25	3	0	1	9
Kogan North	9	9	9	9	9	7	7	12	67	8	8	12
Peat	7	7	7	7	7	7	7	15	62	7	9	10
Rolleston	12	12	12	12	12	12	11	30	38	12	11	12
Scotia	27	27	27	27	27	27	27	27	69	27	19	21
Spring Gully	27	42	42	44	42	42	35	60	83	39	50	55
Strathblane	27	42	42	44	42	42	35	60	83	39	50	47
Taloona	16	25	25	26	25	26	21	36	84	23	30	0
Wallumbilla	13	13	13	13	13	13	13	20	51	13	10	12
Yellowbank	14	14	14	14	14	14	13	30	49	14	15	14
Ballera	18	3	0	17	0	16	26	150	2	12	3	40
Eastern (VIC)										**669**	**814**	**925**
Orbost Gas Plant	0	0	0	0	0	0	0	10	0	0	0	0
Lang Lang Gas Plant	62	63	63	61	61	62	61	70	80	62	56	57
Longford Gas Plant	625	552	561	608	646	706	553	1140	66	607	758	868
LNG Storage Dandenong	0	0	0	0	0	0	0	158	0	0	1	0
Otway Basin (VIC)										**240**	**323**	**364**
Minerva Gas Plant	76	71	61	61	61	61	68	94	81	66	76	95
Otway Gas Plant	113	103	114	108	92	104	56	206	67	99	137	165
Iona Underground Gas Storage	105	101	102	102	45	45	30	320	34	76	110	104
Moomba (SA)												
Moomba Gas Plant	232	248	248	249	247	229	187	430	77	234	331	322

*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)
#Year-to-date flows for Kenya Gas Plant and late data submitted for Berwyndale South and Kogan North facilities has been used to estimate the total production for the Roma/Ballera region.
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 (18 - 24 October)	Average min.	15.5	8.3	11.0	11.8	9.1
	Average max.	23.4	24.4	20.3	26.0	18.2
Previous Week (11 - 17 October)	Average min.	13.2	5.3	9.5	11.7	7.3
	Average max.	22.0	15.7	18.8	18.0	15.9

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 (18 - 24 October)	Scheduling Interval					Daily Imbalance Weighted Average Price
	6am	10am	2pm	6pm	10pm	
Sun	0.49	1.50	2.32	3.10	3.48	0.59
Mon	0.03	0.48	0.48	0.48	2.62	0.06
Tue	0.49	0.60	1.48	1.48	2.32	0.54
Wed	1.50	2.68	3.11	3.16	0.03	1.63
Thu	1.49	3.00	1.49	2.70	0.03	1.52
Fri	0.49	0.48	0.48	0.48	0.01	0.48
Sat	0.48	2.70	0.50	0.48	0.05	0.52

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	
18-Oct	**MP Demand:**	561	563	559	569	569	**0**
	AEMO Demand:	610	580	591	623	587	
	MP demand forecast as % of AEMO	92%	97%	95%	91%	97%	
19-Oct	**MP:**	497	489	484	484	483	**0**
	AEMO:	535	529	515	495	495	
	MP demand forecast as % of AEMO	93%	92%	94%	98%	98%	
20-Oct	**MP:**	424	419	422	422	421	**0**
	AEMO:	488	446	450	451	444	
	MP demand forecast as % of AEMO	87%	94%	94%	94%	95%	
21-Oct	**MP:**	493	498	526	520	519	**3**
	AEMO:	517	532	579	540	528	
	MP demand forecast as % of AEMO	95%	94%	91%	96%	98%	
22-Oct	**MP:**	530	533	526	536	537	**0**
	AEMO:	495	563	529	535	510	
	MP demand forecast as % of AEMO	107%	95%	99%	100%	105%	
23-Oct	**MP:**	531	535	533	531	531	**0**
	AEMO:	540	539	506	506	490	
	MP demand forecast as % of AEMO	98%	99%	105%	105%	108%	
24-Oct	**MP:**	449	453	452	458	458	**0**
	AEMO:	441	498	472	480	467	
	MP demand forecast as % of AEMO	102%	91%	96%	95%	98%	

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