WEEKLY GAS MARKET ANALYSIS

AUSTRALIAN ENERGY REGULATOR

11 - 17 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

Queensland Gas Company again failed to provide actual flow data for the Kenya production facility. In addition, actual flow data for the APA Group Kogan North facility was not submitted within the specified polling times during the week. Previous week comparison for Roma total production (Figure 4) includes estimated data for Kenya Gas Plant, based on the previous week's year-to-date flows. The AER monitors and reviews patterns of late submission of data and is engaging with facilities to ensure that in future the data requirements of the bulletin board are satisfied.

Demand in Queensland remained stable, with consistent demand for GPG since the previous week. Flows across the NSW-VIC interconnect continued to deliver gas north into New South Wales at an increased average daily rate of over 13 TJ. This was around 50 percent lower than positive flows observed during the end of the previous week through the interconnect. Lower temperatures in most states seemed to have little influence on gas demand this week. Demand decreased in New South Wales, South Australia and Victoria, with GPG responsible for the most of the decrease in SA, and to a lesser extent in Victoria. Demand for gas in Tasmania increased reflecting the additional demand from GPG in the region.

Victorian Gas Market

Total gas injections and withdrawals in the Victorian gas market declined by close to 5 per cent from the previous week (See also Figure V3). With the completion of scheduled maintenance at Iona, increased injections delivering gas through the South West Pipeline significantly reduced the amount of gas required from Longford. The total proportion of gas offered into the market for $0/GJ decreased this week, however more gas was offered in between $0 and $4. There was a decrease in the average daily price this week from $2.96/GJ to $2.02/GJ.

Supply Demand Point Constraints (SDPC) were issued for both injections at withdrawals at SEA Gas on the 13 October gas day. Iona was also constrained on 11 October during the completion of scheduled maintenance at the facility.

AEMO issued a negative demand override of 13 TJ on the 11 October gas day due to market participant demand forecasts falling outside AEMO demand forecast thresholds.

Additional information — Regional Gas Production

Figures S1 to S4 display the aggregate production volumes supplied from each region in the 2008/09 and 2009/10 financial years-to-date.

Figure S1: Supply from Roma/Ballera Production Facilities

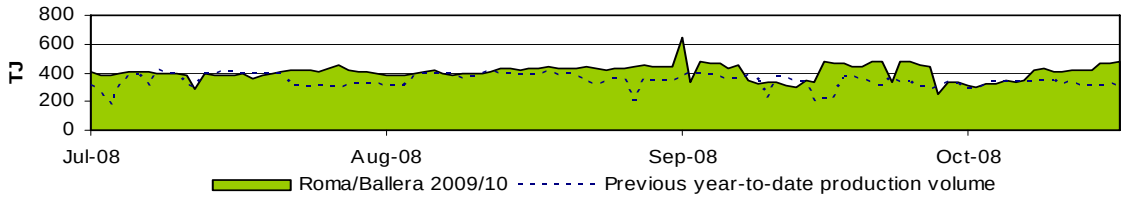


Figure S2: Supply from Otway Basin Production Facilities

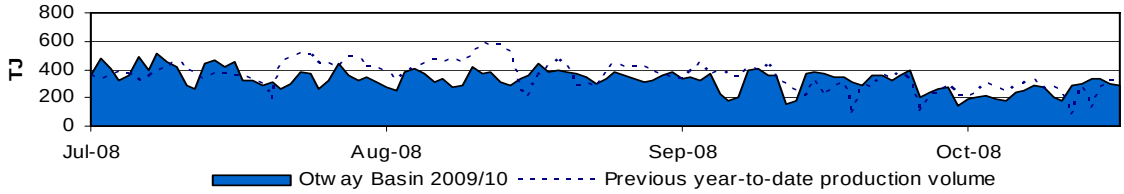


Figure S3: Supply from Eastern Victoria Production Facilities

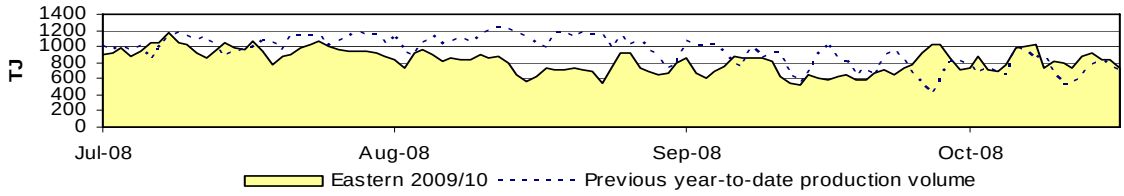
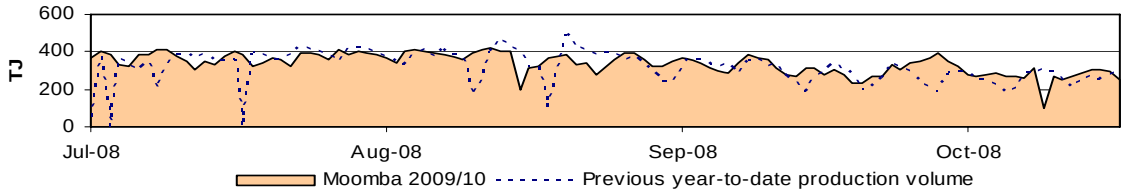


Figure S4: Supply from Moomba Gas Plant



Since the introduction of the QSN Link, which allows gas to be transmitted south into SA from Queensland production facilities, gas supplies in the southern states are now able to be sourced from cheaper coal seam gas. Production in Queensland (Roma/Ballera) increased significantly by 18 percent and Moomba production volumes also increased by 7 percent.

Conversely, production in Eastern Victoria has declined to be around 15 percent lower than the equivalent period in the previous year.

Overall production volumes from facilities in the Otway Basin have declined by 7 percent but this reflects in part the recent outage at Iona for scheduled maintenance. Removing the affects of this outage the change in production has only fallen by around 2 percent.

*considering the recent outage at Iona for scheduled maintenance

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 (11 - 17 October)	370	29	686	291	51	178	83	71
Financial Year-to-date 2009-10*	426	36	788	286	30	158	88	69
Financial Year-to-date 2008-09**	363	37	845	334	31	175	75	65

*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 (11 - 17 October)	76	10	139	31	159
Financial Year-to-date 2009-10*	82	36	152	14	128
Financial Year-to-date 2008-09**	24	79	197	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).

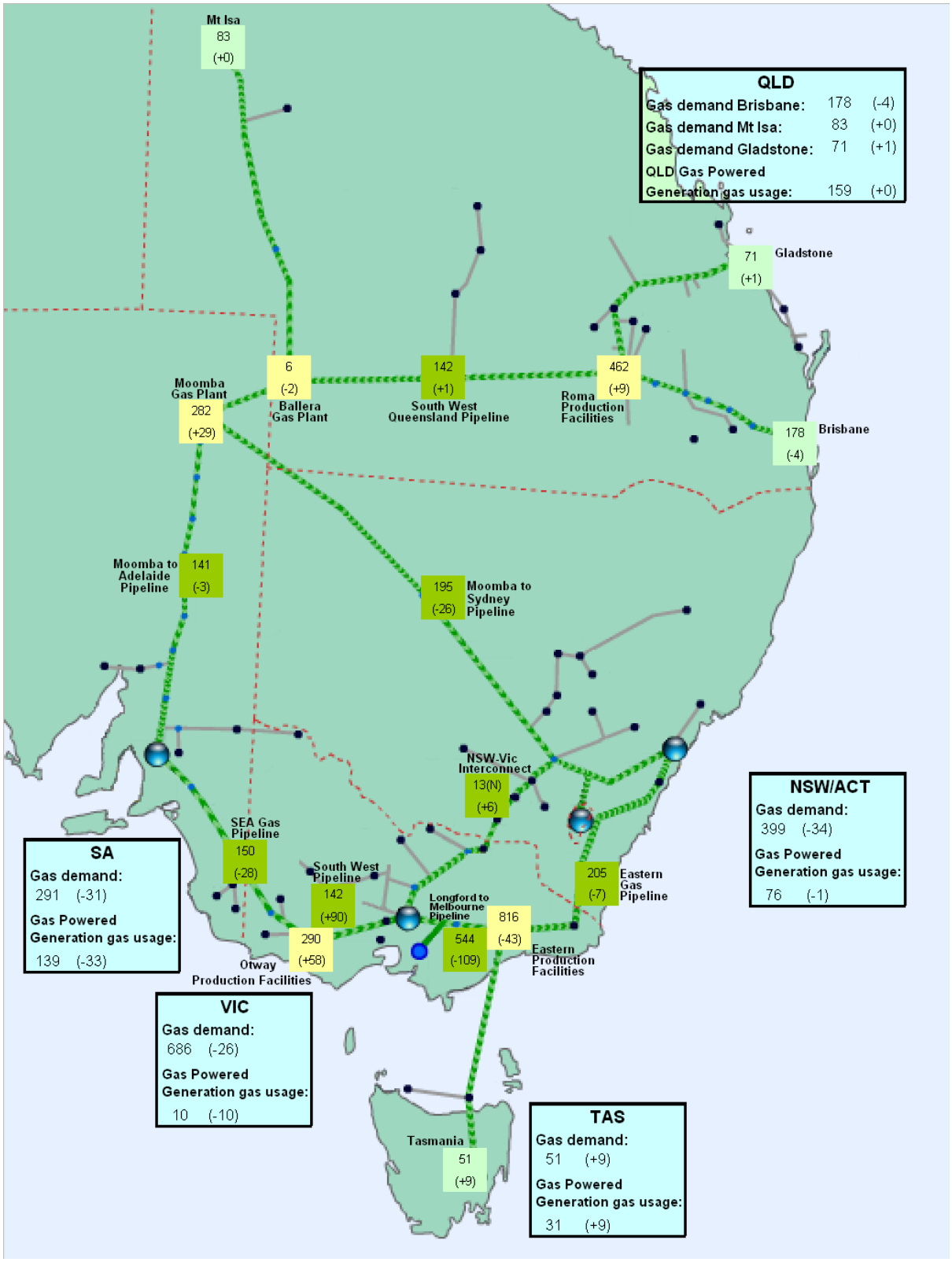
Figure 3: Daily average production flows (TJ) for each production zone

Average daily flows	**Roma (QLD)**	**Eastern Victoria**	**Otway Basin (VIC)**	**Moomba (SA/QLD)**
Current week (11 - 17 October)	468	816	290	282
Financial Year-to-date 2009-10*	432	824	328	337
Financial Year-to-date 2008-09**	363	936	369	325

*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 below 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)



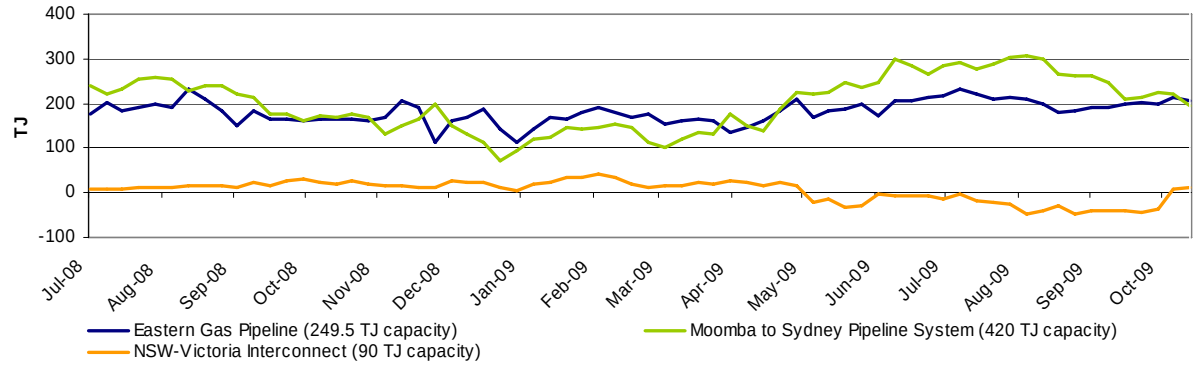
Source: Natural Gas Market Bulletin Board http://www.gasbb.com.au
Notes: Direction of aggregate daily flows along the NSW-Vic Interconnect indicated on map by S (South) or N (North).

Production at Iona increased this week at the completion of scheduled maintenance, providing a substitute for decreased injections from the Longford facility. The NSW-VIC interconnect continued to flow north into NSW/ACT despite lower demand, as flows decreased along the Moomba to Sydney Pipeline. Gas usage for gas powered electricity generation decreased in most states excluding Tasmania.

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.

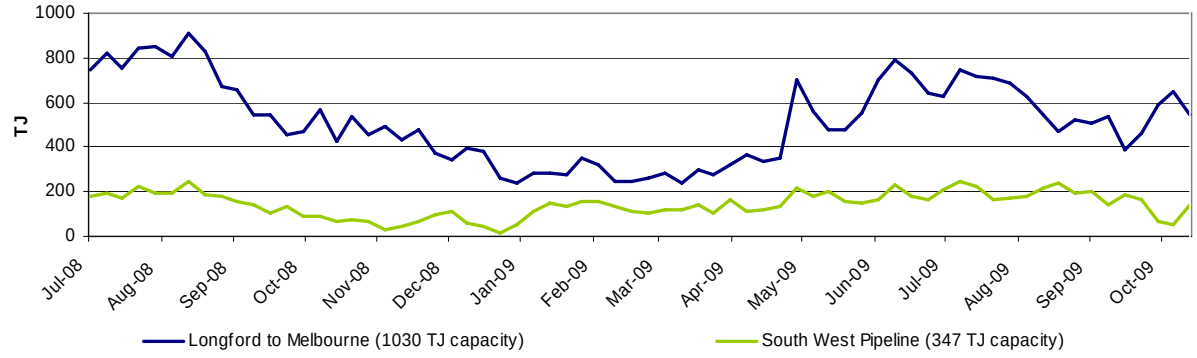
Figure 5: Average daily flows (TJ) into NSW/ACT demand region



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

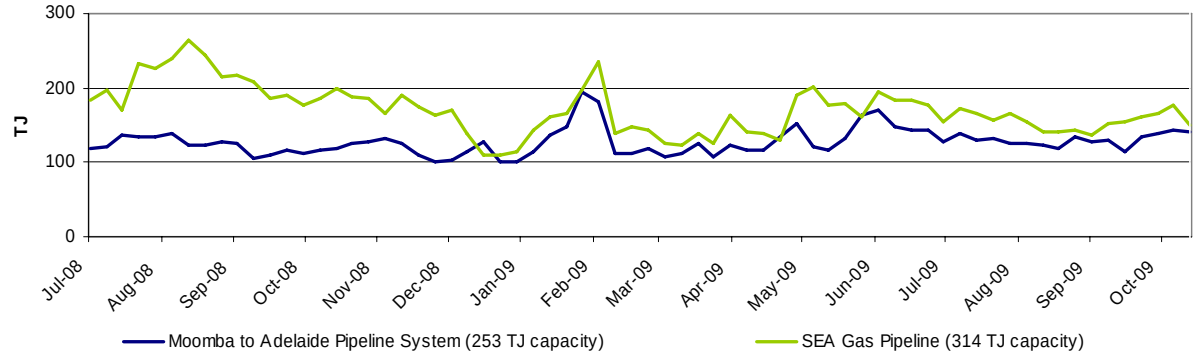
Notes: Negative flows on the NSW-Victoria Interconnect represent flows out of NSW into VIC.

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 below 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					
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			
International Power	Transmission Customer	1											S	
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										S		
Victoria Electricity	Retailer	5		S	S	NS	S	S						
Visy Paper	Distribution Customer	2					S				S			
Simply Energy	Retailer	4			S	NS	S	NS						
Energy Australia	Retailer	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 (11 - 17 October)	Previous Week (4 - 10 October)	2009-10 Financial YTD*	2008-09 Financial YTD**
Average daily price	2.02	2.96	1.83	*3.02*

Current Week (11 - 17 October)	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Daily price	1.57	0.18	3.02	3.13	2.68	3.07	0.51

*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)

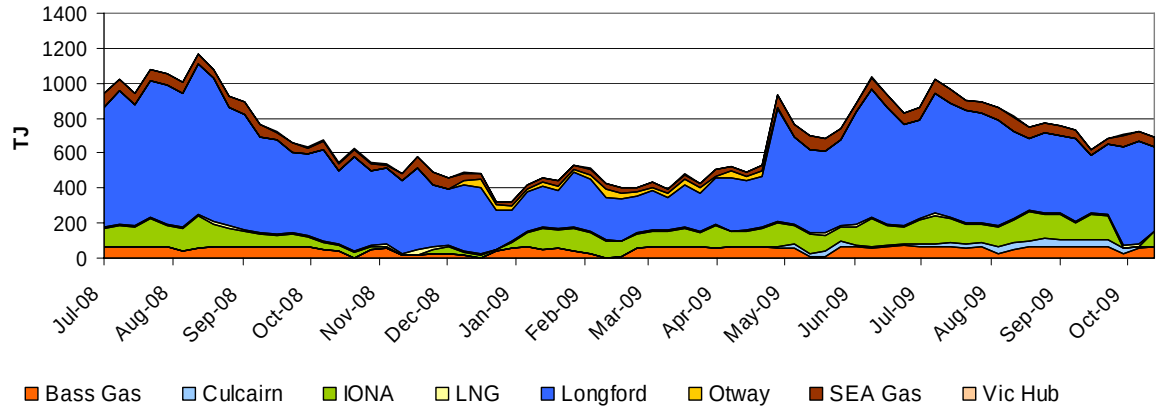
Notes: The daily average market price is a volume weighted imbalance price taking account of trading amounts at five times through the gas day — 6am, 10am, 2pm, 6pm and 10pm.

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 (11 - 17 October)	Previous Week (4 - 10 October)	2009-10 Financial YTD*	2008-09 Financial YTD**
Culcairn	0	8	30	0.1
Longford	481	593	528	656
LNG	6	11	9	8
IONA	89	0	113	99
VicHub	3.2	3.7	1.4	1.3
SEAGas	52	52	59	60
Bass Gas	61	58	57	60
Otway	0	0	0	0
TOTAL	**693**	**726**	**798**	**885**

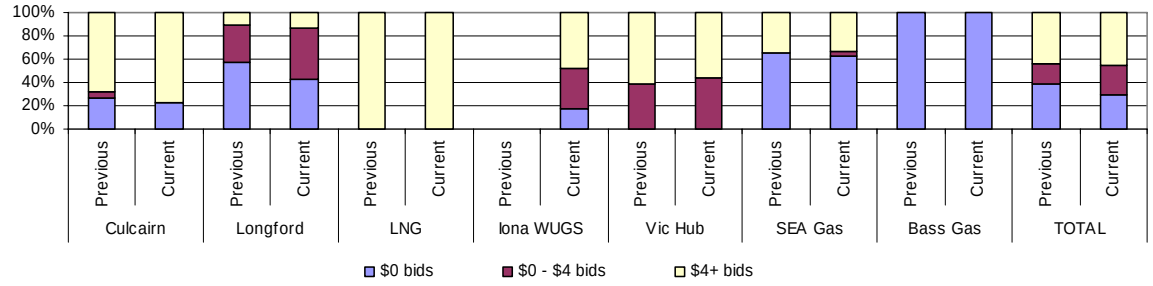


*Average daily estimated gas consumption measured from 1 July 2009 to the current week (inclusive)
**Average daily estimated gas consumption measured from 1 July 2008 to the equivalent week in 2008 (inclusive)
Source: http://www.aemo.com.au (INT 150)

Bidding Activity

Figure V4 shows 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.

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

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 (11 - 17 October)	Previous Week (4 - 10 October)	2009 Financial YTD*	2008 Financial YTD**
Ballarat	32	33	37	37
Geelong^	84	81	92	106
Gippsland	48	57	55	64
Melbourne	458	484	554	599
Northern	71	72	69	83
TOTAL	**693**	**727**	**805**	**888**

^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	86	87	83	83	83	82	79	117	75	83	88	75
QLD Gas Pipeline	67	70	68	82	72	70	72	79	87	71	69	65
Roma to Brisbane Pipeline	171	184	187	188	186	172	161	208	76	178	158	175
South West QLD Pipeline	150	149	142	142	144	152	115	168	93	142	156	69
NSW/ACT										**399**	**462**	**400**
Eastern Gas Pipeline	195	208	204	206	204	211	205	250	81	205	203	183
Moomba to Sydney Pipeline	167	207	198	216	211	215	148	420	62	195	259	216
NSW-VIC Interconnect^	17	8	6	7	11	24	21	90	-30	13	-27	16
VIC										**686**	**788**	**845**
Longford to Melbourne	464	437	626	621	579	607	473	1030	57	544	583	684
South West Pipeline	42	110	163	196	194	154	138	347	50	142	174	161
SA										**291**	**286**	**334**
Moomba to Adelaide Pipeline	120	140	143	152	152	159	121	253	52	141	130	123
SEA Gas Pipeline	99	166	166	164	162	153	141	314	50	150	156	211
TAS												
Tasmanian Gas Pipeline	49	52	51	52	50	51	50	129	23	51	30	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)										**468**	**432**	**363**
Berwyndale South	102	107	109	104	102	97	96	140	61	102	85	66
Fairview	118	118	121	118	115	118	117	115	96	118	110	64
Kenya^	N/A	N/A	N/A	N/A	54	55	55	160	18	54	29	
Kincora	0	0	0	0	0	0	0	25	3	0	1	9
Kogan North	8	8	7	9	9	9	9	12	67	9	8	12
Peat	7	7	7	7	7	7	7	15	63	7	9	10
Rolleston	12	12	12	12	11	12	12	30	37	12	11	12
Scotia	27	27	27	27	27	27	27	27	67	27	18	21
Spring Gully	42	42	41	42	42	42	35	60	84	41	51	55
Strathblane	42	42	41	42	42	42	35	60	84	41	51	47
Taloona	25	25	25	25	25	26	21	36	85	25	31	0
Wallumbilla	12	12	12	13	13	13	13	20	50	13	10	12
Yellowbank	15	14	14	14	14	14	14	30	49	14	15	14
Ballera	0	0	0	0	5	0	35	150	2	6	3	40
Eastern (VIC)										**816**	**824**	**936**
Orbost Gas Plant	0	0	0	0	0	0	0	10	0	0	0	0
Lang Lang Gas Plant	61	61	61	62	62	61	62	70	80	61	56	60
Longford Gas Plant	724	672	807	864	769	771	676	1140	67	755	767	876
LNG Storage Dandenong	0	0	0	0	0	0	0	158	0	0	1	0
Otway Basin (VIC)										**290**	**328**	**369**
Minerva Gas Plant	61	87	78	87	87	87	87	94	81	82	77	95
Otway Gas Plant	116	153	102	132	128	84	107	206	68	117	140	169
Iona Underground Gas Storage	3	52	114	118	125	128	97	320	35	91	112	105
Moomba (SA)												
Moomba Gas Plant	252	268	290	306	305	297	253	430	78	282	337	325

*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)
^^Production volume estimated using year-to-date flow data
#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 (ºC)		NSW (Sydney)	ACT (Canberra)	VIC (Melbourne)	SA (Adelaide)	TAS (Hobart)
Current 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
Previous Week (4 - 10 October)	Average min.	11.0	3.4	8.6	8.0	5.1
	Average max.	18.5	14.3	17.4	18.2	13.7

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 (11 - 17 October)	Scheduling Interval					Daily Imbalance Weighted Average Price
	6am	10am	2pm	6pm	10pm	
Sun	1.51	2.65	1.49	2.66	3.00	1.57
Mon	0.03	2.70	0.01	0.50	4.25	0.18
Tue	3.00	3.29	3.29	3.16	3.74	3.02
Wed	3.11	3.29	3.37	3.37	4.11	3.13
Thu	2.65	2.65	2.65	3.11	4.12	2.68
Fri	3.17	3.48	3.17	0.05	0.05	3.07
Sat	0.49	1.49	0.49	1.00	0.03	0.51

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	
11-Oct	**MP Demand:**	456	448	439	455	459	**-13**
	AEMO Demand:	415	421	413	439	460	
	MP demand forecast as % of AEMO	110%	106%	106%	104%	100%	
12-Oct	**MP:**	543	551	527	527	527	**0**
	AEMO:	531	535	541	557	557	
	MP demand forecast as % of AEMO	102%	103%	97%	95%	95%	
13-Oct	**MP:**	711	714	718	706	704	**0**
	AEMO:	722	760	772	776	782	
	MP demand forecast as % of AEMO	98%	94%	93%	91%	90%	
14-Oct	**MP:**	735	742	739	737	737	**0**
	AEMO:	793	751	791	795	791	
	MP demand forecast as % of AEMO	93%	99%	93%	93%	93%	
15-Oct	**MP:**	725	726	725	727	725	**0**
	AEMO:	759	752	770	768	774	
	MP demand forecast as % of AEMO	96%	97%	94%	95%	94%	
16-Oct	**MP:**	741	751	738	731	729	**0**
	AEMO:	738	755	744	731	698	
	MP demand forecast as % of AEMO	100%	99%	99%	100%	104%	
17-Oct	**MP:**	628	632	631	629	629	**0**
	AEMO:	628	645	640	600	600	
	MP demand forecast as % of AEMO	100%	98%	99%	105%	105%	

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