WEEKLY GAS MARKET ANALYSIS

AUSTRALIAN ENERGY REGULATOR

12 July - 18 July 2009

Preface

As part of its new monitoring roles for the National Gas Market Bulletin Board (bulletin board) and Victorian Gas Market, the AER is publishing 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, which is currently the only declared wholesale gas market in Australia.

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

Bulletin board participants include pipeline operators and production/storage facilities in southern and eastern Australia. The participants report daily forecast and actual operational data. Average pipeline flows and gas production flows were lower than average flows from the previous week. Overall pipeline usage fell from 69 per cent to 63 per cent of total pipeline capacity, while usage of production facilities also decreased from 70 per cent to 66 per cent of total production capacity. However, average usage of both pipelines and production facilities were still higher than their calendar year-to-date averages of 51 per cent and 53 per cent respectively.

In comparison to previous weeks, there were few instances of missing bulletin board data. However, the Berwyndale South and the Lang Lang gas plants did not provide actual flow data for the Sunday and Wednesday gas days respectively. The analysis in this report accounts for this missing data (refer to Figures A1 and A2 of the Appendix). The AER monitors and reviews patterns of late submission of data and will continue to engage with facilities to ensure that in future the data requirements of the bulletin board are satisfied.

Victorian Gas Market

Total gas injections and withdrawals in the Victorian gas market both decreased by approximately 5 per cent from the previous week. The average price of gas traded in the market was $2.46/GJ, largely unchanged from the previous week's average price of $2.47/GJ, although still lower than the 2009 calendar year-to-date average of $2.77/GJ.

There was an overall increase in the proportion of gas bid in at $0/GJ compared to the previous week, although the proportion of $0/GJ bids decreased from Culcairn. Fewer market participants submitted rebids at a smaller number of injection points in the market compared with the previous week, with intra-day rebids of gas submitted at Culcairn, Iona, Longford, SEAGas.

Various constraints at the Iona withdrawal point and the Bass Gas injections point reduced the capacity of gas flows at these facilities.

Part A: National Gas Market Bulletin Board

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Summary of pipeline and production flows

Figure 1 sets out the average daily pipeline flows for each key demand region across the National Gas Market. It compares the average flows for each region with the previous week, and also the calendar year to date averages. (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 (12 - 18 July)	432	46	930	296	28	118	91	63
Previous week (5 - 11 July)	473	46	970	311	31	142	90	69
% change from previous week*	-8.7	0	-4.1	-4.8	-9.7	-16.9	1.1	-8.7
Calendar Year-to-date 2009**	355	20	560	295	30	164	84	67

*The percentage change in the average daily flow from the previous week to the current week
**Average daily injection flows from 1 January 2009 to the current week (inclusive)
Source: National Gas Market Bulletin Board http://www.gasbb.com.au

Notes:

1. Data for NSW calculated from flows on the Moomba-Sydney and Eastern Gas pipelines adjusted for net flows on the NSW-VIC interconnect and deducting flows into ACT. This figure may include some gas taken at EGP off-takes in Victoria such as Bairnsdale.
2. Data for ACT calculated using off-take flows from the Moomba-Sydney and Eastern Gas pipelines
3. Data for VIC calculated by adding flows on Longford-Melbourne and South West pipelines adjusted for net flows on the NSW-VIC interconnect. This excludes Victorian off-takes from the EGP (between Longford and the NSW-VIC border).
4. Data for SA calculated by adding flows on the Moomba-Adelaide and SEAGas pipelines.
5. Data for TAS taken from flows on the Tasmanian Gas Pipeline.
6. Data for Brisbane, Mt Isa, and Gladstone calculated using flows along the Roma-Brisbane Pipeline, Carpentaria Gas Pipeline and Queensland Gas Pipeline respectively.

One of important driver of gas demand is the gas usage by gas-powered generators (GPGs). Figure 2 provides the average daily amount of gas used for gas-powered electricity generation for each demand region for the current week, in comparison to the previous week.

Figure 2: Average daily gas (TJ) used by gas-powered generators in each demand region

Average daily gas for GPG usage^	NSW	VIC	SA	TAS	QLD
Current week (12 - 18 July)	85	58	154	11	78
Previous week (5 - 11 July)	96	68	166	13	78
% change from previous week*	-11.2	-15.2	-7.0	-15.2	0.4

^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'* (Available at: http://www.aciltasman.com.au/News/news.html)
*The percentage change in the average daily gas usage from the previous week to the current week

Source: http://www.aemo.com.au

Notes:

1. Data for NSW calculated using data from the following gas-powered generators (GPGs): Smithfield Energy, Uranquinty, Hunter Valley GT, and Tallawarra power stations
2. Data for VIC calculated using data from the following GPGs: Laverton North, Valley Power, Jeeralang A, Jeeralang B, Somerton, Bairnsdale, and Newport power stations.
3. Data for SA calculated using data from the following GPGs: Dry Creek GT, Pelican Point, Torrens Island, Osborne, Ladbroke Grove, and Quarantine power stations.
4. Data for TAS calculated using data from the following GPGs: Bell Bay, and Bell Bay Power (Tamar Valley) power stations.
5. Data for QLD calculated using data from the following GPGs: 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. It compares these average flows for each zone with flow outcomes from the previous week and the year to date average (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/Ballera (QLD)	Eastern (VIC)	Otway Basin (VIC)	Moomba (SA)
Current week (12 - 18 July)	381	987	382	353
Previous week (5 - 11 July)	399	1028	428	379
% change from previous week*	-4.5	-4.0	-10.7	-6.9
Calendar Year-to-date 2009**	411	662	333	279

*The percentage change in the average daily flow from the previous week to the current week
**Average daily injection flows from 1 January 2009 to the current week (inclusive)
Source: National Gas Market Bulletin Board http://www.gasbb.com.au

Notes:

1. Data for Roma/Ballera taken from the combined actual production flows from Ballera gas plant and the various production facilities in Roma (a full list of these facilities is provided in Figure G1 of the Glossary)
2. Data for Eastern (VIC) taken from the combined actual production flows from Orbost, Lang Lang, and Longford gas plants, along with LNG flows (if any).
3. Data for Otway Basin (VIC) taken from the combined actual production flows from Minerva and Otway gas plants, along with flows from Iona Underground Storage.
4. The Moomba (SA) figure taken from the actual production flows from the Moomba gas plant in South Australia.

Overview of gas demand across southern and eastern Australia

Along with gas-powered electricity generation, temperatures are another important driver of gas demand, particularly in Victoria where there is large residential gas heating demand, and to a lesser extent in Tasmania (TAS), South Australia (SA), New South Wales (NSW) and the Australian Capital Territory (ACT). The colder temperatures for the week ending 18 July, combined with the drop in gas-powered generation, may have led to lower pipeline flows into those regions compared to the previous week. Notably, temperatures in the NSW and TAS demand regions were slightly higher compared to last week, while average minimum temperatures were also marginally higher in Victoria and SA. (See also Figure A3 in the Appendix)

Production from the two Victorian production zones (Eastern and Otway Basin) was lower compared to the previous week. This was consistent with the drop in the demand in TAS, NSW, SA, and Victoria (see Part B for more analysis of the Victorian gas market). Production at Moomba (SA) appears also to have dropped due to the lower demand in both NSW and SA. Production flows from Roma/Ballera (QLD) also fell this week, which was perhaps in large part due to the 17 per cent drop in demand from the Brisbane demand region.

Queensland

There are four bulletin board registered pipelines in Queensland (Figure 4). Average flows on the Carpentaria Pipeline were broadly unchanged from the previous week, and higher than its calendar year to date average. In contrast, flows on the other three pipelines were all down from the previous week, although flows on the South West Queensland Pipeline were still higher than the calendar year to date average

Figure 4: Average daily flows (TJ) for Queensland pipelines

Average daily flows	Carpentaria Pipeline	Queensland Gas Pipeline	South West Queensland Pipeline^	Roma to Brisbane Pipeline
Current week (12 - 18 July)	91	63	146	118

Previous week (5 - 11 July)	90	69	163	142
% change from previous week*	1.1	-9.9	-10.6	-16.9
Calendar Year-to-date 2009**	84	67	127	164

^Includes the Ballera to Moomba section of the pipeline (QSN Link)
*The percentage change in the average daily flow from the previous week to the current week
**Average daily injection flows from 1 January 2009 to the current week (inclusive)
Source: National Gas Market Bulletin Board http://www.gasbb.com.au

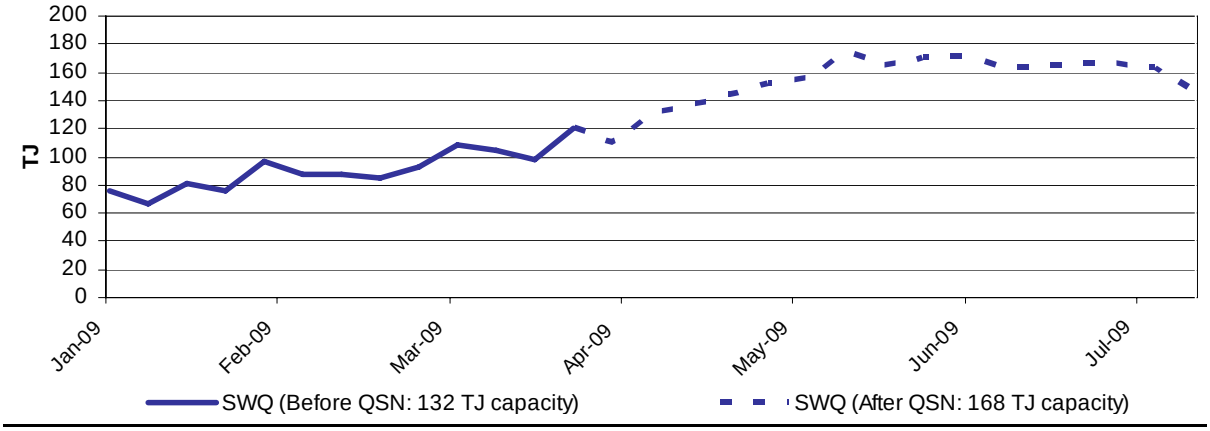
Commissioning of the QSN link

In January 2009, the new QSN Link (Ballera to Moomba) was commissioned, creating for the first-time the ability to deliver dry-gas between Queensland and the southern states. This link is an important source of new inter-basin competition, as Queensland-sourced coal seam gas can now be delivered to compete with gas from Moomba and the southern basins.

Since the commissioning of the QSN link, there has been a significant increase in westerly flows along the South West Queensland Pipeline (SWQP), which feed into the QSN link (and the Carpentaria Gas Pipeline to Mt Isa). Figure 5 shows the average daily flows along the SWQP, with the dotted line marking the additional flows along the SWQP since the introduction of the QSN link allowed Queensland gas to flow to Moomba.

Average daily flows on the SWQP for the week ending 18 July 2009 were about 60 TJ higher than the average flows on the SWQP during the same period in July 2008. This reflects the larger amount of gas able to flow down to the southern states, via the QSN link.

Figure 5: South West Queensland Pipeline (includes QSN Link flows to Moomba, SA)



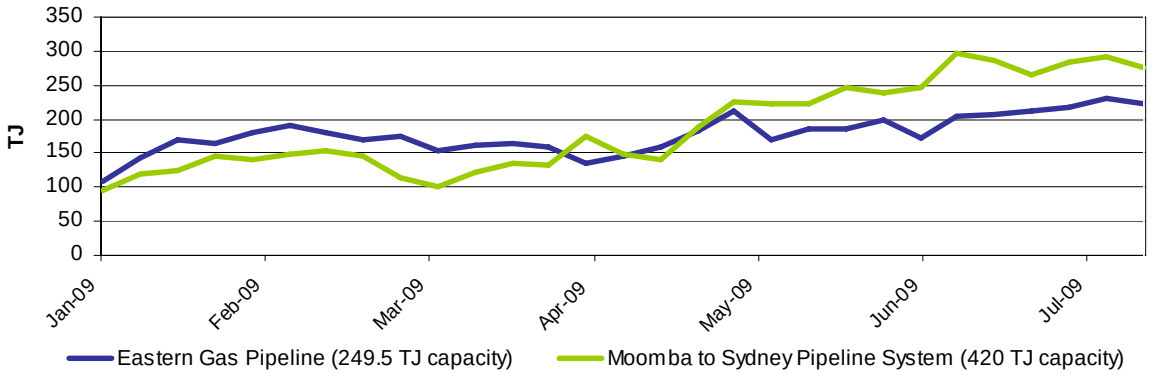
Source: National Gas Market Bulletin Board http://www.gasbb.com.au
Notes: Reporting of flow data for the QSN link only began on the 31 March 2009, despite being commissioned in January 2009.

New South Wales / Australian Capital Territory

There are two main pipelines providing gas to the NSW and ACT demand regions. As shown in Figure 6, Moomba to Sydney Pipeline (MSP) and Eastern Gas Pipeline (EGP) have followed similar flow trends since January 2009. Flows trended slightly downwards this week on both the MSP and EGP, which may have been due to the lower demand from the NSW demand region. This correlated with warmer average temperatures and a 12 per cent fall in gas-powered generation in NSW compared with the previous week.

The direction of gas flow on the bi-directional NSW-VIC interconnect changes depending on whether the demand for Victorian gas is higher than the demand for gas to be shipped into Victoria from NSW. Similar to the previous week, the majority of flows through the NSW-Victoria Interconnect pipeline were in the 'reverse' direction into Victoria. Gas flowed south for each day of the week ending 18 July at an average of 19 TJ/day. However, average flows on the NSW-VIC interconnect on a calendar year-to-date basis have been north, at 9 TJ/day.

Figure 6: Average daily flows (TJ) to NSW/ACT demand region



Average Daily Flows	Eastern Gas Pipeline	Moomba to Sydney Pipeline	NSW-VIC Interconnect^
Current week (12 - 18 July)	222	276	-19
Previous week (5 - 11 July)	232	290	-3
% change from previous week*	-4.4	-5.1	489.1
Calendar Year-to-date 2009**	178	188	8

^Flows on the NSW-VIC Interconnect can flow in reverse direction from NSW into Victoria (represented by negative values)
*The percentage change in the average daily flow from the previous week to the current week
**Average daily injection flows from 1 January 2009 to the current week (inclusive)
Source: National Gas Market Bulletin Board http://www.gasbb.com.au

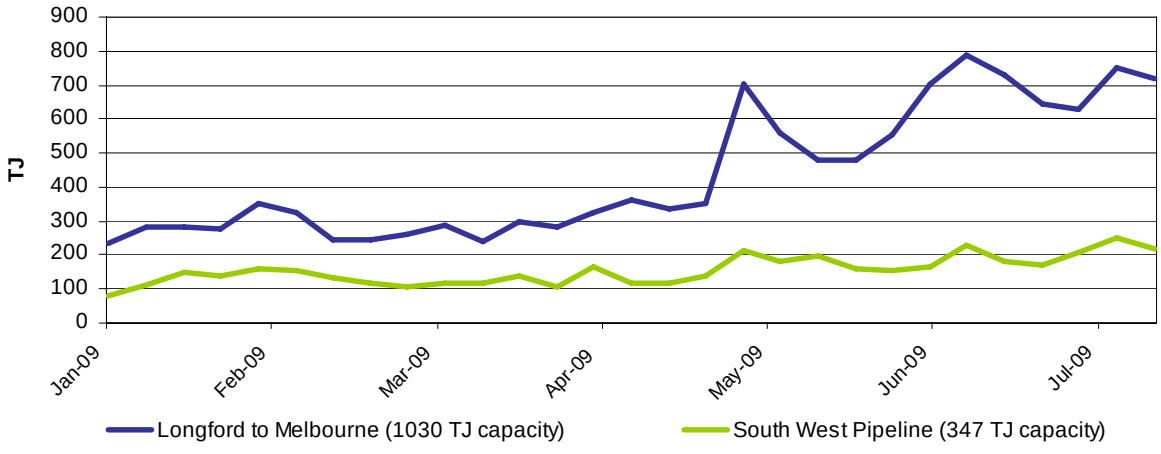
Notes: The figure for the EGP includes some gas that is consumed in Victoria, from Victorian EGP off-takes.

Victoria / Tasmania

There are two main pipelines providing gas into the Victorian demand region. As shown in Figure 7, the Longford to Melbourne Pipeline (LMP) and the South West Pipeline (SWP) have experienced broadly similar flow trends since January 2009. The increase in demand in the Victorian gas market led to marginally lower flows along both the LMP and SWP. This may have been driven by marginally lower gas-powered electricity generation which fell by almost 14 per cent from the previous week, along with slightly warmer temperatures leading to less gas for heating.

The Tasmanian Gas Pipeline (TGP), which is connected to Victorian production facilities, provides gas into the Tasmania demand region. The lower average daily flows along the TGP into Tasmania were consistent with the marginally warmer temperatures and the 15 per cent drop in gas-powered generation in Tasmania, compared to the previous week.

Figure 7: Average daily flows (TJ) to Victoria demand region



Average Daily Flows	Longford to Melbourne Pipeline	South West Pipeline	Tasmanian Gas Pipeline^
Current week (12 - 18 July)	719	221	28
Previous week (5 - 11 July)	749	250	31
% change from previous week*	-4.0	-11.7	-10.4
Calendar Year-to-date 2009**	442	156	30

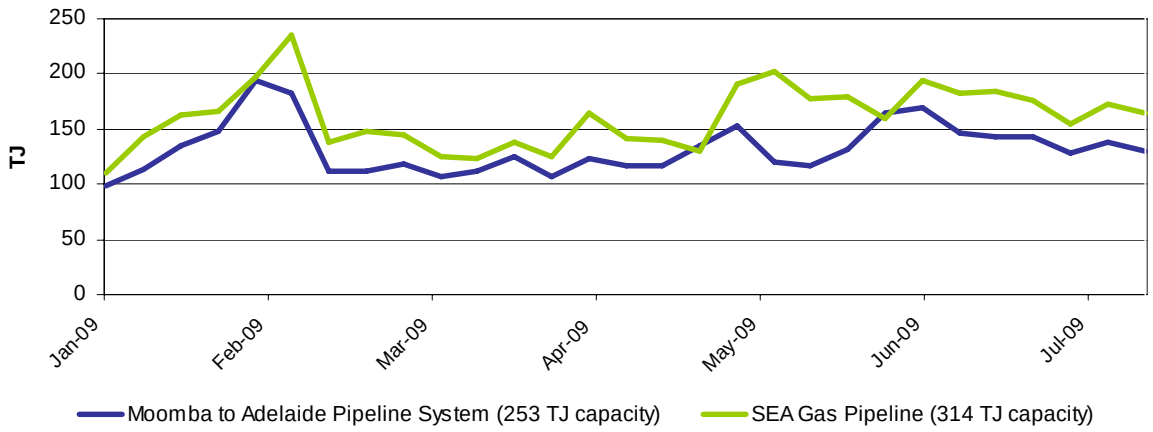
^Gas on the Tasmanian Gas Pipeline flows from Eastern Victoria into Tasmania, ending in Hobart.
*The percentage change in the average daily flow from the previous week to the current week
**Average daily injection flows from 1 January 2009 to the current week (inclusive)
Source: National Gas Market Bulletin Board http://www.gasbb.com.au

South Australia

There are two main gas pipelines flowing into the South Australia (SA) demand region. As shown in Figure 8, the Moomba to Adelaide Pipeline and SEAGas Pipeline have followed broadly similar flow trends from January 2009 to the current week. Both SEAGas and Moomba-Adelaide pipelines experienced marginally lower flows compared to last week. This correlated with the 7 per cent fall gas-powered electricity generation in SA, along with the slightly warmer average minimum temperatures throughout the week.

As with the previous week's and calendar year-to-date average flows, both pipelines are not currently operating near pipeline nominated Maximum Daily Quantity (MDQ), which is a measure of total pipeline capacity. (Refer also to the Appendix for average usage of pipeline facilities)

Figure 8: Average daily flows (TJ) to South Australia demand region



Average Daily Flows	Moomba to Adelaide Pipeline	SEAGas Pipeline
Current week (12 - 18 July)	130	165
Previous week (5 - 11 July)	138	173
% change from previous week*	-5.5	-4.2
Calendar Year-to-date 2009**	133	162

*The percentage change in the average daily flow from the previous week to the current week
**Average daily injection flows from 1 January 2009 to the current week (inclusive)
Source: National Gas Market Bulletin Board http://www.gasbb.com.au

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 "N.S" indicates that none of the gas was scheduled. Withdrawal bids are typically used for export out of Victoria.

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	6		NS	NS	NS	S				NS	NS		
Aust.Power & Gas	Retailer	2				NS	S							
Country Energy	Transmission Customer	1									S			
International Power	Transmission Customer	1											NS	
Origin (Vic)	Retailer	8	S	S	NS	NS	S	S			S	NS		
Origin (Uranquinty)	Trader	1					S							
Red Energy	Retailer	2				NS	S							
Santos	Retailer	1						S						
TRUenergy	Retailer	4			S	NS	S					NS		
Victoria Electricity 2	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	S						
Energy Australia	Retailer	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.

Similar to last week, no injection bids were scheduled from LNG, reflecting the higher-priced LNG bids when compared with bids at other injection points. Country Energy, International Power, and also Victoria Electricity 2 only nominated withdrawal bids, consistent with their interests in interconnected pipelines and interstate customer bases. There were no injection bids submitted at Otway, and no withdrawal bids submitted at VicHub.

Market Prices and Ancillary Payments

In the Victorian gas market, gas volumes (imbalances) are traded five times a day with most volume being traded at the beginning of day (6am) pricing schedule. Smaller amounts of gas are traded at later 10am, 2pm, 6pm and 10pm pricing schedules. Figure V2 displays volume-weighted average daily imbalance prices, compared to the previous week and longer-term financial year-to-date averages. Daily imbalance prices for each day during the current week are also noted.

Figure V2: Imbalance Weighted Prices

	Current Week (12 - 18 July)	Previous Week (5 - 11 July)	2009 Calendar Year (to 18 July)*	2008 Calendar Year (to 18 July)**
Average daily price ($/GJ)	2.46	2.47	2.77	*3.37*

Current Week (12 - 18 July)	**Sun**	**Mon**	**Tue**	**Wed**	**Thu**	**Fri**	**Sat**
Daily price ($/GJ)	2.55	1.60	2.65	2.60	2.64	3.64	1.53

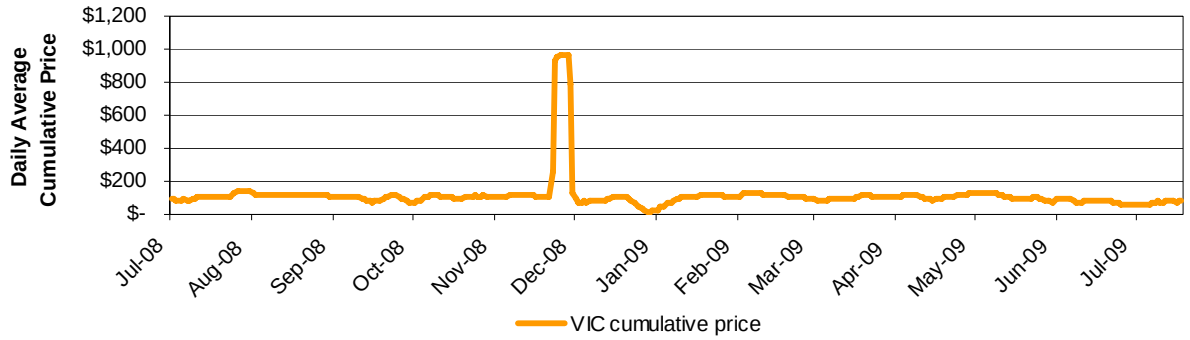
*Average daily imbalance weighted average price from 1 Jan 2009 to 18 July 2009 (inclusive)
**Average daily imbalance weighted average price from 1 Jan 2008 to the 18 July 2008 (inclusive)
Source: http://www.aemo.com.au (INT 041)

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.

The imbalance weighted average price of $2.46/GJ was largely unchanged compared to the $2.47/GJ for the previous week, although still lower than the 2009 calendar year-to-date average, and the 2008 equivalent. Average prices have also been consistently lower in 2009 than in 2008. There was a wider range of spot market prices this week compared to the previous week, with prices ranging from $0.50/GJ on Wednesday at the 10 pm schedule, to $3.88/GJ on Friday at the 10am schedule (see Appendix Figure A4 for all market prices across the week).

Figure V3 shows the daily average cumulative price from 1 July 2008 to the current week (inclusive). If the cumulative price exceeds $3700, the administered price cap of $40/GJ applies (compared to the usual $800/GJ).

Figure V3: Daily average cumulative price



Notes: The Cumulative Price is the weekly rolling cumulative price paid for gas injected into the transmission system. The Cumulative Price is calculated over 35 scheduling intervals.
Source: http://www.aemo.com.au (INT 199)

Ancillary Payments

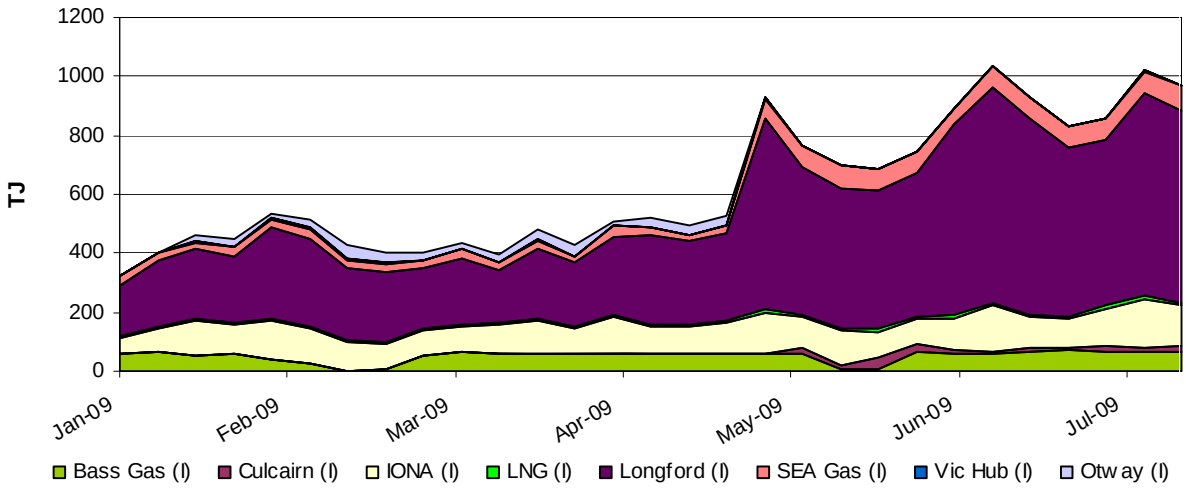
Significant ancillary payments can occur in the market on occasion, particularly if the capacity to deliver gas is limited because of high demand or plant outages, and higher-priced gas is required to be scheduled out of price merit order. Ancillary payments can be made to participants who are called upon to provide gas to alleviate system constraints. As with last week, there were no significant ancillary payments made during the week ending 18 July.

System Injections

Figure V4 provides the total amount of gas injected into the Victorian Principal Transmission System (VPTS) for the week ending 18 July, the previous week, along with the financial year-to-date average injections from each injection point on the system.

Figure V4: Average daily flows (TJ) from Injection Points on the VPTS

Injection Point:	Current Week (12 - 18 July)	Previous Week (5 - 11 July)	2009 Calendar Year to date*
Culcairn^	20	10	7
Longford	654	685	393
LNG	10	10	8
IONA^	136	168	107
VicHub^	0.85**	0.86**	1.26**
SEAGas^	82	78	46
Bass Gas	67	67	52
Otway	0	0	16.1
TOTAL	**969**	**1019**	**630**



^The reported flows from these bi-directional system points reflect actual daily injection flows. Reverse flows are not accounted for in this data unlike the Bulletin Board data presented in Part A of the report.
*Average daily injection flows across weeks from 1 January 2009 to the current week (inclusive)
**Figures have been rounded off to 2 decimal places to reflect the relatively small amount of gas flows (i.e. under 1 TJ)
Source: http://www.aemo.com.au (INT 150)

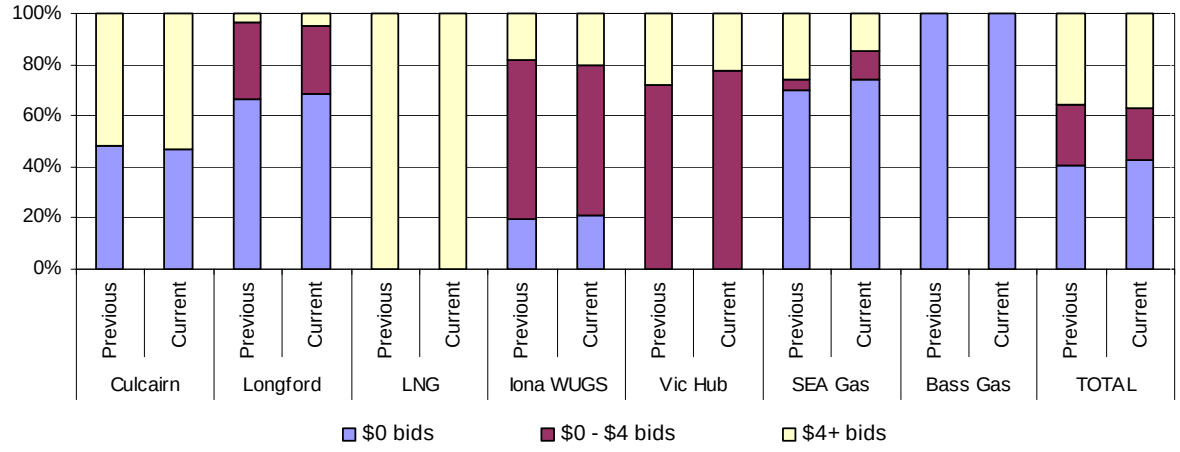
Notes: LNG injections were not scheduled by the market operator, but the reported flows from the LNG injection point indicate the amount of LNG that flowed into the system due to activities to manage the LNG facility's tank level. LNG is also regularly used by the connected BOC plant.

Overall, average daily injections into the VPTS fell by about 5 per cent for the week ending 18 July. Flows from Iona injections dropped by 24 per cent, while Longford injections also fell by a daily average of 31 TJ. This was partially offset by increased flows from SEAGas and Culcairn due to lower demand from New South Wales. There were again no gas injections from the Otway injection point, a continuing trend from June this year.

Bidding Activity

Figure V5 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 V5: 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.

Overall, there was a marginally higher proportion of gas bid in at $0/GJ for the week ending 18 July, where 43 per cent of gas was offered at $0/GJ compared to 41 per cent the previous week. There were similar trends at Longford, Iona, and SEAGas. In contrast, a lower proportion of gas at Culcairn was bid in at $0/GJ, a continuing trend from the previous week. The overall larger proportion of $0/GJ gas bids, despite the marginally lower gas usage this week, may reflect market participant bidding strategies to bid in their gas at lower prices to ensure that adequate contracted gas is dispatched to meet customer demand.

All gas at Bass Gas continued to be bid in at $0/GJ and was consequently scheduled into the market; while all gas at LNG bids were in the greater than $4/GJ range and not scheduled. No bids were submitted at Otway, a continuing trend from June this year.

Figure V6 provides a table of injections point on the VPTS where market participants submitted intra-day renominations, for each day of the week.

Figure V6: Intra-day rebidding of gas injections

Injection Point:	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Culcairn		Origin					
Longford	AGL TRU	AGL Origin	AGL Origin	AGL Origin	Origin	AGL TRU	AGL TRU
LNG							
Iona	TRU Origin	TRU Origin	TRU	TRU	TRU	TRU AGL	TRU
VicHub							
SEAGas	Simply	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

Compared to the previous week, there was a slightly less intra-day rebidding for the week ending 18 July. Compared to last week where there were 7 participants that submitted gas

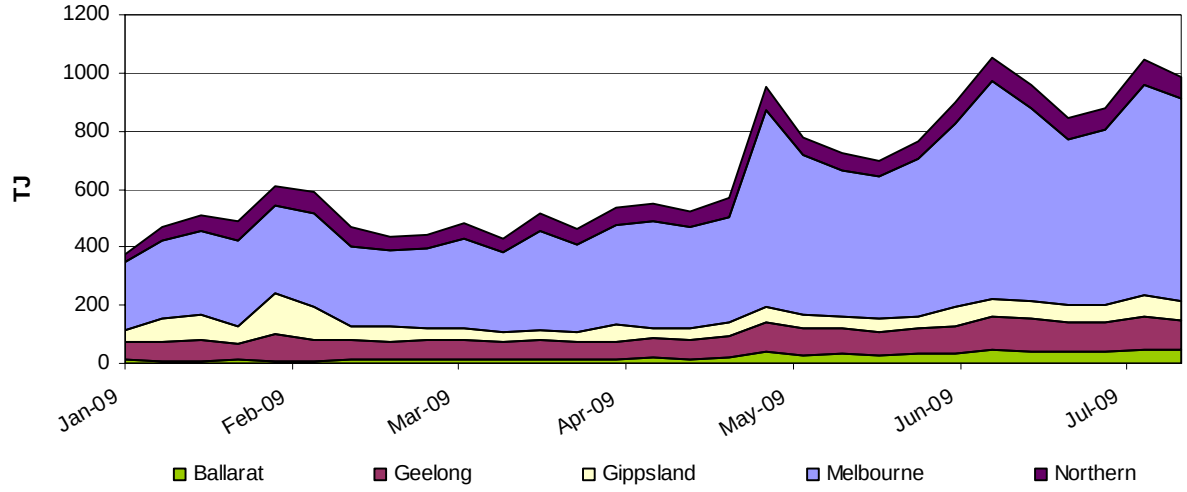
rebids, only 4 retailers rebid gas in the market this week. While TRUenergy and Simply Energy continued to submit the majority of their rebids at Iona and SEAGas respectively, Origin Energy and AGL also submitted rebids at Longford, Iona and Culcairn on various days during the week.

System withdrawals

Figure V7 notes the average daily gas withdrawals from the VPTS compared with the previous week and 2009 calendar year to date daily averages.

Figure V7: Average daily withdrawals (TJ) from system demand zones on the VPTS

System withdrawal zone:	Current Week (12 - 18 July)	Previous Week (5 - 11 July)	2009 Calendar Year to date**
Ballarat	45	47	23
Geelong*	105	110	80
Gippsland	62	79	58
Melbourne	698	722	437
Northern	78	85	64
TOTAL	**988**	**1044**	**663**



*Data presented for the Geelong also includes withdrawals for the Western system withdrawal zone or Western Transmission System (WTS). Typical WTS demand is understood to be around 10 TJ based on AEMO planning documents.
**Average daily injection flows from 1 January 2009 across weeks to the current week (inclusive)
Source: http://www.aemo.com.au (INT 150).

Consistent with the increase in injections, average daily withdrawals from the system also decreased by around 5 per cent. While average withdrawals fell in each zone, the increases were particularly marked in Gippsland (27 per cent), and also in Melbourne where 20 TJ less gas was withdrawn on average each day, compared to the previous week. This was perhaps due to lower residential demand for heating and lower demand for gas-powered generation.

System Outages and Constraints

A Directional Flow Point Constraint (DFPC) was issued at the Iona withdrawal point for the 17 July and 18 July, where the maximum hourly withdrawal quantity was 0 TJ/hour between 10pm and 6am next gas day. Bass Gas also continued to issue a daily maximum injection capacity of 65 TJ from 11 July to 13 July.

Australian Energy Regulator
July 2009

APPENDIX

AUSTRALIAN ENERGY REGULATOR

12 July - 18 July 2009

Figures A1 and A2 display the daily gas flows from each pipeline and production/storage facility and pipeline facility (in TJ) in the National Gas Market over the current week ending 18 July. 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, previous 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)	Current week average capacity usage (%)	Previous week average capacity usage (%)	Year to date average capacity usage* (%)
QLD											
Carpentaria Pipeline	93	93	82	86	86	95	100	117	78	77	72
QLD Gas Pipeline	65	68	69	67	57	55	57	79	79	88	85
Roma to Brisbane Pipeline	118	146	149	150	0	135	126	208	57	68	79
South West QLD Pipeline	170	140	135	155	140	142	140	168	87	97	76
QSN link**	54	54	54	54	54	54	54	-	-	-	-
NSW/ACT											
Eastern Gas Pipeline	199	242	247	228	230	206	201	250	89	93	71
Moomba to Sydney Pipeline	236	256	271	307	308	299	253	420	66	69	45
NSW-VIC Interconnect^	-33	-17	-8	-25	-8	-20	-24	90	-21	-4	9
VIC											
Longford to Melbourne	627	707	731	733	703	822	707	1030	70	73	43
South West Pipeline	100	264	295	245	280	161	200	347	64	72	45
SA											
Moomba to Adelaide Pipeline	127	138	131	140	135	130	112	253	52	55	53
SEA Gas Pipeline	139	181	200	169	185	160	123	314	53	55	52
TAS											
Tasmanian Gas Pipeline	20	35	36	27	30	29	20	129	22	24	23

NB. Actual flow data not reported by Bulletin Board polling time is indicated by N/A
*Average daily injection flows from 1 January 2009 to the current week (inclusive)
**Flows on the QSN-link are included in the flow figures for the South West Qld Pipeline
^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)	Current week average capacity usage (%)	Previous week average capacity usage (%)	Year to date average capacity usage* (%)
Roma / Ballera (QLD)											
Berwyndale South	N/A	102	100	97	100	100	100	140	71	71	67
Fairview	105	105	105	105	104	107	103	115	91	92	81
Kenya^	0	0	0	0	0	0	0	160	0	6	0
Kincora	5	0	0	0	0	0	0	25	3	9	6
Kogan North	6	6	6	6	0	6	6	12	43	50	76
Peat	11	11	11	11	11	11	11	15	73	73	71
Rolleston	11	11	11	11	11	11	11	30	37	37	34
Scotia	0	0	0	0	0	0	0	27	0	0	78
Spring Gully	51	52	51	53	53	50	36	60	82	88	100
Strathblane	51	52	51	53	53	50	36	60	82	88	88
Taloona	31	31	31	32	32	30	22	36	83	88	35
Wallumbilla	0	0	0	0	0	0	0	20	0	40	55
Yellowbank	15	15	15	15	14	14	15	30	49	50	50
Ballera	0	10	5	0	0	10	13	150	4	0	11
Eastern (VIC)											
Orbost Gas Plant	0	0	0	0	0	0	0	10	0	0	0
Lang Lang Gas Plant	65	68	68	N/A	68	68	66	70	96	96	73
Longford Gas Plant	795	889	980	992	903	999	880	1140	81	84	54
LNG Storage Dandenong	0	0	0	0	0	0	0	158	0	0	0
Otway Basin (VIC)											
Minerva Gas Plant	88	94	94	94	94	94	68	94	95	92	91
Otway Gas Plant	160	169	155	157	155	166	141	206	76	80	66
Iona Underground Gas Storage	10	176	215	170	200	65	112	320	42	55	35
Moomba (SA)											
Moomba Gas Plant	301	348	332	380	401	387	319	430	82	88	65

NB. Actual flow data not reported by Bulletin Board polling timelines is indicated by N/A
*Average daily injection flows from 1 January 2009 to the current week (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 week ending 18 July. The average temperatures for the previous week are also provided. (Note: only the demand regions where temperature is a significant 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 (12 - 18 July)	Average min.	9.2	1.3	7.9	8.3	4.5
	Average max.	17.1	12.1	14.6	14.8	11.8
Previous Week (5 - 11 July)	Average min.	8.6	0.0	6.6	7.4	3.3
	Average max.	16.9	11.7	14.6	15.6	10.6

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 week ending 18 July. 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 (12 - 18 July)	Scheduling Interval					Daily Imbalance Weighted Average Price
	6am	10am	2pm	6pm	10pm	
Sun	2.65	1.11	0.52	0.52	2.65	2.55
Mon	1.50	2.65	2.65	3.30	3.30	1.60
Tue	2.65	3.10	2.65	2.61	1.50	2.65
Wed	2.65	2.65	1.50	0.52	0.50	2.60
Thu	2.65	2.65	2.65	2.65	1.50	2.64
Fri	3.65	3.89	3.65	2.65	2.65	3.64
Sat	1.52	1.52	1.52	1.52	3.12	1.53

Source: http://www.aemo.com.au (INT 041).

Figures G1 to G4 below provide geographical information for the various pipeline, production and storage facilities covered by the National Gas Market Bulletin Board. Figure G1 lists the production facilities that fall under the Roma zone. The majority of these facilities are Coal Seam Gas (CSG) plants.

Figure G1: Production facilities in the Roma Zone

Roma zone production facilities	
Berwyndale South	Scotia
Dawson Valley	Silver Springs
Fairview	Spring Gully
Kenya	Strathblane
Kincora	Taloona
Kogan North	Wallumbilla
Peat	Yellowbank
Rolleston	

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

Figure G2: Pipeline facilities

Map ID	Pipeline facility	Map ID	Pipeline facility
CGP	Carpentaria Gas Pipeline	RBP	Roma to Brisbane Pipeline
EGP	Eastern Gas Pipeline	QGP	Queensland Gas Pipeline
MAP	Moomba to Adelaide pipeline	SEAGas	South East Australian Gas pipeline
MSP	Moomba to Sydney pipeline	SWQP	South West QLD Pipeline
LMP	Longford to Melbourne pipeline	TGP	Tasmanian Gas Pipeline

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

Figure G3: Location of production and storage facilities

Facility	Location
Camden CSM	Located near Sydney
Minerva, Otway, Iona UGS	Located near Port Campbell
LNG Storage Dandenong	Located near Melbourne

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

Figure G4: Map of Bulletin Board pipeline and production facility locations

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