WEEKLY GAS MARKET ANALYSIS

AUSTRALIAN ENERGY REGULATOR

21 June - 27 June 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 daily 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 operators of the larger pipeline and production/storage facilities in southern and eastern Australia. The participants report forecast and actual operational data.

Data for the week ending 27 June 2009 shows overall pipeline flows decreasing by 7 per cent from the previous week, while overall gas production decreased by 8 per cent. The decrease appears to reflect lower gas usage in Victoria and, to a lesser extent, New South Wales. The usage of pipeline systems and production/storage facilities were each at 62 per cent of capacity, down from 66 per cent and 68 per cent respectively in the previous week.

Various production facilities in Queensland did not provide flow data on 25 June. These included the Fairview, Scotia and Wallumbilla production facilities in the Roma zone as well as the Ballera gas plant. The analysis in this report therefore omits this data (refer to Figures A1 and A2 in the Appendix).

Victorian Gas Market

Victorian wholesale gas market participants include retailers, producers, traders and large gas users responsible for injecting and withdrawing gas in the market.

For the week ending 27 June, total gas injections into the Victorian Pipeline Transmission System (VPTS) fell by about 11 per cent, with flows decreasing from most injection points. The average price of gas traded in the market was $1.82/GJ for the week ending 27 June, compared with $2.06/GJ for the previous week, and $2.98/GJ for the 2008-09 financial year-to-date average.

Along with the lower average prices, there was an increase in the proportion of gas bid in at $0, compared to the previous week. Intra-day rebids of gas were submitted at three injections points over the week – Longford, Iona and SEAGas. The level of rebidding was largely unchanged from the previous week, although different participants submitted rebids at Longford. No system constraints or plant outages were reported for the week ending 27 June.

Part A: National Gas Market Bulletin Board

AUSTRALIAN ENERGY REGULATOR

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Pipeline and production/storage flows

Figure 1 sets out the average daily pipeline flows for the week ending 27 June 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 financial year to date averages. (A list of pipeline facilities for each demand region is provided in 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 (21 - 27 June)	431	41	779	320	38	133	88	69
Previous week (14 - 20 June)	442	42	885	328	34	169	90	68
Financial Year-to-date 2008-09*	347	21	595	301	32	170	83	67

*Average daily injection flows from 1 July 2008 to the current week (inclusive)
Source: National Gas Market Bulletin Board http://www.gasbb.com.au

Notes:

1. Data for NSW is calculated from flows along the Moomba-Sydney and Eastern Gas pipelines and northward flows on the NSW-VIC interconnect, and deducting flows into the ACT. This figure includes gas taken at EGP off-takes in Victoria such as Bairnsdale and Orbost.
2. Data for ACT is calculated using off-take flows from the Moomba-Sydney and Eastern Gas pipelines
3. Data for VIC is calculated by adding flows from Longford-Melbourne and South West pipelines. This excludes Victorian off-takes from the EGP (between Longford and the NSW-VIC border). Further, exports from Victoria at Culcairn have not been deducted.
4. Data for SA is calculated by adding flows on the Moomba-Adelaide Pipeline and SEAGas Pipeline (where the flows are positive i.e. from Victoria into South Australia).
5. Data for TAS is calculated from flows on the Tasmanian Gas Pipeline.
6. Data for Brisbane, Mt Isa, and Gladstone is calculated using flows along the Roma to Brisbane Pipeline, Carpentaria Gas Pipeline and Queensland Gas Pipeline respectively.

Figure 2 sets out the daily average flows from production and storage facilities for the week ending 27 June 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 and storage facilities for each production zone is provided in the Appendix).

Figure 2: Daily average production/storage flows (TJ) for each production zone

Average daily flows	Roma/Ballera (QLD)	Eastern (VIC)	Otway Basin (VIC)	Moomba (SA)
Current week (21 - 27 June)	395	895	340	365
Previous week (14 - 20 June)	445	982	365	392
Financial Year-to-date 2008-09*	384	721	317	280

*Average daily injection flows from 1 July 2008 to the current week (inclusive).
Source: National Gas Market Bulletin Board http://www.gasbb.com.au

Notes:

1. Data for Roma/Ballera is 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 the Glossary)
2. Data for Eastern (VIC) is 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) is 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 is taken from the actual production flows from the Moomba gas plant in South Australia.

Overview of production and pipeline flows across South East Australia

Temperature is an important driver of gas demand, particularly in Victoria where there is large residential gas heating demand. Averages temperatures in Victoria and New South Wales were marginally higher for the week ending 27 June, which perhaps lead to marginally lower pipeline flows into those regions.[1]

With the exception of Brisbane, pipeline flows into each demand region were higher than the 2008-09 financial year-to-date average, but slightly lower than average flows in the previous week. Similarly, production was higher in each production zone compared to financial year-to-date averages, but also slightly down from the previous week.

A fall in production from the Roma/Ballera production zone was consistent with lower overall demand from each of the three Queensland demand regions. Decreased production in Eastern (VIC), Moomba (SA) and Otway Basin (VIC) was consistent with slightly lower demand in the NSW, ACT and South Australia demand regions. Decreased production at the two Victorian production zones was consistent with significantly lower overall demand in the Victorian Gas Market (see Part B of the report also).

Queensland

There are four bulletin board registered pipelines in Queensland (figure 3). Flows on these pipelines were relatively constant compared to the previous week, with the exception of the Carpentaria pipeline which flows up to the Mt Isa demand region.

Figure 3: Average daily flows for Queensland pipelines

Average daily flows (TJ)	Carpentaria Pipeline	Queensland Gas Pipeline	South West Queensland Pipeline^	Roma to Brisbane Pipeline
Current week (21 - 27 June)	133	88	69	167
Previous week (14 - 20 June)	169	90	68	164
% change from previous week*	-21.5%	-1.9%	0.7%	1.6%
Financial Year-to-date 2008-09**	170	83	67	92

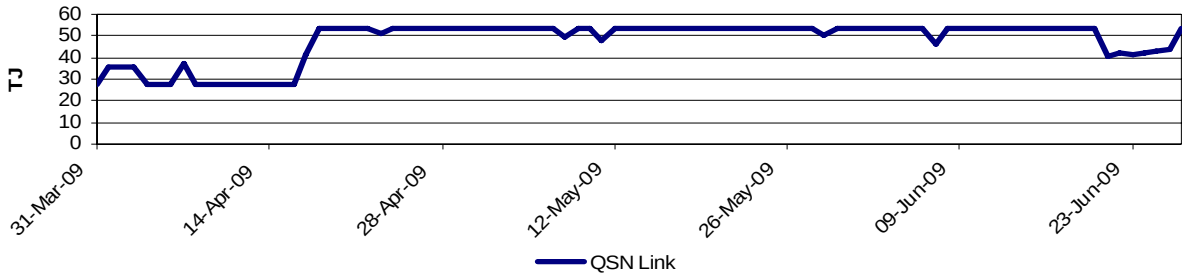
^Includes the Ballera to Moomba section of the pipeline (QSN Link)
*The percentage change in the average daily flow from the previous week to the current week
**Average daily injection flows from 1 July 2008 to the current week (inclusive)
Source: National Gas Market Bulletin Board http://www.gasbb.com.au

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 methane gas can now be delivered to compete with Moomba and the southern-basin gas sources. Figure 4 shows the daily flows along the QSN link since it began reporting flows on the bulletin board from 31 March 2009.

[1] http://www.bom.gov.au/climate/dwo/IDCJDW3050.latest.shtml
http://www.bom.gov.au/climate/dwo/IDCJDW2124.latest.shtml
http://www.bom.gov.au/climate/dwo/IDCJDW2801.latest.shtml

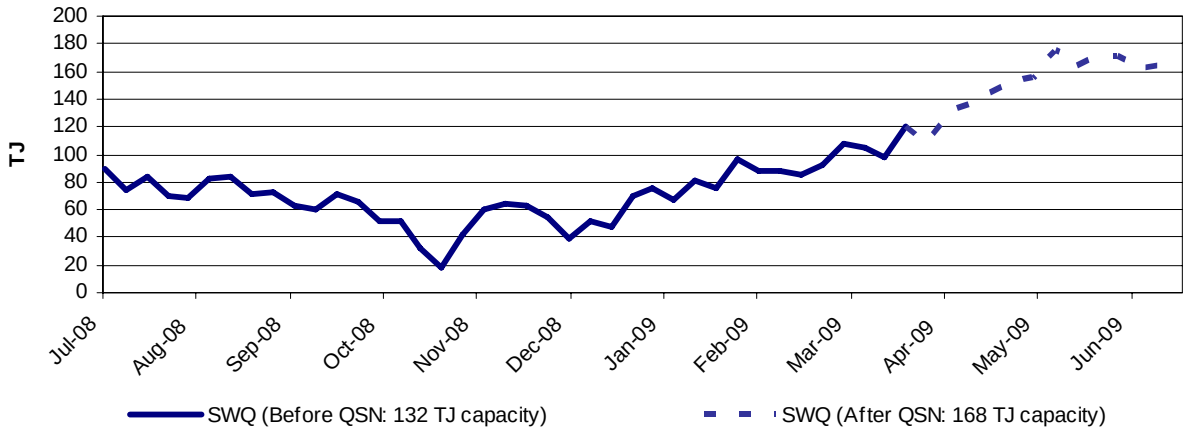
Figure 4: Average daily flows on the QSN Link



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

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 27 June 2009 were about 60 TJ higher than the average flows on the first week of July 2008.

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



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

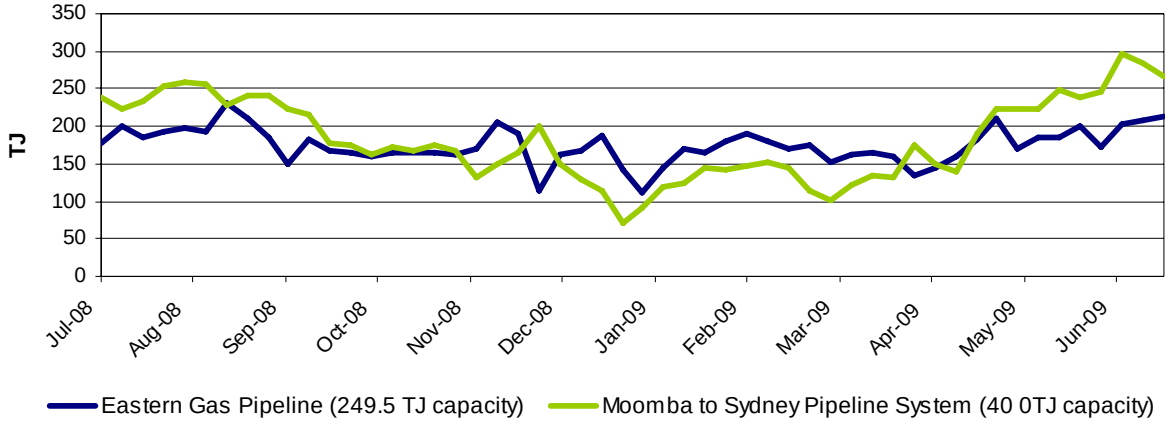
Notes: Reporting of flow data for the QSN link only began on the 31 March 2009, despite being commissioned in January 2009.

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 July 2008 and are currently supplying similar quantities of gas into NSW and ACT. Flows trended down this week on both pipelines, although flows on the MSP were slightly higher than those on the EGP. The lower gas flows may partially be explained by marginally warmer temperatures in NSW leading to lower demand.

The majority of gas flows through the NSW-Victoria Interconnect pipeline were in the 'reverse' direction for the week ending 27 June (overall more gas flowed southwards into Victoria rather than northwards into NSW). Gas flowed north from Tuesday to Friday but flowed south on other days. Regular flows north on the NSW-Victoria Interconnect are understood to mostly meet gas demand near Wagga Wagga in Southern NSW including of the Uranquinty power station. Reverse flows southwards typically may occur to meet high demand in Victoria, typically in higher-price periods in the Victorian gas market. However, Part B of the report shows for the current week that these flows occurred despite prices being fairly low in Victoria.

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



Average Daily Flows (TJ)	Eastern Gas Pipeline	Moomba to Sydney Pipeline	NSW-VIC Interconnect^
Current week (21 - 27 June)	212	266	-6
Previous week (14 - 20 June)	207	285	-8
% change from previous week*	2.3%	-6.6%	-23.8%
Financial Year-to-date 2008-09**	175	182	14

^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 July 2008 to the current week (inclusive)
Source: National Gas Market Bulletin Board http://www.gasbb.com.au

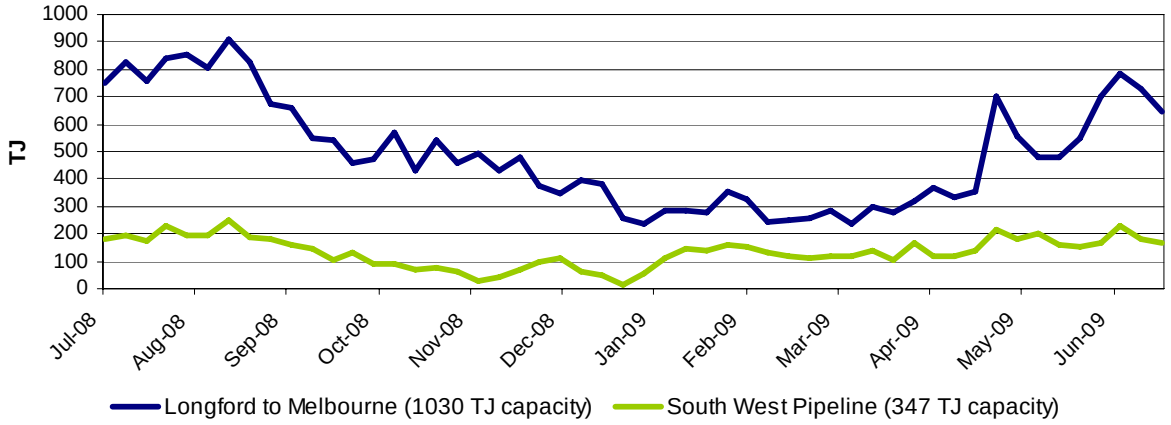
Notes: The figure for the EGP includes some gas that is consumed in Victoria, from Victorian EGP off-takes.

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 similar flow trends since July 2008. In the current week there was a decrease in demand in the Victorian gas market from the previous week. There was a proportionately greater reduction in average daily flows along the LMP than along the SWP.

The Tasmanian Gas Pipeline (TGP), which is connected to Victorian production facilities, provides gas into the Tasmania demand region. Slightly higher average daily flows along the TGP occurred at the same time as there were marginally colder temperatures in Tasmania.

Figure 7: Average daily flows to Victoria demand region



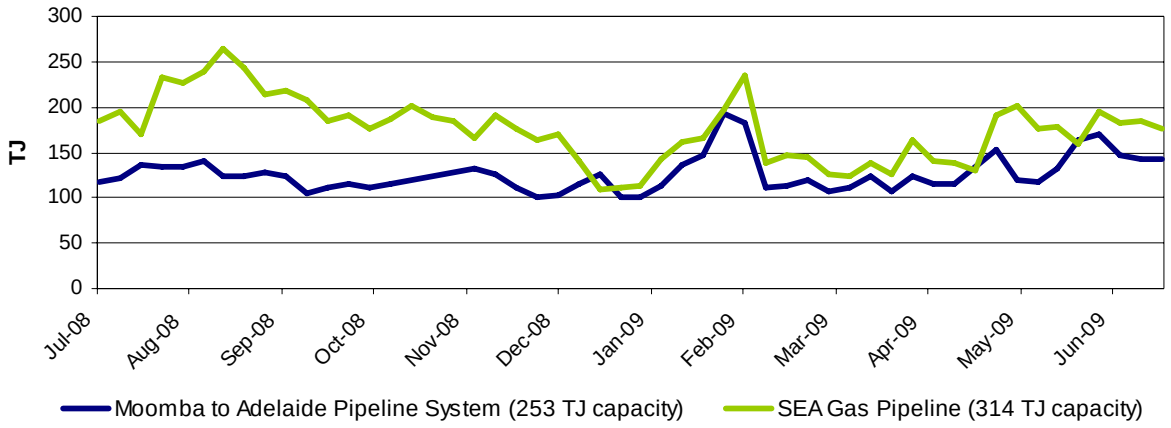
Average Daily Flows (TJ)	Longford to Melbourne Pipeline	South West Pipeline	Tasmanian Gas Pipeline^
Current week (21 - 27 June)	643	168	38
Previous week (14 - 20 June)	729	183	34
% change from previous week*	-11.8%	-8.1%	10.3%
Financial Year-to-date 2008-09**	492	133	32

^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 July 2008 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 Australian demand region. As shown in figure 8, the Moomba to Adelaide Pipeline and SEAGas Pipeline have followed broadly similar flow trends from July 2008 to present. SEAGas pipeline experienced decreased flows this week, while Moomba to Adelaide flows were largely constant. Both pipelines are not currently operating near pipeline nominated Maximum Daily Quantity, which is a measure of total pipeline capacity.

Figure 8: Average daily flows to South Australia demand region



Average Daily Flows (TJ)	Moomba to Adelaide Pipeline	SEAGas Pipeline
Current week (21 - 27 June)	143	177
Previous week (14 - 20 June)	144	184
% change from previous week*	-0.1%	-4.3%
Financial Year-to-date 2008-09**	126	175

*The percentage change in the average daily flow from the previous week to the current week
**Average daily injection flows from 1 July 2008 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 for the start of the gas day (6:00am) at injection and withdrawal points on the Victorian Principal Transmission System (VPTS). The shaded boxes indicate that the participant submitted injection / withdrawal 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 nominated 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	Market Customer	1							NS					
AGL (Qld)	Retailer	1				NS								
AGL	Retailer	6		NS	NS	NS	S				S	S		
Aust. Power & Gas	Retailer	2				NS	S							
Country Energy	Retailer	1									S			
International Power	Producer, Retailer	1											S	
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	2						S						S
TRU Energy	Retailer	4			S	NS	S					NS		
Victoria Electricity Pty Ltd	Retailer	6		S	S	NS	S	S	S					
Victoria Electricity 2	Market Customer	2			NS							S		
Visy Paper	Market Customer	2					S				S			
Simply Energy	Retailer	4			S	NS	S	NS						
Energy Australia	Retailer	2		S			S							

^Bids taken from 6:00am data for each gas day during the current week.
Source: http://www.vencorp.com.au (INT131)

Notes: Comparison is approximate since data represents whether bids were under or over the scheduled market clearing price at 6:00am. 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.
It is understood though that on occasion, scheduling requires some bids in price merit order to be displaced by other bids due to physical supply constraints.

No injection bids were scheduled at the LNG facility during the week, reflecting the higher-priced LNG bids when compared with bids at other injection points. Country Energy and International Power only nominated withdrawal bids, consistent with interests in interconnected pipelines and interstate customer bases.

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 6:00am pricing schedule. Smaller amounts of gas are traded at later 10:00am, 2:00pm, 6:00pm and 10:00pm pricing schedules. Figure V2 displays volume-weighted average daily imbalance prices for the week ending 27 June, compared to the previous week and longer-term financial year-to-date averages. Secondly, daily imbalance prices for each day during the current week are noted.

Figure V2: Imbalance Weighted Average Prices

	Current Week (21 - 27 June)	Previous Week (14 - 20 June)	2008-09 Financial Year (to 27 June)*	2007-08 Financial Year (to 27 June)**
Average daily price ($/GJ)	1.82	2.06	2.98	*3.94*

Current Week (21 - 27 June)	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Daily price ($/GJ)	1.50	1.46	1.51	1.49	2.66	1.50	2.61

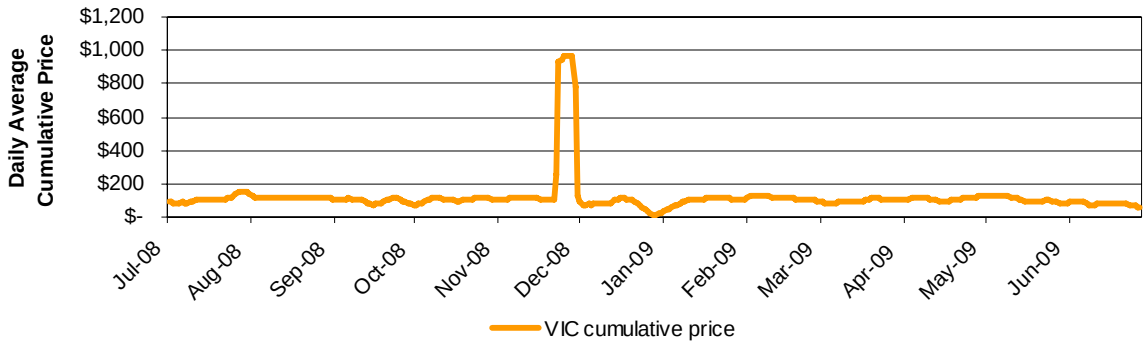
*Average daily imbalance weighted average price from 1 July 2008 to 27 June 2009 (inclusive)
**Average daily imbalance weighted average price from 1 July 2007 to the 27 June 2008 (inclusive)
Source: http://www.vencorp.com.au (INT041)

Notes: The daily average market price is a volume weighted imbalance price taking account of trading amounts at five times through the gas day — 6:00am, 10:00am, 2:00pm, 6:00pm and 10:00pm.

The imbalance weighted average price for the current week was lower than for the previous week and also lower than the financial year to date average. Average prices have been significantly higher in 2008-09 than in 2007-08. The range of prices for the current week was larger than the previous week. Prices this week ranged from $0.86/GJ at 6:00pm on Monday to $3.30/GJ at 10:00am on Thursday.

Figure V3 shows the daily average cumulative price (taken over the last 35 scheduling intervals) for the Victorian gas market. The importance of the cumulative price is that if it surpasses a threshold of $3700, the cap on the maximum price for gas in the market will be reduced from $800/GJ to $40/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.vencorp.com.au (INT 199)

The cumulative price began at a high of around of $95/GJ at the beginning of June before gradually decreasing and settling at around at a low of around $60/GJ towards the end of the week. Cumulative prices continue to be well below the Cumulative Price Threshold of $3700.

Ancillary Payments

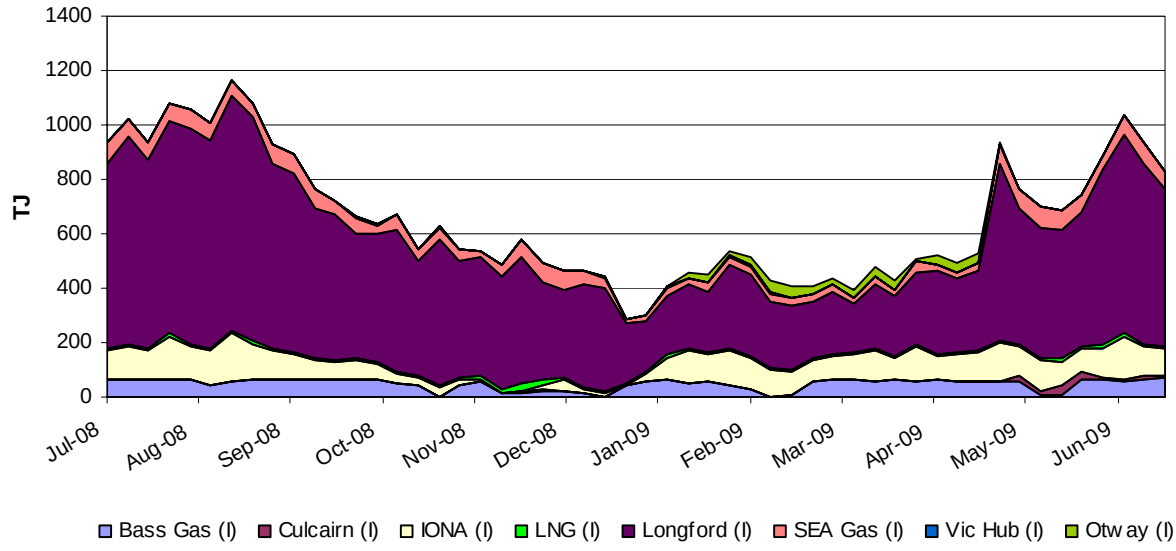
Significant ancillary payments can occur in the market from time to time, particularly if the systems' capacity to deliver gas is limited because of high demand or outages, and higher-priced gas is required out of price merit order. Significant ancillary payments can be made to participants who are called upon to provide gas to alleviate system constraints. There were no significant ancillary payments for the week ending 27 June.

Injections and Bidding activity

Figure V4 provides the total amount of gas injected into the Victorian Principal Transmission System for the week ending 27 June, 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 (21 - 27 June)	Previous Week (14 - 20 June)	2008-09 Financial Year to date*
Culcairn	10	12	3
Longford	575	668	456
LNG	10	8	9
IONA	96	106	84
VicHub	0	0	1
SEAGas	70	74	48
Bass Gas	70	64	48
Otway	0	0	18
TOTAL	**831**	**933**	**666**



*Average daily injection flows across weeks from 1 July 2008 to the current week (inclusive)
Source: http://www.vencorp.com.au (INT 150)

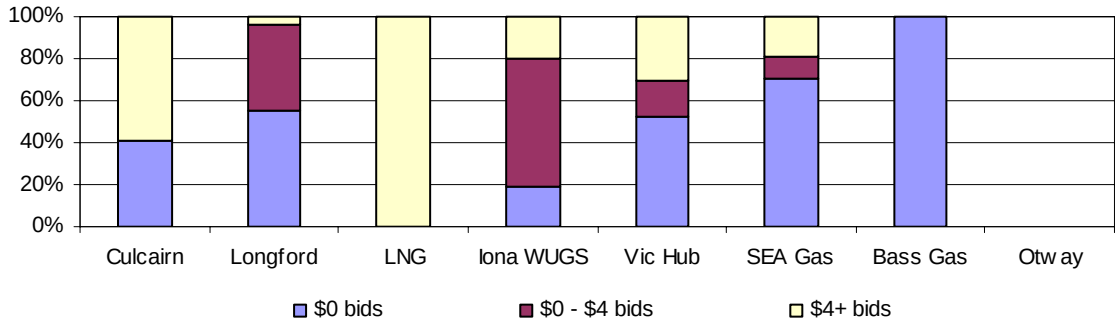
N.B: Figures in the table are rounded off to the nearest round number (TJ)

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.

Average daily injections decreased by about 11 per cent for the week ending 27 June, consistent with slightly warmer weather than in the previous week. Average daily injections fell at Longford by around 14 per cent, while injections from Iona Western Underground Storage (WUGS) fell by 9 per cent. There were also minor falls in injections from Culcairn, SEAGas and VicHub. In contrast, there were slight increases in flows from LNG and Bass Gas. There were no gas injections from the Otway injection point in June.

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.vencorp.com.au (INT 131) - bids submitted for the 6:00am 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.

For the week ending 27 June, there was a marginal increase in the proportion of $0 bids at Culcairn and SEAGas, while at Iona WUGS a slightly higher proportion of $0 - $4 bids meant a lower proportion of $4+ bids. At VicHub, around 50% of gas was bid in at $0, compared to the previous week where no gas was bid in at this price. This greater concentration of bids in the lowest price band may reflect a market participant bidding strategy to reduce 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 no bids were submitted at Otway injection point this week.

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							
Longford	TRU AGL	TRU Origin	TRU Origin	TRU			
LNG							
Iona WUGS	TRU	TRU	TRU Origin	TRU Origin	TRU Origin	TRU	TRU
VicHub							
SEAGas	Simply	Simply	Simply		Simply	Simply	
Bass Gas							

Source: http://www.vencorp.com.au (INT 131)

Notes: Origin = Origin Energy | AGL = AGL Sales | TRU = TRUenergy | Simply = Simply Energy

Overall, there was a similar amount of intra-day rebidding by participants compared to the previous week. Several participants renominated gas quantities and price bands at Longford,

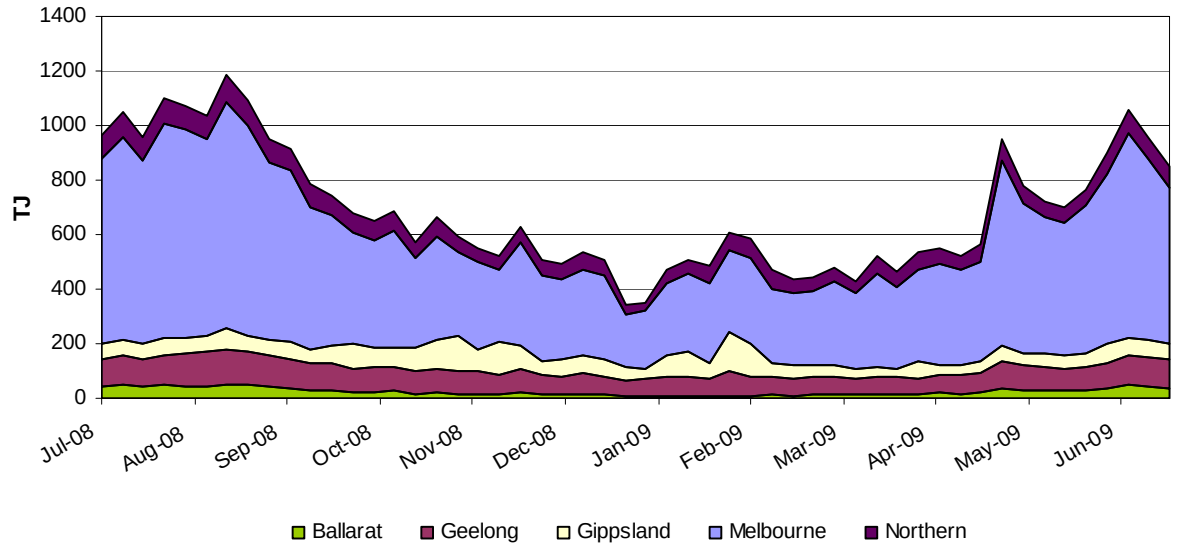
while Simply Energy continued to rebid gas at SEAGas on several days during the week. Similarly, TRUenergy submitted gas rebids on each day of the week at Iona WUGS.

System withdrawals

Figure V7 notes the average daily gas withdrawals from the VPTS during the week to 27 June, compared with the previous week and 2008-09 financial year-to-date daily averages.

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

System withdrawal zone:	Current Week (21 - 27 June)	Previous Week (14 - 20 June)	2008-09 Financial Year to date*
Ballarat	38	43	24
Geelong	105	110	85
Gippsland	57	59	64
Melbourne	572	668	449
Northern	75	80	67
TOTAL	**848**	**960**	**689**



^ Data does not include flows for the Western system withdrawal zone which are not publicly available. Typical Western system demand is understood to be around 10 TJ based on AEMO planning documents.
*Average daily injection flows from 1 July 2008 across weeks to the current week (inclusive)
Source: http://www.vencorp.com.au (INT 150).

Notes: Figures in the table are rounded off to the nearest round number (TJ)

Average daily withdrawals from the system decreased by around 12 per cent, consistent with warmer temperatures compared to the previous week. While each demand zone experienced lower demand, the falls were particularly marked in Melbourne (14 per cent) and Ballarat (11 per cent), perhaps reflecting a decrease in gas usage for heating given the warmer weather.

System Outages and Constraints

There were no reported Supply Demand Point Constraints or Directional Flow Point Constraints on the VPTS for the current week ending 27 June.

Australian Energy Regulator
July 2009

Figures A1 and A2 displays 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. 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	87	86	84	86	90	93	94	117	76%	77%	71%
QLD Gas Pipeline	67	68	68	67	71	71	68	79	87%	86%	85%
Roma to Brisbane Pipeline	110	139	145	145	143	136	112	208	64%	81%	82%
South West QLD Pipeline	178	165	149	174	151	154	194	168	99%	98%	55%
NSW/ACT											
Eastern Gas Pipeline	188	219	218	212	216	220	212	250	85%	83%	70%
Moomba to Sydney Pipeline	213	251	274	335	291	264	238	400	67%	71%	45%
NSW-VIC Interconnect	-24^	-10^	3	0	7	7	-28^	90	-7%	-9%	16%
VIC											
Longford to Melbourne	550	569	678	650	746	721	583	1030	62%	71%	48%
South West Pipeline	134	151	176	155	217	161	182	347	48%	53%	38%
SA											
Moomba to Adelaide Pipeline	119	144	156	160	149	144	132	253	57%	57%	50%
SEA Gas Pipeline	154	172	182	187	203	192	146	314	56%	59%	56%
TAS											
Tasmanian Gas Pipeline	33	39	40	42	48	35	29	129	29%	27%	25%

^Negative figure represents a reverse flow of gas along the pipeline
*Average daily injection flows from 1 July 2008 to the current week (inclusive)
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	92	89	87	93	93	94	94	160	57%	74%	49%
Fairview	116	110	106	108	N/A	107	107	115	95%	98%	66%
Kincora	0	0	0	0	0	0	0	25	0%	0%	18%
Kogan North	6	6	6	6	6	6	6	12	50%	76%	88%
Peat	11	11	11	11	11	11	11	15	73%	75%	70%
Rolleston	11	11	11	11	8	8	8	30	32%	37%	35%
Scotia	0	0	0	0	N/A	0	0	27	0%	70%	83%
Spring Gully	55	53	55	55	55	55	55	60	91%	88%	97%
Strathblane	55	53	55	55	55	55	55	60	91%	88%	82%
Taloona	33	32	33	33	33	33	33	36	91%	88%	14%
Wallumbilla	9	9	9	9	N/A	9	9	20	45%	51%	61%
Yellowbank	16	16	16	16	16	16	16	30	53%	53%	48%
Ballera Gas Plant	0	0	0	0	N/A	0	0	150	0%	0%	20%
Eastern Victoria (VIC)											
Orbost Gas Plant	0	0	0	0	0	0	0	10	0%	0%	0%
Lang Lang Gas Plant	70	71	70	71	70	70	71	70	101%	91%	68%
Longford Gas Plant	699	743	911	829	925	900	762	1140	72%	81%	59%
LNG Storage Dandenong	0	0	0	0	0	0	0	158	0%	0%	0%
Otway Basin (VIC)											
Minerva Gas Plant	68	78	94	94	88	83	68	94	87%	87%	93%
Otway Gas Plant	139	182	172	133	198	164	140	206	78%	85%	69%
Iona Underground Gas Storage	78	79	93	87	133	93	115	320	30%	31%	28%
Moomba (SA)											
Moomba Gas Plant	326	330	353	386	393	404	363	430	85%	91%	65%

NB. flow data not reported by Bulletin Board polling time is indicated by N/A
*Average daily injection flows from 1 July 2008 to the current week (inclusive)
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% of the respective MDQs. The exception is the Longford Gas Plant which has a minimum operational range of 20% of its MDQ.

Figure A3 shows the market prices at each of the scheduling intervals on each day during the week ending 4 July. The imbalance weighted average prices for each gas day are also provided.

Figure A3: Daily Victorian gas market prices ($/GJ) at each scheduling interval

Current Week (21 - 27 June)	Scheduling Interval					Imbalance Weighted Average Price
	6am	10am	2pm	6pm	10pm	
Sun	1.50	1.50	1.50	1.50	1.06	1.50
Mon	1.50	1.06	0.87	0.86	1.06	1.46
Tue	1.50	1.50	1.50	1.50	2.65	1.51
Wed	1.50	1.50	1.50	1.01	1.01	1.49
Thu	2.65	3.30	2.66	2.65	2.65	2.66
Fri	1.50	1.50	1.50	1.50	1.01	1.50
Sat	2.65	1.54	1.50	1.50	3.30	2.61

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

Figures G1 to G4 below provide geographical information for the various pipeline, production and storage facilities covered by the 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
Kincora	Strathblane
Kogan North	Taloona
Peat	Wallumbilla
Rolleston	Yellowbank

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

Figure G2: Pipeline facilities

Map ID	Pipeline facility	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

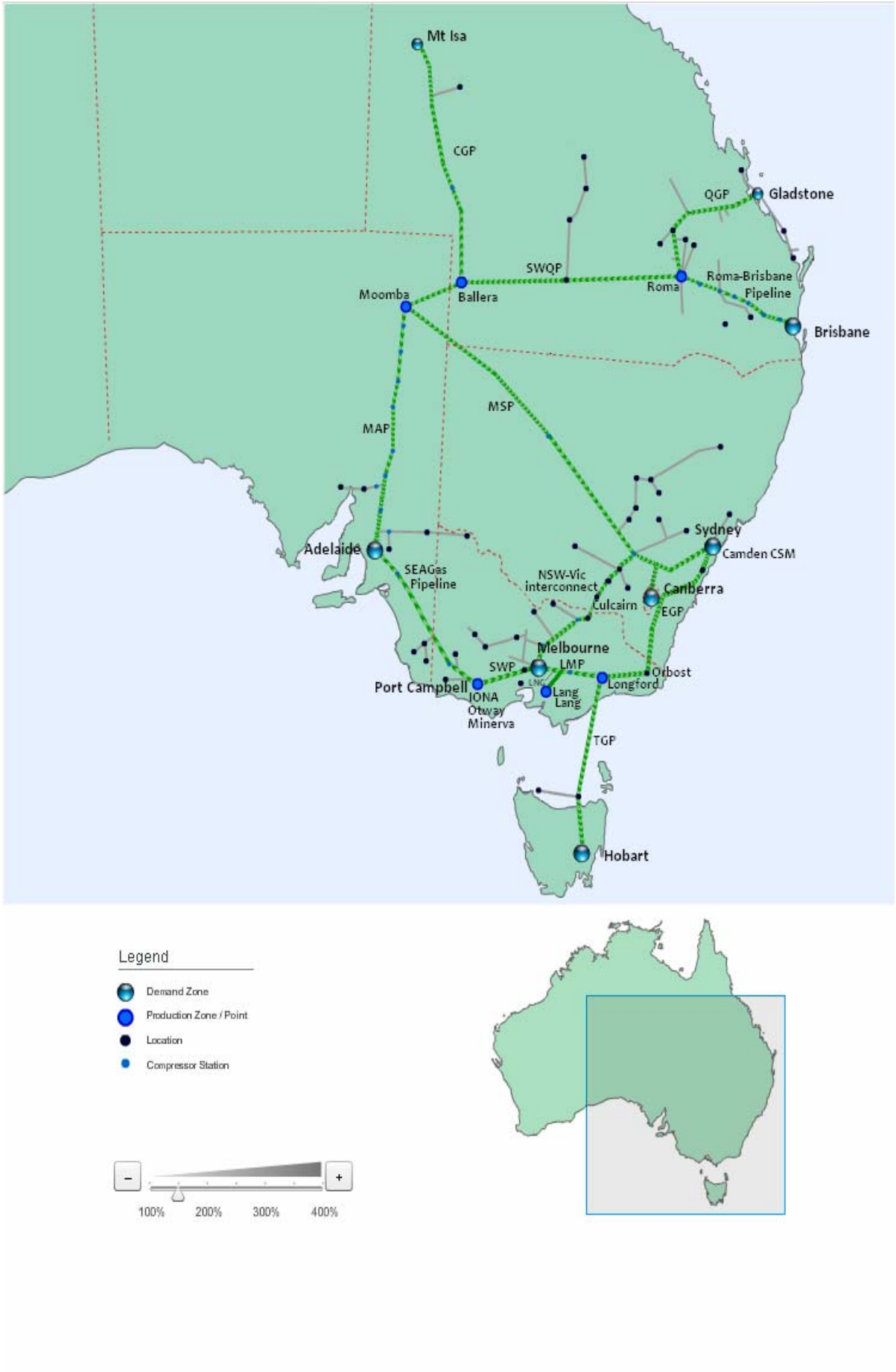
Source: Natural Gas Market Bulletin Board http://www.gasbb.com.au

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