WEEKLY GAS MARKET ANALYSIS

AUSTRALIAN ENERGY REGULATOR

30 August – 5 September 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. Participants report daily forecast and actual operational data. Average gas production and pipeline flows during the week were similar to the previous week, with temperatures across both weeks also largely unchanged. There was increased demand from Brisbane and New South Wales, along with a large increase in gas powered generation (GPG) in Queensland. Production at the Roma facilities increased by 50 TJ, perhaps to meet the increased GPG in Queensland along with the increased demand in Brisbane. Flows along the other Queensland pipelines remained relatively stable this week.

Significant falls GPG in Victoria and South Australia were consistent with the drop in overall gas demand in both demand regions. This also resulted in decreased gas production from the production facilities in those states. Tasmanian Gas Pipeline flows also increased this week, corresponding to a slight rise in GPG demand in the state.

Following on from the previous week, the Tasmanian Gas Pipeline again failed to report flows on the Bulletin Board for the third consecutive week. Missing flow data was also identified for Berwyndale South and Kenya Production facilities for the same period. 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.

Victorian Gas Market

Market participant demand forecasts exceeded AEMO forecast thresholds on the gas days of 4 and 5 September, requiring the market operator to adjust forecasts to maintain the integrity of the Victorian pipeline transmission system.

Total gas injections and withdrawals in the Victorian gas market decreased by around two per cent from the previous week. Despite the small drop in demand, there was a noticeable increase in the average daily imbalance price this week from $1.01/GJ to $1.85/GJ. Average daily injections at Longford decreased this week by 17 TJ, although gas on the NSW-Victoria Interconnect continued to flow into Victoria.

Part A: National Gas Market Bulletin Board

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 (30 Aug - 5 Sep)	416	35	745	263	32	179	89	68
Previous week (23 - 29 Aug)	408	35	762	278	30	173	88	68
% change from previous week*	2	-0.7	-2.2	-5.3	6.8	3.9	1	0.7
Calendar Year-to-date 2009**	365	24	645	291	29	162	85	68

*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 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.

A significant driver of gas demand is the usage by gas powered electricity generation (GPG). Figure 2 provides the average daily amount of gas used for GPG in each state region for the current week, in comparison to the previous week and the calendar year to date average.

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

Average daily gas for GPG usage*	**NSW**	**VIC**	**SA**	**TAS**	**QLD**
Current week (30 Aug - 5 Sep)	73	7	129	15	155
Previous week (23 - 29 Aug)	66	24	140	11	136
% change from previous week**	11.4	-70.4	-7.7	36.9	14.2
Calendar Year-to-date 2009***	66	55	172	17	117

*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
***Average daily estimated gas consumption measured from 1 January 2009 to the current week (inclusive)
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, Colongra 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, Hallet, Pelican Point, Torrens Island, Mintaro, 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 (30 Aug - 5 Sep)	484	719	335	334
Previous week (23 - 29 Aug)	434	742	336	346
% change from previous week*	11.5	-3.1	-0.5	-3.4
Calendar Year-to-date 2009**	430	691	334	295

*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 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.

Queensland

There are four bulletin board registered pipelines in Queensland (Figure 4). Average flows on Queensland pipelines were similar to the previous week, with increased flows occurring on the Roma to Brisbane Pipeline. A significant increase in GPG saw the Roma production facilities increase their average daily output by 50 TJ.

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 (30 Aug - 5 Sep)	89	68	166	179
Previous week (23 - 29 Aug)	88	68	165	173
% change from previous week*	1	0.7	0.5	3.9
Calendar Year-to-date 2009**	85	68	134	162

^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

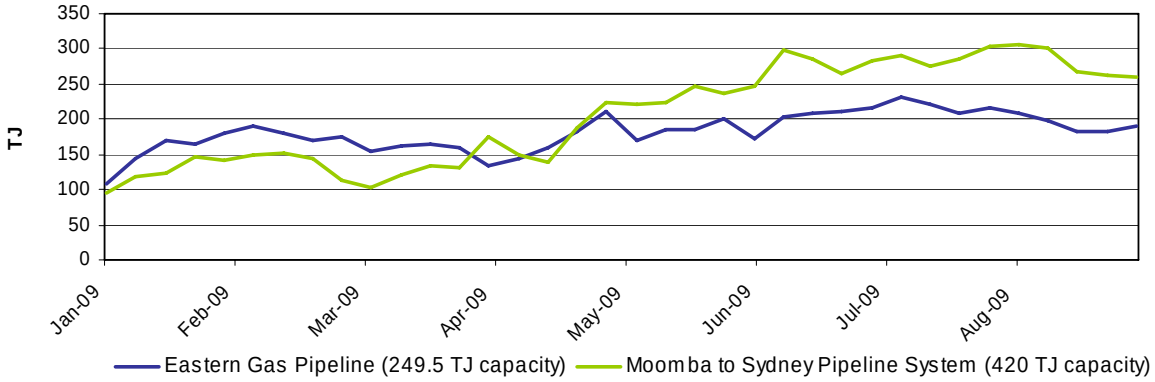
New South Wales / Australian Capital Territory

There are two main pipelines providing gas to the NSW and ACT demand regions. As shown in Figure 6, flows trended slightly downwards this week on the higher capacity Moomba Sydney Pipeline (MSP) despite higher demand, due to the lower volumes of gas leaving the state through the NSW-Victoria Interconnect and increased supply through the Eastern Gas Pipeline (EGP).

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, daily average flows through the NSW-Victoria Interconnect pipeline were in the 'reverse' direction into Victoria on each day of the

week. Gas flowed south at an average rate of 41 TJ/day, a decrease from the average of 48 TJ/day during the previous week. However, the average flows on the NSW-VIC interconnect on a calendar year-to-date basis have been northward, at 7 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 (30 Aug - 5 Sep)	190	261	-41
Previous week (23 - 29 Aug)	182	261	-48
% change from previous week*	4.6	-0.2	-14.9
Calendar Year-to-date 2009**	182	207	0

^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.

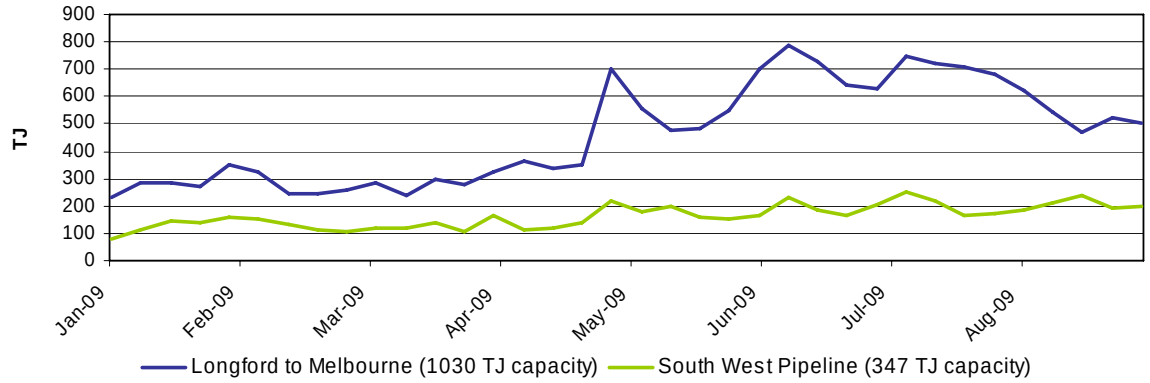
Victoria / Tasmania

There are two main pipelines providing gas into the Victorian demand region. As shown in Figure 7, average weekly flows on the smaller capacity South West Pipeline (SWP) have varied between 100 and 250 TJ/day since January 2009. Flows on the larger capacity Longford to Melbourne Pipeline (LMP) increased markedly at the end of April, but have since declined over August.

There was a significant decrease in production at facilities in eastern Victoria (Longford) and a subsequent decrease in flows down the LMP of 17 TJ/day. Increased flows through the SWP, resulting from decreased flows out of the state into NSW, were offset by a reduction in flows heading south across the NSW-Victoria interconnect into Victoria.

The Tasmanian Gas Pipeline (TGP), which is connected to Victorian production facilities, provides gas into the Tasmania demand region. The slight increase in Tasmanian GPG usage led to marginally increased flows along the TGP.

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 (30 Aug - 5 Sep)	505	199	32
Previous week (23 - 29 Aug)	522	192	30
% change from previous week*	-3.2	3.7	6.8
Calendar Year-to-date 2009**	469	164	29

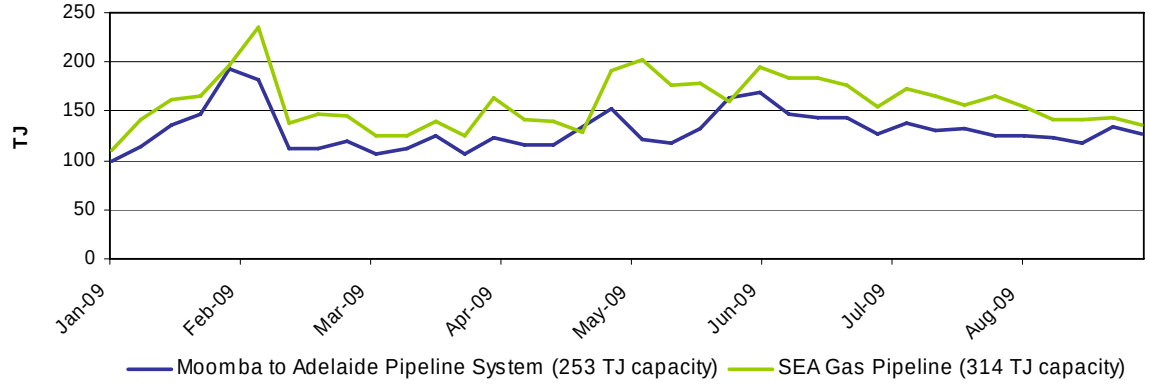
^Gas on the Tasmanian Gas Pipeline flows from Eastern Victoria into Tasmania, ending in Hobart.
*The percentage change in the average daily flow from the previous week to the current week
**Average daily injection flows from 1 January 2009 to the current week (inclusive)
Source: National Gas Market Bulletin 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 (MAP) and SEAGas Pipeline have followed broadly similar flow trends from January 2009 to the current week. Flows along the SEAGas and Moomba to Adelaide pipelines decreased this week in response to a decrease in demand and GPG, with lower amounts of gas being produced at both the Otway Basin and Moomba production facilities. Gas supplied to the state decreased by around 15 TJ/day compared to the previous week, with the majority of this decrease attributable to the 8 per cent reduction in GPG.

Both SEAGas and MAP continue to not operate near pipeline nominated Maximum Daily Quantity (MDQ), which is a measure of total pipeline capacity. (Refer also to Figure A1 in 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 (30 Aug - 5 Sep)	127	136
Previous week (23 - 29 Aug)	135	143
% change from previous week*	-5.7	-5
Calendar Year-to-date 2009**	132	159

*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

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.

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							S					NS
AGL (Qld)	Retailer	1				NS								
AGL	Retailer	4		NS	NS	NS	S				NS	S		
Aust. Power & Gas	Retailer	2				NS	S							
Country Energy	Retailer	1									S			
Energy Australia	Retailer	1					S							
International Power	Producer, Retailer	1											S	
Simply Energy	Retailer	4			S	NS	S	NS						
Origin (Vic)	Trader	6	S	S	NS	NS	S	S			NS	NS		
Origin (Uranquinty)	Retailer	1					S							
Red Energy	Producer	2				NS	S							
Santos	Retailer	1						S						
TRU Energy	Retailer	3			S	NS	S					NS		
Victoria Electricity	Retailer	1										S		
Victoria Electricity	Market Customer	5		S	S	NS	S	S						
Visy Paper	Market Customer	2					S				S			

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

Notes: Comparison is approximate since data represents whether bids were under or over the scheduled market clearing price at 6am. Bids are scheduled in price merit order — this means injection bids which are less than the market clearing price will be scheduled, while withdrawal bids which are greater than the market clearing price will be scheduled into the market. Weekly changes are highlighted a different colour.

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. At Culcairn the amount of gas

scheduled for injection decreased over the week, yet continued to remain high to support the significant amount of gas flow southward (see Figure V4 below).

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 calendar year-to-date averages. Daily imbalance prices for each day during the current week are also noted.

Figure V2: Imbalance Weighted Prices ($/GJ)

	Current Week (30 Aug - 5 Sep)	Previous Week (23-29 August)	2009 Calendar Year*	2008 Calendar Year**
Average daily price	1.85	1.01	2.50	*3.36*

Current Week (30 August - 5 September)	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Daily price	1.73	1.54	1.70	1.49	1.56	1.72	3.18

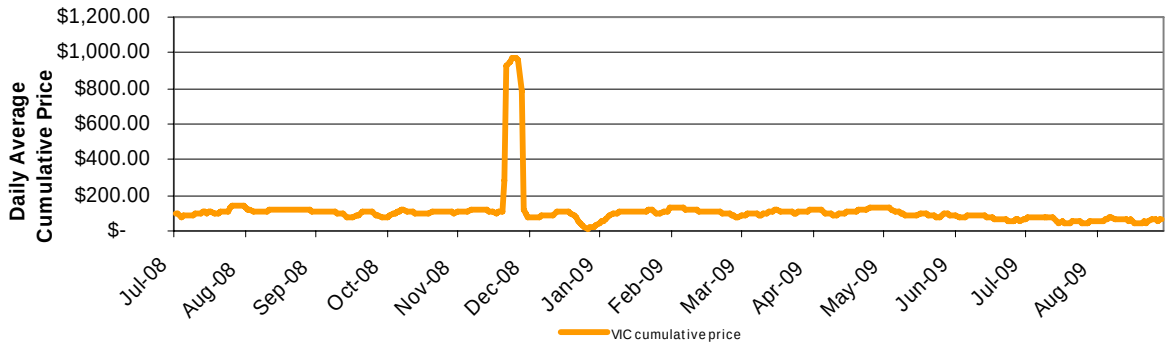
*Average daily imbalance weighted average price from 1 Jan 2009 to the current week (inclusive)
**Average daily imbalance weighted average price from 1 Jan 2008 over equivalent period.
Source: http://www.aemo.com.au (INT 041)

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 $1.85/GJ was higher than the previous week. On Thursday gas interval prices dropped as low as 1 cent /GJ in the last three intervals from 2 pm, but did not have a significant effect on the price of gas due to larger volumes being scheduled at the start of the day.

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

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

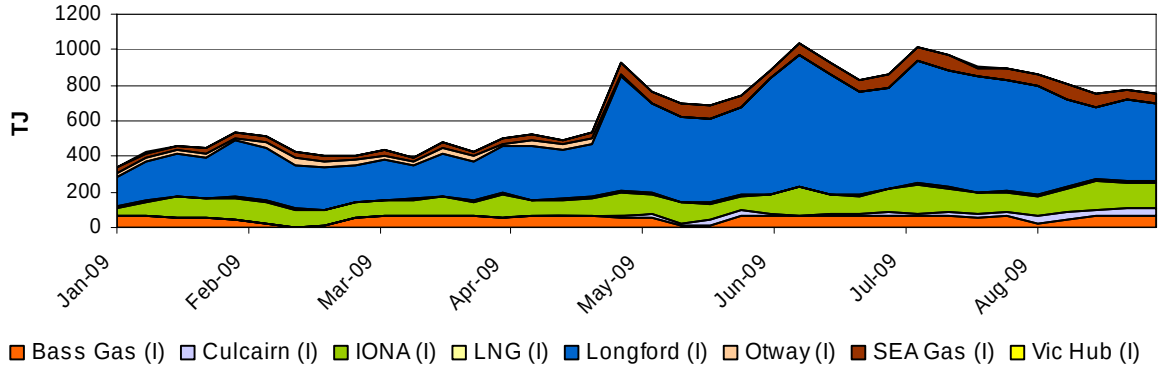
gas is required to be scheduled out of price merit order. Ancillary payments can be made to participants who are called upon to provide gas to alleviate system constraints. As with last week, there were no significant ancillary payments made during the week ending 5 September.

System Injections

Figure V4 provides the average daily amount of gas injected into the Victorian Principal Transmission System (VPTS) for the current week, the previous week, along with the calendar 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 (30 Aug – 5 Sep)	Previous Week (23 – 29 August)	2009 Calendar Year to date*
Culcairn^	40.5	47.6	12.6
Longford	444	461	419
LNG	9	8	8
IONA^	145	137	112
VicHub^	0.99	1.10	1.15
SEAGas^	52	53	49
Bass Gas	64	64	52
Otway	0	0	13
TOTAL	**756**	**771**	**668**



^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)

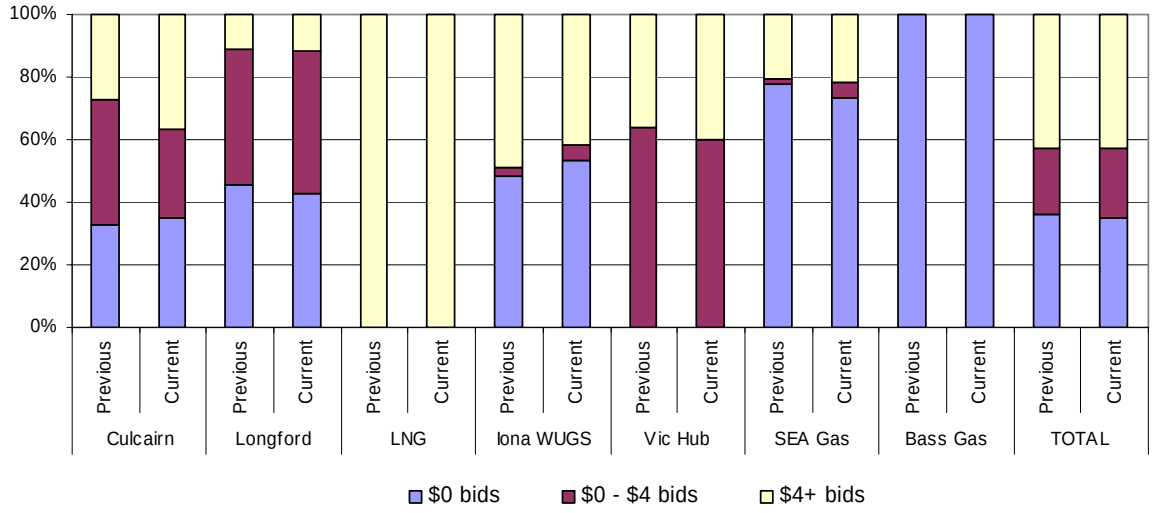
Notes: LNG injections were not scheduled by the market operator, but the reported flows from the LNG injection point indicate the amount of LNG that flowed into the system due to activities to manage the LNG facility's tank level. LNG is also regularly used by the connected BOC plant.

Overall, average daily injections into the VPTS decreased by about two percent for the week ending 5 September. There were significant decreases to the amount of gas scheduled from Longford. This was consistent with a decreased proportion of gas offered into the market in the zero dollar price band as reported on in figure V5 below.

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.

The previous week's report noted increased injection bids at $0/GJ price band at Longford. For the week ending 5 September there were less $0/GJ bids at Longford. Reductions in gas scheduled from Longford and SEAGas correlated with reduced amount of gas bid into the market at $0/GJ at these locations. In contrast, larger volumes of gas were bid in at $0/GJ from Iona, where more gas was scheduled compared to the previous week.

Figure V6 provides a table of injection points 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 Origin TRU	Origin TRU	AGL TRU	AGL Origin TRU	Origin TRU	TRU
LNG							
Iona	TRU	TRU	TRU	TRU	TRU	TRU	
VicHub	AETV			AETV			
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 | AETV = AETV Power

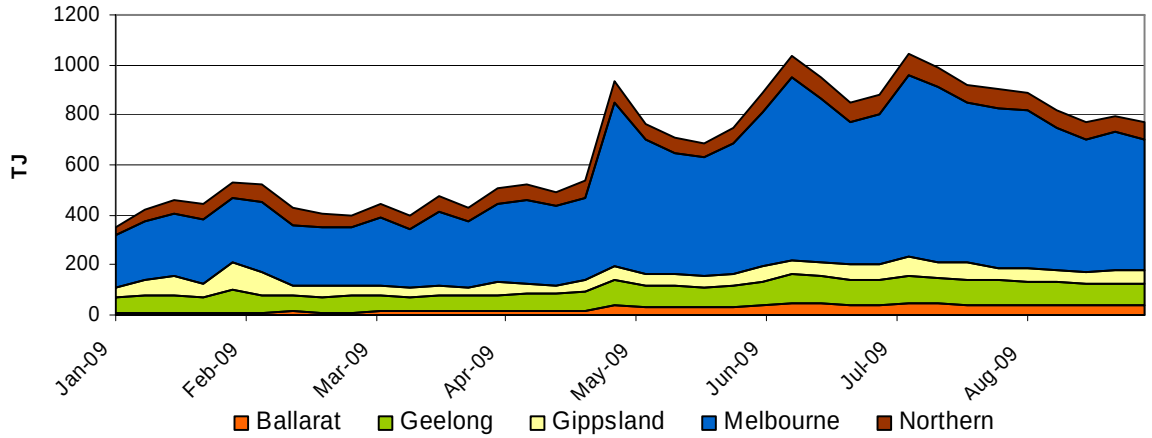
Rebidding was again dominated by the largest three retailers, with all three rebidding at Longford on various days. Intra-day rebidding was also seen by Simply Energy at SEAGas, and by AETV Power at Vic Hub.

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 (30 Aug – 5 Sep)	Previous Week (23 – 29 August)	2009 Calendar Year to date**
Ballarat	36	38	26
Geelong*	90	89	83
Gippsland	50	54	54
Melbourne*	525	553	446
Northern	67	66	65
TOTAL	**768**	**799**	**674**



*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 withdrawal flows across weeks from 1 January 2009 to the current week (inclusive)
Source: http://www.aemo.com.au (INT 150).

Following on from an increase in the previous week, system withdrawals decreased this week. Last week's rise in consumption was attributable to a decrease in temperature and increased GPG resulting in increased withdrawals (see Figure 2 and Appendix A3). This week a decrease in GPG demand and increased gas exports out of the state saw consumption drop despite relatively stable temperatures. Decreased withdrawals were most prominent in Melbourne where consumption is likely to be particularly skewed towards residential heating demand.

Demand Forecasts and Demand Overrides

Significant amounts of override were applied by AEMO to market participant demand forecasts this week on 4 and 5 September gas days. AEMO forecast thresholds were exceeded on these days, requiring the market operator to adjust forecasts to maintain system security. The demand override is shown in Figure A5 in the appendix along with comparisons between market participant demand forecasts and AEMO demand forecasts.

System Outages and Constraints

A Directional Flow Point Constraint (DFPC) was applied this week at the Iona withdrawal point, where hourly capacity was restricted to 10 TJ from 6 am to 7 pm on 31 August. Supply Demand Point Constraints (SDPCs) were also imposed on both Iona injections and withdrawals on 5 September, where hourly restrictions set the maximum quantities to 0 TJ from 2 pm.

Australian Energy Regulator
August 2009

APPENDIX

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. 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	92	93	84	77	91	92	91	117	76	75	73
QLD Gas Pipeline	71	64	66	71	65	69	72	79	86	86	85
Roma to Brisbane Pipeline	161	197	190	191	189	176	153	208	86	83	78
South West QLD Pipeline	185	163	160	145	159	162	188	168	99	98	80
QSN link**	53	53	48	50	46	50	50	-	-	-	-
NSW/ACT											
Eastern Gas Pipeline	172	206	204	193	197	197	163	250	76	73	73
Moomba to Sydney Pipeline	238	292	277	274	267	260	218	420	62	62	49
NSW-VIC Interconnect^	-52	-52	-40	-35	-25	-37	-47	90	-45	-53	0
VIC											
Longford to Melbourne	506	553	611	416	396	477	578	1030	49	51	46
South West Pipeline	257	228	177	188	159	270	112	347	57	55	47
SA											
Moomba to Adelaide Pipeline	128	139	142	130	119	122	109	253	50	53	52
SEA Gas Pipeline	105	164	159	131	153	135	108	314	43	46	51
TAS											
Tasmanian Gas Pipeline	13	25	48	N/A	13	43	52	129	25	24	22

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	79	83	97	N/A	96	95	93	140	65	54	64
Fairview	114	113	115	115	116	115	116	115	100	97	84
Kenya^	35	31	31	N/A	35	34	34	160	21	21	15
Kincora	0	0	0	0	5	0	7	25	7	0	5
Kogan North	10	9	9	9	9	9	9	12	75	58	72
Peat	9	9	9	12	11	12	11	15	70	63	70
Rolleston	10	11	11	11	10	11	11	30	36	35	35
Scotia	27	27	25	25	25	25	17	27	91	100	76
Spring Gully	52	52	122	51	53	53	54	60	104	85	98
Strathblane	52	52	122	51	53	53	54	60	104	85	88
Taloona	32	31	74	31	32	32	32	36	105	86	46
Wallumbilla	10	10	13	13	13	13	12	20	59	55	54
Yellowbank	15	15	15	15	15	15	15	30	50	50	50
Ballera	0	0	0	0	0	0	0	150	0	0	9
Eastern (VIC)											
Orbost Gas Plant	0	0	0	0	0	0	0	10	0	0	0
Lang Lang Gas Plant	65	66	64	65	62	61	64	70	91	91	74
Longford Gas Plant	604	733	797	596	544	628	686	1140	57	60	56
LNG Storage Dandenong	0	0	0	0	0	0	0	158	0	0	0
Otway Basin (VIC)											
Minerva Gas Plant	68	78	66	61	61	61	61	94	70	76	88
Otway Gas Plant	98	151	134	162	173	108	113	206	65	62	66
Iona Underground Gas Storage	194	153	129	129	83	206	52	320	42	43	36
Moomba (SA)											
Moomba Gas Plant	318	352	365	354	339	311	298	380	88	91	78

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 current week. The average temperatures for the previous week are also provided. (Note: only the demand regions where temperature is a driver of gas demand are included).

Figure A3: Average daily temperatures (°C) at each demand region

Average daily temperatures (°C)		NSW (Sydney)	ACT (Canberra)	VIC (Melbourne)	SA (Adelaide)	TAS (Hobart)
Current Week (30 Aug - 5 Sep)	Average min.	12.2	3.5	8.6	10.3	5.2
	Average max.	21.3	15.1	17.8	17.4	14.9
Previous Week (23 – 29 August)	Average min.	13.5	6.5	9.5	9.2	5.6
	Average max.	23.2	15.4	17.3	17.4	13.1

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 (30 Aug - 5 Sep)	Scheduling Interval					Daily Imbalance Weighted Average Price
	6am	10am	2pm	6pm	10pm	
Sun	1.69	2.99	3.19	2.99	3.29	1.73
Mon	1.51	2.45	1.49	2.45	2.99	1.54
Tue	1.69	2.99	1.69	1.69	1.68	1.70
Wed	1.51	1.69	1.69	0.54	0.54	1.49
Thu	1.68	0.56	0.01	0.03	0.03	1.56
Fri	1.69	1.68	0.06	2.99	4.25	1.72
Sat	3.19	3.49	3.30	3.19	1.23	3.18

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

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	
30-Aug	**MP Demand:**	774	779	778	775	775	**0**
	AEMO Demand:	784	790	809	799	800	
	MP demand forecast as % of AEMO	99%	99%	96%	97%	97%	
31-Aug	**MP:**	847	861	849	852	851	**0**
	AEMO:	878	875	866	852	853	
	MP demand forecast as % of AEMO	96%	98%	98%	100%	100%	
1-Sep	**MP:**	856	856	858	857	856	**0**
	AEMO:	875	880	860	838	843	
	MP demand forecast as % of AEMO	98%	97%	100%	102%	102%	
2-Sep	**MP:**	670	660	656	650	652	**0**
	AEMO:	705	693	694	671	651	
	MP demand forecast as % of AEMO	95%	95%	95%	97%	100%	
3-Sep	**MP:**	654	631	608	616	617	**0**
	AEMO:	694	621	595	616	595	
	MP demand forecast as % of AEMO	94%	102%	102%	100%	104%	
4-Sep	**MP:**	776	771	756	770	770	**-4**
	AEMO:	739	736	671	794	783	
	MP demand forecast as % of AEMO	105%	105%	113%	97%	98%	
5-Sep	**MP:**	742	745	751	741	741	**2**
	AEMO:	755	771	806	736	723	
	MP demand forecast as % of AEMO	98%	97%	93%	101%	102%	

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

GLOSSARY

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
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

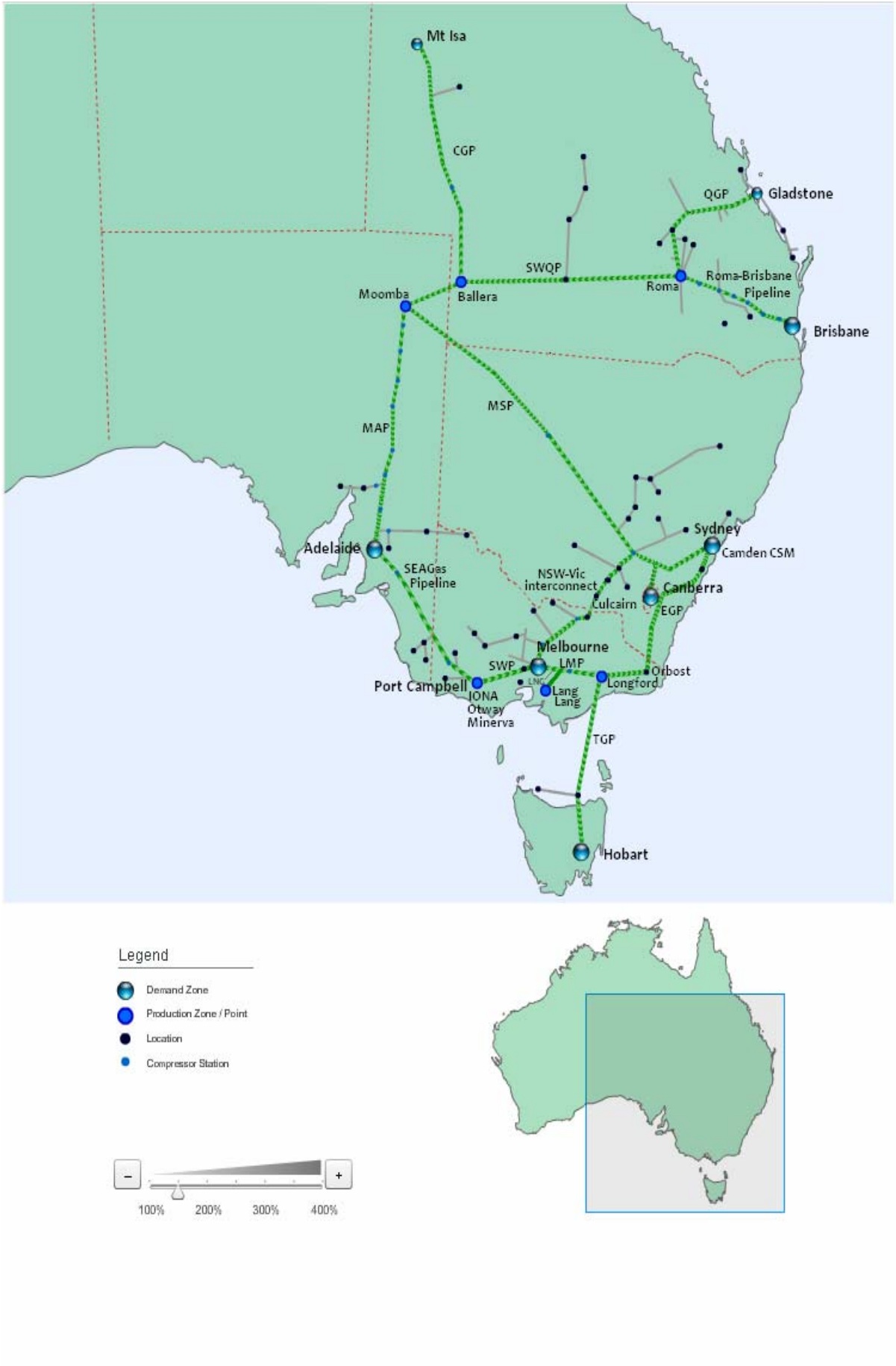
Source: Natural Gas Market Bulletin Board http://www.gasbb.com.au

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