WEEKLY GAS MARKET ANALYSIS

AUSTRALIAN ENERGY REGULATOR

19 July - 25 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 gas production flows were lower than average flows from the previous week. Overall pipeline usage remained stable at 63 per cent of the total stated pipeline capacity, while usage of production facilities decreased slightly from 66 to 64 per cent of total production capacity. However, average usage of pipeline and production facilities were still higher than the respective calendar year-to-date averages of 51 per cent and 53 per cent respectively.

There were no instances of missing bulletin board data for this reporting week. 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 7 per cent from the previous week. The average price of gas traded in the market was $0.97/GJ, substantially lower than the previous week's average price of $2.46/Gj and the 2009 calendar year-to-date average of $2.71/GJ.

There was a slight decrease in the proportion of gas bid in at $0/GJ compared to the previous week. Yet the proportion of $0/GJ bids at Vic Hub increased to 44 per cent from 0 per cent in the previous week, with an increase in $0/GJ bids also evident at Culcairn. Market participants submitted rebids at a larger number of injection points in the market compared with the previous week, with intra-day rebids of gas submitted at Culcairn, Iona, Longford, SEAGas, Vic Hub and Bass Gas.

Constraints at the SEAGas injection and withdrawal point and the Bass Gas injection point reduced the capacity of gas flows at these facilities during the week ending 25 July. AEMO continued to apply a lot of override to market participant demand forecasts across this week.

Part A: National Gas Market Bulletin Board

AUSTRALIAN ENERGY REGULATOR

19 July - 25 July 2009

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 flows from the week ending 25 July with the previous week and 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 (19 - 25 July)	428	46	867	289	25	144	97	70
Previous week (12 - 18 July)	432	46	930	296	28	118	91	63
% change from previous week*	-1.1	-0.4	-6.7	-2.4	-12.2	22.2	6.8	12.3
Calendar Year-to-date 2009**	357	21	571	295	30	163	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.

One 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 (19 - 25 July)	86	52	147	10	87
Previous week (12 - 18 July)	85	58	154	11	78
% change from previous week*	1.2	-10.7	-5.1	-11.7	11.1
Calendar Year-to-date 2009**	66	52	178	19	117

^Estimated values based on National Electricity Market generator output data and the application of implied heat rates sourced from figures in ACIL Tasman's 2009 Final Report *'Fuel resource, new entry and generation costs in the NEM'* for the Inter-Regional Planning Committee (Available at: http://www.aemo.com.au/planning/419-0035.pdf)
*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 GPGs: Smithfield, 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 and 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 the flows from the week ending 25 July with the previous week and the calendar year-to-date averages. (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 (19 - 25 July)	402	948	313	367
Previous week (12 - 18 July)	381	987	382	353
% change from previous week*	5.4	-4	-18	4.1
Calendar Year-to-date 2009**	408	672	332	282

*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.

Overview of gas demand across South and Eastern Australia

Gas-powered electricity generation (GPG) and temperature patterns are both important drivers of gas demand. In South Australia (SA) and Tasmania (Tas) GPG explains around half of all gas demand. Of all the states and territories, temperature is the most significant driver of gas demand in Victoria, where gas heating is widespread. Slightly warmer temperatures for the week ending 25 July (see Figure A3 in the appendix), combined with an overall drop in GPG demand (see Figure 2 above) may have led to the overall lower pipeline flows compared to the previous week.

Production from the two Victorian production zones (Eastern and Otway Basin) was lower compared to the previous week. This was consistent with the lower demand in TAS, New South Wales (NSW), SA, and Victoria (see Part B for more analysis of the Victorian gas market). Production at Moomba (SA) also appears to have increased marginally despite the slightly lower demand in SA and NSW. This was perhaps to make up for the decreased flows from the Otway Basin.

Flows along the Moomba to Sydney pipeline also increased during the week despite slightly lower overall demand in NSW. This was most likely attributable to the lower volume of gas being shipped up from the Eastern (VIC) production zone. Production flows from Roma/Ballera (QLD) increased this week, consistent with the increase in demand in each of the Queensland regions. Demand in Brisbane also increased by 22 per cent from the previous week.

Queensland

There are four bulletin board registered pipelines in Queensland (Figure 4). Average flows on each of the Queensland pipelines were slightly higher than the previous week and year-to-date levels, with the exception of the Roma to Brisbane Pipeline. Flows along the Roma to Brisbane Pipeline increased from the previous week, yet these flows were still lower 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 (19 - 25 July)	97	70	167	144
Previous week (12 - 18 July)	91	63	146	118
% change from previous week*	6.8	12.3	14.5	22.2
Calendar Year-to-date 2009**	85	68	128	163

^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

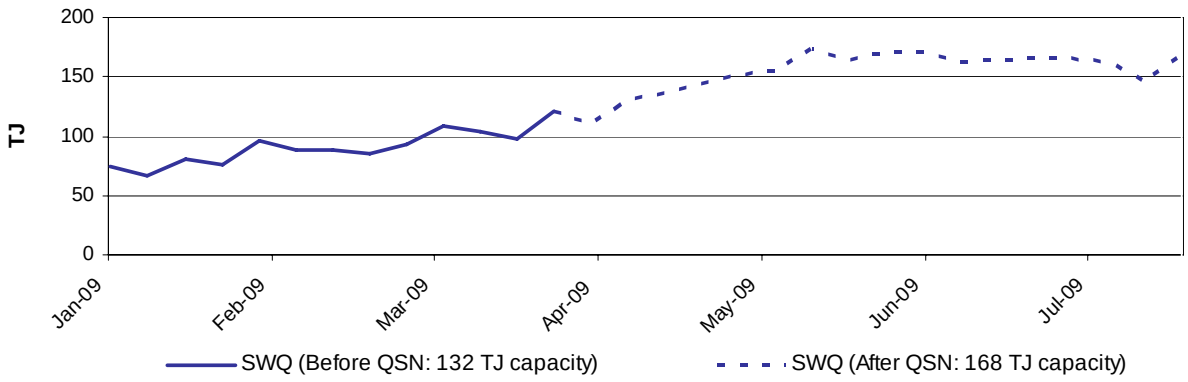
Commissioning of the QSN link

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 25 July 2009 were about 95 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.

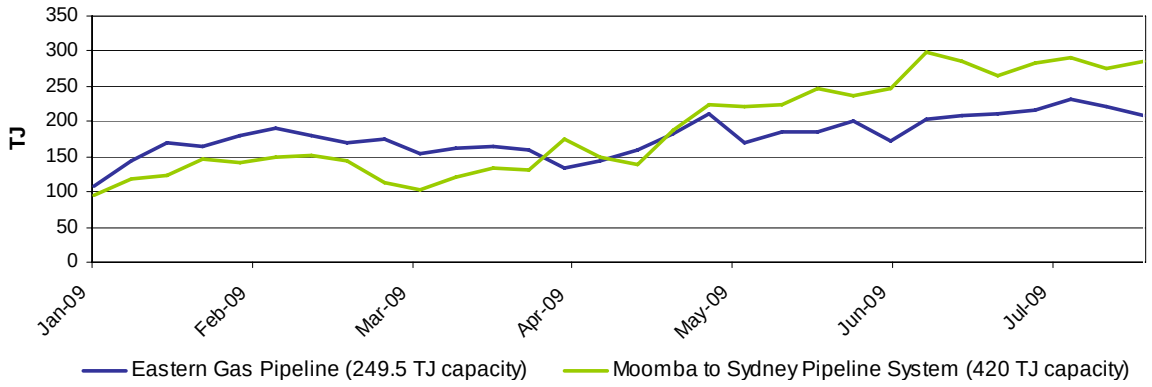
New South Wales / Australian Capital Territory

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 the EGP, which may have been due to the lower demand from the NSW demand region. This correlated with warmer average temperatures decreasing the demand for gas.

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 25 July at an average of 21 TJ/day. However, average flows on the NSW-VIC interconnect on a calendar year-to-date basis have been north, 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 (19 - 25 July)	208	286	-21
Previous week (12 - 18 July)	222	276	-19
% change from previous week*	-6.1	3.8	9.8
Calendar Year-to-date 2009**	179	192	7

^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

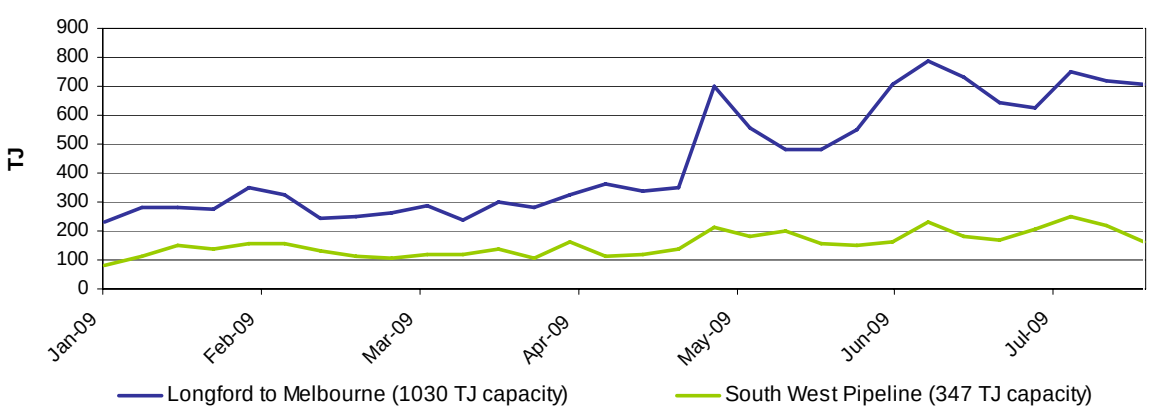
Notes: The figure for the EGP includes some gas that is consumed in Victoria, from Victorian EGP off-takes.

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 decrease in Victorian and Tasmanian gas market led to marginally lower flows along the LMP, SWP and TGP. This may have been driven by marginally lower gas-powered electricity generation which fell by almost 11 per cent in Victoria 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 12 per cent drop in gas-powered generation in Tasmania, compared to the previous week.

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



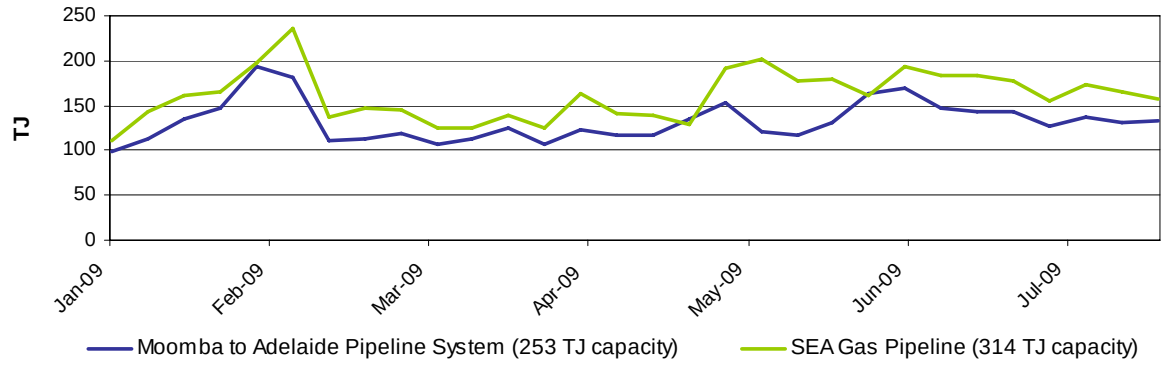
Average Daily Flows	Longford to Melbourne Pipeline	South West Pipeline	Tasmanian Gas Pipeline^
Current week (19 - 25 July)	707	164	25
Previous week (12 - 18 July)	719	221	28
% change from previous week*	-1.6	-25.6	-12.2
Calendar Year-to-date 2009**	451	156	30

^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 (MAP) and SEAGas Pipeline have followed broadly similar flow trends from January 2009 to the current week. The SEAGas pipeline experienced marginally lower flows compared to the previous week, while flows along the MAP remained relatively stable. This correlated with the 5 per cent fall in gas-powered electricity generation in SA, along with the slightly warmer average minimum temperatures throughout the week.

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



Average Daily Flows	Moomba to Adelaide Pipeline	SEAGas Pipeline
Current week (19 - 25 July)	132	156
Previous week (12 - 18 July)	130	165
% change from previous week*	1.3	-5.4
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	2							NS					NS
AGL Sales (Qld)	Retailer	1				NS								
AGL Sales	Retailer	6		NS	NS	NS	S				NS	NS		
Aus. Power & Gas	Retailer	2				NS	S							
Country Energy	Transmission Customer	1									S			
International Power	Transmission Customer	1											S	
Origin (Vic)	Retailer	8	S	S	NS	NS	S	S			S	S		
Origin (Uranquinty)	Trader	1					S							
Red Energy	Retailer	2				NS	S							
Santos	Retailer	2						S						S
TRU Energy	Retailer	4			S	NS	S					S		
Victoria Electricity 2	Trader	2			NS							S		
Victoria Electricity	Retailer	6		S	S	NS	S	S	S					
Visy Paper	Distribution Customer	2					S				S			
Simply Energy	Retailer	4			S	NS	S	NS						
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 and

International Power only nominated withdrawal bids, consistent with their interests in interconnected pipelines and interstate customer bases. There were no injection bids submitted at the Otway injection point during the week.

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 year-to-date averages. Imbalance weighted prices for each day during the current week are also provided.

Figure V2: Imbalance Weighted Prices ($/GJ)

	Current Week (19 - 25 July)	Previous Week (12 - 18 July)	2009 Calendar Year*	2008 Calendar Year**
Average daily price	0.97	2.46	2.71	*3.37*

Current Week (19 - 25 July)	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Daily price	0.52	0.52	0.48	0.56	1.61	1.57	1.54

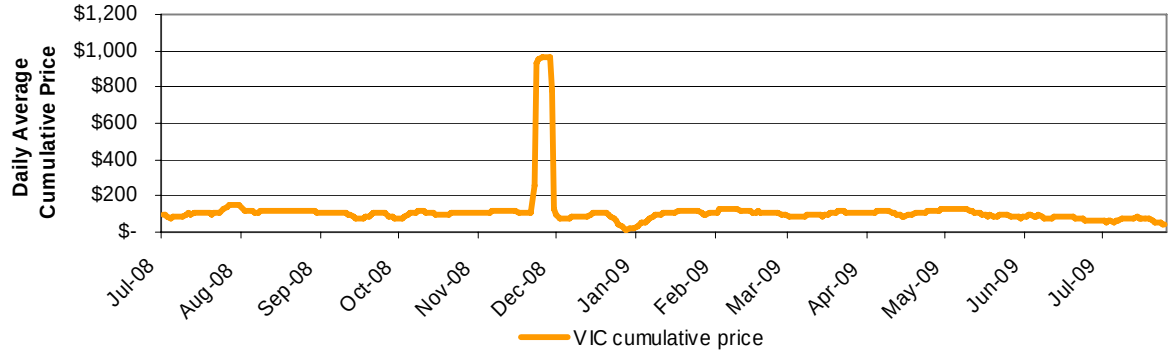
*Average daily imbalance weighted average price from 1 Jan 2009 to the current week (inclusive)
**Average daily imbalance weighted average price from 1 Jan 2008 over equivalent period.
Source: http://www.aemo.com.au (INT 041)

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 $0.97/GJ was significantly lower compared to $2.46/GJ for the previous week. Average prices have also been consistently lower in 2009 than in 2008. The range of spot market prices this week decrease slightly compared to the previous week, with prices ranging from $0.09/GJ on Tuesday at the 6 pm schedule, to $3.12/GJ over a number of schedules for Thursday and on Friday at the 10pm 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

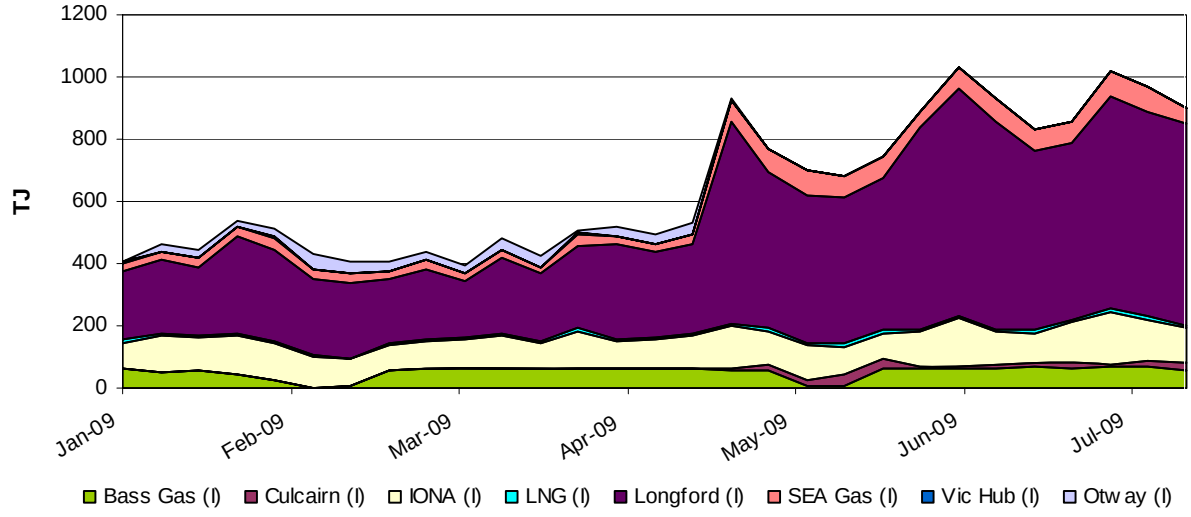
gas is required to be scheduled out of price merit order. Ancillary payments can be made to participants who are called upon to provide gas to alleviate system constraints. As with last week, there were no significant ancillary payments made during the week ending 25 July.

System Injections

Figure V4 provides the total amount of gas injected into the Victorian Principal Transmission System (VPTS) for the week ending 25 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 (19 - 25 July)	Previous Week (12 - 18 July)	2009 Calendar Year to date*
Culcairn^	22	19	7
Longford	651	654	401
LNG	7	10	8
IONA^	111	136	108
VicHub^	0.98	0.85	1.25
SEAGas^	51	82	46
Bass Gas	59	67	52
Otway	0	0	16
TOTAL	**900**	**969**	**639**



^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)

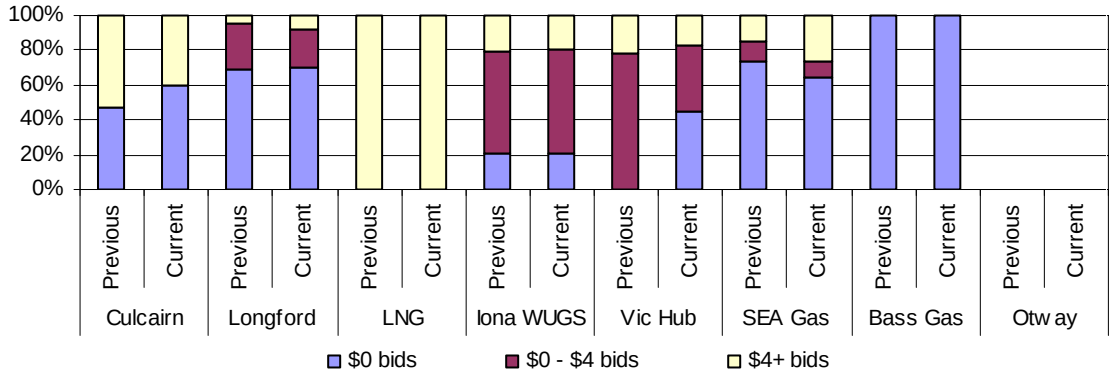
Notes: LNG injections were not scheduled by the market operator, but the reported flows from the LNG injection point indicate the amount of LNG that flowed into the system due to activities to manage the LNG facility's tank level. LNG is also regularly used by the connected BOC plant.

Overall, average daily injections into the VPTS fell by about 7 per cent for the week ending 25 July. Flows from Iona injections dropped by 18 per cent and flows from SEAGas decreased by 38 per cent, while Longford injections also fell by a daily average of 3 TJ. This was partially offset by increased flows from Vic Hub 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. This is due to pressure restrictions at the Otway injection point, causing gas delivered from the Otway basin to be injected through the SEAGas and IONA injection points as an alternative means of distributing that gas into the VPTS.

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 lower proportion of gas bid in at $0/GJ for the week ending 25 July, where 42 per cent of gas was offered at $0/GJ compared to 43 per cent the previous week. The overall lower proportion of $0/GJ gas bids coincide with marginally lower gas demand during the week. It is noted that despite the general trend, a higher proportion of gas at Culcairn was bid in at $0/GJ.

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	Origin TRU AGL	Origin	Origin TRU		AGL	Origin AGL	Origin
LNG							
IONA	TRU Origin	TRU	TRU	TRU	TRU	TRU	TRU Origin
VicHub					AETV		
SEAGas					Simply		Origin VE
Bass Gas			Origin				

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

Notes: Origin = Origin Energy | AGL = AGL Sales | TRU = TRUenergy | Simply = Simply Energy | VE = Victoria Electricity | AETV = Aurora Energy TV Power

Compared to the previous week, there were more participants submitting intra-day rebids at more injection points for the week ending 25 July. Only 4 participants submitted gas rebids last week, whereas 6 retailers rebid gas in the market this week. While TRUenergy continued to submit the majority of their rebids at Iona, Origin Energy and AGL also submitted rebids

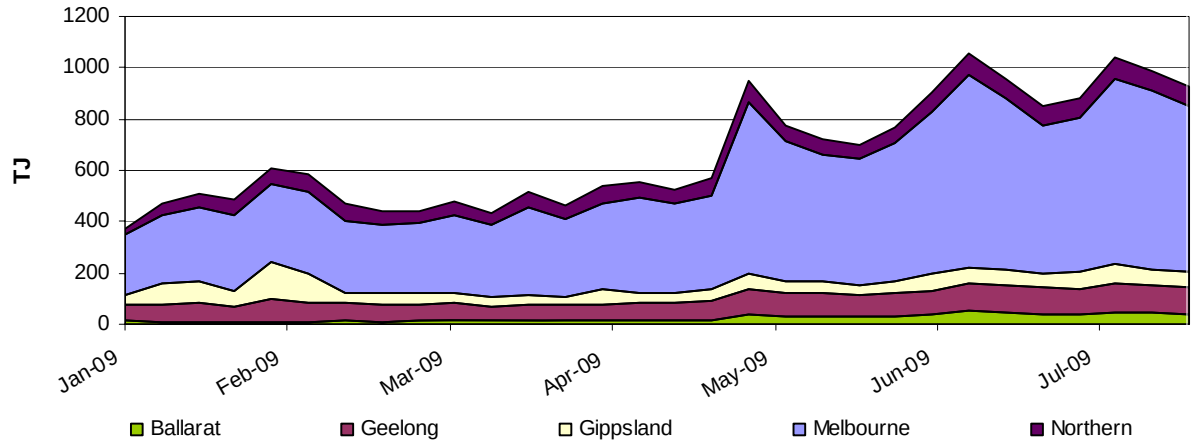
at Longford, Iona and Culcairn and Bass Gas on various days during the week. Simply Energy submitted only one intra-day rebid at SEAGas during the current week.

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 (19 - 25 July)	Previous Week (12 - 18 July)	2009 Calendar Year to date**
Ballarat	41	45	24
Geelong*	100	105	81
Gippsland	66	62	58
Melbourne	641	698	444
Northern	74	78	64
TOTAL	**923**	**988**	**672**



*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).

Consistent with the decrease in injections, average daily withdrawals from the system also decreased by almost 7 per cent. While average withdrawals fell in each zone, Gippsland withdrawals increased slightly (7 per cent). The decreased consumption was more significant in the Melbourne region where almost 60 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.

Demand Forecasts and Demand Overrides

In the Victorian Gas Market, the market operator, AEMO (formerly VENCorp), determines its own hourly demand forecasts for uncontrollable demand, known as the VENCorp Demand Forecast. Market Participants also submit their own forecast demand, which is aggregated and used by AEMO for scheduling subject to any Demand Override it applies.

If the Market Participant Total Demand Forecast is too high or too low relative to the AEMO Total Demand Forecast, then an amount may be added (or subtracted) to the Market Participant Forecast Demand to create the Total Demand, so as to ensure that an appropriate amount of gas is scheduled to maintain system security.

For the week ending 25 July, demand overrides were applied at each schedule on Tuesday 21 July, ranging from -0.38 TJ/hour at the 2pm schedule to -3.17 TJ/hour at the 6pm schedule. On this day, total demand forecasts submitted by market participant were on average 106 per cent higher than AEMO demand forecasts. Market participant demand forecasts were on average 105 per cent higher than AEMO demand forecasts. The maximum variance between AEMO demand forecasts and Market Participant forecasts occurred at the 10 pm schedule on 20 July with Market Participant forecasts being 111% higher.

The only positive demand override was applied on Friday 24 July at a rate of 1.88 TJ/hour from the 10pm schedule. (See Figure A5 in the Appendix for all demand forecasts and demand overrides for the week ending 25 July).

System Outages and Constraints

The maximum hourly injection and withdrawal rate at SEAGas was limited to 0 TJ/hour between 9am and 4pm on Thursday 23 July, while Bass Gas injections were also limited by a daily maximum injection capacity of 35 TJ on 25 July.

Australian Energy Regulator
August 2009

APPENDIX

AUSTRALIAN ENERGY REGULATOR

19 July - 25 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. 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	98	99	95	97	98	97	96	117	83	78	73
QLD Gas Pipeline	63	69	74	74	70	70	72	79	89	79	86
Roma to Brisbane Pipeline	132	150	151	149	156	141	128	208	69	57	78
South West QLD Pipeline	177	164	161	167	158	171	171	168	99	87	76
QSN link**	54	54	54	54	54	54	54	-	-	-	-
NSW/ACT											
Eastern Gas Pipeline	194	213	215	210	220	217	188	250	83	89	72
Moomba to Sydney Pipeline	249	314	275	268	320	310	268	420	68	66	46
NSW-VIC Interconnect^	-37	-38	-5	-27	-25	-13	-3	90	-24	-21	8
VIC											
Longford to Melbourne	557	630	658	743	791	810	760	1030	69	70	44
South West Pipeline	149	144	112	139	221	254	130	347	47	64	45
SA											
Moomba to Adelaide Pipeline	97	116	119	143	159	160	131	253	52	52	53
SEA Gas Pipeline	124	164	167	170	201	156	113	314	50	53	52
TAS											
Tasmanian Gas Pipeline	17	28	27	25	30	25	21	129	19	22	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	99	101	100	105	98	102	77	140	70	71	67
Fairview	102	105	105	105	105	106	105	115	91	91	81
Kenya^	0	0	0	0	0	0	14.5	160			
Kincora	0	0	0	0	0	0	0	25	0	3	6
Kogan North	6	6	6	6	6	6	6	12	50	43	75
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	9	10	10	10	10	27	26	0	76
Spring Gully	50	53	54	56	55	56	56	60	90	82	100
Strathblane	50	53	54	56	55	56	56	60	90	82	88
Taloona	30	32	33	34	33	34	34	36	91	83	37
Wallumbilla	7	8	9	9	9	10	10	20	44	0	55
Yellowbank	15	15	15	15	15	15	10	30	48	49	50
Ballera	0	0	0	0	0	0	0	150	0	4	11
Eastern (VIC)											
Orbost Gas Plant	0	0	0	0	0	0	0	10	0	0	0
Lang Lang Gas Plant	62	53	60	68	68	66	34	70	84	96	73
Longford Gas Plant	707	819	847	923	956	995	976	1140	78	81	54
LNG Storage Dandenong	0	0	0	0	0	0	0	158	0	0	0
Otway Basin (VIC)											
Minerva Gas Plant	68	68	73	83	62	78	68	94	76	95	90
Otway Gas Plant	153	161	145	150	103	99	75	206	61	76	66
Iona Underground Gas Storage	71	83	46	69	216	198	122	320	36	42	35
Moomba (SA)											
Moomba Gas Plant	343	365	357	326	396	396	386	430	85	82	66

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 25 July. 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 (19 - 25 July)	Average min.	9.1	0.6	8.7	9.2	5.0
	Average max.	20.5	13.4	16.0	17.6	13.8
Previous 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

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 25 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 (19 - 25 July)	Scheduling Interval					Daily Imbalance Weighted Average Price
	6am	10am	2pm	6pm	10pm	
Sun	0.52	0.53	0.52	0.50	0.56	0.52
Mon	0.52	0.52	0.52	0.50	0.50	0.52
Tue	0.50	0.53	0.59	0.09	0.50	0.48
Wed	0.52	0.21	0.20	1.52	3.07	0.56
Thu	1.53	3.12	3.12	1.11	3.12	1.61
Fri	1.53	2.64	2.40	1.53	3.12	1.57
Sat	1.52	1.50	2.50	1.11	1.13	1.54

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

Figure A5 shows the total Market Participant (MP) demand forecasts and the market operator (AEMO) demand forecasts at each schedule for each day of the week ending 25 July. The average daily amount for each of the demand forecasts are also provided, along with MP demand forecasts as a percentage of AEMO demand forecasts. Demand overrides for each schedule (if any) are also included, as well as the total amount for each gas day.

Figure A5: Daily demand forecasts (TJ) and demand overrides (TJ/hour)

Gas Day	Demand Forecasts (TJ)	Schedule 6am	10am	2pm	6pm	10pm	Average daily forecast amount (TJ)
19-Jul	MP:	**792**	**800**	**803**	**804**	**805**	801
	AEMO:	770	773	788	810	760	780
	Override:	-	-	-		-	
	MP demand forecast as % of AEMO	103%	104%	102%	99%	106%	
20-Jul	MP:	**892**	**890**	**889**	**887**	**897**	891
	AEMO:	844	850	851	841	808	839
	Override:	-	-	-		-1.25 TJ/hr	
	MP demand forecast as % of AEMO	106%	105%	104%	105%	111%	
21-Jul	MP:	**839**	**857**	**869**	**831**	**861**	851
	AEMO:	799	810	819	781	794	801
	Override:	-2.25 TJ/hr	-1.15 TJ/hr	-0.38 TJ/hr	-3.17 TJ/hr	-1.88 TJ/hr	
	MP demand forecast as % of AEMO	105%	106%	106%	106%	108%	
22-Jul	MP:	**946**	**905**	**920**	**955**	**952**	936
	AEMO:	897	838	841	939	930	889
	Override:	-	-2.8 TJ/hr	-2.19 TJ/hr		-	
	MP demand forecast as % of AEMO	105%	108%	109%	102%	102%	
23-Jul	MP:	**1049**	**1082**	**1090**	**1094**	**1098**	1083
	AEMO:	1070	1057	1066	1058	1050	1060
	Override:	-	-	-		-	
	MP demand forecast as % of AEMO	98%	102%	102%	103%	105%	
24-Jul	MP:	**1073**	**1064**	**1068**	**1074**	**1097**	1075
	AEMO:	1018	1035	1078	1085	1100	1063
	Override:	-	-0.35 TJ/hr	-		1.88 TJ/hr	
	MP demand forecast as % of AEMO	105%	103%	99%	99%	100%	
25-Jul	MP:	**938**	**926**	**927**	**932**	**932**	931
	AEMO:	898	900	904	925	923	910
	Override:	-0.17 TJ/hr	-	-		-	
	MP demand forecast as % of AEMO	104%	103%	103%	101%	101%	

Note: Override figures in brackets represent negative demand overrides

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

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

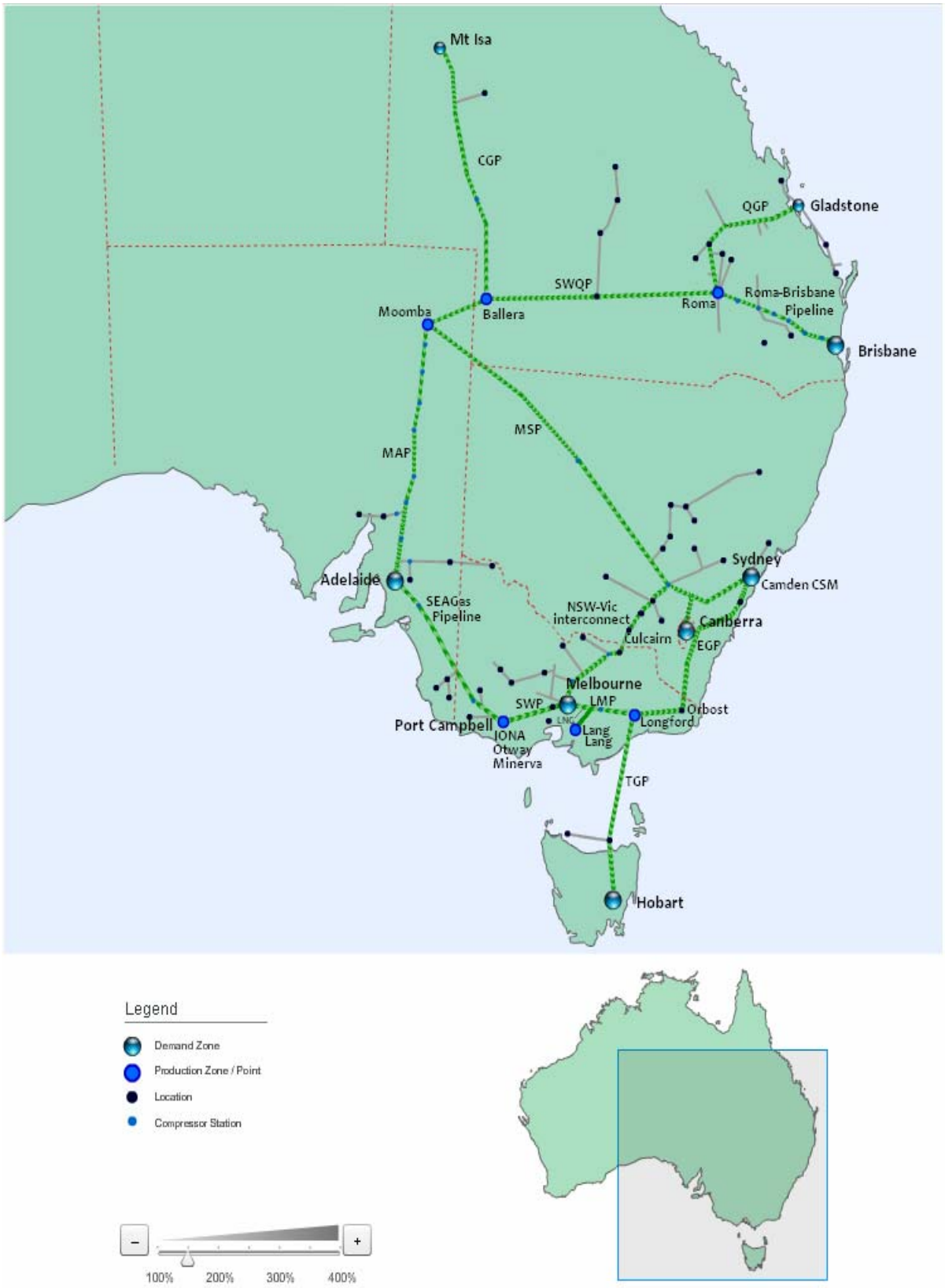
Source: Natural Gas Market Bulletin Board http://www.gasbb.com.au

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