WEEKLY GAS MARKET ANALYSIS

AUSTRALIAN ENERGY REGULATOR

2 – 8 August 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 and pipeline flows were lower than the previous week. Notably, flows through the NSW-VIC Interconnect in to Victoria were reported at 53 TJ for 5 August, the highest reported directional flow rate for the year.

A number of facilities failed to provide flow information within the prescribed timeframes. Carpentaria Gas Pipeline, Roma to Brisbane Pipeline and Kogan North Production Facility flows were missing from the Bulletin Board for both 4 and 5 August. Actual flows for the Moomba to Sydney Pipeline were also missing from Bulletin Board data for 8 August. The AER monitors and reviews patterns of late submission of data and will continue to engage with facilities to ensure the data requirements of the bulletin board are satisfied.

Victorian Gas Market

Total gas injections and withdrawals in the Victorian gas market both decreased relative to the previous week, with injection volumes falling by more than 3 percent.

The average price of gas traded in the market was $1.49/GJ, higher than the previous week's average price of $1.42/GJ, yet still lower than the 2009 calendar year-to-date average of $2.63/GJ.

Increased flows from Culcairn replaced flows elsewhere at Longford and Bass Gas noting that Bass Gas experienced on-shore and off-shore problems with gas production over the week. The proportion of $0/GJ bids at Culcairn increased to 72 percent from 52 percent in the previous week leading to more gas being scheduled from Culcairn.

There was a greater amount of rebidding this week including at Culcairn.

Significant amounts of override were applied by AEMO to market participant demand forecasts this week.

Part A: National Gas Market Bulletin Board

AUSTRALIAN ENERGY REGULATOR

2 – 8 August 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 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 (2 - 8 August)	475	45	853	279	14	150	86	69
Previous week (26 July – 1 August)	472	46	881	290	22	149	93	72
% change from previous week*	0.6	-2.9	-3.1	-3.7	-35	0.6	-7.4	-4.9
Calendar Year-to-date 2009**	357	22	631	294	29	163	85	68

^ Some changes were made to the methodology to calculate NSW and Victorian demand, applying from this week. Figures now better reflect Victorian or NSW demand. Changes related to the treatment of NSW-Vic Interconnect flows and Tasmanian Gas Pipeline flows.
*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 after 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 is calculated by adding flows on Longford-Melbourne and South West pipelines and any southward 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 (2 - 8 August)	86	54	143	3	96
Previous week (26 July – 1 August)	105	70	148	9	90
% change from previous week*	-17.8	-23.2	-3.3	-72	6
Calendar Year-to-date 2009**	65	61	177	18	116

^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 gas-powered generators (GPGs): Smithfield Energy, Uranquinty, Hunter Valley GT, and Tallawarra power stations

2. Data for VIC calculated using data from the following GPGs: Laverton North, Valley Power, Jeeralang A, Jeeralang B, Somerton, Bairnsdale, and Newport power stations.
3. Data for SA calculated using data from the following GPGs: Dry Creek GT, Pelican Point, Torrens Island, Osborne, Ladbroke Grove, and Quarantine power stations.
4. Data for TAS calculated using data from the following GPGs: Bell Bay, and Bell Bay Power (Tamar Valley) power stations.
5. Data for QLD calculated using data from the following GPGs: Braemar 1, Braemar 2, Roma, Oakey, Barcaldine, and Swanbank power stations.

Figure 3 sets out the daily average flows from production and storage facilities from each production zone across the National Gas Market. It compares these average flows for each zone with flow outcomes from the previous week and the year to date average (a list of production/storage facilities for each zone is provided in Figure A2 of the Appendix).

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

Average daily flows	Roma/Ballera (QLD)	Eastern (VIC)	Otway Basin (VIC)	Moomba (SA)
Current week (2 - 8 August)	395	856	332	388
Previous week (26 July – 1 August)	413	920	341	385
% change from previous week*	-4.5	-7	-2.5	0.7
Calendar Year-to-date 2009**	423	686	332	289

*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

Along with gas-powered electricity generation, temperature patterns are another important driver of gas demand, particularly in Victoria where there is large residential gas heating demand, and to a lesser extent in Tasmania (TAS), South Australia (SA), New South Wales (NSW) and the ACT. Slightly warmer temperatures for the week ending 8 August, combined with the drop in gas-powered generation, may have led to lower pipeline flows into those regions compared to the previous week. (See also Figure A3 in the Appendix)

Production from each region was generally lower compared to the previous week, with only a slight increase of 3 TJ at the Moomba Production Facility. This was consistent with the drop in the demand over all regions except Brisbane, which was the only region to experience an increase in gas-powered generation over the week. The slight increase in production at Moomba (SA) corresponded with increased flows along the Moomba to Sydney Pipeline. Increased flows down the MSP offset decreases in amount of gas transmitted through the Eastern Gas Pipeline. Decreased production at Roma/Ballera (QLD) corresponded with lower flows along the South West Queensland Pipeline.

Queensland

There are four bulletin board registered pipelines in Queensland (Figure 4). Average flows on each of the Queensland pipelines were slightly lower than the previous week flows, yet still higher than year-to-date levels, with the exception of the Roma to Brisbane Pipeline.

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 (2 - 8 August)	86	69	148	150
Previous week (26 July – 1 August)	93	72	162	149
% change from previous week*	-7.4	-4.9	-9.2	0.6
Calendar Year-to-date 2009**	85	68	130	163

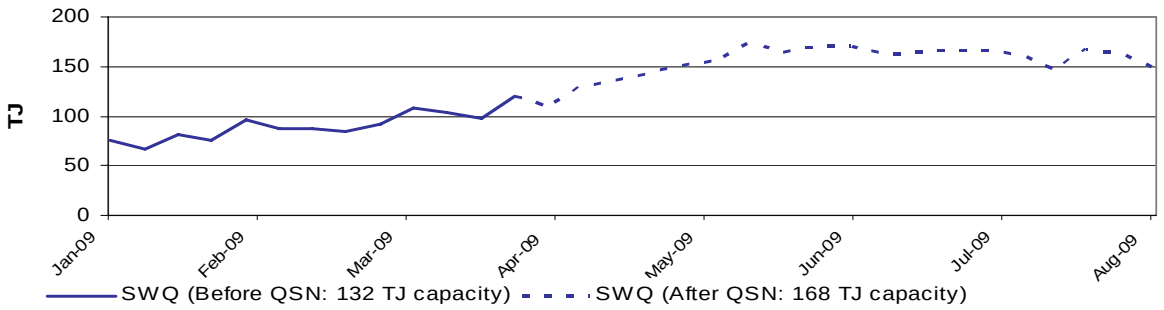
^Includes the Ballera to Moomba section of the pipeline (QSN Link)
*The percentage change in the average daily flow from the previous week to the current week
**Average daily injection flows from 1 January 2009 to the current week (inclusive)
Source: National Gas Market Bulletin Board http://www.gasbb.com.au

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. This reflects the larger amount of gas able to flow down to the southern states, via the QSN link. Average daily flows on the SWQP for this week however decreased slightly from the previous week.

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



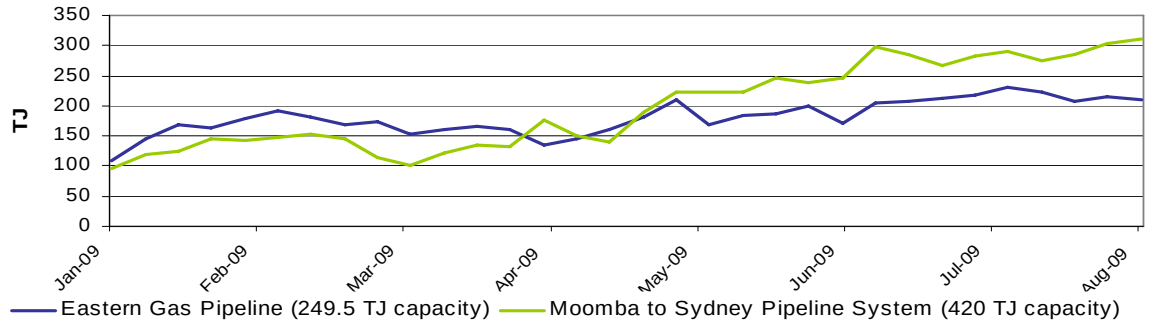
Source: National Gas Market Bulletin Board http://www.gasbb.com.au
Notes: Reporting of flow data for the QSN link only began on the 31 March 2009, despite being commissioned in January 2009.

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, the Moomba to Sydney Pipeline (MSP) has experienced an increase in flows since the end of April in comparison to the Eastern Gas Pipeline (EGP) where flows have remained relatively steady. EGP Flows trended slightly downwards this week whereas flows on the MSP and through the NSW-Victoria Interconnect pipeline (NSW-Vic) increased slightly, as more gas flowed into Victoria. Similar to the previous week, the majority of flows on NSW-Vic were in the 'reverse' direction into Victoria. Gas flowed south through NSW-Vic for each day at an average of 48 TJ/day. However, on a calendar year-to-date basis flows have been north, at 5 TJ/day.

The current week saw flows through the NSW-VIC Interconnect in to Victoria of 53 TJ on 1 August, the highest reported directional flow rate for the year.

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 (2 - 8 August)	209	311	-48
Previous week (26 July – 1 August)	215	303	-25
% change from previous week*	-2.7	2.4	90
Calendar Year-to-date 2009**	181	199	5

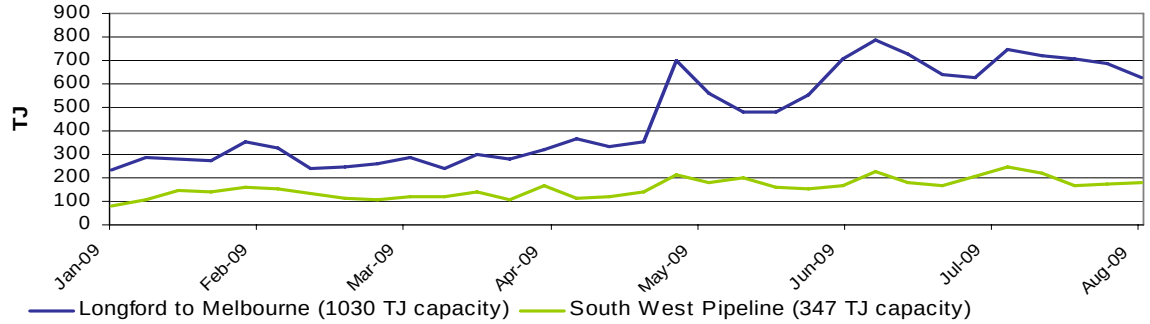
^Flows on the NSW-VIC Interconnect can flow in reverse direction from NSW into Victoria (represented by negative values)
*The percentage change in the average daily flow from the previous week to the current week
**Average daily injection flows from 1 January 2009 to the current week (inclusive)
Source: 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 South West Pipeline has followed relatively similar flow trends since January 2009, while the Longford to Melbourne Pipeline (LMP) has experienced an increase in flows since the end of April. A decrease in Victorian and Tasmanian gas market demand led to marginally lower flows along the LMP and the Tasmanian Gas Pipeline (TGP) for this week. This may have been driven by marginally lower gas-powered electricity generation which fell by more than 23 percent in Victoria from the previous week, along with slightly warmer temperatures leading to less gas for heating. Lower TGP flows were consistent with a 72 percent 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 (2 - 8 August)	623	182	14
Previous week (26 July – 1 August)	684	171	22
% change from previous week*	-8.9	6.4	-35
Calendar Year-to-date 2009**	464	158	29

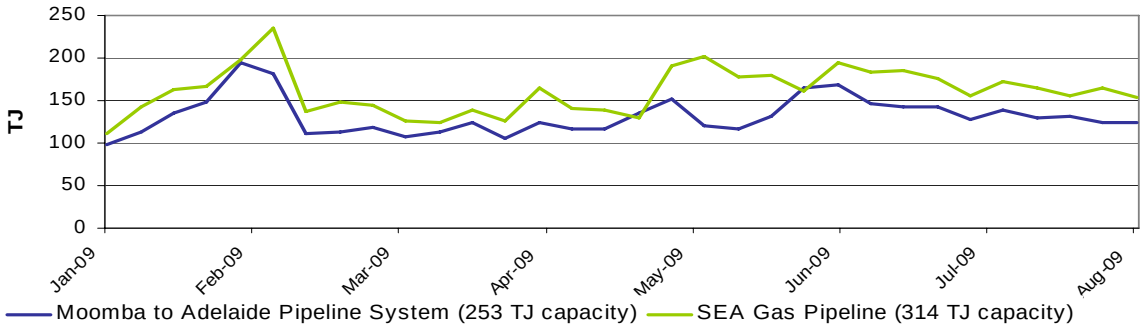
^Gas on the Tasmanian Gas Pipeline flows from Eastern Victoria into Tasmania, ending in Hobart.
*The percentage change in the average daily flow from the previous week to the current week
**Average daily injection flows from 1 January 2009 to the current week (inclusive)
Source: National Gas Market Bulletin 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 the table in Figure 8, the SEAGas pipeline experienced marginally lower flows compared to the previous week, while flows along the Moomba Adelaide Pipeline remained relatively stable. Explaining decreased flows on the SEAGas pipeline, there was a 3 percent fall in gas-powered electricity generation in SA, along with the slightly warmer average maximum temperatures throughout the week.

Both pipelines continue to not operate near pipeline nominated Maximum Daily Quantity (MDQ), which is a measure of total pipeline capacity. (Refer also to the Appendix for average usage of pipeline facilities)

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



Average Daily Flows	Moomba to Adelaide Pipeline	SEAGas Pipeline
Current week (2 - 8 August)	125	154
Previous week (26 July – 1 August)	125	165
% change from previous week*	-0.2	-6.4
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	Market Customer	1							NS					NS
AGL (Qld)	Retailer	1				NS								
AGL	Retailer	4		NS	NS	NS	S				NS	NS		
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	S		
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			NS							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.

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 due to pressure restrictions.

Market Prices and Ancillary Payments

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

Figure V2: Imbalance Weighted Prices ($/GJ)

	Current Week (2 - 8 August)	Previous Week (26 July - 1 August)	2009 Calendar Year*	2008 Calendar Year**
Average daily price	1.49	1.42	2.63	*3.37*

Current Week (2 - 8 August)	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Daily price	1.07	1.55	1.64	1.57	0.59	1.56	2.45

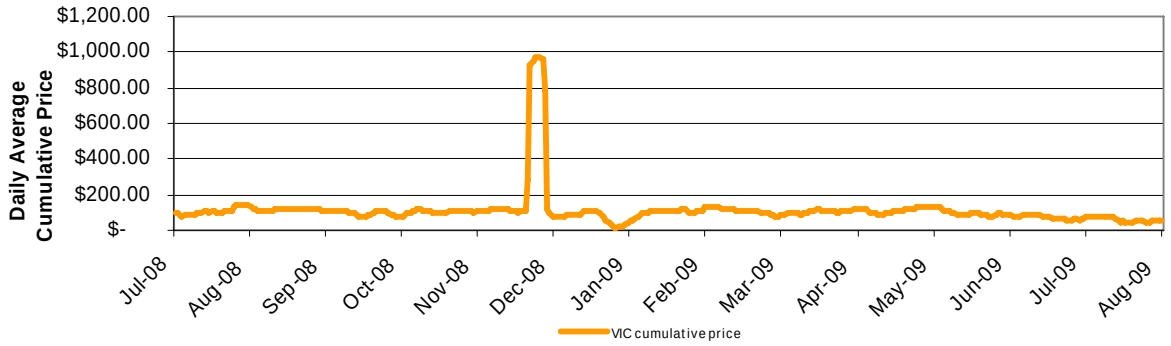
*Average daily imbalance weighted average price from 1 Jan 2009 to the current week (inclusive)
**Average daily imbalance weighted average price from 1 Jan 2008 over equivalent period.
Source: http://www.aemo.com.au (INT 041)

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 $1.49/GJ was higher compared to $1.42/GJ for the previous week. Recent average prices have been consistently lower than year-to-date levels in both 2008 and 2009. The range of spot market prices this week increased slightly compared to the previous week, with prices ranging from $0.50/GJ on two occasssions to $3.12/GJ at 10 am on Tuesday (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

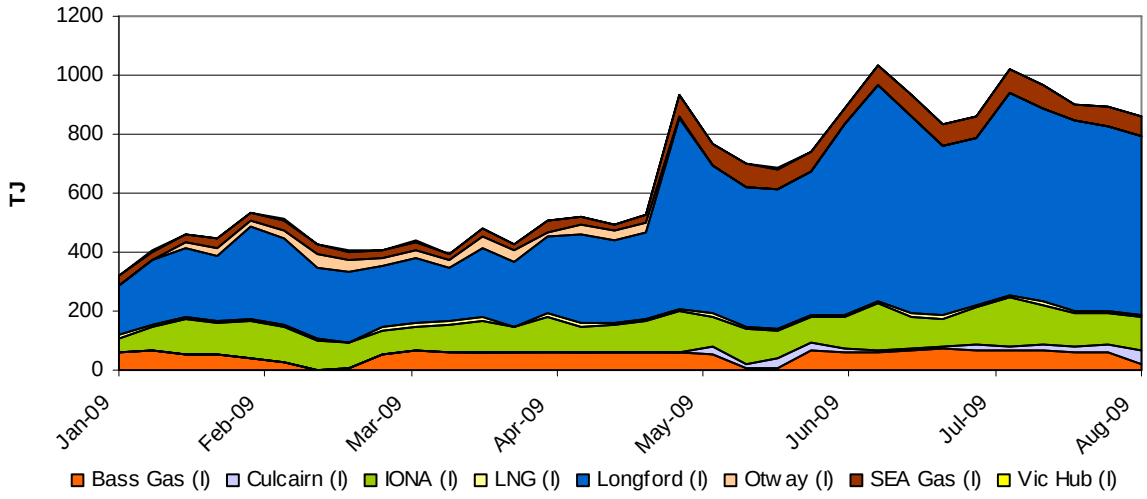
Significant ancillary payments can occur in the market on occasion, particularly if the capacity to deliver gas is limited because of high demand or plant outages, and higher-priced gas is required to be scheduled out of price merit order. Ancillary payments can be made to participants who are called upon to provide gas to alleviate system constraints. As with last week, there were no significant ancillary payments made during the week ending 8 August.

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 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 (2 - 8 August)	Previous Week (26 July - 1 August)	2009 Calendar Year to date*
Culcairn^	46.8	24.7	9.0
Longford	606	625	415
LNG	8	10	8
IONA^	112	105	108
VicHub^	0.31	0.13	1.18
SEAGas^	69	64	48
Bass Gas	20	62	51
Otway	0	0	14
TOTAL	**861**	**891**	**654**



^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.

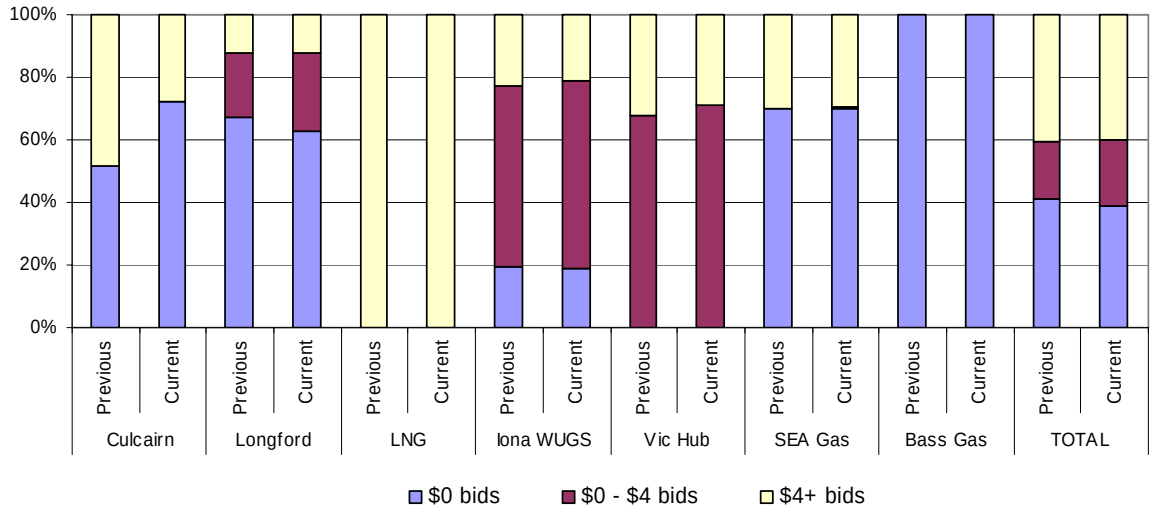
Overall, average daily injections into the VPTS fell by about 3 percent for the week ending 8 August. As a result of both onshore and offshore issues, flows from Bass Gas dropped significantly. However, flows from Culcairn increased by almost 90 percent. Longford injections were also 19 TJ lower than for the previous week. 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 8 August, where 39 percent of gas was offered at $0/GJ compared to 41 percent the previous week. There were similar trends at Longford, Iona, and Bass Gas. In contrast, a higher proportion of gas at Culcairn was bid in at $0/GJ which was reflected in higher actual injections at Culcairn (see figure V4 above).

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	Origin			
Longford	AGL TRU	Origin	AGL		Origin TRU	TRU	TRU
LNG						APG	
Iona	TRU	TRU	TRU	TRU	TRU	TRU	TRU
VicHub							
SEAGas	Simply	Simply	Simply	Simply	IP	IP	Simply
Bass Gas		Origin		Origin	Origin		

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

Notes: Origin = Origin Energy | AGL = AGL Sales | TRU = TRUenergy | Simply = Simply Energy | IP = International Power | APG = Australian Power & Gas

Compared to the previous week, there were more participants submitting intra-day rebids at more injection points for the week ending 8 August. Only 4 participants submitted gas rebids

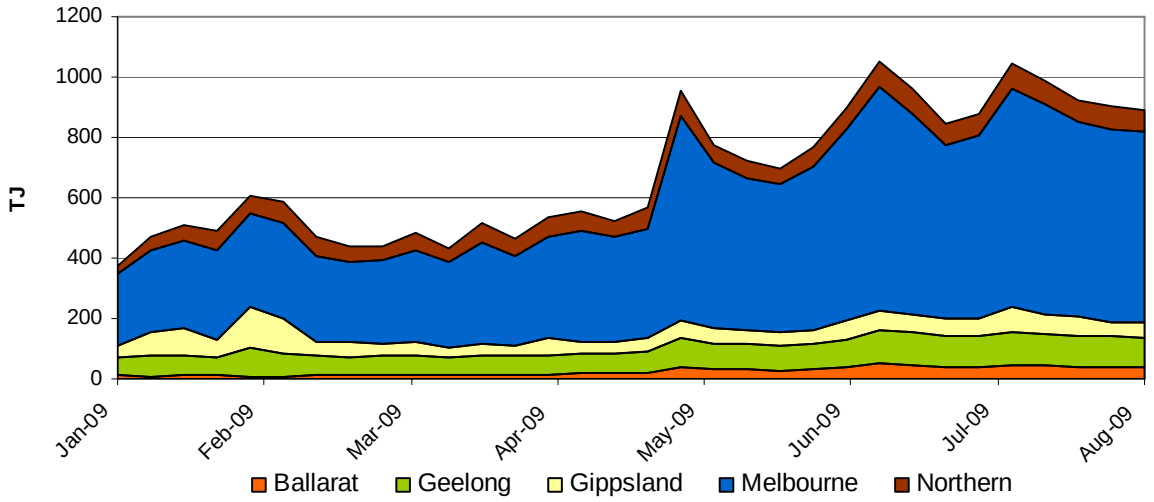
last week, whereas 6 retailers rebid gas in the market this week. While TRUenergy continued to submit the majority of their rebids at Iona, Origin Energy also submitted rebids at Longford, Culcairn and Bass Gas on various days during the week and Simply Energy continued to submit intra-day rebids at SEAGas during the week.

System withdrawals

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

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

System withdrawal zone:	Current Week (2 - 8 August)	Previous Week (26 July - 1 August)	2009 Calendar Year to date**
Ballarat	41	40	25
Geelong*	92	99	82
Gippsland	53	49	58
Melbourne	633	639	456
Northern	70	74	65
TOTAL	**889**	**901**	**686**



*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. While average withdrawals fell in each zone, Gippsland withdrawals increased slightly (6 per cent) together with an increase in withdrawals at Ballarat (2 Per cent). 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's 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.

Compared to the previous week, the amount of demand override applied for the week ending 1 August was lower but still occurred over two days of the week. 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

No Directional Flow Point Constraints (DFPCs) were issued for the current week. A Supply Demand Point Constraint (SDPC) was imposed at the Culcairn injection point on 8 August, limiting the flow to a daily maximum injection capacity of 45 TJ. SDPCs were also applied at the Bass Gas injection point on a number of occasions throughout the week. On 2 and 3 August hourly constraints restricted the hourly injection capacity at Bass Gas to less than 28 TJ, with further restrictions from 2pm on both days. On 2, 4 and 6 August the daily maximum capacity limit on the injection point ranged between 25 TJ and 36 TJ per day.

Australian Energy Regulator
July 2009

APPENDIX

AUSTRALIAN ENERGY REGULATOR

2 – 8 August 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

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	89	87	N/A	N/A	85	85	86	117	74	80	73
QLD Gas Pipeline	72	69	70	63	68	69	70	79	87	92	86
Roma to Brisbane Pipeline	0 check	149	N/A	N/A	161	178	113	208	72	72	78
South West QLD Pipeline	171	148	141	129	129	148	168	168	88	97	77
QSN link**	44	44	44	44	54	52	47	-	-	-	-
NSW/ACT											
Eastern Gas Pipeline	196	214	220	216	211	211	196	250	84	86	73
Moomba to Sydney Pipeline	262	302	342	345	307	305	N/A	420	74	72	47
NSW-VIC Interconnect^	-42	-46	-45	-53	-51	-51	-46	90	-53	-28	5
VIC											
Longford to Melbourne	510	670	699	662	581	627	615	1030	61	66	45
South West Pipeline	152	199	251	163	143	201	166	347	52	49	45
SA											
Moomba to Adelaide Pipeline	117	140	144	121	117	126	109	253	49	49	52
SEA Gas Pipeline	111	188	189	178	156	142	115	314	49	53	52
TAS											
Tasmanian Gas Pipeline	13	18	20	15	12	11	10	129	11	17	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	60	59	59	60	67	62	55	140	43	51	66
Fairview	105	107	107	107	104	100	105	115	91	93	82
Kenya^	32	32	32	32	32	32	32	160	20	19	11
Kincora	0	0	5	5	0	0	0	25	6	0	6
Kogan North	0	0	N/A	N/A	8	6	6	12	33	30	72
Peat	11	11	11	11	11	11	11	15	73	68	71
Rolleston	11	11	11	11	11	11	11	30	37	41	35
Scotia	10	10	10	10	16	16	10	27	44	69	75
Spring Gully	51	49	49	51	50	51	51	60	84	87	99
Strathblane	51	49	49	51	50	51	51	60	84	87	88
Taloona	31	30	30	31	31	31	31	36	85	88	40
Wallumbilla	9	9	9	9	9	9	9	20	45	45	54
Yellowbank	14	15	16	16	15	16	16	30	51	50	50
Ballera	0	0	0	9	9	0	0	150	2	0	10
Eastern (VIC)											
Orbost Gas Plant	0	0	0	0	0	0	0	10	0	0	0
Lang Lang Gas Plant	36	15	29	35	26	0	0	70	29	76	72
Longford Gas Plant	698	895	922	867	783	851	832	1140	73	76	56
LNG Storage Dandenong	0	0	0	0	0	0	0	158	0	0	0
Otway Basin (VIC)											
Minerva Gas Plant	68	94	78	83	73	68	68	94	81	83	90
Otway Gas Plant	108	169	140	185	164	127	119	206	70	76	67
Iona Underground Gas Storage	79	118	182	105	72	137	87	320	35	33	35
Moomba (SA)											
Moomba Gas Plant	336	404	415	405	391	385	380	430	90	90	67

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 1 August. 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 (2 - 8 August)	Average min.	8.7	0.7	8.8	7.9	7.0
	Average max.	19.8	14.1	16.3	18.1	14.1
Previous Week (26 July – 1 Aug)	Average min.	8.8	0.6	9.1	10.1	7.9
	Average max.	18.6	12.9	16.1	15.5	14.6

Source: http://www.bom.gov.au/climate/dwo

Figure A4 shows the market prices at each of the scheduling intervals on each day during the week ending 1 August. 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 (2 - 8 August)	Scheduling Interval					Daily Imbalance Weighted Average Price
	6am	10am	2pm	6pm	10pm	
Sun	1.11	0.52	1.10	0.50	0.52	1.07
Mon	1.52	2.50	1.52	1.52	2.64	1.55
Tue	1.60	3.12	1.70	2.40	3.00	1.64
Wed	1.59	1.59	1.50	0.52	0.52	1.57
Thu	0.52	0.52	1.61	2.50	0.50	0.59
Fri	1.59	1.10	0.53	1.10	2.70	1.56
Sat	2.49	2.99	1.53	0.52	3.10	2.45

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

Figure A5: Daily demand forecasts (TJ) and daily demand overrides (TJ)

Gas Day	Forecasts (TJ)	Schedule 1	2	3	4	5	Average	Demand Override Applied (TJ)
2-Aug	MP Demand:	**789**	**780**	**772**	**772**	**773**	777	
	AEMO Demand:	721	745	734	751	720	734	
	MP demand forecast as % of AEMO	109%	105%	105%	103%	107%		0
3-Augl	MP:	**948**	**954**	**951**	**954**	**958**	953	
	AEMO:	934	937	914	912	926	925	
	MP demand forecast as % of AEMO	101%	102%	104%	105%	103%		0
4-Aug	MP:	**1001**	**999**	**1003**	**1015**	**1015**	1006	
	AEMO:	982	981	981	993	978	983	
	MP demand forecast as % of AEMO	102%	102%	102%	102%	104%		0
5-Aug	MP:	**927**	**932**	**928**	**929**	**928**	929	
	AEMO:	928	919	907	885	885	905	
	MP demand forecast as % of AEMO	100%	101%	102%	105%	105%		-4
6-Aug	MP:	**803**	**758**	**789**	**798**	**794**	788	
	AEMO:	777	709	770	786	786	766	
	MP demand forecast as % of AEMO	103%	107%	103%	101%	101%		-4
7-Aug	MP:	**964**	**978**	**984**	**983**	**984**	978	
	AEMO:	987	929	946	905	900	933	
	MP demand forecast as % of AEMO	98%	105%	104%	109%	109%		0
8-Aug	MP:	**857**	**853**	**851**	**851**	**852**	853	
	AEMO:	843	824	809	809	812	820	
	MP demand forecast as % of AEMO	102%	103%	105%	105%	105%		0

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

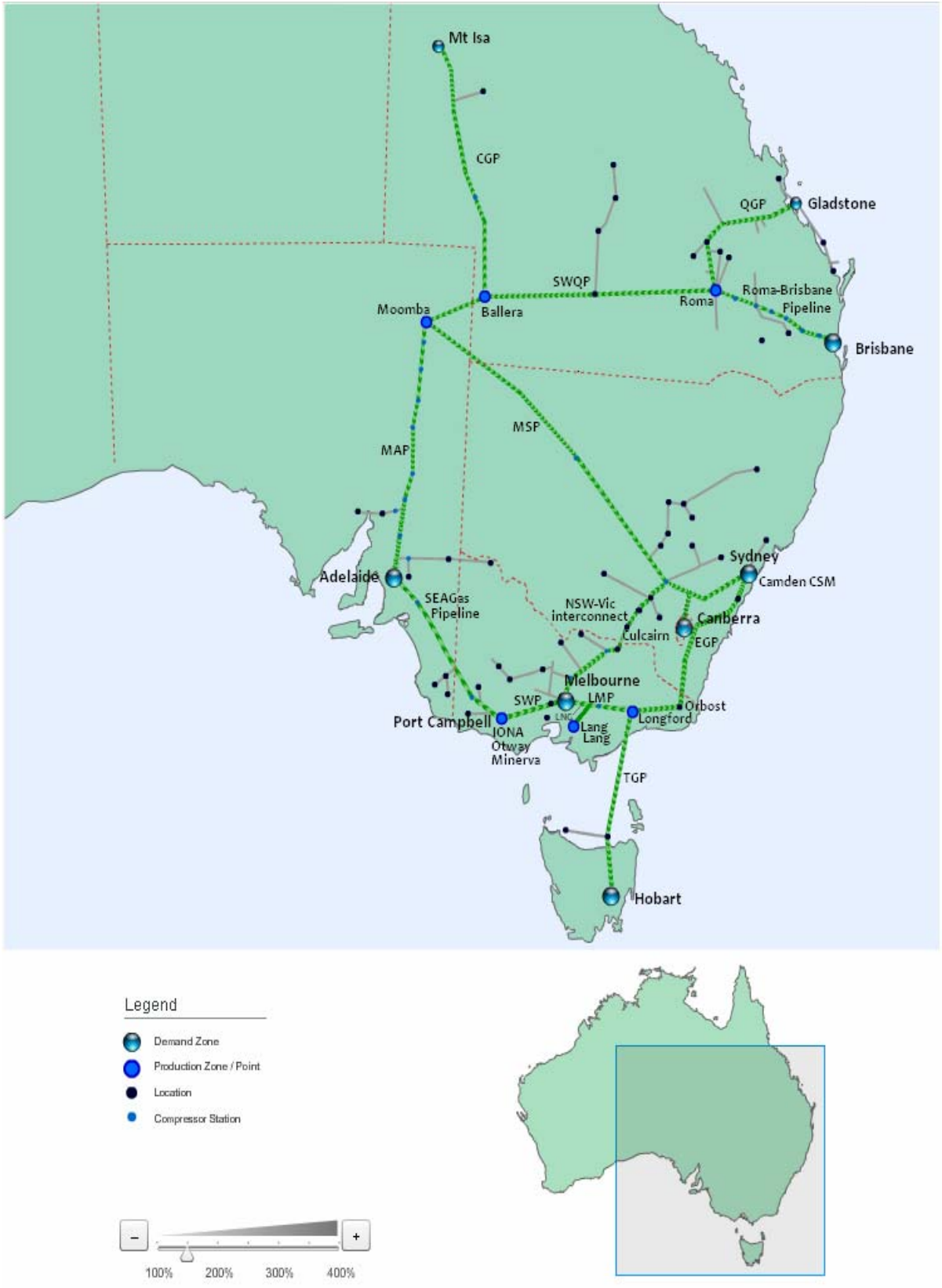
Source: Natural Gas Market Bulletin Board http://www.gasbb.com.au

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