WEEKLY GAS MARKET ANALYSIS



2 May - 8 May 2010

Preface

As part of its monitoring roles for the National Gas Market Bulletin Board (Bulletin Board) and Victorian Gas Market, the AER publishes a weekly gas market report. Part A of the report looks at gas usage and flows of registered facilities in southern and eastern Australia (as reported on the Bulletin Board). Part B provides a summary of operational and market data in the Victorian Gas Market.

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

There were no instances of missing flow data on the Bulletin Board this week.

Figure 4 shows changes in gas demand and production and pipeline flows compared to the previous week. Total average daily demand for gas increased by 56 TJ (3 per cent) compared to the previous week. A significant increase was recorded in NSW/ACT of 63 TJ (17 per cent). Other regions recorded minor variations.

Total average daily Gas Powered Generation (GPG) gas usage increased by 15 TJ (4 per cent) compared to the previous week. Increases were recorded in South Australia of 17 TJ and New South Wales of 21 TJ. Victoria recorded a fall of 17 TJ, while the remaining regions recorded minor falls.

Average daily production volumes increased by 26 TJ (1 per cent) compared to the previous week. The Moomba and Eastern production facilities recorded increases of 135 TJ (91 per cent) and (37 TJ or 5 per cent) respectively. Significant falls were recorded at the Otway Basin (93 TJ or 31 per cent) and Ballera (40 TJ of 91 per cent) production facilities. Total average daily flows were higher than the previous week by 93 TJ or 7 per cent. Significant increases occurred on the Moomba to Sydney (94 TJ or 71 per cent) and Longford to Melbourne gas pipelines (78 TJ or 18 per cent). A significant fall occurred on the South West pipeline (84 TJ or 47 per cent).

Victorian Gas Market

The average imbalance price fell from \$2.47/GJ the previous week to \$1.947/GJ (see Figure V2). Prices were above \$3/GJ on Wednesday and then fell to \$0.39/GJ on Thursday.

Around 80 per cent of capacity at SEA Gas was bid into the \$4 plus price range, compared to 25 per cent the previous week. Bids at the Vic Hub were price lower this week with around 70 per cent of bids priced at zero, the previous week around 85 per cent of bids were priced above zero and less than \$4/GJ (see figure V4).

On Wednesday, when prices were the highest, five different participants rebid gas capacity at the IONA injection point.

AEMO issued multiple demand overrides on three days this week — on Monday (10 TJ), Wednesday (-6 TJ) and Friday (3 TJ) (see figure A5).

A Demand Point Constraints (SDPCs) was applied to BassGas injections for the Thursday gas day and to Iona injections and withdrawals for the Saturday gas day. A Directional Flow Point Constraint (DFPC) was applied to Sea Gas injections and withdrawals for the Tuesday gas day.

Part A: National Gas Market Bulletin Board

Overview of pipeline and production flows

Figure 1 sets out the average daily pipeline flows into each key demand region across the National Gas Market. (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
2 May – 8 May	417	23	599	257	41	150	100	69
Financial Year-to-date 2009-10*	362	18	539	279	39	170	85	71
Financial Year-to-date 2008-09**	322	19	599	298	32	170	82	68

^{*}Average daily estimated gas consumption measured from 1 July 2009 to the current week (inclusive)

Figure 2 provides the average daily amount of gas used for GPG (gas-powered generators) in each state.

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

Average daily gas for GPG usage^	NSW	VIC	SA	TAS	QLD
2 May – 8 May	103	5	153	26	143
Financial Year-to-date 2009-10*	83	39	164	24	164
Financial Year-to-date 2008-09**	41	66	184	22	115

[^]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'

Notes: Data for each state collected on the following basis:

- 1. NSW Smithfield Energy, Uranquinty, Hunter Valley GT, Colongra and Tallawarra power stations
- 2. VIC Laverton North, Valley Power, Jeeralang A, Jeeralang B, Somerton, Bairnsdale, and Newport power stations.
- 3. SA Dry Creek GT, Hallet, Pelican Point, Torrens Island, Mintaro, Osborne, Ladbroke Grove, and Quarantine power stations.
- 4. TAS Tamar Valley power stations.
- 5. QLD 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. (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 (QLD)	Eastern Victoria	Otway Basin (VIC)	Moomba (SA/QLD)
2 May – 8 May	486	759	206	287
Financial Year-to-date 2009-10*	457	653	274	273
Financial Year-to-date 2008-09**	336	697	312	303

^{*}Average daily estimated gas consumption measured from 1 July 2009 to the current week (inclusive)

^{**}Average daily estimated gas consumption measured from 1 July 2008 to the equivalent week in 2008 (inclusive) Source: National Gas Market Bulletin Board http://www.gasbb.com.au

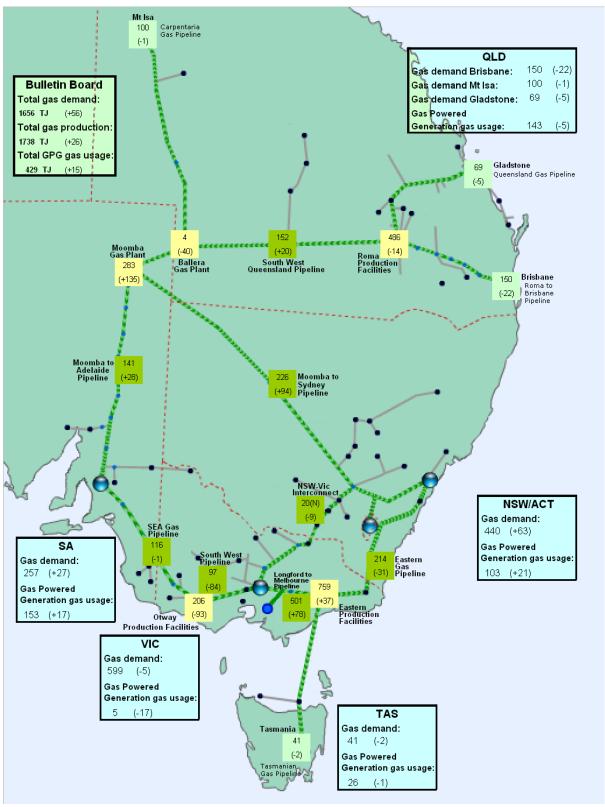
^{*}Average daily estimated gas consumption measured from 1 July 2009 to the current week (inclusive)

^{**}Average daily estimated gas consumption measured from 1 July 2008 to the equivalent week in 2008 (inclusive) Source: http://www.aemo.com.au

^{**}Average daily estimated gas consumption measured from 1 July 2008 to the equivalent week in 2008 (inclusive) Source: National Gas Market Bulletin Board http://www.gasbb.com.au

Figure 4 shows the changes in average daily pipeline and production flows compared to the previous week, as well as the gas demand and GPG usage of gas in each region.

Figure 4: Changes in gas demand and production and pipeline flows (TJ)

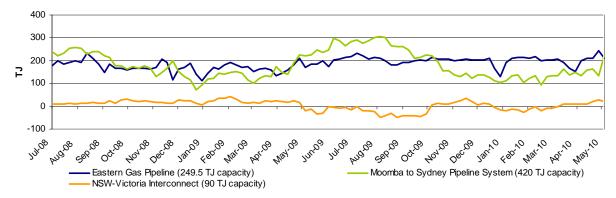


Source: Natural Gas Market Bulletin Board http://www.gasbb.com.au
Notes: Direction of aggregate daily flows along the NSW-Vic Interconnect indicated on map by S (South) or N (North).

Gas flows into demand regions

The figures below provide the average daily flows into each of the demand regions served by multiple pipelines and supply sources.

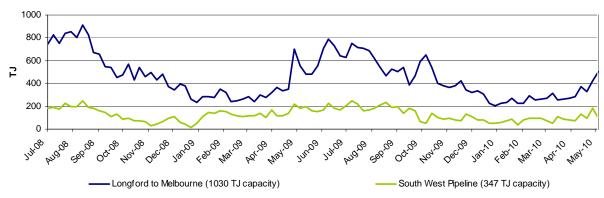
Figure 5: Average daily flows (TJ) into NSW/ACT demand region



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

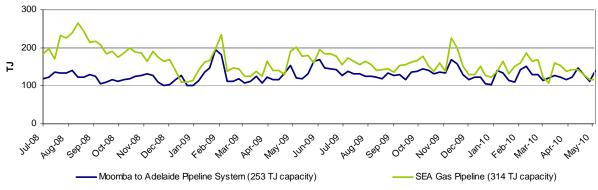
Notes: Negative flows on the NSW-Victoria Interconnect represent flows out of NSW into VIC.

Figure 6: Average daily flows (TJ) into VIC demand region



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

Figure 7: Average daily flows (TJ) into SA demand region



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

Part B: Victorian Gas Market

Participation in the market

Figure V1 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 orange 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. Green shading below indicates where a change has occurred from the previous week.

Figure V1: Injection and withdrawal point bids in the VIC Gas Market^

Market Participant	Participant type	No. of injection / withdrawal			Injecti	on bids	s in the	VPTS			b		drawal the VPT	·s
		bid points	BassGas	Culcairn	IONA	LNG	Longford	SEA Gas	VicHub	Otway	Culcairn	IONA	SEA Gas	VicHub
AETV Power	Trader	1							S					
AGL (Qld)	Retailer	1				NS								
AGL	Retailer	4		NS	S	NS	S				NS	S		
Aust. Power & Gas	Retailer	3			NS	NS	S					S		
Coogee Energy	Transmission Customer	1					S							
Country Energy	Transmission Customer	1									S			
Energy Australia	Retailer	3			S		S							
International Power	Transmission Customer	1											NS	
Origin (Vic)	Retailer	6	S	S	S	NS	S	S			S	S		
Origin (Uranquinty)	Trader	1					S							
Red Energy	Retailer	1					S							
Simply Energy	Retailer	4			S	NS	S	S						
TRU Energy	Retailer	5			S	NS	S				NS	S		
Victoria Electricity	Trader	1			S							S		
Victoria Electricity	Retailer	4			S	NS			S				_	
Visy Paper	Distribution 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.

Market Prices

Figure V2 displays volume-weighted average daily imbalance prices, compared to the 2009-10 financial year-to-date average and the 2008-09 financial year-to-date equivalent. Daily imbalance prices for each day during the current week are also noted.

Figure V2: Imbalance Weighted Prices (\$/GJ)

	2 May - 8 May	y 25 Apr – 1 May		2009 Financia	-	2008 Financia	
Average daily price	1.94	2.4	2.47		67	3.09	
2 May – 8 May	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Daily price	2.77	2.12	2.12 0.26		3.40 0.39		2.04

^{*}Average daily estimated gas consumption measured from 1 July 2009 to the current week (inclusive)

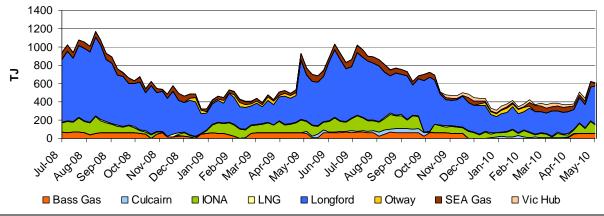
Notes: The daily average market price is a volume weighted imbalance price taking account of trading amounts at five times through the gas day — 6am, 10am, 2pm, 6pm and 10pm.

System Injections

Figure V3 notes the average daily injections into the VPTS for the current week, compared with the 2009-10 and 2008-09 equivalent financial year-to-date daily averages.

Figure V3: Average daily flows (TJ) from Injection Points on the VPTS

Injection Point:	2 May - 8 May	25 Apr – 1 May	2009-10 Financial YTD*	2008-09 Financial YTD**
Culcairn	1	0	15	0.7
Longford	430	368	357	436
LNG	9	10	9	9
IONA	83	128	76	80
VicHub	20.2	2.5	17.8	1.6
SEAGas	14	60	41	45
Bass Gas	52	53	32	48
Otway	0	0	8	13
TOTAL	609	622	555	633



^{*}Average daily estimated gas consumption measured from 1 July 2009 to the current week (inclusive)

Bidding Activity

Figure V4 compares 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, for the current week and for the previous week.

^{**}Average daily estimated gas consumption measured from 1 July 2008 to the equivalent week in 2008 (inclusive) Source: http://www.aemo.com.au (INT 041)

^{**}Average daily estimated gas consumption measured from 1 July 2008 to the equivalent week in 2008 (inclusive) Source: http://www.aemo.com.au (INT 150)

Figure V4: 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.

Figure V5 provides a table of injection points on the VPTS where market participants submitted intra-day renominations, for each day of the week.

Figure V5: Intra-day rebidding of gas injections

Injection Point: Culcairn	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Longford	AGL	AGL	Origin AGL	AGL TRU	TRU	AGL TRU	AGL TRU
LNG							
lona	TRU	TRU Origin Vic Elec	TRU Vic Elec	AGL TRU Origin Vic Elec APG	TRU Origin Vic Elec	TRU Vic Elec	TRU
VicHub	AETV	AETV	AETV	AETV	AETV	AETV	AETV
SEAGas	Simply	Origin Simply	Origin Simply	Origin Simply	Simply	Simply	
Bass Gas	Origin	Origin	Origin		Origin	Origin	

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

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

AETV = AETV Power | APG = Australian Power & Gas I Vic Elec = Victoria Electricity

System withdrawals

Figure V6 notes the average daily gas usage on the VPTS for this week, compared with the 2009-10 financial year-to-date daily average, as well as the 2008-09 equivalent.

Figure V6: Average daily withdrawals (TJ) from system demand zones on the VPTS

System withdrawal zone:	2 May – 8 May	25 Apr – 1 May	2009-10 Financial YTD*	2008-09 Financial YTD**
Ballarat	25	24	21	23
Geelong [^]	79	86	78	84
Gippsland	42	40	44	59
Melbourne	393	398	361	403
Northern	73	77	53	66
TOTAL	612	625	556	634

[^]Data presented also includes withdrawals for the Western system withdrawal zone or Western Transmission System (WTS).

^{*}Average daily estimated gas consumption measured from 1 July 2009 to the current week (inclusive)

^{**}Average daily estimated gas consumption measured from 1 July 2008 to the equivalent week in 2008 (inclusive) Source: http://www.aemo.com.au (INT 150).

APPENDIX

Figures A1 and A2 display the daily gas flows from each pipeline and production/storage facility 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 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)	YTD average capacity usage (%)	Current week average daily flows	Current YTD average daily flows*	Previous YTD average daily flows**
QLD												
Carpentaria Pipeline	103	106	97	98	95	99	101	117	73	100	85	82
QLD Gas Pipeline	72	72	71	67	69	67	68	79	90	69	71	68
Roma to Brisbane Pipeline	149	148	180	172	173	134	93	214	79	150	170	170
South West QLD Pipeline	166	154	148	150	139	156	152	181	75	152	136	80
NSW/ACT												
Eastern Gas Pipeline	198	227	226	217	200	218	198	250	80	214	201	172
Moomba to Sydney Pipeline	130	231	219	275	294	255	177	420	43	226	180	169
NSW-VIC Interconnect^	9	37	19	37	28	22	-9	90	-8	20	-7	19
VIC												
Longford to Melbourne	448	504	479	570	570	527	410	1030	39	501	406	472
South West Pipeline	93	76	44	201	91	125	46	347	34	97	118	126
SA												
Moomba to Adelaide Pipeline	129	112	151	152	149	153	139	253	51	141	129	124
SEA Gas Pipeline	60	123	104	156	163	126	81	314	48	116	150	174
TAS												
Tasmanian Gas Pipeline	39	42	43	41	40	40	41	129	30	41	39	32

^{*}Average daily estimated gas consumption measured from 1 July 2009 to the current week (inclusive)

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

Notes: Operational ranges for each pipeline facility range from a minimum of 20% to a maximum of 120% of the respective MDQs. The exceptions are the South West Queensland Pipeline and the NSW-VIC Interconnect which have minimum operational ranges of 40% and 0% of MDQ respectively.

^{**}Average daily estimated gas consumption measured from 1 July 2008 to the equivalent week in 2008 (inclusive)

[^]Negative figure represents a reverse flow of gas along the pipeline

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)	YTD average capacity usage* (%)	Current week average daily flows	Current YTD average daily flows*	Previous YTD average daily flows**
Roma (QLD)												
Berwyndale South	75	79	98	99	89	96	63	140	65	86	92	71
Fairview	107	131	127	132	127	128	104	115	97	122	111	71
Kenya Gas Plant	65	62	62	55	52	52	50	160	35	57	56	
Kincora	0	7	10	10	10	0	0	25	7	5	2	5
Kogan North	11	11	11	10	9	6	6	12	73	9	9	11
Peat	12	11	11	12	11	10	12	15	57	11	9	11
Rolleston	12	12	12	12	11	11	12	30	38	12	11	11
Scotia	29	29	29	29	29	1	0	27	88	21	24	22
Spring Gully	47	47	39	35	38	40	40	60	72	41	43	59
Strathblane	47	47	39	35	38	40	40	60	72	41	43	49
Taloona	29	28	24	21	23	24	24	36	72	25	26	0
Wallumbilla	11	11	11	11	11	10	7	20	53	10	11	13
Yellowbank	13	7	7	7	7	6	7	30	42	8	12	14
Talinga	34	35	36	45	45	46	30	50	18	39	9	
Moomba (SA/QLD) Moomba Gas Plant Ballera	230	190 0	303	306 0	338	318 16	299	430 150	61 8	283 4	261 12	268 35
Eastern (VIC)												
Orbost Gas Plant	0	0	0	0	0	0	0	92	22	0	20	0
Lang Lang Gas Plant	55	53	56	54	38	53	54	70	45	52	32	48
Longford Gas Plant	588	699	735	795	763	744	625	1145	53	707	602	648
LNG Storage Dandenong	0	0	0	0	0	0	0	158	0	0	0	1
Otway Basin (VIC)												
Minerva Gas Plant Otway Gas	0	69	39	84	55	55	51	94	73	51	69	88
Plant	0	0	0	0	0	0	0	206	61	0	125	138
Iona Underground Gas Storage	123	148	108	238	183	208	77	440	18	155	80	86

^{*}Average daily estimated gas consumption measured from 1 July 2009 to the current week (inclusive)

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.

^{**}Average daily estimated gas consumption measured from 1 July 2008 to the equivalent week in 2008 (inclusive) ^Commissioned as a Bulletin Board facility from 6 July 2009 (Facility began reporting flows from 7 July 2009)

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 tempera	tures (°C)	QLD (Brisbane)	NSW (Sydney)	ACT (Canberra)	VIC (Melbourne)	SA (Adelaide)	TAS (Hobart)
2 May – 8 May	Average min.	15.4	13.3	4.1	11.2	13.2	9.4
	Average max.	25.7	23.6	18.5	19.9	20.4	18.0
25 Apr – 1 May	Average min.	16.3	13.7	5.2	10.8	11.9	8.4
	Average max.	27.7	22.2	17.9	18.9	20.9	17.4

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

2 May - 8 May		So	cheduling Inter	val		Daily Imbalance Weighted Average
	6am	10am	2pm	6pm	10pm	Price
Sun	2.78	2.09	2.78	3.09	3.46	2.77
Mon	2.10	3.43	2.54	0.08	0.10	2.12
Tue	0.10	1.00	0.10	2.09	3.43	0.26
Wed	3.44	3.45	2.78	1.84	3.45	3.40
Thu	0.30	0.30	2.77	0.30	2.77	0.39
Fri	2.56	3.23	2.99	3.23	2.56	2.60
Sat	2.02	3.00	2.09	2.02	3.08	2.04

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

Figure A5 compares the market participants and market operator demand forecasts and each of the scheduling intervals on each gas day during the current week. Total actual demand for each gas day is also provided, along with the total demand override (if any) from AEMO.

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

Gas Day	Demand	Schedule					Total
	Forecasts (TJ)	1	2	3	4	5	Demand Override (TJ)
2-May	MP:	489	494	494	496	496	` ′
	AEMO:	483	443	531	533	538	
	MP as % of AEMO	101	112	93	93	92	0
3-May	MP:	533	545	539	526	526	
	AEMO:	613	630	612	560	541	
	MP as % of AEMO	87	87	88	94	97	10
4-May	MP:	471	468	468	477	479	
	AEMO:	490	490	471	510	522	
	MP as % of AEMO	96	96	99	94	92	0
5-May	MP:	732	719	714	709	715	
	AEMO:	659	653	653	651	714	
	MP as % of AEMO	111	110	109	109	100	-6
6-May	MP:	646	650	661	660	660	
	AEMO:	680	663	646	636	651	
	MP as % of AEMO	95	98	102	104	101	0
7-May	MP:	579	600	601	605	600	
	AEMO:	650	654	660	670	621	1
	MP as % of AEMO	89	92	91	90	97	3
8-May	MP:	474	475	474	473	473	
	AEMO:	524	488	475	466	485	
	MP as % of AEMO	90	97	100	102	98	0

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