

WEEKLY MARKET ANALYSIS



AUSTRALIAN ENERGY
REGULATOR

16 March – 22 March 2008

Summary

The average prices in South Australia and Victoria for the week were \$160/MWh and \$144/MWh respectively. For the third consecutive week the cumulative price reached close to the \$150 000 threshold that triggers administered pricing. On Monday at 5.30 pm the Cumulative Price Threshold was breached in South Australia. This is the first time since market start that the threshold has been breached and resulted in administered pricing in South Australia for the remainder of Monday. Administered pricing continued to apply for Tuesday.

On Sunday and Monday the temperature in Adelaide peaked above 35 degrees – a total of 15 consecutive days above 35 degrees, which is the longest-ever recorded heat wave. New record demands occurred on Monday in both South Australia and Victoria of 3077 MW and 9776 MW respectively¹. The spot price exceeded \$5000/MWh for two trading intervals in South Australia, Victoria and the Snowy. The AER will be issuing a report into the circumstances that led to the spot price exceeding \$5000/MWh in accordance with clause 3.13.7 of the Rules.

Prices in the other regions were normal for this time of the year.

In the financial markets, Base Calendar prices remained steady across all regions.

Low reserves were forecast for South Australia on Sunday, Monday and Wednesday and for Victoria on Monday.

Spot market prices

Figure 1 sets out the volume weighted average price for this week and this financial year to date across the NEM regions and compares them with price outcomes from the previous week and year to date respectively.

Figure 1: volume weighted average spot price by region (\$/MWh)

	Qld	NSW	Vic	SA	Tas
Ave price for 16 March - 22 March	38	49	144	160	59
Financial year to 22 March	66	46	52	122	55
% change from previous week*	-9%	5%	146%	-69%	-15%
% change from year to date**	79%	12%	9%	138%	30%

*The percentage change between last week's average spot price and the average price for the previous week.

**The percentage change between the average spot price for the current financial year to date and the average spot price over the similar period for the previous financial year

The AER provides further information if the spot price exceeds three times the weekly average.

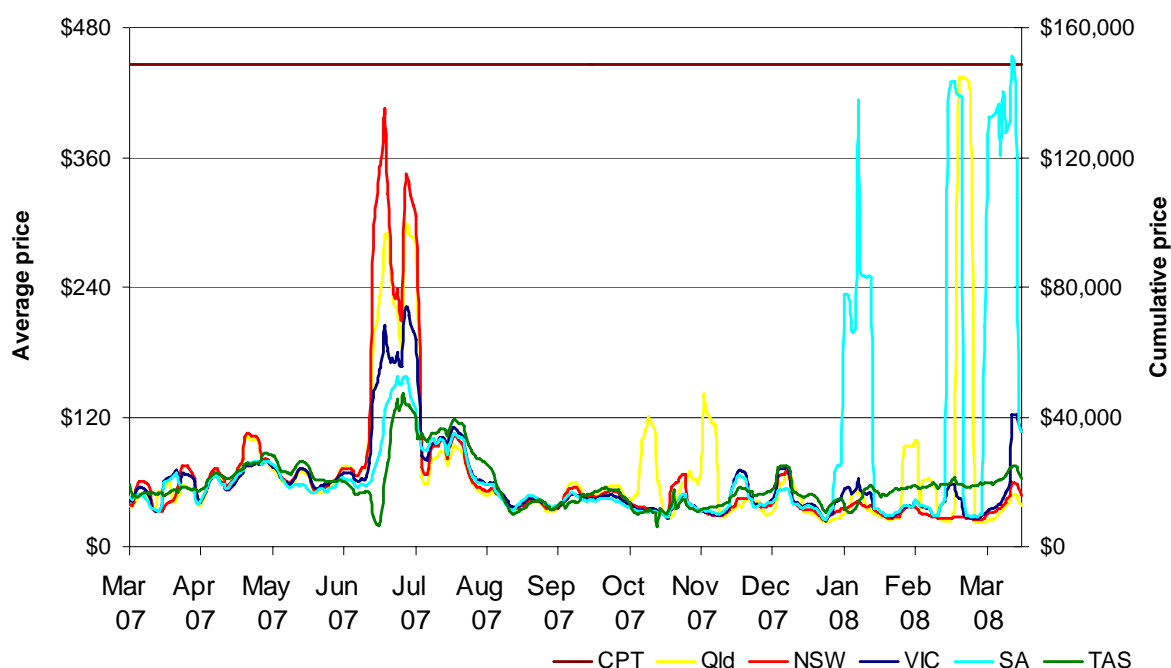
¹

The demand, based on dispatchable generation (including wind farms at Lake Bonney stage 2 and Hallett) reached 3077 MW in South Australia. When non-dispatchable generation is included (wind farms at Cathedral rocks, Canunda, Lake Bonney stage 1, Mount Millar, Snowtown, Starfish Hill and Wattle Point) the demand reached 3155 MW. Prior to this week, on the same basis the maximum demand was 3147 MW on 13 March 2008.

All regions except Queensland recorded prices greater than three times the weekly average. Details of these events are attached in Appendix A. Longer term market trends are attached in Appendix B.

Figure 2 shows the seven day rolling cumulative price for each region together with the CPT (and the equivalent seven day time-weighted average price).

Figure 2: 7 day rolling cumulative price and CPT



Financial market

Figures 3 to 10 show futures contract² prices traded on the Sydney Futures Exchange as at close of trade on Monday 23 March. Figure 3 shows the calendar base futures contract prices for this year and the next two years, and the three year average. Also shown are percentage changes compared to a week earlier.

Figure 3: Base calendar futures contract prices (\$/MWh)

	QLD		NSW		VIC		SA	
Calendar 2008	50	0%	42	1%	45	1%	79	0%
Calendar 2009	44	-1%	47	1%	47	0%	63	0%
Calendar 2010	48	0%	53	0%	53	0%	50	0%
Three year average	47	0%	47	0%	48	0%	64	0%

Source: d-cyphaTrade www.d-cyphatrade.com.au

Figure 4 shows the \$300 cap contract price for the current quarter and calendar year and the change from the previous week.

² Futures contracts on the SFE are listed by d-cyphaTrade (www.d-cyphatrade.com.au). A futures contract is typically for one MW of electrical energy per hour based on a fixed load profile. A base load profile is defined as the base load period from midnight to midnight Monday to Sunday over the duration of the contract quarter. A peak load profile is defined as the peak-period from 7 am to 10 pm Monday to Friday (excluding Public holidays) over the duration of the contract quarter.

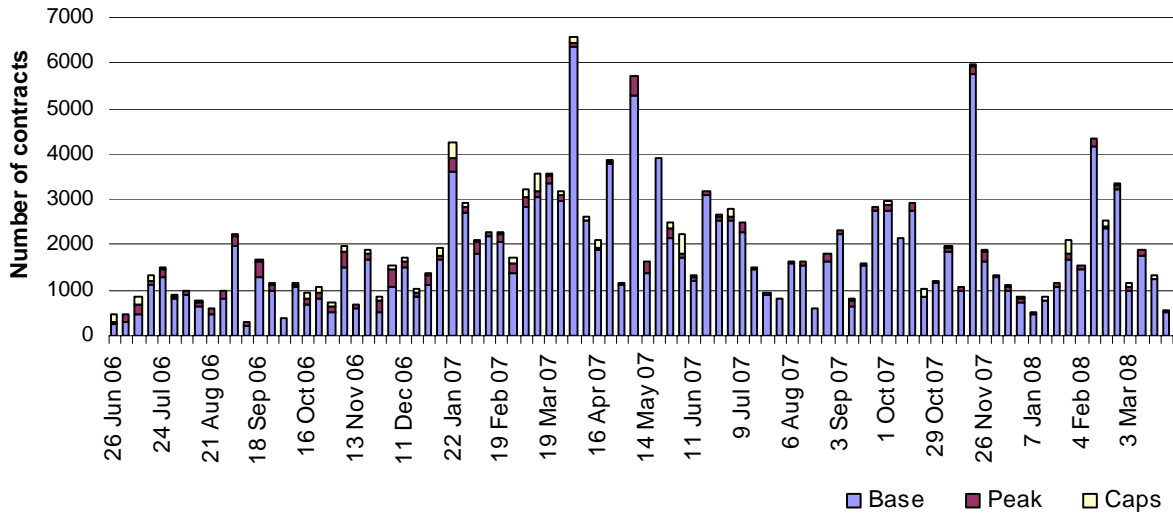
Figure 4: \$300 cap contract prices (\$/MWh)

	QLD		NSW		VIC		SA	
Q1 2008 price	38	0%	2	0%	7	-7%	87	0%
Calendar 2008	15	0%	6	1%	6	-2%	31	0%

Source: d-cyphaTrade www.d-cyphatrade.com.au

Figure 5 shows the weekly trading volumes for base, peak and cap contracts, the date is the end of that week.

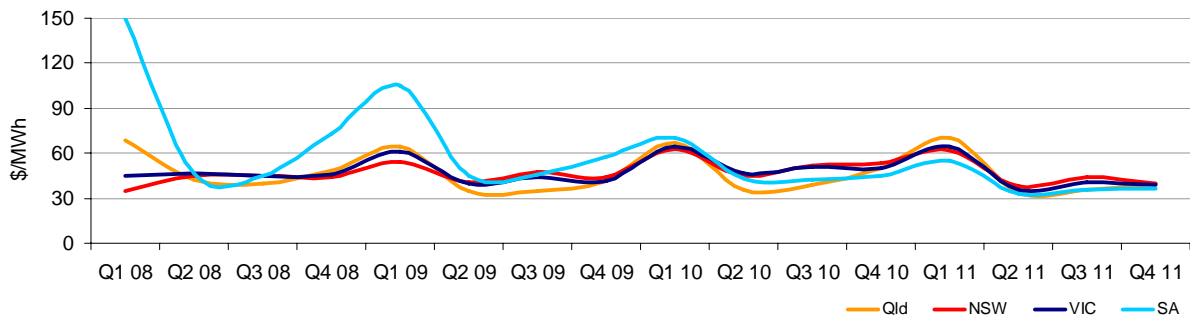
Figure 5: Number of exchange traded contracts per week



Source: d-cyphaTrade www.d-cyphatrade.com.au

Figure 6 shows the prices for base contracts for each quarter for the next three years.

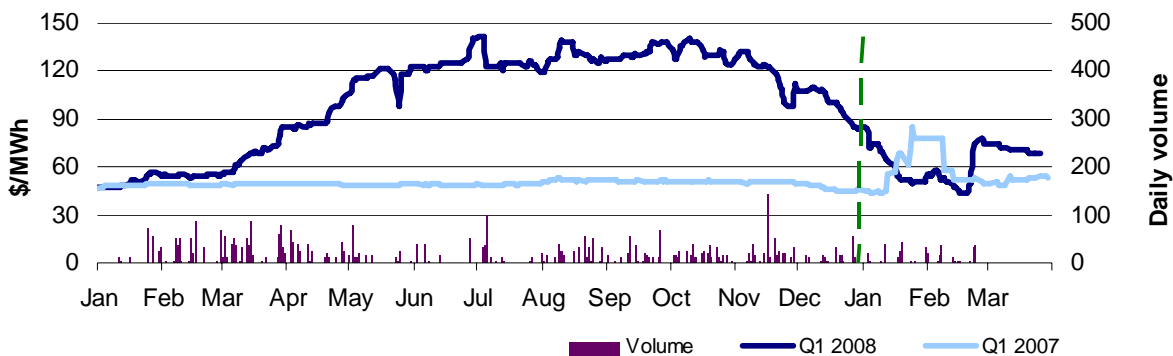
Figure 6: quarterly base future prices 2008 - 2011



Source: d-cyphaTrade www.d-cyphatrade.com.au

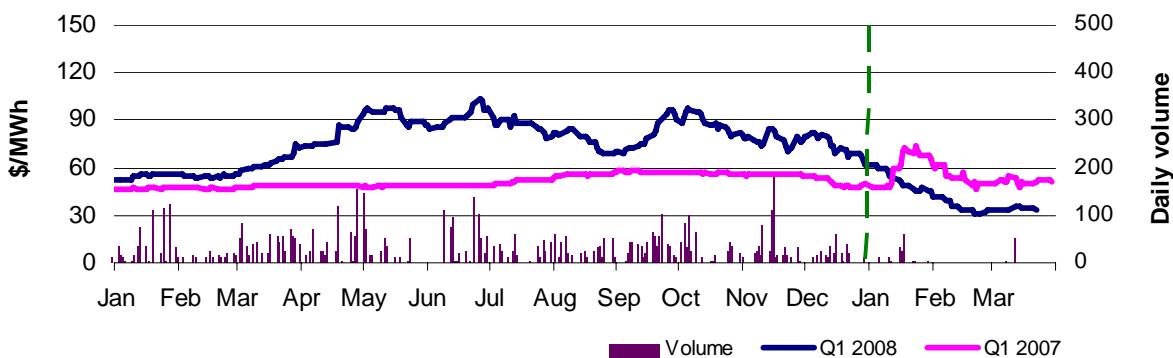
Figure 7-10 compares for each region the closing daily base contract price for the first quarter of 2007 against 2008 and also shows the daily volume of Q1 08 base contracts traded. The vertical dashed line signifies the start of the Q1 period.

Figure 7: Queensland



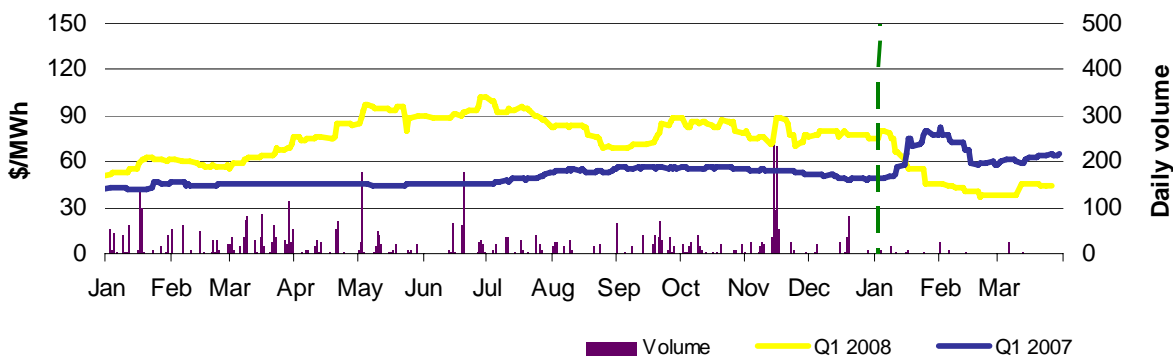
Source: d-cyphaTrade www.d-cyphatrade.com.au

Figure 8: New South Wales



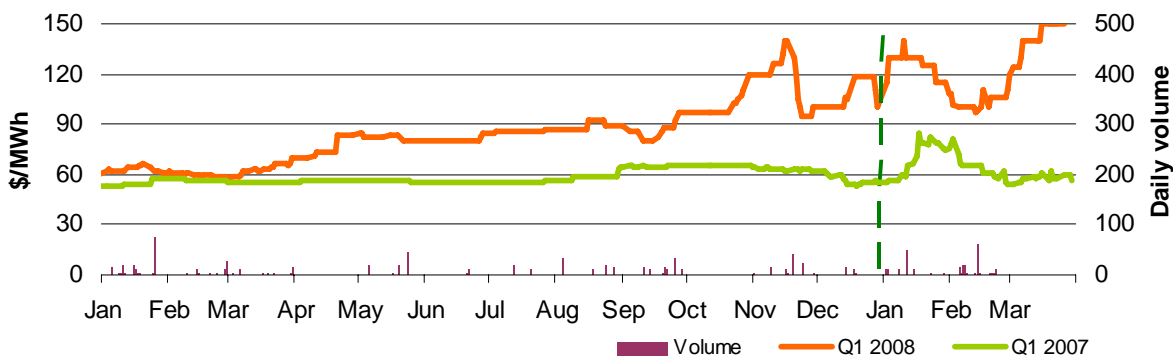
Source: d-cyphaTrade www.d-cyphatrade.com.au

Figure 9: Victoria



Source: d-cyphaTrade www.d-cyphatrade.com.au

Figure 10: South Australia



Source: d-cyphaTrade www.d-cyphatrade.com.au

Spot market forecasting variations

The AER is required by the National Electricity Rules to determine whether there is a significant variation between the forecast spot price published by NEMMCO and the actual spot price and state why the AER considers that the significant price variation occurred. It is not unusual for there to be significant variations as demand forecasts vary and as participants react to changing market conditions. For the week, there were 126 trading intervals where actual prices significantly varied from forecasts. Reasons for these variances are summarised in Figure 11.

Figure 11: reasons for variations between forecast and actual prices

	Availability	Demand	Network	Combination
Price is higher than forecast	12%	37%	0%	5%
Price is lower than forecast	0%	41%	0%	5%

Demand and bidding patterns

The AER reviews demand, network limitations and generator bidding as part of our market monitoring to better understand the drivers behind price variations. Figure 12 shows changes to the offer price and available capacity of generation in each region for the on-peak periods only³. For example, in Queensland 37 MW less was offered at prices less than \$20/MWh this week compared to the previous week. Also included is the change in average demand during peak periods for comparison.

Figure 12: Changes in available generation compared to the previous week during peak times

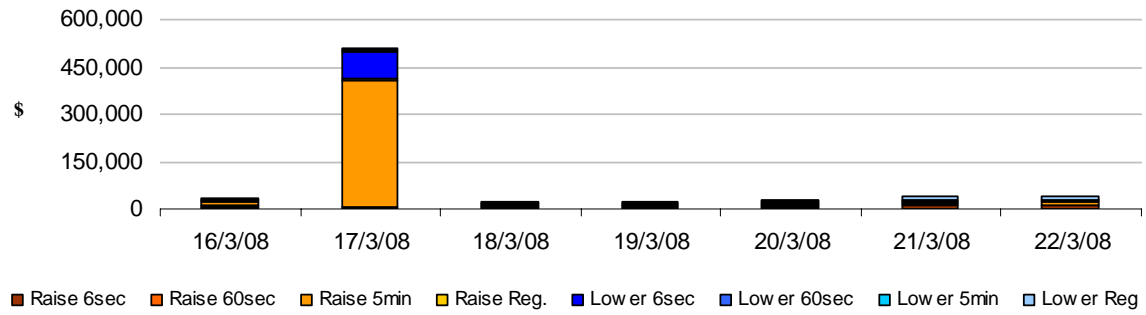
\$/MWh	<20	Between 20 and 50	Total availability	Change in average demand
Queensland	-37	166	216	-177
New South Wales	-600	22	-1,012	-496
Victoria	-209	85	-116	-502
South Australia	-266	100	-343	-679
Tasmania	-68	54	173	1
Snowy	93	-289	216	26
Total	-1,087	138	-865	-1,826

Ancillary services market

The total cost of ancillary services on the mainland for the week was \$637 000 or 0.2 per cent of turnover in the energy market. At 2.46 pm on Monday International Power rebid 100 MW of Raise 5 minute services at Loy Yang B from prices below \$100/MW to above \$4500/MW. The reason given was “Energy FCAS optimisation”. A further rebid at 3.08 pm reduced the availability of this service by 150 MW because of boiler instability. At the same time there was an 80 MW reduction in services in South Australia that was set up the previous day. This led to prices averaging \$500/MW from 3 pm to 5 pm when the availability of this service from Snowy Hydro increased by 200 MW. The total cost of ancillary services in Tasmania for the week was \$52 000 or 0.5 per cent of the turnover in the Tasmanian energy market. Figure 13 shows the daily breakdown of cost for each frequency control ancillary service.

³ Peak periods is defined as between trading intervals ending 7.30 am and 10 pm on weekdays, which aligns with the SFE contract definition.

Figure 13: daily frequency control ancillary service cost



**Australian Energy Regulator
April 2008**

APPENDIX A:

Detailed Market Analysis



16 March – 22 March 2008

National: There were four occasions where the spot price aligned nationally and the New South Wales price was greater than three times the New South Wales weekly average price of \$49/MWh – the New South Wales spot price has been used as a proxy national price under these conditions as New South Wales is located in the centre of the NEM.

Monday, 17 March

3:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	503.11	100.00	98.00
Demand (MW)	31 661	31 442	31 059
Available capacity (MW)	36 322	37 176	37 333
3:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	353.23	152.00	127.46
Demand (MW)	31 773	31 610	31 209
Available capacity (MW)	36 136	37 201	37 318
4:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	1070.23	256.80	266.94
Demand (MW)	31 955	31 719	31 358
Available capacity (MW)	36 143	37 179	37 317
4:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	1068.07	98.00	100.00
Demand (MW)	31 858	31 647	31 361
Available capacity (MW)	36 111	37 179	37 318

Conditions at the time saw demand at near record level for the NEM with South Australia and Victoria both recording new records. Prices in South Australia, Victoria and Snowy exceeded \$5000/MWh at 4 pm and 4.30 pm. The AER will be issuing a report into the circumstances that led to the spot price exceeding \$5000/MWh in accordance with clause 3.13.7 of the Rules. Rebidding of participants in South Australia and Victoria will be discussed in more detail in that report.

Network constraints were forcing flow north from Snowy into New South Wales at around 1000 MW, counter to the prevailing market conditions.

At 12.40 pm Macquarie Generation's Liddell unit four tripped from around 430 MW. The unit had previously offered 490 MW of availability with 460 MW of this capacity priced below \$100/MWh.

Over a number of rebids during the morning CS Energy shifted 407 MW of capacity from prices above \$9000/MWh to below \$300/MWh. Further rebids from 12.50 pm CS Energy reduced capacity at Collinsville and Swanbank by 198 MW the majority of which was priced under \$100/MWh. The reasons given were "Colnsv revised RTS", Conlsv_5 unit trip" and Swan_B_2 mill O/S".

Over four rebids between 1.25 pm and 1.44 pm Delta Electricity rebid 260 MW of capacity at Wallerawang and Mount Piper from prices below \$300/MWh to above \$9000/MWh. The reason given was “NSW capacity change::band shift”.

Over three rebids from 2.26 pm Millmerran Energy Trader rebid 175 MW of capacity at Millmerran from prices below \$280/MWh to above \$9000/MWh. The reason given was “Changed PD::adjustMWdist”.

Over two rebids, at 3.02 pm and 3.40 pm Stanwell Corporation rebid 120 MW of capacity at Gladstone from prices below \$100/MWh to above \$5000/MWh. The reason given was “Portfolio optimisation::change MW distrib”.

Victoria: There were five occasions where the spot price in Victoria was greater than three times the Victoria weekly average price of \$144/MWh. Four of these occurred when prices were generally aligned across all regions and is detailed in the national market outcomes section. The remaining occasion is presented below.

Monday, 17 March

5:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	667.99	338.80	1026.09
Demand (MW)	9580	9324	9398
Available capacity (MW)	7771	8162	8285

Conditions at the time saw demand at record levels and available capacity 400 MW lower than forecast. Price was lower than that forecast 12 hours ahead but higher than that forecast four hours ahead.

South Australia: There were five occasions where the spot price in South Australia was greater than three times the South Australia weekly average price of \$160/MWh. Four of these occurred when prices were generally aligned across all regions and is detailed in the national market outcomes section. The remaining occasion is presented below.

Monday, 17 March

5:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	703.77	367.41	1000.72
Demand (MW)	3041	2995	2909
Available capacity (MW)	3147	3163	3214

Conditions at the time saw demand at record levels with price lower than that forecast 12 hours ahead but higher than that forecast four hours ahead.

Tasmania: There were five occasions where the spot price in Tasmania was greater than three times the Tasmania weekly average price of \$59/MWh.

Sunday, 16 March

3:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	238.75	97.48	100.96
Demand (MW)	1158	1104	1104
Available capacity (MW)	2289	2181	2126
3:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	240.21	97.48	103.11
Demand (MW)	1157	1105	1105
Available capacity (MW)	2255	2181	2126
4:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	254.89	97.48	135.38
Demand (MW)	1178	1112	1112
Available capacity (MW)	2289	2181	2126
4:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	226.22	95.89	137.87
Demand (MW)	1189	1126	1126
Available capacity (MW)	2281	2181	2126
5:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	226.88	94.34	136.33
Demand (MW)	1198	1139	1139
Available capacity (MW)	2281	2181	2126

Conditions at the time saw demand and available capacity close to that forecast four and 12 hours ahead.

Price in Tasmania was following the conditions in Victoria where a combination of demand around 500 MW higher than forecast four hours ahead and the unplanned loss of 200 MW of capacity from International Power's Hazelwood saw the price higher than forecast.

There was no significant rebidding in Tasmania.

Appendix B: Detailed NEM Price and Demand Trends



Table 1: Financial year to date spot market volume weighted average price

Financial year	QLD	NSW	SNOWY	VIC	SA	TAS
2007-08 (\$/MWh) YTD	66	46	32	52	122	55
2006-07 (\$/MWh) YTD	36	41	27	48	51	43
Change (YTD)	81%	13%	17%	10%	138%	30%
2006-07 (\$/MWh)	57	67	38	61	59	51

Table 2: NEM turnover

Financial year	NEM Turnover* (\$, billion)	Energy (TWh)
2007-08 YTD	\$8.7	151
2006-07	\$12.7	206
2005-06	\$7.9	201
Change (2005-06 to 2006-07)	61%	2.7%

* estimated value

Table 3: Recent monthly and quarterly spot market volume weighted average price and turnover

Volume weighted average (\$/MWh)	QLD	NSW	SNOWY	VIC	SA	TAS	Turnover (\$, billion)
Nov-07	58	38	29	46	47	45	0.77
Dec-07	41	43	32	50	54	52	0.78
Jan-08	52	36	28	45	186	48	0.94
Feb-08	161	28	24	41	207	58	1.30
Mar-08	35	42	32	78	413	62	0.99
Q4 2006	23	27	22	29	40	37	1.40
Q4 2007	56	41	30	44	46	44	2.35
Change	142%	51%	37%	52%	15%	20%	

Table 4: ASX energy futures contract prices (compared with settled price for Q1 2007) at 24 March

	QLD		NSW		VIC		SA	
	Base	Peak	Base	Peak	Base	Peak	Base	Peak
Q1 2008								
Price on 18 Mar (\$/MW)	71	105	36	45	45	60	150	250
Price on 23 Mar (\$/MW)	69	105	35	45	45	69	150	250
% increase since 1 March 07	25%	7%	-36%	-52%	-20%	-31%	163%	147%
Traded in the last week (MW)	0	0	0	0	0	0	0	0
Traded since 1 March 07	3664	397	5751	382	3958	657	749	142
Settled price for Q1 07 (\$/MW)	53	85	51	74	65	109	56	88

Table 5: Changes to availability of low priced generation capacity offered to the market

Comparison:	QLD	NSW	SNOWY	VIC	SA	TAS	NEM
January 08 with January 07							
MW Priced <\$20	-8	-409	22	-83	84	13	-381
MW Priced \$20 to \$50	79	989	-260	116	-178	1	747
February 08 with February 07							
MW Priced <\$20	-243	-732	4	-221	-44	-94	-1331
MW Priced \$20 to \$50	318	1,387	282	-38	0	-66	1883
March 08 with March 07							
MW Priced <\$20	71	-159	11	84	132	-26	114
MW Priced \$20 to \$50	63	1,076	492	-90	-82	18	1477