

# WEEKLY MARKET ANALYSIS



AUSTRALIAN ENERGY  
REGULATOR

15 June – 21 June 2008

## Summary

Average prices for the week on the mainland ranged from \$35/MWh in Queensland to \$38/MWh in Victoria and South Australia. Prices in Tasmania averaged \$57/MWh. These prices represent a decrease in all regions compared to the previous week, consistent with an increase in low priced capacity in New South Wales and Victoria.

In the financial markets, base futures prices were higher across all regions compared to the previous week.

## 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 15 June – 21 June	35	37	38	38	57
Financial year to 21 June	58	45	51	103	57
% change from previous week*	-6%	-8%	-3%	-1%	-4%
% change from year to date**	13%	-26%	-10%	82%	17%

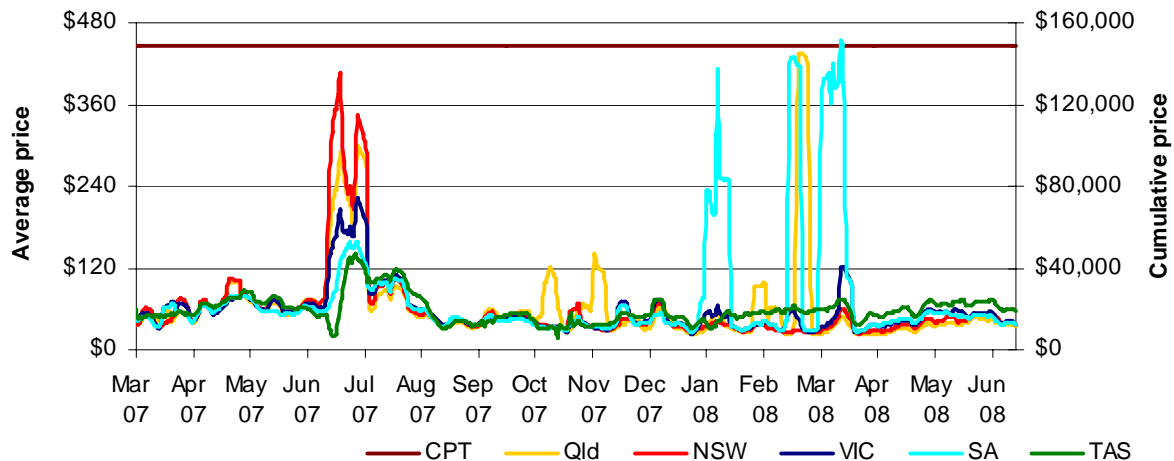
\*The percentage change between last week's average spot price and the average price for the previous week.

\*\*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. 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) for the last 15 months.

**Figure 2: Seven day rolling cumulative price and CPT**



## Financial markets

Figures 3 to 10 show futures contract<sup>1</sup> prices traded on the Sydney Futures Exchange as at close of trade on Monday 23 June. Figure 3 shows the financial year 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 financial year futures contract prices (\$/MWh)**

	QLD		NSW		VIC		SA	
Financial 2008-09	59	4%	53	3%	53	2%	67	1%
Financial 2009-10	53	2%	55	2%	54	0%	55	1%
Financial 2010-11	56	0%	54	0%	67	0%	49	0%
Three year average	56	2%	54	2%	58	1%	57	0%

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

Figure 4 shows the \$300 cap contract price for the first quarter of 2009 and the 2009 calendar year and the change from the previous week.

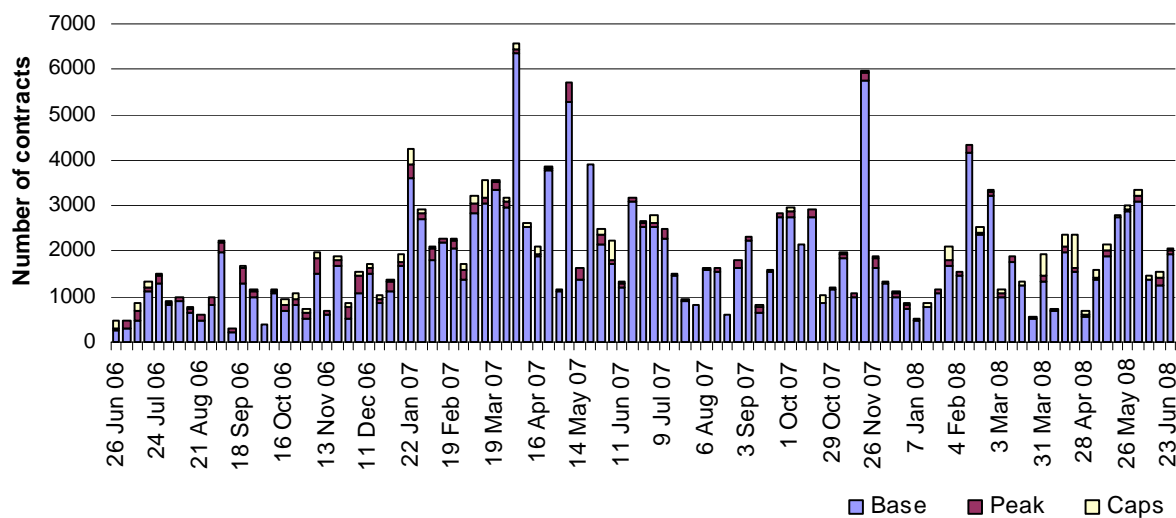
**Figure 4: \$300 cap contract prices (\$/MWh)**

	QLD		NSW		VIC		SA	
Q1 2009 price	43	10%	27	0%	27	0%	65	0%
Calendar 2009	17	6%	13	-2%	12	-1%	21	4%

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**

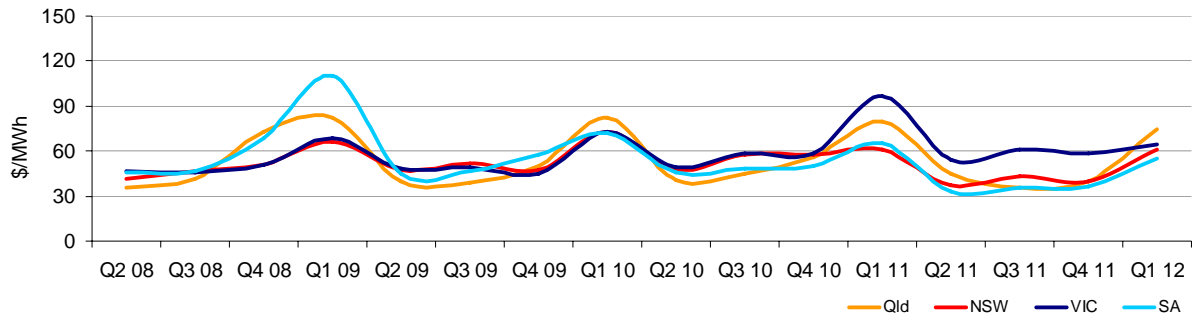


Source: d-cyphaTrade www.d-cyphatrade.com.au

<sup>1</sup> 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 6 shows the prices for base contracts for each quarter for the next four years.

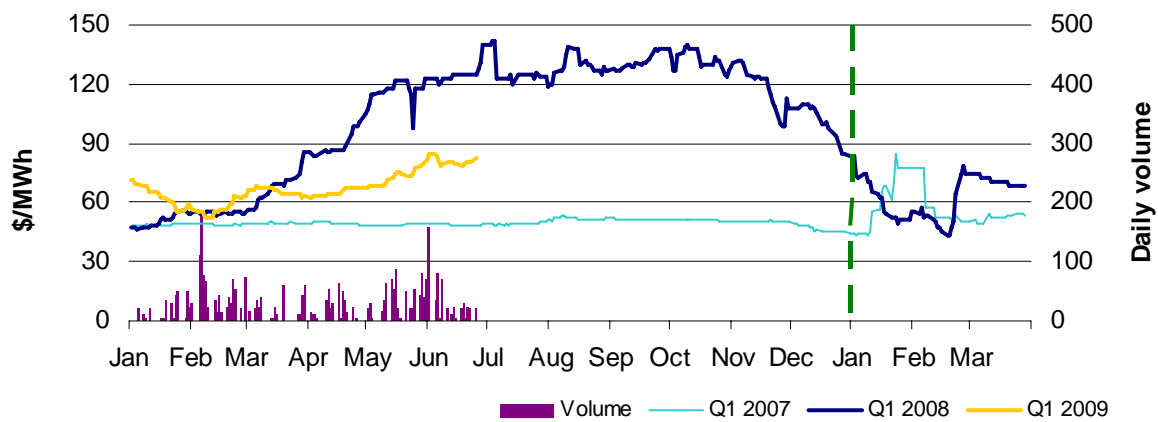
**Figure 6: Quarterly base future prices 2008 - 2011**



Source: d-cyphaTrade [www.d-cyphatrade.com.au](http://www.d-cyphatrade.com.au)

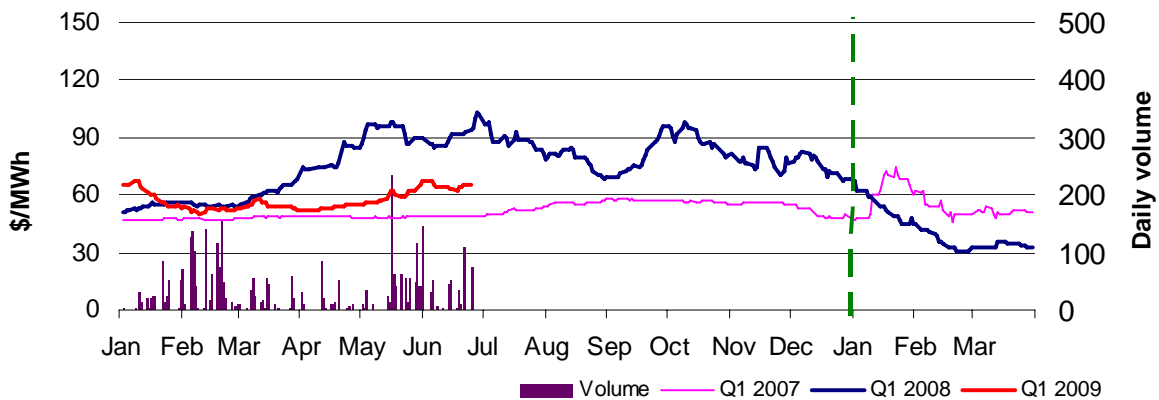
Figures 7-10 compares for each region the closing daily base contract price for the first quarter of 2007, 2008 and 2009. Also shown is the daily volume of Q1 09 base contracts traded. The vertical dashed line signifies the start of the Q1 period.

**Figure 7: Queensland Q1 2007, 2008 and 2009**



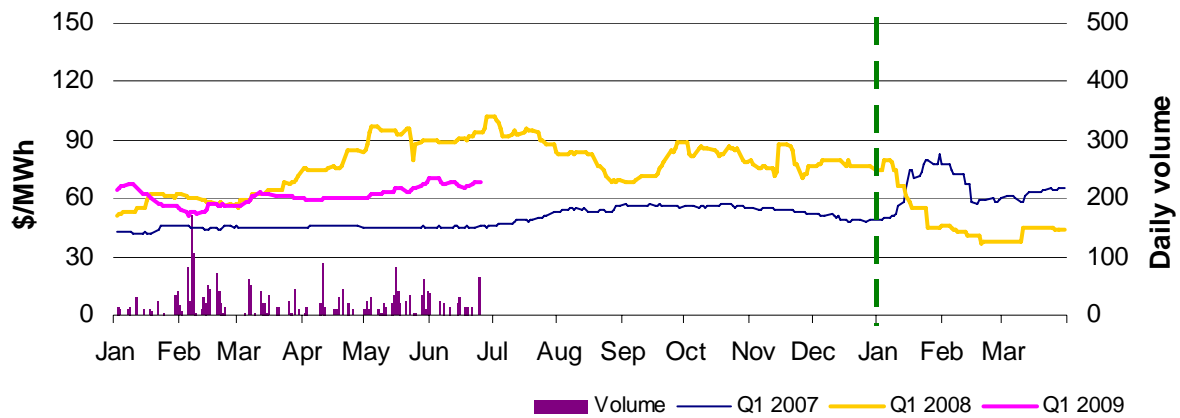
Source: d-cyphaTrade [www.d-cyphatrade.com.au](http://www.d-cyphatrade.com.au)

**Figure 8: New South Wales Q1 2007, 2008 and 2009**



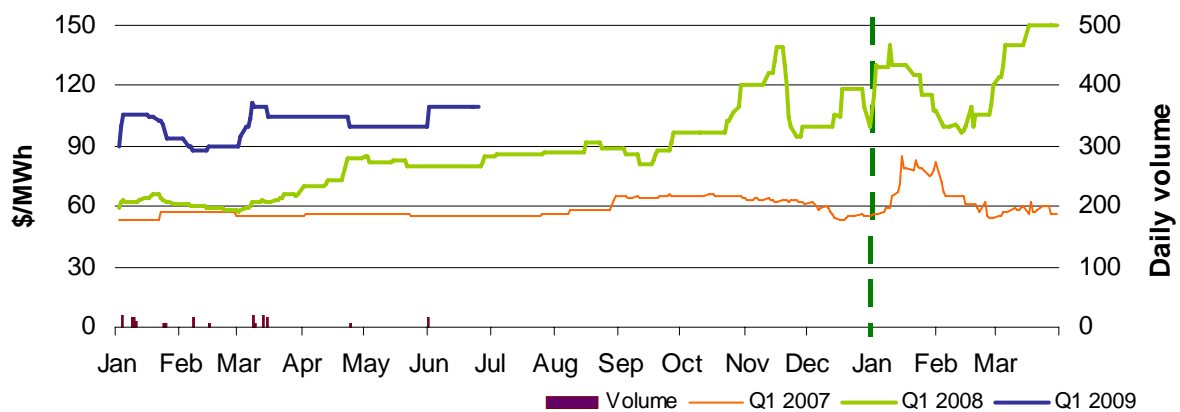
Source: d-cyphaTrade [www.d-cyphatrade.com.au](http://www.d-cyphatrade.com.au)

**Figure 9: Victoria Q1 2007, 2008 and 2009**



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

**Figure 10: South Australia Q1 2007, 2008 and 2009**



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 80 trading intervals where actual prices significantly varied from forecasts<sup>2</sup>. This compares to the weekly average in 2007 of 125 counts. Reasons for these variances are summarised in Figure 11.<sup>3</sup>

**Figure 11: Reasons for variations between forecast and actual prices**

	Availability	Demand	Network	Combination
Price is higher than forecast	16%	68%	0%	4%
Price is lower than forecast	0%	10%	0%	2%

<sup>2</sup> A trading interval is counted as having a variation if the actual price differs significantly from the forecast price either four or twelve hours ahead.

<sup>3</sup> The table summarises (as a percentage) the number of times when the actual price differs significantly from the forecast price four or twelve hours ahead and the major reason for that variation. The reasons are classified as availability (which means that there is a change in the total quantity or price offered for generation), demand forecast inaccuracy, changes to network capability or as a combination of factors (when there is not one dominant reason). An instance where both twelve and four hour ahead forecasts differ significantly from the actual price will be counted as two variations.

## 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 only<sup>4</sup>. For example, in Queensland 80 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**

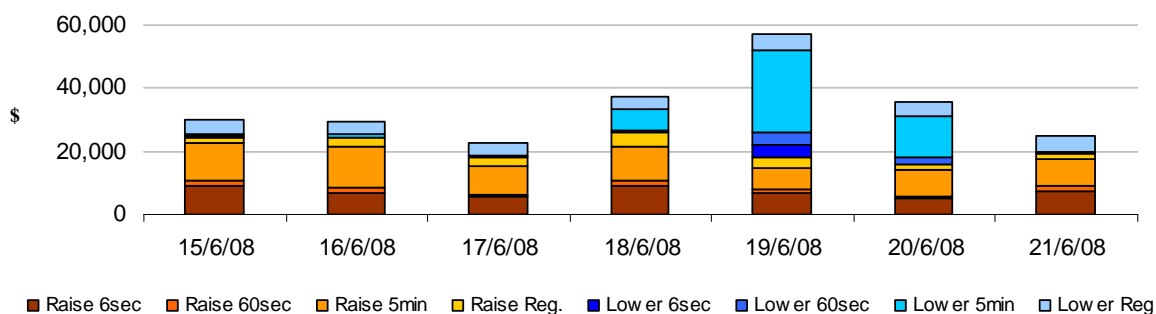
\$/MWh	<20	Between 20 and 50	Total availability	Change in average demand
Queensland	-80	36	-223	57
New South Wales	945	-51	876	369
Victoria	196	71	281	311
South Australia	0	-41	-21	144
Tasmania	-29	-48	-37	89
Snowy	87	24	82	-10
Total	1,119	-8	959	961

## Ancillary services market

The total cost of ancillary services on the mainland for the week was \$188 000 or 0.1 per cent of turnover in the energy market. The total cost of ancillary services in Tasmania for the week was \$49 000 or 0.4 per cent of the turnover in the Tasmanian energy market.

Figure 13 shows the daily breakdown of cost for each frequency control ancillary service.

**Figure 13: Daily frequency control ancillary service cost**



## Australian Energy Regulator June 2008

<sup>4</sup> Peak period is defined as between 7 am and 10 pm on weekdays, which aligns with the SFE contract definition.

# APPENDIX A:

## Detailed Market Analysis



15 June – 21 June 2008

**National:** Spot prices within the national market are regularly aligned with conditions in one region reflected across all others. There was one occasion where the price generally aligned across all regions and the New South Wales and Queensland prices were greater than three times the weekly average price. In the following table 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.

### Sunday, 15 June

<b>6:30 pm</b>	<b>Actual</b>	<b>4 hr forecast</b>	<b>12 hr forecast</b>
Price (\$/MWh)	117.79	59.37	54.85
Demand (MW)	28 222	27 328	27 277
Available capacity (MW)	35 475	36 106	36 574

Conditions at the time saw demand 1000 MW higher than forecast 12 hours ahead and 900 MW higher than forecast four hours ahead. Available capacity was 1100 MW lower than forecast 12 hours ahead and 630 MW lower than forecast four hours ahead.

At 10 am Delta Electricity reduced the availability of Munmorah unit three by 120 MW, 100 MW of which was priced below \$20/MWh. The reason given was “Mill capacity”. Throughout the morning Vales Point unit five had problems returning to service. At 4.29 pm Delta Electricity reduced availability by 580 MW then at 5.32 pm added back 170 MW of capacity all of which was priced below zero.

Over numerous rebids from 12.27 pm Callide Power Trading delayed the return to service of Callide unit four by 387 MW. All of this capacity was priced below zero. The unit had been offline since mid May.

There was no other significant rebidding.

## 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	58	45	31	51	103	57
2006-07 (\$/MWh) YTD	51	59	35	56	56	48
Change (YTD)	14%	-25%	-11%	-10%	84%	17%
2006-07 (\$/MWh)	57	67	38	61	59	51

**Table 2: NEM turnover**

Financial year	NEM Turnover* (\$, billion)	Energy (TWh)
2007-08 YTD	\$10.9	203
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)
Feb-08	161	28	24	41	207	58	1.30
Mar-08	31	37	29	65	325	57	1.12
Apr-08	29	34	28	41	44	56	0.60
May-08	41	47	36	56	53	68	0.87
Jun-08	39	45	28	45	43	63	0.54
Q1 2007	60	57	29	75	69	50	3.26
Q1 2008	80	34	27	50	243	54	3.36
Change	34%	-40%	-8%	-33%	252%	9%	

**Table 4: ASX energy futures contract prices at 23 June**

	QLD		NSW		VIC		SA	
	Base	Peak	Base	Peak	Base	Peak	Base	Peak
Q1 2009								
Price on 16 Jun (\$/MW)	78	138	62	104	65	110	110	160
Price on 23 Jun (\$/MW)	82	142	66	104	69	114	110	160
Open interest on 23 Jun	2076	139	2007	66	1487	359	145	0
Traded in the last week (MW)	102	15	231	0	96	10	0	0
Traded since 1 Jan 08	3292	302	3592	68	2351	460	170	0
Settled price for Q1 08(\$/MW)	68	97	32	42	43	65	152	322

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

Comparison:	QLD	NSW	SNOWY	VIC	SA	TAS	NEM
April 08 with April 07							
MW Priced <\$20	1,048	1,029	0	-201	-139	41	1777
MW Priced \$20 to \$50	-45	827	527	-97	150	60	1422
May 08 with May 07							
MW Priced <\$20	526	570	-74	-84	0	-71	866
MW Priced \$20 to \$50	89	277	419	-62	-42	25	707
June 08 with June 07							
MW Priced <\$20	358	212	-22	-90	-74	-491	-106
MW Priced \$20 to \$50	306	183	297	24	34	113	957