

# WEEKLY MARKET ANALYSIS



AUSTRALIAN ENERGY REGULATOR

28 September – 4 October 2008

## Summary

Spot prices on the mainland averaged between \$30/MWh in South Australia and \$35/MWh in New South Wales. High output from smaller storage hydro-generators, as a result of high rainfall in Tasmania, resulted in almost 50 hours of prices lower than \$10/MWh and an average price for the week of \$25/MWh.

In the financial markets contract prices were slightly higher compared to the previous week.

## Spot market prices

Figure 1 sets out the volume weighted average prices for this week and the financial year to date across the NEM. It compares these prices 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 28 Sept – 4 Oct	33	35	34	30	25
Financial year to 3 October	36	41	42	42	44
% change from previous week*	-7%	-12%	-20%	-15%	-41%
% change from year to date**	-35%	-30%	-29%	-31%	-32%

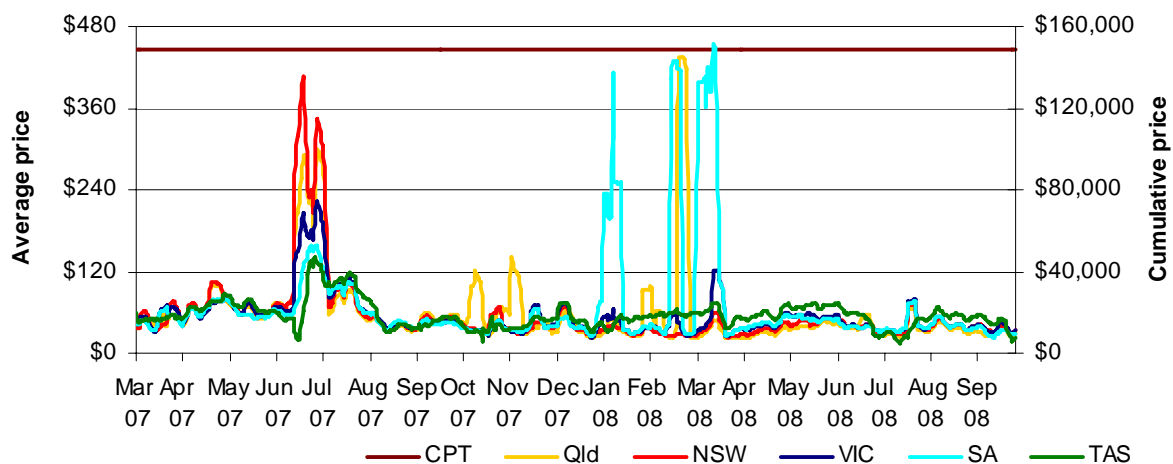
\*The percentage change between last week's average spot price and the average price for the previous week.

\*\*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 18 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 6 October. Figure 3 shows the financial year base futures contract prices for the current year, the following 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	51	2%	50	2%	51	0%	55	1%
Financial 2009-10	57	0%	50	-1%	63	1%	59	6%
Financial 2010-11	53	9%	45	0%	54	0%	49	9%
Three year average	54	4%	48	0%	56	1%	54	5%

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

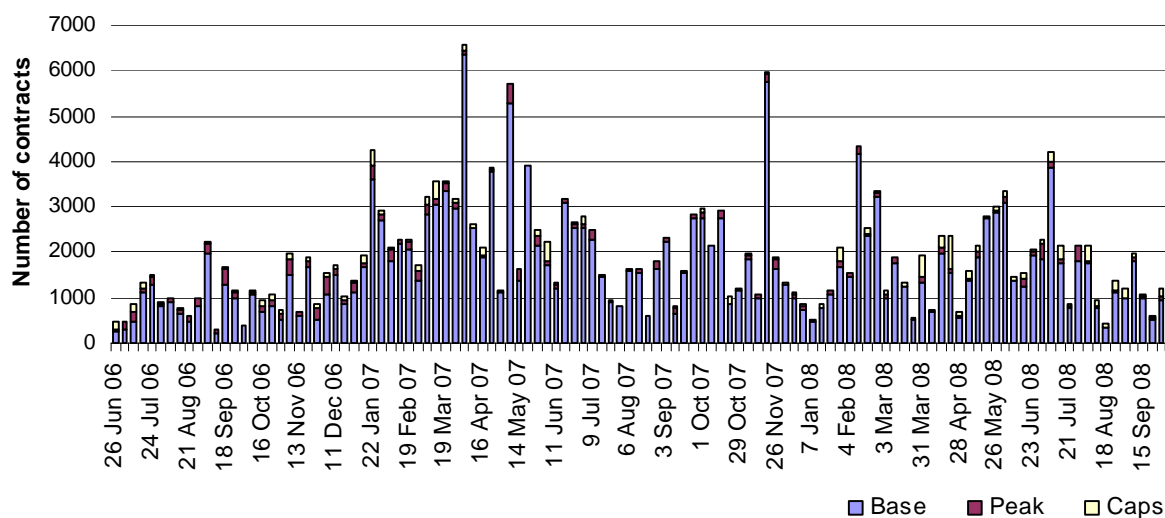
**Figure 4: \$300 cap contract prices (\$/MWh)**

	QLD		NSW		VIC		SA	
Q1 2009 price	43	0%	20	-7%	27	-1%	65	0%
Calendar 2009	17	6%	11	-3%	12	-1%	21	0%

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

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

**Figure 5: Number of exchange traded contracts per week**

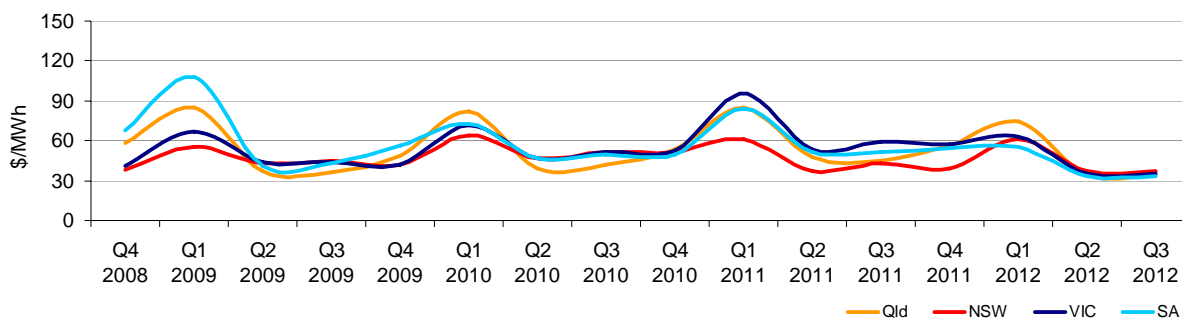


Source: d-cyphaTrade [www.d-cyphatrade.com.au](http://www.d-cyphatrade.com.au)

<sup>1</sup> Futures contracts on the SFE are listed by d-cyphaTrade ([www.d-cyphatrade.com.au](http://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.

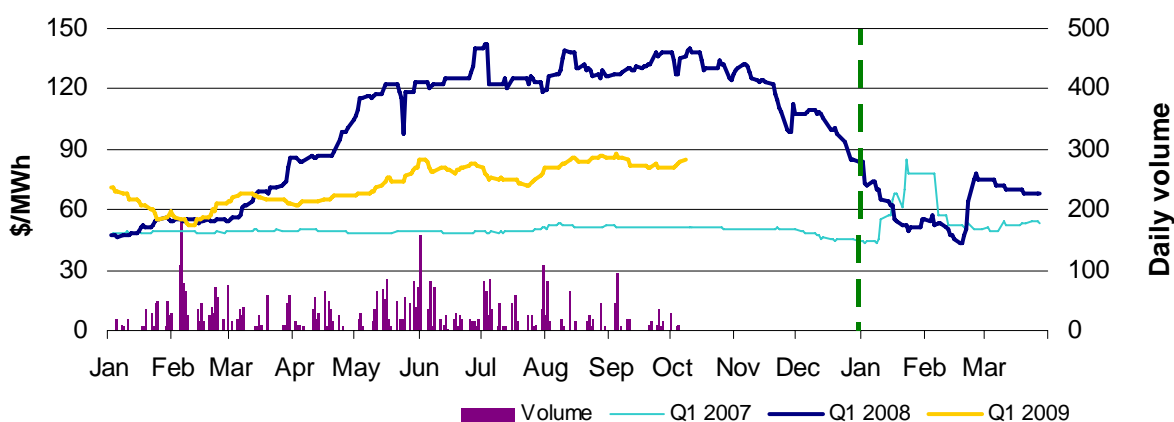
**Figure 6: Quarterly base future prices 2008 - 2012**



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

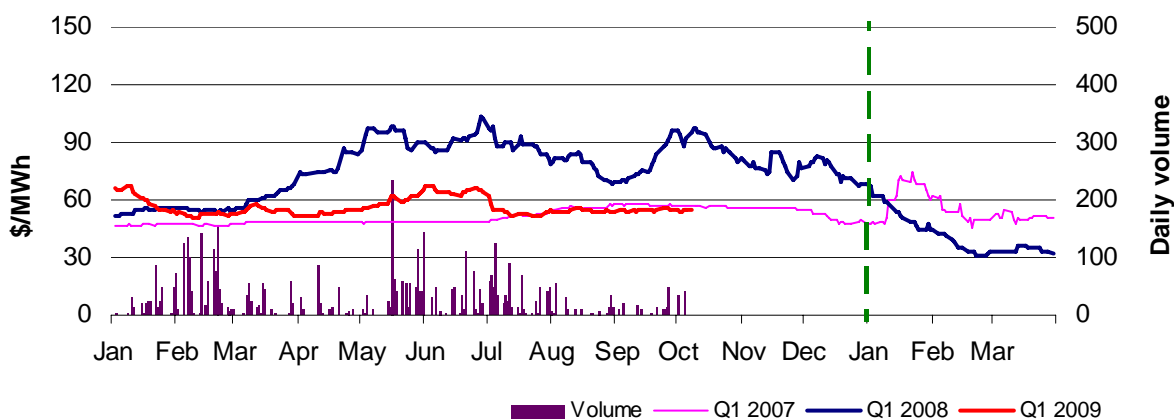
Figures 7-10 compares for each region the closing daily base contract price for the first quarter of 2007, 2008 and 2009. Also shown is the daily volume of Q1 09 base contracts traded. The vertical dashed line signifies the start of the Q1 period.

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



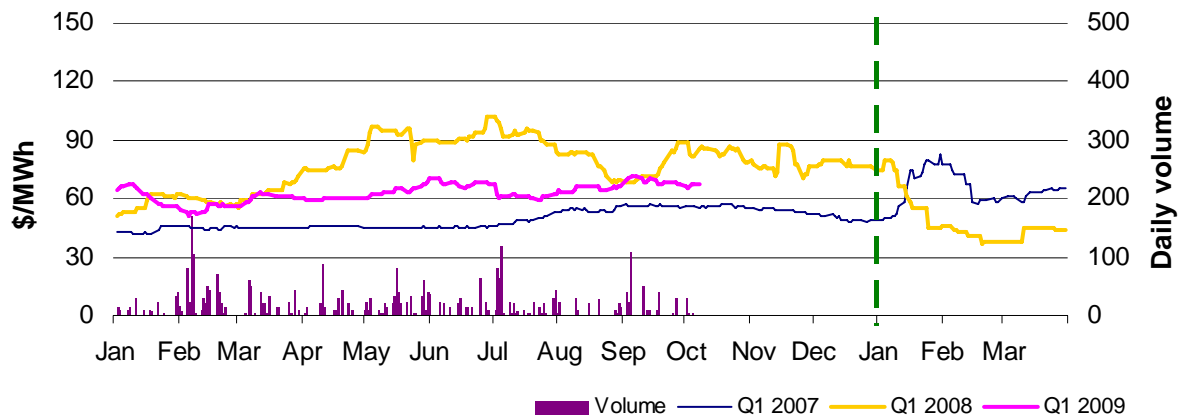
Source: d-cyphaTrade [www.d-cyphatrade.com.au](http://www.d-cyphatrade.com.au)

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



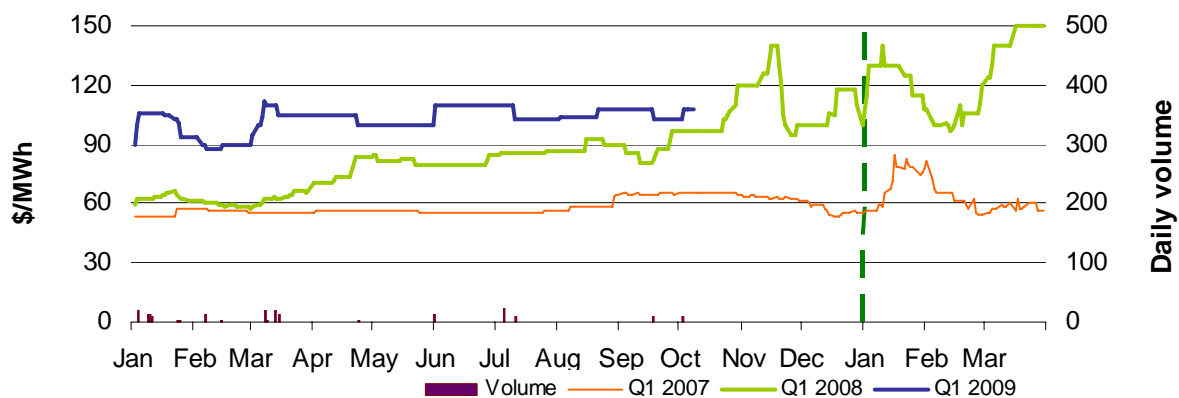
Source: d-cyphaTrade [www.d-cyphatrade.com.au](http://www.d-cyphatrade.com.au)

**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. There were 160 trading intervals where actual prices significantly varied from forecasts<sup>2</sup> throughout the week. 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**

	<b>Availability</b>	<b>Demand</b>	<b>Network</b>	<b>Combination</b>
Price is higher than forecast	4%	30%	0%	0%
Price is lower than forecast	63%	1%	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 its 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 261 MW less capacity 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**

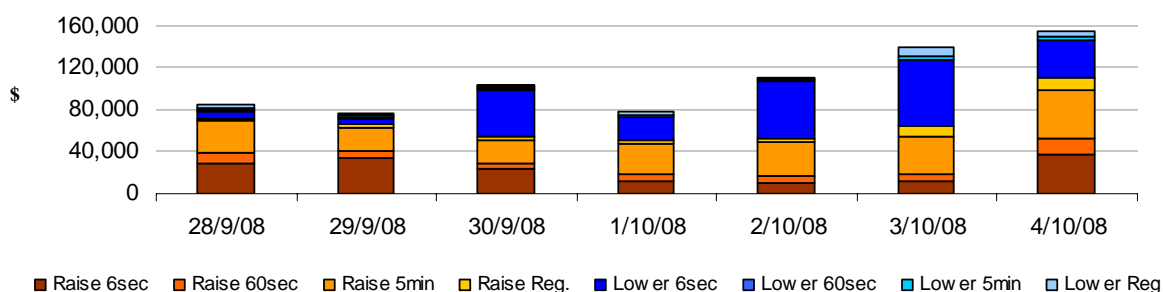
\$/MWh	<20	Between 20 and 50	Total availability	Change in average demand
Queensland	-261	-275	-434	101
New South Wales	28	33	342	80
Victoria	154	88	567	-9
South Australia	-36	-24	-72	-62
Tasmania	-60	-30	-69	-28
Total	-176	-208	335	83

## Ancillary services market

The total cost of ancillary services on the mainland for the week was \$350 000 or less than one per cent of turnover in the energy market.

The total cost of ancillary services in Tasmania for the week was \$398 000 or nine per cent of turnover in the energy market in Tasmania. 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 October 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



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**Tasmania:** There were four occasions where the spot price in Tasmania was greater than three times the Tasmania weekly average price of \$25/MWh.

### Friday, 3 October

<b>12:30 pm</b>	<b>Actual</b>	<b>4 hr forecast</b>	<b>12 hr forecast</b>
Price (\$/MWh)	75.68	45.24	48.66
Demand (MW)	1167	1195	1190
Available capacity (MW)	1798	1828	1828
<b>1:30 pm</b>	<b>Actual</b>	<b>4 hr forecast</b>	<b>12 hr forecast</b>
Price (\$/MWh)	76.48	65.21	44.64
Demand (MW)	1148	1157	1148
Available capacity (MW)	1821	1888	1888
<b>2:00 pm</b>	<b>Actual</b>	<b>4 hr forecast</b>	<b>12 hr forecast</b>
Price (\$/MWh)	76.07	51.36	44.74
Demand (MW)	1142	1152	1141
Available capacity (MW)	1838	1918	1918
<b>2:30 pm</b>	<b>Actual</b>	<b>4 hr forecast</b>	<b>12 hr forecast</b>
Price (\$/MWh)	76.22	62.88	44.37
Demand (MW)	1156	1157	1144
Available capacity (MW)	1863	1918	1918

Conditions at the time saw demand and available capacity close to that forecast.

From 11.36 am, over several rebids, the availability at Bell Bay unit 2 was reduced by 80 MW, all of which was priced below zero. The reason given was “Outage Timing Change”.

There is 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	VIC	SA	TAS
2008-09 (\$/MWh) YTD	36	41	42	42	44
2007-08 (\$/MWh) YTD	56	59	60	61	64
Change	-35%	-30%	-29%	-31%	-32%
2007-08 (\$/MWh)	58	44	51	101	57

**Table 2: NEM turnover**

Financial year	NEM Turnover* (\$, billion)	Energy (TWh)
2008-09 YTD	\$2.3	57
2007-08	\$11.1	208
2006-07	\$12.7	206
Change (2006-07 to 2007-08)	-12%	0.8%

\* 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)
Jun-08	43	44	28	44	42	57	0.77
Jul-08	40	44	-	46	48	31	0.82
Aug-08	37	42	-	42	44	56	0.79
Sep-08	32	37	-	38	34	46	0.61
Oct-08	36	39	-	38	30	31	0.08
Q3 2007	56	59	-	60	62	65	3.17
Q3 2008	36	41	-	42	42	44	2.23
Change	-35%	-31%	-	-30%	-31%	-32%	

**Table 4: ASX energy futures contract prices at 6 October**

	QLD		NSW		VIC		SA	
	Base	Peak	Base	Peak	Base	Peak	Base	Peak
Q1 2009								
Price on 29 Sep (\$/MW)	81	143	54	89	67	119	103	197
Price on 06 Oct (\$/MW)	85	144	55	89	67	118	108	197
Open interest on 06 Oct	2294	130	2228	171	1747	442	150	0
Traded in the last week (MW)	15	0	75	0	40	0	10	0
Traded since 1 Jan 08	4703	377	4932	215	3438	662	225	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
August 08 with August 07							
MW Priced <\$20	138	668	-	116	168	-248	841
MW Priced \$20 to \$50	511	-844	-	275	79	51	72
September 08 with September 07							
MW Priced <\$20	911	700	-	-87	143	128	1794
MW Priced \$20 to \$50	197	-408	-	181	185	43	198
October 08 with October 07							
MW Priced <\$20	-1216	-1492	-	229	-25	410	-2057
MW Priced \$20 to \$50	-175	1,832	-	-18	103	-158	1148

\*For comparative purposes Snowy generation for July 2007 and 2008 has been incorporated into New South Wales and Victoria