

# WEEKLY ELECTRICITY MARKET ANALYSIS



AUSTRALIAN ENERGY  
REGULATOR

18 – 24 October 2009

## Summary

Average spot prices ranged from \$24/MWh in Victoria to \$29/MWh in Tasmania.

## Spot market prices

Figure 1 sets out the volume weighted average prices for the week 18 to 24 October and the financial year to date across the National Electricity Market (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
Average price for 18 – 24 October	25	27	24	26	29
% change from previous week*	-5	-2	-7	-1	27
09/10 financial YTD	26	28	25	27	24
% change from 08/09 financial YTD**	-27	-30	-39	-34	-45

\*The percentage change between last week's average spot price and the average price for the previous week. Calculated on VWA prices prior to rounding.

\*\*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. Percentage changes are calculated on VWA prices prior to rounding.

Longer term market trends are attached in Appendix A<sup>1</sup>.

## Financial markets

Figures 2 to 9 show futures contract<sup>2</sup> prices traded on the Sydney Futures Exchange (SFE) as at close of trade on Monday 26 October. Figure 2 shows the base futures contract prices for the next three calendar years, and the three year average. Also shown are percentage changes<sup>3</sup> compared to the previous week.

**Figure 2: Base calendar year futures contract prices (\$/MWh)**

	QLD		NSW		VIC		SA	
Calendar Year 2010	37	-1%	40	-1%	39*	-1%	49	0%
Calendar Year 2011	40*	0%	43	0%	44	-1%	54	-8%
Calendar Year 2012	48*	0%	51	2%	54	-1%	69	0%
Three year average	42	0%	45	0%	45	-1%	58	-2%

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

\* denotes trades in the product.

<sup>1</sup> Monitoring the performance of the wholesale market is a key part of the AER's role and an overview of the market's performance in the long-term is provided on the AER website. Long-term statistics can be found there on, amongst other things, demand, spot prices, contract prices and frequency control ancillary services prices.

To access this information go to

[www.aer.gov.au](http://www.aer.gov.au) -> Monitoring, reporting and enforcement -> Electricity market reports -> Long-term analysis.

<sup>2</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.

<sup>3</sup> Calculated on prices prior to rounding.

Figure 3 shows the \$300 cap contract price for the first quarter of 2010 and the 2010 calendar year and the percentage change<sup>4</sup> from the previous week.

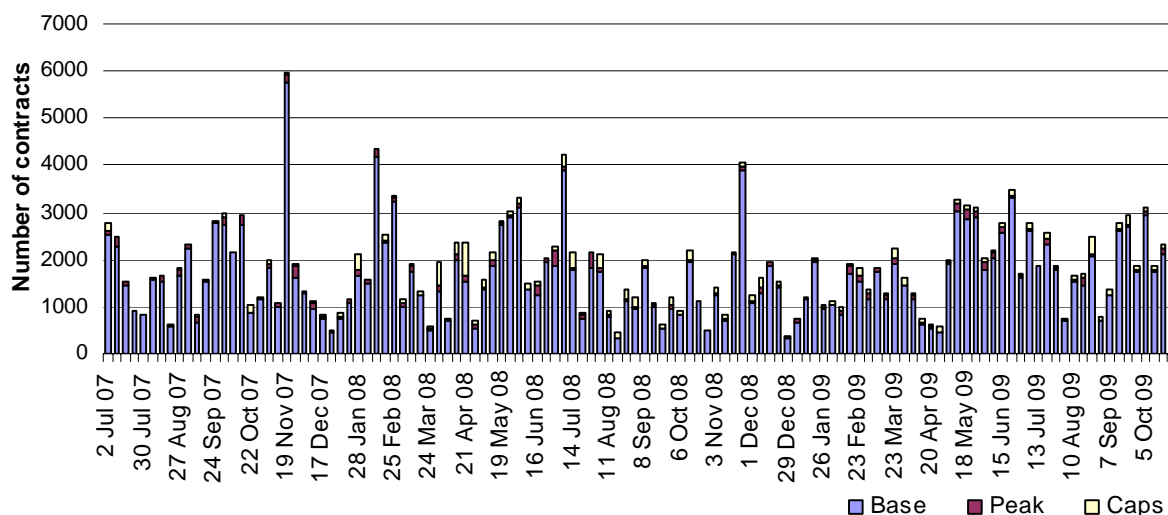
**Figure 3: \$300 cap contract prices (\$/MWh)**

	QLD		NSW		VIC		SA	
Q1 2010 (% Change)	23	0%	19	0%	24	0%	42	0%
2010 (% Change)	11	0%	11	2%	9	0%	14	0%

Source: d-cyphaTrade [www.d-cyphatrade.com.au](http://www.d-cyphatrade.com.au)  
There were no trades.

Figure 4 shows the weekly trading volumes for base, peak and cap contracts. The date represents the end of the trading week.

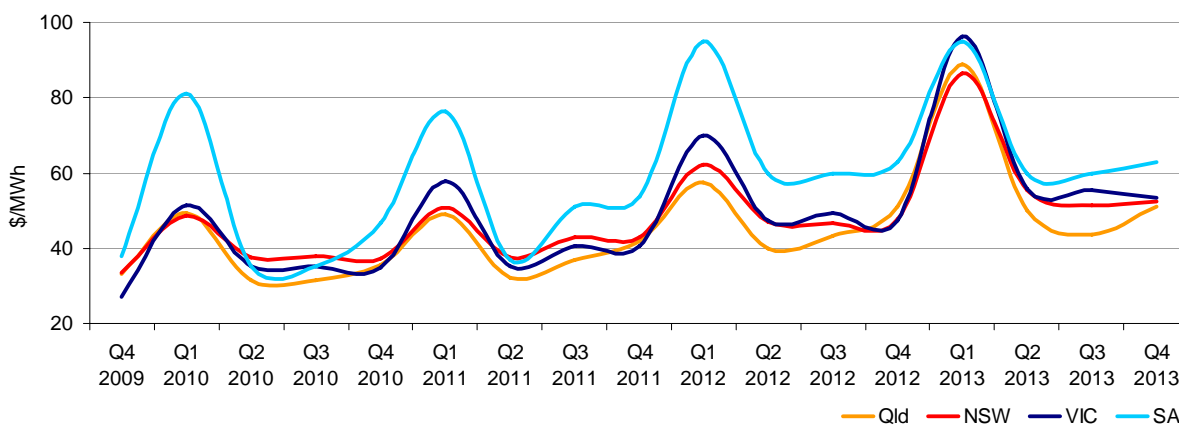
**Figure 4: Number of exchange traded contracts per week**



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

Figure 5 shows the prices for base contracts for each quarter for the next four financial years.

**Figure 5: Quarterly base future prices Q4 2009 – Q3 2013**

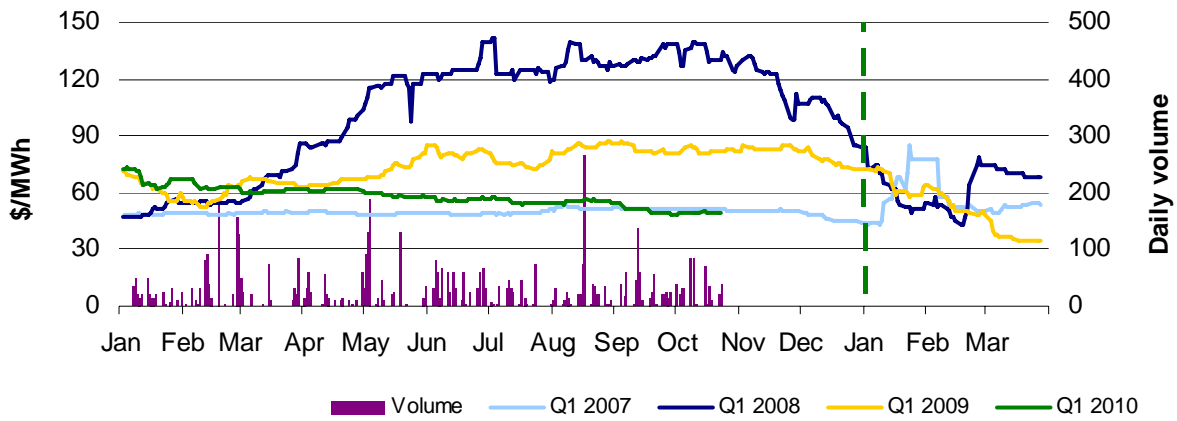


Source: d-cyphaTrade [www.d-cyphatrade.com.au](http://www.d-cyphatrade.com.au)

Figures 6-9 compare for each region the closing daily base contract prices for the first quarter of 2007, 2008, 2009 and 2010. Also shown is the daily volume of Q1 2010 base contracts traded. The vertical dashed line signifies the start of the Q1 period for which the contracts are being purchased. To understand the diagrams, the dark-blue line demonstrates that throughout the middle of 2007, the market had an expectation of very high spot prices in the first quarter of 2008.

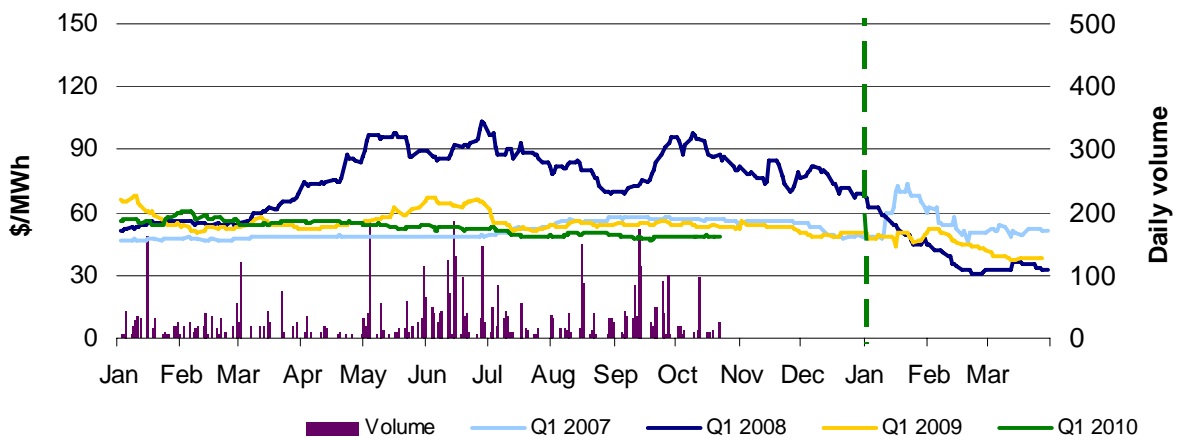
<sup>4</sup> Calculated on prices prior to rounding.

**Figure 6: Queensland Q1 2007, 2008, 2009 and 2010**



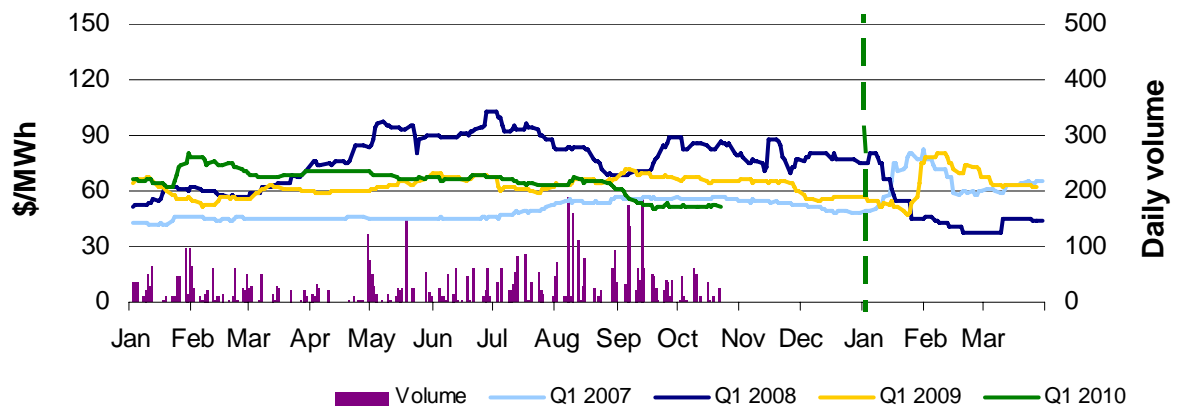
Source: d-cyphaTrade [www.d-cyphatrade.com.au](http://www.d-cyphatrade.com.au)

**Figure 7: New South Wales Q1 2007, 2008, 2009 and 2010**



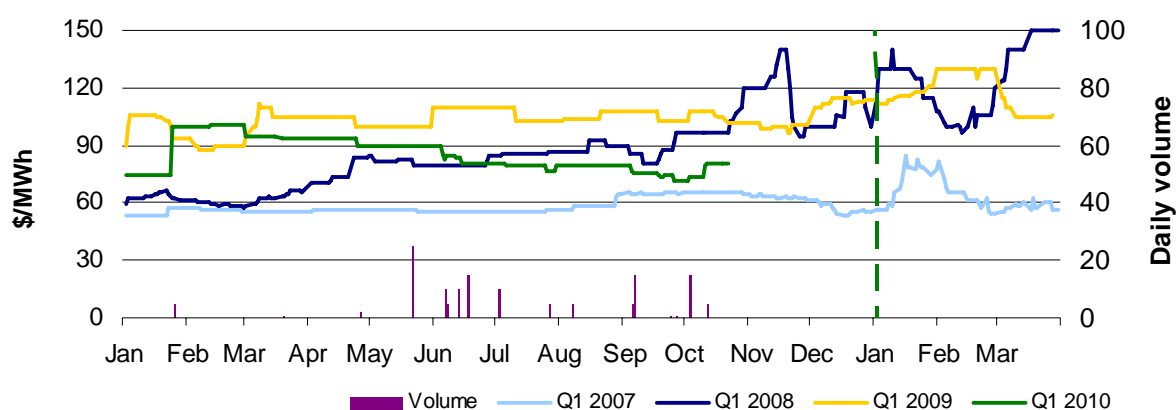
Source: d-cyphaTrade [www.d-cyphatrade.com.au](http://www.d-cyphatrade.com.au)

**Figure 8: Victoria Q1 2007, 2008, 2009 and 2010**



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

**Figure 9: South Australia Q1 2007, 2008, 2009 and 2010**



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

\*The daily volume scale for South Australia is smaller than for other regions to reflect the lower liquidity in the market in South Australia.

### Spot market forecasting variations

The AER is required under the National Electricity Rules to determine whether there is a significant variation between the forecast spot price published by the Australian Energy Market Operator (AEMO) and the actual spot price and, if there is a variation, state why the AER considers 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 25 trading intervals throughout the week where actual prices varied significantly from forecasts<sup>5</sup>. This compares to the weekly average in 2008 of 130 counts. Reasons for these variances are summarised in Figure 10<sup>6</sup>.

**Figure 10: Reasons for variations between forecast and actual prices**

	Availability	Demand	Network	Combination
% of total above forecast	6%	45%	0%	1%
% of total below forecast	44%	1%	0%	3%

### 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 11 shows the weekly change in total available capacity at various price levels during peak periods<sup>7</sup>. For example, in Queensland 182 MW more capacity was offered at prices under \$20/MWh this week compared to the previous week. Also included is the change in average demand during peak periods, for comparison.

<sup>5</sup> A trading interval is counted as having a variation if the actual price differs significantly from the forecast price either four or 12 hours ahead.

<sup>6</sup> The table summarises (as a percentage) the number of times when the actual price differs significantly from the forecast price four or 12 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 four and 12 hour ahead forecasts differ significantly from the actual price will be counted as two variations.

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

**Figure 11: Changes in available generation and average demand compared to the previous week during peak periods**

MW	<\$20/MWh	Between \$20 and \$50/MWh	Total availability	Change in average demand
Qld	182	-29	254	0
NSW	-91	223	145	63
VIC	485	-115	372	-60
SA	-121	-40	-147	28
TAS	-421	254	-38	-36
<b>TOTAL</b>	<b>34</b>	<b>293</b>	<b>586</b>	<b>-5</b>

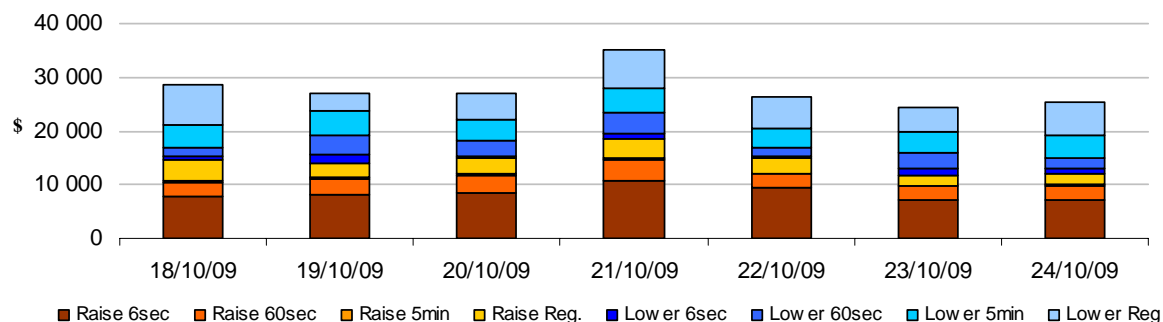
### Ancillary services market

The total cost of frequency control ancillary services (FCAS) on the mainland for the week was \$140 000 or less than one per cent of energy turnover on the mainland.

The total cost of FCAS in Tasmania for the week was \$54 000 or about one per cent of energy turnover in Tasmania.

Figure 12 shows the daily breakdown of cost for each FCAS for the NEM.

**Figure 12: Daily frequency control ancillary service cost**



# Detailed NEM Price and Demand Trends

for Weekly Market Analysis  
18 October - 24 October 2009



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

Financial year	QLD	NSW	VIC	SA	TAS
2009-10 (\$/MWh) (YTD)	26	28	25	27	24
2008-09 (\$/MWh) (YTD)	36	41	42	41	44
Change*	-27%	-30%	-39%	-34%	-45%
2008-09 (\$/MWh)	36	43	49	69	62

**Table 2: NEM turnover**

Financial year	NEM Turnover** (\$, billion)	Energy (TWh)
2009-10 (YTD)	\$1.734	65
2008-09	\$9.413	208
2007-08	\$11.125	208

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

Volume weighted average (\$/MWh)	QLD	NSW	VIC	SA	TAS	Turnover (\$, billion)
Jun-09	33	37	31	33	194	0.746
Jul-09	29	34	28	29	27	0.539
Aug-09	24	25	23	24	22	0.418
Sep-09	25	26	24	28	22	0.406
Oct-09 (MTD)	28	29	27	28	24	0.358
Q3 2009	26	28	25	27	24	1.377
Q3 2008	36	41	42	42	44	2.226
Change*	-29%	-31%	-41%	-36%	-46%	-38.16%

**Table 4: ASX energy futures contract prices at 26 October**

	QLD		NSW		VIC		SA	
Q1 2010	Base	Peak	Base	Peak	Base	Peak	Base	Peak
Price on 19 Oct (\$/MW)	49	83	49	80	52	90	81	145
Price on 26 Oct (\$/MW)	50	83	49	80	52	91	81	145
Open interest on 26 Oct	2743	140	2476	71	2850	215	77	0
Traded in the last week (MW)	108	15	55	15	79	25	0	0
Traded since 1 Jan 09 (MW)	5316	250	5278	113	5288	321	135	0
Settled price for Q1 09(\$/MW)	35	48	38	48	62	114	102	200

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

Comparison:	QLD	NSW	VIC	SA	TAS	NEM
August 09 with August 08						
MW Priced <\$20/MWh	-131	-261	-343	67	513	-155
MW Priced \$20 to \$50/MWh	47	140	-194	-58	251	187
September 09 with September 08						
MW Priced <\$20/MWh	-236	-1137	-194	6	507	-1054
MW Priced \$20 to \$50/MWh	-7	981	10	-82	90	991
October 09 with October 08 (MTD)						
MW Priced <\$20/MWh	-89	-346	171	75	271	82
MW Priced \$20 to \$50/MWh	-120	185	64	0	430	559

\*Note: These percentage changes are calculated on VWA prices prior to rounding

\*\* Estimated value