

# WEEKLY MARKET ANALYSIS



14 – 20 December 2008

## Summary

Average spot prices were \$23/MWh in Victoria and New South Wales and \$26/MWh in Queensland and South Australia. The average spot price in Tasmania was \$33/MWh.

## Spot market prices

Figure 1 sets out the volume weighted average prices for 14 December to 20 December and the financial year to date across the National Electricity Market. 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 14 – 20 December	26	23	23	26	33
Financial year to 20 December	38	47	39	38	45
% change from previous week*	-49	-9	-8	-4	-6
% change from year to date**	-33	-9	-26	-27	-20

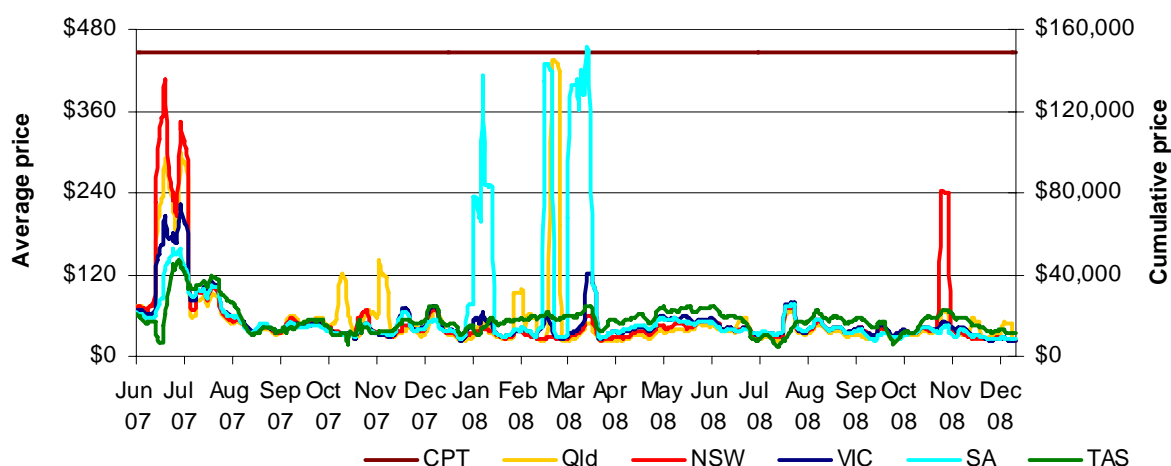
\*The percentage change between last week's average spot price and the average price for the previous week.

\*\*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 Cumulative Price Threshold (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 (SFE) as at close of trade on Monday 22 December. Figure 3 shows the base futures contract prices for the next three financial 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 2009-10	48	0%	48	0%	50	1%	57	0%
Financial 2010-11	61	3%	61	2%	63	1%	61	0%
Financial 2011-12	59	4%	50	0%	61	4%	61	2%
Three year average	56	3%	53	1%	58	2%	60	1%

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.

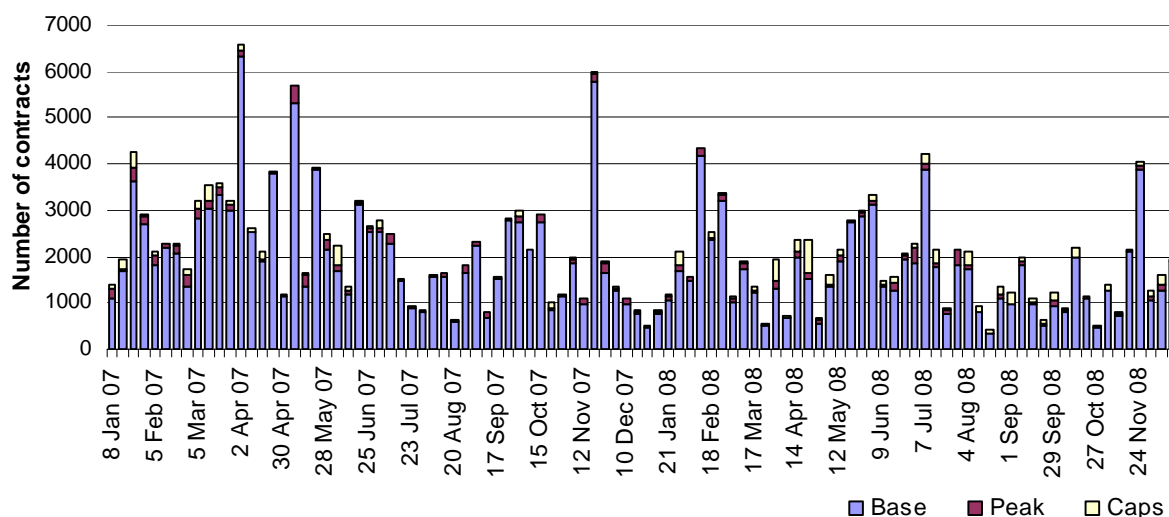
**Figure 4: \$300 cap contract prices (\$/MWh)**

	QLD		NSW		VIC		SA	
Q1 2009 price	40	0%	14	0%	18	-6%	75	0%
Calendar 2009	16	0%	9	0%	9	-3%	23	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**

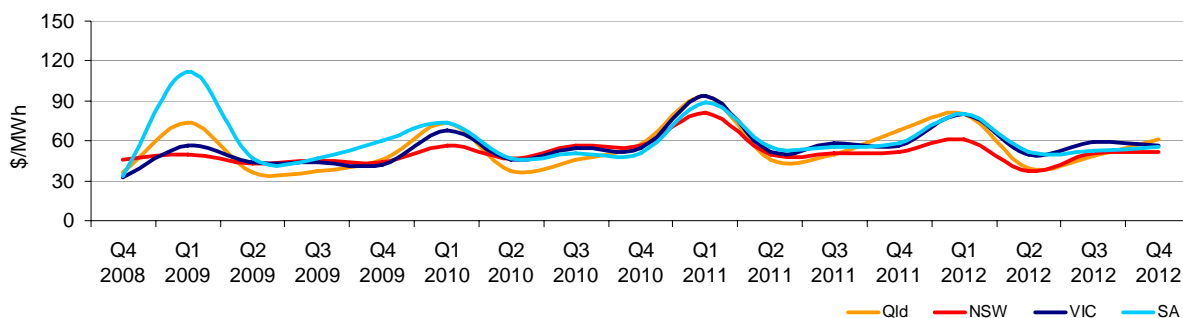


Source: d-cyphaTrade [www.d-cyphatrade.com.au](http://www.d-cyphatrade.com.au)

<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.

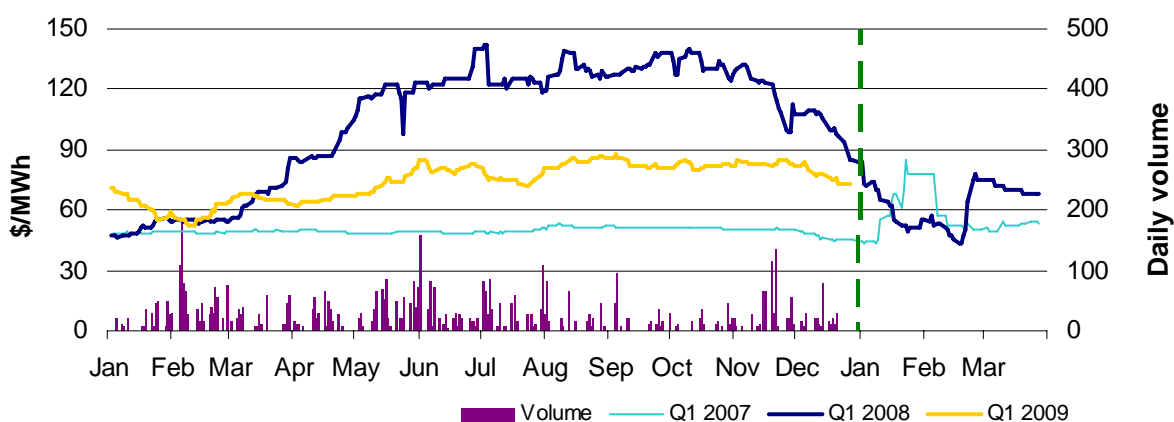
**Figure 6: Quarterly base future prices 2008 - 2012**



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

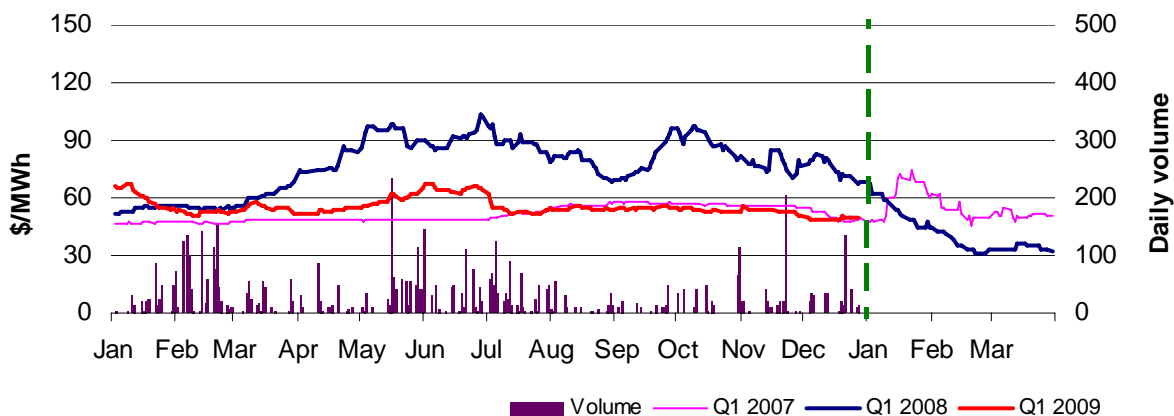
Figures 7-10 compare for each region the closing daily base contract prices for the first quarter of 2007, 2008 and 2009. Also shown is the daily volume of Q1 2009 base contracts traded. The vertical dashed line signifies the start of the Q1 period.

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



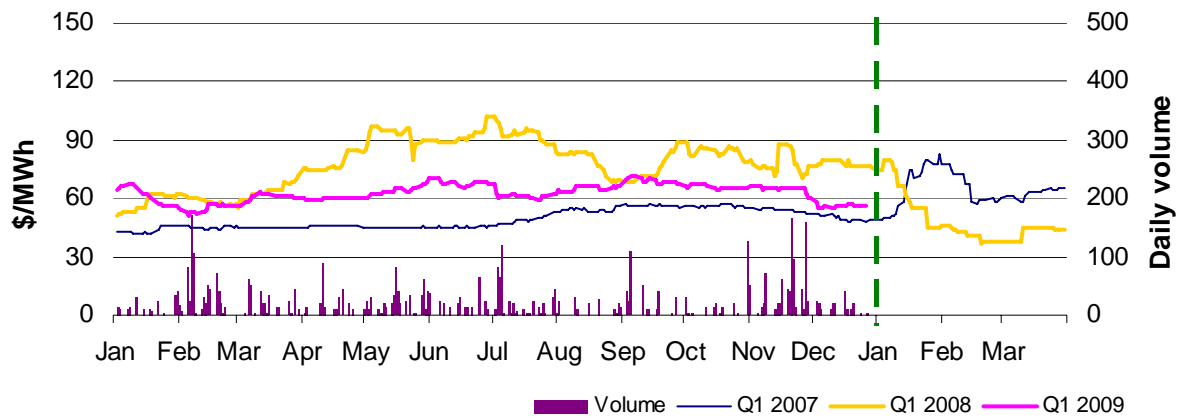
Source: d-cyphaTrade [www.d-cyphatrade.com.au](http://www.d-cyphatrade.com.au)

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



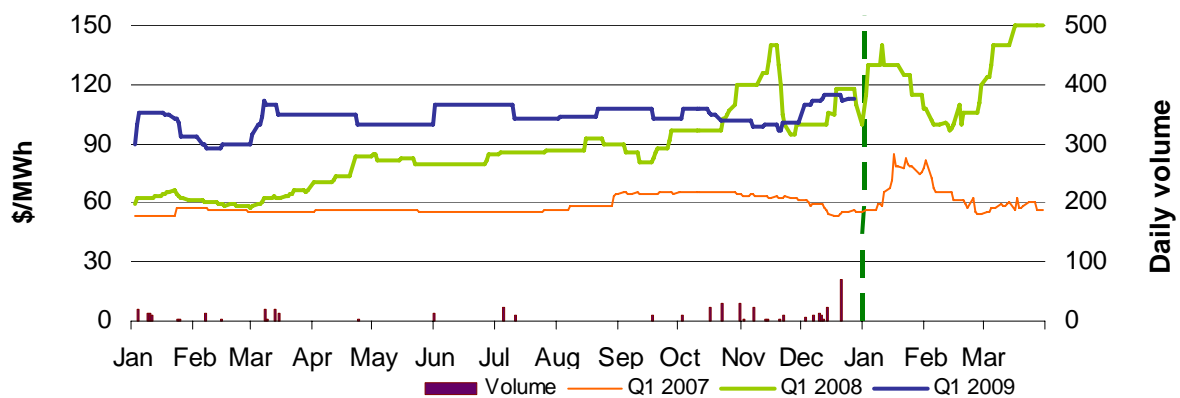
Source: d-cyphaTrade [www.d-cyphatrade.com.au](http://www.d-cyphatrade.com.au)

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



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

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



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

**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 NEMMCO and the actual spot price and, if there is a variation, 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 33 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**

	Availability	Demand	Network	Combination
% of total above forecast	0%	8%	0%	5%
% of total below forecast	87%	0%	0%	0%

<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 peak periods only<sup>4</sup>. For example, in Queensland 377 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.

**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	377	-15	345	136
New South Wales	414	-112	111	-66
Victoria	-84	-31	-377	-164
South Australia	-80	-50	-216	-101
Tasmania	-71	-12	110	23
Total	556	-220	-27	-172

## Ancillary services market

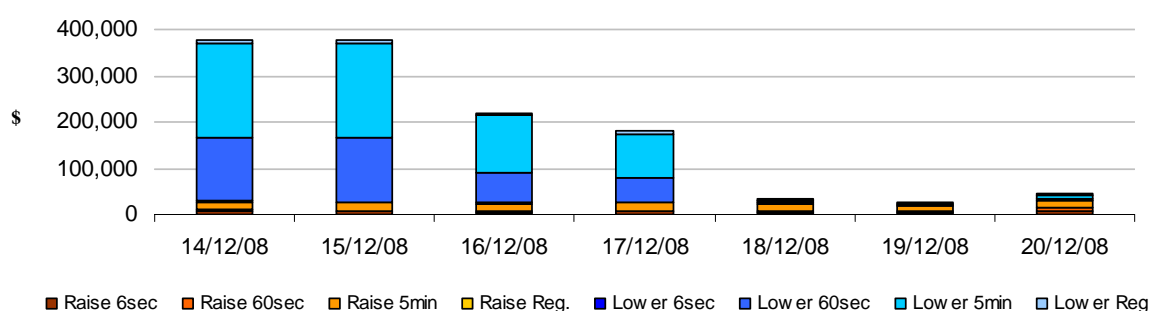
The total cost of frequency control ancillary services on the mainland for the week was \$201 000 or less than one per cent of turnover in the energy market.

The total cost of ancillary services in Tasmania for the week was \$1 060 000 or 17 per cent of turnover in the energy market in Tasmania. The step change in bidding strategy by Hydro Tasmania for lower 60 second services and lower five minute services in the previous week continued until Wednesday 17 December, when it further increased offer prices to \$880/MW for part of the day, again setting the price.

Prices returned to normal levels from Wednesday afternoon when services were able to be sourced from the mainland.

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

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



## Australian Energy Regulator December 2008

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

## Detailed Market Analysis



AUSTRALIAN ENERGY  
REGULATOR

14 – 20 December 2008

**Queensland:** There was one occasion where the spot price in Queensland was greater than three times the Queensland weekly average price of \$26/MWh.

### Sunday, 14 December

7:30 am	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	842.21	16.70	13.20
Demand (MW)	5741	5601	5591
Available capacity (MW)	10 120	10 092	10 359

Conditions at the time saw demand greater than forecast and available generation less than that forecast 12 hours ahead.

At 3.00 am CS Energy reduced the available capacity of Swanbank E by 212 MW, all of which was priced at less than zero. The rebid reason given was “Swan B1, Swan E bid for availability”. A short time later CS Energy rebid Collinsville unit one to extend its run, adding an extra 13 MW of capacity at low prices.

According to NEMMCO, a 30 per cent step change reduction in the rating of the Calvale to Wurdong 275 kV transmission line, near Gladstone, occurred for one dispatch interval at 7.25 am. This resulted in a step change in QNI and Directlink import limits of 1050 MW and 630 MW respectively. These limits—driven by the Q>>NIL\_855\_871 network constraint—were violated for that dispatch interval, and combined imports into Queensland decreased by 111 MW. In the following dispatch interval the line ratings increased to 15 per cent below that at 7.20 am.

The rating change also resulted in a number of lower-priced generators constrained off and higher-priced generators constrained on by the constraint and the price increase from \$16/MWh at 7.20 am to \$4975/MWh at 7.25 am. The price returned to \$19/MWh at 7.30 am.

There was no other significant rebidding.

# 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	38	47	39	38	45
2007-08 (\$/MWh) YTD	58	52	53	53	56
Change	-34%	-10%	-26%	-27%	-20%
2007-08 (\$/MWh)	58	44	51	101	57

**Table 2: NEM turnover**

Financial year	NEM Turnover* (\$, billion)	Energy (TWh)
2008-09 YTD	\$4.2	100
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)
Aug-08	37	42	-	42	44	56	0.79
Sep-08	32	37	-	38	34	46	0.61
Oct-08	43	94	-	41	37	47	1.05
Nov-08	40	32	-	36	34	51	0.60
Dec-08 MTD	38	26	-	25	27	36	0.34
Q3 2008	36	41	-	42	42	44	2.23
Q3 2007	56	59	-	60	62	65	3.17
Change	-35%	-31%	-	-30%	-31%	-32%	

**Table 4: ASX energy futures contract prices at 22 December**

	QLD		NSW		VIC		SA	
	Base	Peak	Base	Peak	Base	Peak	Base	Peak
Q1 2009								
Price on 15 Dec (\$/MW)	76	139	49	74	56	93	115	200
Price on 22 Dec (\$/MW)	73	136	50	77	57	93	112	200
Open interest on 22 Dec	2423	229	2681	171	2286	469	192	20
Traded in the last week (MW)	71	0	219	0	43	5	40	0
Traded since 1 Jan 08	5755	494	6032	215	4717	782	504	40
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
October 08 with October 07							
MW Priced <\$20	248	-230	-	-138	112	-356	-364
MW Priced \$20 to \$50	357	-325	-	150	45	-36	191
November 08 with November 07							
MW Priced <\$20	-175	391	-	26	4	-62	183
MW Priced \$20 to \$50	450	25	-	-41	10	-27	417
December 08 with December 07							
MW Priced <\$20	-157	515	-	729	-79	89	1097
MW Priced \$20 to \$50	343	458	-	-149	110	120	882

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