

# WEEKLY MARKET ANALYSIS



AUSTRALIAN ENERGY  
REGULATOR

24 February – 1 March 2008

## Summary

Average prices for the week were lower than for the previous week and for this time of the year as a result of reduced demand across the market.<sup>1</sup>

On Thursday morning, a network outage at Armidale led to loss of the Queensland to New South Wales and Directlink interconnectors. This caused separation of Queensland from the rest of the market for an hour and led to high prices for all frequency control ancillary services in Queensland – at a cost of more than \$4 million.

With respect to the financial markets, base Calendar 2010 prices in Queensland and Victoria increased by seven per cent and four per cent respectively late in the 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 24 February- 1 March	24	25	27	29	57
Financial year to 1 March	68	46	50	89	55
% change from previous week*	-96%	-11%	-49%	-96%	-4%
% change from year to date**	95%	17%	7%	77%	31%

\*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

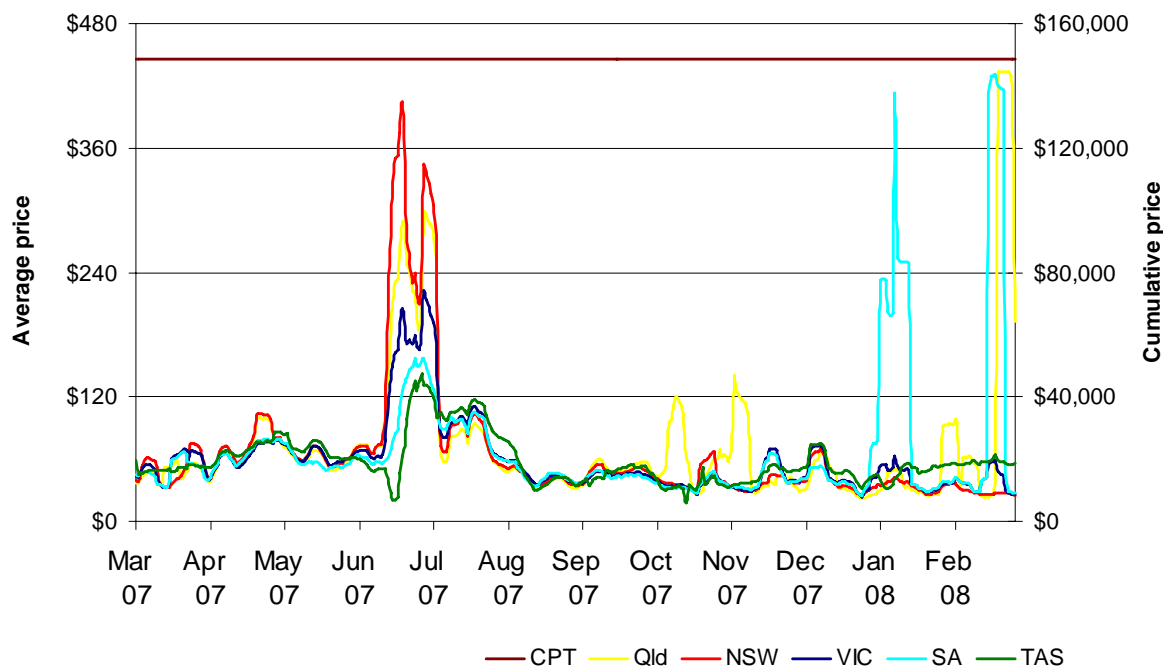
The AER provides further information if the spot price exceeds three times the weekly average. In addition, a report is prepared if the spot price exceeds \$5000/MWh.

No region recorded prices greater than three times the weekly average. Longer term market trends are attached in Appendix A.

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).

<sup>1</sup> Long term statistics are available at <http://www.aer.gov.au>

**Figure 2: 7 day rolling cumulative price and CPT**



**Financial market**

Figures 3 to 10 show futures contract<sup>2</sup> prices traded on the Sydney Futures Exchange as at close of trade on Monday 3 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	1%	40	1%	42	1%	70	7%
Calendar 2009	45	1%	46	1%	45	0%	59	2%
Calendar 2010	47	7%	53	3%	51	4%	50	0%
Three year average	47	3%	46	2%	46	2%	60	3%

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.

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

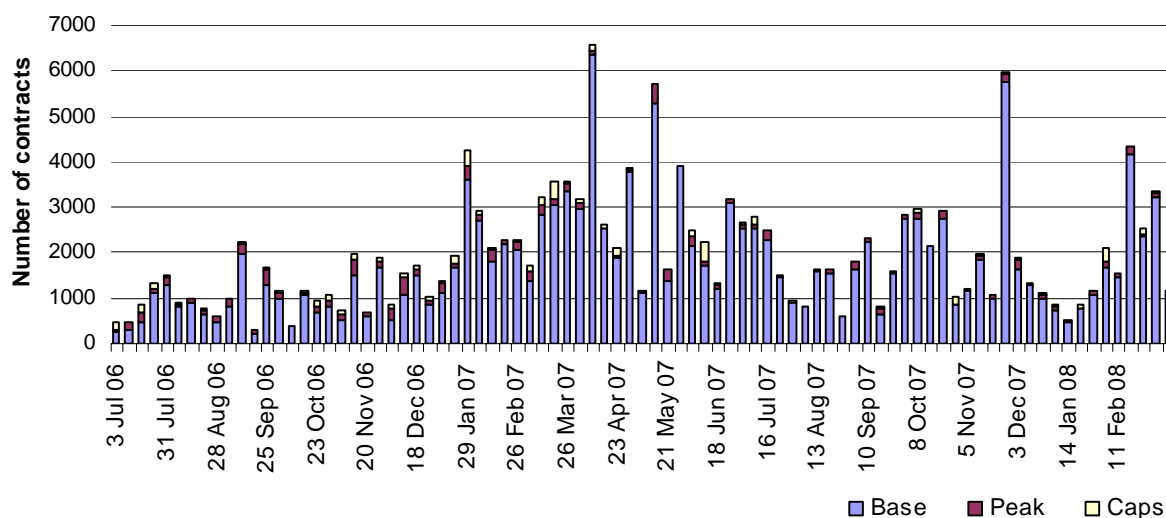
	QLD		NSW		VIC		SA	
Q1 2008 price	38	5%	2	100%	4	0%	75	24%
Calendar 2008	15	3%	5	6%	6	0%	26	24%

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

<sup>2</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 7am to 10pm Monday to Friday (excluding Public holidays) over the duration of the contract quarter.

Figure 5 shows the weekly trading volumes for base, peak and cap contracts.

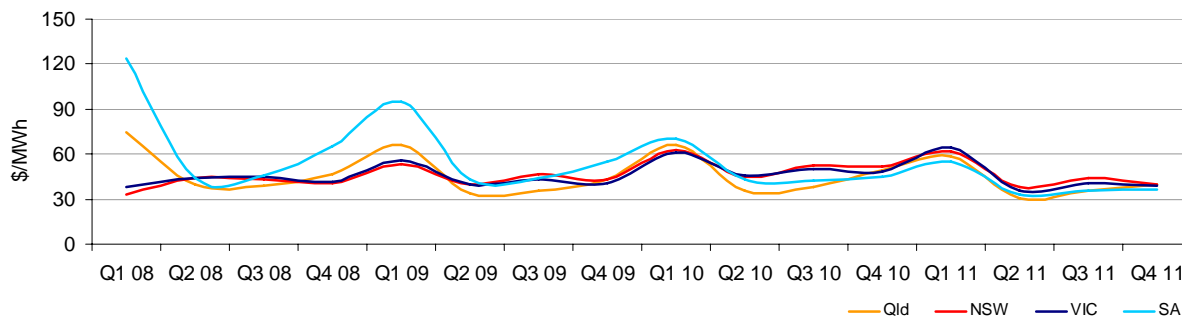
**Figure 5: Number of exchange traded contracts per week**



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

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

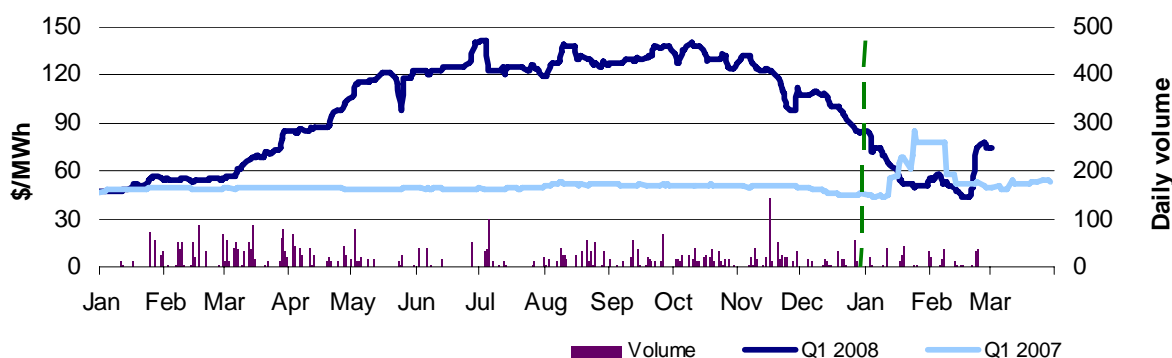
**Figure 6: quarterly base future prices 2008 - 2011**



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

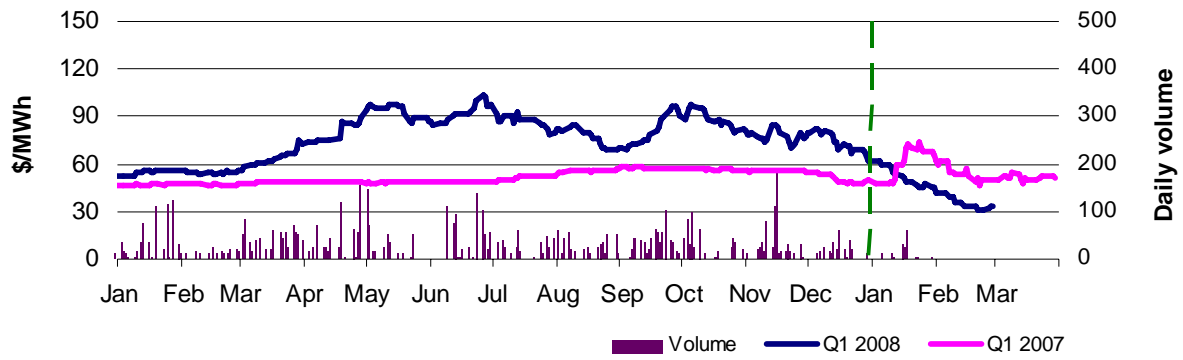
Figure 7-10 compares for each region the closing daily base contract price for the first quarter of 2007 against 2008 and also shows the daily volume of Q1 08 base contracts traded. The vertical dashed line signifies the start of the Q1 period.

**Figure 7: Queensland**



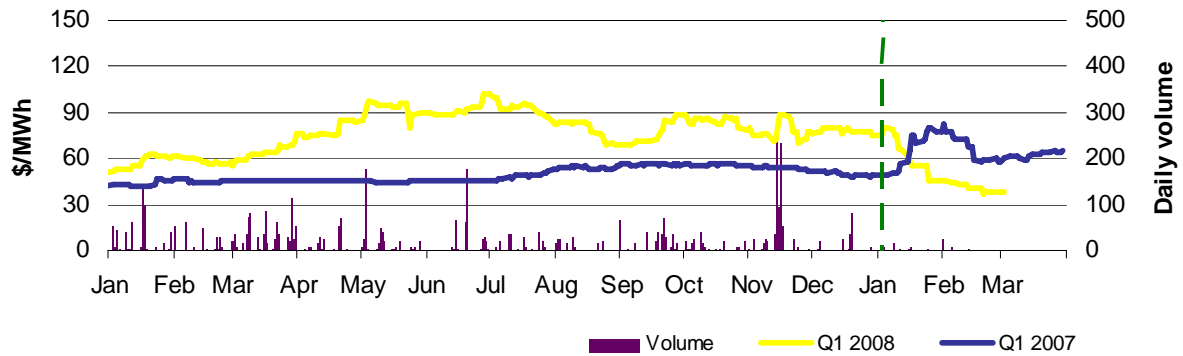
Source: d-cyphaTrade [www.d-cyphatrade.com.au](http://www.d-cyphatrade.com.au)

**Figure 8: New South Wales**



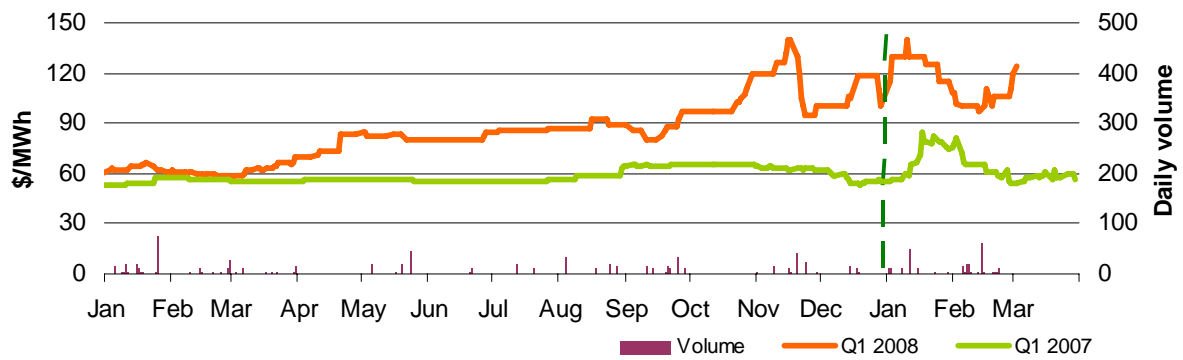
Source: d-cyphaTrade [www.d-cyphatrade.com.au](http://www.d-cyphatrade.com.au)

**Figure 9: Victoria**



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

**Figure 10: South Australia**



Source: d-cyphaTrade [www.d-cyphatrade.com.au](http://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 38 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**

	<b>Availability</b>	<b>Demand</b>	<b>Network</b>	<b>Combination</b>
Price is higher than forecast	12%	4%	12%	17%
Price is lower than forecast	0%	48%	3%	4%

## 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>3</sup>. For example, in Queensland 125 MW more 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**

<b>\$/MWh</b>	<b>&lt;20</b>	<b>Between 20 and 50</b>	<b>Total availability</b>	<b>Change in average demand</b>
Queensland	125	-15	75	-222
New South Wales	-166	301	-296	-385
Victoria	-360	-25	-440	-778
South Australia	-330	107	-351	-348
Tasmania	-217	-19	-146	30
Snowy	-19	-90	-169	11
Total	-967	259	-1,326	-1,691

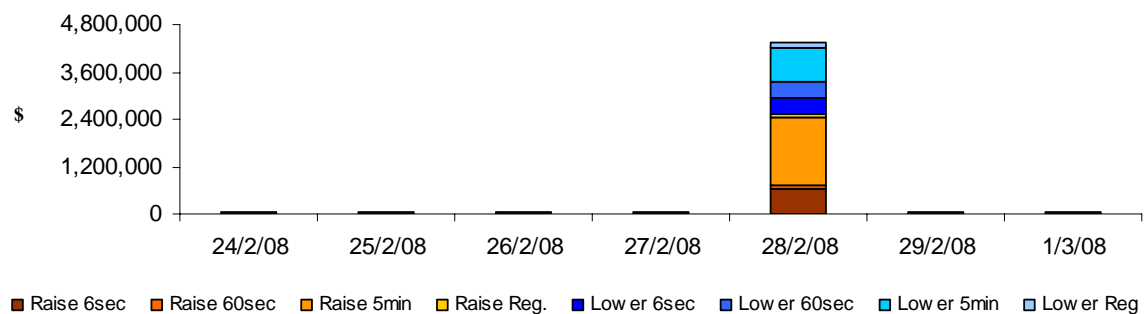
<sup>3</sup> Peak periods is defined as between trading intervals ending 7.30 am and 10 pm on weekdays, which aligns with the SFE contract definition.

## Ancillary services market

The total cost of ancillary services on the mainland for the week was \$4.6 million or 4.8 per cent of turnover in the energy market. On Thursday morning at around 6 am an unplanned outage of the Armidale No. 5 330kV busbar in New South Wales caused the opening of both interconnectors to New South Wales. Queensland was required to supply its own frequency control services for two and a half hours and this led to high prices for these services. The requirement for raise contingency services was driven by the output of the largest generator, Kogan Creek. At times there was insufficient supply to meet the requirements. At 7.53 am NEMMCO issued a notice seeking a market response to the shortfall. A combination of additional ancillary services availability and reduced output at Kogan Creek due to an unrelated coal supply problem saw ancillary services prices reduce to typical values by 8.30 am. The cost of these local ancillary services totalled \$4.3 million during this period.

The total cost of ancillary services in Tasmania for the week was \$110 000 or 1 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 March 2008

# Appendix A: 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	68	46	32	50	89	55
2006-07 (\$/MWh) YTD	35	39	27	46	50	42
Change (YTD)	96%	18%	20%	8%	77%	31%
2006-07 (\$/MWh)	57	67	38	61	59	51

**Table 2: NEM turnover**

Financial year	NEM Turnover* (\$, billion)	Energy (TWh)
2007-08 YTD	\$7.8	139
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)
Oct-07	68	43	27	37	36	36	0.80
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
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 3 March**

	QLD		NSW		VIC		SA	
	Base	Peak	Base	Peak	Base	Peak	Base	Peak
Q1 2008								
Price on 25 Feb (\$/MW)	75	105	31	45	38	62	106	210
Price on 04 Mar (\$/MW)	75	105	33	45	38	60	124	225
% increase since 1 March	36%	7%	-39%	-52%	-32%	-40%	117%	122%
Traded in the last week (MW)	15	14	1	0	0	1	0	0
Traded since 1 March	3629	397	5674	382	3908	632	744	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
December 07 with December 06							
MW Priced <\$20	-575	-1,685	25	-807	182	-41	-2901
MW Priced \$20 to \$50	-58	1,741	-519	134	-127	-175	996
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