

WEEKLY MARKET ANALYSIS



AUSTRALIAN ENERGY
REGULATOR

21 – 27 December 2008

Summary

Network constraint issues in Queensland led to a number of high price events and saw the average price increase to \$32/MWh. Average spot prices in the other regions were lower than the previous week due to reduced demand over the Christmas period, ranging from \$19/MWh in Victoria to \$27/MWh in Tasmania.

Spot market prices

Figure 1 sets out the volume weighted average prices for 21 December to 27 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 21 – 27 December	32	20	19	24	27
Financial year to 27 December	38	46	39	38	44
% change from previous week*	20%	-11%	-17%	-7%	-18%
% change from year to date**	-32%	-10%	-26%	-27%	-20%

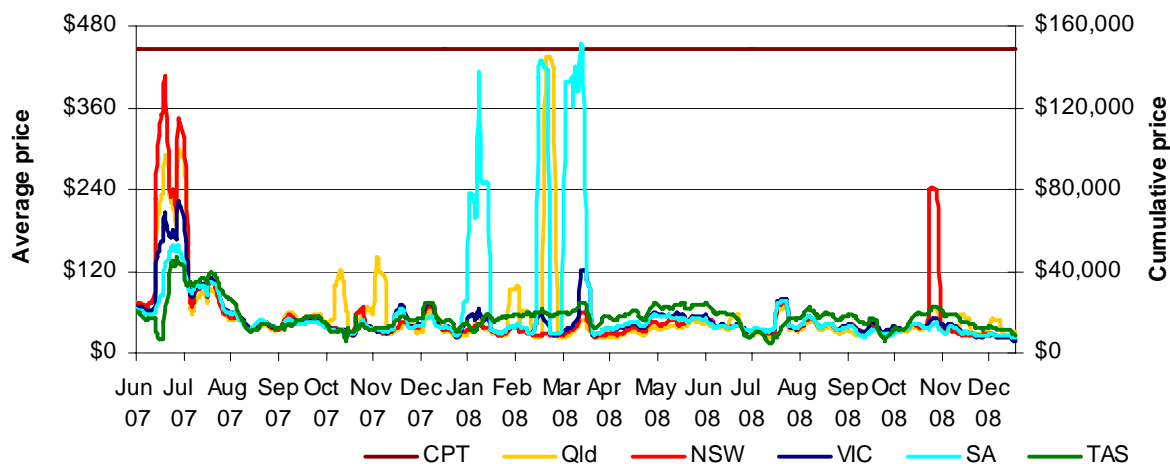
*The percentage change between last week's average spot price and the average price for the previous week.

**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 contract¹ prices traded on the Sydney Futures Exchange (SFE) as at close of trade on Monday 29 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	0%	57	0%
Financial 2010-11	61	0%	61	0%	63	0%	61	0%
Financial 2011-12	61	4%	61	21%*	64	5%	64	4%
Three year average	57	1%	57	7%	59	2%	61	2%

Source: d-cyphaTrade www.d-cyphatrade.com.au
* There were no trades.

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.

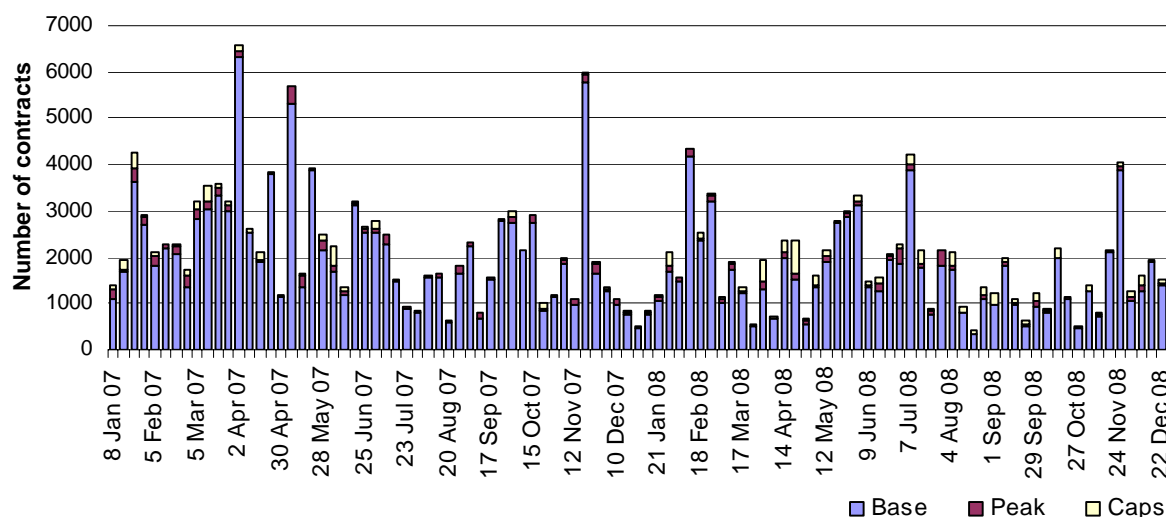
Figure 4: \$300 cap contract prices (\$/MWh)

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

Source: d-cyphaTrade 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

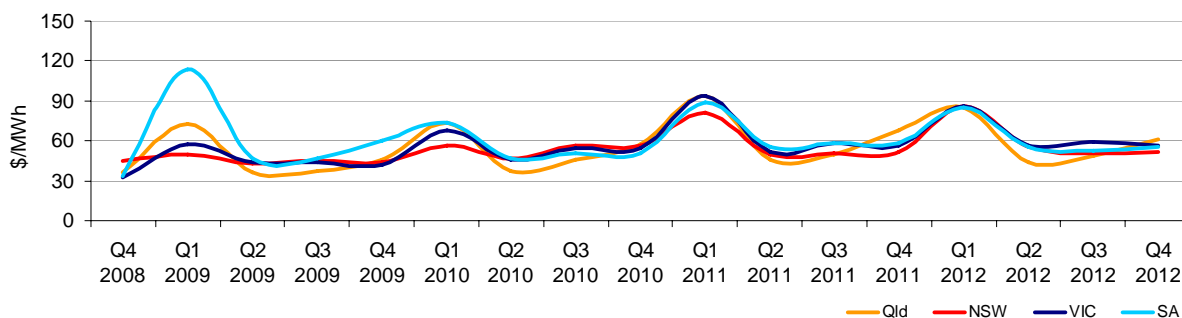


Source: d-cyphaTrade www.d-cyphatrade.com.au

¹ 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.

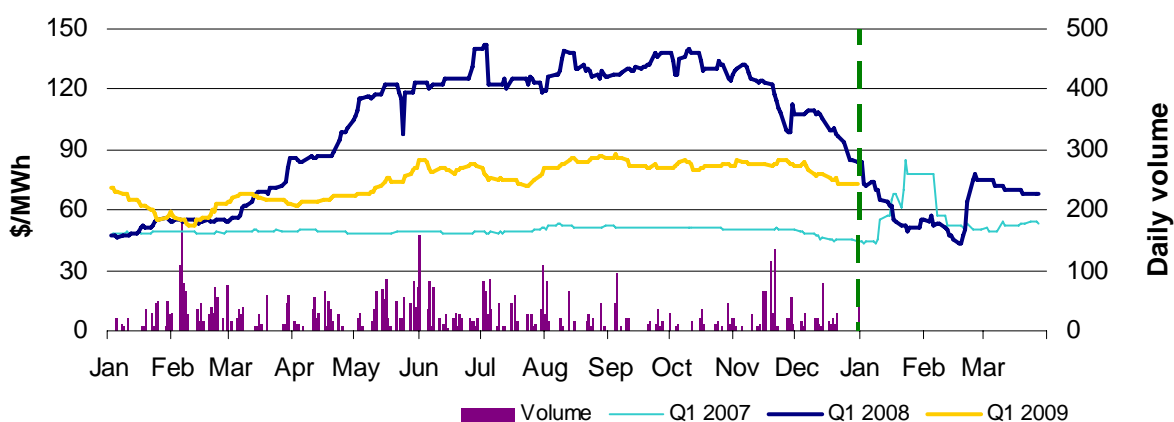
Figure 6: Quarterly base future prices 2008 - 2012



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

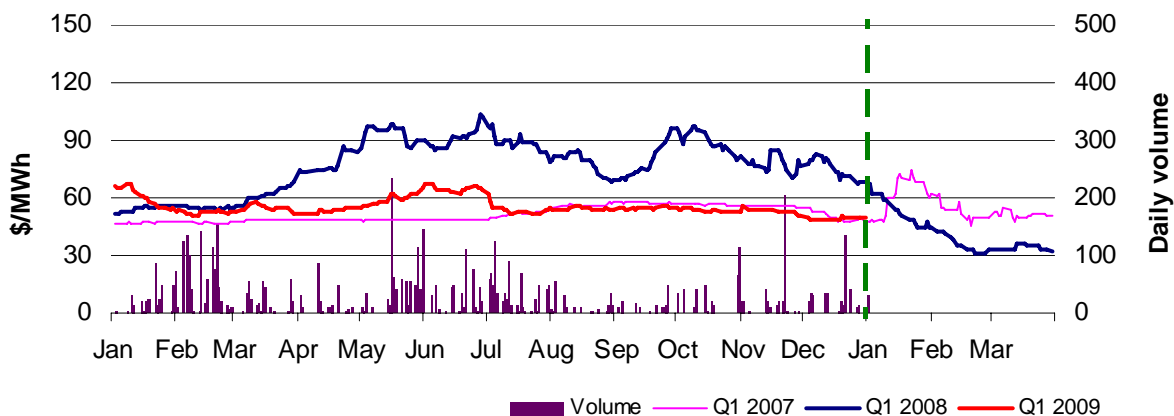
Figures 7-10 compare for each region the closing daily base contract prices for the first quarter of 2007, 2008 and 2009. Also shown is the daily volume of Q1 2009 base contracts traded. The vertical dashed line signifies the start of the Q1 period.

Figure 7: Queensland Q1 2007, 2008 and 2009



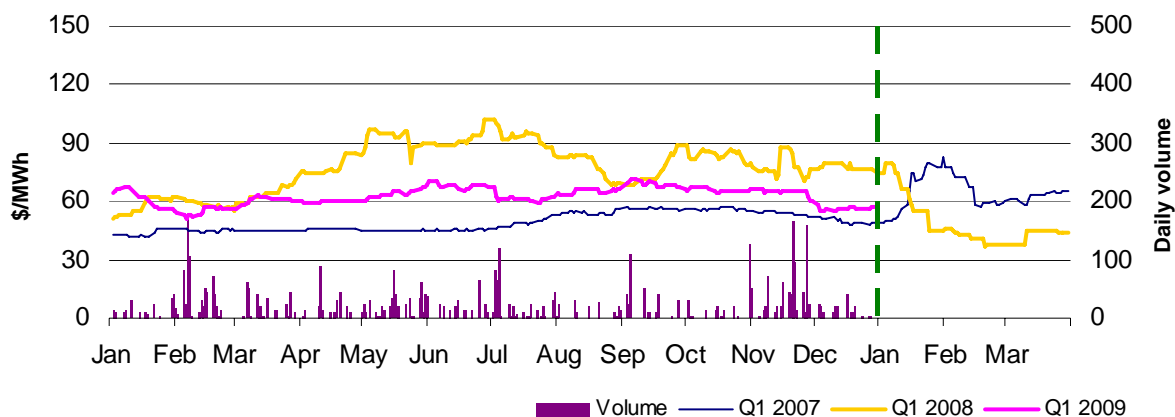
Source: d-cyphaTrade www.d-cyphatrade.com.au

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



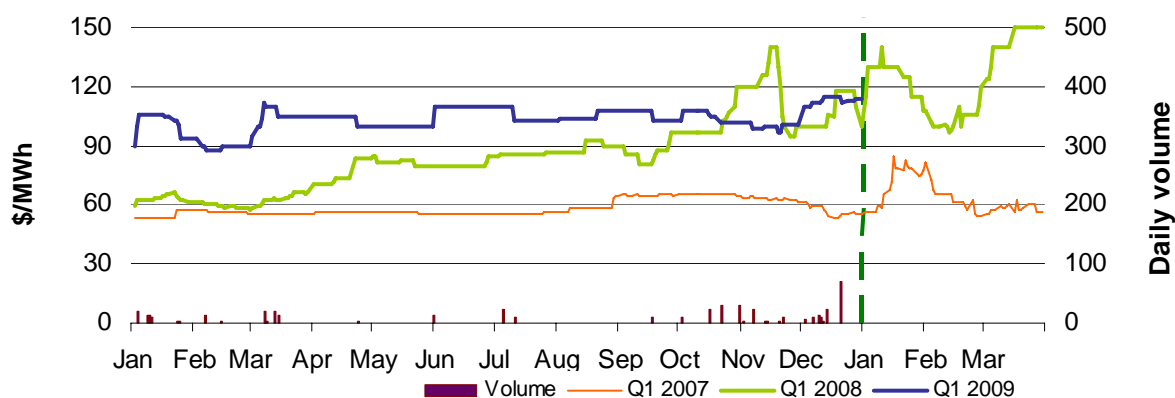
Source: d-cyphaTrade www.d-cyphatrade.com.au

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 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 36 trading intervals where actual prices significantly varied from forecasts² throughout the week. This compares to the weekly average in 2007 of 125 counts. Reasons for these variances are summarised in Figure 11³.

Figure 11: Reasons for variations between forecast and actual prices

	Availability	Demand	Network	Combination
% of total above forecast	0%	30%	6%	3%
% of total below forecast	61%	1%	0%	0%

² 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.

³ 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 only⁴. For example, in Queensland 262 MW less 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

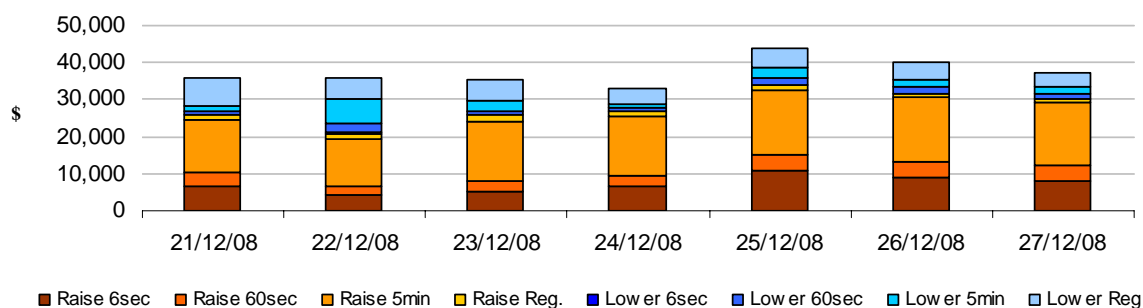
\$/MWh	<20	Between 20 and 50	Total availability	Change in average demand
Queensland	-262	-117	-461	-1031
New South Wales	-784	8	-205	-1038
Victoria	337	-48	818	-479
South Australia	-214	175	-39	-60
Tasmania	-117	94	71	-56
Total	-1,040	112	184	-2,664

Ancillary services market

The total cost of frequency control ancillary services on the mainland for the week was \$218 000 or less than one per cent of turnover in the energy market.

The total cost of ancillary services in Tasmania for the week was \$44 000 or less than one per cent of turnover in the energy market in Tasmania. 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



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

Detailed Market Analysis



21 – 27 December 2008

Queensland: There were three occasions where the spot price in Queensland was greater than three times the Queensland weekly average price of \$32/MWh.

Sunday, 21 December

10:30 am	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	337.75	21.69	21.33
Demand (MW)	6202	6444	6309
Available capacity (MW)	9656	9935	9912

Conditions at the time saw demand and available capacity lower than forecast.

From early in the morning a system normal constraint that avoids overloading of the Calvale to Wurdong (871) 275kV line, near Gladstone, on the trip of the Calvale to Stanwell (855) 275kV line was forcing flow counter-price across QNI and Terranora into New South Wales. This constraint also resulted in a number of lower-priced generators constrained off and higher-priced generators constrained on causing some generators to be dispatched out of merit order.

At 9.28 am in response to the dispatch of its plant out of merit order, Stanwell Corporation reduced available capacity across its portfolio by a total of 1175 MW, the majority of which was priced below \$50/MWh. The reason given was “AVOID UNECONOMIC OPERATION::CHANGE AVAILABILITY”. This rebid was first effective for the 10.05 am dispatch interval and the dispatch price spiked from \$22/MWh to \$1933/MWh at this time. At 10.03 am, effective 10.10 am, Stanwell Corporation reversed the 9.28 am rebid with the reason given “PRICE MATERIALLY GREATER THAN PREDISP::CHANGE MW DISTRIB” and prices then returned to previous levels.

There was no other significant rebidding.

Wednesday, 24 December

9:00 am	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	1680.95	22.54	22.38
Demand (MW)	6674	6602	6603
Available capacity (MW)	9824	9891	9795

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

According to NEMMCO, Powerlink provided a step change reduction in the rating of the Calvale to Wurdong 275 kV transmission line, near Gladstone, which NEMMCO applied over two dispatch intervals at 8.30 am and 8.35 am. At 8.35 am the relevant system normal constraint, which had been binding for two hours, was violated as the network limitation could not be met by generators in Queensland. The rating change also resulted in a number of

lower-priced generators being constrained off and higher-priced generators constrained on by the constraint and the price increase from \$23/MWh at 8.25 am to \$74/MWh at 8.30 am and to the price cap at 8.35 am.

Powerlink provided NEMMCO with an increased rating which applied from the 8.40 am dispatch interval causing the constraint to stop binding and the price to return to previous levels.

There was no significant rebidding.

Thursday, 25 December

5:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	1681.66	18.09	21.32
Demand (MW)	5720	5758	6083
Available capacity (MW)	9643	9643	9855

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

According to NEMMCO, Powerlink provided a step change reduction in the rating of the Calvale to Stanwell 275 kV transmission line, near Gladstone. In response, NEMMCO invoked a new network constraint, to manage the flow on the Calvale to Stanwell line on the trip of the Calvale to Wurdong line. The new constraint was violated at 5.25 pm, the first dispatch interval it was invoked.

This constraint forced counter-priced flows into New South Wales and also resulted in a number of lower-priced generators being constrained off and higher-priced generators constrained on and the price increase from \$18/MWh at 5.20 pm to the price cap at 5.25 pm. The price returned to previous levels at 5.30 pm.

There was no 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	46	39	38	44
2007-08 (\$/MWh) YTD	57	51	52	52	55
Change	-33%	-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	\$4.3	104
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	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	37	25	24	26	34	0.42
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 29 December

	QLD		NSW		VIC		SA	
	Base	Peak	Base	Peak	Base	Peak	Base	Peak
Q1 2009								
Price on 22 Dec (\$/MW)	73	136	50	77	57	93	112	200
Price on 29 Dec (\$/MW)	73	134	50	77	57	93	114	200
Open interest on 29 Dec	2433	229	2681	181	2291	469	262	20
Traded in the last week (MW)	55	0	45	15	10	0	10	0
Traded since 1 Jan 08	5810	494	6077	230	4727	782	514	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	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