

WEEKLY ELECTRICITY MARKET ANALYSIS



AUSTRALIAN ENERGY
REGULATOR

21 – 27 March 2010

Summary

Weekly average spot prices ranged from \$23/MWh in Victoria to \$34/MWh in New South Wales.

Spot market prices

Figure 1 sets out the volume weighted average prices for the week 21 March to 27 March 2010 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
Average price for 21 – 27 March 2010	24	34	23	24	26
% change from previous week*	4	24	-17	-18	-14
09/10 financial YTD	43	60	40	100	27
% change from 08/09 financial YTD**	12	33	-26	25	-43

*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.

The AER provides further information if the spot price exceeds three times the weekly average and is above \$250/MWh. Details of these events are attached in Appendix A. Longer term market trends are attached in Appendix B¹.

Financial markets

Figures 2 to 9 show futures contract² prices traded on the Sydney Futures Exchange (SFE) as at close of trade on Monday 29 March 2010. Figure 2 shows the base futures contract prices for the next three calendar years, and the three year average. Also shown are percentage changes³ compared to the previous week.

¹ 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 -> Monitoring, reporting and enforcement -> Electricity market reports -> Long-term analysis.

² 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.

³ Calculated on prices prior to rounding.

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

	QLD		NSW		VIC		SA	
Calendar Year 2010	32	-1%	38	0%	36	-2%	48	0%
Calendar Year 2011	35*	-1%	42*	0%	39*	-2%	45	0%
Calendar Year 2012	45	0%	49	0%	47	-4%	69	0%
Three year average	37	-1%	43	0%	41	-3%	54	0%

Source: d-cyphaTrade www.d-cyphatrade.com.au
 * denotes trades in the product.

Figure 3 shows the \$300 cap contract price for the first quarter of 2010 and the 2010 calendar year and the percentage change⁴ from the previous week.

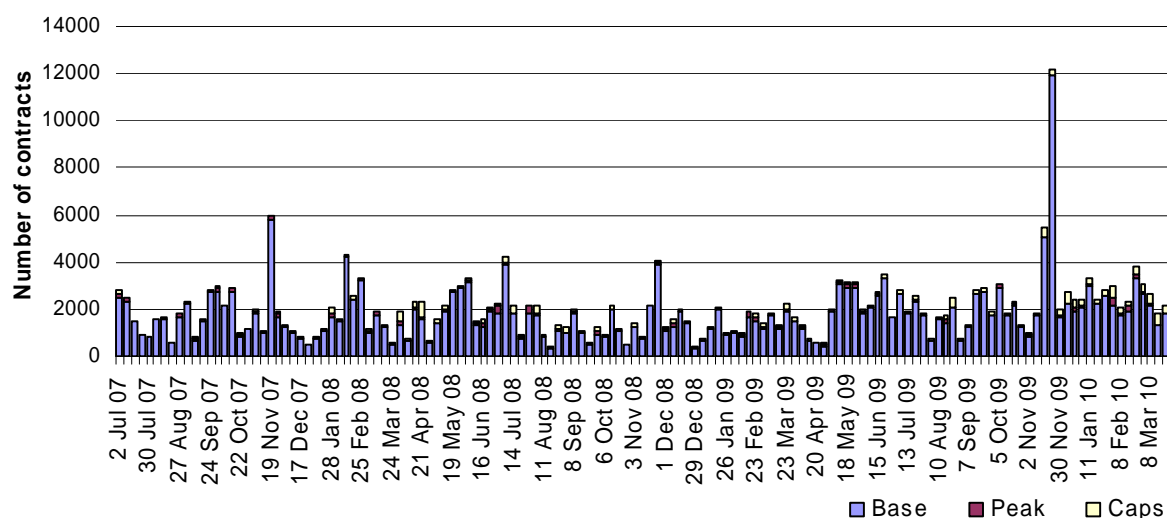
Figure 3: \$300 cap contract prices (\$/MWh)

	QLD		NSW		VIC		SA	
Q1 2010 (% Change)	13	0%	14*	-3%	23*	-1%	55	-11%
2010 (% Change)	6	0%	9	-1%	8	-4%	19	-8%

Source: d-cyphaTrade www.d-cyphatrade.com.au
 * denotes trades in the product.

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

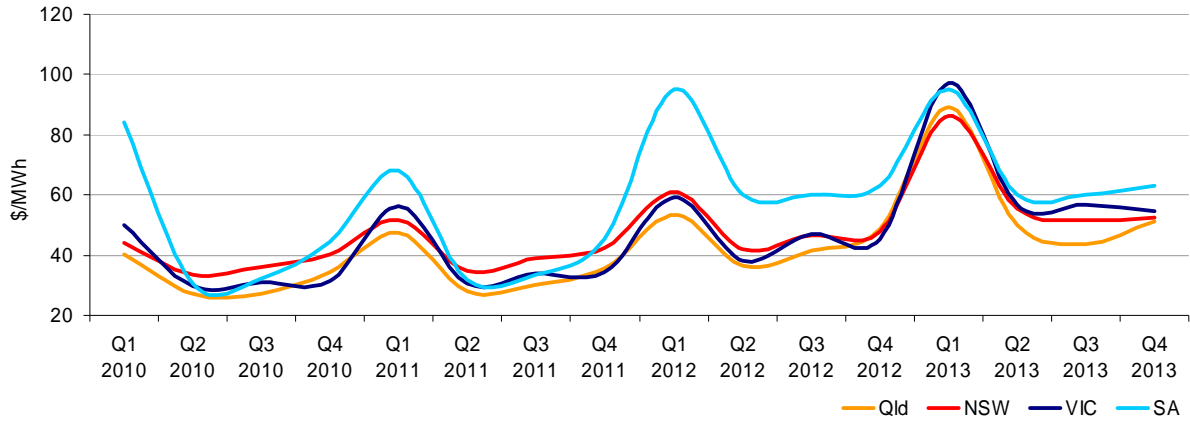


Source: d-cyphaTrade www.d-cyphatrade.com.au

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

⁴ Calculated on prices prior to rounding.

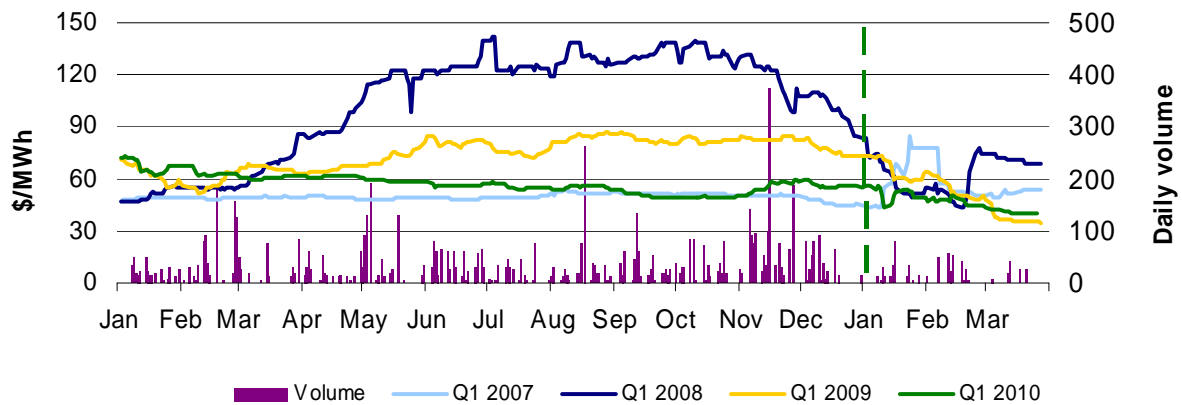
Figure 5: Quarterly base future prices Q1 2010 – Q4 2013



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

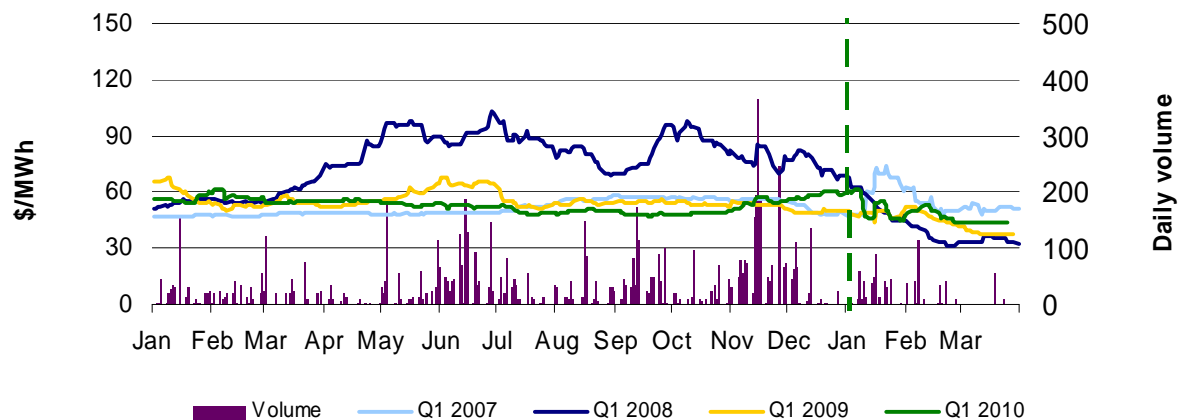
Figures 6-9 compare for each region the closing daily base contract prices for the first quarter of 2007, 2008, 2009 and 2010. Also shown is the daily volume of Q1 2010 base contracts traded. The vertical dashed line signifies the start of the Q1 period for which the contracts are being purchased. To 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.

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



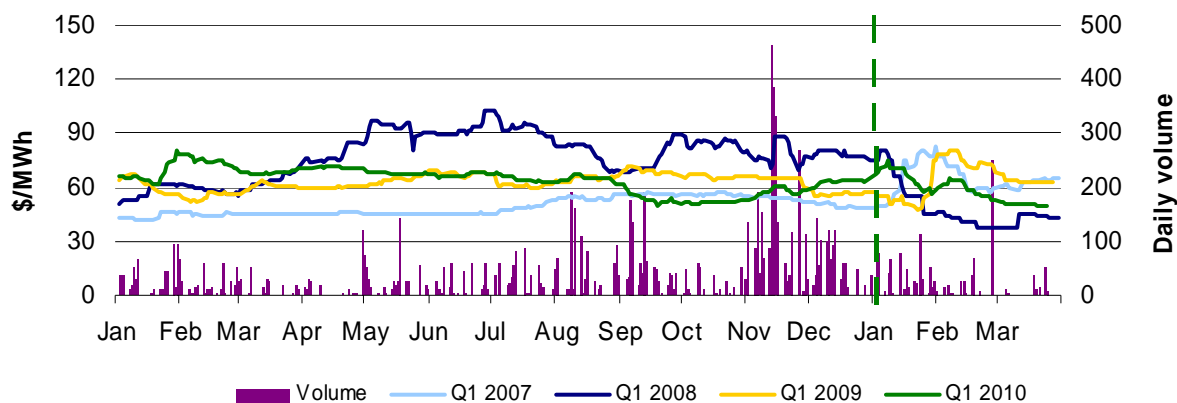
Source: d-cyphaTrade www.d-cyphatrade.com.au

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



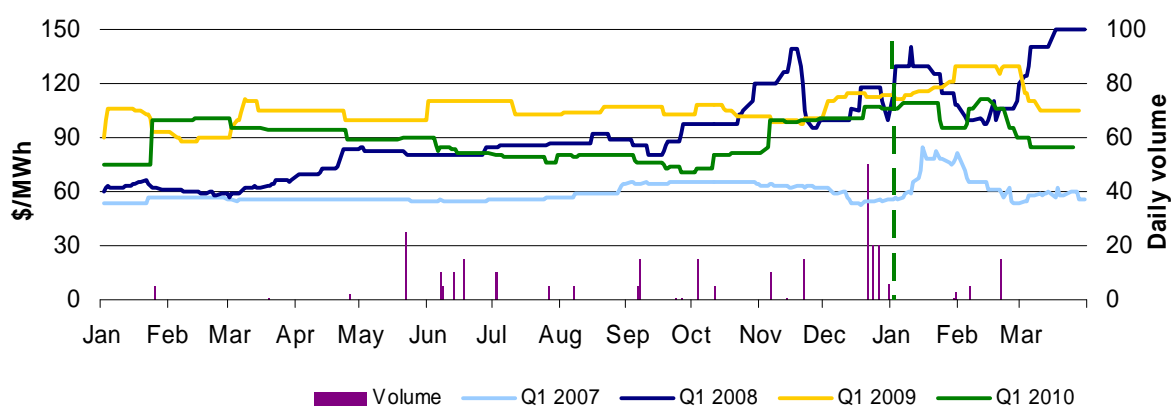
Source: d-cyphaTrade www.d-cyphatrade.com.au

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



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

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



Source: d-cyphaTrade 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 92 trading intervals throughout the week where actual prices varied significantly from forecasts⁵. This compares to the weekly average in 2009 of 103 counts. Reasons for these variances are summarised in Figure 10⁶.

⁵ 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.

⁶ 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.

Figure 10: Reasons for variations between forecast and actual prices

	Availability	Demand	Network	Combination
% of total above forecast	0	9	0	4
% of total below forecast	68	6	0	13

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 periods⁷. For example, in Queensland 213 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 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	-213	-48	-343	106
NSW	611	-458	-404	279
VIC	222	-112	8	-643
SA	-227	111	-115	-318
TAS	78	245	91	-15
TOTAL	471	-262	-763	-591

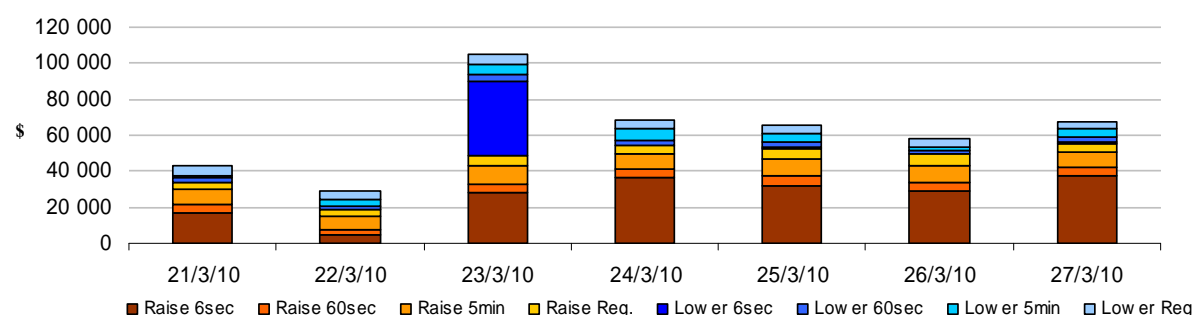
Ancillary services market

The total cost of frequency control ancillary services (FCAS) on the mainland for the week was \$214 000 or less than one per cent of energy turnover on the mainland.

The total cost of FCAS in Tasmania for the week was \$223 000 or close to five per cent of energy turnover in Tasmania. On Tuesday at around 9.35 am Basslink tripped from 470 MW into Tasmania. The resultant interaction of the Energy and FCAS markets saw the five minute price of lower 6 second services increase from \$0.09/MW at 9.35 am to \$2647/MW at 9.40 am.

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

Figure 12: Daily frequency control ancillary service cost



Australian Energy Regulator May 2010

⁷ A 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 March 2010

New South Wales: There were two occasions where the spot price in New South Wales was greater than three times the New South Wales weekly average price of \$34/MWh and above \$250/MWh.

Friday, 26 March

12.30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	483.67	44.28	44.28
Demand (MW)	10 979	10 821	10 831
Available capacity (MW)	11 498	11 674	11 674
1 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	1835.69	44.33	44.28
Demand (MW)	11 118	10 876	10 882
Available capacity (MW)	12 328	11 674	11 674

Conditions at the time saw demand up to 242 MW higher than forecast. Available capacity was 176 MW lower than forecast four hours ahead for the 12.30 pm trading interval and 654 MW higher than forecast for the 1 pm trading interval.

The dispatch prices during the 12.30 pm and 1 pm trading intervals were volatile, ranging from \$21/MWh to \$9900/MWh.

At 8.41 am, effective from 12.05 pm, Macquarie Generation reduced the available capacity of Liddell Power Station unit two by 180 MW (all of which was priced below \$25/MWh). The reason given was “0835 feed pump limit ongoing”.

At 12.20 pm, effective for the 1 pm and 1.30 pm trading intervals, Snowy increased the available capacity of Tumut Three by 500 MW (all of which was priced below zero). The reason given was “13:19 M Demand hghr thn fcast: bandshift”. At 12.39 pm, effective from 12.45 pm, another 90 MW of capacity was made available at Tumut Three (all of which was priced below zero). The reason given was “13::38:M Manage unexptd V-NSW const:band shift dwn” which was later corrected to “13:51:P:Bid error update plant availability”.

At 12.37 pm, effective from 12.45 pm, Eraring Energy rebid 200 MW of available capacity at Eraring units one and three from prices below \$50/MWh to above \$9700/MWh. The reason given was “1232A Actual dispatch prices much higher than 1200 PD prices”. This resulted in the five minute price increasing from \$488/MWh at 12.40 pm to \$9900/MWh at 12.45 pm.

Over three rebids at 12.32 pm (effective at 12.40 pm), 12.41 pm and 12.43 pm, (effective at 12.50 pm), Delta Electricity increased the available capacity at its Colongra Power Station by a total of 489 MW (all of which was priced below zero). The reasons related to interconnector constraints.

There was no other significant rebidding.

A constraint (invoked to manage a planned outage on the Koolkhan to Lismore transmission line) limited imports (into New South Wales) to around 100 MW across the Directlink interconnector from 10.40 am to 3.10 pm.

At 12.20 pm a constraint (used to manage the outage of the Dapto to Marulun line) bound causing a significant reduction on the import limits into New South Wales across the QNI and VIC-NSW interconnectors. Limits across both the QNI and VIC-NSW interconnectors changed direction from flows into New South Wales (up to a total of 1218 MW) to flows out of New South Wales (by up to a total of 724 MW).

Detailed NEM Price and Demand Trends

for Weekly Market Analysis
21 March - 27 March 2010



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

Financial year	QLD	NSW	VIC	SA	TAS
2009-10 (\$/MWh) (YTD)	43	60	40	100	27
2008-09 (\$/MWh) (YTD)	38	45	54	80	47
Change*	12%	33%	-26%	25%	-43%
2008-09 (\$/MWh)	36	43	49	69	62

Table 2: NEM turnover

Financial year	NEM Turnover** (\$, billion)	Energy (TWh)
2009-10 (YTD)	\$7.892	153
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)
Nov-09	99	138	36	325	34	1.924
Dec-09	34	130	25	26	32	1.066
Jan-10	67	63	88	160	30	1.336
Feb-10	45	66	90	213	23	1.235
Mar-10 (MTD)	25	27	24	25	27	0.389
Q4 2009	53	100	29	134	31	3.555
Q4 2008	39	51	34	32	44	2.133
Change*	35%	97%	-13%	312%	-30%	66.66%

Table 4: ASX energy futures contract prices at 29 March

	QLD		NSW		VIC		SA	
Q1 2010	Base	Peak	Base	Peak	Base	Peak	Base	Peak
Price on 22 Mar (\$/MW)	40	66	44	68	51	90	85	185
Price on 29 Mar (\$/MW)	40	66	44	68	50	89	84	185
Open interest on 29 Mar	3034	200	3543	177	3888	275	169	30
Traded in the last week (MW)	25	0	65	0	116	0	0	0
Traded since 1 Jan 09 (MW)	8022	350	8638	228	10592	613	281	20
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
January 10 with January 09						
MW Priced <\$20/MWh	808	-25	168	179	-168	961
MW Priced \$20 to \$50/MWh	-603	47	-138	45	799	150
February 10 with February 09						
MW Priced <\$20/MWh	1044	-637	26	311	100	844
MW Priced \$20 to \$50/MWh	-588	696	-285	160	673	655
March 10 with March 09						
MW Priced <\$20/MWh	1032	-1128	114	406	-36	389
MW Priced \$20 to \$50/MWh	-483	620	99	-162	598	672

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

** Estimated value