WEEKLY ELECTRICITY MARKET ANALYSIS

AUSTRALIAN ENERGY REGULATOR

29 November – 5 December 2009

Summary

Milder temperatures in all regions saw relatively low average spot prices. Average spot prices ranged from $23/MWh in Queensland and South Australia to $32/MWh in Tasmania.

On 4 December, there were negative prices in South Australia for two trading intervals as a result of increased wind generation.

Spot market prices

Figure 1 sets out the volume weighted average prices for the week 29 November to 5 December 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 29 Nov – 5 Dec	23	24	24	23	32
% change from previous week*	-83	-85	-19	-9	-2
09/10 financial YTD	41	49	27	89	26
% change from 08/09 financial YTD**	6	1	-32	126	-42

*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. Longer term market trends are attached in Appendix A[1].

Financial markets

Figures 2 to 9 show futures contract[2] prices traded on the Sydney Futures Exchange (SFE) as at close of trade on Monday 7 December. Figure 2 shows the base futures contract prices for the next three calendar years and the three year average. Also shown are percentage changes[3] 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	41	2%	44	3%	43	3%	55	0%
Calendar Year 2011	41*	-3%	45	-2%	44*	-2%	55	0%
Calendar Year 2012	49	0%	52	0%	53	0%	69	0%
Three year average	44	0%	47	0%	47	0%	60	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 change[4] from the previous week.

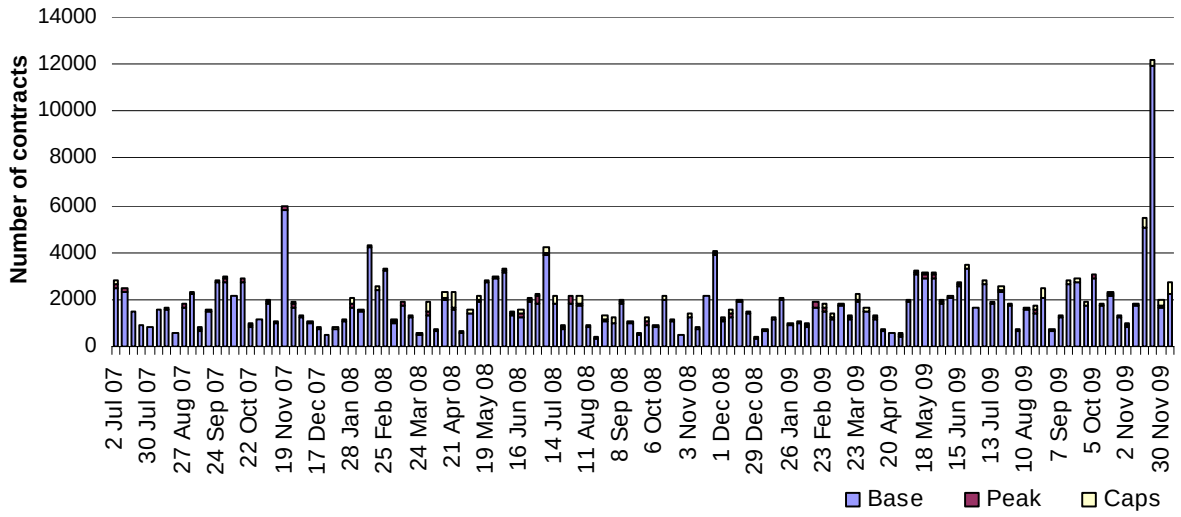
Figure 3: $300 cap contract prices ($/MWh)

	QLD		NSW		VIC		SA	
Q1 2010 (% Change)	29*	2%	26*	2%	30*	7%	60	0%
2010 (% Change)	12	-1%	13	1%	11	5%	18	0%

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

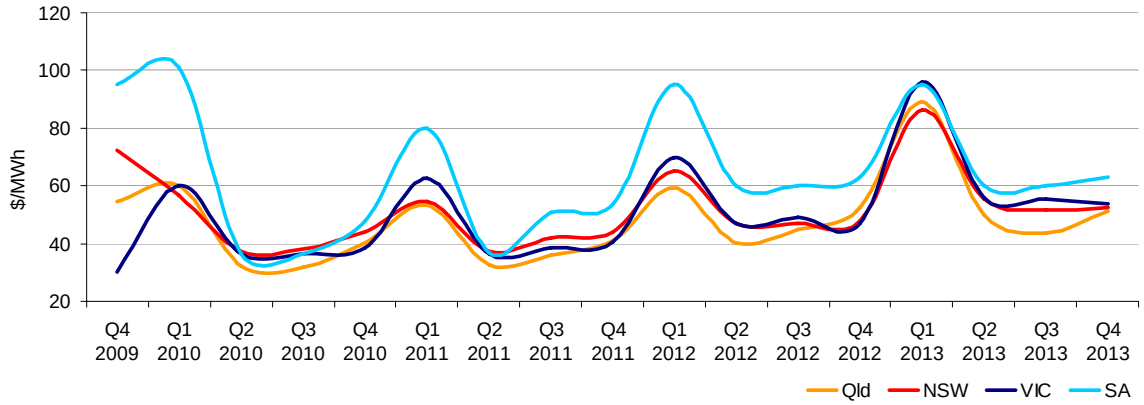


Source: d-cyphaTrade www.d-cyphatrade.com.au

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

[4] Calculated on prices prior to rounding.

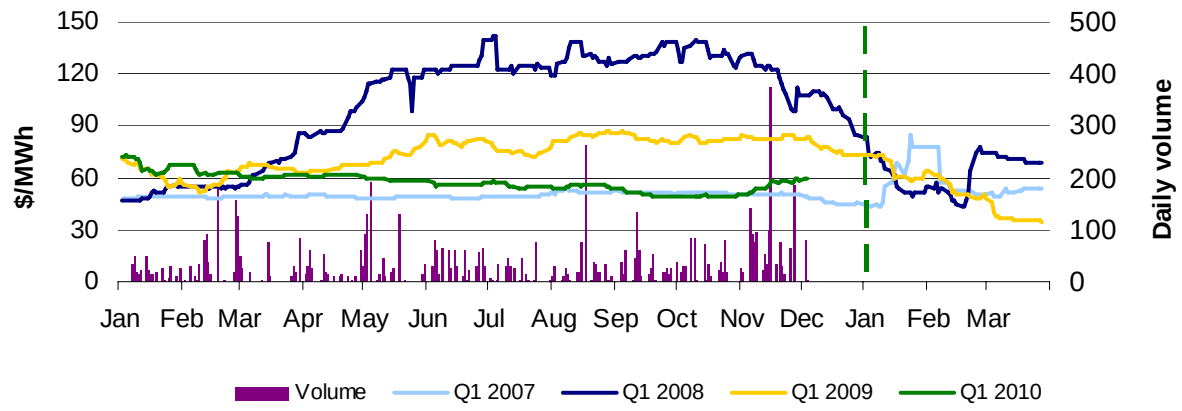
Figure 5: Quarterly base future prices Q4 2009 – Q3 2013



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

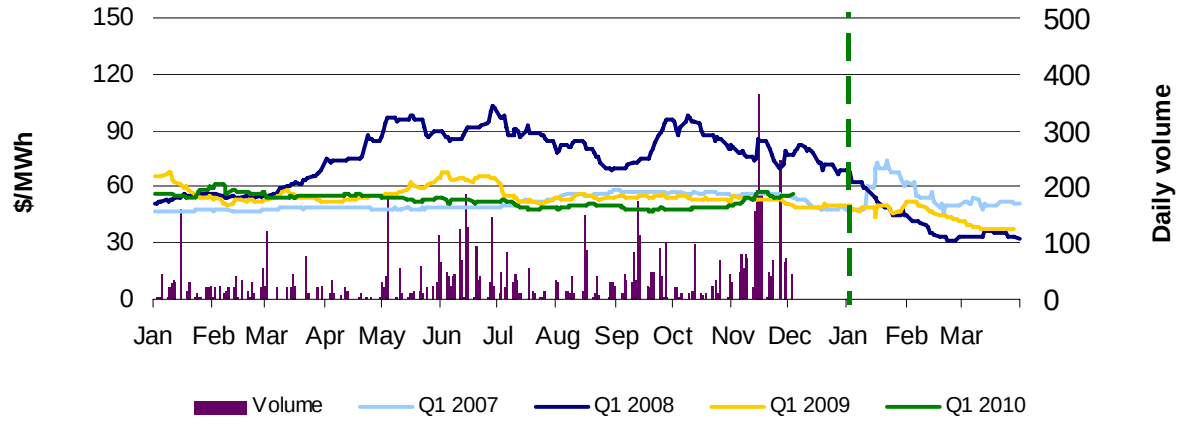
Figures 6-9 compare for each region the closing daily base contract prices for the first quarter of 2007, 2008, 2009 and 2010. Also shown is the daily volume of Q1 2010 base contracts traded. The vertical dashed line signifies the start of the Q1 period for which the contracts are being purchased. To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



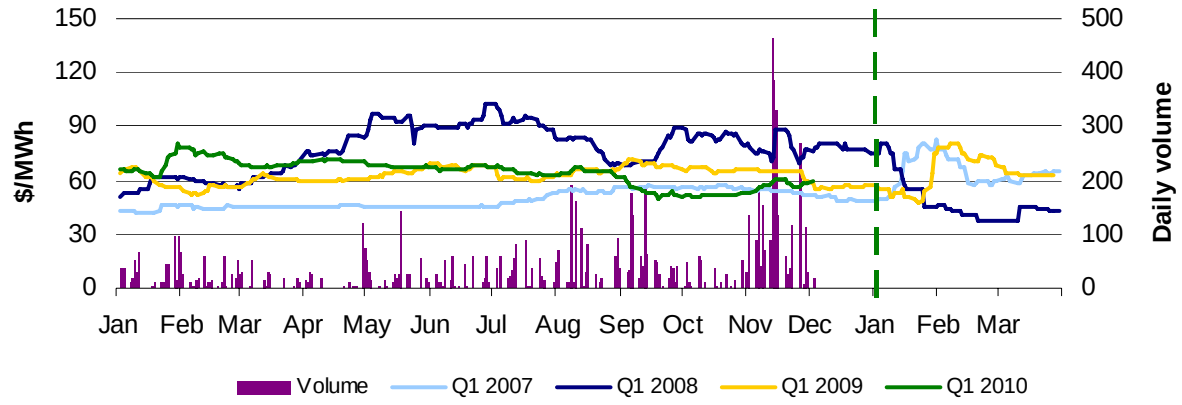
Source: d-cyphaTrade www.d-cyphatrade.com.au

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



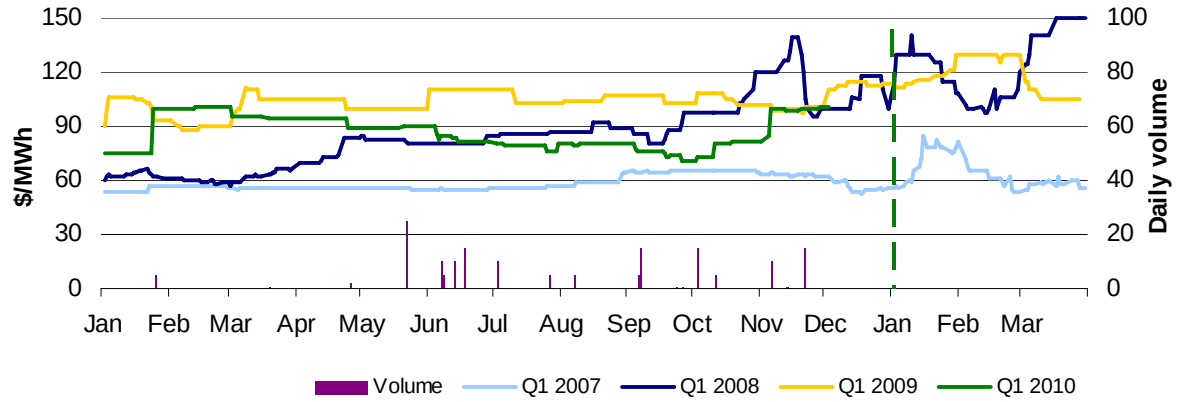
Source: d-cyphaTrade www.d-cyphatrade.com.au

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 84 trading intervals throughout the week where actual prices varied significantly from forecasts[5]. This compares to the weekly average in 2008 of 130 counts. Reasons for these variances are summarised in Figure 10[6].

[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	5	0	0
% of total below forecast	91	4	0	0

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[7]. For example, in Queensland 342 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 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	342	-18	611	-219
NSW	53	303	606	-819
VIC	-771	219	-310	-266
SA	-73	-33	30	-110
TAS	-14	-40	65	18
TOTAL	-463	431	1 002	-1 396

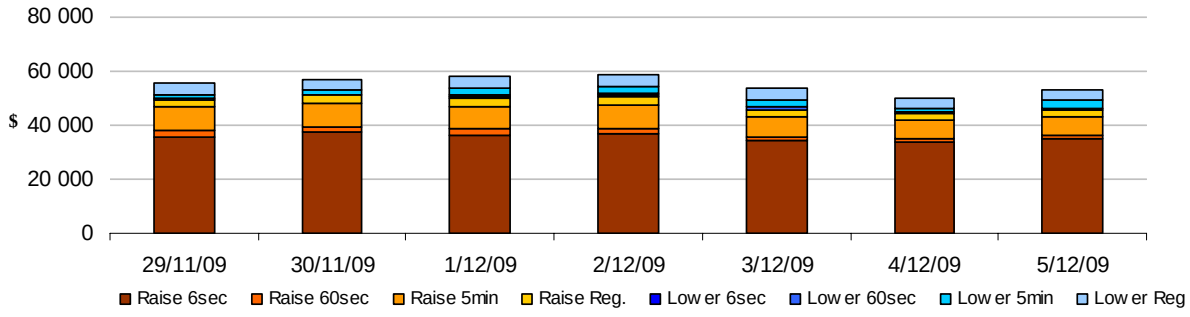
Ancillary services market

The total cost of frequency control ancillary services (FCAS) on the mainland for the week was $126 000 or less than one per cent of energy turnover on the mainland.

The total cost of FCAS in Tasmania for the week was $261 000 or about four 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



Australian Energy Regulator
December 2009

[7] A peak period is defined as between 7 am and 10 pm on weekdays, which aligns with the SFE contract definition.

Detailed NEM Price and Demand Trends

for Weekly Market Analysis
29 November - 05 December 2009

AUSTRALIAN ENERGY REGULATOR

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

Financial year	QLD	NSW	VIC	SA	TAS
2009-10 ($/MWh) (YTD)	41	49	27	89	26
2008-09 ($/MWh) (YTD)	38	49	41	39	46
Change*	6%	1%	-32%	126%	-42%
2008-09 ($/MWh)	36	43	49	69	62

Table 2: NEM turnover

Financial year	NEM Turnover** ($, billion)	Energy (TWh)
2009-10 (YTD)	$3.823	89
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)
Aug-09	24	25	23	24	22	0.418
Sep-09	25	26	24	28	22	0.406
Oct-09	27	28	26	30	26	0.459
Nov-09	99	138	36	325	34	1.924
Dec-09 (MTD)	21	23	24	23	29	0.064
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 7 December

	QLD		NSW		VIC		SA	
Q1 2010	Base	Peak	Base	Peak	Base	Peak	Base	Peak
Price on 30 Nov ($/MW)	58	100	54	94	57	105	100	160
Price on 7 Dec ($/MW)	60	106	57	95	60	104	101	160
Open interest on 07 Dec	2919	175	3338	97	3484	207	102	30
Traded in the last week (MW)	272	10	429	5	440	0	0	0
Traded since 1 Jan 09 (MW)	6960	295	7349	133	8159	416	161	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
October 09 with October 08						
MW Priced <$20/MWh	156	-288	247	48	29	193
MW Priced $20 to $50/MWh	-140	227	110	-45	702	854
November 09 with November 08						
MW Priced <$20/MWh	855	-401	581	338	-101	1271
MW Priced $20 to $50/MWh	-354	-172	325	-124	812	487
December 09 with December 08						
MW Priced <$20/MWh	1896	-484	-598	405	-308	911
MW Priced $20 to $50/MWh	-640	122	772	-110	772	916

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