WEEKLY ELECTRICITY MARKET ANALYSIS

AUSTRALIAN ENERGY REGULATOR

3 – 9 January 2010

Summary

On Friday 8 January, with temperatures in excess of 41°C in Adelaide, the spot price reached the price cap for three consecutive trading intervals (from 3.30 pm to 4.30 pm inclusive). As a result the weekly average spot price for South Australia reached $179/MWh. In accordance with clause 3.13.7 of the Electricity Rules, the AER will issue a separate report into the circumstances that led to the spot price exceeding $5000/MWh.

The weekly average spot price in other regions ranged from $25/MWh in Queensland to $31/MWh in Tasmania.

Spot market prices

Figure 1 sets out the volume weighted average prices for the week 3 January to 9 January 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 3 – 9 January 2010	25	28	27	179	31
% change from previous week*	8	16	16	576	20
09/10 financial YTD	39	62	27	84	27
% change from 08/09 financial YTD**	4	37	-29	125	-38

*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 B[1].

[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.

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 11 January 2010. 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.

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

	QLD		NSW		VIC		SA	
Calendar Year 2010	39	1%	44	0%	46	6%	58	2%
Calendar Year 2011	40*	3%	44*	2%	46*	3%	53	0%
Calendar Year 2012	48	0%	50	-1%	53	0%	69	0%
Three year average	42	1%	46	0%	48	3%	60	1%

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.

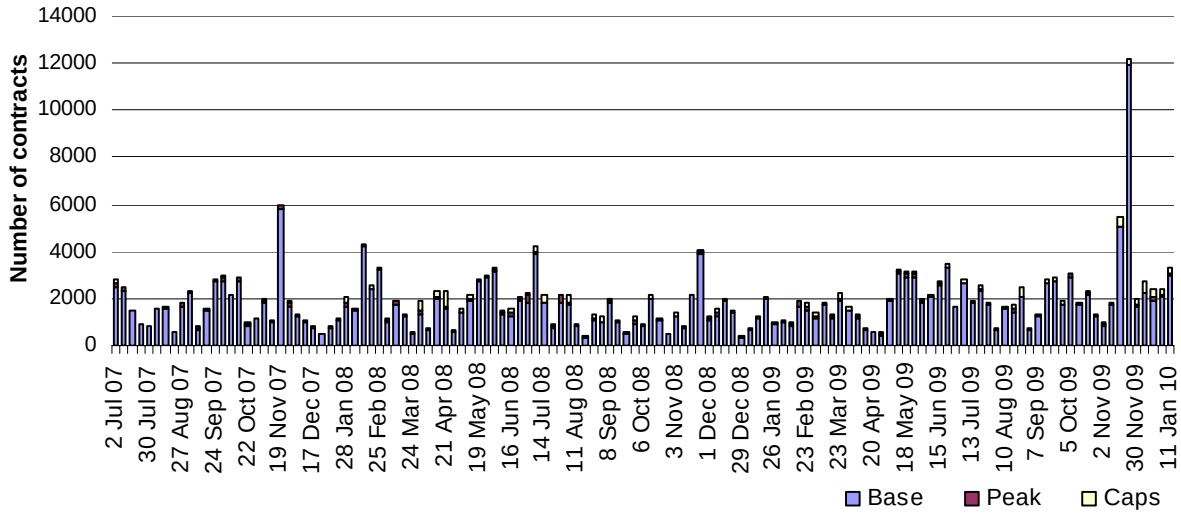
Figure 3: $300 cap contract prices ($/MWh)

	QLD		NSW		VIC		SA	
Q1 2010 (% Change)	26	0%	28*	4%	44*	33%	61	0%
2010 (% Change)	10	-1%	14	5%	15	24%	19	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

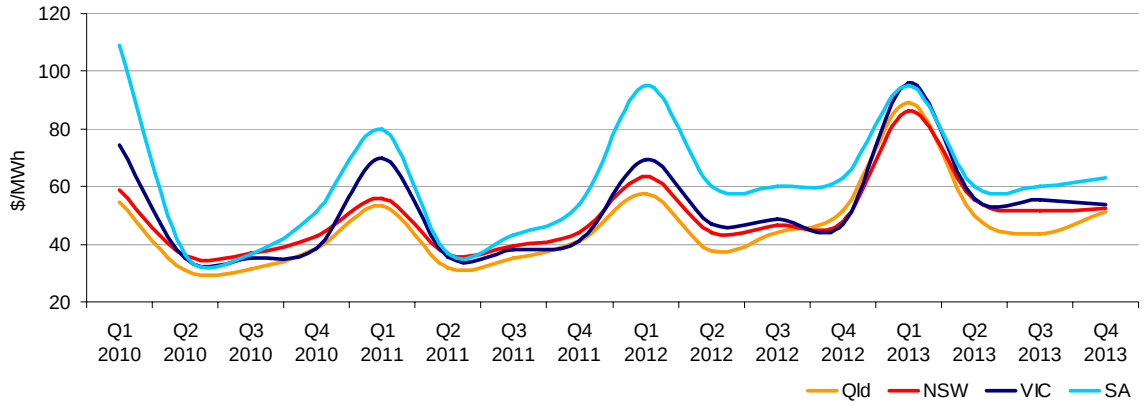


Source: d-cyphaTrade www.d-cyphatrade.com.au

[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.
[4] Calculated on prices prior to rounding.

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

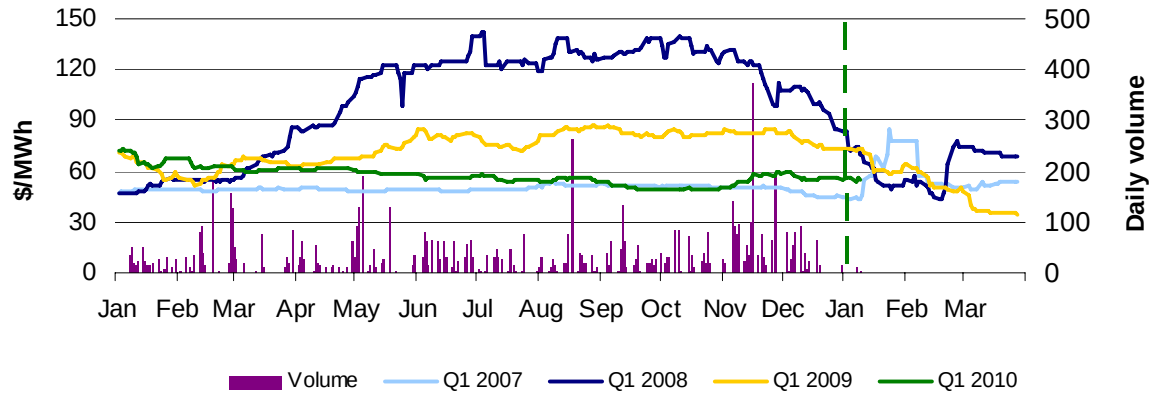
Figure 5: Quarterly base future prices Q4 2009 – Q3 2013



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

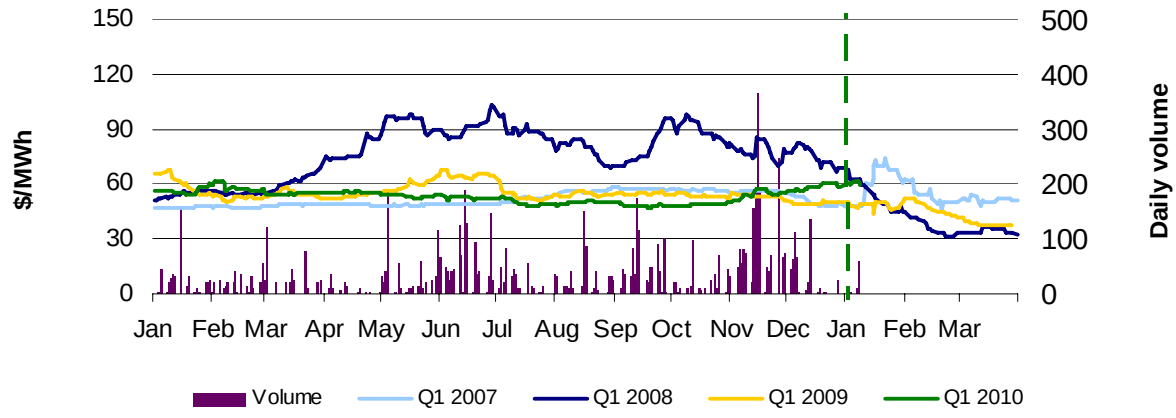
Figures 6-9 compare for each region the closing daily base contract prices for the first quarter of 2007, 2008, 2009 and 2010. Also shown is the daily volume of Q1 2010 base contracts traded. The vertical dashed line signifies the start of the Q1 period for which the contracts are being purchased. To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



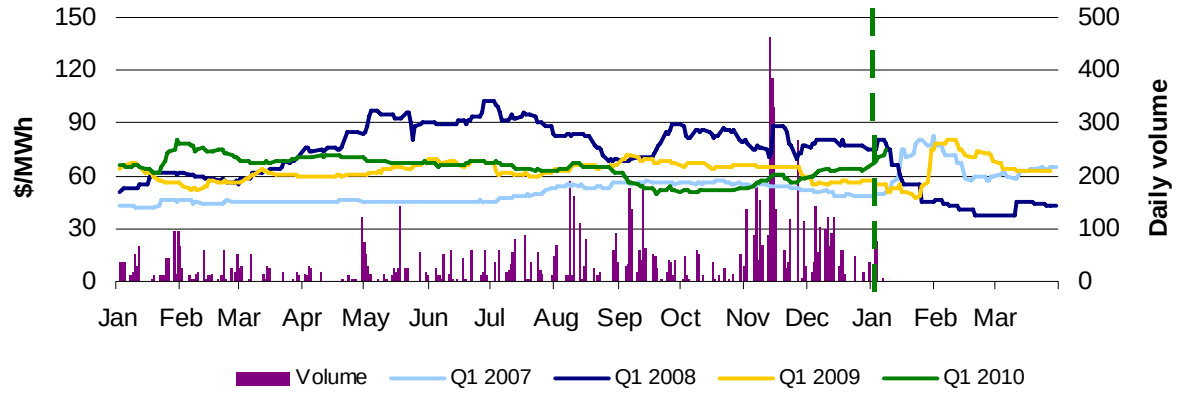
Source: d-cyphaTrade www.d-cyphatrade.com.au

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



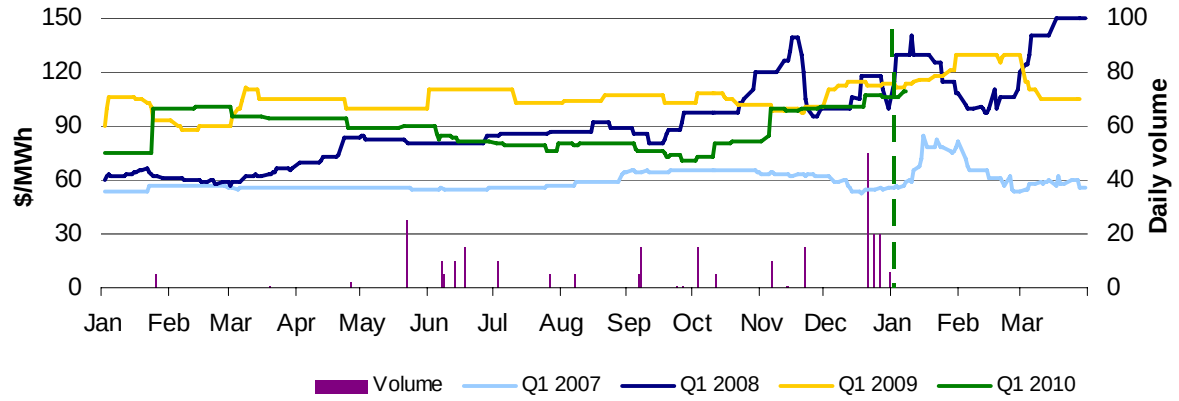
Source: d-cyphaTrade www.d-cyphatrade.com.au

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 94 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].

Figure 10: Reasons for variations between forecast and actual prices

	Availability	Demand	Network	Combination
% of total above forecast	1%	31%	0%	2%
% of total below forecast	55%	11%	0%	0%

[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.

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 498 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	498	-63	461	461
NSW	825	156	1510	1001
VIC	163	324	26	126
SA	71	33	132	147
TAS	-131	63	-355	76
TOTAL	1426	513	1,774	1811

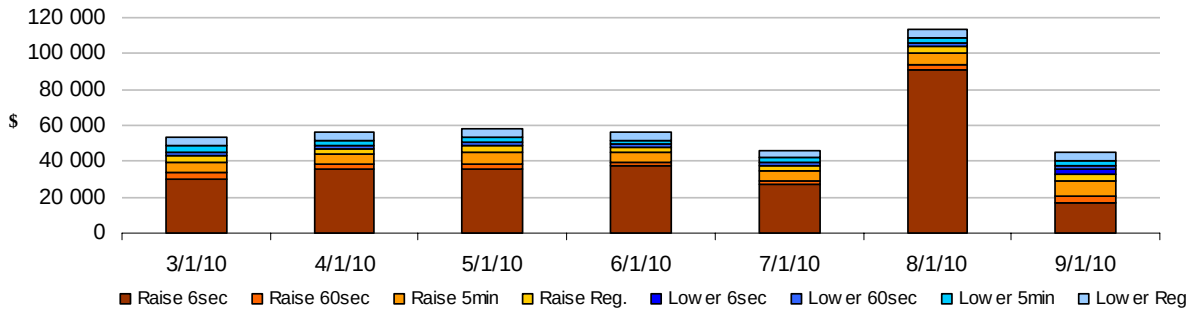
Ancillary services market

The total cost of frequency control ancillary services (FCAS) on the mainland for the week was $137 000 or less than one per cent of energy turnover on the mainland.

The total cost of FCAS in Tasmania for the week was $291 000 or about five per cent of energy turnover in Tasmania. On Friday 8 January, the interaction of the Energy and FCAS markets saw the Raise six second price gradually increase from around $0.30/MWh before reaching around $4100/MWh for the 7.00 pm and 7.05 pm dispatch intervals. Prices then gradually fell to around $16/MWh by 7.15 pm and remained at that level until 10.30 pm. However, again due to the interaction of the Energy and FCAS markets, the Raise 6 second price spiked to $1989/MWh at 10.35 pm, before returning to $16/MWh in the next dispatch interval.

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

Figure 12: Daily frequency control ancillary service cost



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

South Australia: There were three occasions where the spot price in South Australia was greater than three times the South Australia weekly average price of $179/MWh and $250/MWh.

Friday, 8 January

3:30 pm	**Actual**	**4 hr forecast**	**12 hr forecast**
Price ($/MWh)	9999.71	147.20	9000.40
Demand (MW)	2752	2775	2749
Available capacity (MW)	3068	2890	2921
4:00 pm	**Actual**	**4 hr forecast**	**12 hr forecast**
Price ($/MWh)	9999.71	174.94	9000.40
Demand (MW)	2792	2785	2759
Available capacity (MW)	3022	2887	2916
4:30 pm	**Actual**	**4 hr forecast**	**12 hr forecast**
Price ($/MWh)	9999.71	169.24	9000.40
Demand (MW)	2794	2798	2778
Available capacity (MW)	3023	2921	2987

In accordance with clause 3.13.7 of the Electricity Rules, the AER will issue a separate report into the circumstances that led to the spot price exceeding $5000/MWh.

Detailed NEM Price and Demand Trends

for Weekly Market Analysis
3 - 9 January 2010

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

Financial year	QLD	NSW	VIC	SA	TAS
2009-10 ($/MWh) (YTD)	39	62	27	84	27
2008-09 ($/MWh) (YTD)	38	45	38	37	44
Change*	4%	37%	-29%	125%	-38%
2008-09 ($/MWh)	36	43	49	69	62

Table 2: NEM turnover

Financial year	NEM Turnover** ($, billion)	Energy (TWh)
2009-10 (YTD)	$5.101	108
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)
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	34	130	25	26	32	1.172
Jan-10 (MTD)	24	27	25	152	29	0.170
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 11 January

	QLD		NSW		VIC		SA	
Q1 2010	Base	Peak	Base	Peak	Base	Peak	Base	Peak
Price on 04 Jan ($/MW)	56	97	59	102	66	121	106	185
Price on 11 Jan ($/MW)	55	95	59	104	75	130	109	185
Open interest on 11 Jan	3092	215	3570	177	4207	177	153	30
Traded in the last week (MW)	15	0	91	15	175	15	0	0
Traded since 1 Jan 09 (MW)	7398	350	7891	228	9439	611	257	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
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	872	-206	-165	503	-14	991
MW Priced $20 to $50/MWh	-423	-115	540	-68	441	375
January 10 with January 09						
MW Priced <$20/MWh	381	265	142	385	19	1192
MW Priced $20 to $50/MWh	-432	169	-179	6	575	139

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