WEEKLY ELECTRICITY MARKET ANALYSIS

AUSTRALIAN ENERGY REGULATOR

1 – 7 November 2009

Summary

High demands driven by high temperatures saw the spot price reach $10 000/MWh in South Australia on Monday, $6337/MWh in New South Wales and $5706/MWh in Queensland on Tuesday. This led to higher volume weighted average weekly prices in those regions, reaching $84/MWh, $71/MWh and $57/MWh in South Australia, New South Wales and Queensland respectively. In accordance with clause 3.13.7 of the National Electricity Rules, the AER will issue separate reports into the circumstances that led to the spot prices exceeding $5000/MWh.

Spot market prices

Figure 1 sets out the volume weighted average prices for the week 1 to 7 November and the financial year to date across the National Electricity Market (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 1 – 7 November	57	71	26	84	30
% change from previous week*	135	167	1	133	-12
09/10 financial YTD	28	31	25	31	25
% change from 08/09 financial YTD**	-27	-42	-40	-25	-46

*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.

Longer term market trends are attached in Appendix B[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 9 November. 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	38	2%	41	2%	40*	2%	51	2%
Calendar Year 2011	40*	1%	43	1%	43	0%	54	0%
Calendar Year 2012	48	0%	51	0%	53	0%	69	0%
Three year average	42	1%	45	1%	46	1%	58	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.

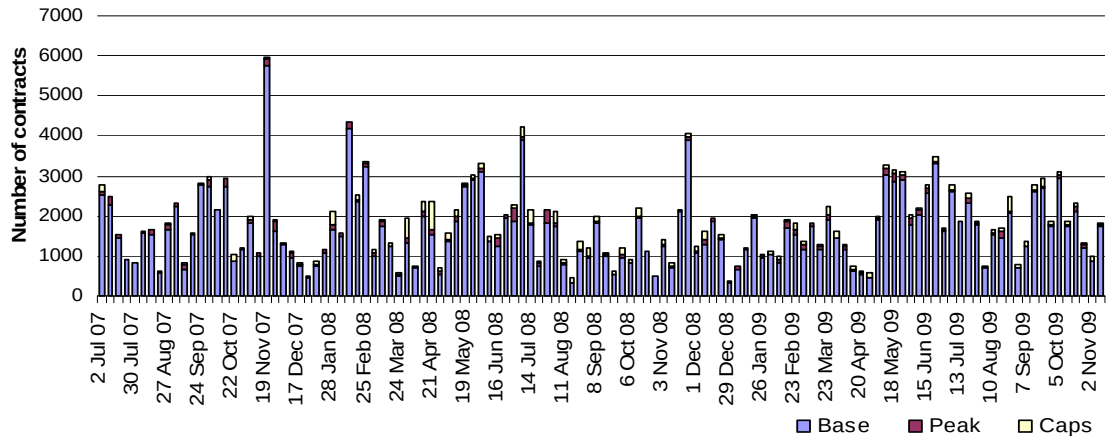
Figure 3: $300 cap contract prices ($/MWh)

	QLD		NSW		VIC		SA	
Q1 2010 (% Change)	24*	4%	21	6%	25*	5%	42	0%
2010 (% Change)	11	2%	11	3%	9	3%	14	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.

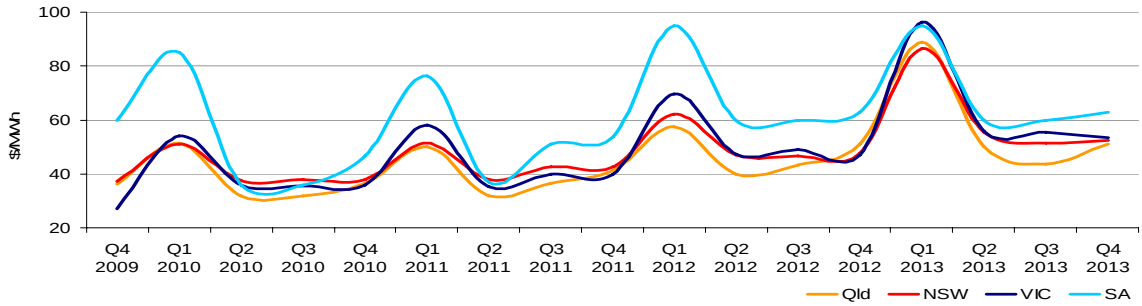
Figure 4: Number of exchange traded contracts per week



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.

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

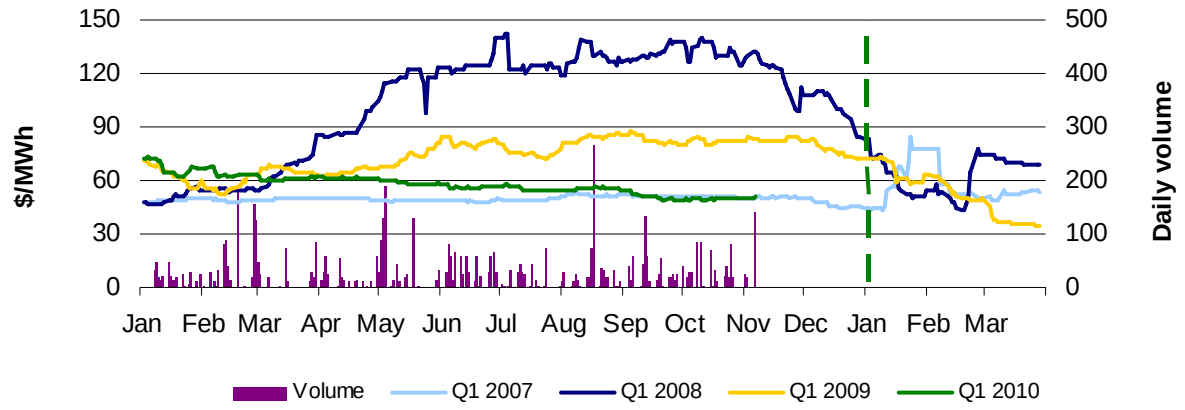


Source: d-cyphaTrade www.d-cyphatrade.com.au

[4] Calculated on prices prior to rounding.

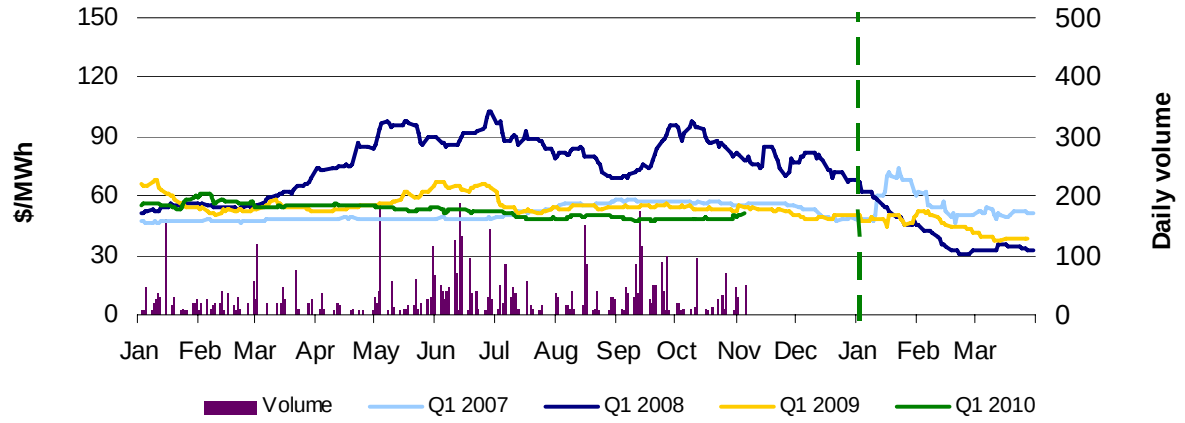
Figures 6-9 compare for each region the closing daily base contract prices for the first quarter of 2007, 2008, 2009 and 2010. Also shown is the daily volume of Q1 2010 base contracts traded. The vertical dashed line signifies the start of the Q1 period for which the contracts are being purchased. To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



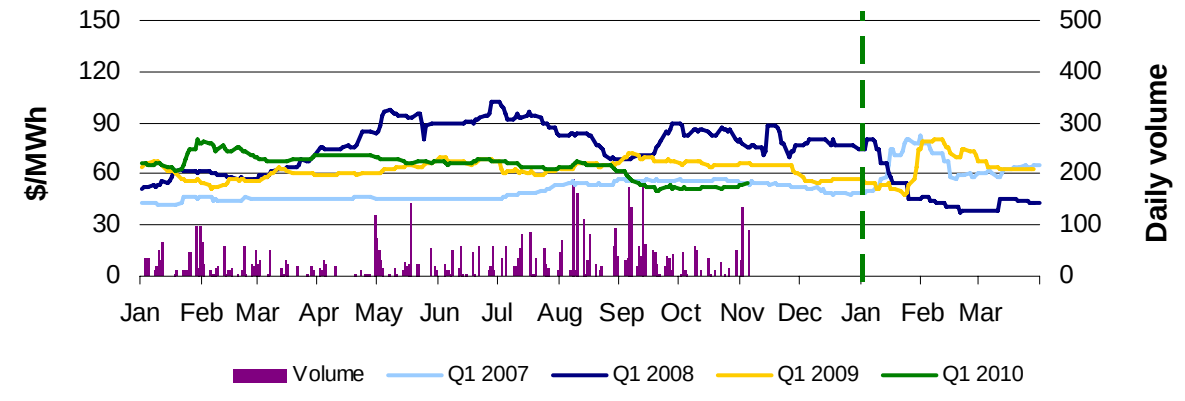
Source: d-cyphaTrade www.d-cyphatrade.com.au

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



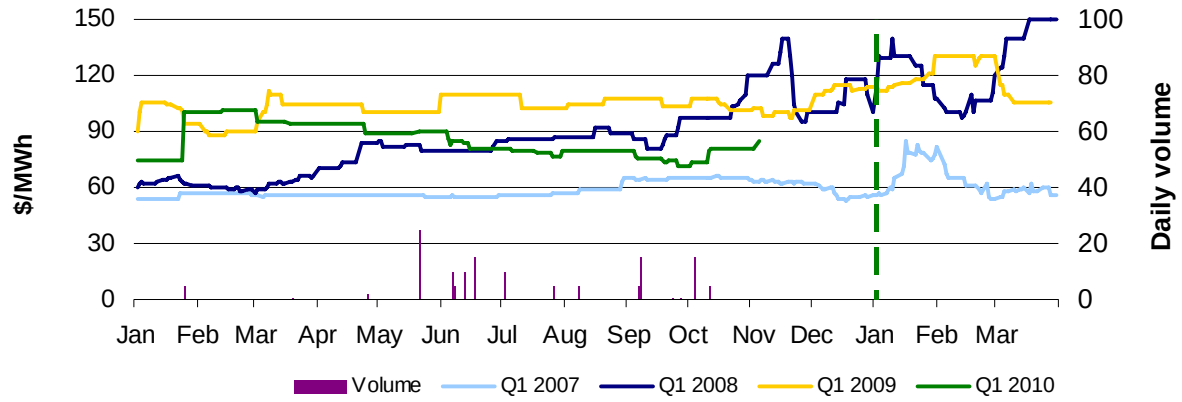
Source: d-cyphaTrade www.d-cyphatrade.com.au

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 86 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	10%	35%	0%	2%
% of total below forecast	43%	8%	0%	2%

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 20 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.

[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.

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

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	20	-125	-229	351
NSW	507	237	578	394
VIC	-213	-128	-51	-403
SA	-140	0	-129	-124
TAS	-50	-72	15	-47
TOTAL	124	-88	184	171

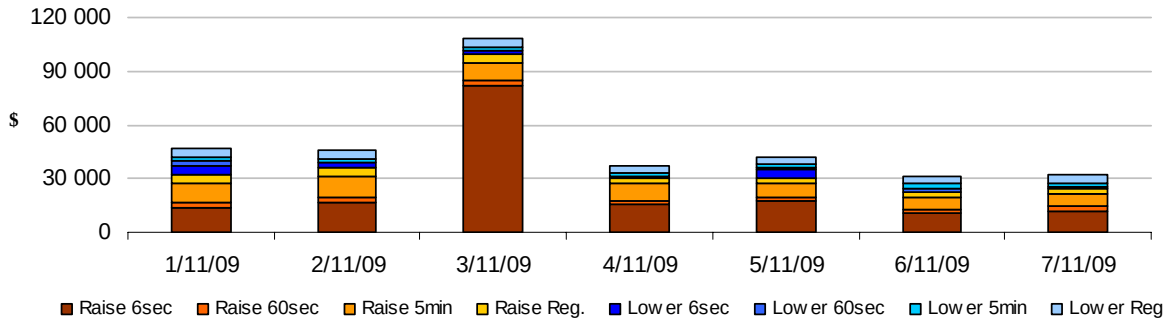
Ancillary services market

The total cost of frequency control ancillary services (FCAS) on the mainland for the week was $157 000 or less than one per cent of energy turnover on the mainland.

The total cost of FCAS in Tasmania for the week was $187 000 or about three per cent of energy turnover in Tasmania. Sixty per cent of this cost accrued over one dispatch interval. On Tuesday, there were 5 dispatch intervals at which the raise 6 second service price was greater than $1500/MW.

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
November 2009

South Australia: There were two occasions where the spot price in South Australia exceeded both three times the South Australia weekly average price (of $84/MWh) and $250/MWh.

Monday, 2 November

1:30 pm	**Actual**	**4 hr forecast**	**12 hr forecast**
Price ($/MWh)	1716.88	299.30	67.46
Demand (MW)	2327	2099	1858
Available capacity (MW)	2348	2282	2335
2:00 pm	**Actual**	**4 hr forecast**	**12 hr forecast**
Price ($/MWh)	9999.74	299.30	74.00
Demand (MW)	2342	2085	1891
Available capacity (MW)	2335	2255	2327

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.

Queensland: There were four occasions where the spot price in Queensland exceeded both three times the Queensland weekly average price (of $57/MWh) and $250/MWh.

Tuesday, 3 November

2:00 pm	**Actual**	**4 hr forecast**	**12 hr forecast**
Price ($/MWh)	250.96	41.77	28.31
Demand (MW)	7044	6988	6957
Available capacity (MW)	9734	9663	9694
3:30 pm	**Actual**	**4 hr forecast**	**12 hr forecast**
Price ($/MWh)	2267.68	60.86	30.68
Demand (MW)	7067	7016	6931
Available capacity (MW)	9721	9793	9695
4:00 pm	**Actual**	**4 hr forecast**	**12 hr forecast**
Price ($/MWh)	5706.28	79.29	30.49
Demand (MW)	7013	7005	6933
Available capacity (MW)	9689	9645	9695
4:30 pm	**Actual**	**4 hr forecast**	**12 hr forecast**
Price ($/MWh)	277.98	79.85	33.52
Demand (MW)	7005	7062	6928
Available capacity (MW)	9630	9635	9695

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New South Wales: There were six occasions where the spot price in New South Wales exceeded both three times the New South Wales weekly average price (of $71/MWh) and $250/MWh.

Tuesday, 3 November

2:00 pm	**Actual**	**4 hr forecast**	**12 hr forecast**
Price ($/MWh)	296.04	43.68	34.74
Demand (MW)	11 681	11 287	10 934
Available capacity (MW)	12 255	12 722	12 789
2:30 pm	**Actual**	**4 hr forecast**	**12 hr forecast**
Price ($/MWh)	282.67	89.52	38.82
Demand (MW)	11 580	11 635	11 002
Available capacity (MW)	12 394	12 702	12 789
3:00 pm	**Actual**	**4 hr forecast**	**12 hr forecast**
Price ($/MWh)	430.83	89.52	39.26
Demand (MW)	11 832	11 831	11 045
Available capacity (MW)	11 875	12 702	12 789
3:30 pm	**Actual**	**4 hr forecast**	**12 hr forecast**
Price ($/MWh)	2693.45	65.16	39.23
Demand (MW)	12 055	11 890	11 033
Available capacity (MW)	11 528	12 705	12 789
4:00 pm	**Actual**	**4 hr forecast**	**12 hr forecast**
Price ($/MWh)	6337.10	89.52	38.73
Demand (MW)	12 163	11 843	10 940
Available capacity (MW)	11 462	12 790	12 789
4:30 pm	**Actual**	**4 hr forecast**	**12 hr forecast**
Price ($/MWh)	317.57	89.52	36.00
Demand (MW)	11 950	11 726	10 770
Available capacity (MW)	11 389	12 788	12 789

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