WEEKLY ELECTRICITY MARKET ANALYSIS

AUSTRALIAN ENERGY REGULATOR

30 August – 5 September 2009

Summary

Average spot prices ranged from $19/MWh in Victoria to $24/MWh in New South Wales.

In a media release of 1 September, the Bureau of Meteorology declared that this August was the warmest on record for Australia and the warmest winter on record in New South Wales, Victoria and South Australia.

The milder winter temperatures drove lower winter peak demands in Queensland, New South Wales, South Australia and Tasmania. Combined winter peak demand for the National Electricity Market (NEM) was 32 094 MW compared to the winter 2008 peak demand of 34 422 MW. This year's NEM winter peak demand was the lowest since 2006.

The lower winter demands in turn drove lower volume weighted average prices in all mainland regions compared to last winter (ranging from 26 per cent lower in New South Wales to 38 per cent lower in Victoria). In Tasmania, however, the volume weighted average price increased by almost 70 per cent as a result of extreme prices in excess of $5000/MWh and the application of administered pricing in June[1].

Spot market prices

Figure 1 sets out the volume weighted average prices for the week 30 August to 5 September 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 30 August – 5 September	23	24	19	20	23
% change from previous week*	5	-5	-20	-17	-6
09/10 financial YTD	26	29	25	26	25
% change from 08/09 financial YTD**	-32	-32	-43	-42	-44

*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.

Longer term market trends are attached in Appendix B[2].

[1] As required under the Electricity Rules, the AER published Prices above $5000/MWh reports in respect of these events. The reports can be accessed on the AER's website.

[2] 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[3] prices traded on the Sydney Futures Exchange (SFE) as at close of trade on Monday 7 September. Figure 2 shows the base futures contract prices for the next three calendar years, and the three year average. Also shown are percentage changes compared to the previous week.

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

	QLD		NSW		VIC		SA	
Calendar Year 2010	39	-2%	41*	-1%	42	-3%	49	0%
Calendar Year 2011	41*	-2%	45*	-1%	46*	-2%	59	0%
Calendar Year 2012	52	-1%	59	0%	60	0%	69	0%
Three year average	44	-1%	48	-1%	50	-1%	59	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 2009-10 financial year and the percentage change from the previous week.

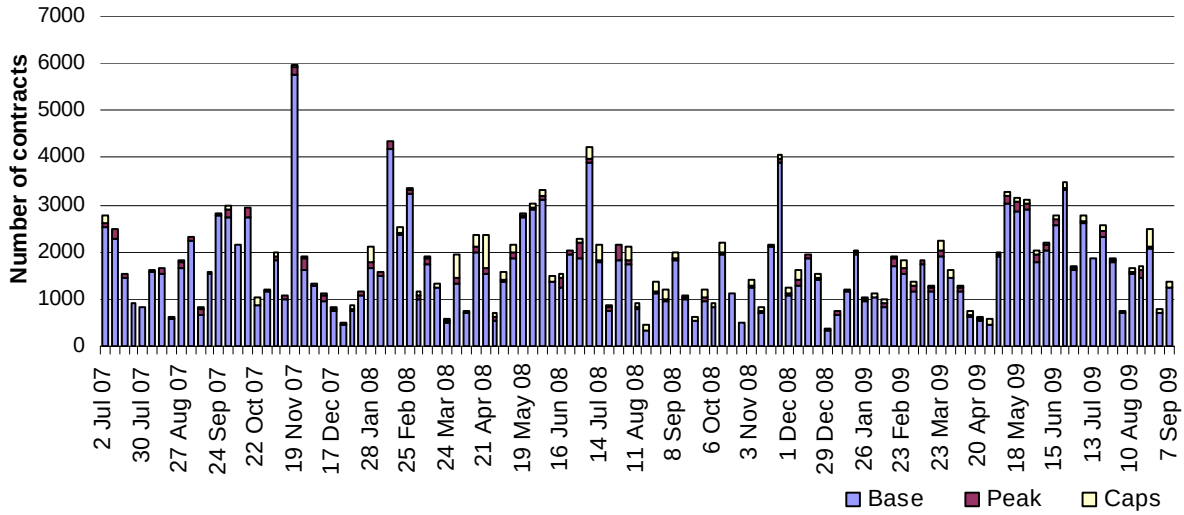
Figure 3: $300 cap contract prices ($/MWh)

	QLD		NSW		VIC		SA	
Q1 2010 (% change)	24	-8%	19	0%	29*	-5%	45	0%
FY 2010 (% change)	10	-5%	9	0%	9	-4%	17	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

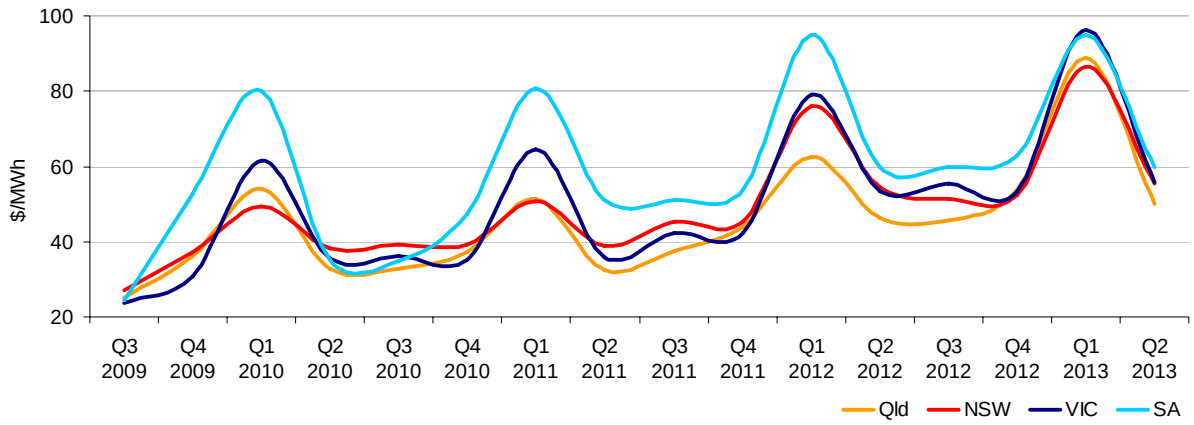


Source: d-cyphaTrade www.d-cyphatrade.com.au

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

[3] 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.

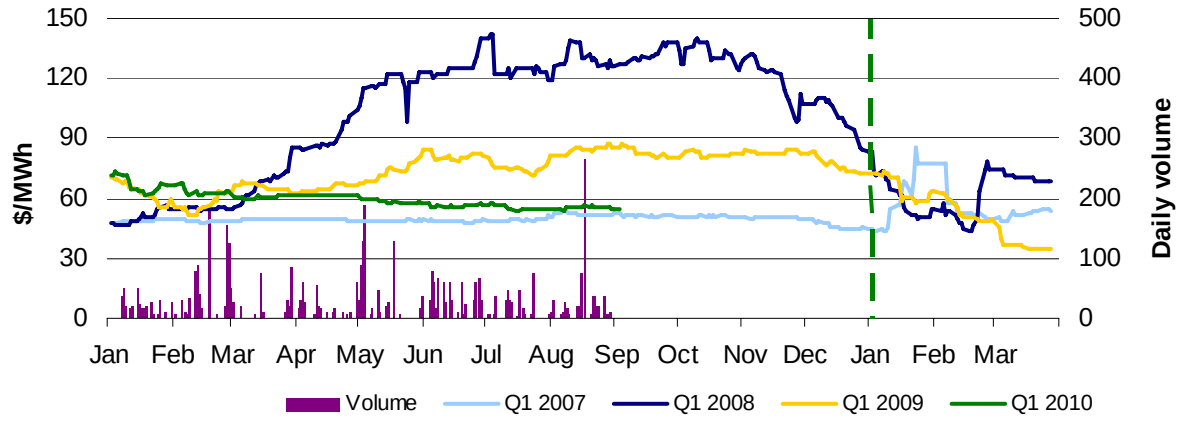
Figure 5: Quarterly base future prices Q3 2009 – Q2 2013



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

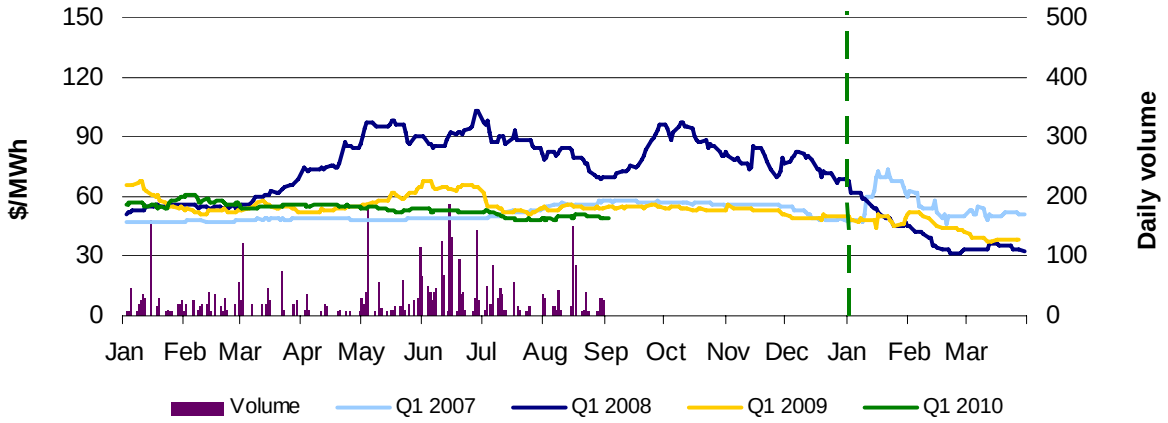
Figures 6-9 compare for each region the closing daily base contract prices for the first quarter of 2007, 2008, 2009 and 2010. Also shown is the daily volume of Q1 2010 base contracts traded. The vertical dashed line signifies the start of the Q1 period for which the contracts are being purchased. To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



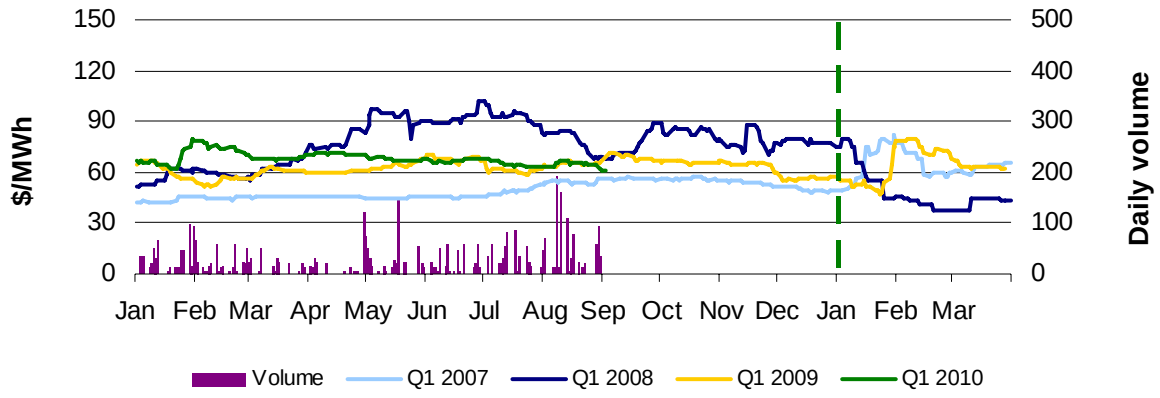
Source: d-cyphaTrade www.d-cyphatrade.com.au

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



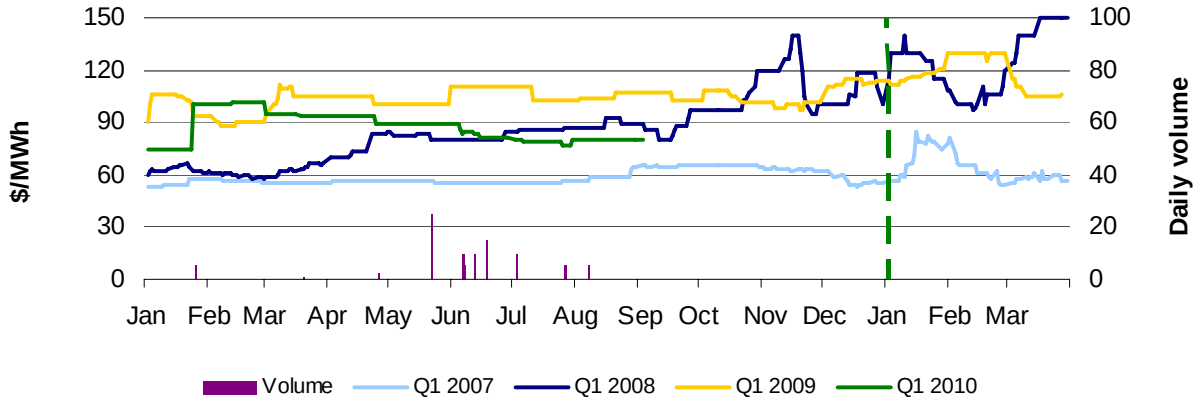
Source: d-cyphaTrade www.d-cyphatrade.com.au

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 66 trading intervals throughout the week where actual prices varied significantly from forecasts[4]. This compares to the weekly average in 2008 of 130 counts. Reasons for these variances are summarised in Figure 11[5].

Figure 10: Reasons for variations between forecast and actual prices

	Availability	Demand	Network	Combination
% of total above forecast	0	36	2	0
% of total below forecast	60	2	0	0

4 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.

5 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[6]. For example, in Queensland 437 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	-437	103	-797	-369
NSW	-1063	866	-452	32
VIC	595	73	525	-24
SA	13	-34	-60	-101
TAS	-53	-27	-82	-49
TOTAL	-945	981	-866	-511

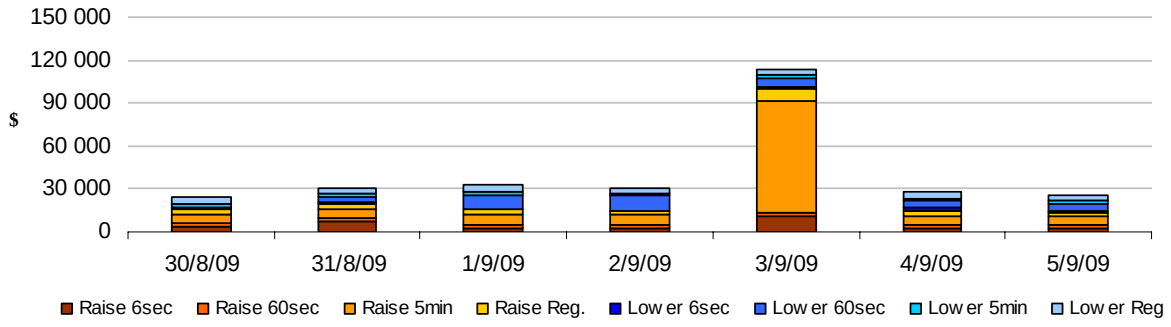
Ancillary services market

The total cost of frequency control ancillary services (FCAS) on the mainland for the week was $128 000 or less than one per cent of turnover in the energy market.

The total cost of FCAS in Tasmania for the week was $156 000 or around three per cent of turnover in the energy market. On Thursday 3 September, at 4.50 pm, AEMO declared the simultaneous loss of the two Farrell to Sheffield lines as a credible contingency event. This caused an increase in the Raise five minute service requirement of up to 72 MW. The reclassification also led to an increase in the five minute energy price from $20/MWh to $10 000/MWh (as detailed in Appendix A). The interaction of the Energy and FCAS markets saw the Raise five minute price increase from $1.50/MW at 4.50 pm to $10 000/MW at 4.55 pm before returning to previous levels at 5 pm.

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

There was one occasion where the spot price in Tasmania was greater than three times the Tasmania weekly average price of $23/MWh and $250/MWh.

Thursday, 3 September

5 pm	Actual	4 hr forecast	12 hr forecast
Price ($/MWh)	1685.58	14.08	10.67
Demand (MW)	1263	1183	1188
Available capacity (MW)	2076	2076	2076

Conditions at the time saw demand 80 MW greater than that forecast four hours ahead and available capacity as forecast.

At 4.49 pm, AEMO reclassified the simultaneous loss of the two Farrell to Sheffield lines as a credible contingency, due to lightning and storms near the lines. The constraint that was invoked to manage the reclassification saw a reduction of 193 MW in the combined dispatch of generation at Mackintosh, Reece unit one and Tribute. All of this capacity was priced below zero. This resulted in the dispatch of higher priced generation in Tasmania, with the five minute price spiking to $10 000/MWh at 4.55 pm before reducing to prices of around $35/MWh at 5 pm.

The reclassification of the Farrell to Sheffield lines ceased at 5.43 pm.

There were no rebids.

Detailed NEM Price and Demand Trends

for Weekly Market Analysis
30 August - 5 September 2009

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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 ($/MWh) (YTD)	26	29	25	26	25
2008-09 ($/MWh) (YTD)	38	43	44	46	44
Change*	-32%	-32%	-43%	-42%	-44%
2008-09 ($/MWh)	36	43	49	69	62

Table 2: NEM turnover

Financial year	NEM Turnover** ($, billion)	Energy (TWh)
2009-10 (YTD)	$1.032	38
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)
May-09	28	31	33	35	49	0.550
Jun-09	33	37	31	33	194	0.746
Jul-09	29	34	28	29	27	0.539
Aug-09	24	25	23	24	22	0.418
Sep-09 (MTD)	23	24	19	20	25	0.061
Q2 2009	32	35	34	35	106	1.918
Q2 2008	38	42	47	46	61	2.251
Change*	-17%	-15%	-27%	-24%	75%	-14.81%

Table 4: ASX energy futures contract prices at 7 September

	QLD		NSW		VIC		SA	
Q1 2010	Base	Peak	Base	Peak	Base	Peak	Base	Peak
Price on 31 Aug ($/MW)	56	96	50	83	65	118	80	145
Price on 7 Sep ($/MW)	54	95	50	82	62	114	80	145
Open interest on 07 Sep	2489	150	2281	41	2309	119	58	0
Traded in the last week (MW)	20	0	90	10	190	0	0	0
Traded since 1 Jan 09 (MW)	4277	220	4126	63	3997	185	93	0
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
July 09 with July 08						
MW Priced <$20/MWh	-657	-516	-41	152	55	-1006
MW Priced $20 to $50/MWh	470	93	4	-53	194	707
August 09 with August 08						
MW Priced <$20/MWh	-131	-261	-343	67	513	-155
MW Priced $20 to $50/MWh	47	140	-194	-58	251	187
September 09 with September 08 (MTD)						
MW Priced <$20/MWh	-452	-611	44	181	683	-156
MW Priced $20 to $50/MWh	62	929	-352	-180	142	602

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