WEEKLY ELECTRICITY MARKET ANALYSIS

AUSTRALIAN ENERGY REGULATOR

23 - 29 August 2009

Summary

Average spot prices ranged from $22/MWh in Queensland to $25/MWh in New South Wales and South Australia.

Spot market prices

Figure 1 sets out the volume weighted average prices for the week 23 August to 29 August 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 23 – 29 August	22	25	24	25	24
% change from previous week*	-12	6	11	13	24
09/10 financial YTD	26	30	26	27	25
% change from 08/09 financial YTD**	-32	-32	-42	-42	-42

*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.[1]

Figure 2 shows the 28 day rolling volume weighted average price for each region since January 2006.

Figure 2: Regional 28 day rolling average spot prices

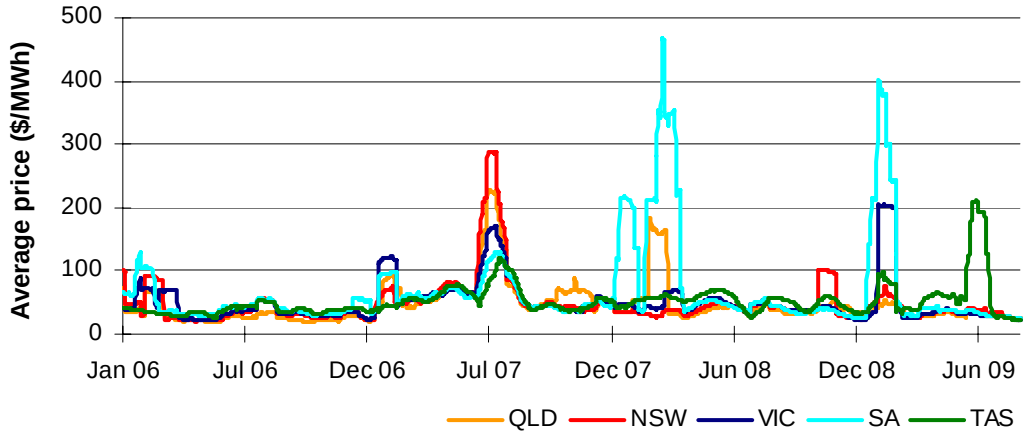


Figure 2 shows that events such as the drought in 2007 and generator bidding behaviour (for example AGL in South Australia in the summer of 2008 and 2009) have significant impacts on average prices. January 2006 was chosen as the starting point for this figure as it was the first calendar year that included all NEM regions (Tasmania joined the NEM in May 2005).

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 3 to 10 show futures contract[2] prices traded on the Sydney Futures Exchange (SFE) as at close of trade on Monday 31 August. Figure 3 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 3: Base calendar year futures contract prices ($/MWh)

	QLD		NSW		VIC		SA	
Calendar Year 2010	40*	0%	42	0%	43*	0%	49	0%
Calendar Year 2011	42	0%	45	0%	47	0%	59	0%
Calendar Year 2012	53	0%	59	0%	60	0%	69	0%
Three year average	45	0%	49	0%	50	0%	59	0%

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

Figure 4 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.

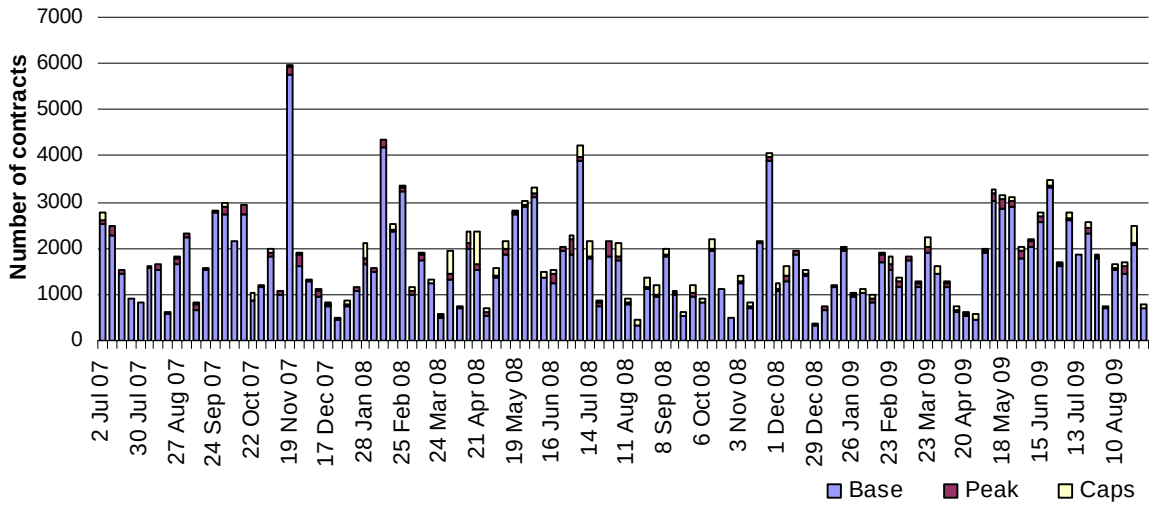
Figure 4: $300 cap contract prices ($/MWh)

	QLD		NSW		VIC		SA	
Q1 2010 (% change)	26	0%	19	0%	31	-1%	45	0%
FY 2010 (% change)	10	0%	9	0%	9	-1%	17	0%

Source: d-cyphaTrade www.d-cyphatrade.com.au
Note: there were no trades in these products.

Figure 5 shows the weekly trading volumes for base, peak and cap contracts. The date represents the end of the trading week.

Figure 5: Number of exchange traded contracts per week

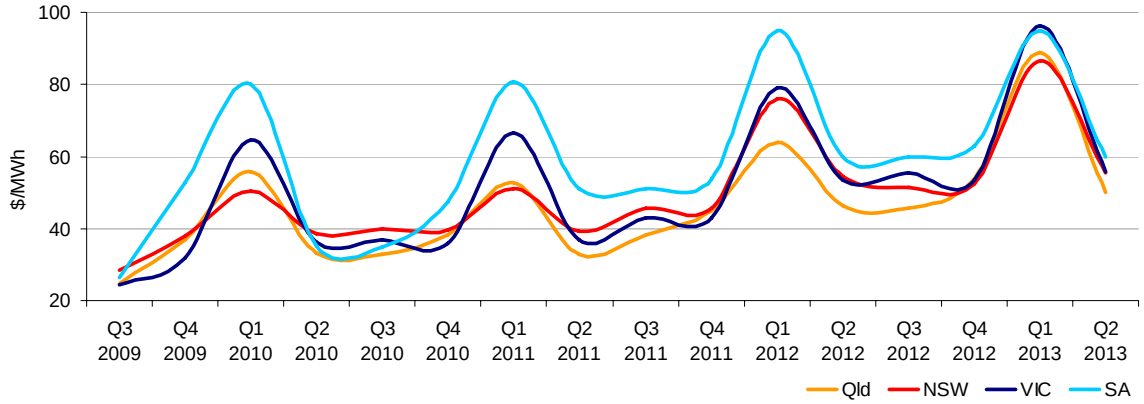


Source: d-cyphaTrade www.d-cyphatrade.com.au

Figure 6 shows the prices for base contracts for each quarter for the next four financial years.

[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.

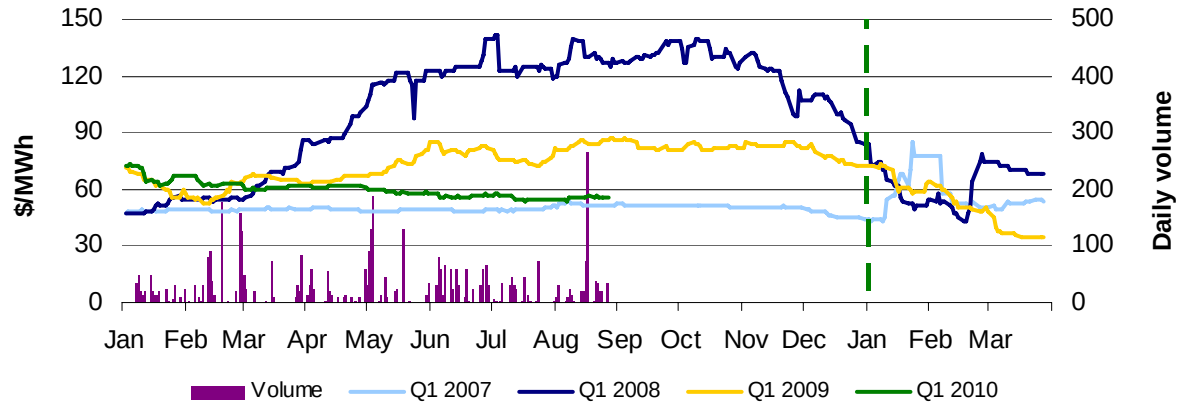
Figure 6: Quarterly base future prices Q3 2009 – Q2 2013



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

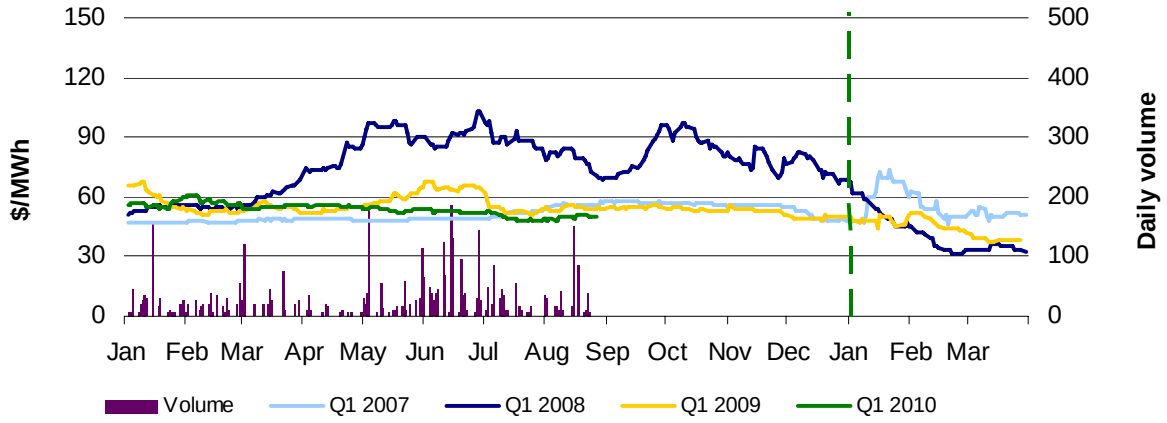
Figures 7-10 compare for each region the closing daily base contract prices for the first quarter of 2007, 2008, 2009 and 2010. Also shown is the daily volume of Q1 2010 base contracts traded. The vertical dashed line signifies the start of the Q1 period for which the contracts are being purchased. To 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 7: Queensland Q1 2007, 2008, 2009 and 2010



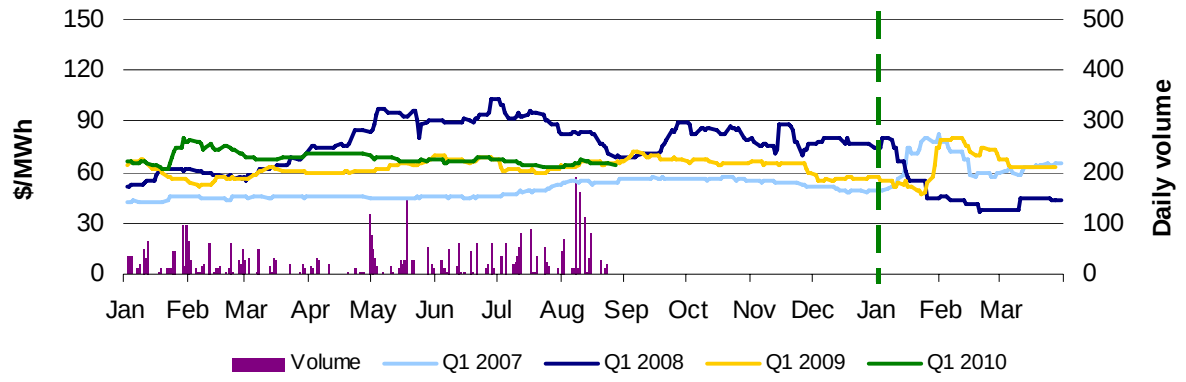
Source: d-cyphaTrade www.d-cyphatrade.com.au

Figure 8: New South Wales Q1 2007, 2008, 2009 and 2010



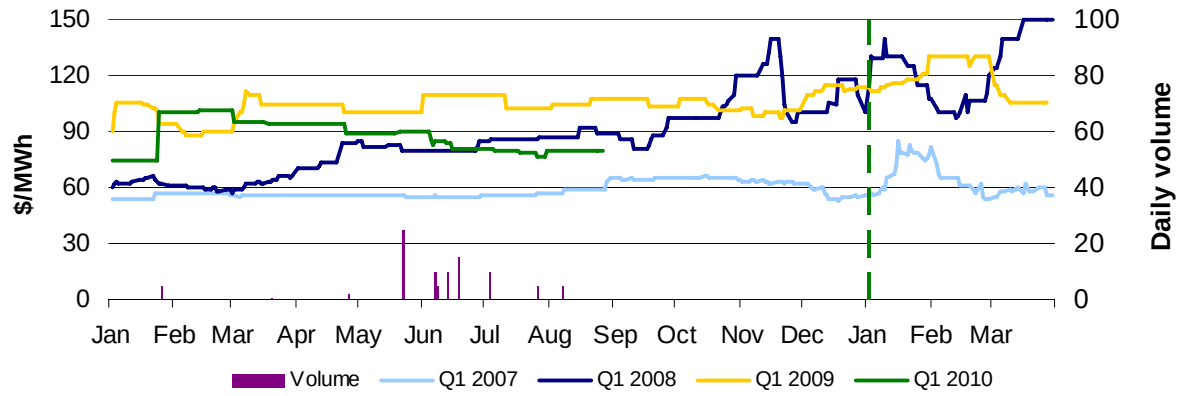
Source: d-cyphaTrade www.d-cyphatrade.com.au

Figure 9: Victoria Q1 2007, 2008, 2009 and 2010



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

Figure 10: 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 35 trading intervals throughout the week where actual prices varied significantly from forecasts[3]. This compares to the weekly average in 2008 of 130 counts. Reasons for these variances are summarised in Figure 11[4].

Figure 11: Reasons for variations between forecast and actual prices

	Availability	Demand	Network	Combination
% of total above forecast	0	63	2	0
% of total below forecast	32	0	0	3

[3] 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.

[4] 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 12 shows the weekly change in total available capacity at various price levels during peak periods[5]. For example, in Queensland 232 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 12: 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	232	-63	508	258
NSW	-898	95	-991	-315
VIC	-428	-164	-574	-44
SA	38	28	26	80
TAS	145	-60	6	99
TOTAL	-911	-164	-1,025	78

Ancillary services market

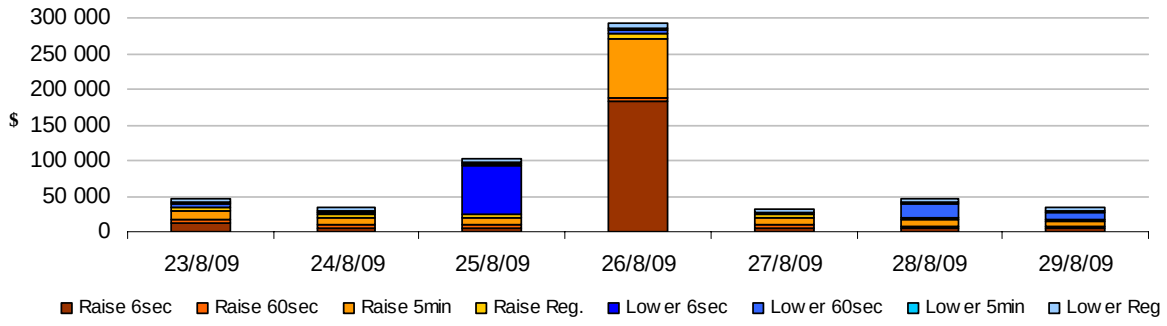
The total cost of frequency control ancillary services (FCAS) on the mainland for the week was $185 000 or less than one per cent of turnover in the energy market.

The total cost of FCAS in Tasmania for the week was $401 000 or around eight per cent of turnover in the energy market. On Wednesday 26 August, AEMO declared the simultaneous loss of the two Farrell to Sheffield lines and the two Chapel Street to Gordon lines as credible contingency events. This caused a significant increase in the Raise five minute service requirement from 71 MW at 10.35 am to 166 MW at 10.40 am. The reclassification also led to the five minute energy price increasing from $25/MWh to $5592/MWh (as detailed in Appendix A). The interaction of the Energy and FCAS markets saw the Raise five minute price increase from $1/MWh at 10.35 am to around $5500/MWh at 10.40 am.

On five occasions between 11.15 am and 11.55 am, step changes in the requirements for local Raise six second services in Tasmania occurred. This led to four Raise six second service price spikes above $4400/MWh.

Figure 13 shows the daily breakdown of cost for each FCAS for the NEM.

Figure 13: Daily frequency control ancillary service cost



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

Tasmania: There was one occasion where the spot price in Tasmania was greater than three times the Tasmania weekly average price of $24/MWh and above $250/MWh.

Wednesday, 26 August

11:00 am	Actual	4 hr forecast	12 hr forecast
Price ($/MWh)	948.35	21.83	21.70
Demand (MW)	1451.29	1325.62	1317.46
Available capacity (MW)	2242	2137	2137

Conditions at the time saw demand around 130 MW higher than forecast and available capacity 105 MW higher than forecast.

At 10.15 am, AEMO reclassified the simultaneous loss of the two Chapel Street to Gordon transmission lines as a credible contingency. At 10.35 am AEMO reclassified the simultaneous loss of the two Farrell to Sheffield lines as a credible contingency. Both reclassifications were due to lightning and storms near the lines. The constraint that was invoked to manage the Farrell to Sheffield reclassification reduced the combined dispatch of generation at Mackintosh, Reece unit one and Tribute by 206 MW (from 273 MW at 10.35 am to 66 MW at 10.40 am). 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 $5592/MWh at 10.40 am before returning to its previous levels of around $35/MWh at 10.45 am.

The reclassification of the Chapel Street to Gordon lines ceased at 11 am and the reclassification of the Farrell to Sheffield lines ceased at 11.30 am.

There were no significant rebids.

Detailed NEM Price and Demand Trends

for Weekly Market Analysis
23 August - 29 August 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 ($/MWh) (YTD)	27	30	26	27	25
2008-09 ($/MWh) (YTD)	39	43	45	46	43
Change*	-31%	-30%	-42%	-41%	-42%
2008-09 ($/MWh)	36	43	49	69	62

Table 2: NEM turnover

Financial year	NEM Turnover** ($, billion)	Energy (TWh)
2009-10 (YTD)	$0.856	31
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)
Apr-09	34	38	40	38	69	0.622
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 (MTD)	24	25	24	25	23	0.394
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 31 August

	QLD		NSW		VIC		SA	
Q1 2010	Base	Peak	Base	Peak	Base	Peak	Base	Peak
Price on 24 Aug ($/MW)	56	96	51	83	66	119	80	145
Price on 31 Aug ($/MW)	56	96	50	83	65	118	80	145
Open interest on 31 Aug	2535	150	2262	31	2225	119	58	0
Traded in the last week (MW)	148	0	57	0	31	5	0	0
Traded since 1 Jan 09 (MW)	4257	220	4036	53	3807	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
June 09 with June 08						
MW Priced <$20/MWh	182	38	474	28	39	761
MW Priced $20 to $50/MWh	487	766	-242	44	244	1299
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 (MTD)						
MW Priced <$20/MWh	-128	-189	-347	59	511	-96
MW Priced $20 to $50/MWh	49	106	-191	-58	253	159

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