WEEKLY ELECTRICITY MARKET ANALYSIS

AUSTRALIAN ENERGY REGULATOR

30 September – 6 October 2012

Spot market prices

Figure 1 sets out the volume weighted average (VWA) prices for the week 30 September to 6 October and the 11/12 financial year to date (YTD) 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 30 September - 6 October 2011	49	54	49	49	37
% change from previous week*	2	5	4	9	1
12/13 financial YTD	57	60	62	68	49
% change from 11/12 financial YTD **	100	97	109	74	63

*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 and the average spot price for the previous financial year. Percentage changes are calculated on VWA prices prior to rounding.

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

Financial markets

Figures 2 to 9 show futures contract[2] prices traded on the Australian Securities Exchange (ASX) as at close of trade on Monday 8 October 2012. Figure 2 shows the base futures contract prices for the next three calendar years, and the average over these three years. Also shown are percentage changes[3] from 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 -> Australian energy industry -> Performance of the energy sector

[2] Futures contracts traded on the ASX 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 2013	58*	-1%	60*	0%	54	-1%	58	-1%
Calendar Year 2014	56*	-1%	59*	-1%	52*	-2%	56*	-2%
Calendar Year 2015	51	0%	52	0%	50	0%	68	0%
Three year average	55	-1%	57	0%	52	-1%	61	-1%

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

Figure 3 shows the $300 cap contract price for Q1 2013 and calendar year 2013 and the percentage change[4] from the previous week.

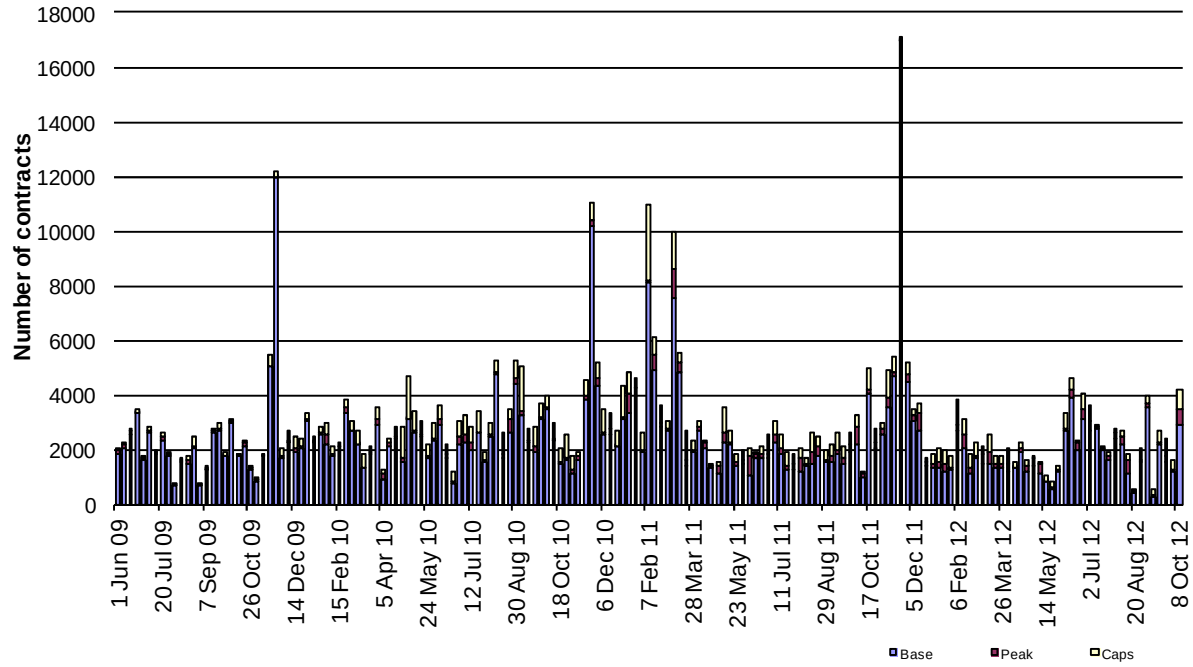
Figure 3: $300 cap contract prices ($/MWh)

	QLD		NSW		VIC		SA	
Q1 2013 (% change)	15*	-5%	12*	-4%	10*	-10%	16	-2%
2013 (% change)	6	-3%	6	-5%	5	-6%	7	-1%

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

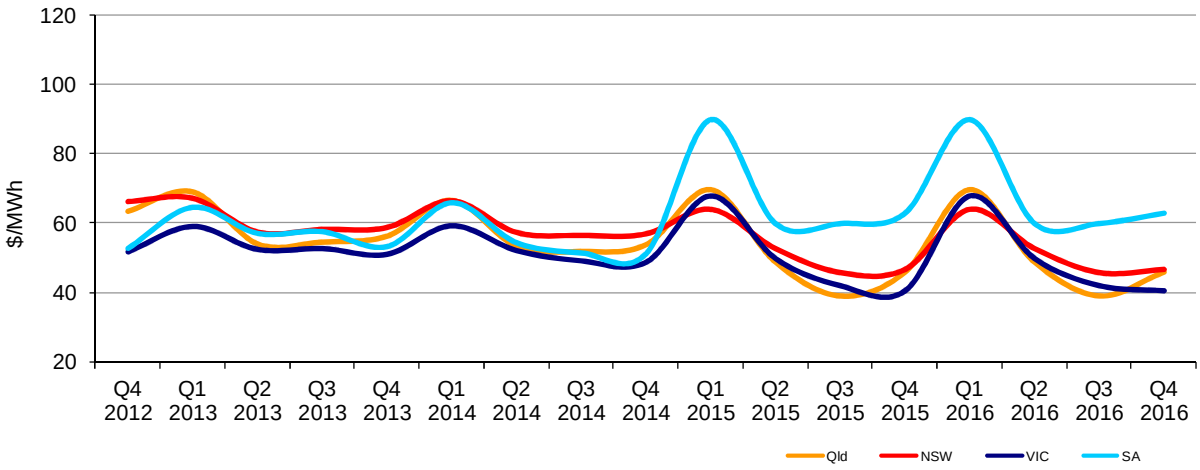


Source: d-cyphaTrade www.d-cyphatrade.com.au

[4] Calculated on prices prior to rounding.

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

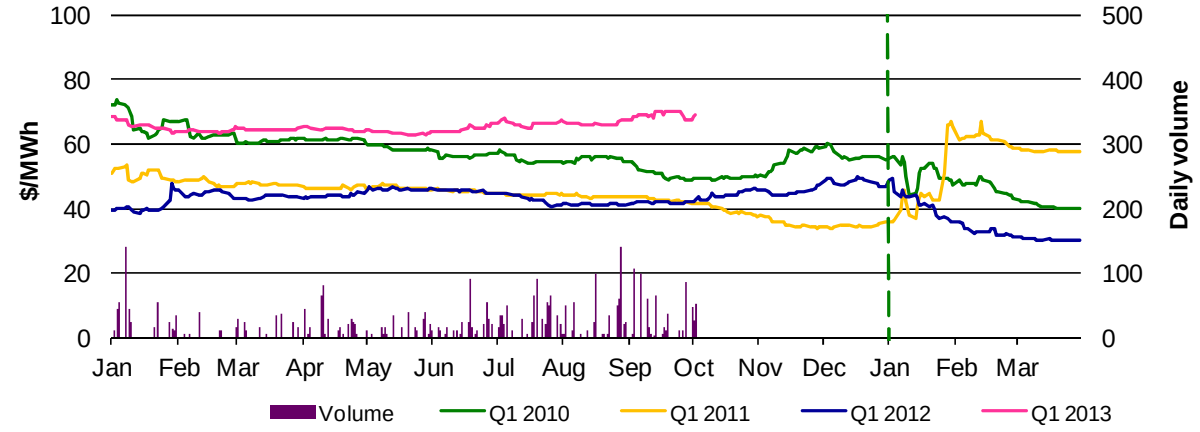
Figure 5: Quarterly base future prices Q4 2012 – Q4 2016



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

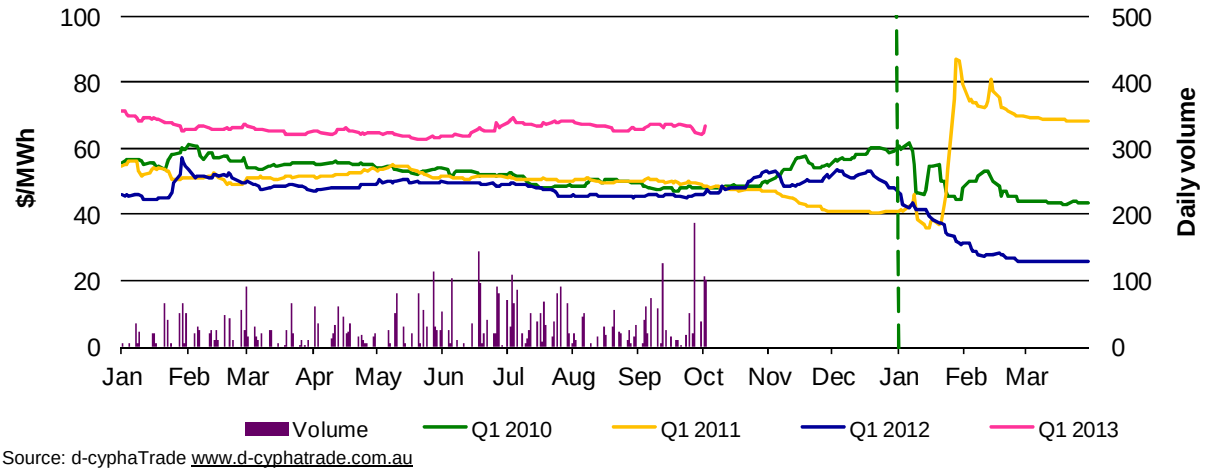
Figures 6-9 compare for each region the closing daily base contract prices for the first quarter of 2010, 2011, 2012 and 2013. Also shown is the daily volume of Q1 2013 base contracts traded. The vertical dashed line signifies the start of the Q1 period for which the contracts are being purchased.

Figure 6: Queensland Q1 2010, 2011, 2012 and 2013



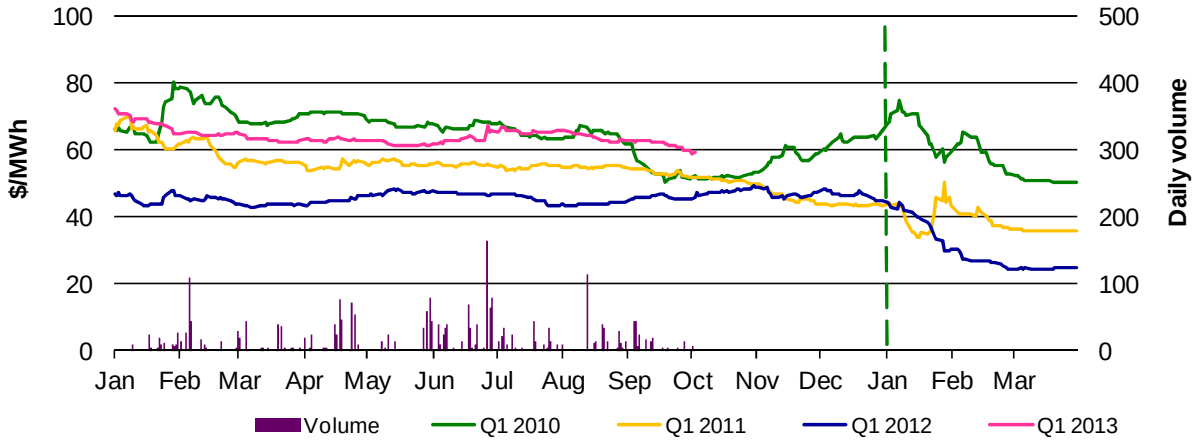
Source: d-cyphaTrade www.d-cyphatrade.com.au

Figure 7: New South Wales Q1 2010, 2011, 2012 and 2013



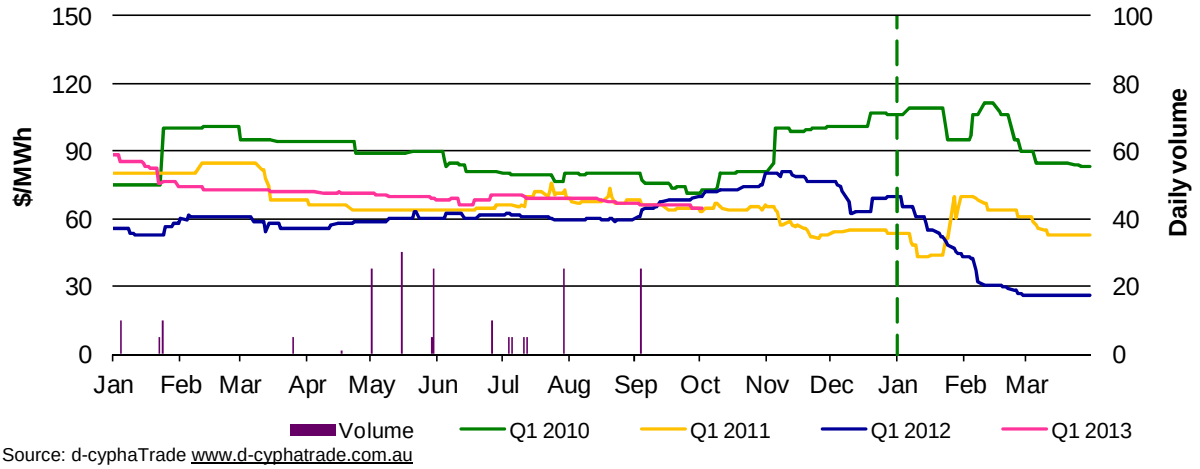
Source: d-cyphaTrade www.d-cyphatrade.com.au

Figure 8: Victoria Q1 2010, 2011, 2012 and 2013



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

Figure 9: South Australia Q1 2010, 2011, 2012 and 2013



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 was 28 trading interval throughout the week where actual prices varied significantly from forecasts[5]. This compares to the weekly average in 2011 of 78 counts and the average in 2010 of 57. 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	10	22	0	0
% of total below forecast	12	46	0	10

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 450 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	-450	307	27	-255
NSW	-321	-237	-978	-166
VIC	-79	-86	-425	-46
SA	101	17	138	-39
TAS	-75	151	-119	-102
TOTAL	-824	152	-1357	-608

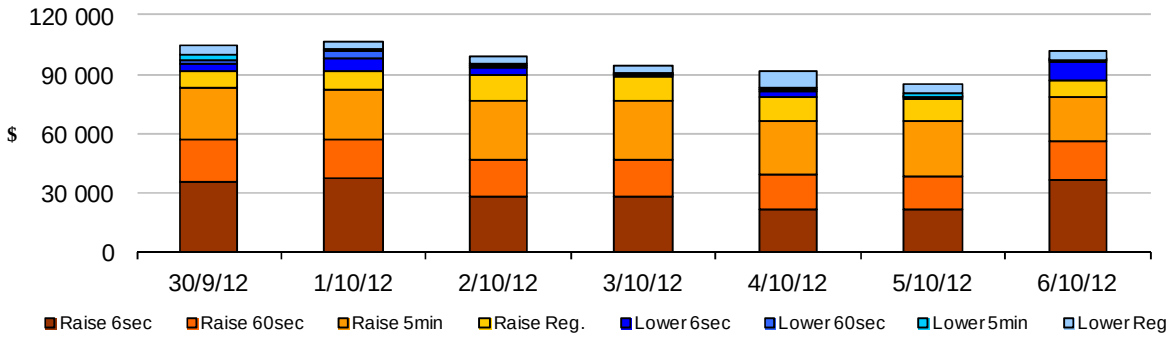
Ancillary services market

The total cost of frequency control ancillary services (FCAS) on the mainland for the week was $606 000 or less than one per cent of energy turnover on the mainland.

The total cost of FCAS in Tasmania for the week was $77 000 or less than two 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
October 2012

[7] A peak period is defined as between 7 am and 10 pm on weekdays.

Detailed NEM Price and Demand Trends

for Weekly Market Analysis
30 September - 6 October 2012

AUSTRALIAN ENERGY REGULATOR

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

Financial year	QLD	NSW	VIC	SA	TAS
2012-13 ($/MWh) YTD	57	60	62	68	49
2011-12 ($/MWh) YTD	29	30	30	39	30
Change*	100%	97%	109%	74%	63%
2011-12 ($/MWh)	30	31	28	32	33

Table 2: NEM turnover

Financial year	NEM Turnover** ($, billion)	Energy (TWh)
2012-13 (YTD)	$3.165	53
2011-12	$5.987	199
2010-11	$7.445	204

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)
June-12	35	37	38	31	35	0.619
July-12	65	68	76	83	60	1.228
August-12	55	58	57	65	48	0.971
September-12	46	51	48	49	38	0.971
October-12 (MTD)	50	55	49	49	38	0.153
Q4 2012 (QTD)	50	55	49	49	38	0.153
Q4 2011 (QTD)	28	30	24	71	29	0.095
Change*	81%	85%	101%	-30%	30%	60.65%

Table 4: ASX energy futures contract prices at end of 1 October 2012

	QLD		NSW		VIC		SA	
Q1 2013	Base	Peak	Base	Peak	Base	Peak	Base	Peak
Price on 01 Oct ($/MWh)	70	97	67	88	61	79	66	96
Price on 08 Oct ($/MWh)	69	96	67	88	59	78	65	90
Open interest on 08 Oct	1189	257	1514	448	1274	93	159	0
Traded in the last week (MW)	219	30	452	56	21	10	0	0
Traded since 1 Jan 12 (MW)	3698	432	5261	510	2728	150	196	0
Settled price for Q1 12($/MWh)	30	37	26	28	25	29	26	30

Table 5: Changes to availability of low priced generation capacity offered to the market

Comparison:	QLD	NSW	VIC	SA	TAS	NEM
August 12 with August 11						
MW Priced <$20/MWh	-3009	-1064	-1217	-133	-170	-5594
MW Priced $20 to $50/MWh	2583	-1047	714	-458	177	1969
September 12 with September 11						
MW Priced <$20/MWh	-2600	-525	-1694	13	-126	-4932
MW Priced $20 to $50/MWh	2307	-1266	823	-316	111	1658
October 12 with October 11 (MTD)						
MW Priced <$20/MWh	-3298	-843	-2261	69	261	-6072
MW Priced $20 to $50/MWh	3015	-1904	960	-230	-12	1829

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