

WEEKLY ELECTRICITY MARKET ANALYSIS



AUSTRALIAN ENERGY
REGULATOR

3 June - 9 June 2012

Spot market prices

Figure 1 sets out the volume weighted average (VWA) prices for the week 3 June to 9 June 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 3 June – 9 June 2012	31	34	35	36	34
% change from previous week*	17	18	30	18	19
11/12 financial YTD	30	30	28	32	33
% change from 10/11 financial YTD **	-14	-32	-6	-24	5

*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 A¹.

Financial markets

Figures 2 to 9 show futures contract² prices traded on the Australian Securities Exchange (ASX) as at close of trade on Tuesday 12 June 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 changes³ from the previous week.

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

	QLD		NSW		VIC		SA	
Calendar Year 2013	54*	1%	58*	1%	53*	2%	56	0%
Calendar Year 2014	50	0%	52	0%	48	1%	54	0%
Calendar Year 2015	62	0%	55	0%	59	0%	69	0%
Three year average	55	0%	55	1%	53	1%	60	0%

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

* denotes trades in the product.

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 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 3 shows the \$300 cap contract price for Q1 2013 and calendar year 2013 and the percentage change⁴ from the previous week.

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

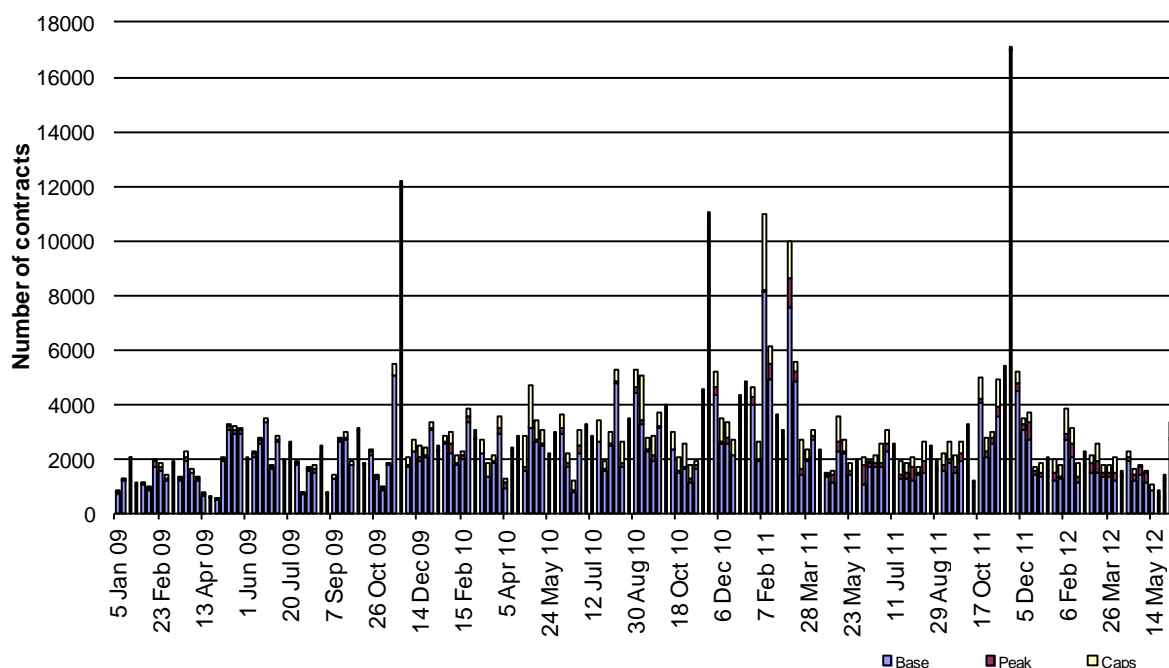
	QLD		NSW		VIC		SA	
Q1 2013 (% change)	14*	-3%	14	0%	14*	0%	23	0%
2013 (% change)	7	-1%	7	0%	6	0%	9	0%

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.

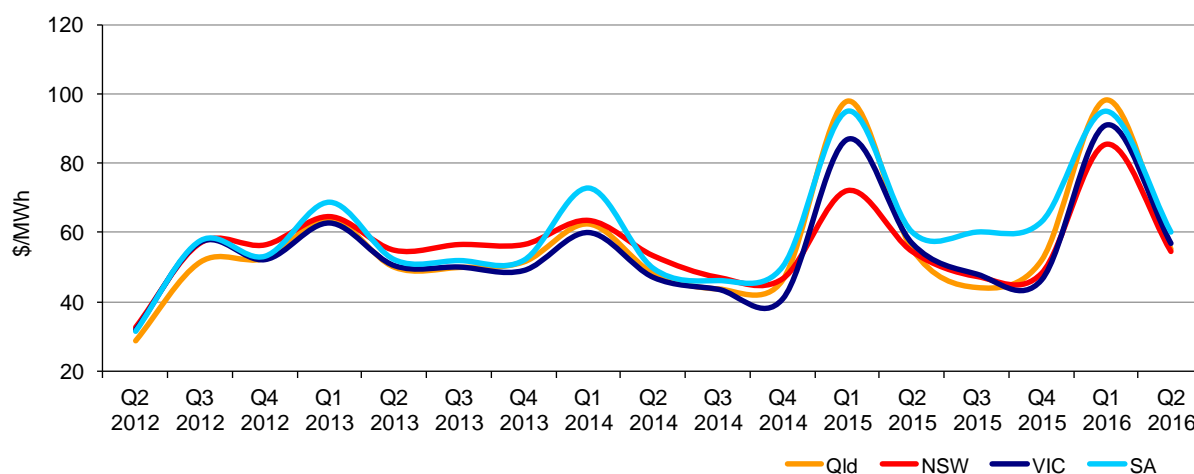
Figure 4: Number of exchange traded contracts per week



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 Q2 2012 – Q2 2016

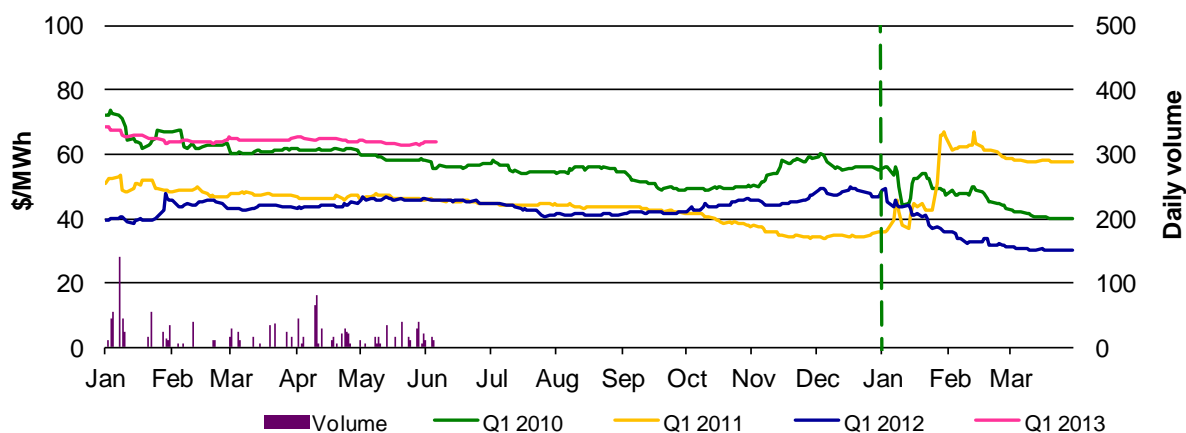


Source: d-cyphaTrade www.d-cyphatrade.com.au

⁴ Calculated on prices prior to rounding.

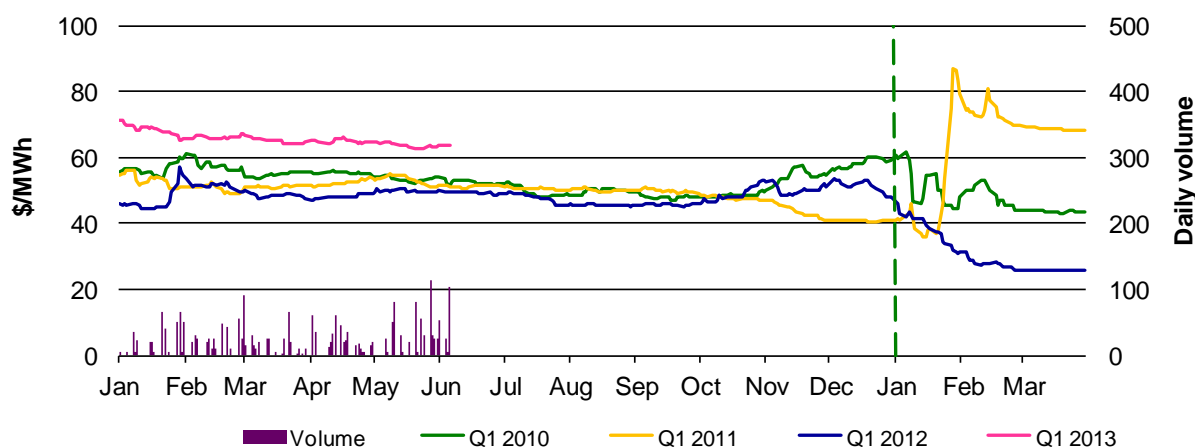
Figures 6-9 compare for each region the closing daily base contract prices for the first quarter of 2010, 2011, 2012 and 2013. Also shown is the daily volume of Q1 2013 base contracts traded. The vertical dashed line signifies the start of the Q1 period for which the contracts are being purchased.

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



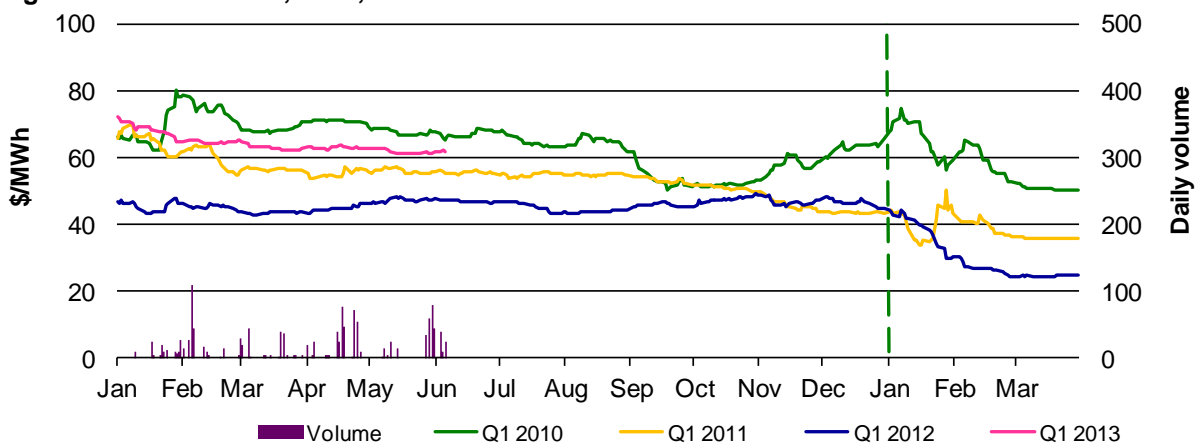
Source: d-cyphaTrade www.d-cyphatrade.com.au

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



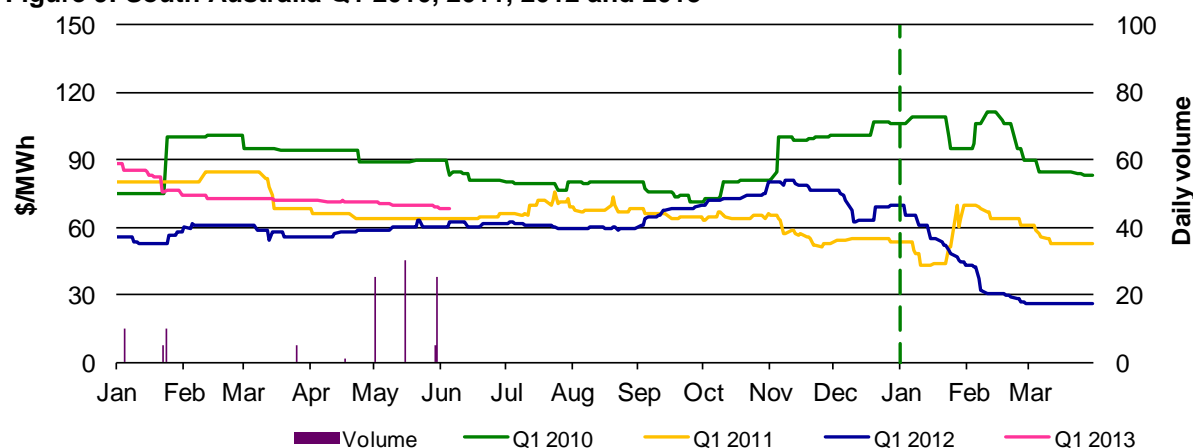
Source: d-cyphaTrade www.d-cyphatrade.com.au

Figure 8: Victoria 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 were 76 trading intervals throughout the week where actual prices varied significantly from forecasts⁵. 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 10⁶.

Figure 10: Reasons for variations between forecast and actual prices

	Availability	Demand	Network	Combination
% of total above forecast	5	3	0	3
% of total below forecast	46	25	0	18

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 periods⁷. For example, in Queensland 229 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.

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.

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	-229	210	-35	3
NSW	187	-145	107	380
VIC	-836	-101	-566	-15
SA	52	-14	-4	-15
TAS	-81	68	153	10
TOTAL	-907	18	-345	363

Ancillary services market

The total cost of frequency control ancillary services (FCAS) on the mainland for the week was \$724 000 or less than one per cent of energy turnover on the mainland. The majority of this occurred on Thursday morning for local South Australia services.

The total cost of FCAS in Tasmania for the week was \$66 000 or one per cent of energy turnover in Tasmania.

On Thursday 7 June, there was a planned outage of the Heywood to Mortlake 500kV line from 7 am to 11.10 am. As a result there was a requirement for local lower services in South Australia of around 200 MW (across all three lower services).

At 8.03 am, effective from 8.10 am, Origin Energy rebid 281 MW of capacity at Mortlake unit one from prices above \$52/MWh to close to the price floor, which resulted in the commitment of the generator. The reason given was “0800A avoid short run – ensure economic dispatch SL”. The transmission outage combined with Mortlake generation required forced exports into Victoria from South Australia of around 150 MW across the Heywood interconnector to manage voltage conditions at APD.

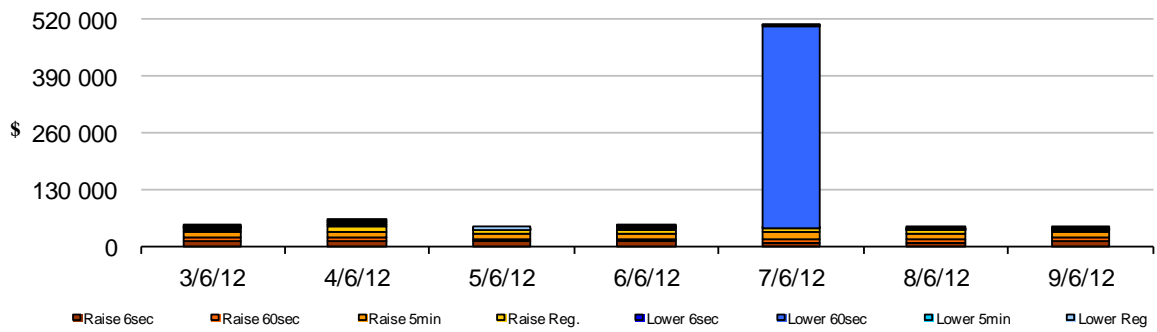
At 9.08 am, effective from 9.15 am, International Power rebid 25 MW of 60 second lower FCAS services at Pelican Point from zero to above \$4800/MW (this rebid applied to the 9.30 am trading interval). The reason given was “0907E Manage Constraint F_S++HYML_L6”. A further rebid at 9.29 am, effective from 9.35 am (for three trading intervals), saw International Power shift 25 MW of capacity shifted from zero to \$2000/MW. The reason given was “0928A manage constraint F_S++HYML_L60”.

The South Australia local lower 60 second service price increased from \$2.45/MW at 9.10 am to \$3383/MW at 9.15 am, and remained at \$2000/MW or higher until 11.10 am. This resulted in the cost of lower 60 second services accruing to \$464 000 over this two hour period.

International Power’s 9.29 am rebid set the price to \$2000/MW for the delayed Lower FCAS service from 9.35 am to 10 am, 10.10 am to 10.45 am and 10.55 am to 11.10 am.

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
July 2012**

Detailed NEM Price and Demand Trends

for Weekly Market Analysis
3 June - 9 June 2012



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

Financial year	QLD	NSW	VIC	SA	TAS
2011-12 (\$/MWh) YTD	30	30	28	32	33
2010-11 (\$/MWh) YTD	34	44	29	43	31
Change*	-14%	-32%	-6%	-24%	5%
2010-11 (\$/MWh)	34	43	29	42	31

Table 2: NEM turnover

Financial year	NEM Turnover** (\$, billion)	Energy (TWh)
2011-12 (YTD)	\$5.534	187
2010-11	\$7.445	204
2009-10	\$9.643	206

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)
Feb-12	32	27	27	29	37	0.427
Mar-12	28	26	24	26	36	0.396
Apr-12	30	34	33	30	36	0.457
May-12	26	29	27	30	33	0.434
June-12 (MTD)	30	33	33	35	32	0.166
Q2 2012 (QTD)	28	32	30	31	34	1.146
Q2 2011 (QTD)	26	28	31	32	33	1.113
Change*	7%	13%	-3%	-5%	2%	2.96%

Table 4: ASX energy futures contract prices at end of 12 June 2012

	QLD		NSW		VIC		SA	
Q1 2013	Base	Peak	Base	Peak	Base	Peak	Base	Peak
Price on 04 Jun (\$/MWh)	63	85	63	84	61	83	69	113
Price on 12 Jun (\$/MWh)	64	85	65	84	63	84	69	113
Open interest on 12 Jun	647	56	1003	235	799	68	84	0
Traded in the last week (MW)	35	0	190	0	120	0	0	0
Traded since 1 Jan 12 (MW)	1435	122	2330	196	1399	119	116	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
April 12 with April 11						
MW Priced <\$20/MWh	22	-1904	-128	-53	139	-1924
MW Priced \$20 to \$50/MWh	414	646	-112	234	-151	1031
May 12 with May 11						
MW Priced <\$20/MWh	26	-1367	593	-94	34	-809
MW Priced \$20 to \$50/MWh	38	217	98	177	182	712
June 12 with June 11 (MTD)						
MW Priced <\$20/MWh	-548	-2133	255	116	38	-2272
MW Priced \$20 to \$50/MWh	215	957	-175	104	153	1254

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

** Estimated value