

WEEKLY ELECTRICITY MARKET ANALYSIS



AUSTRALIAN ENERGY
REGULATOR

23 December – 29 December 2012

Spot market prices

Figure 1 sets out the volume weighted average (VWA) prices for the week 23 December to 29 December and the 12/13 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 23 - 29 December 2012	48	48	45	47	41
% change from previous week*	-45	-5	-5	-8	-7
12/13 financial YTD	57	58	65	65	49
% change from 11/12 financial YTD **	97	86	136	84	61

*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 Friday 28 December 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	59	2%	59*	2%	57	2%	61	2%
Calendar Year 2014	56*	2%	58*	2%	54	1%	58	1%
Calendar Year 2015	51	0%	52	0%	48*	0%	53	0%
Three year average	56	1%	56	1%	53	1%	57	1%

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

* denotes number of 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 -> 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 3 shows the \$300 cap contract price for Q1 2013 and calendar year 2013 and the percentage change⁴ from the previous week. Cap contract prices have significantly increased across all regions over the last three weeks. The largest increase has occurred in Queensland where the price increased from \$10.60/MW on 5 December to \$20.65 on 28 December.

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

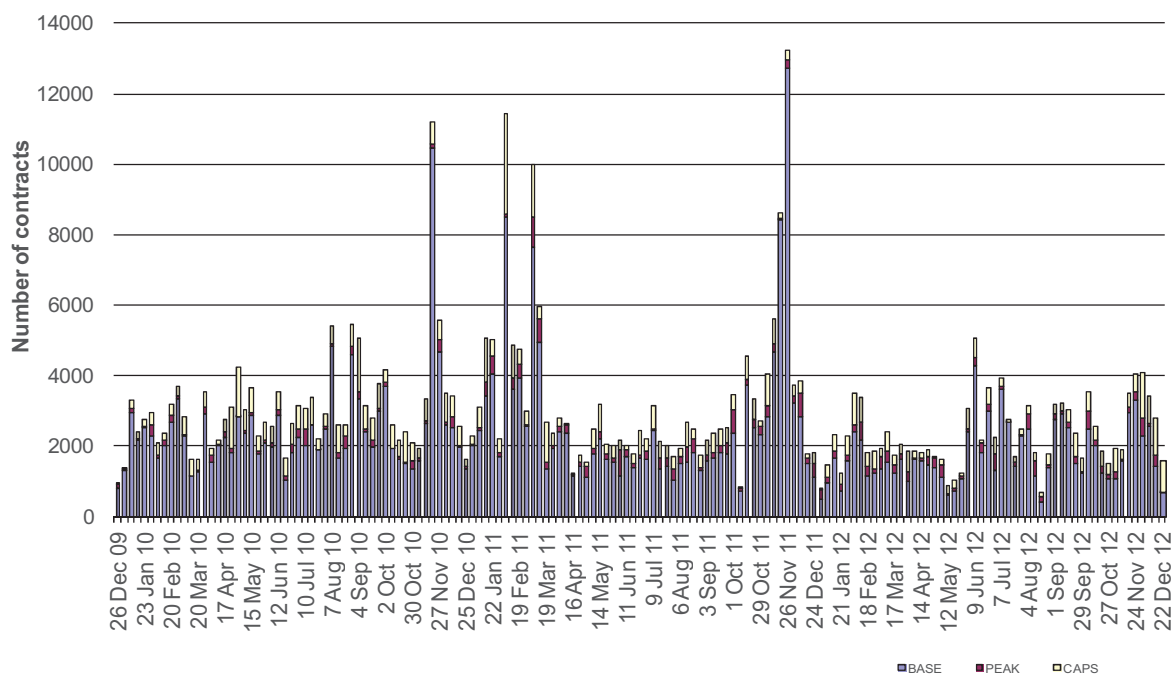
	QLD		NSW		VIC		SA	
Q1 2013 (% change)	21*	40%	13*	39%	19*	34%	19*	19%
2013 (% change)	8	23%	6	19%	7	22%	8	11%

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

* denotes number of 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.

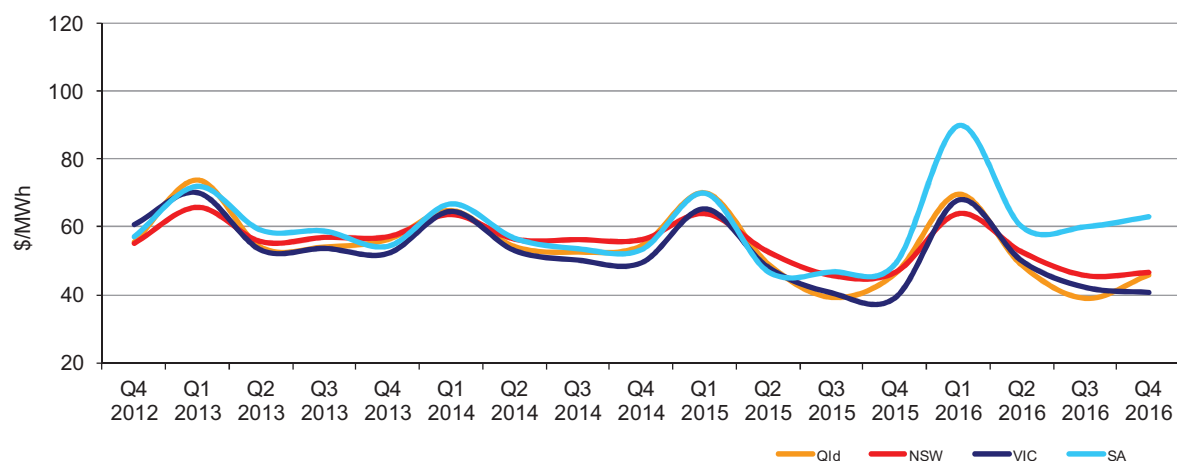
Figure 4: Number of exchange traded contracts per week



Source: d-cyphaTrade/ASX 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 2012 – Q4 2016

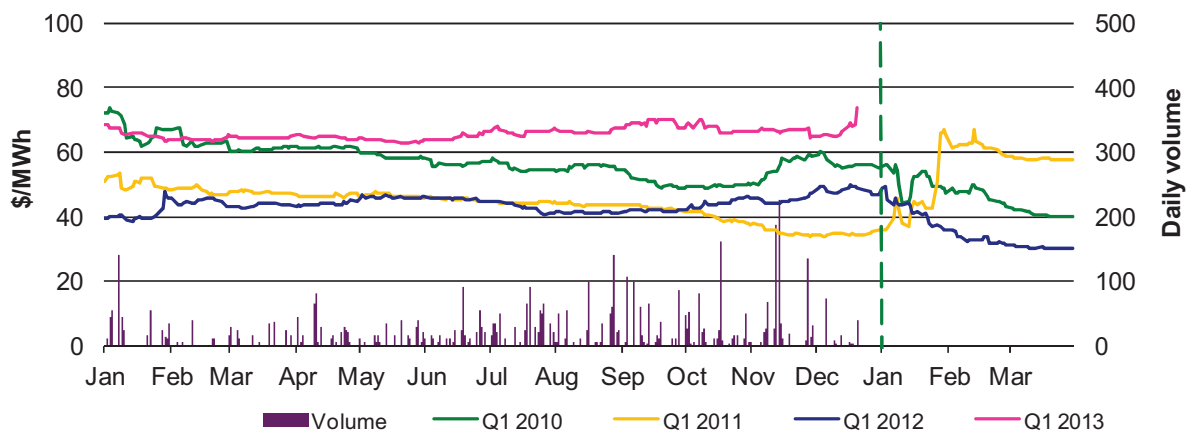


Source: d-cyphaTrade/ASX www.d-cyphatrade.com.au

⁴ Calculated on prices prior to rounding.

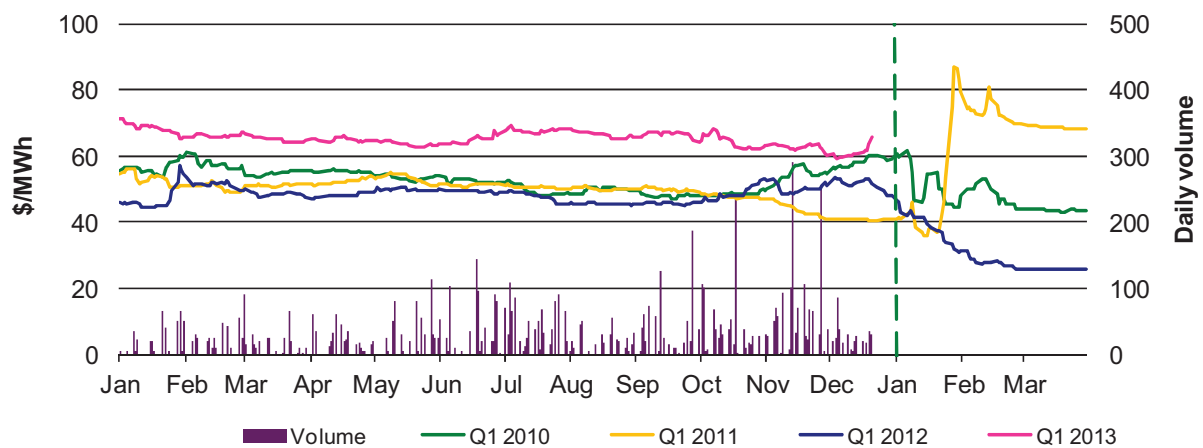
Figures 6-9 compare for each region the closing daily base contract prices for the first quarter of 2010, 2011, 2012 and 2013. Also shown is the daily volume of Q1 2013 base contracts traded. The vertical dashed line signifies the start of the Q1 period for which the contracts are being purchased.

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



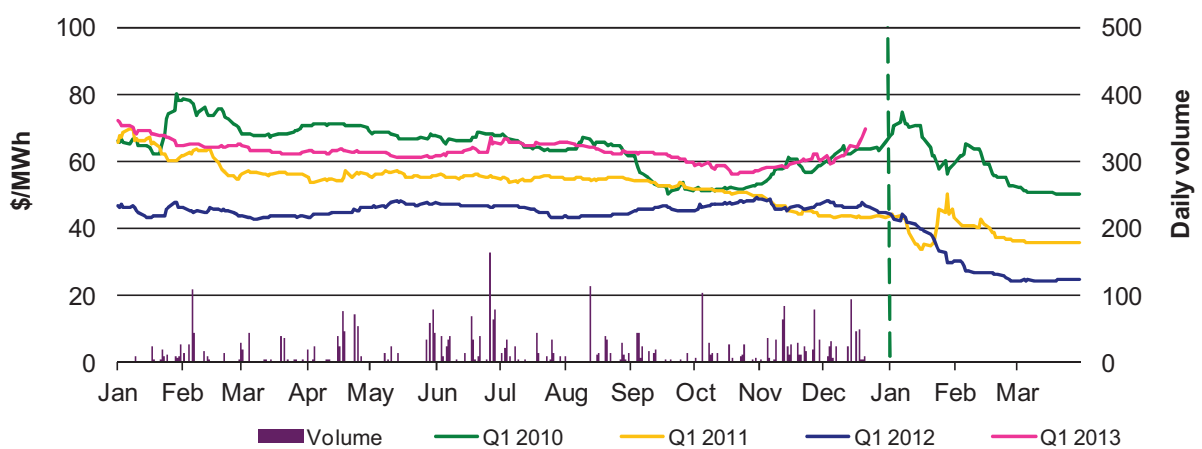
Source: d-cyphaTrade/ASX www.d-cyphatrade.com.au

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



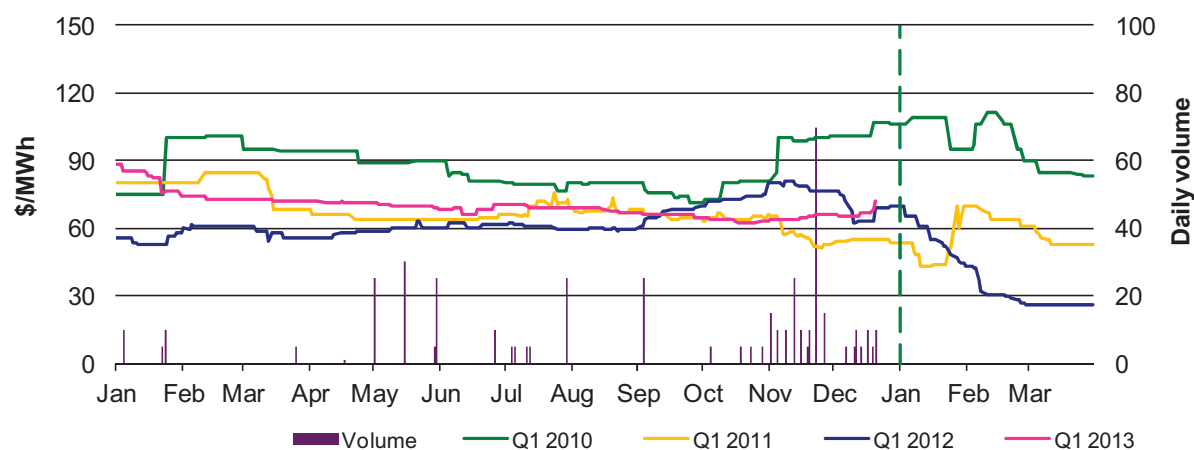
Source: d-cyphaTrade/ASX www.d-cyphatrade.com.au

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



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

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



Source: d-cyphaTrade/ASX 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 97 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	3	11	0	1
% of total below forecast	74	9	0	3

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.

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 193 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. The effect of the Christmas holiday period is shown in the significantly lower average demand.

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	-193	-294	-462	-1600
NSW	-615	-866	-303	-1612
VIC	-96	-351	-141	-1150
SA	-184	61	-264	-362
TAS	-139	-499	85	-156
TOTAL	-1227	-1949	-1085	-4880

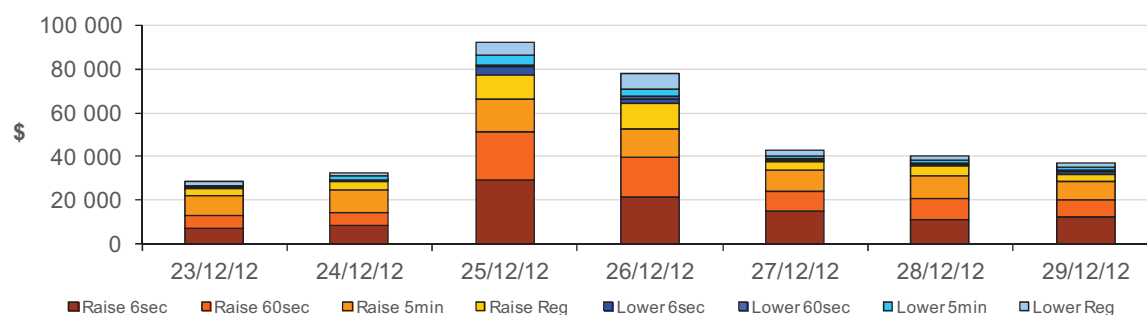
Ancillary services market

The total cost of frequency control ancillary services (FCAS) on the mainland for the week was \$277 500 or less than one per cent of energy turnover on the mainland.

The total cost of FCAS in Tasmania for the week was \$72 500 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



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

23 December - 29 December 2012

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

Financial year	QLD	NSW	VIC	SA	TAS
2012-13 (\$/MWh) YTD	57	58	65	65	49
2011-12 (\$/MWh) YTD	29	31	27	35	30
Change*	97%	86%	136%	84%	61%
2011-12 (\$/MWh)	30	31	28	32	33

Table 2: NEM turnover

Financial year	NEM Turnover** (\$, billion)	Energy (TWh)
2012-13 (YTD)	5.743	96
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)
August-12	55	58	57	65	48	0.971
September-12	53	53	55	56	40	0.812
October-12	53	58	52	52	44	0.848
November-12	55	58	94	72	51	1.045
December-12	63	50	56	58	47	0.838
Q4 2012 (QTD)	57	56	67	60	47	2.732
Q4 2011 (QTD)	30	32	25	33	30	1.404
Change*	93%	75%	171%	83%	57%	0.946

Table 4: ASX energy futures contract prices at end of 28 December 2013

	QLD		NSW		VIC		SA	
	Base	Peak	Base	Peak	Base	Peak	Base	Peak
Q1 2013								
Price on 21 Dec (\$/MWh)	69	91	62	78	65	88	67	85
Price on 28 Dec (\$/MWh)	74	107	66	84	70	102	72	85
Open Interest on 28 Dec (\$/MWh)	1357	320	2175	679	1234	130	260	0
Traded in the last week (MW)	41	5	67	15	17	1	15	0
Traded since 1 Jan 12(MW)	5126	569	7803	1042	3858	209	436	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
October 12 with October 11						
MW Priced \$20/MWh	-3085	-908	-2042	-48	98	-5985
MW Priced \$20/MWh to \$50/MWh	2830	-1652	857	-175	148	2008
November 12 with November 11						
MW Priced \$20/MWh	-3407	78	-1859	-61	-283	-5533
MW Priced \$20/MWh to \$50/MWh	2797	-1617	452	-242	77	1467
December 12 with December 11 (MTD)						
MW Priced \$20/MWh	-2983	268	-1755	-123	-231	-4823
MW Priced \$20/MWh to \$50/MWh	2624	-904	607	-232	-6	2089

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

** Estimated value