WEEKLY ELECTRICITY MARKET ANALYSIS

AUSTRALIAN ENERGY REGULATOR

24 February – 2 March 2013

Spot market prices

Figure 1 sets out the volume weighted average (VWA) prices for the week 24 February to 2 March 2013 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 24 Feb - 2 Mar 2013	68	56	53	57	49
% change from previous week*	25	8	-22	-32	6
12-13 financial YTD	73	56	63	65	49
% change from 11-12 financial YTD**	142	89	132	95	53

*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.

Further information is provided in Appendix A when the spot price exceeds three times the weekly average and is above $250/MWh or less than -$100/MWh. Longer term market trends are attached in Appendix B.[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 Friday 1 March 2013. 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.

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

	QLD		NSW		VIC		SA	
Calendar Year 2013	66	1%	55	1%	53	1%	57	0%
Calendar Year 2014	54	0%	55 (5)	0%	52 (5)	-1%	57	0%
Calendar Year 2015	50	0%	49	0%	46	-2%	49	0%
Three year average	57	0%	53	0%	50	-1%	54	0%

Source: d-cyphaTrade/ASX www.d-cyphatrade.com.au
A number in brackets denotes the 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 change[4] from the previous week.

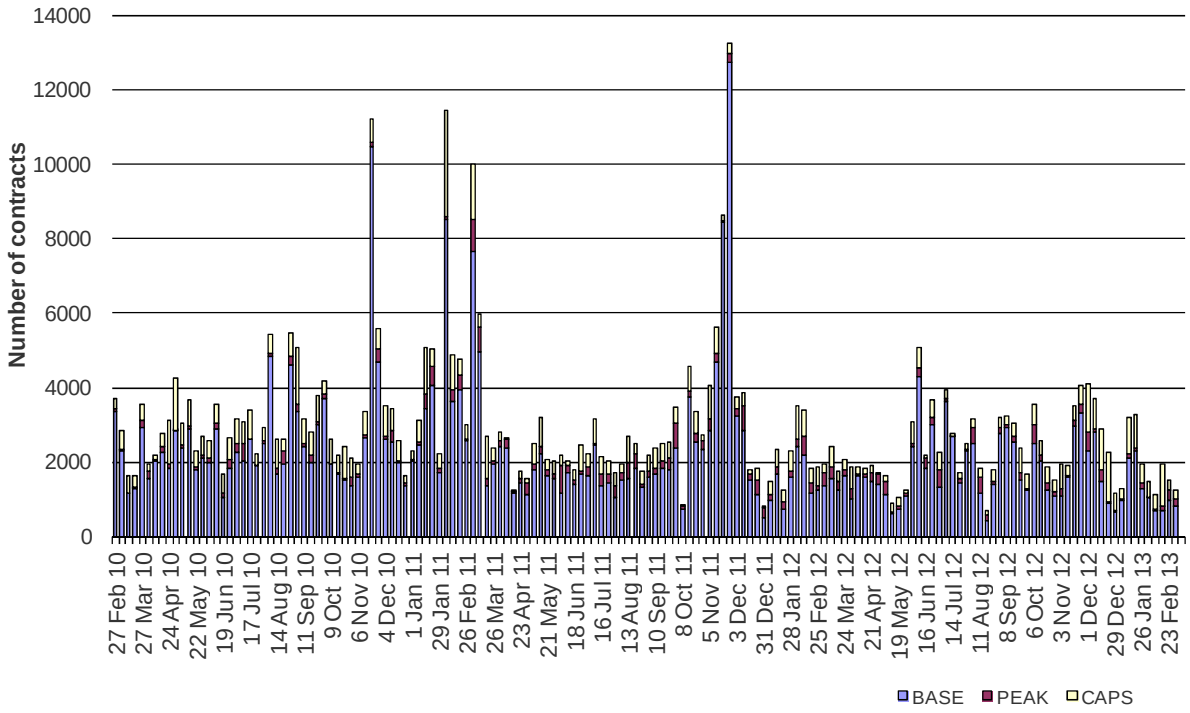
Figure 3: $300 cap contract prices ($/MWh)

	QLD		NSW		VIC		SA	
Q1 2013	21 (51)	-7%	0 (3)	-40%	3 (26)	0%	5 (5)	0%
2013	8	-4%	3	-1%	3	0%	4	0%

Source: d-cyphaTrade/ASX www.d-cyphatrade.com.au
A number in brackets denotes the 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.

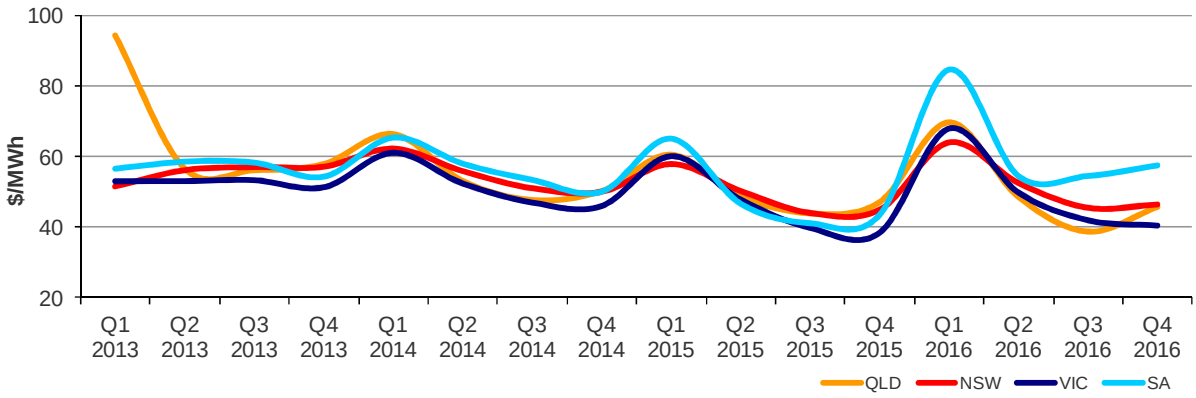
Figure 4: Number of exchange traded contracts per week



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

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

Figure 5: Quarterly base future prices Q1 2013 – Q4 2016

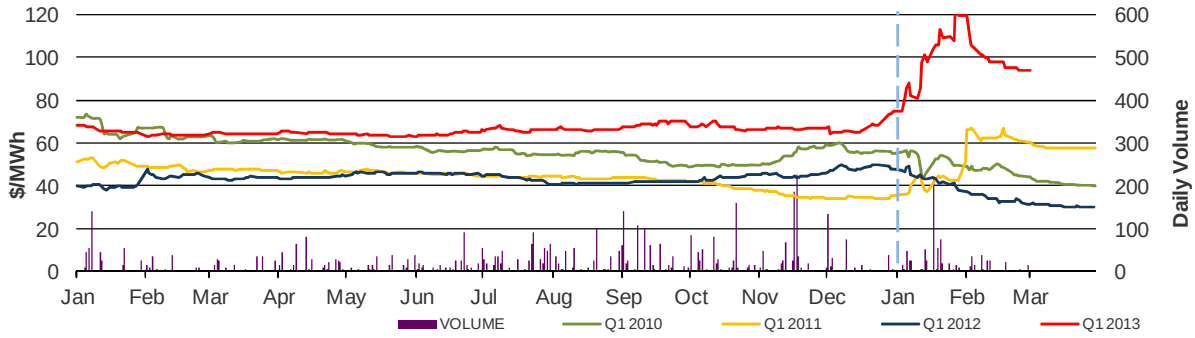


Source: d-cyphaTrade/ASX www.d-cyphatrade.com.au

[4] Calculated on prices prior to rounding.

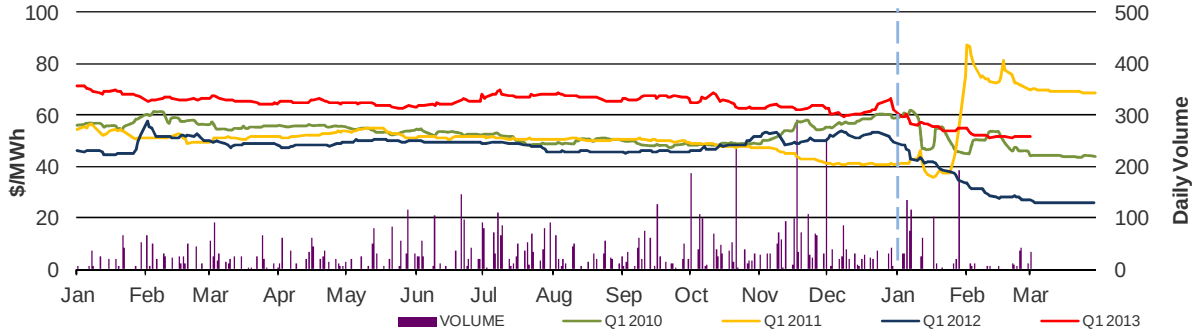
Figures 6-9 compare for each region the closing daily base contract prices for the first quarter of 2010, 2011, 2012 and 2013. Also shown is the daily volume of Q1 2013 base contracts traded. The vertical dashed line signifies the start of the Q1 period for which the contracts are being purchased.

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



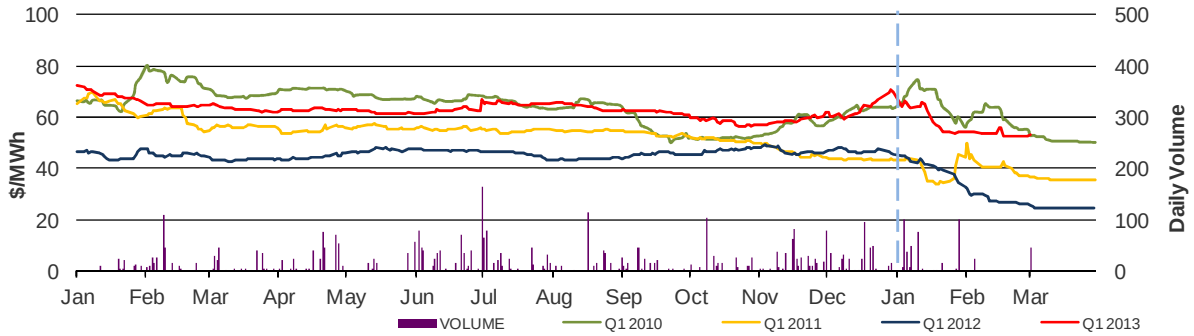
Source: d-cyphaTrade/ASX www.d-cyphatrade.com.au

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



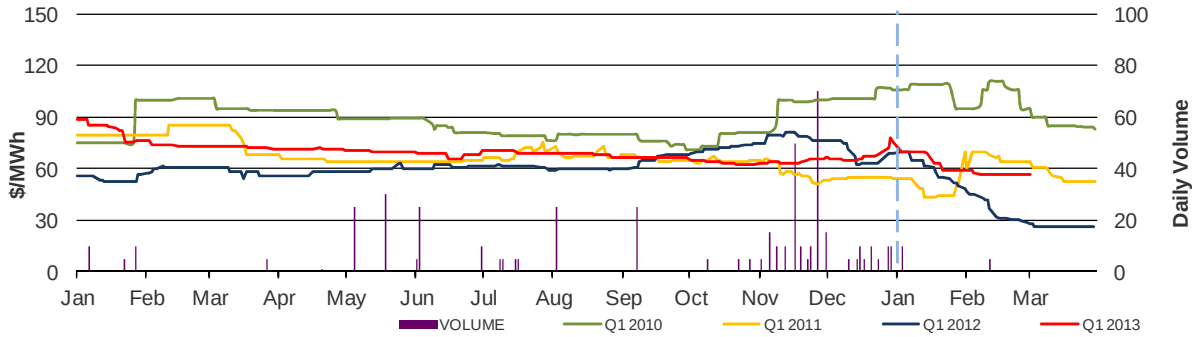
Source: d-cyphaTrade/ASX www.d-cyphatrade.com.au

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 87 trading intervals throughout the week where actual prices varied significantly from forecasts[5]. This compares to the weekly average in 2012 of 60 counts and the average in 2011 of 78. Reasons for these variances are summarised in Figure 10[6].

Figure 10: Reasons for variations between forecast and actual prices

	Availability	Demand	Network	Combination
% of total above forecast	1	26	0	0
% of total below forecast	56	11	0	6

The total may not equal 100% due to rounding

[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 periods[7]. For example, in Queensland 159 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	-159	153	-103	168
NSW	-234	598	137	219
VIC	-289	-36	481	-428
SA	-194	-103	-393	-277
TAS	-37	7	38	-1
TOTAL	-913	619	160	-319

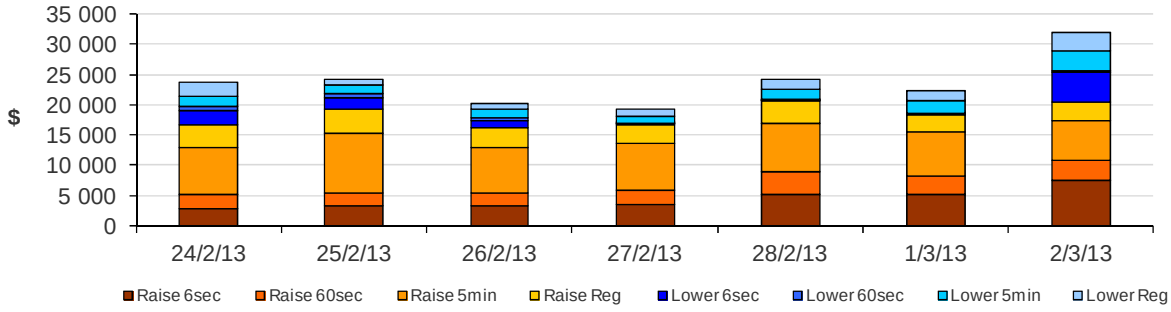
Ancillary services market

The total cost of frequency control ancillary services (FCAS) on the mainland for the week was $128 500 or less than one per cent of energy turnover on the mainland.

The total cost of FCAS in Tasmania for the week was $38 000 or less than one 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
March 2013

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

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Queensland:

There was one occasion where the spot price in Queensland was greater than three times the Queensland weekly average price of $68/MWh and above $250/MWh.

Thursday, 28 February

12:30 PM	Actual	4 hr forecast	12 hr forecast
Price ($/MWh)	2206.37	59.90	98.46
Demand (MW)	6831	6935	7024
Available capacity (MW)	9198	9812	9667

Conditions on the day saw demand around 100 MW and available capacity up to 614 MW less than that forecast four hours ahead.

At 9.03 am, effective from 9.35 am, Callide Power Trading reduced the available capacity at Callide C by 412 MW (206 MW of which was priced at $95/MWh). The reason given was “coal conservation and also wet coal”.

At 12.16 pm, effective at 12.25 pm, CS Energy reduced the available capacity of Kogan Creek by 200 MW (to 500 MW), all of which was priced at less than $40/MWh. The reason given was “1216P technical issues – ATW pumps failed – SL”. At 12.23 pm, the unit tripped from 500 MW, all of this capacity was priced at less than $30/MWh. The rebid reflective of the unit tripping became effective at 12.30 pm.

At the time of when the unit trip other lower price generators were either ramp up rate limited, trapped in FCAS or offline. Hence the dispatch price increased from $72/MWh at 12.25 pm to the price cap at 12.30 pm.

At 12.24 pm, effective from 12.35 pm, CS Energy rebid 300 MW of capacity at Gladstone from prices above $12700/MWh to below $55/MWh. The reason given was “1224P portfolio rearrangement due to KOG trip – SL”. This saw the 5-minute price fall to $155/MWh at 12.35 pm.

There was no other significant rebidding.

Detailed NEM Price and Demand Trends

for Weekly Market Analysis

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

Financial year	QLD	NSW	VIC	SA	TAS
2012-13 ($/MWh) YTD	73	56	63	65	49
2011-12 ($/MWh) YTD	30	30	27	33	32
Change*	142%	89%	132%	95%	53%
2011-12 ($/MWh)	30	31	28	32	33

Table 2: NEM turnover

Financial year	NEM Turnover** ($, billion)	Energy (TWh)
2012-13 YTD	8.181	131
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)
October-12	53	58	52	52	44	0.848
November-12	55	58	94	72	51	1.045
December-12	62	50	55	57	47	0.881
January-13	170	51	60	68	57	1.489
February-13	60	53	56	63	46	0.855
Q1 2013 QTD	120	52	58	66	52	2.344
Q1 2012 QTD	33	27	26	28	38	0.961
Change*	261%	96%	122%	132%	35%	1.439

Table 4: ASX energy futures contract prices at end of 1 March 2013

	QLD		NSW		VIC		SA	
Q1 2013	Base	Peak	Base	Peak	Base	Peak	Base	Peak
Price on 22 Feb ($/MWh)	95	112	51	55	53	65	57	74
Price on 1 Mar ($/MWh)	94	109	52	55	53	63	57	72
Open Interest on 1 Mar ($/MWh)	1548	341	2486	692	1270	178	275	0
Traded in the last week (MW)	19	29	125	0	45	1	0	0
Traded since 1 Jan 12 (MW)	5961	705	8838	1069	4288	293	486	0
Settled price for Q1 12 ($/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
December 12 with December 11						
MW Priced $20/MWh	-2990	273	-1725	-115	-219	-4777
MW Priced $20/MWh to $50/MWh	2632	-867	605	-235	33	2168
January 13 with January 12						
MW Priced $20/MWh	-2772	-2217	-1360	-41	-235	-6625
MW Priced $20/MWh to $50/MWh	1812	1269	1255	-346	339	4330
February 13 with February 12						
MW Priced $20/MWh	-3691	-1475	-1023	-157	-399	-6745
MW Priced $20/MWh to $50/MWh	2240	47	635	-421	389	2891

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

** Estimated value