WEEKLY ELECTRICITY MARKET ANALYSIS

AUSTRALIAN ENERGY REGULATOR

18 November – 24 November 2012

Spot market prices

Figure 1 sets out the volume weighted average (VWA) prices for the week 18 November to 24 November 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 18 - 24 November 2012	51	52	51	57	51
% change from previous week*	3	-1	-1	16	6
12/13 financial YTD	56	59	59	63	48
% change from 11/12 financial YTD **	89	85	107	69	56

*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 Monday 26 November 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.

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

	QLD		NSW		VIC		SA	
Calendar Year 2013	57*	1%	59*	1%	54*	2%	59	1%
Calendar Year 2014	55*	0%	58*	0%	53*	1%	57	0%
Calendar Year 2015	51	0%	52	0%	50	0%	53	0%
Three year average	54	0%	56	1%	52	1%	56	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 -> 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.

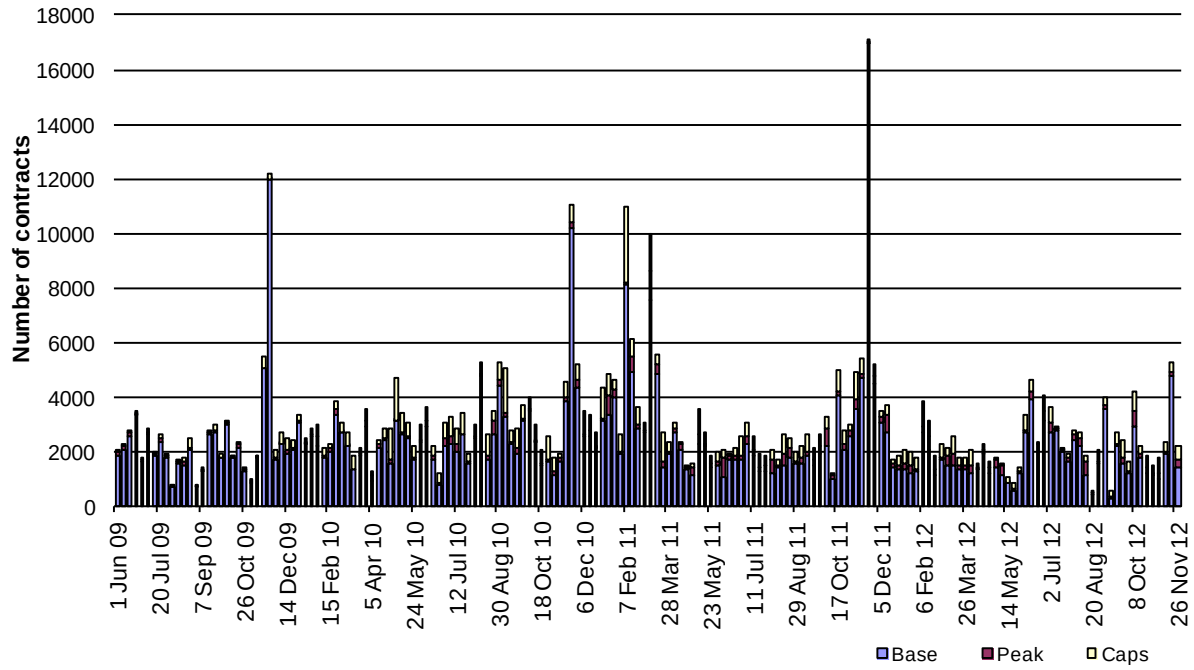
Figure 3: $300 cap contract prices ($/MWh)

	QLD		NSW		VIC		SA	
Q1 2013 (% change)	13*	2%	10*	7%	10*	15%	14*	9%
2013 (% change)	6	0%	5	3%	4	7%	7	8%

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.

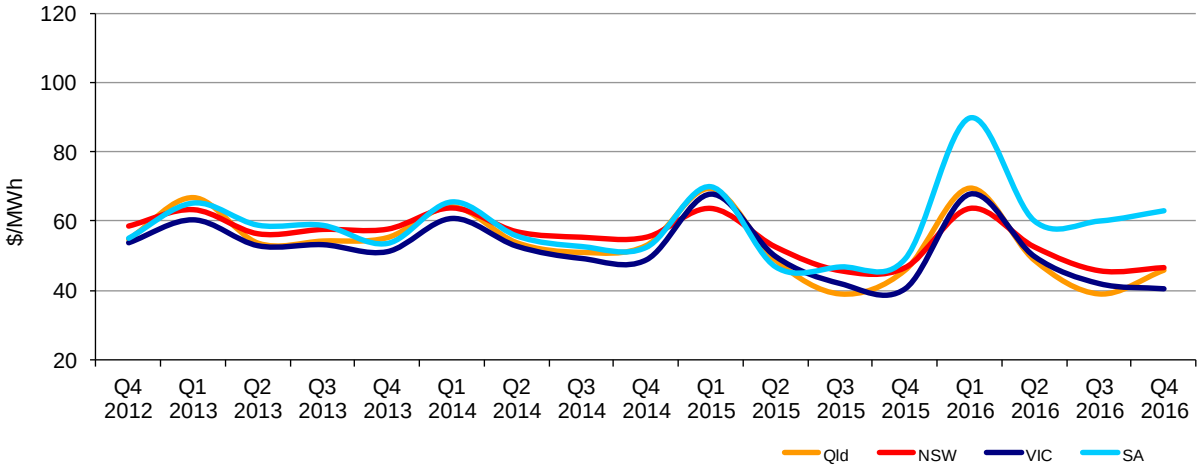
Figure 4: Number of exchange traded contracts per week



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 Q4 2012 – Q4 2016

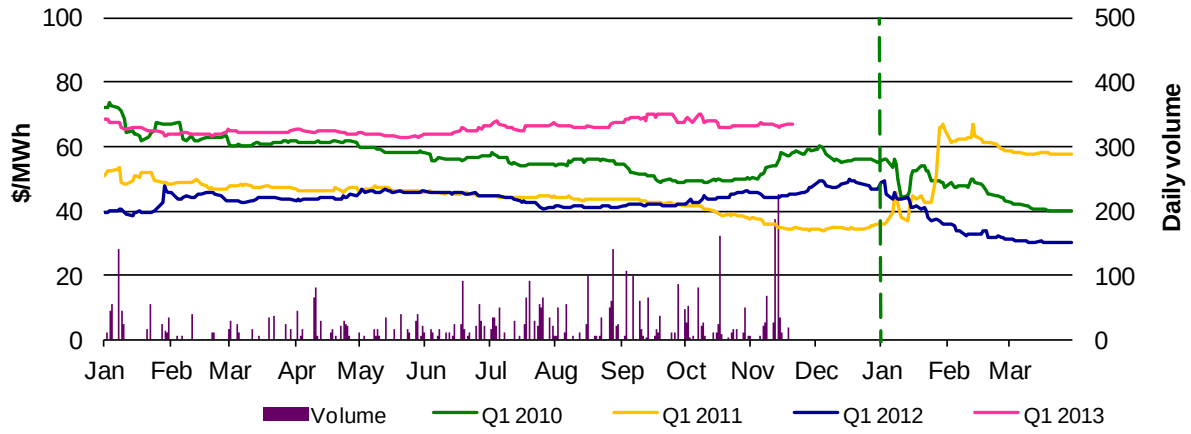


Source: d-cyphaTrade www.d-cyphatrade.com.au

[4] Calculated on prices prior to rounding.

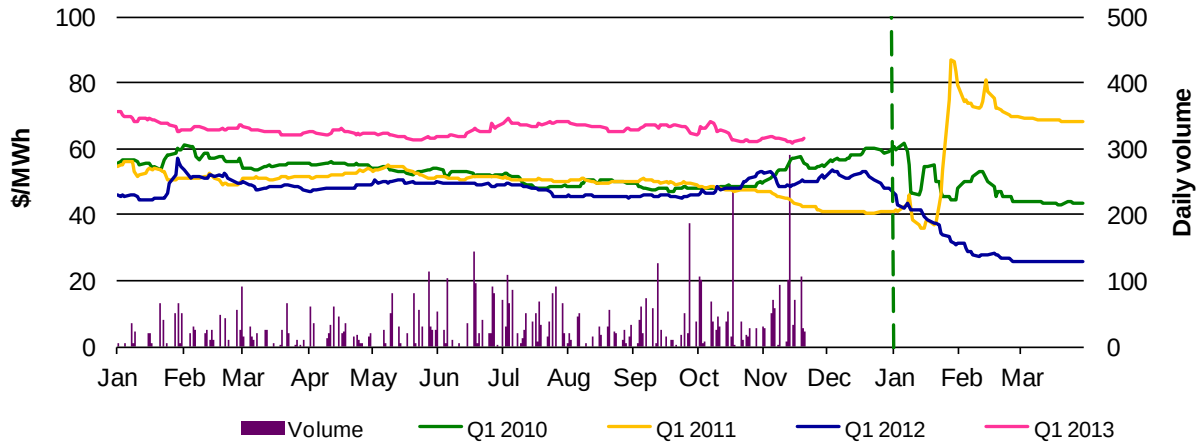
Figures 6-9 compare for each region the closing daily base contract prices for the first quarter of 2010, 2011, 2012 and 2013. Also shown is the daily volume of Q1 2013 base contracts traded. The vertical dashed line signifies the start of the Q1 period for which the contracts are being purchased.

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



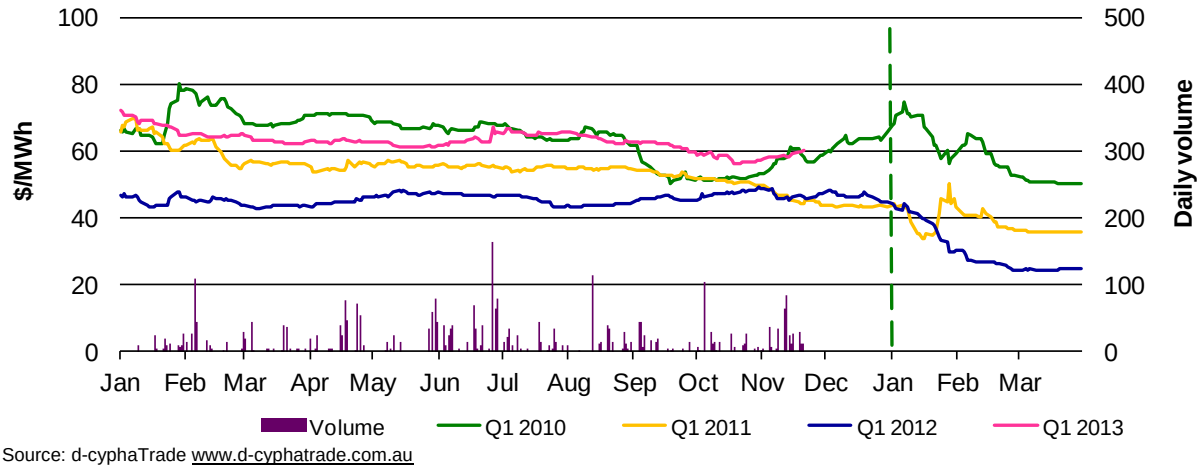
Source: d-cyphaTrade www.d-cyphatrade.com.au

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



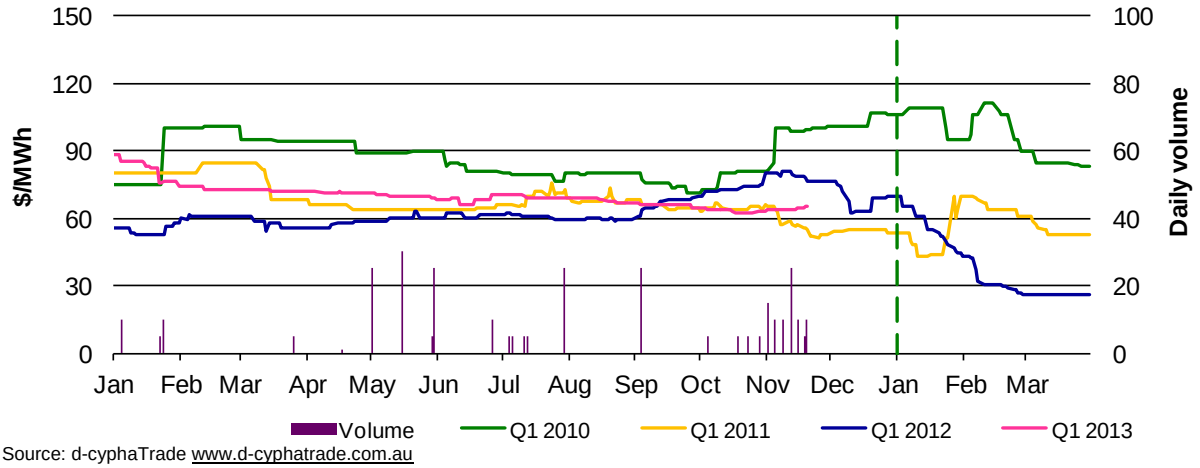
Source: d-cyphaTrade www.d-cyphatrade.com.au

Figure 8: Victoria 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 were 45 trading intervals 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].

Figure 10: Reasons for variations between forecast and actual prices

	Availability	Demand	Network	Combination
% of total above forecast	24	29	0	6
% of total below forecast	9	29	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 periods[7]. For example, in Queensland 291 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	-291	264	-111	334
NSW	416	-433	330	-123
VIC	376	141	703	61
SA	15	-32	107	114
TAS	-170	66	58	-34
TOTAL	346	6	1087	352

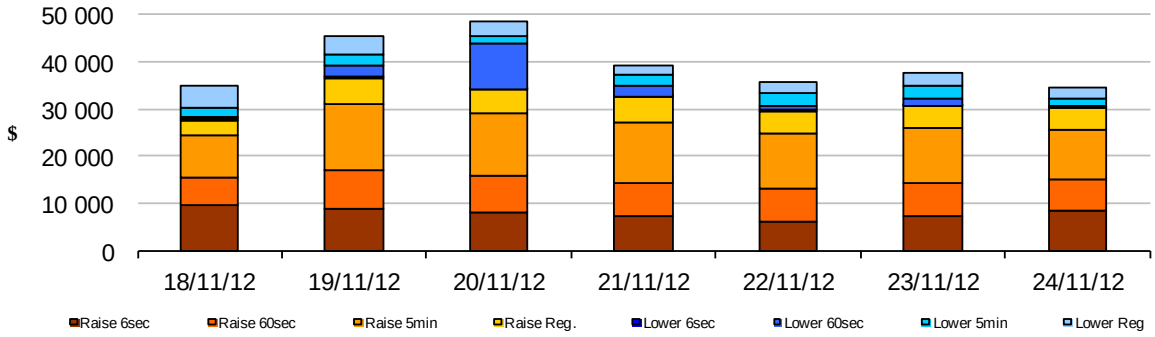
Ancillary services market

The total cost of frequency control ancillary services (FCAS) on the mainland for the week was $226 000 or less than one per cent of energy turnover on the mainland.

The total cost of FCAS in Tasmania for the week was $51 000 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
December 2012

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

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South Australia

There was one occasion where the spot price in South Australia was greater than three times the South Australia weekly average price of $57/MWh and above $250/MWh.

Friday, 23 November

2 PM	**Actual**	**4 hr forecast**	**12 hr forecast**
Price ($/MWh)	2051.51	60.80	60.80
Demand (MW)	1700	1745	1732
Available capacity (MW)	2341	2385	2381

There was a planned outage of the Alcoa to Portland to Heywood No.2 500 kV line in Victoria that restricts flows across the Heywood interconnector. There was also an outage of the Buronga to Balranald to Darlington line in New South Wales that restricts flows across Murraylink. Actual flows and limits on the two interconnectors for imports into South Australia were close to forecast but at low levels of around 200 MW in total. South Australia was also experiencing high temperatures and very low levels of wind generation. Total output from wind generation was less than 60 MW all afternoon, which was close to forecast.

At 1.25 pm, effective from 1.35 pm, Alinta Energy rebid 100 MW of available capacity at Northern Power Station from prices below $60/MWh to above $11 560/MWh. The reason given was "1325A new binding constraint V>>S_HYML_4@13:25".

With all online offers fully dispatched (apart from 106 MW at Alinta's Northern Power Station priced above $11 560/MWh), and all fast start peaking plant offline, a small increase in demand saw the 5-minute price reach $12 000/MWh at 1.50 pm set by Northern Power Station.

Immediately following the price spike, there was an apparent demand side response of 105 MW and participants rebid into lower price bands (effective from 1.55 pm) which together saw the price return to previous levels.

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 ($/MWh) YTD	56	59	59	63	48
2011-12 ($/MWh) YTD	29	32	28	38	31
Change*	89%	85%	107%	69%	56%
2011-12 ($/MWh)	30	31	28	32	33

Table 2: NEM turnover

Financial year	NEM Turnover** ($, billion)	Energy (TWh)
2012-13 (YTD)	$4.494	78
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)
July-12	65	68	76	83	60	1.228
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 (MTD)	51	53	52	55	49	0.635
Q4 2012 (QTD)	52	56	52	53	46	1.482
Q4 2011 (QTD)	31	34	26	38	33	0.912
Change*	70%	64%	101%	40%	40%	62.45%

Table 4: ASX energy futures contract prices at end of 26 November 2012

	QLD		NSW		VIC		SA	
Q1 2013	Base	Peak	Base	Peak	Base	Peak	Base	Peak
Price on 19 Nov ($/MWh)	66	90	62	78	58	73	64	85
Price on 26 Nov ($/MWh)	67	89	63	79	60	77	65	85
Open interest on 26 Nov	1237	302	1863	514	1218	112	259	0
Traded in the last week (MW)	63	15	260	106	90	0	25	0
Traded since 1 Jan 12 (MW)	4788	518	6956	667	3354	185	301	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
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						
MW Priced <$20/MWh	-3085	-908	-2042	-48	98	-5985
MW Priced $20 to $50/MWh	2830	-1652	857	-175	148	2008
November 12 with November 11						
MW Priced <$20/MWh	-3478	-72	-1846	-92	-336	-5824
MW Priced $20 to $50/MWh	2880	-1496	548	-201	159	1890

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