WEEKLY ELECTRICITY MARKET ANALYSIS

AUSTRALIAN ENERGY REGULATOR

20 May - 26 May 2012

Summary

The average weekly spot price ranged from $25/MWh in Victoria to $29/MWh in New South Wales and South Australia. The Tasmanian weekly average spot price has fallen compared to previous weeks as a result of the change in Hydro Tasmania's bidding strategy.

Spot market prices

Figure 1 sets out the volume weighted average (VWA) prices for the week 20 May to 26 May 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 20 May – 26 May 2012	26	29	25	29	27
% change from previous week*	7	6	-1	-2	-21
11/12 financial YTD	30	30	27	32	33
% change from 10/11 financial YTD **	-15	-33	-5	-25	6

*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 28 May 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 -> 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 2: Base calendar year futures contract prices ($/MWh)

	QLD		NSW		VIC		SA	
Calendar Year 2013	53*	0%	56*	-1%	51	0%	56	1%
Calendar Year 2014	51	0%	52*	-1%	47	0%	55	0%
Calendar Year 2015	62	0%	56	0%	59	0%	69	0%
Three year average	55	0%	55	-1%	53	0%	60	0%

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.

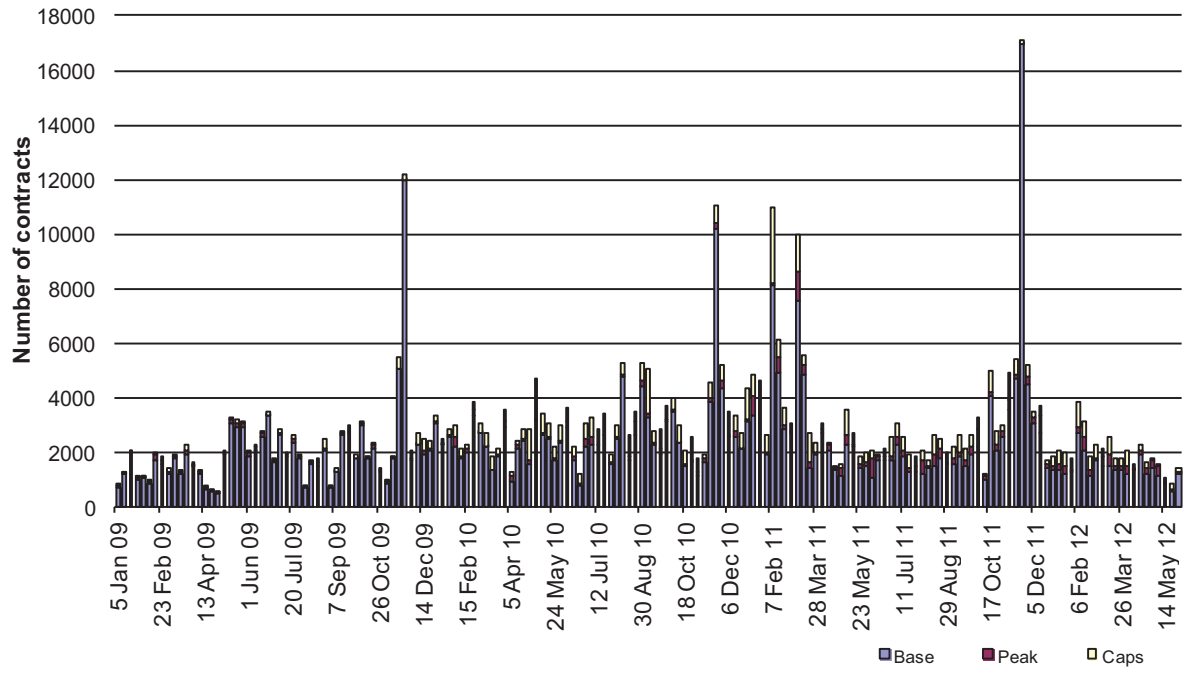
Figure 3: $300 cap contract prices ($/MWh)

	QLD		NSW		VIC		SA	
Q1 2013 (% change)	14	0%	14	-2%	14*	-4%	23	0%
2013 (% change)	7	0%	8	-2%	6	-4%	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

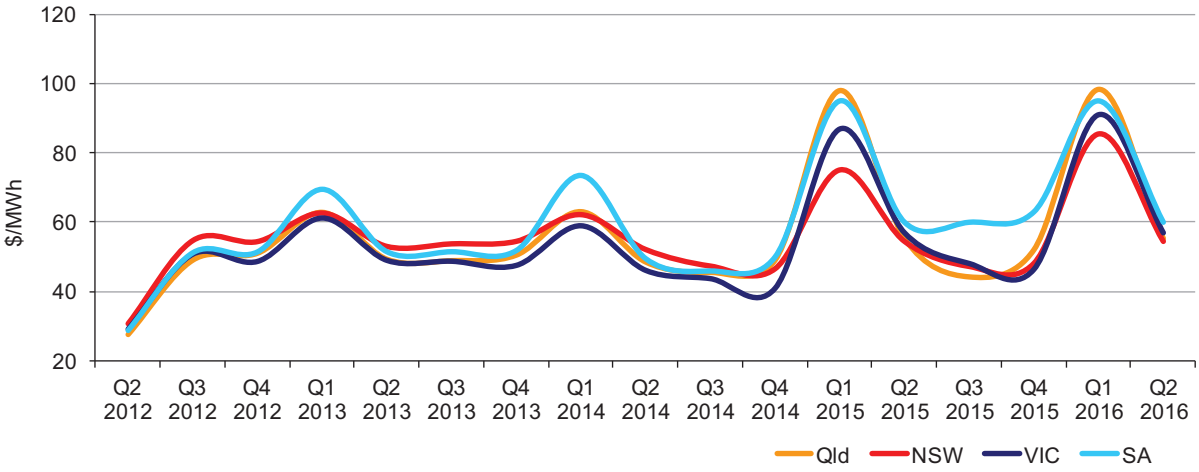


Source: d-cyphaTrade www.d-cyphatrade.com.au

[4] Calculated on prices prior to rounding.

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

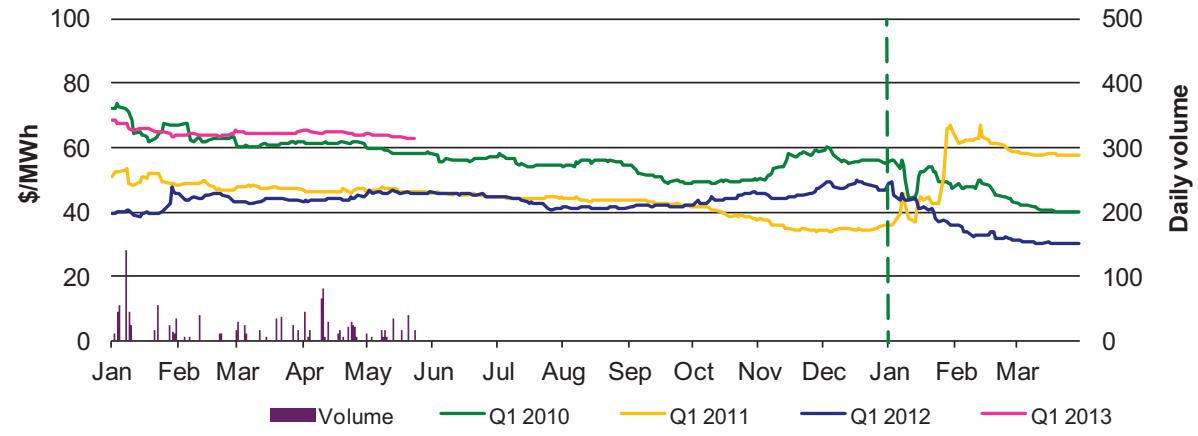
Figure 5: Quarterly base future prices Q2 2012 – Q2 2016



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

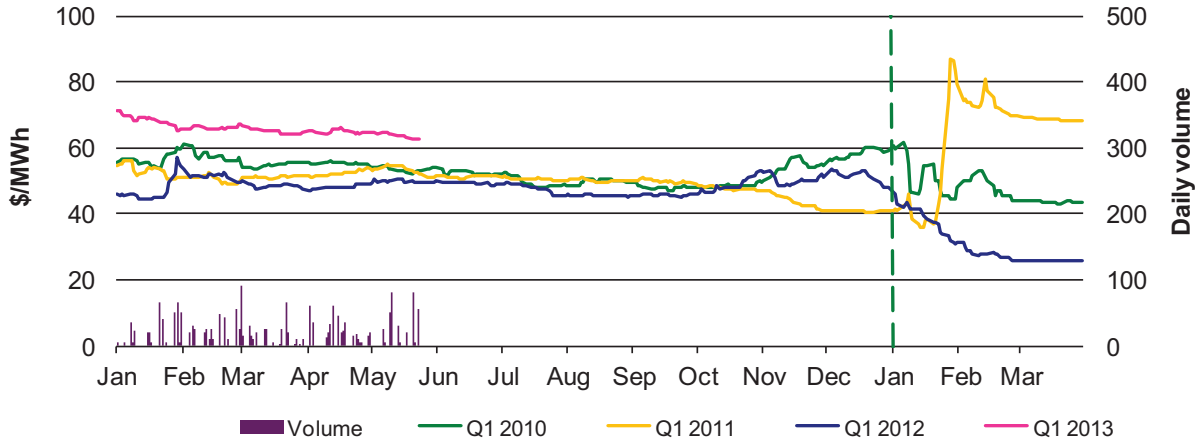
Figures 6-9 compare for each region the closing daily base contract prices for the first quarter of 2010, 2011, 2012 and 2013. Also shown is the daily volume of Q1 2013 base contracts traded. The vertical dashed line signifies the start of the Q1 period for which the contracts are being purchased.

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



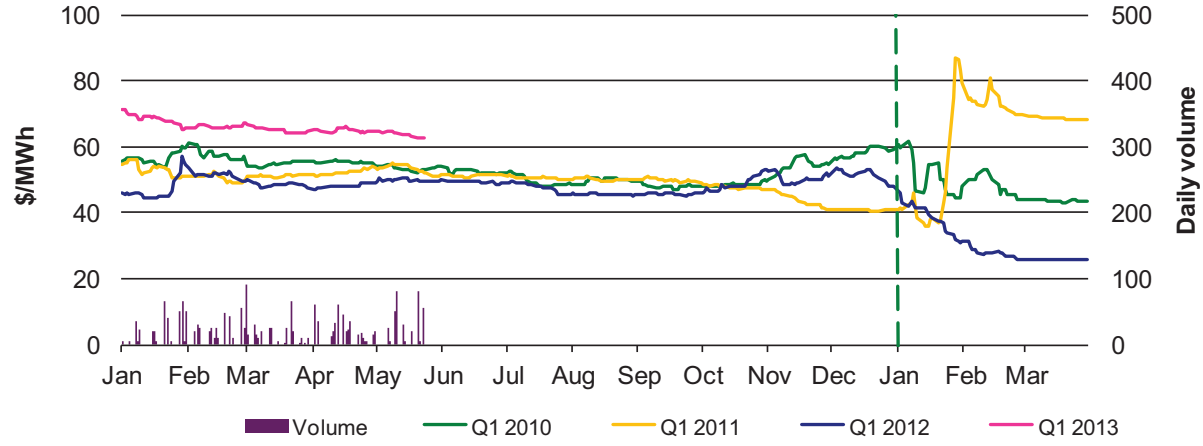
Source: d-cyphaTrade www.d-cyphatrade.com.au

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



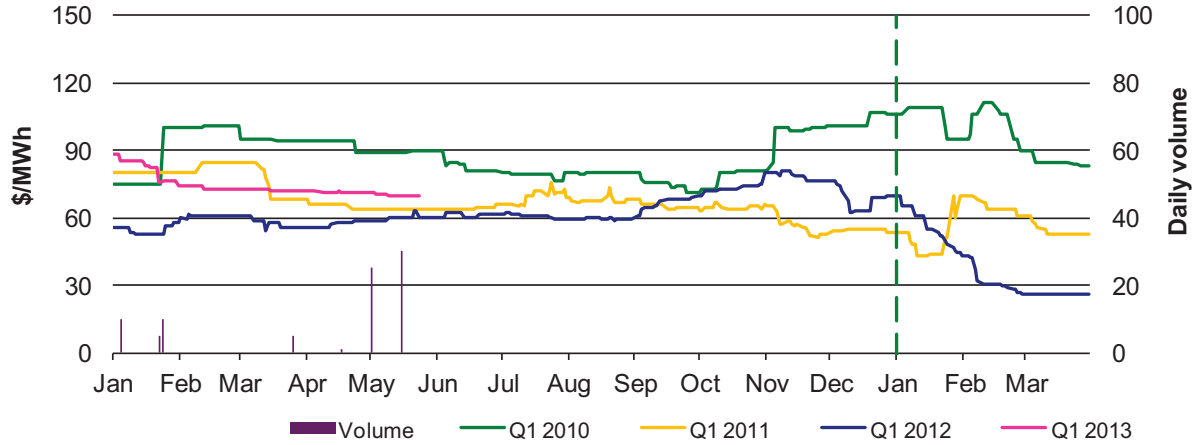
Source: d-cyphaTrade www.d-cyphatrade.com.au

Figure 8: Victoria 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 32 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	14	31	0	3
% of total below forecast	49	1	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 250 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	-250	87	-147	40
NSW	105	-404	-287	152
VIC	-123	74	269	22
SA	-101	-132	-188	-25
TAS	196	-37	108	-11
TOTAL	-173	-412	-245	178

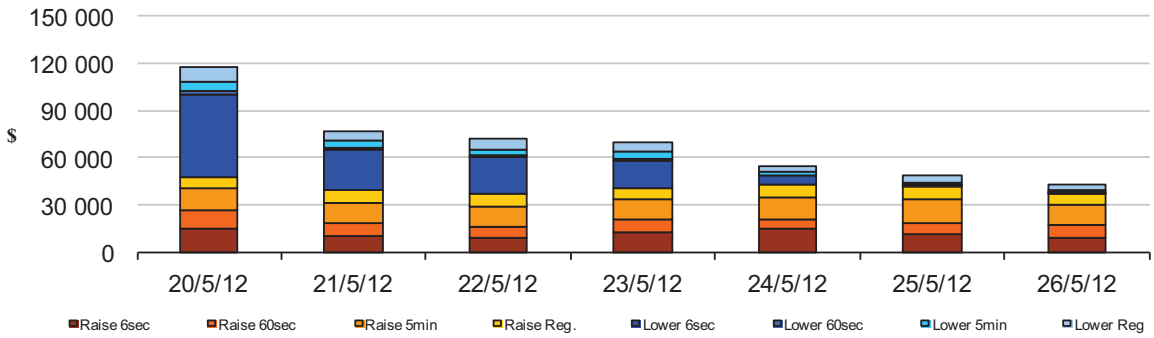
Ancillary services market

The total cost of frequency control ancillary services (FCAS) on the mainland for the week was $298 000 or less than one per cent of energy turnover on the mainland.

The total cost of FCAS in Tasmania for the week was $183 000 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
June 2012

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

20 May– 26 May 2012

Victoria:

There was one occasion where the spot price in Victoria was below -$100/MWh.

Thursday, 24 May

1:30 PM	**Actual**	**4 hr forecast**	**12 hr forecast**
Price ($/MWh)	-150.18	23.89	24.10
Demand (MW)	6481	6520	6582
Available capacity (MW)	10 448	10 461	10 481

Conditions at the time saw demand and available capacity close to forecast.

At around 7 am, there was a planned network outage of the Dederang-South Morang 330kV No. 1 line. The constraint used to manage the outage bound at 7.05 am and for the majority of the time until the completion of the outage at 3.45 pm. The constraint effects generation in northern Victoria and Newport power station as well as flows across three interconnectors (Victoria to New South Wales, Murraylink and Heywood). In the constraint, Murraylink is the term with the largest factor (with import from South Australia into Victoria across Murraylink providing the greatest assistance to the network outage compared to other interconnectors and generators).

At around 1 pm, Mortlake unit two, which was being commissioned, received a start target of below 1 MW, which was its minimum loading level for the first 16 minutes (as specified in its fast start inflexibility profile). The output from the unit exceeded this target by around 30 MW and continued to generate above its target until 1.25 pm. At 1.19 pm, effective from 1.30 pm, Origin Energy rebid to change the minimum loading level for Mortlake unit two, from 1 MW to 190 MW. The reason given was “1315P Commissioning SL”. Despite this rebid, the dispatch target for Mortlake unit two increased from 53 MW to 279 MW at 1.25 pm as the minimum duration at the minimum loading level had passed.

At the same time, the Murraylink limit changed to force significant flows into Victoria, increasing from 27 MW at 1 pm to 178 MW at 1.20 pm. The combination of an increase in low priced generation at Mortlake and forced imports into Victoria, led to a number of Victorian generators being dispatched down at their ramp rate limit and the 5-minute price falling to the price floor at 1.25 pm.

At 1.30 pm, units in Victoria were no longer ramp rate limited. As a result the 5-minute dispatch price returned to previous levels of above $15/MWh.

There was no significant rebidding.

Detailed NEM Price and Demand Trends

for Weekly Market Analysis
20 May - 26 May 2012

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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 ($/MWh) YTD	30	30	27	32	33
2010-11 ($/MWh) YTD	35	45	29	43	31
Change*	-15%	-33%	-5%	-25%	6%
2010-11 ($/MWh)	34	43	29	42	31

Table 2: NEM turnover

Financial year	NEM Turnover** ($, billion)	Energy (TWh)
2011-12 (YTD)	$5.288	179
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)
Jan-12	35	26	25	28	39	0.447
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 (MTD)	26	29	27	30	33	0.361
Q2 2012 (QTD)	28	32	30	30	35	0.901
Q2 2011 (QTD)	26	28	29	30	32	0.853
Change*	6%	14%	3%	1%	8%	5.57%

Table 4: ASX energy futures contract prices at end of 28 May 2012

	QLD		NSW		VIC		SA	
Q1 2013	Base	Peak	Base	Peak	Base	Peak	Base	Peak
Price on 21 May ($/MWh)	64	88	64	86	61	84	70	113
Price on 28 May ($/MWh)	63	85	63	85	61	84	70	113
Open interest on 28 May	660	56	906	220	657	69	61	0
Traded in the last week (MW)	71	10	161	30	0	0	0	0
Traded since 1 Jan 12 (MW)	1295	122	1914	176	1106	114	86	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
March 12 with March 11						
MW Priced <$20/MWh	-151	-49	-33	-263	95	-402
MW Priced $20 to $50/MWh	479	395	43	91	-540	468
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 (MTD)						
MW Priced <$20/MWh	80	-1285	625	-116	26	-670
MW Priced $20 to $50/MWh	77	151	116	191	186	721

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