WEEKLY ELECTRICITY MARKET ANALYSIS

AUSTRALIAN ENERGY REGULATOR

12 June - 18 June 2011

Summary

Weekly average spot prices ranged from $27/MWh in Queensland to $33/MWh in South Australia.

On Friday 17 June, there were five negative spot prices in South Australia with the lowest price reaching -$852/MWh.

Spot market prices

Figure 1 sets out the volume weighted average (VWA) prices for the week 11 June to 18 June and the 10/11 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 11 June - 18 June 2011	27	29	31	33	31
% change from previous week*	-2	-3	-5	-8	-1
10/11 financial YTD	34	44	29	42	31
% change from 09/10 financial YTD **	-10	-17	-31	-50	3

*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 is below $-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 Sydney Futures Exchange (SFE) as at close of trade on Monday 20 June 2011. 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 SFE 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 2012	40*	-3%	47	-2%	42	-2%	46	0%
Calendar Year 2013	51	0%	56	10%	48	0%	67	0%
Calendar Year 2014	56	0%	59	0%	60	0%	69	0%
Three year average	49	-1%	54	3%	50	-1%	61	0%

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

* denotes trades in the product.

Figure 3 shows the $300 cap contract price for Q1 2012 and calendar year 2012 and the percentage change[4] from the previous week.

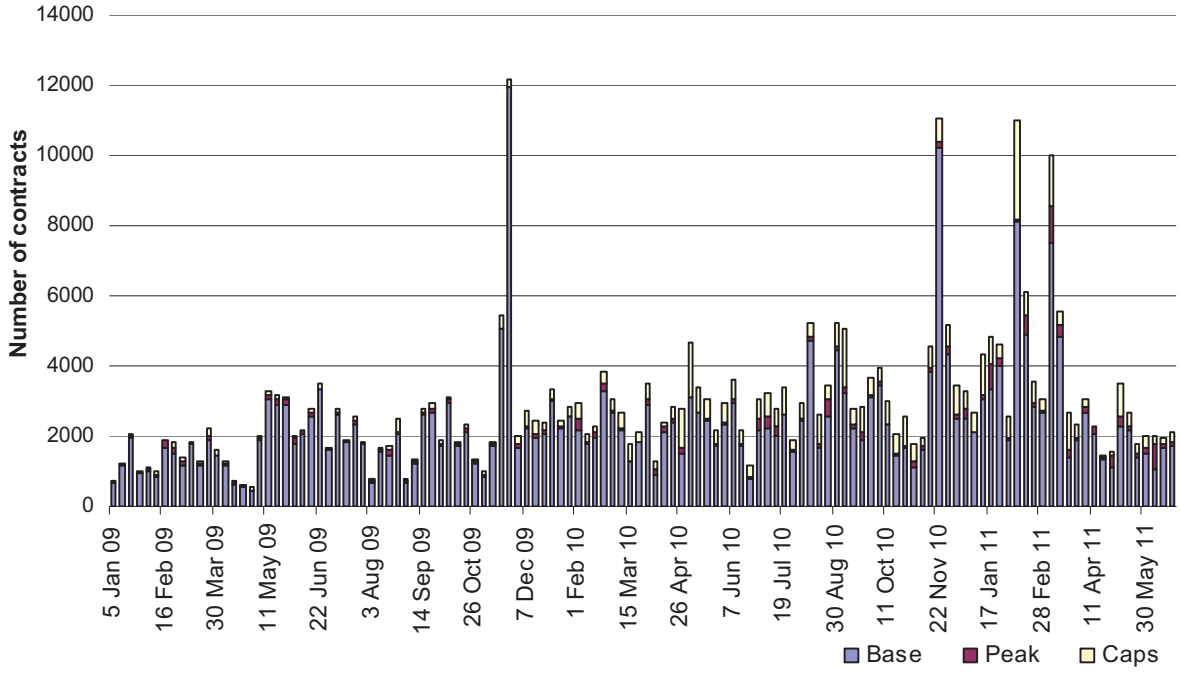
Figure 3: $300 cap contract prices ($/MWh)

	QLD		NSW		VIC		SA	
Q1 2012 (% change)	17	-2%	18*	-5%	17*	1%	32	0%
2012 (% change)	8	-1%	11	-2%	7	1%	12	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

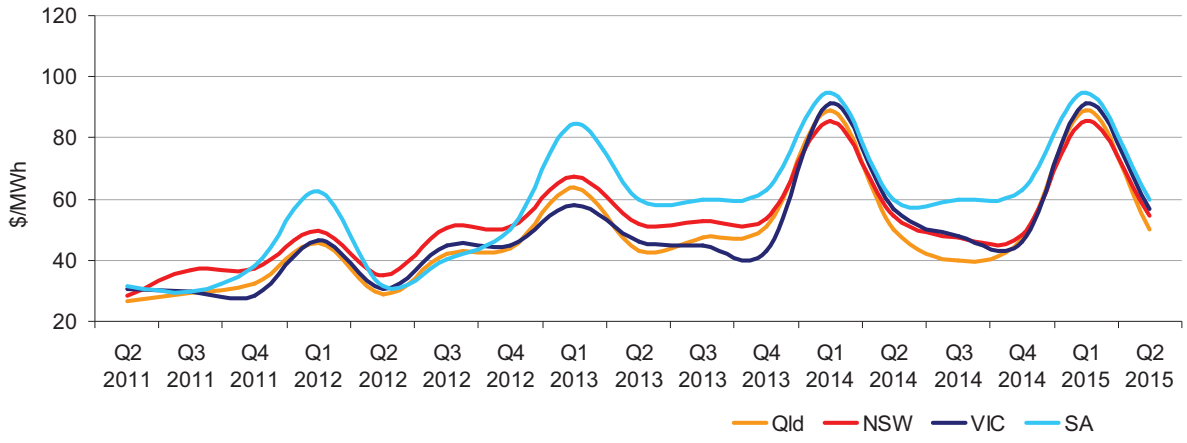


Source: d-cyphaTrade www.d-cyphatrade.com.au

[4] Calculated on prices prior to rounding.

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

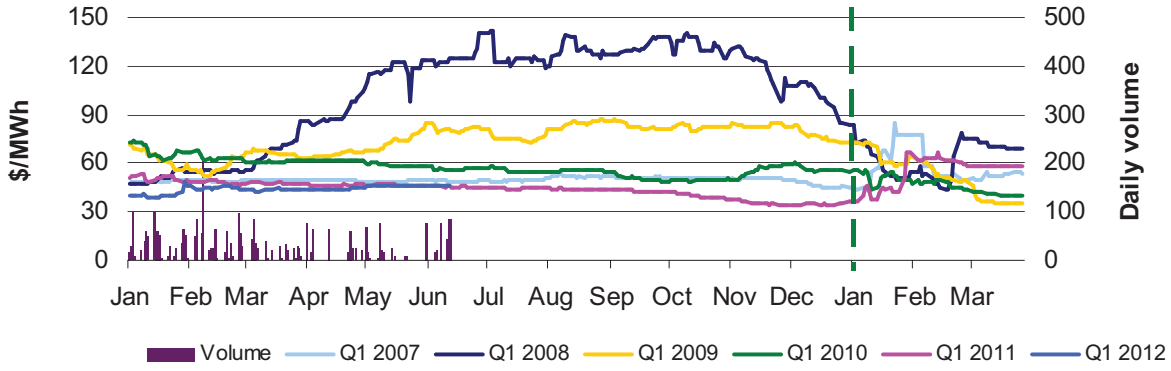
Figure 5: Quarterly base future prices Q2 2011 – Q2 2015



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

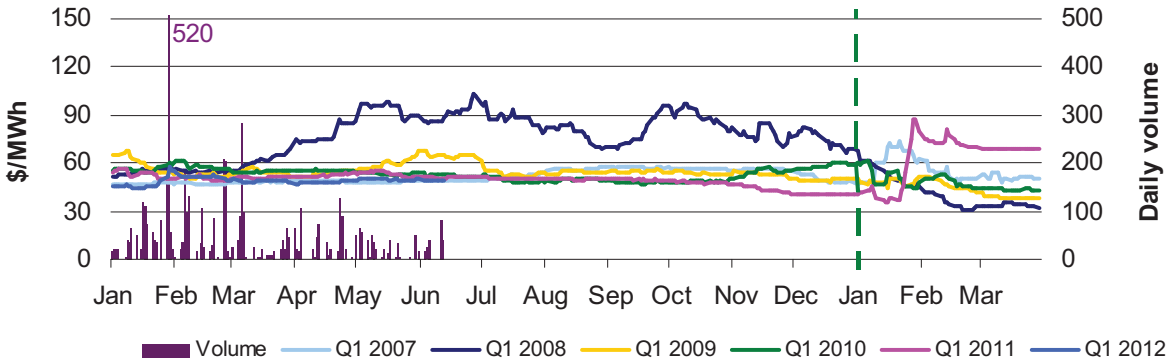
Figures 6-9 compare for each region the closing daily base contract prices for the first quarter of 2007, 2008, 2009, 2010, 2011 and 2012. Also shown is the daily volume of Q1 2012 base contracts traded. The vertical dashed line signifies the start of the Q1 period for which the contracts are being purchased. To understand the diagrams, the dark-blue line in figure 6 demonstrates that throughout the middle of 2007, the market had an expectation of very high spot prices in the first quarter of 2008.

Figure 6: Queensland Q1 2007, 2008, 2009, 2010, 2011 and 2012



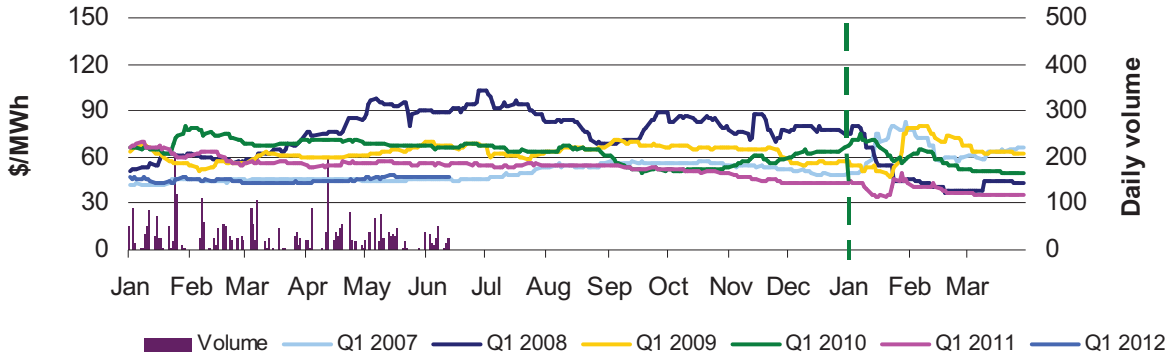
Source: d-cyphaTrade www.d-cyphatrade.com.au

Figure 7: New South Wales Q1 2007, 2008, 2009, 2010, 2011 and 2012



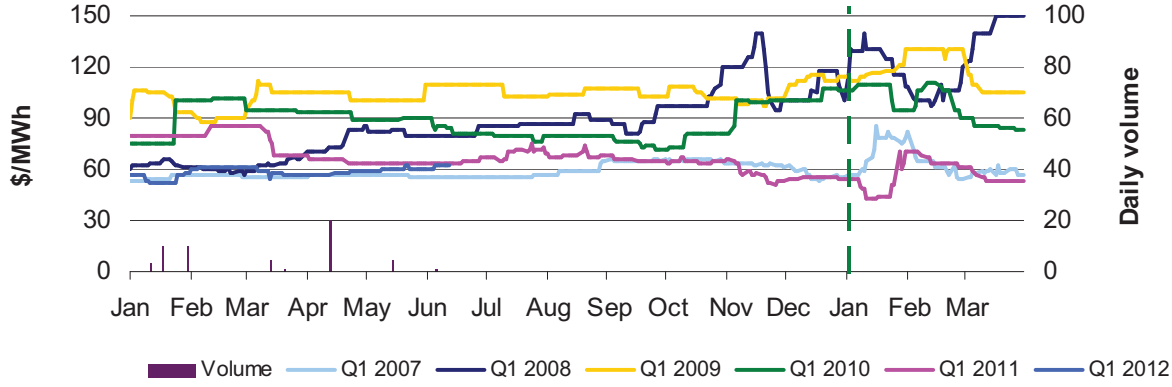
Source: d-cyphaTrade www.d-cyphatrade.com.au

Figure 8: Victoria Q1 2007, 2008, 2009, 2010, 2011 and 2012



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

Figure 9: South Australia Q1 2007, 2008, 2009, 2010, 2011 and 2012



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 61 trading intervals throughout the week where actual prices varied significantly from forecasts[5]. This compares to the weekly average in 2010 of 57 counts and the average in 2009 of 103. 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	2	23	0	0
% of total below forecast	72	1	0	2

[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 228 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	-228	-31	-292	-192
NSW	-207	-523	-1002	-584
VIC	190	-536	11	-264
SA	50	-114	24	-32
TAS	-3	47	-4	39
TOTAL	-198	-1157	-1263	-1033

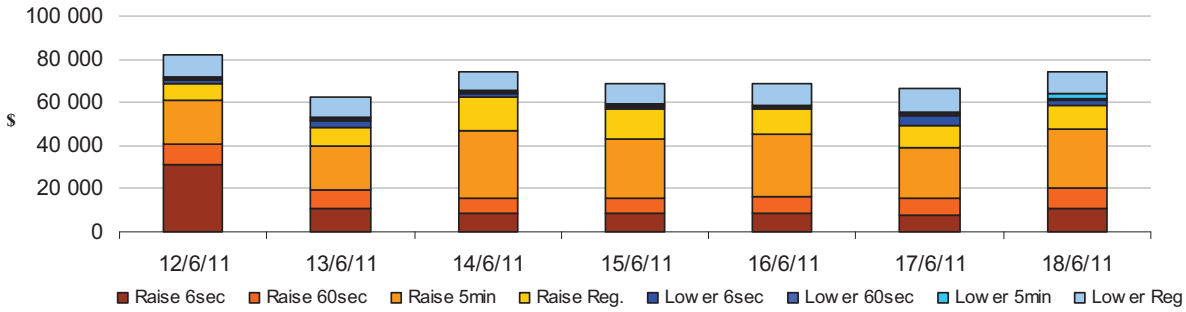
Ancillary services market

The total cost of frequency control ancillary services (FCAS) on the mainland for the week was $402 000 or less than one per cent of energy turnover on the mainland.

The total cost of FCAS in Tasmania for the week was $94 000 or one and a half 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
July 2011

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

Detailed Market Analysis

AUSTRALIAN ENERGY REGULATOR

12 June - 18 June 2011

South Australia:

There were two occasions where the spot price in South Australia was less than -$100/MWh.

Friday, 17 June

4:30 AM	**Actual**	**4 hr forecast**	**12 hr forecast**
Price ($/MWh)	-107	-30	0
Demand (MW)	1042	1016	1015
Available capacity (MW)	2816	2927	3036
5:00 AM	**Actual**	**4 hr forecast**	**12 hr forecast**
Price ($/MWh)	-852	-30	5
Demand (MW)	1041	1015	1017
Available capacity (MW)	2589	2924	3028

High wind generation levels and low demand in South Australia saw maximum exports of 420 MW flowing between South Australia and Victoria on both the Heywood and Murraylink interconnectors for the majority of the 3.15 am to 6.05 am period. Five-minute prices were at zero or lower for the majority of the 3.30 am to 5 am period.

A rapid increase in generation at Lake Bonney 2 wind farm (from 2 MW at 4.05 am to 148 MW at 4.20 am) led to a 64 MW reduction in export capability and the price falling from $14/MWh at 4.05 am to -$419/MWh at 4.20 am.

In response, effective from 4.25 am, AGL rebid 340 MW of available capacity at Torrens Island from prices above $40/MWh to close to the price floor. The reason given was “04:20A chg in dispatch::price decrease vs pd SA -$418.78”. As a result, from 4.40 am to 5 am inclusive, the five minute price fell to -$997/MWh.

At 4.36 am, effective from 4.45 am, Alinta Energy rebid 40 MW of available capacity at its Northern Power Station from prices below zero to close to the price floor. The reason given was “0433A avoid uneconomic dispatch in pd@04:33”.

As a result of these low prices, Lake Bonney 2, Snowtown and Clements Gap wind farms received targets to reduce output to zero.

Available capacity was reported as up to 335 MW below that forecast four hours ahead and up to 439 MW below that forecast twelve hours ahead. Targeted reductions in output from semi-scheduled wind generation as a result of constraints or as a result of regional prices lower than their offer price are reported as a reduction in regional available capacity.

There was no other significant rebidding.

Detailed NEM Price and Demand Trends

for Weekly Market Analysis
12 June - 18 June 2011

AUSTRALIAN ENERGY REGULATOR

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

Financial year	QLD	NSW	VIC	SA	TAS
2010-11 ($/MWh) YTD	34	44	29	42	31
2009-10 ($/MWh) YTD	38	53	42	84	30
Change*	-10%	-17%	-31%	-50%	3%
2009-10 ($/MWh)	37	52	42	82	30

Table 2: NEM turnover

Financial year	NEM Turnover** ($, billion)	Energy (TWh)
2010-11 (YTD)	$7.259	197
2009-10	$9.643	206
2008-09	$9.413	208

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-11	123	190	48	33	29	1.794
Mar-11	28	27	26	23	26	0.414
Apr-11	25	27	26	28	27	0.374
May-11	28	30	35	35	39	0.499
Jun-11 (MTD)	26	29	31	35	31	0.278
Q1 2011	65	90	41	83	27	3.484
Q1 2010	46	52	67	134	27	3.014
Change*	41%	74%	-38%	-38%	2%	15.57%

Table 4: ASX energy futures contract prices at end of 20 June

	QLD		NSW		VIC		SA	
Q1 2012	Base	Peak	Base	Peak	Base	Peak	Base	Peak
Price on 14 Jun ($/MW)	46	74	49	81	47	79	62	100
Price on 20 Jun ($/MW)	46	74	50	81	47	79	62	100
Open interest on 20 Jun	1173	98	1288	305	1404	105	88	0
Traded in the last week (MW)	290	0	120	30	91	0	0	0
Traded since 1 Jan 11 (MW)	3511	91	5189	450	3073	51	79	0
Settled price for Q1 11($/MW)	57	96	68	118	35	51	53	93

Table 5: Changes to availability of low priced generation capacity offered to the market

Comparison:	QLD	NSW	VIC	SA	TAS	NEM
April 11 with April 10						
MW Priced <$20/MWh	-1035	-451	-384	272	-6	-1604
MW Priced $20 to $50/MWh	339	521	323	183	91	1457
May 11 with May 10						
MW Priced <$20/MWh	-1468	-82	-475	288	-126	-1862
MW Priced $20 to $50/MWh	493	952	626	88	52	2210
June 11 with June 10 (MTD)						
MW Priced <$20/MWh	-1032	24	-922	248	219	-1463
MW Priced $20 to $50/MWh	638	553	667	18	-181	1695

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