

WEEKLY ELECTRICITY MARKET ANALYSIS



AUSTRALIAN ENERGY
REGULATOR

6 March - 12 March 2011

Summary

Weekly average spot prices ranged from \$20/MWh in South Australia to \$27/MWh in New South Wales.

Rebidding by AGL led to five spot prices below \$-100/MWh, with three at close to the price floor. Further info is provided in Appendix A.

Spot market prices

Figure 1 sets out the volume weighted average (VWA) prices for the week 6 March to 12 March 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 6 Mar - 12 Mar 2011	24	27	25	20	26
% change from previous week*	-22	-4	-1	-23	-3
10/11 financial YTD	37	50	29	46	31
% change from 09/10 financial YTD **	-16	-20	-30	-55	14

*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 B¹.

Financial markets

Figures 2 to 9 show futures contract² prices traded on the Sydney Futures Exchange (SFE) as at close of trade on Monday 14 March 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 changes³ 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 2011	35	-2%	43	-2%	30	-2%	36	-3%
Calendar Year 2012	35*	-2%	42*	-3%	35*	-2%	41	-4%
Calendar Year 2013	47	0%	49	0%	45	0%	67	0%
Three year average	39	-1%	45	-1%	37	-1%	48	-2%

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

* denotes trades in the product.

Figure 3 shows the \$300 cap contract price for Q1 2011 and calendar year 2011 and the percentage change⁴ from the previous week.

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

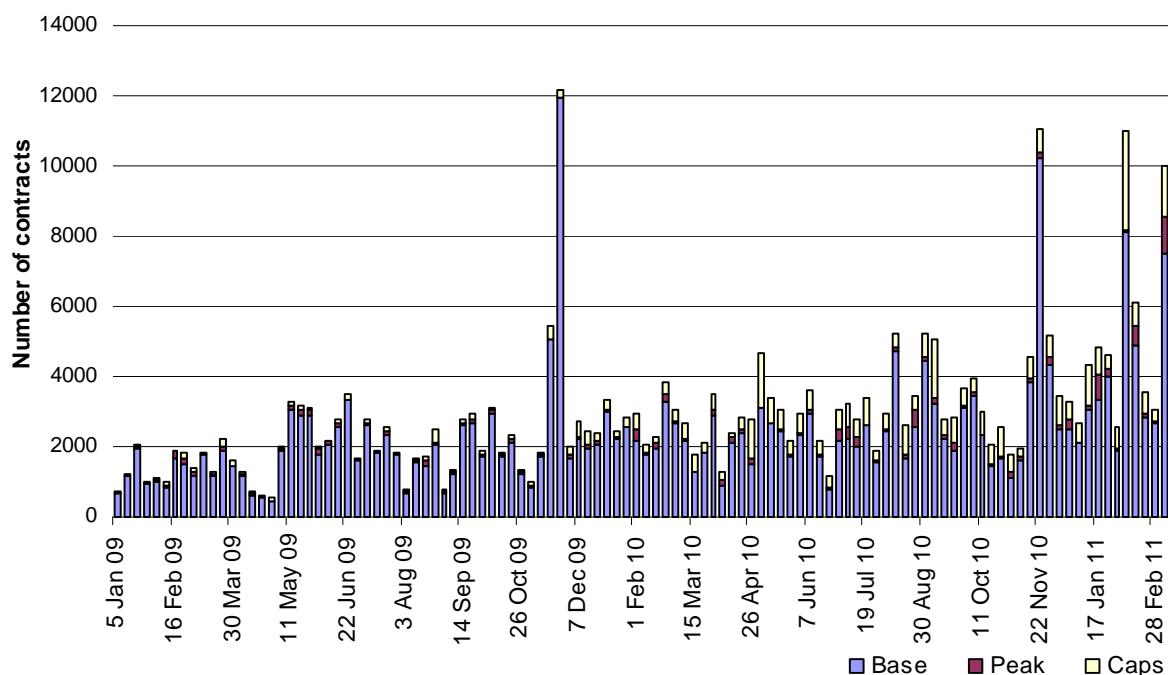
	QLD		NSW		VIC		SA	
Q1 2011 (% change)	21	-3%	32*	0%	8	-3%	27	-23%
2011 (% change)	9	-3%	13	-3%	4	-3%	10	-17%

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

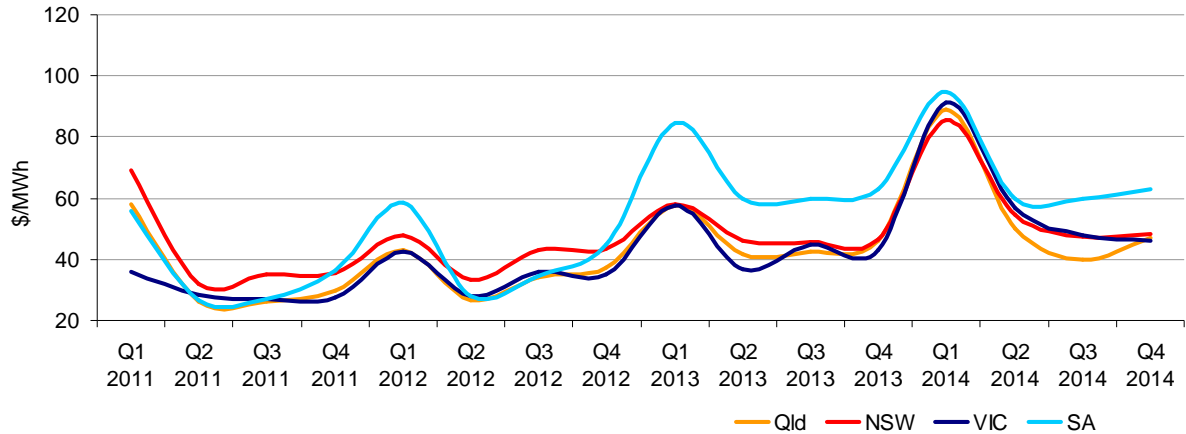


Source: d-cyphaTrade www.d-cyphatrade.com.au

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

⁴ Calculated on prices prior to rounding.

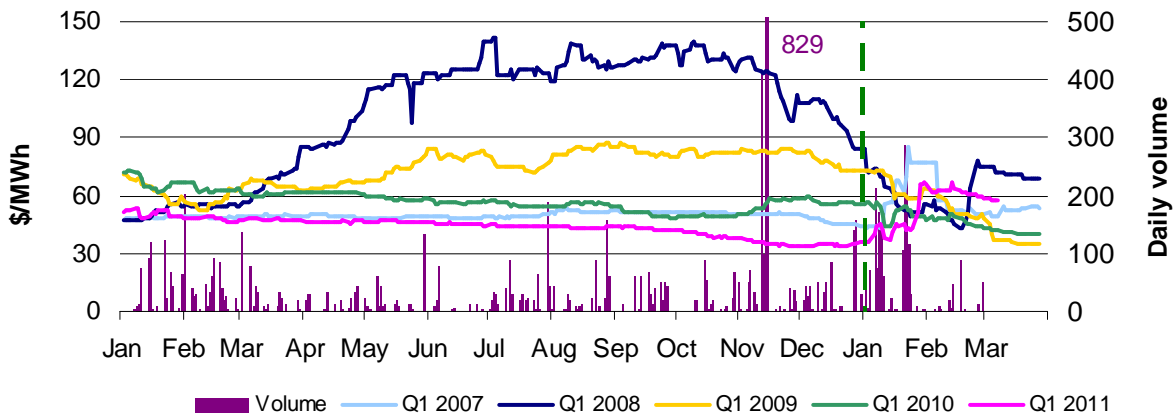
Figure 5: Quarterly base future prices Q1 2011 – Q4 2014



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

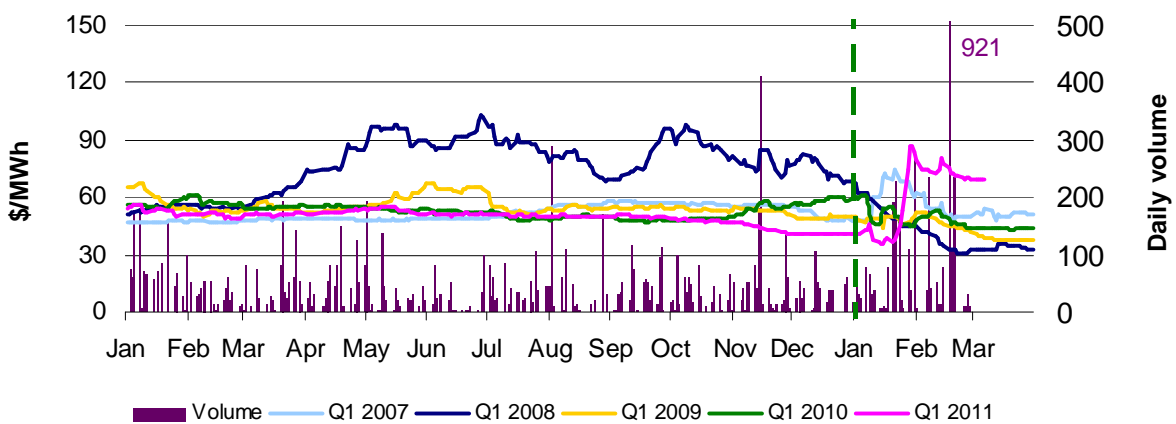
Figures 6-9 compare for each region the closing daily base contract prices for the first quarter of 2007, 2008, 2009, 2010 and 2011. Also shown is the daily volume of Q1 2011 base contracts traded. The vertical dashed line signifies the start of the Q1 period for which the contracts are being purchased. 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 and 2011



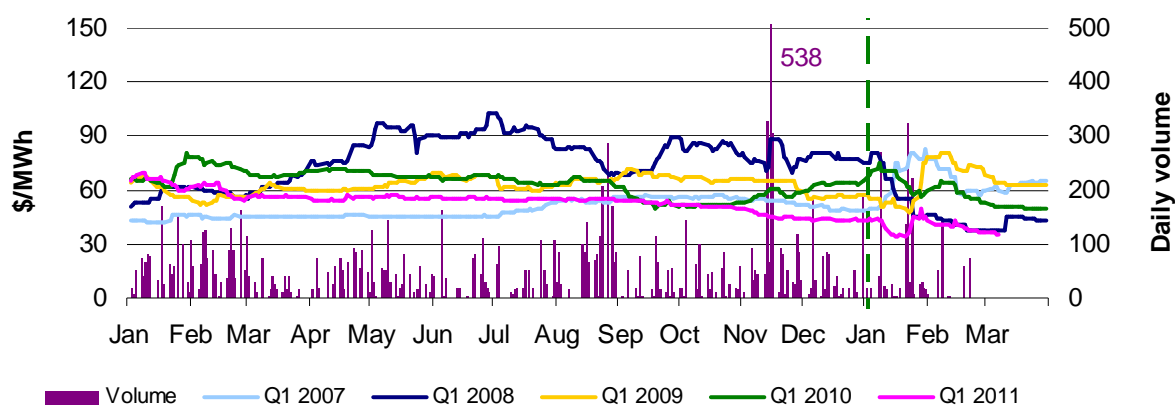
Source: d-cyphaTrade www.d-cyphatrade.com.au

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



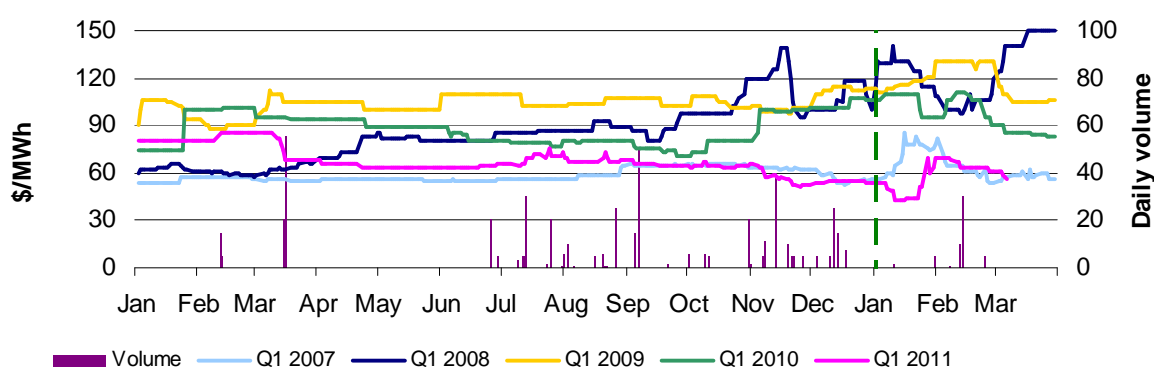
Source: d-cyphaTrade www.d-cyphatrade.com.au

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



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

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



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 24 trading intervals throughout the week where actual prices varied significantly from forecasts⁵. 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 10⁶.

Figure 10: Reasons for variations between forecast and actual prices

	Availability	Demand	Network	Combination
% of total above forecast	4	13	0	3
% of total below forecast	43	35	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 periods⁷. For example, in Queensland 279 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	-279	40	-204	-878
NSW	-585	232	-206	-182
VIC	243	2	179	297
SA	-55	-106	-151	149
TAS	45	-75	63	-28
TOTAL	-631	93	-319	-642

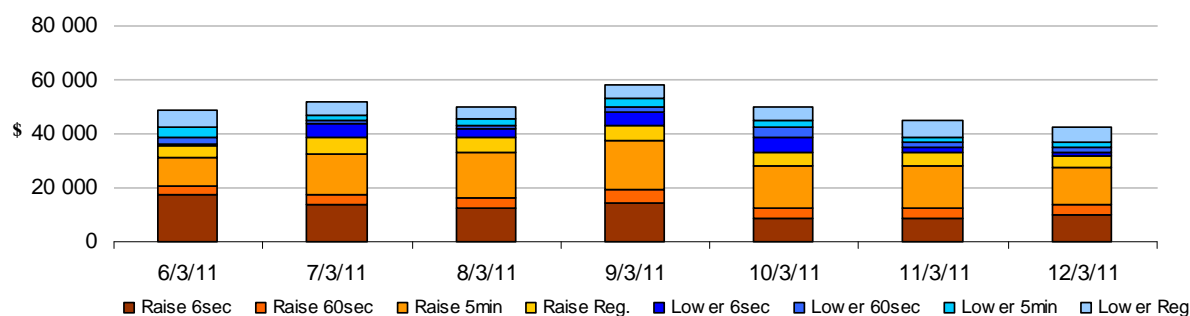
Ancillary services market

The total cost of frequency control ancillary services (FCAS) on the mainland for the week was \$268 000 or less than one per cent of energy turnover on the mainland.

The total cost of FCAS in Tasmania for the week was \$78 000 or around 1.5 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 April 2011

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

Detailed Market Analysis


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South Australia:

There were five occasions where the spot price in South Australia was below \$-100/MWh.

Monday, 7 March

3 am	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	-194	5	8
Demand (MW)	1147	1104	1097
Available capacity (MW)	3520	3487	3470
3.30 am	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	-997	0	4
Demand (MW)	1155	1092	1087
Available capacity (MW)	3281	3493	3470
4 am	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	-852	0	4
Demand (MW)	1163	1077	1069
Available capacity (MW)	3252	3504	3469
4.30 am	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	-830	0	4
Demand (MW)	1188	1077	1076
Available capacity (MW)	3278	3519	3483
5 am	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	-203	0	8
Demand (MW)	1214	1101	1109
Available capacity (MW)	3277	3524	3485

Conditions at the time saw low levels of demand. Available capacity was up to 252 MW below that forecast four hours ahead. Targeted reductions in output from semi-scheduled

wind generation as a result of prices lower than their offer price translate to a reduction in regional available capacity.

At 2.48 am, effective from 2.55 am until 4 am, AGL rebid 365 MW of capacity at its Torrens Island Power Station from prices above \$30/MWh to below \$-990/MWh. The reason given was “02:31A chg in forecast::pd price decrease SA negative prices”. At 2.58 am this rebid was extended until the 5 am trading interval with the same reason. This resulted in 595 MW out of 840 MW of offered capacity at the station priced at the price floor during the period of low prices.

Following the 2.48 am rebid, the 5 minute price fell from \$-0.61/MWh at 2.55 am to \$-997/MWh (set by AGL) at 3 am and remained close to the price floor for a total of 18 dispatch intervals until 4.45 am.

As the price fell below the offer prices from Snowtown, Waterloo and Clements Gap wind farms, these wind farms received targets from AEMO to reduce output from a total of 235 MW at 2.25 am to 0 MW at 3 am.

There was no other significant rebidding.