WEEKLY ELECTRICITY MARKET ANALYSIS

AUSTRALIAN ENERGY REGULATOR

5 December – 11 December 2010

Summary

The weekly average spot prices ranged from $16/MWh in Victoria and South Australia to $24/MWh in New South Wales.

Spot prices at close to the price floor occurred on Saturday in South Australia and Victoria caused by Victorian transmission network outages at South Morang.

Spot market prices

Figure 1 sets out the volume weighted average prices for the week 5 December to 11 December 2010 and the 10-11 financial year 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 5 Dec - 11 Dec 2010	22	24	16	16	17
% change from previous week*	4	2	-15	0	-6
10/11 financial YTD	21	27	23	27	34
% change from 09/10 financial YTD **	-50	-55	-14	-69	25

*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.

The AER provides further information if the spot price exceeds three times the weekly average and is above $250/MWh. Details of these events are attached in Appendix A. Longer term market trends are attached in Appendix B[1].

[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.

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 13 December 2010. Figure 2 shows the base futures contract prices for the next three calendar years, and the three year average. Also shown are percentage changes[3] compared to the previous week.

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

	QLD		NSW		VIC		SA	
Calendar Year 2011	29	0%	37*	-1%	32	-1%	37	-1%
Calendar Year 2012	32*	1%	40*	0%	35*	-1%	40	0%
Calendar Year 2013	40	-4%	50	-3%	47	-1%	69	0%
Three year average	34	-1%	42	-1%	38	-1%	49	0%

Source: d-cyphaTrade www.d-cyphatrade.com.au
* denotes trades in the product.

Figure 3 shows the $300 cap contract price for the first quarter of 2011 and the 2011 calendar year and the percentage change[4] from the previous week.

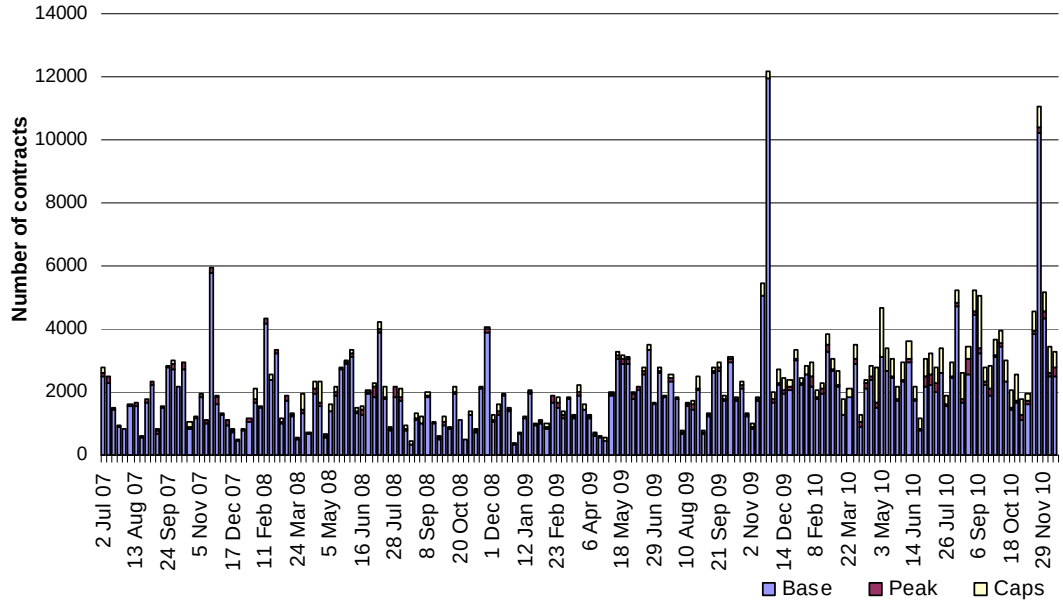
Figure 3: $300 cap contract prices ($/MWh)

	QLD		NSW		VIC		SA	
Q1 2011 (% Change)	10*	3%	15*	1%	18*	-1%	25	0%
2011 (% Change)	5	1%	10	-1%	7	-1%	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

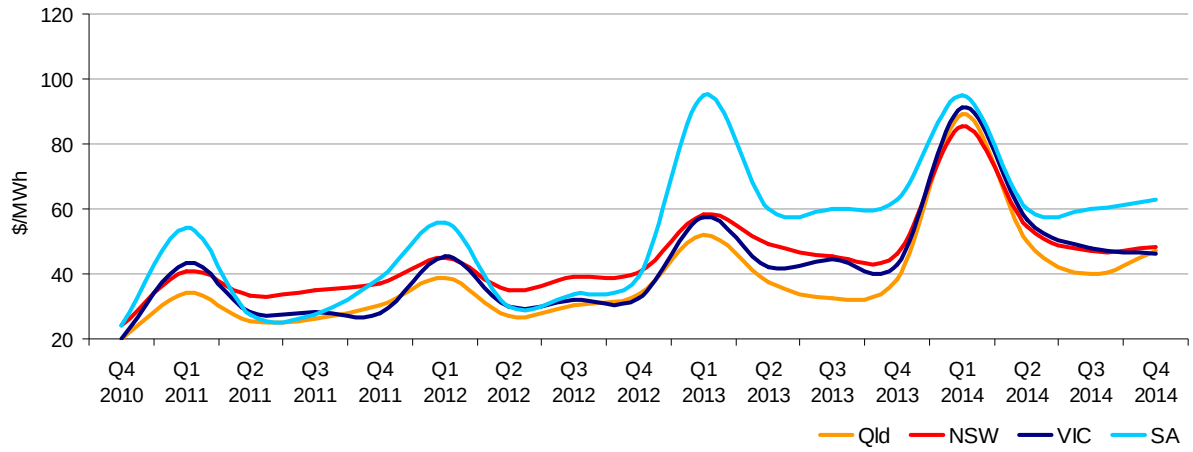
[2] Futures contracts traded on the SFE are listed by d-cyphaTrade (www.d-cyphatrade.com.au). A futures contract is typically for one MW of electrical energy per hour based on a fixed load profile. A base load profile is defined as the base load period from midnight to midnight Monday to Sunday over 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.

[4] Calculated on prices prior to rounding.

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

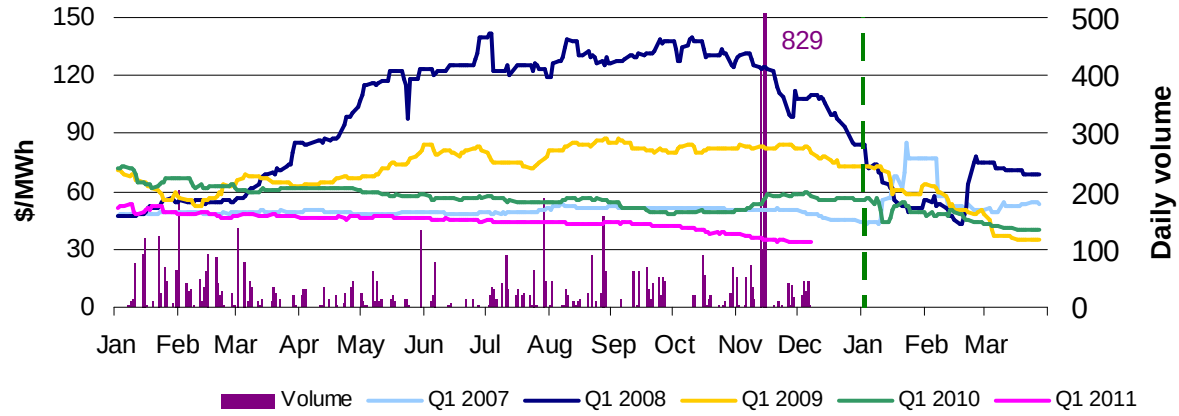
Figure 5: Quarterly base future prices Q4 2010 – Q4 2014



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

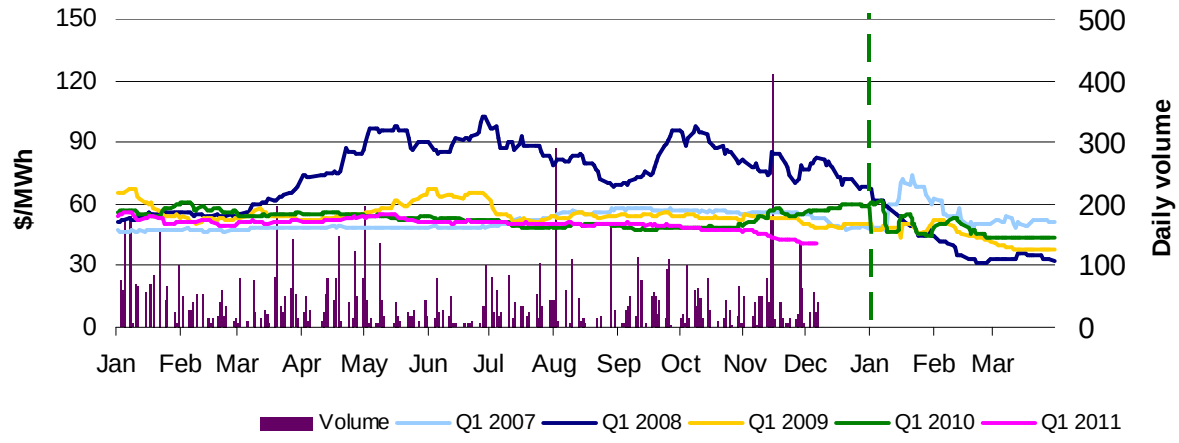
Figures 6-9 compare for each region the closing daily base contract prices for the first quarter of 2007, 2008, 2009, 2010 and 2011. Also shown is the daily volume of Q1 2011 base contracts traded. The vertical dashed line signifies the start of the Q1 period for which the contracts are being purchased.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



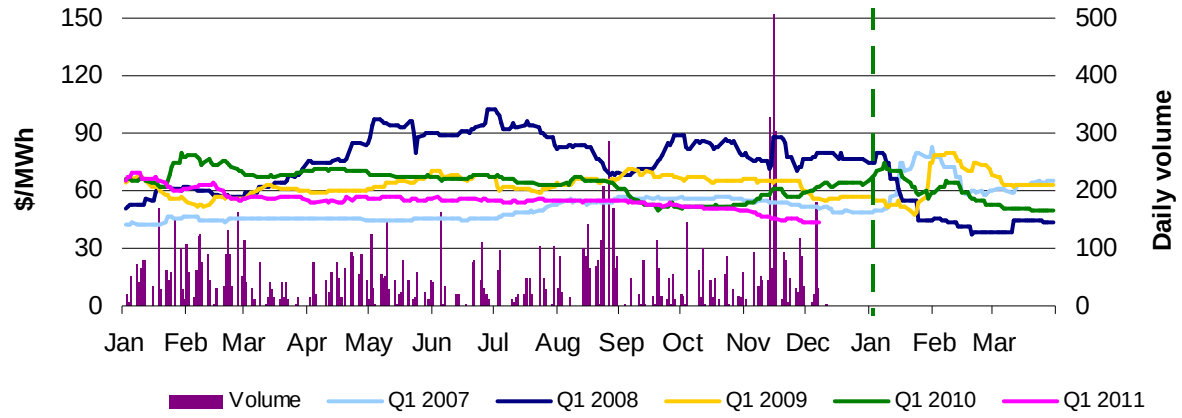
Source: d-cyphaTrade www.d-cyphatrade.com.au

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



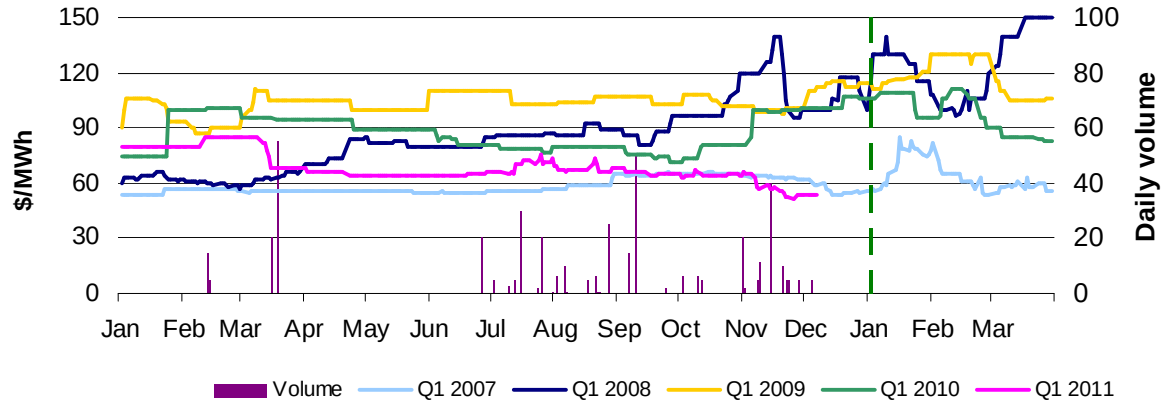
Source: d-cyphaTrade www.d-cyphatrade.com.au

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 31 trading intervals throughout the week where actual prices varied significantly from forecasts[5]. This compares to the weekly average in 2009 of 103 counts. 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	4	17	0	2
% of total below forecast	41	33	1	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 97 MW more 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	97	-116	116	398
NSW	309	65	464	805
VIC	454	29	282	328
SA	19	72	208	29
TAS	-7	108	97	-15
TOTAL	872	158	1167	1545

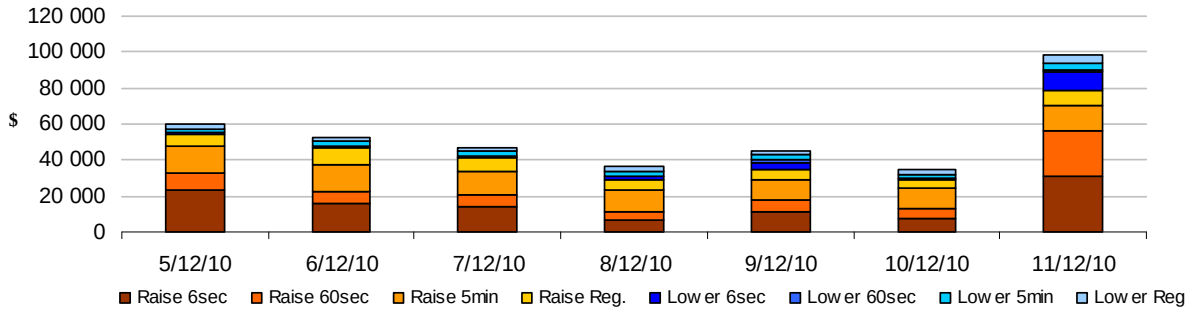
Ancillary services market

The total cost of frequency control ancillary services (FCAS) on the mainland for the week was $279 000 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 over three 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 2010

[7] A peak period is defined as between 7 am and 10 pm on weekdays, which aligns with the SFE contract definition.

Appendix A

Detailed Market Analysis

AUSTRALIAN ENERGY REGULATOR

5 December – 11 December 2010

There were 2 occasions throughout the week when the spot price in Victoria or South Australia was less than $-100/MWh. Details of the price outcomes and market conditions at the time are presented below.

Victoria:

Saturday, 11 December

5.30 am	**Actual**	**4 hr forecast**	**12 hr forecast**
Price ($/MWh)	-817	19	19
Demand (MW)	4238	4381	4378
Available capacity (MW)	9436	9484	9479

Ramping constraints used to manage the outage a 330 kV bus at South Morang Terminal Station near Melbourne resulted in significant changes in interconnector limits out of Victoria. Ramping constraints are designed to soften the impact of planned outages. These ramping constraints were invoked at 5.05 am.

The ramping constraints saw the Vic-NSW interconnector's export limit into New South Wales fall from 1014 MW at 4.55 am to 132 MW at 5.15 am.

The Heywood interconnector's import limit changed from 53 MW into South Australia at 4.55 am to 466 MW at 5.30 am. This flow was counter-price on three of these dispatch intervals.

Murraylink's export limit changed from 168 MW into Victoria at 4.55 am to 220 MW into South Australia at 5 am.

These limit changes caused generation to be ramp down limited and as a result negative priced generation set the price in Victoria and South Australia. The Victoria and South Australia 5-minute price fell to close to the price floor between 5.10 am and 5.30 am. Once the ramping constraint was revoked prices returned to previous levels.

South Australia:

Saturday, 11 December

5.30 am	**Actual**	**4 hr forecast**	**12 hr forecast**
Price ($/MWh)	-841	8	8
Demand (MW)	1028	1000	998
Available capacity (MW)	2540	2570	2548

Price outcomes in South Australia were impacted by the conditions in Victoria.

Detailed NEM Price and Demand Trends

for Weekly Market Analysis
5 December - 11 December 2010

AUSTRALIAN ENERGY REGULATOR

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

Financial year	QLD	NSW	VIC	SA	TAS
2010-11 ($/MWh) YTD	21	27	23	27	34
2009-10 ($/MWh) YTD	41	60	27	87	27
Change*	-50%	-55%	-14%	-69%	25%
2009-10 ($/MWh)	37	52	42	82	30

Table 2: NEM turnover

Financial year	NEM Turnover** ($, billion)	Energy (TWh)
2010-11 (YTD)	$2.292	92
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)
Aug-10	22	37	28	28	70	0.579
Sep-10	22	24	23	27	21	0.386
Oct-10	20	23	21	25	18	0.358
Nov-10	18	23	19	26	29	0.346
Dec-10 (MTD)	22	24	18	20	18	0.118
Q3 2010	22	30	26	29	41	1.697
Q3 2009	26	28	25	27	24	1.918
Change*	-16%	5%	4%	6%	72%	-11.51%

Table 4: ASX energy futures contract prices at end of 13 December

	QLD		NSW		VIC		SA	
Q1 2011	Base	Peak	Base	Peak	Base	Peak	Base	Peak
Price on 06 Dec ($/MW)	34	54	41	65	44	75	53	97
Price on 13 Dec ($/MW)	34	54	41	64	43	75	54	97
Open interest on 13 Dec	1616	162	2680	310	2431	215	190	6
Traded in the last week (MW)	141	37	146	3	241	9	5	5
Traded since 1 Jan 10 (MW)	7183	246	9145	557	11101	412	428	6
Settled price for Q1 10($/MW)	40	65	44	68	50	89	83	160

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

Comparison:	QLD	NSW	VIC	SA	TAS	NEM
October 10 with October 09						
MW Priced <$20/MWh	499	679	527	481	686	2873
MW Priced $20 to $50/MWh	350	-128	-24	-98	-594	-494
November 10 with November 09						
MW Priced <$20/MWh	-73	-20	777	227	994	1906
MW Priced $20 to $50/MWh	393	95	-524	-110	-663	-809
December 10 with December 09 (MTD)						
MW Priced <$20/MWh	-511	-284	1206	430	999	1840
MW Priced $20 to $50/MWh	422	-39	-559	-80	-378	-634

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