

WEEKLY ELECTRICITY MARKET ANALYSIS



AUSTRALIAN ENERGY
REGULATOR

12 September – 18 September 2010

Summary

The weekly average spot price ranged from \$20/MWh in Queensland to \$25/MWh in Tasmania.

Spot market prices

Figure 1 sets out the volume weighted average prices for the week 12 September to 18 September 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 12 - 18 Sep 2010	20	24	23	24	25
% change from previous week*	-6	-2	-3	3	14
10/11 financial YTD	21	31	27	29	44
% change from 09/10 financial YTD **	-17	7	6	9	84

*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 prices 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 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 20 September 2010. Figure 2 shows the base futures contract prices for the next three calendar years, and the three year average. Also shown are percentage changes³ compared to 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	32	-1%	42*	0%	37*	-2%	44	0%
Calendar Year 2012	36*	-1%	46*	0%	41*	-1%	47	-1%
Calendar Year 2013	51	0%	56	0%	55	0%	69	0%
Three year average	39	-1%	48	0%	44	-1%	53	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 change⁴ from the previous week.

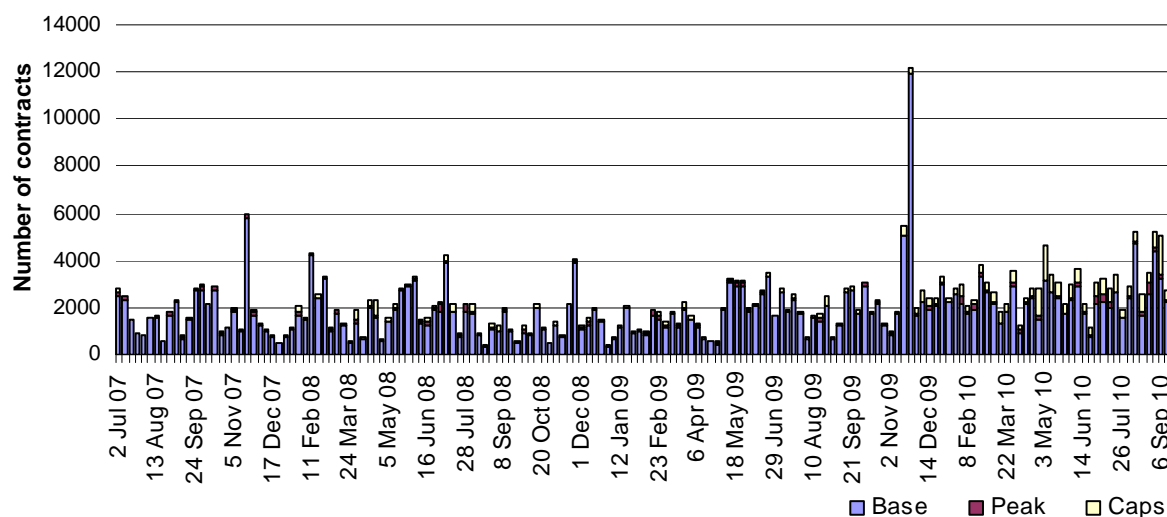
Figure 3: \$300 cap contract prices (\$/MWh)

	QLD		NSW		VIC		SA	
Q1 2011 (% Change)	16*	-2%	20*	-2%	24*	-5%	34	0%
2011 (% Change)	8	-3%	12	0%	9	-4%	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

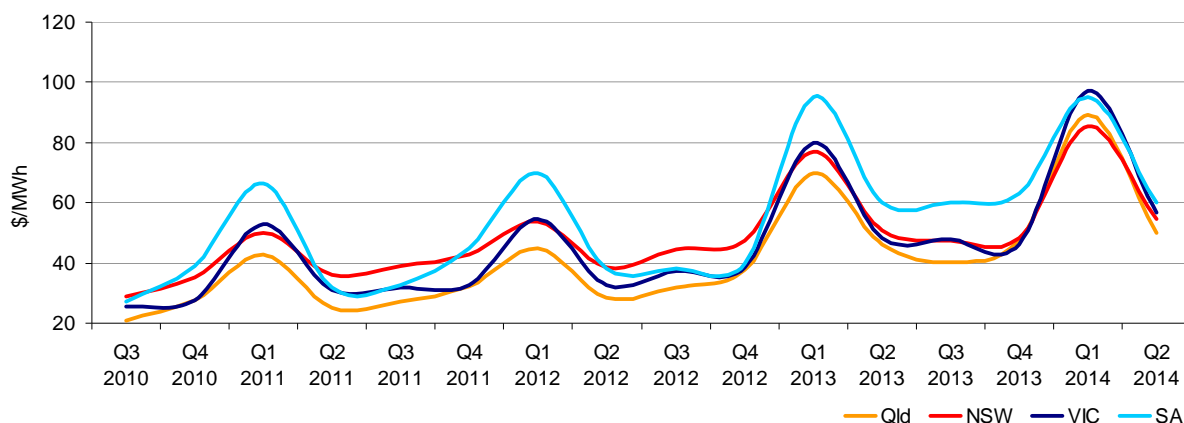


Source: d-cyphaTrade www.d-cyphatrade.com.au

⁴ Calculated on prices prior to rounding.

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

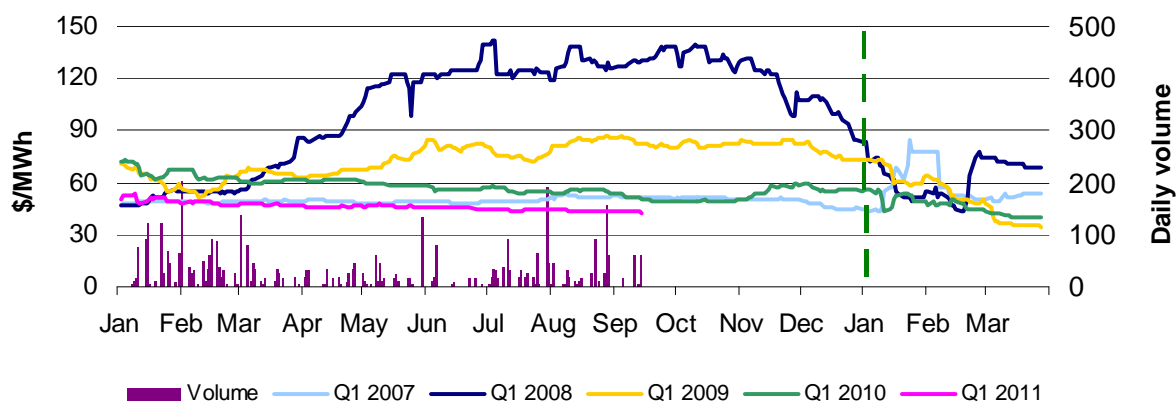
Figure 5: Quarterly base future prices Q3 2010 – Q2 2014



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

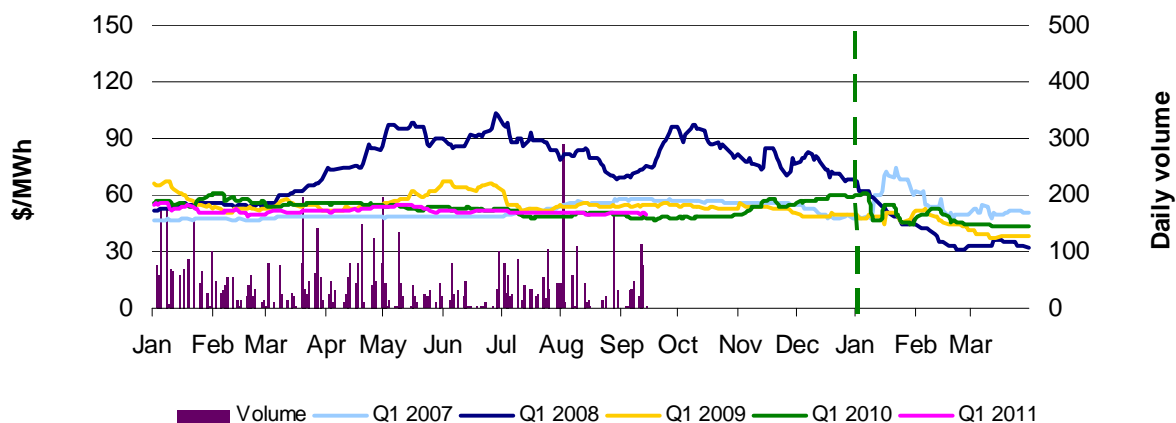
Figures 6-9 compare for each region the closing daily base contract prices for the first quarter of 2007, 2008, 2009, 2010 and 2011. Also shown is the daily volume of Q1 2011 base contracts traded. The vertical dashed line signifies the start of the Q1 period for which the contracts are being purchased.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



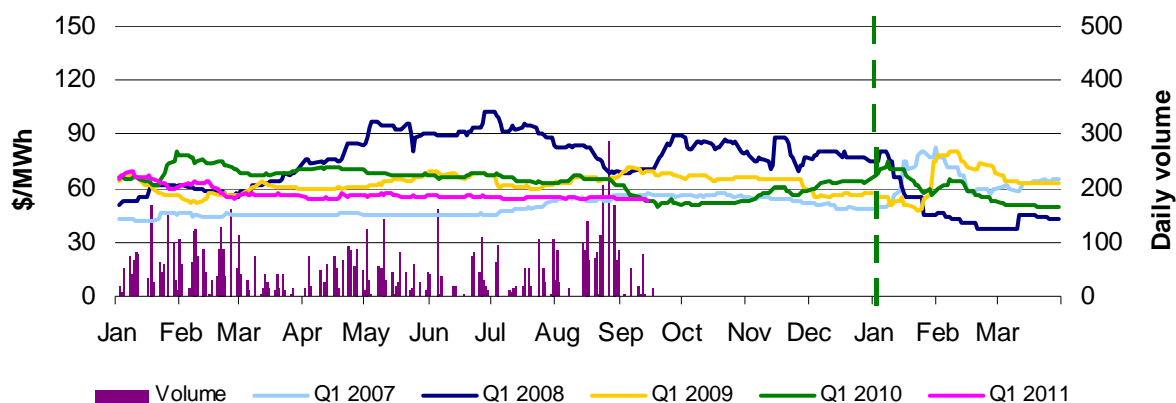
Source: d-cyphaTrade www.d-cyphatrade.com.au

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



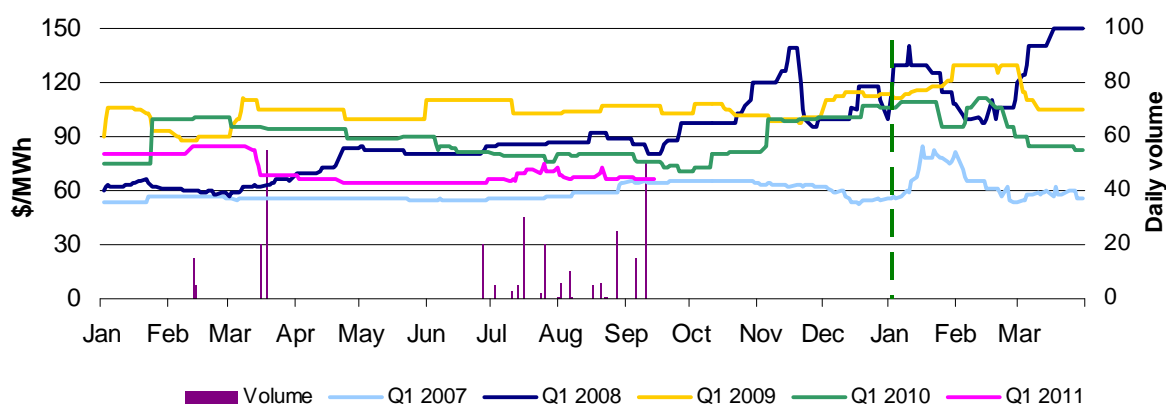
Source: d-cyphaTrade www.d-cyphatrade.com.au

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 35 trading intervals throughout the week where actual prices varied significantly from forecasts⁵. This compares to the weekly average in 2009 of 103 counts. 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	3	17	3	0
% of total below forecast	77	0	0	0

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 169 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	169	144	523	-6
NSW	268	-452	-205	-257
VIC	338	-181	-11	-24
SA	-62	17	-110	-32
TAS	-122	-95	-82	-13
TOTAL	591	-567	115	-332

Ancillary services market

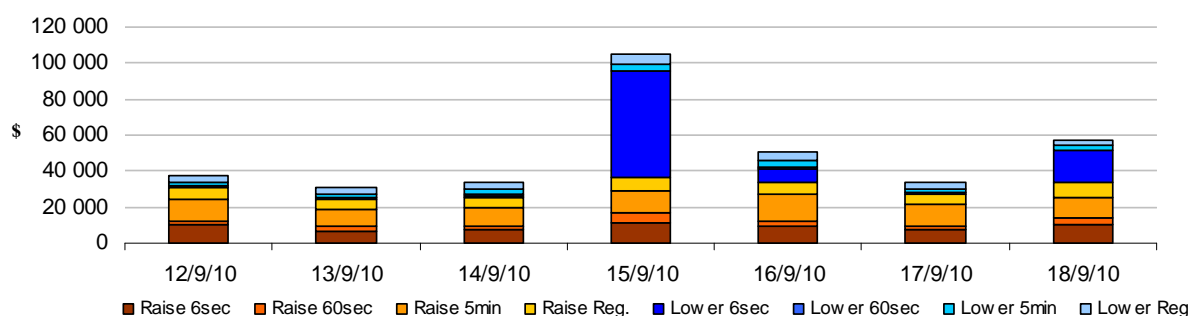
The total cost of frequency control ancillary services (FCAS) on the mainland for the week was \$238 000 or less than one per cent of energy turnover on the mainland.

The total cost of FCAS in Tasmania for the week was \$112 000 or just over two per cent of energy turnover in Tasmania.

At around 2 pm on 15 September, there was an unplanned outage of Basslink. This led to an increase in local requirements (from 0 MW to 167 MW) for lower 6 second services in Tasmania. The price of lower 6 second services reached \$2540/MW at 2.05 pm before falling to \$67/MW by 2.10 pm. This represents a cost of around \$60 000. Basslink returned to service at 1.30 am the following day.

Figure 12 shows the daily breakdown of cost for each FCAS for the NEM.

Figure 12: Daily frequency control ancillary service cost



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

Detailed Market Analysis



12 September – 18 September 2010

Tasmania:

There were two occasions where the spot price in Tasmania was greater than three times the Tasmania weekly average price of \$25/MWh and above \$250/MWh.

Tuesday, 14 September

7:00 am	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	297.26	51.01	47.88
Demand (MW)	1355	1377	1345
Available capacity (MW)	2231	2294	2294
8:00 am	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	297.27	296.91	293.26
Demand (MW)	1459	1501	1469
Available capacity (MW)	2294	2294	2294

Conditions at the time saw demand lower than forecast four hours ahead, and available capacity around 60 MW lower than forecast for the 7 am trading interval. Price and available capacity were as forecast for the 8 am trading interval.

Through initial offers, Hydro Tasmania bid only 450 MW of capacity at prices below \$10/MWh and the remaining capacity was priced above \$250/MWh for the 7 am trading interval. For the 8 am trading interval there was only 540 MW of capacity at prices below \$10/MWh and the remaining capacity was priced above \$250/MWh. Prior to this time there was around 2000 MW priced below \$50/MWh.

From 6.04 am over several rebids Aurora Energy reduced the available capacity of its three small Bell Bay gas turbines by around 60 MW, all of which was priced below zero. The reasons given related to plant issues. As a result of the reduction in capacity the price increased.

There was no other significant rebidding.

Detailed NEM Price and Demand Trends

for Weekly Market Analysis
12 September - 18 September 2010



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

Financial year	QLD	NSW	VIC	SA	TAS
2010-11 (\$/MWh) YTD	21	31	27	29	44
2009-10 (\$/MWh) YTD	26	29	25	27	24
Change*	-17%	7%	6%	9%	84%
2009-10 (\$/MWh)	37	52	42	82	30

Table 2: NEM turnover

Financial year	NEM Turnover** (\$, billion)	Energy (TWh)
2010-11 (YTD)	\$1.309	47
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)
May-10	22	29	32	31	61	0.509
Jun-10	23	35	33	38	32	0.563
Jul-10	22	28	27	31	31	0.495
Aug-10	22	37	28	28	70	0.579
Sep -10 (MTD)	21	24	23	30	23	0.235
Q2 2010	22	30	48	34	40	1.697
Q2 2009	32	35	34	35	106	1.918
Change*	-30%	-16%	40%	-5%	-63%	-11.51%

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

	QLD		NSW		VIC		SA	
	Base	Peak	Base	Peak	Base	Peak	Base	Peak
Q1 2011								
Price on 13 Sep (\$/MW)	44	75	51	83	54	97	66	108
Price on 20 Sep (\$/MW)	43	72	50	82	53	93	66	108
Open interest on 20 Sep	1462	147	2263	239	2197	110	141	0
Traded in the last week (MW)	126	36	216	84	102	35	0	0
Traded since 1 Jan 10 (MW)	4052	150	6604	330	7737	145	301	0
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
July 10 with July 09						
MW Priced <\$20/MWh	977	-476	1	77	-90	489
MW Priced \$20 to \$50/MWh	-445	328	180	72	382	518
August 10 with August 09						
MW Priced <\$20/MWh	566	-841	-562	184	-86	-739
MW Priced \$20 to \$50/MWh	85	715	537	46	313	1696
September 10 with September 09 (MTD)						
MW Priced <\$20/MWh	533	868	-222	540	-23	1696
MW Priced \$20 to \$50/MWh	341	-158	259	-139	385	688

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

** Estimated value