19 October – 25 October 2008

#### **Summary**

Spot prices on the mainland were similar to the previous week, averaging between \$35/MWh in Queensland and \$41/MWh in South Australia and Victoria. In Tasmania the spot price averaged \$58/MWh - an increase of one third compared to the previous week. In the financial markets, there was relatively little contract activity.

#### **Spot market prices**

Figure 1 sets out the volume weighted average prices for this week and the financial year to date 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)

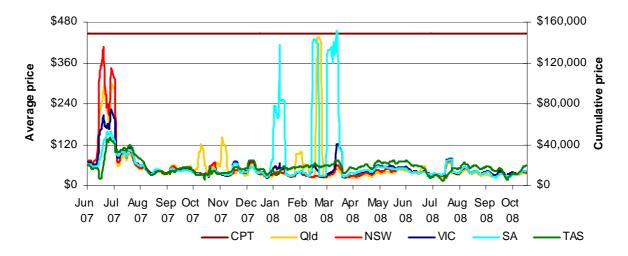
	Qld	NSW	VIC	SA	Tas
Ave price for 19 October – 25 October	35	38	41	41	58
Financial year to 25 October	36	40	42	41	44
% change from previous week*	-1%	-4%	2%	2%	32%
% change from year to date**	-39%	-28%	-25%	-27%	-26%

<sup>\*</sup>The percentage change between last week's average spot price and the average price for the previous week.

The AER provides further information if the spot price exceeds three times the weekly average. Details of these events are attached in Appendix A. Longer term market trends are attached in Appendix B.

Figure 2 shows the seven day rolling cumulative price for each region together with the CPT (and the equivalent seven day time-weighted average price) for the last 18 months.

Figure 2: Seven day rolling cumulative price and CPT



<sup>\*\*</sup>The percentage change between the average spot price for the current financial year to date and the average spot price over the similar period for the previous financial year

#### **Financial markets**

Figures 3 to 10 show futures contract<sup>1</sup> prices traded on the Sydney Futures Exchange as at close of trade on Monday 27 October. Figure 3 shows the financial year base futures contract prices for the current year, the following two years, and the three year average. Also shown are percentage changes compared to a week earlier.

Figure 3: Base financial year futures contract prices (\$/MWh)

	Q	LD NSW		VIC		SA		
Financial 2009-10	51	0%	49	0%	51	1%	55	0%
Financial 2010-11	58	-1%	60	20%	62	3%	59	0%
Financial 2011-12	55	0%	50	12%	54	3%	49	0%
Three year average	55	0%	53	11%	56	2%	54	0%

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

Figure 4 shows the \$300 cap contract price for the first quarter of 2009 and the 2009 calendar year and the change from the previous week.

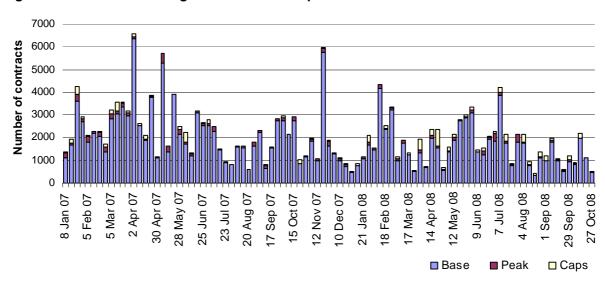
Figure 4: \$300 cap contract prices (\$/MWh)

	QI	QLD		NSW		VIC		A
Q1 2009 price	43	1%	18	-1%	25	0%	65	0%
Calendar 2009	18	1%	10	-1%	12	0%	21	0%

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

Figure 5 shows the weekly trading volumes for base, peak and cap contracts. The date represents the end of the trading week.

Figure 5: Number of exchange traded contracts per week

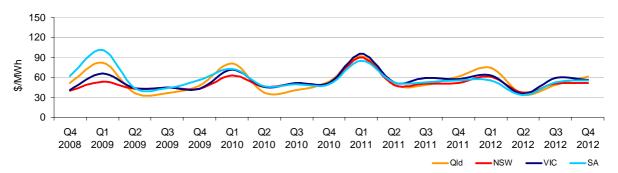


 $Source: d\text{-}cyphaTrade \\ \underline{www.d\text{-}cyphatrade.com.au}$ 

Futures contracts 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.

Figure 6 shows the prices for base contracts for each quarter for the next four years.

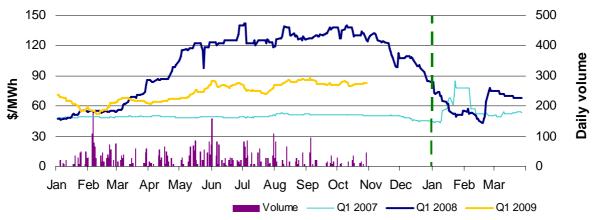
Figure 6: Quarterly base future prices 2008 - 2012



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

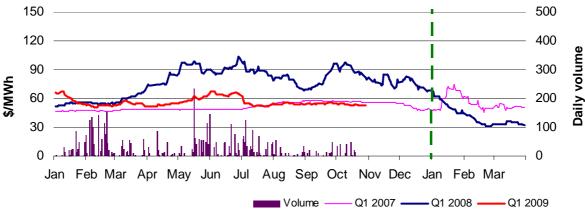
Figures 7-10 compare for each region the closing daily base contract prices for the first quarter of 2007, 2008 and 2009. Also shown is the daily volume of Q1 2009 base contracts traded. The vertical dashed line signifies the start of the Q1 period.

Figure 7: Queensland Q1 2007, 2008 and 2009



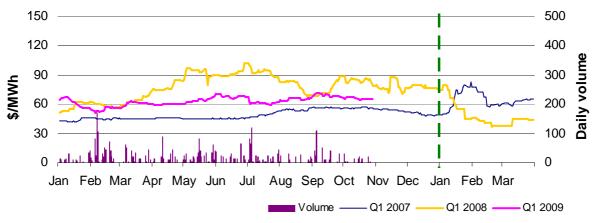
Source: d-cyphaTrade www.d-cyphatrade.com.au

Figure 8: New South Wales Q1 2007, 2008 and 2009



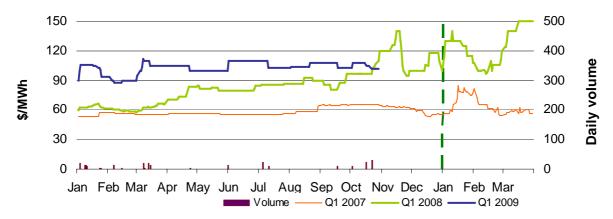
Source: d-cyphaTrade www.d-cyphatrade.com.au

Figure 9: Victoria Q1 2007, 2008 and 2009



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

Figure 10: South Australia Q1 2007, 2008 and 2009



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

#### **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 NEMMCO and the actual spot price and if there is a variation, state why the AER considers that 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 39 trading intervals where actual prices significantly varied from forecasts<sup>2</sup> throughout the week. This compares to the weekly average in 2007 of 125 counts. Reasons for these variances are summarised in Figure 11<sup>3</sup>.

Figure 11: Reasons for variations between forecast and actual prices

	Availability	Demand	Network	Combination
Price is higher than forecast	0%	62%	0%	0%
Price is lower than forecast	33%	6%	0%	0%

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A trading interval is counted as having a variation if the actual price differs significantly from the forecast price either four or twelve hours ahead.

The table summarises (as a percentage) the number of times when the actual price differs significantly from the forecast price four or twelve 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 twelve and four 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 12 shows changes to the offer price and available capacity of generation in each region for the peak periods only<sup>4</sup>. For example, in Queensland 245 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 12: Changes in available generation compared to the previous week during peak times

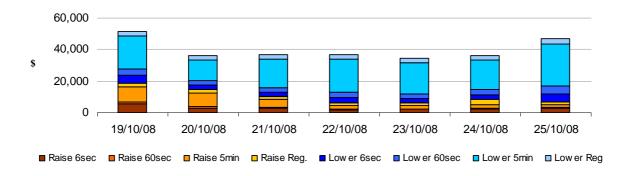
\$/MWh	<20	Between 20 and 50	Total availability	Change in average demand
Queensland	-245	-64	-256	-143
New South Wales	448	235	693	91
Victoria	93	-243	-61	79
South Australia	-111	-43	-136	-68
Tasmania	-210	-23	27	87
Total	-25	-137	267	45

#### **Ancillary services market**

The total cost of ancillary services on the mainland for the week was \$244 000 or less than one per cent of turnover in the energy market.

The total cost of ancillary services in Tasmania for the week was \$35 000 or one per cent of turnover in the energy market in Tasmania. Figure 13 shows the daily breakdown of cost for each frequency control ancillary service.

Figure 13: Daily frequency control ancillary service cost



#### Australian Energy Regulator October 2008

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<sup>&</sup>lt;sup>4</sup> 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**



#### 19 – 25 October 2008

<u>Tasmania</u>: There were three occasions where the spot price in Tasmania was greater than three times the Tasmania weekly average price of \$58/MWh.

#### Tuesday, 21 October

11:00 am	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	218.29	66.26	66.26
Demand (MW)	1155	1193	1194
Available capacity (MW)	1850	1850	1897
11:30 am	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	218.30	66.26	66.26
Demand (MW)	1185	1178	1178
Available capacity (MW)	1850	1850	1897
12:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	199.17	66.10	66.10
Demand (MW)	1160	1150	1158
Available capacity (MW)	1850	1850	1850

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

At 6.30 am a planned outage of the Hazelwood no.4 220kV line commenced. From 9.25 am to 2.45 pm, the constraint used to manage this outage bound. This reduced import capability into Tasmania - from around 440 MW at 9.50 am to 116 MW at 10 am. This reduction was not forecast.

From 10.26 am, over several rebids, Hydro Tasmania rebid up to 905 MW of capacity across its portfolio from prices below \$110/MWh to above \$200/MWh. The reason given was "Constraint management".

There was no other significant rebidding.

# Appendix B Detailed NEM Price and Demand Trends



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

Financial year	QLD	NSW	VIC	SA	TAS
2008-09 (\$/MWh) YTD	36	40	42	41	44
2007-08 (\$/MWh) YTD	59	56	56	56	60
Change	-39%	-28%	-25%	-27%	-26%
2007-08 (\$/MWh)	58	44	51	101	57

**Table 2: NEM turnover** 

Financial year	NEM Turnover* (\$, billion)	Energy (TWh)
2008-09 YTD	\$2.7	69
2007-08	\$11.1	208
2006-07	\$12.7	206
Change (2006-07 to 2007-08)	-12%	0.8%

<sup>\*</sup> estimated value

Table 3: Recent monthly and quarterly spot market volume weighted average price and turnover

Volume weighted							Turnover
average (\$/MWh)	QLD	NSW	SNOWY	VIC	SA	TAS	(\$, billion)
Jun-08	43	44	28	44	42	57	0.77
Jul-08	40	44	-	46	48	31	0.82
Aug-08	37	42	-	42	44	56	0.79
Sep-08	32	37	-	38	34	46	0.61
Oct-08 MTD	35	38	-	39	37	43	0.51
Q3 2007	56	59	-	60	62	65	3.17
Q3 2008	36	41	-	42	42	44	2.23
Change	-35%	-31%	-	-30%	-31%	-32%	

Table 4: ASX energy futures contract prices at 27 October

	QLD		NSW		VIC		SA	
Q1 2009	Base	Peak	Base	Peak	Base	Peak	Base	Peak
Price on 20 Oct (\$/MW)	82	145	53	89	66	117	102	197
Price on 27 Oct (\$/MW)	83	147	53	89	66	117	102	197
Open interest on 27 Oct	2455	152	2378	171	1902	449	155	0
Traded in the last week (MW)	76	12	0	0	25	0	0	0
Traded since 1 Jan 08	4859	389	5072	215	3533	687	280	0
Settled price for Q1 08(\$/MW)	68	97	32	42	43	65	152	322

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

Comparison:	QLD	NSW	SNOWY*	VIC	SA	TAS	NEM
August 08 with August 07							
MW Priced <\$20	138	668	-	116	168	-248	841
MW Priced \$20 to \$50	511	-844	-	275	79	51	72
September 08 with September 0	7						
MW Priced <\$20	913	717	-	-84	137	147	1829
MW Priced \$20 to \$50	189	-401	-	186	187	37	199
October 08 with October 07							
MW Priced <\$20	220	-238	-	-161	89	-324	-414
MW Priced \$20 to \$50	372	-319	-	138	55	-34	211

<sup>\*</sup>For comparative purposes Snowy generation for July 2007 and 2008 has been incorporated into New South Wales and Victoria