# WEEKLY MARKET ANALYSIS



#### 1-7 March 2009

### **Summary**

Average spot prices on the mainland ranged from \$23/MWh in New South Wales and Victoria to \$28/MWh in Queensland. The average spot price in Tasmania was \$37/MWh.

In the financial market, prices for the current quarter fell in all regions.

# **Spot market prices**

Figure 1 sets out the volume weighted average prices for 1 to 7 March and the financial year to date across the National Electricity Market. 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)

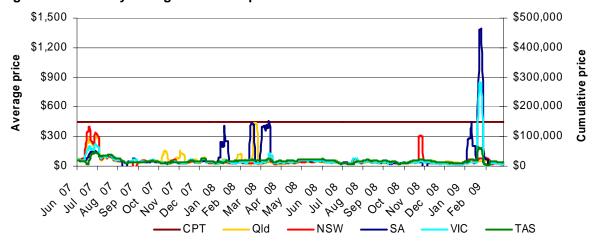
	Qld	NSW	VIC	SA	Tas
Ave price for 1 – 7 March	28	23	23	24	37
Financial year to 7 March	39	47	56	83	48
% change from previous week*	1%	-16%	-12%	-27%	-13%
% change from year to date**	-42%	1%	14%	-21%	-12%

<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 Cumulative Price Threshold (CPT) (and the equivalent seven day time-weighted average price).

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 (SFE) as at close of trade on Monday 9 March. Figure 3 shows the base futures contract prices for the next three financial 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	N:	SW	٧	'IC	S	SA
Financial 2009-10	44	-3%	46	-2%	48	-3%	59	-6%
Financial 2010-11	55	-3%	58	-2%	61	-2%*	67	0%
Financial 2011-12	63	-1%	63	0%	65	-3%	69	0%
Three year average	54	-2%	56	-1%	58	-2%	65	-2%

Source: d-cyphaTrade <u>www.d-cyphatrade.com.au</u> \*There were trades in this product

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.

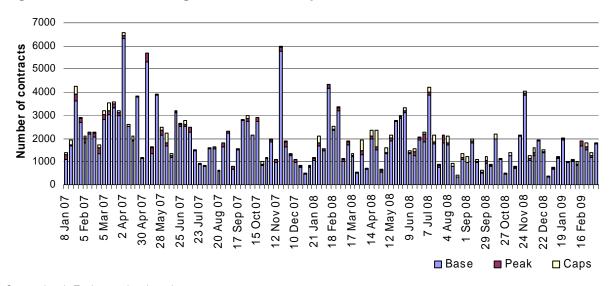
Figure 4: \$300 cap contract prices (\$/MWh)

	QLD		QLD NSW		\	/IC	SA	
Q1 2009 price	7	-61%	6	-29%	30	-11%	90	0%
Calendar 2009	6	-35%	6	-19%	11	-8%	28	0%

Source: d-cyphaTrade www.d-cyphatrade.com.au There were no trades in these products.

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

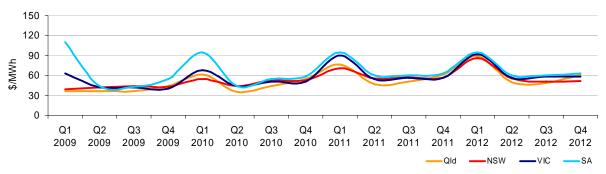


Source: d-cyphaTrade www.d-cyphatrade.com.au

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.

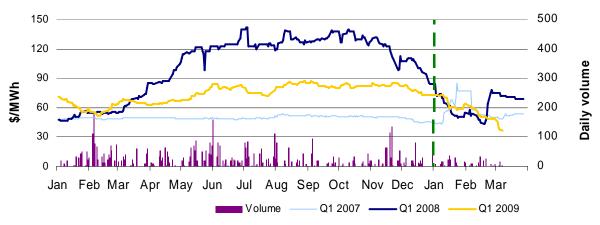
Figure 6: Quarterly base future prices 2009 - 2012



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

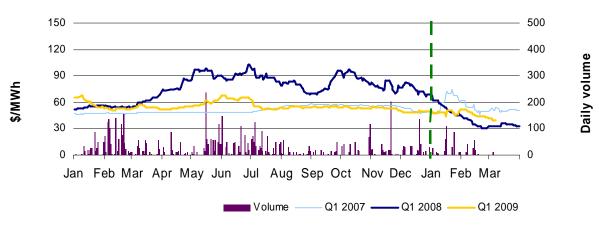
Figures 7-10 compare for each region the closing daily base contract prices for the first quarter of 2007, 2008 and 2009. Also shown is the daily volume of Q1 2009 base contracts traded. The vertical dashed line signifies the start of the Q1 period.

Figure 7: Queensland Q1 2007, 2008 and 2009



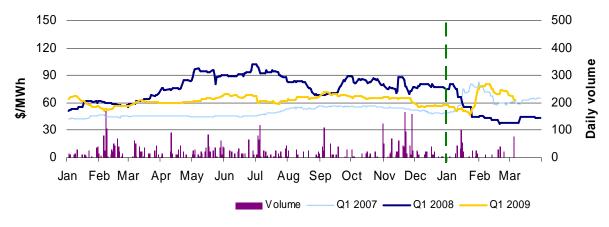
Source: d-cyphaTrade www.d-cyphatrade.com.au

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



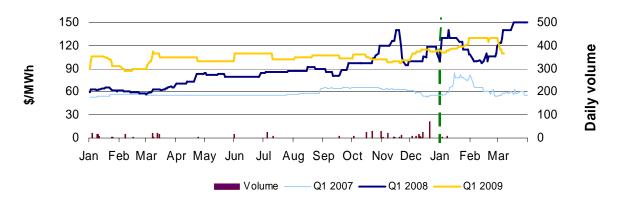
Source: d-cyphaTrade www.d-cyphatrade.com.au

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 82 trading intervals where actual prices significantly varied from forecasts<sup>2</sup> throughout the week. This compares to the weekly average in 2008 of 130 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
% of total above forecast	0%	5%	0%	1%
% of total below forecast	84%	10%	0%	0%

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 the change in total available capacity in each region from the previous week and at the price levels shown, for the peak periods only<sup>4</sup>. For example, in Queensland 214 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 12: Changes in available generation and average demand compared to the previous week during peak times

MW	<\$20/MWh	Between \$20 and \$50/MWh	Total availability	Change in average demand
Queensland	214	-32	208	276
New South Wales	-29	239	203	-324
Victoria	-499	-124	-525	-387
South Australia	4	196	-188	-284
Tasmania	57	25	19	21
Total	-253	304	-283	-698

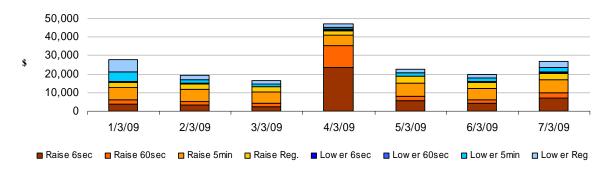
## **Ancillary services market**

The total cost of frequency control ancillary services on the mainland for the week was \$152,000 or less than one per cent of turnover in the energy market.

The total cost of ancillary services in Tasmania for the week was \$29 000 or less than 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 for the NEM.

Figure 13: Daily frequency control ancillary service cost



Australian Energy Regulator March 2009

<sup>4</sup> Peak period is defined as between 7 am and 10 pm on weekdays, which aligns with the SFE contract definition.



**Queensland:** There were three occasions where the spot price in Queensland was greater than three times the Queensland weekly average price of \$28/MWh.

# Monday, 2 March

1:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	91.52	243.15	151.80
Demand (MW)	8298	8022	8022
Available capacity (MW)	9729	9803	9940
2:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	98.54	151.58	246.48
Demand (MW)	8352	8064	8064
Available capacity (MW)	9688	9799	9889
2:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	96.82	163.91	250.78
Demand (MW)	8364	8088	8088
Available capacity (MW)	9751	9762	9889

Conditions at the time saw demand up to 288 MW higher than that forecast four and 12 hours ahead. Available capacity was up to 111 MW lower than that forecast four hours ahead with prices below those forecast four hours ahead.

An unexpected reduction in capacity at Kogan Creek saw an increase in imports, by around 200 MW, from New South Wales that was not forecast four hours ahead.

Over several rebids from 10.10 am, Tarong Energy shifted 150 MW of available capacity across its portfolio from prices above \$148/MWh to prices below \$84/MWh. The reasons given included "portfolio optimisation::volume profile change", "emissions::adjust availability" and "control issue continuing::fixed load".

Over three rebids from 1.26 pm, Stanwell Corporation added up to 190 MW of available capacity at Stanwell unit three. The reasons given were 'technical issues::extend fixed bid", "technical issues::change avail/MW distrib" and "revised unit RTS/OOS::change".

There was no other significant rebidding.

<u>Victoria:</u> There were two occasions where the spot price in Victoria was greater than three times the Victoria weekly average price of \$23/MWh.

# Friday, 6 March

7:00 am	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	76.67	59.00	59.00
Demand (MW)	6486	6451	6441
Available capacity (MW)	8877	9005	9000
8:30 am	Actual	4 hr forecast	12 hr forecast
<b>8:30 am</b> Price (\$/MWh)	<b>Actual</b> 75.15	4 hr forecast 37.86	<b>12 hr forecast</b> 59.54

Conditions at the time saw demand close to forecast, with available capacity up to 396 MW lower than forecast four hours ahead.

Over several rebids from 3.32 am, affecting the 7 am trading interval, LYMMCO reduced the available capacity at Loy Yang A by 145 MW, all of which was priced below \$20/MWh. The reason given was "revised plant limits". Over several rebids from 7.03 am, affecting the 8.30 am trading interval, LYMMCO removed up to 655 MW of available capacity across its portfolio, all of which was priced below \$20/MWh. The reason given was "Coal Plant Issues".

There was no other significant rebidding.

**South Australia:** There were two occasions where the spot price in South Australia was greater than three times the South Australia weekly average price of \$24/MWh.

# Friday, 6 March

7:00 am	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	78.38	58.48	58.49
Demand (MW)	1545	1590	1591
Available capacity (MW)	2287	2353	2353
8:30 am	Actual	4 hr forecast	12 hr forecast
<b>8:30 am</b> Price (\$/MWh)	<b>Actual</b> 76.82	4 hr forecast 38.77	<b>12 hr forecast</b> 60.01

Conditions at the time saw demand and available capacity close to that forecast four hours ahead. Prices were aligned with those in Victoria.

There was no significant rebidding.

# **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	39	47	56	83	48
2007-08 (\$/MWh) YTD	67	46	50	106	55
Change	-42%	1%	14%	-21%	-12%
2007-08 (\$/MWh)	58	44	51	101	57

**Table 2: NEM turnover** 

Financial year	NEM Turnover* (\$, billion)	Energy (TWh)
2008-09 YTD	\$7.1	144
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	VIC	SA	TAS	(\$, billion)
Nov-08	40	32	36	34	51	0.60
Dec-08	36	25	23	26	33	0.48
Jan-09	44	57	190	374	85	1.96
Feb-09	42	47	38	47	40	0.71
Mar-09 MTD	28	23	23	24	37	0.10
Q4 2008	39	51	34	32	44	2.13
Q4 2007	56	41	44	46	44	2.35
Change	-29%	23%	-23%	-30%	0%	-0.48%

Table 4: ASX energy futures contract prices at 9 March

	QI	LD	NS	SW	V	IC	S	A
Q1 2009	Base	Peak	Base	Peak	Base	Peak	Base	Peak
Price on 02 Mar (\$/MW)	49	78	42	68	68	140	130	200
Price on 09 Mar (\$/MW)	37	54	39	55	64	125	110	200
Open interest on 09 Mar	2545	263	2766	231	2445	484	267	20
Traded in the last week (MW)	27	0	10	0	75	0	0	0
Traded since 1 Jan 08	6198	544	6609	295	5258	807	529	40
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	VIC	SA	TAS	NEM
January 09 with January 08						
MW Priced <\$20	-423	-799	25	39	-26	-1184
MW Priced \$20 to \$50	420	1043	178	52	-64	1629
February 09 with February 08						
MW Priced <\$20	-373	32	-3	72	33	-241
MW Priced \$20 to \$50	328	141	149	-89	10	539
March 09 with March 08						
MW Priced <\$20	-441	81	107	-90	-12	-355
MW Priced \$20 to \$50	433	507	23	26	75	1063