

WEEKLY MARKET ANALYSIS



AUSTRALIAN ENERGY
REGULATOR

5 April-11 April 2009

Summary

Average spot prices for the mainland regions were lower than average driven by low demand, ranging from \$27/MWh in Queensland to \$33/MWh in South Australia.

The average spot price in Tasmania was \$70/MWh. For the second consecutive week very high prices for raise contingency frequency control ancillary services (FCAS) in Tasmania almost led to administered pricing of those services.

Spot market prices

Figure 1 sets out the volume weighted average prices for 5 April to 11 April 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
Average price for 5 April – 11 April	27	29	32	33	70
Financial year to 11 April	38	45	53	78	49
% change from previous week*	-16%	-26%	-19%	-52%	-10%
% change from previous year to date**	-40%	0%	4%	-33%	-12%

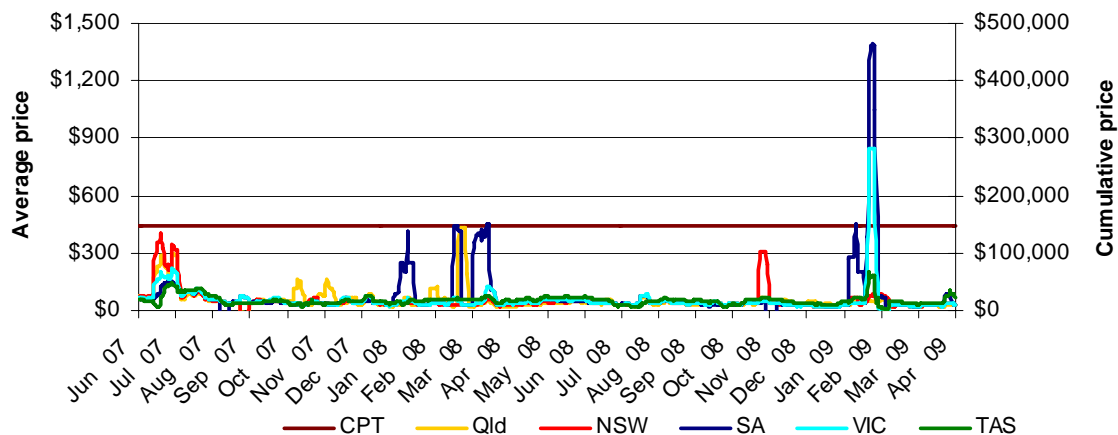
*The percentage change between last week's average spot price and the average price for the previous week.

**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.

The AER provides further information if the spot price exceeds three times the weekly average. Details of these events are attached at 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



Financial markets

Figures 3 to 10 show futures contract¹ prices traded on the Sydney Futures Exchange (SFE) as at close of trade on Monday 13 April. 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)

	QLD		NSW		VIC		SA	
Financial 2009-10	44	-1%	46	0%	49	0%	58	0%
Financial 2010-11	51	0%	54	0%	56	-1%	66	0%
Financial 2011-12	63	0%	64	0%	67	1%	69	0%
Three year average	52	0%	55	0%	57	0%	65	0%

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

Figure 4 shows the \$300 cap contract price for the first quarter of 2010 and the 2010 financial year and the percentage change from the previous week.

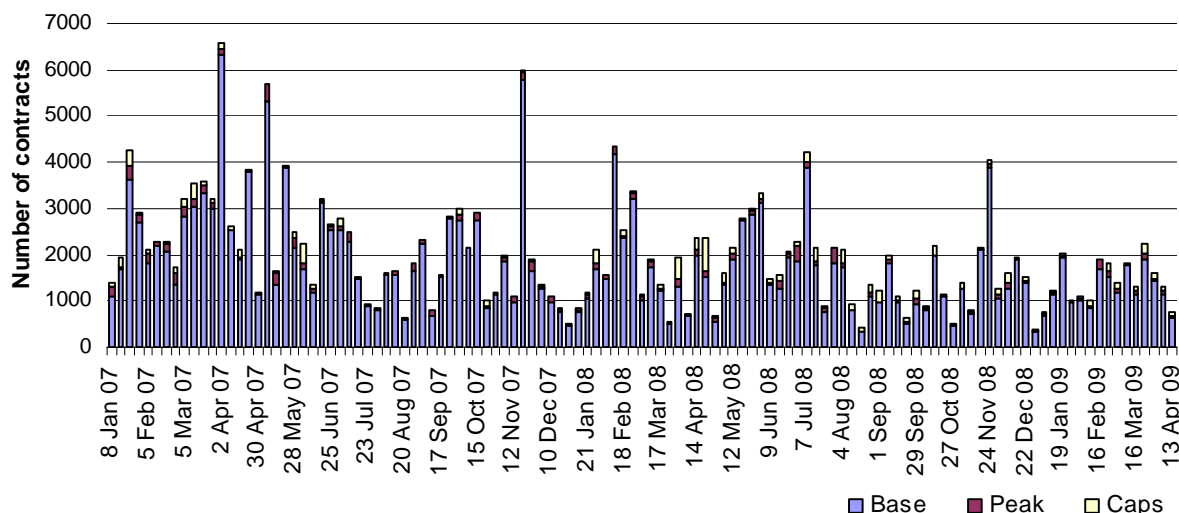
Figure 4: \$300 cap contract prices (\$/MWh)

	QLD		NSW		VIC		SA	
Q1 2010 (% Change)	27	0%	22	-3%	35	0%	45	0%
FY 2010 (% Change)	12	0%	11	-2%	12	0%	16	0%

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

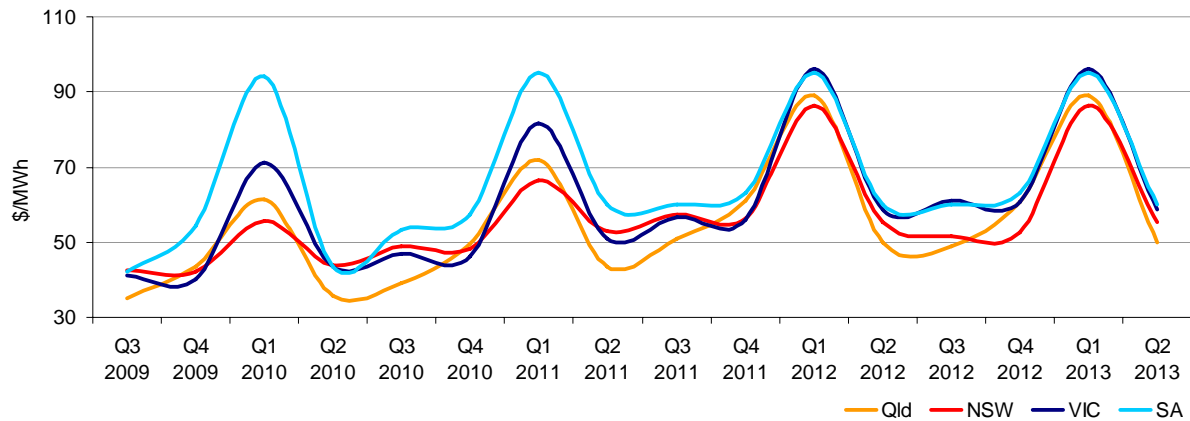


Source: d-cyphaTrade www.d-cyphatrade.com.au

¹ 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 financial years.

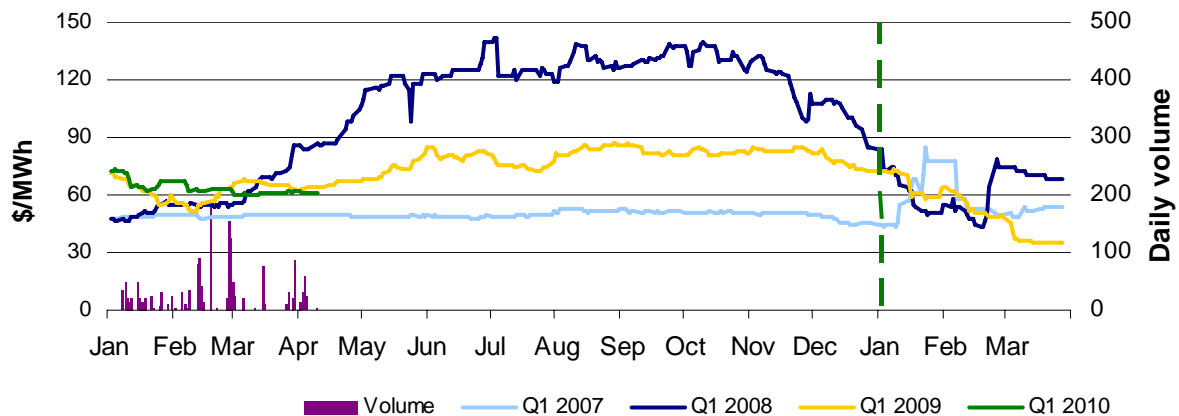
Figure 6: Quarterly base future prices Q3 2009 – Q2 2013



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

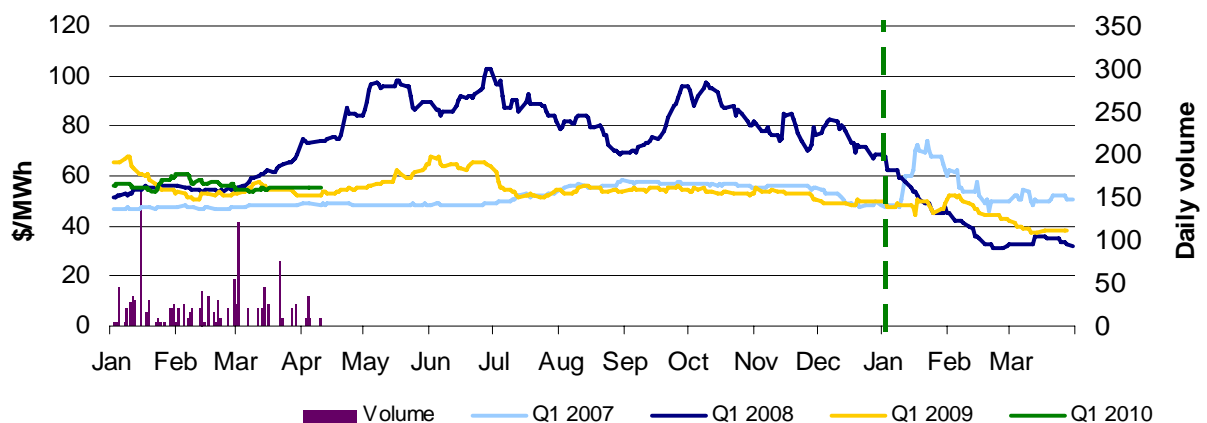
Figures 7-10 compare for each region the closing daily base contract prices for the first quarter of 2007, 2008, 2009 and 2010. Also shown is the daily volume of Q1 2010 base contracts traded. The vertical dashed line signifies the start of the Q1 period.

Figure 7: Queensland Q1 2007, 2008, 2009 and 2010



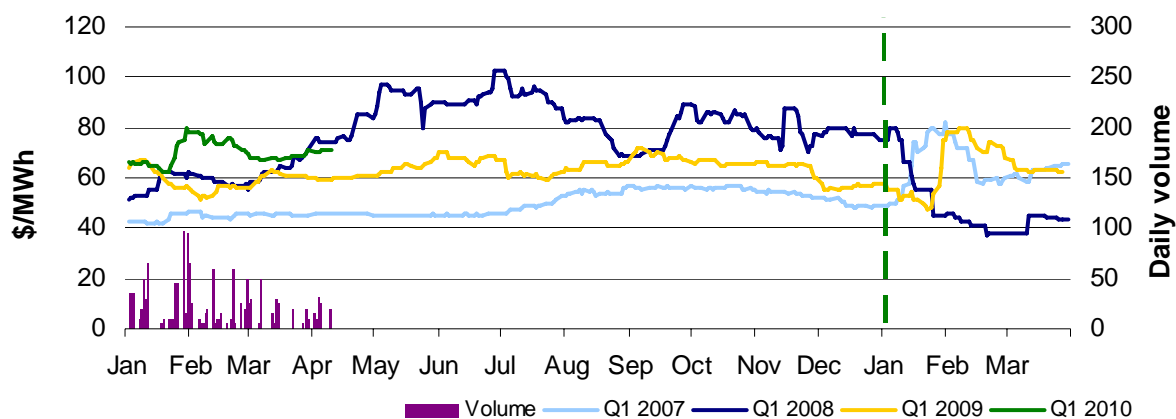
Source: d-cyphaTrade www.d-cyphatrade.com.au

Figure 8: New South Wales Q1 2007, 2008, 2009 and 2010



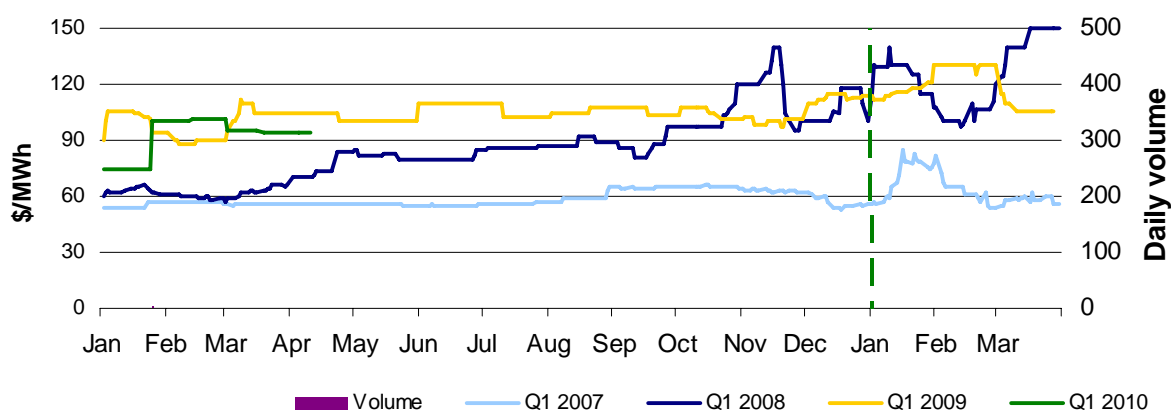
Source: d-cyphaTrade www.d-cyphatrade.com.au

Figure 9: Victoria Q1 2007, 2008, 2009 and 2010



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

Figure 10: South Australia Q1 2007, 2008, 2009 and 2010



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 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 115 trading intervals where actual prices varied significantly from forecasts² throughout the week. This compares to the weekly average in 2008 of 130 counts. Reasons for these variances are summarised in Figure 11³.

Figure 11: Reasons for variations between forecast and actual prices

	Availability	Demand	Network	Combination
% of total above forecast	0%	32%	0%	0%
% of total below forecast	68%	0%	0%	0%

² 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.

³ 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 only⁴. For example, in Queensland 364 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 and average demand compared to the previous week during peak times

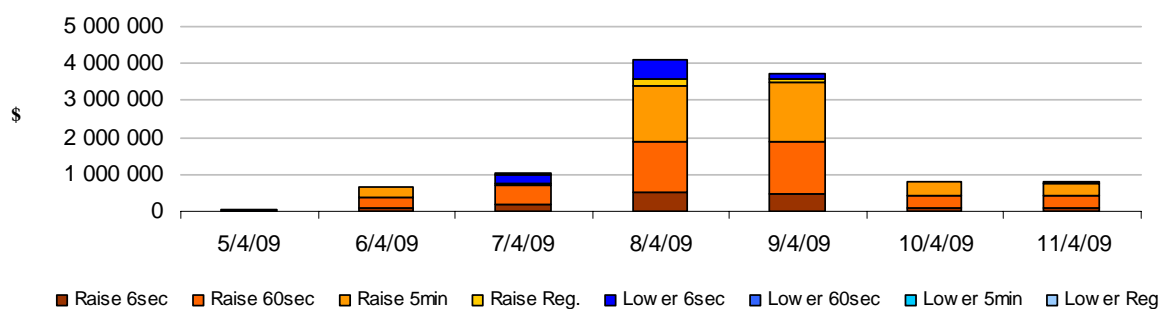
MW	<\$20/MWh	Between \$20 and \$50/MWh	Total availability	Change in average demand
Queensland	-364	2	-150	-487
New South Wales	-8	128	161	-641
Victoria	-874	79	-691	-527
South Australia	-117	9	83	-247
Tasmania	84	-36	42	89
Total	-1279	182	-555	-1813

Ancillary services market

The total cost of FCAS on the mainland for the week was \$217 000 or less than one per cent of turnover in the energy market.

Figure 13 shows the daily breakdown of FCAS for the NEM.

Figure 13: Daily FCAS cost



The total cost of FCAS in Tasmania for the week was \$11 million. Most of this cost (\$10 million) was for raise contingency services.

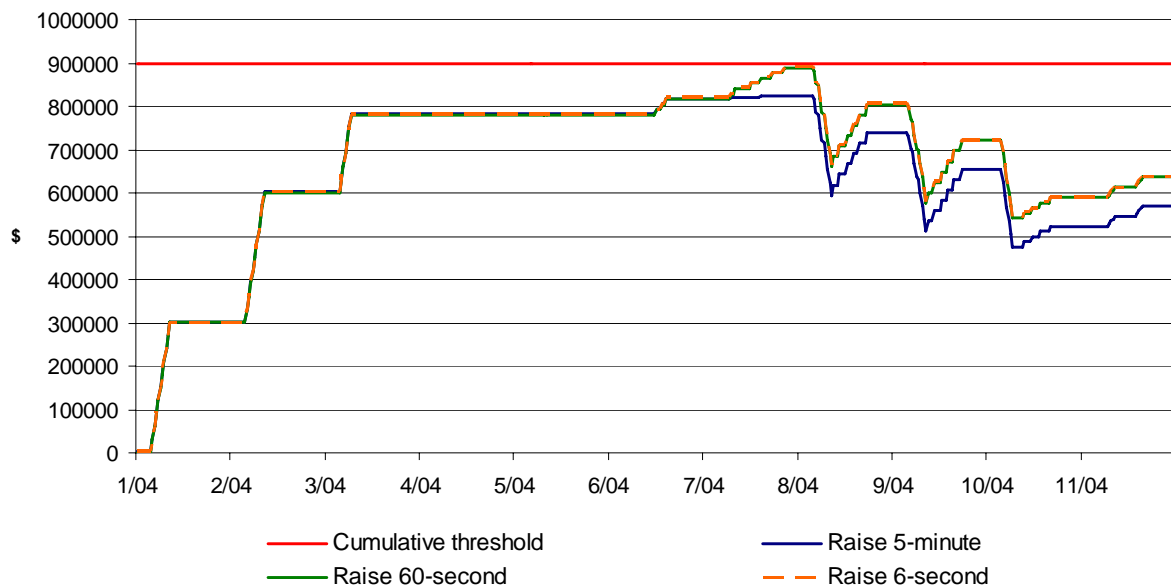
Hydro Tasmania continued the change in bidding strategy it began on 1 April (refer to Weekly Market Analysis for 29 March to 4 April) in relation to raise contingency FCAS. Prices of raise 6-second, 60-second and 5-minute contingency FCAS reached up to \$4000/MW on several occasions on Wednesday and Thursday and up to \$2000/MW during the other days of the week.

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

There were short periods of high prices for other services on Tuesday through Thursday.

Administered pricing is invoked where the sum of the ancillary service prices for a market ancillary service in the previous 2016 dispatch intervals exceeds 6 times the CPT. If the cumulative price of the service exceeds this threshold (\$900 000) the price will be capped at \$300/MW. The cumulative price for raise 6-second and raise 60-second FCAS for the week reached approximately \$890 000. Figure 14 shows the cumulative price for raise contingency services from 1 April.

Figure 14: Cumulative price of raise contingency services



Australian Energy Regulator

May 2009

Detailed Market Analysis

AUSTRALIAN ENERGY
REGULATOR**5 April-11 April 2009**

Tasmania: There were six occasions where the spot price in Tasmania was greater than three times the Tasmania weekly average price of \$70/MWh.

Monday, 6 April

7.00 am	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	855.71	46.80	46.80
Demand (MW)	1125	1128	1052
Available capacity (MW)	1929	2028	2028

Conditions at the time saw demand close to that forecast four hours ahead and available capacity around 100 MW less than forecast.

At 4.15 am Hydro Tasmania reduced the available capacity of Gordon by 99 MW due to a plant failure.

As there was no capacity priced between \$46/MWh and \$4600/MWh, a 51 MW increase in demand from 6.55 am to 7 am resulted in the 5-minute price reaching \$4900/MWh.

There was no other significant rebidding.

Monday, 6 April

12.30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	353.30	920.10	69.90
Demand (MW)	1062	1090	1061
Available capacity (MW)	1966	1966	1966

Conditions at the time saw demand 28 MW lower than that forecast four hours ahead but close to that forecast 12 hours ahead. Available capacity was as forecast.

There was no capacity priced between \$68/MWh and \$4600/MWh. The price forecast four hours ahead was significantly greater than that forecast 12 hours ahead due to an increase in forecast demand of 29 MW.

Actual demand was 28 MW lower than that forecast four hours ahead resulting in a significantly lower actual price than that forecast four hours ahead.

There was no significant rebidding.

Monday, 6 April

2.00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	211.60	920.10	69.90
Demand (MW)	1032	1073	1064
Available capacity (MW)	2048	2048	2048

Conditions at the time saw demand around 40 MW lower than that forecast four hours ahead.

There was no capacity priced between \$68/MWh and \$4600/MWh so small changes in demand and the forecast import limit into Tasmania had significant impacts on forecast and actual prices.

There was no significant rebidding.

Tuesday, 7 April

2.30 am	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	1664.68	4900.30	4900.44
Demand (MW)	862	901	895
Available capacity (MW)	2011	2048	2048
3.00 am	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	855.73	4900.30	4900.30
Demand (MW)	860	900	895
Available capacity (MW)	2011	2048	2048

Conditions at the time saw demand 40 MW lower than that forecast four hours ahead and available capacity 37 MW lower than that forecast four and 12 hours ahead.

There was no capacity priced between \$46/MWh and \$4600/MWh so small changes in demand and the forecast import limit into Tasmania had significant impacts on forecast and actual prices.

At 11.40 pm the previous evening Aurora's Tamar Valley Power Station (previously registered as Bell Bay Three) unit three tripped reducing available capacity by 37 MW.

There was no other significant rebidding.

Tuesday, 7 April

4.30 am	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	2473.42	46.74	46.74
Demand (MW)	859	905	909
Available capacity (MW)	2062	2076	2076

Conditions at the time saw demand 46 MW lower than that forecast four hours ahead. Available capacity was close to forecast.

There was no capacity priced between \$47/MWh and \$4600/MWh. Small increases in 5-minute demand resulted in three 5-minute prices of \$4900/MWh from 4.05 am to 4.15 am.

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	38	45	53	78	49
2007-08 (\$/MWh) YTD	63	45	51	116	55
Change*	-40%	0%	4%	-33%	-12%
2007-08 (\$/MWh)	58	44	51	101	57

Table 2: NEM turnover

Financial year	NEM Turnover** (\$, billion)	Energy (TWh)
2008-09 YTD	\$7.720	163
2007-08	\$11.125	208
2006-07	\$12.695	206
Change (2006-07 to 2007-08)	-12%	0.8%

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)
Dec-08	36	25	23	26	33	0.476
Jan-09	44	57	190	374	85	1.962
Feb-09	42	47	38	47	40	0.709
Mar-09	27	26	26	35	37	0.466
Apr-09 MTD	31	36	39	39	83	0.225
Q1 2009	37	43	87	161	55	3.136
Q1 2008	80	34	50	243	54	3.358
Change*	-53%	28%	73%	-34%	1%	1.09%

Table 4: ASX energy futures contract prices at 13 April

	QLD		NSW		VIC		SA	
	Base	Peak	Base	Peak	Base	Peak	Base	Peak
Q1 2010								
Price on 06 Apr (\$/MW)	62	104	55	91	71	121	94	102
Price on 13 Apr (\$/MW)	61	105	56	91	71	121	94	102
Open interest on 13 Apr	1525	65	1206	12	1425	35	6	0
Traded in the last week (MW)	90	15	53	0	76	0	0	0
Traded since 1 Jan 09	1625	80	1265	12	1382	40	6	0
Settled price for Q1 09(\$/MW)	35	48	38	48	62	114	102	200

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

Comparison:	QLD	NSW	VIC	SA	TAS	NEM
February 09 with February 08						
MW Priced <\$20/MWh	-373	32	-3	72	33	-241
MW Priced \$20 to \$50/MWh	328	141	149	-89	10	539
March 09 with March 08						
MW Priced <\$20/MWh	-557	-386	119	-246	-50	-1121
MW Priced \$20 to \$50/MWh	562	347	129	-1	-2	1035
April 09 with April 08						
MW Priced <\$20/MWh	-480	-529	226	316	-123	-591
MW Priced \$20 to \$50/MWh	680	-176	-355	11	-10	151

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

** Estimated value