WEEKLY ELECTRICITY MARKET ANALYSIS

AUSTRALIAN ENERGY REGULATOR

14 – 20 February 2010

Summary

On Monday 15 February, the spot price in Queensland exceeded $1000/MWh for eight out of the ten trading intervals between 12.30 pm to 5 pm inclusive. This resulted in the weekly average spot price in that region reaching $99/MWh.

The weekly average spot price was $26/MWh in New South Wales, $28/MWh in Victoria and $30/MWh in South Australia and Tasmania.

Spot market prices

Figure 1 sets out the volume weighted average prices for the week 14 February to 20 February 2010 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
Average price for 14 – 20 February 2010	99	26	28	30	30
% change from previous week*	229	-74	-87	-95	-15
09/10 financial YTD	45	64	43	110	27
% change from 08/09 financial YTD**	14	33	-27	28	-44

*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 to date and the average spot price over the similar period 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].

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 22 February 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.

[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 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 2010	34	-6%	39	-6%	38	-6%	55	-3%
Calendar Year 2011	36*	-5%	41*	-3%	40*	-6%	53	0%
Calendar Year 2012	46	0%	50	0%	53	0%	69	0%
Three year average	39	-4%	43	-3%	44	-4%	59	-1%

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 2010 and the 2010 calendar year and the percentage change[4] from the previous week.

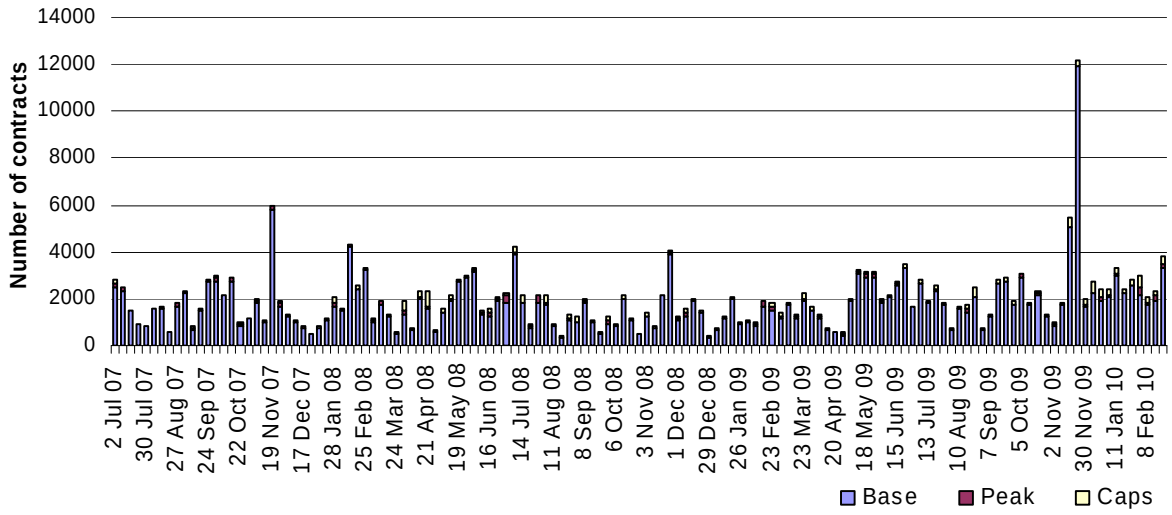
Figure 3: $300 cap contract prices ($/MWh)

	QLD		NSW		VIC		SA	
Q1 2010 (% Change)	19	0%	14*	-26%	27*	-18%	61	0%
2010 (% Change)	8	-2%	9	-13%	9	-18%	22	6%

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

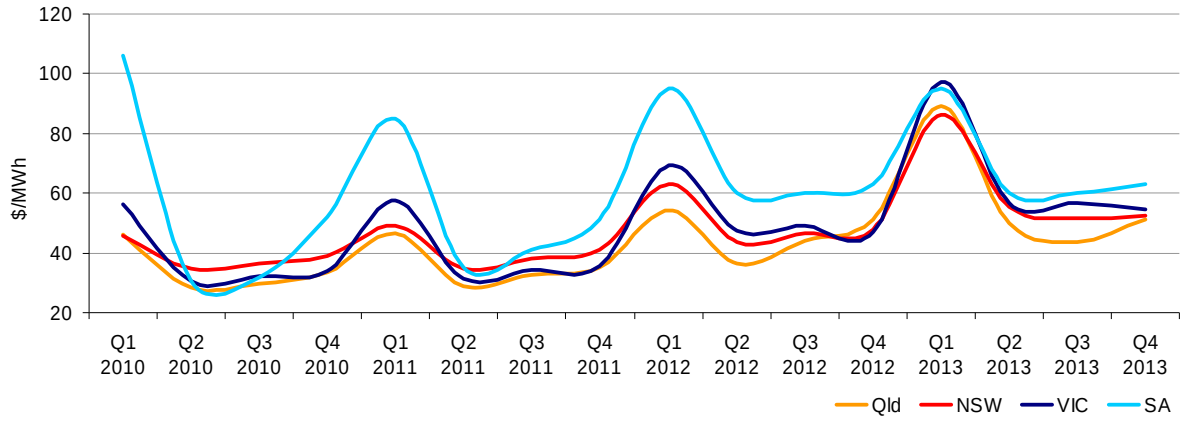


Source: d-cyphaTrade www.d-cyphatrade.com.au

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

[4] Calculated on prices prior to rounding.

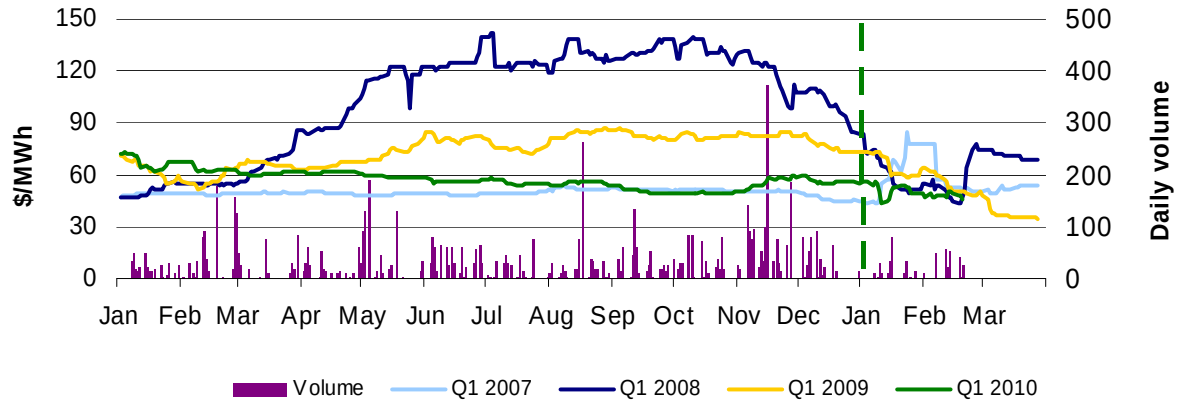
Figure 5: Quarterly base future prices Q1 2010 – Q4 2013



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

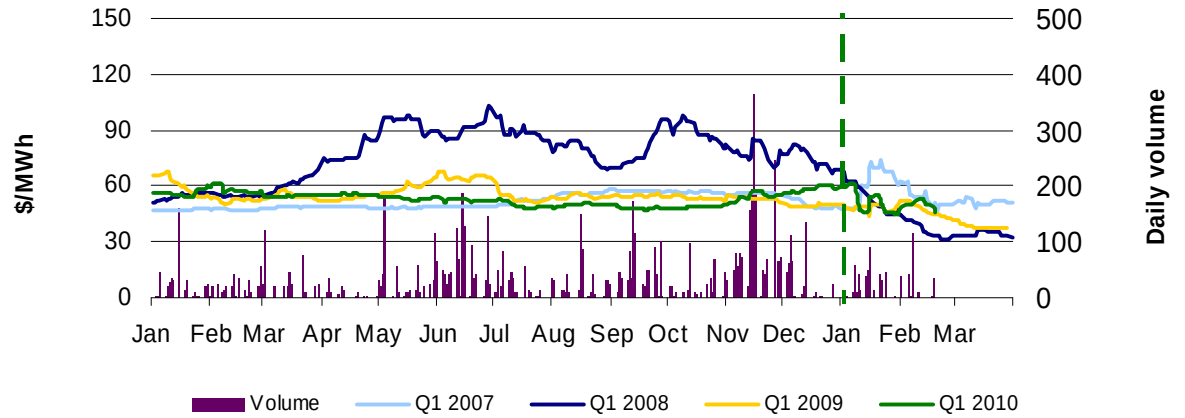
Figures 6-9 compare for each region the closing daily base contract prices for the first quarter of 2007, 2008, 2009 and 2010. Also shown is the daily volume of Q1 2010 base contracts traded. The vertical dashed line signifies the start of the Q1 period for which the contracts are being purchased. To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



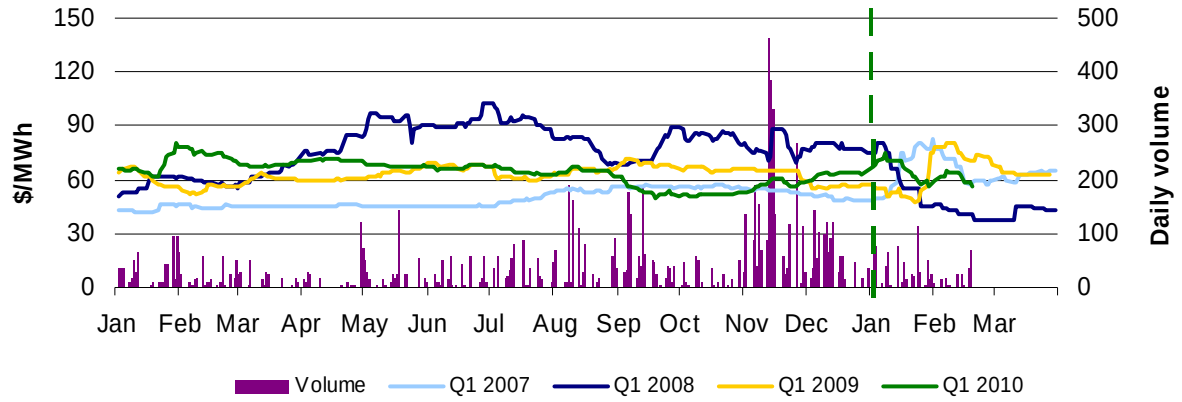
Source: d-cyphaTrade www.d-cyphatrade.com.au

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



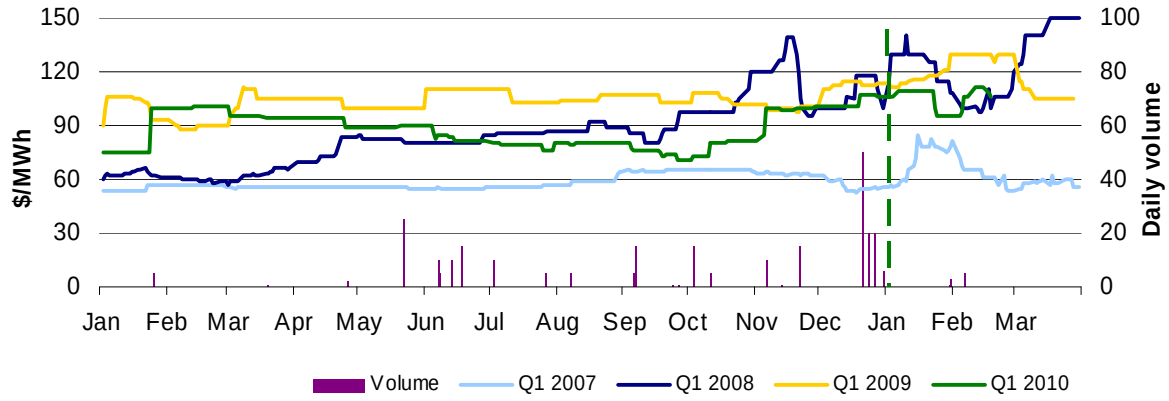
Source: d-cyphaTrade www.d-cyphatrade.com.au

Figure 8: Victoria Q1 2007, 2008, 2009 and 2010



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

Figure 9: South Australia Q1 2007, 2008, 2009 and 2010



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 69 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].

[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.

Figure 10: Reasons for variations between forecast and actual prices

	Availability	Demand	Network	Combination
% of total above forecast	5	39	0	3
% of total below forecast	33	18	0	2

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 341 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	341	-98	13	70
NSW	-1032	180	-551	-1174
VIC	-643	558	-429	-961
SA	-240	14	-67	-415
TAS	-406	38	-58	-50
TOTAL	-1980	692	-1,092	-2530

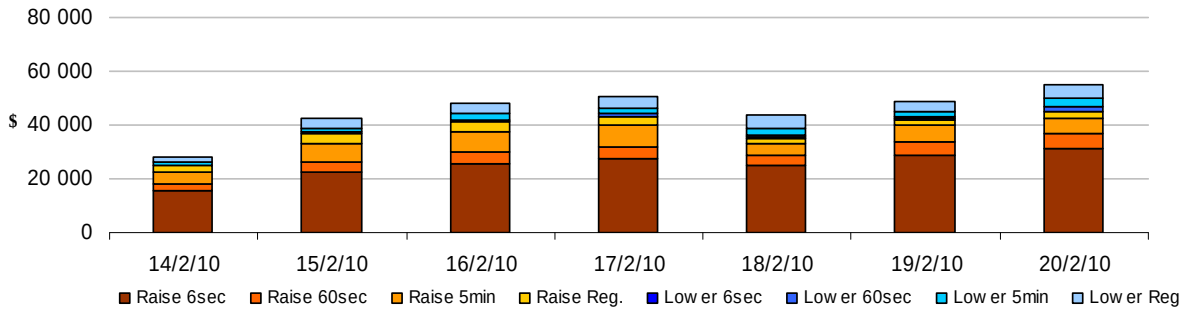
Ancillary services market

The total cost of frequency control ancillary services (FCAS) on the mainland for the week was $152 000 or less than one per cent of energy turnover on the mainland.

The total cost of FCAS in Tasmania for the week was $189 000 or around 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
April 2010

[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

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Queensland: There were eight occasions where the spot price in Queensland was greater than three times the Queensland weekly average price of $99/MWh and above $250/MWh.

Monday, 15 February

12:30 pm	**Actual**	**4 hr forecast**	**12 hr forecast**
Price ($/MWh)	4083.62	63.39	32.58
Demand (MW)	8698	8468	8103
Available capacity (MW)	10 767	11 102	11 163
1 pm	**Actual**	**4 hr forecast**	**12 hr forecast**
Price ($/MWh)	2754.06	85.74	33.79
Demand (MW)	8737	8515	8171
Available capacity (MW)	10 739	11 103	11 161
2 pm	**Actual**	**4 hr forecast**	**12 hr forecast**
Price ($/MWh)	1364.48	308.74	35.37
Demand (MW)	8759	8604	8275
Available capacity (MW)	10 772	10 775	11 127
2:30 pm	**Actual**	**4 hr forecast**	**12 hr forecast**
Price ($/MWh)	3631.15	436.00	35.59
Demand (MW)	8804	8859	8338
Available capacity (MW)	10 754	11 027	11 125
3 pm	**Actual**	**4 hr forecast**	**12 hr forecast**
Price ($/MWh)	1231.51	280.00	36.30
Demand (MW)	8757	8861	8347
Available capacity (MW)	10 768	11 021	11 123
3:30 pm	**Actual**	**4 hr forecast**	**12 hr forecast**
Price ($/MWh)	3559.78	238.35	43.36
Demand (MW)	8753	8857	8331
Available capacity (MW)	10 936	11 072	11 121

4:30 pm	**Actual**	**4 hr forecast**	**12 hr forecast**
Price ($/MWh)	1392.86	145.79	36.34
Demand (MW)	8854	8794	8281
Available capacity (MW)	10 665	11 023	11 114
5 pm	**Actual**	**4 hr forecast**	**12 hr forecast**
Price ($/MWh)	1241.79	89.80	33.56
Demand (MW)	8868	8743	8239
Available capacity (MW)	10 678	11 029	11 115

Conditions at the time saw demand up to 230 MW greater than that forecast four hours ahead and up to 629 MW greater than that forecast 12 hours ahead. Available capacity was up to 364 MW less than that forecast four hours ahead and up to 449 MW less than that forecast 12 hours ahead.

Over two rebids at 8.57 am and 11.44 am, which were effective until 4.30 pm trading interval, Millmerran Energy Trader rebid up to 265 MW of available capacity at Millmerran Power Station units one and two, from prices below $10/MWh to above $9500/MWh. The reasons given were “8:49A: Change 30min PD QLD demand 201002158/9” and “11:05A: Change in QLD 30min PD prices 2010021514/15”. At 3.43 pm, effective from 3.50 pm, Millmerran Energy reduced the available capacity at Millmerran unit one by 185 MW (a majority of which was priced above $9000/MWh). The reason given was “15:41 P: Testing of turbine HP/IP stop and control valves”. At 4.25 pm, effective from 4.35 pm, Millmerran Energy Trader rebid 130 MW of available capacity at Millmerran unit two from prices below $10/MWh to above $9500/MWh. The reason given was “16:05A: Change in QLD 30min PD availability 2010021524/25”.

At 9.25 am Stanwell Corporation’s Gladstone unit five tripped, reducing its capacity by 280 MW to zero (all of which was priced below $260/MWh). At around 12.15 pm, the unit returned to service, however had trouble following dispatch instructions. As a result, Stanwell rebid the unit inflexible at 4 pm to 170 MW. This level was revised down to 130 MW by 4.25 pm.

At 10.31 am, effective for the 11 am to 4 pm trading intervals, Callide Power Trading rebid 72 MW of capacity at Callide Power Station unit three, from prices below $20/MWh to above $9200/MWh. The reason given was “15/2/10 10:29 0930A cnge in Qld 30mpd sens 201002511/13”. A subsequent rebid at 3.33 pm saw the above rebid extended for the 4.30 pm and 5 pm trading intervals.

At 11.26 am, effective from 12.05 pm, CS Energy rebid 280 MW of available capacity across Swanbank B and Swanbank E, from prices below $40/MWh to above $7900/MWh. The reason given was “A change in 1100 hrs 30min predispatch & sensitivities”. At 12.11 pm, effective from 12.20 pm until 2 pm, CS Energy reduced the available capacity of Swanbank E by 200 MW (all of which was priced above $7900/MWh). The reason given was “P:Swan_E turbine vibration SL”.

There was no other significant rebidding.

The Terranora interconnector was forecast to be flowing into New South Wales at around 30 MW during the times of high prices but actual flows into New South Wales were up to 130 MW. Flows across the QNI interconnector into Queensland was flowing as forecast but at only around 160 MW, compared to its nominal limit of around 480 MW.

Detailed NEM Price and Demand Trends

for Weekly Market Analysis
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Table 1: Financial year to date spot market volume weighted average price

Financial year	QLD	NSW	VIC	SA	TAS
2009-10 ($/MWh) (YTD)	45	64	43	110	27
2008-09 ($/MWh) (YTD)	40	48	58	87	49
Change*	14%	33%	-27%	28%	-44%
2008-09 ($/MWh)	36	43	49	69	62

Table 2: NEM turnover

Financial year	NEM Turnover** ($, billion)	Energy (TWh)
2009-10 (YTD)	$7.325	133
2008-09	$9.413	208
2007-08	$11.125	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)
Oct-09	27	28	26	30	26	0.459
Nov-09	99	138	36	325	34	1.924
Dec-09	34	130	25	26	32	1.066
Jan-10	67	63	88	160	30	1.336
Feb-10 (MTD)	54	69	113	279	21	1.056
Q4 2009	53	100	29	134	31	3.555
Q4 2008	39	51	34	32	44	2.133
Change*	35%	97%	-13%	312%	-30%	66.66%

Table 4: ASX energy futures contract prices at 22 February

	QLD		NSW		VIC		SA	
Q1 2010	Base	Peak	Base	Peak	Base	Peak	Base	Peak
Price on 15 Feb ($/MW)	50	81	53	73	64	110	111	185
Price on 22 Feb ($/MW)	46	80	46	73	56	110	106	185
Open interest on 22 Feb	2983	200	3644	177	4279	305	154	30
Traded in the last week (MW)	71	0	40	0	138	0	0	0
Traded since 1 Jan 09 (MW)	7897	350	8518	228	10203	612	266	20
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
December 09 with December 08						
MW Priced <$20/MWh	872	-206	-165	503	-14	991
MW Priced $20 to $50/MWh	-423	-115	540	-68	441	375
January 10 with January 09						
MW Priced <$20/MWh	808	-25	168	179	-168	961
MW Priced $20 to $50/MWh	-603	47	-138	45	799	150
February 10 with February 09						
MW Priced <$20/MWh	897	-547	300	333	143	1125
MW Priced $20 to $50/MWh	-604	594	-256	191	631	556

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