

WEEKLY ELECTRICITY MARKET ANALYSIS

7 – 13 March 2010



AUSTRALIAN ENERGY
REGULATOR

Summary

The weekly average spot price ranged from \$20/MWh in South Australia to \$33/MWh in Queensland.

Spot market prices

Figure 1 sets out the volume weighted average prices for the week 7 March to 13 March 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 7 – 13 March 2010	33	22	21	20	24
% change from previous week*	50	-2	-12	-8	-13
09/10 financial YTD	44	62	41	104	27
% change from 08/09 financial YTD**	13	34	-26	26	-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 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 15 March 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 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	33	-1%	39	1%	37	-2%	48	-4%
Calendar Year 2011	35*	-1%	42	0%	39	0%	51	-1%
Calendar Year 2012	45	-1%	49	0%	50	0%	69	0%
Three year average	38	-1%	43	0%	42	-1%	56	-2%

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 change⁴ from the previous week.

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

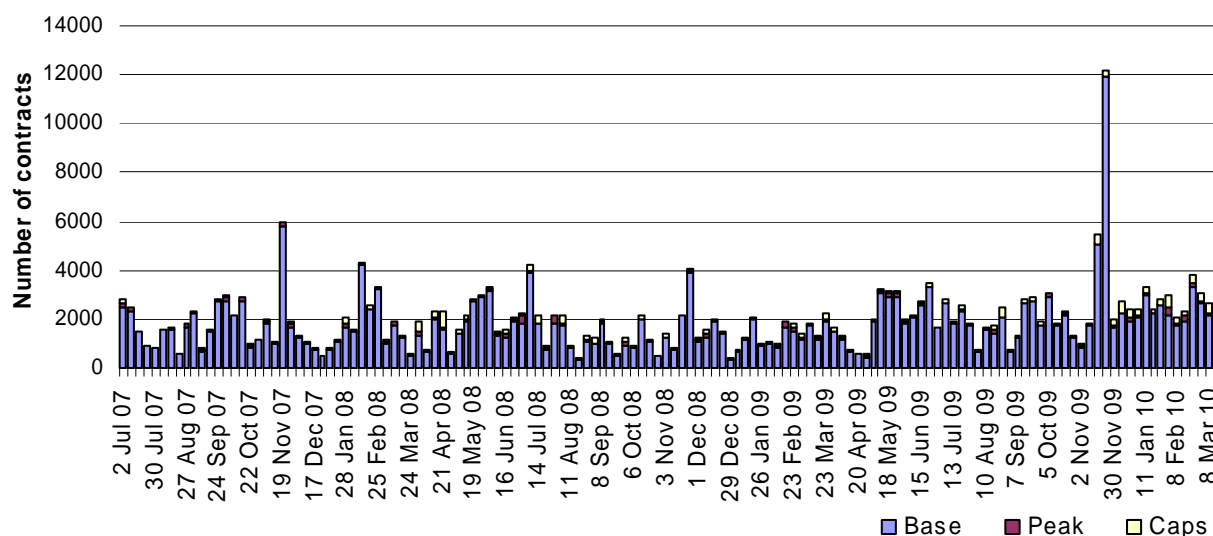
	QLD		NSW		VIC		SA	
Q1 2010 (% Change)	13	2%	15*	-2%	23*	-4%	61	0%
2010 (% Change)	6	0%	10	2%	8	-1%	20	-8%

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

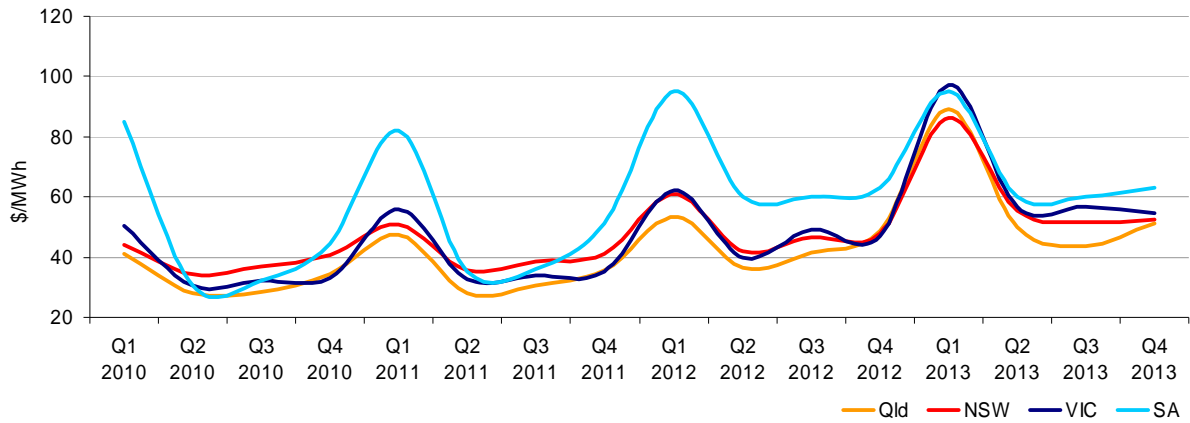


Source: d-cyphaTrade www.d-cyphatrade.com.au

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

⁴ Calculated on prices prior to rounding.

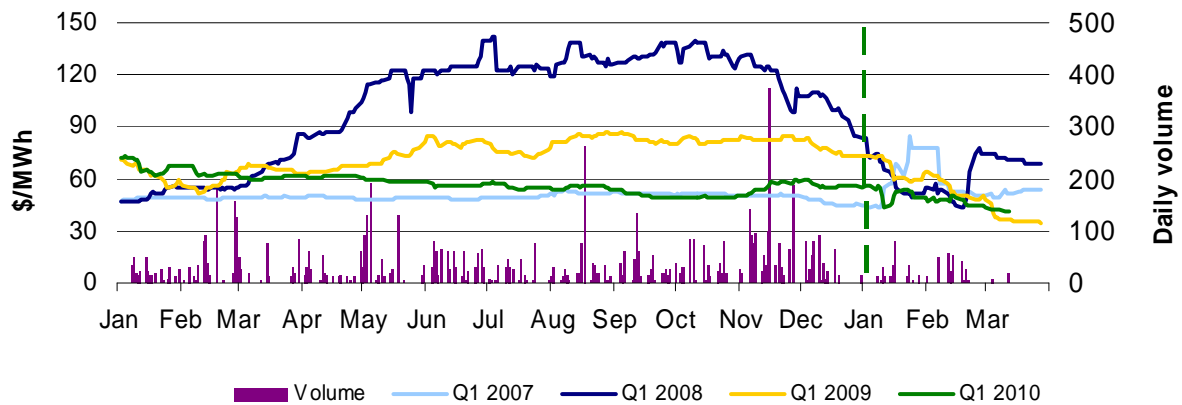
Figure 5: Quarterly base future prices Q1 2010 – Q4 2013



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

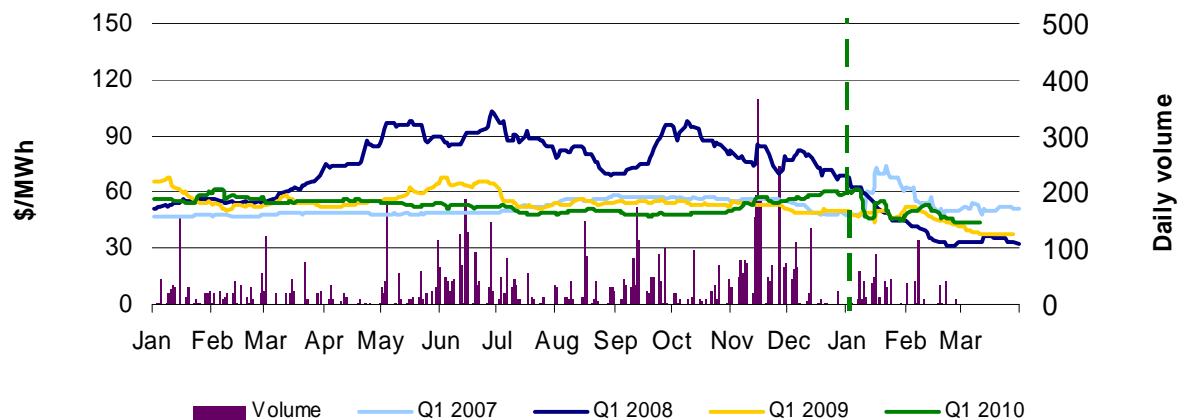
Figures 6-9 compare for each region the closing daily base contract prices for the first quarter of 2007, 2008, 2009 and 2010. Also shown is the daily volume of Q1 2010 base contracts traded. The vertical dashed line signifies the start of the Q1 period for which the contracts are being purchased. To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



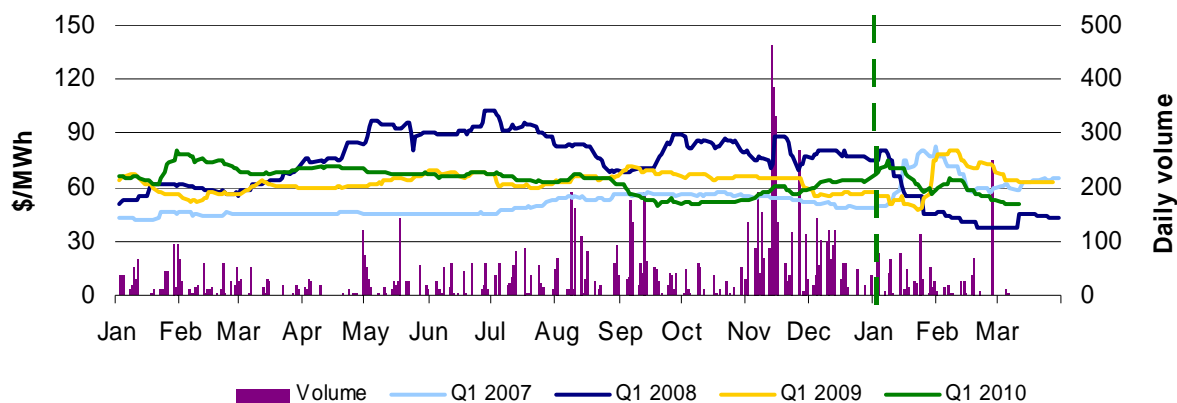
Source: d-cyphaTrade www.d-cyphatrade.com.au

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



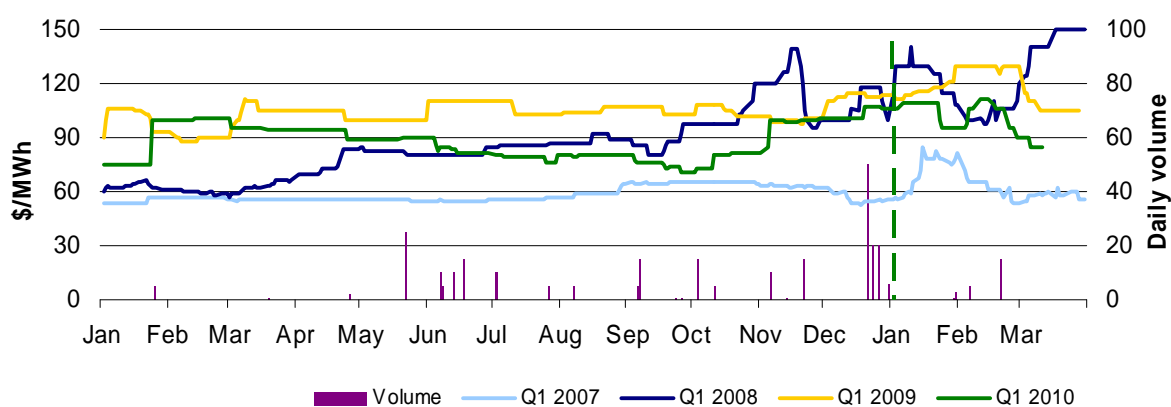
Source: d-cyphaTrade www.d-cyphatrade.com.au

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 64 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.

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	3	24	0	7
% of total below forecast	65	0	0	0

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 79 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 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	-79	66	-34	100
NSW	-502	886	-608	144
VIC	149	-455	-162	-534
SA	-23	41	27	-215
TAS	-32	15	33	-27
TOTAL	-487	553	-744	-532

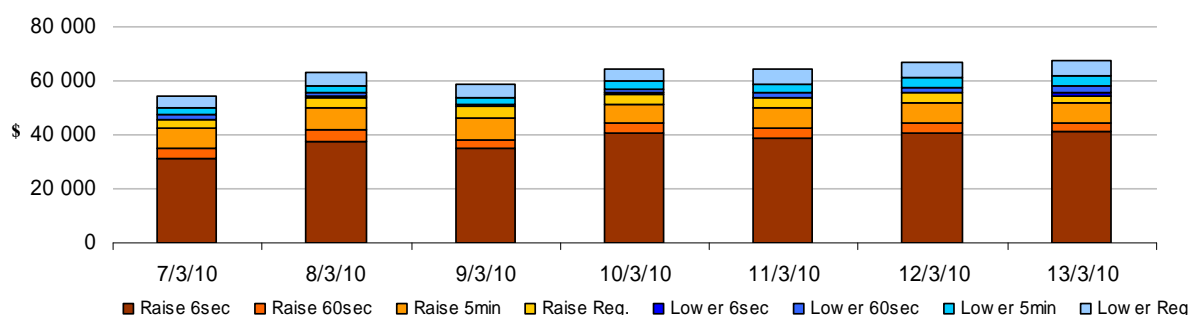
Ancillary services market

The total cost of frequency control ancillary services (FCAS) on the mainland for the week was \$188 000 or less than one per cent of energy turnover on the mainland.

The total cost of FCAS in Tasmania for the week was \$251 000 or about six 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 May 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 three occasions where the spot price in Queensland was greater than three times the Queensland weekly average price of \$33/MWh and above \$250/MWh.

Monday, 8 March

2 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	272.10	30.72	27.50
Demand (MW)	7428	7725	7662
Available capacity (MW)	10 247	10 341	10 467

Conditions at the time saw demand around 300 MW less than that forecast four hours ahead. Available capacity was 94 MW less than forecast four hours ahead and 220 MW less than forecast 12 hours ahead.

At 9.44 am, Stanwell Corporation reduced the availability of Gladstone unit one by 140 MW (a majority of which was priced below \$100/MWh). The reason given was “0944P Technical issues – condenser repairs”.

There was no other significant rebidding.

Tuesday, 9 March

1 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	1687.64	31.63	32.02
Demand (MW)	7633	7565	7632
Available capacity (MW)	10 027	10 167	10 338

Conditions at the time saw demand close to forecast and available capacity 140 MW less than forecast four hours ahead and 311 MW less than forecast 12 hours ahead.

At 10.17 am, effective for the 10.30 am to 2 pm trading intervals, Stanwell Corporation reduced the available capacity at Stanwell power station unit four by 100 MW. The reason given was “1017P technical issues – blown oil hose”. Half of this capacity was priced below \$30/MWh. At 12.45 pm, effective from 12.55 pm, Stanwell rebid 120 MW of capacity at Gladstone power station units one, three and six from prices below \$40/MWh to above \$9500/MWh. The reason given was “1245F contract position 5/30”.

Over two rebids at 12.16 pm and 12.27 pm, effective from 12.25 pm and 12.35 pm respectively, CS Energy reduced the available capacity at Swanbank B Power Station by 60 MW, all which was priced below \$55/MWh. The reasons given were “P:Sawn_B_4 Unit availability mill G/box problem SL” and “P:Swan_B unit limit – Boiler wet coal SL”.

An outage of the Bayswater to Liddell line meant that the imports across the QNI interconnector into Queensland were restricted to around 160 MW. Meanwhile, an outage of Coffs Harbour to Lismore line forced flows across the Directlink interconnector of around 80 MW into New South Wales.

There was an increase in demand of 65 MW at 12.35 pm, low priced generation was either ramp rate limited or trapped in frequency control ancillary services and high priced generation was dispatched in its place. This resulted in the dispatch price increasing from \$100/MWh at 12.30 pm to the price cap at 12.35 pm and then reduced to \$39/MWh at 12.40 pm when demand fell by 55 MW.

Wednesday, 10 March

11:30 am	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	1258.75	23.26	23.26
Demand (MW)	7554	7463	7463
Available capacity (MW)	10 708	10 852	10 867

Conditions at the time saw demand 91 MW higher than forecast and available capacity was around 144 MW less than forecast four hours ahead.

Over two rebids at 8.26 am and 8.35 am, effective from the 10 am trading interval, Stanwell Corporation rebid a total of 210 MW of capacity across its Gladstone Power Station and Stanwell unit four from prices below \$85/MWh to above \$9500/MWh. The reasons given were “0824P rebalance portfolio due to G2 RTS” and “0933P rebalance portfolio due to S3 testing”. At around 11.25 am, Stanwell unit four tripped from 240 MW to zero (a majority of this capacity was priced at less than zero). The unit tripping resulted in the violation of a system normal constraint (preventing a thermal overload on the Calvale to Wurdong 275 kV line in the event of a trip on the Calvale to Stanwell line). The constraint reduced the combined dispatch of a number of low priced Queensland generators from 7002 MW at 11.25 am to 6786 MW at 11.30 am. This resulted in the dispatch price increasing from \$27/MWh at 11.250 am to \$7418/MWh at 11.30 am and then reduced to \$28/MWh at 11.35 am.

At 10.41 am, effective from 10.50 am, Millmerran Energy rebid 125 MW at Millmerran unit two from prices below \$10/MWh above \$9500/MWh. The reason given was “10:25 A: actual QNI flow and limit diff to PD 2010031013”.

There was no other significant rebidding.

Detailed NEM Price and Demand Trends

for Weekly Market Analysis
7 March - 13 March 2010



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

Financial year	QLD	NSW	VIC	SA	TAS
2009-10 (\$/MWh) (YTD)	44	62	41	104	27
2008-09 (\$/MWh) (YTD)	38	46	56	82	48
Change*	13%	34%	-26%	26%	-44%
2008-09 (\$/MWh)	36	43	49	69	62

Table 2: NEM turnover

Financial year	NEM Turnover** (\$, billion)	Energy (TWh)
2009-10 (YTD)	\$7.676	145
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)
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	45	66	90	213	23	1.235
Mar-10 (MTD)	28	23	22	22	26	0.174
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 15 March

	QLD		NSW		VIC		SA	
	Base	Peak	Base	Peak	Base	Peak	Base	Peak
Q1 2010								
Price on 08 Mar (\$/MW)	42	66	44	68	52	96	90	185
Price on 15 Mar (\$/MW)	41	66	44	68	51	96	85	185
Open interest on 15 Mar	3015	200	3674	177	4075	275	169	30
Traded in the last week (MW)	20	0	0	0	13	0	0	0
Traded since 1 Jan 09 (MW)	7930	350	8573	228	10476	613	281	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
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	1044	-637	26	311	100	844
MW Priced \$20 to \$50/MWh	-588	696	-285	160	673	655
March 10 with March 09						
MW Priced <\$20/MWh	954	-956	47	217	-102	160
MW Priced \$20 to \$50/MWh	-466	674	-105	-110	512	505

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

** Estimated value