

# WEEKLY MARKET ANALYSIS



AUSTRALIAN ENERGY  
REGULATOR

22-28 February 2009

## Summary

The average spot prices on the mainland in the NEM ranged from \$26/MWh in Victoria to \$34/MWh in South Australia. The average spot price in Tasmania was \$42/MWh.

In the financial market, trades and prices were generally at a similar level to the previous week.

## Spot market prices

Figure 1 sets out the volume weighted average prices for 22 to 28 February 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 22 – 28 February | 27   | 27  | 26   | 34  | 42   |
| Financial year to 28 February  | 39   | 47  | 57   | 85  | 48   |
| % change from previous week*   | -35% | 5%  | -14% | -6% | -8%  |
| % change from year to date**   | -43% | 2%  | 15%  | -5% | -11% |

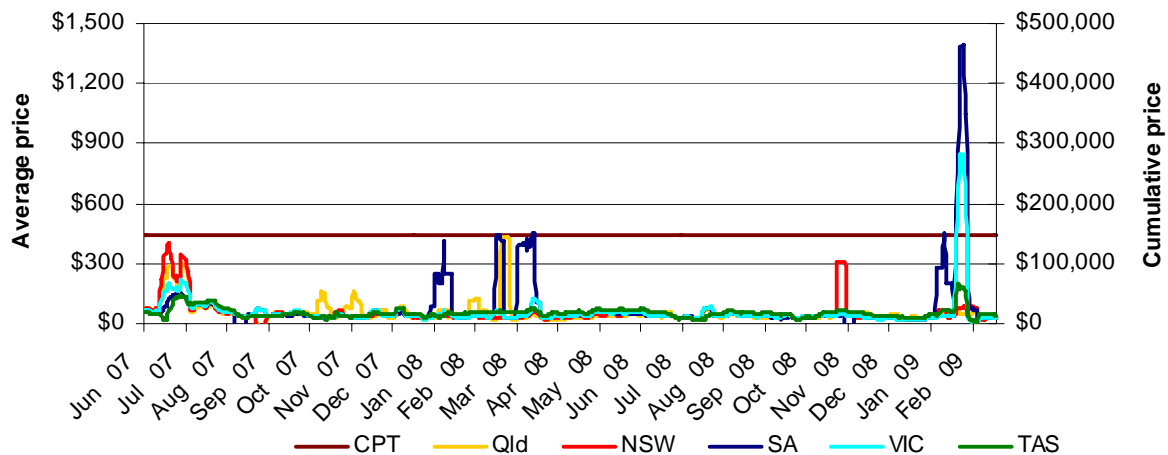
\*The percentage change between last week's average spot price and the average price for the previous week.

\*\*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 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**



## 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 2 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)**

|                    | QLD |     | NSW |      | VIC |     | SA |     |
|--------------------|-----|-----|-----|------|-----|-----|----|-----|
| Financial 2009-10  | 45  | 0%  | 47  | -1%* | 50  | -3% | 63 | -1% |
| Financial 2010-11  | 57  | 1%* | 59  | -1%  | 62  | 0%  | 67 | 0%  |
| Financial 2011-12  | 63  | 1%  | 63  | 0%   | 67  | 0%  | 69 | 0%  |
| Three year average | 55  | 1%  | 57  | -1%  | 60  | -1% | 66 | 0%  |

Source: d-cyphaTrade [www.d-cyphatrade.com.au](http://www.d-cyphatrade.com.au)  
 \* There were trades in this product but not others.

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.

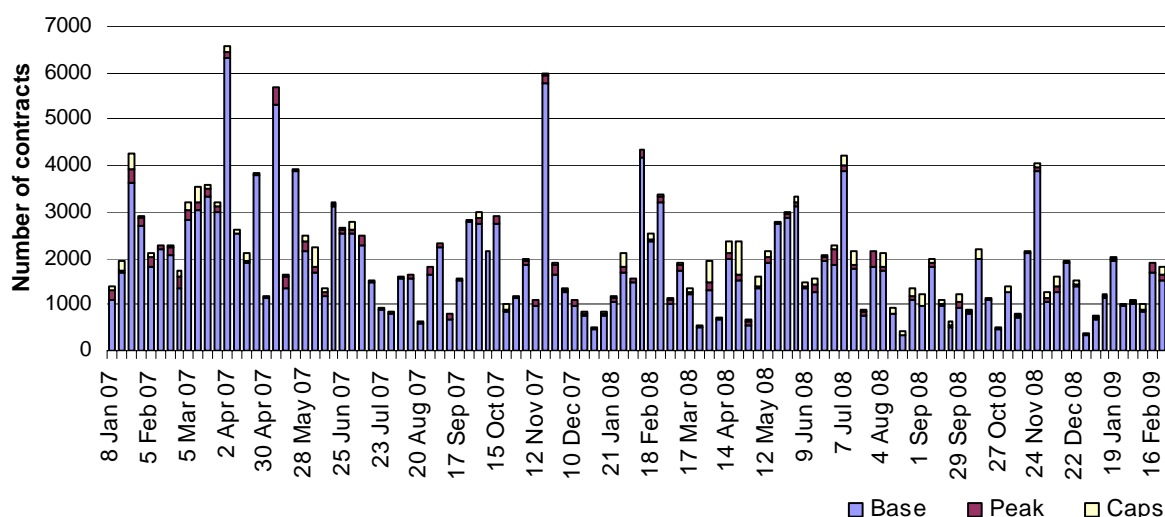
**Figure 4: \$300 cap contract prices (\$/MWh)**

|               | QLD |      | NSW |     | VIC |     | SA |    |
|---------------|-----|------|-----|-----|-----|-----|----|----|
| Q1 2009 price | 18  | 13%* | 9   | 0%  | 33  | -6% | 90 | 0% |
| Calendar 2009 | 10  | 5%   | 7   | -1% | 12  | -7% | 28 | 0% |

Source: d-cyphaTrade [www.d-cyphatrade.com.au](http://www.d-cyphatrade.com.au)  
 \* There were trades in this product but not others.

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**

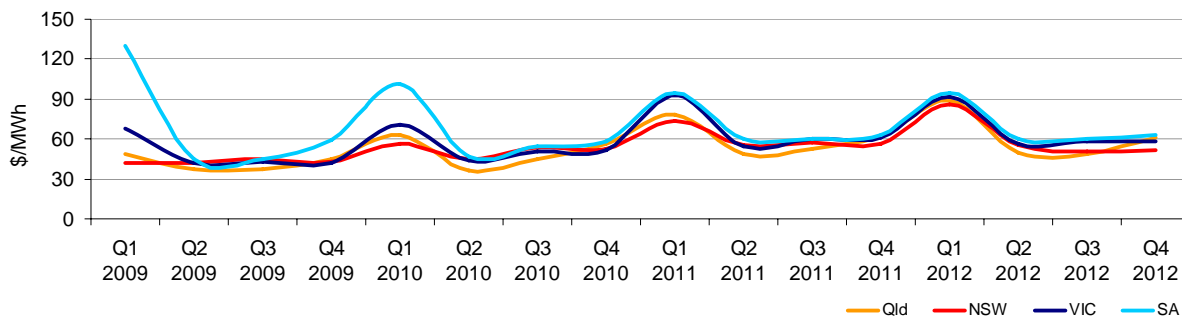


Source: d-cyphaTrade [www.d-cyphatrade.com.au](http://www.d-cyphatrade.com.au)

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

<sup>1</sup> Futures contracts on the SFE are listed by d-cyphaTrade ([www.d-cyphatrade.com.au](http://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.

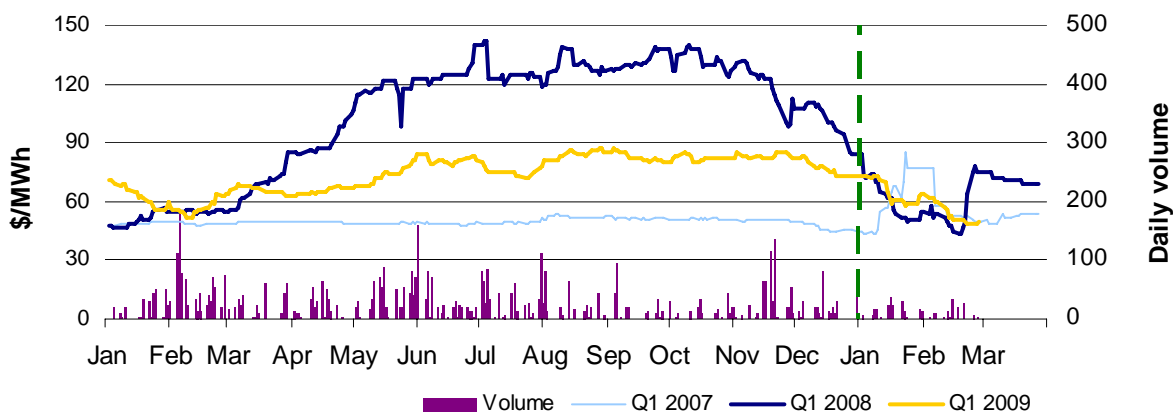
**Figure 6: Quarterly base future prices 2009 - 2012**



Source: d-cyphaTrade [www.d-cyphatrade.com.au](http://www.d-cyphatrade.com.au)

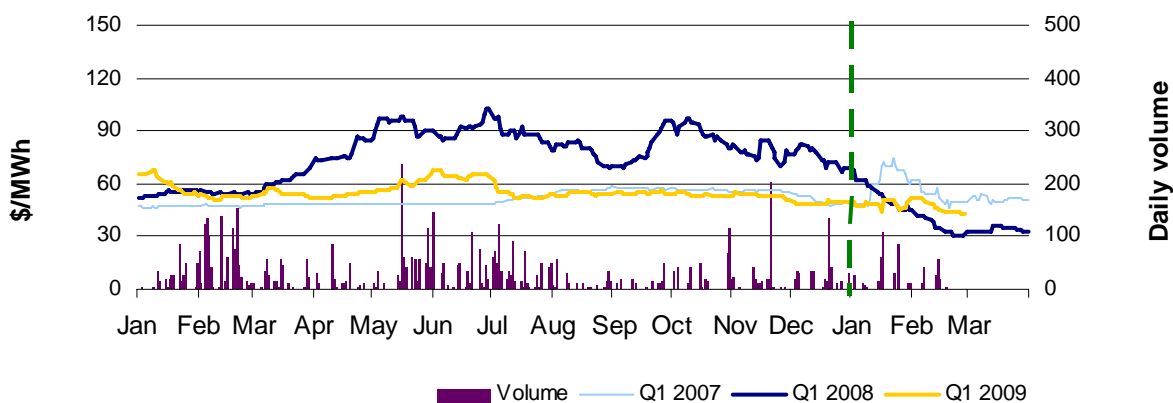
Figures 7-10 compare for each region the closing daily base contract prices for the first quarter of 2007, 2008 and 2009. Also shown is the daily volume of Q1 2009 base contracts traded. The vertical dashed line signifies the start of the Q1 period.

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



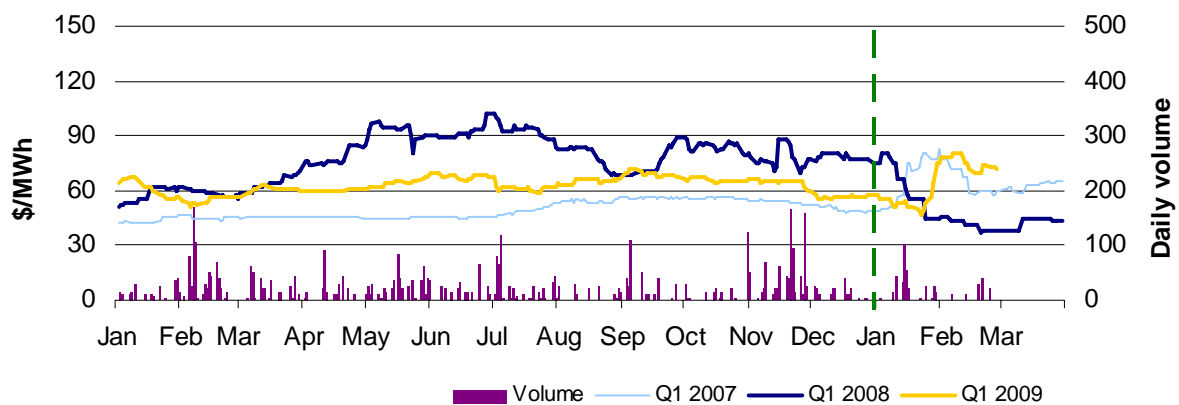
Source: d-cyphaTrade [www.d-cyphatrade.com.au](http://www.d-cyphatrade.com.au)

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



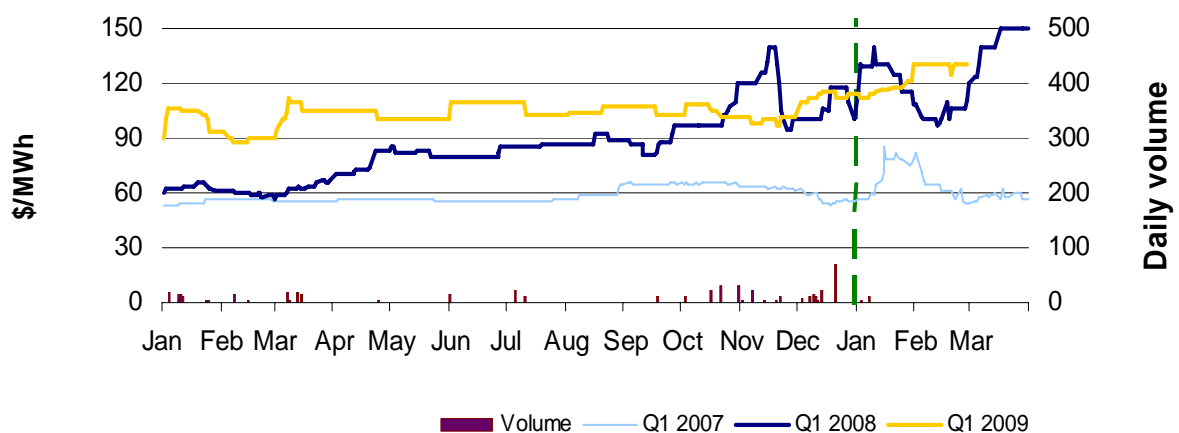
Source: d-cyphaTrade [www.d-cyphatrade.com.au](http://www.d-cyphatrade.com.au)

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



Source: d-cyphaTrade [www.d-cyphatrade.com.au](http://www.d-cyphatrade.com.au)

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



Source: d-cyphaTrade [www.d-cyphatrade.com.au](http://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 113 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 | 1%           | 29%    | 0%      | 0%          |
| % of total below forecast | 66%          | 2%     | 0%      | 1%          |

<sup>2</sup> 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.

<sup>3</sup> 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 178 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**

| \$/MWh          | <20  | Between 20 and 50 | Total availability | Change in average demand |
|-----------------|------|-------------------|--------------------|--------------------------|
| Queensland      | -178 | 22                | -117               | -232                     |
| New South Wales | -478 | 189               | -828               | 259                      |
| Victoria        | 169  | -28               | 311                | -128                     |
| South Australia | -7   | -53               | 71                 | -139                     |
| Tasmania        | -50  | 10                | -6                 | -8                       |
| Total           | -544 | 140               | -569               | -248                     |

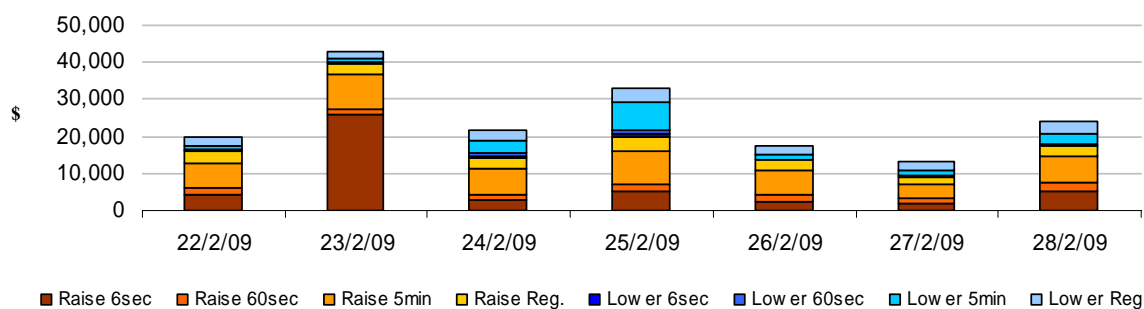
## Ancillary services market

The total cost of frequency control ancillary services on the mainland for the week was \$115 000 or less than one per cent of turnover in the energy market.

The total cost of ancillary services in Tasmania for the week was \$57 000 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.

## Detailed Market Analysis



22-28 February 2009

**South Australia:** There were three occasions where the spot price in South Australia was greater than three times the South Australia weekly average price of \$34/MWh.

### Thursday, 26 February

| <b>3:00 pm</b>          | <b>Actual</b> | <b>4 hr forecast</b> | <b>12 hr forecast</b> |
|-------------------------|---------------|----------------------|-----------------------|
| Price (\$/MWh)          | 184.08        | 54.73                | 301.10                |
| Demand (MW)             | 2506          | 2481                 | 2595                  |
| Available capacity (MW) | 3158          | 3260                 | 3275                  |
| <b>3:30 pm</b>          | <b>Actual</b> | <b>4 hr forecast</b> | <b>12 hr forecast</b> |
| Price (\$/MWh)          | 222.86        | 63.20                | 301.20                |
| Demand (MW)             | 2557          | 2498                 | 2618                  |
| Available capacity (MW) | 3163          | 3220                 | 3275                  |
| <b>4:00 pm</b>          | <b>Actual</b> | <b>4 hr forecast</b> | <b>12 hr forecast</b> |
| Price (\$/MWh)          | 209.21        | 64.70                | 590.00                |
| Demand (MW)             | 2595          | 2508                 | 2643                  |
| Available capacity (MW) | 3158          | 3232                 | 3275                  |

Conditions at the time saw demand higher than that forecast four hours ahead but lower than that forecast 12 hours ahead. Available capacity was lower than that forecast four hours ahead, with the difference priced above \$300/MWh.

Prices were lower than that forecast 12 hours ahead but higher than that forecast four hours ahead consistent with the changes in forecast demand.

During the time of high price some dispatch intervals were affected by the outage of the NSW Murraylink runback scheme, reducing imports into South Australia to around 165 MW or around 55 MW lower than that forecast.

At 3.21 pm, first used at 3.30 pm, Synergen Power rebid 30 MW of available capacity at Mintaro from prices below \$300/MWh to above \$960/MWh. The reason given was "Change in 5-min PD-avoid unit load shifting". This led to a price spike of \$999/MWh for the 3.30 pm and 3.35 pm dispatch intervals. At 3.29 pm, first used at 3.40 pm, Synergen Power reversed their previous bid with the reason given "Portfolio management" and prices returned to previous levels.

There was no other 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  | 58  | 85  | 49   |
| 2007-08 (\$/MWh) YTD | 69   | 46  | 50  | 90  | 55   |
| Change               | -43% | 2%  | 14% | -6% | -11% |
| 2007-08 (\$/MWh)     | 58   | 44  | 51  | 101 | 57   |

**Table 2: NEM turnover**

| Financial year              | NEM Turnover* (\$, billion) | Energy (TWh) |
|-----------------------------|-----------------------------|--------------|
| 2008-09 YTD                 | \$7.0                       | 139          |
| 2007-08                     | \$11.1                      | 208          |
| 2006-07                     | \$12.7                      | 206          |
| Change (2006-07 to 2007-08) | -12%                        | 0.8%         |

\* estimated value

**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-08                           | 43   | 94  | 41   | 37   | 47  | 1.05                   |
| 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   | 48  | 39   | 48   | 41  | 0.70                   |
| 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 2 March**

|                                | QLD  |      | NSW  |      | VIC  |      | SA   |      |
|--------------------------------|------|------|------|------|------|------|------|------|
|                                | Base | Peak | Base | Peak | Base | Peak | Base | Peak |
| Q1 2009                        |      |      |      |      |      |      |      |      |
| Price on 23 Feb (\$/MW)        | 49   | 78   | 44   | 68   | 74   | 140  | 130  | 200  |
| Price on 02 Mar (\$/MW)        | 49   | 78   | 42   | 68   | 68   | 140  | 130  | 200  |
| Open interest on 02 Mar        | 2525 | 263  | 2766 | 231  | 2445 | 484  | 267  | 20   |
| Traded in the last week (MW)   | 14   | 0    | 0    | 0    | 20   | 0    | 0    | 0    |
| Traded since 1 Jan 08          | 6171 | 544  | 6599 | 295  | 5183 | 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   |
|------------------------------|------|------|------|------|-----|-------|
| December 08 with December 07 |      |      |      |      |     |       |
| MW Priced <\$20              | -78  | 295  | 805  | -142 | 16  | 897   |
| MW Priced \$20 to \$50       | 320  | 414  | -150 | 145  | 140 | 870   |
| 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   |