

WEEKLY ELECTRICITY MARKET ANALYSIS



AUSTRALIAN ENERGY
REGULATOR

4 – 10 October 2009

Summary

Average spot prices ranged from \$26/MWh in Tasmania to \$32/MWh in Queensland, New South Wales and South Australia.

On 8 October at around 3 pm market time an unplanned outage of transmission equipment at Keilor in Victoria led to around 250 MW of customer load being interrupted. AEMO will be reviewing and publishing a report into the incident in accordance with clause 4.8.15 of the Electricity Rules.

Spot market prices

Figure 1 sets out the volume weighted average prices for the week 4 to 10 October and the financial year to date across the National Electricity Market (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 4 – 10 October | 32 | 32 | 30 | 32 | 26 |
| % change from previous week* | 14 | 15 | 13 | 15 | 34 |
| 09/10 financial YTD | 26 | 29 | 25 | 27 | 24 |
| % change from 08/09 financial YTD** | -28 | -30 | -40 | -34 | -45 |

*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.

Longer term market trends are attached in Appendix A¹.

Financial markets

Figures 2 to 9 show futures contract² prices traded on the Sydney Futures Exchange (SFE) as at close of trade on Monday 12 October. 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 | 37 | 0% | 40* | 0% | 39* | 0% | 47* | 1% |
| Calendar Year 2011 | 40* | 1% | 44* | 0% | 44 | 0% | 59 | 0% |
| Calendar Year 2012 | 48 | -3% | 56 | -4% | 57 | -6% | 69 | 0% |
| Three year average | 42 | -1% | 47 | -2% | 47 | -2% | 59 | 0% |

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.

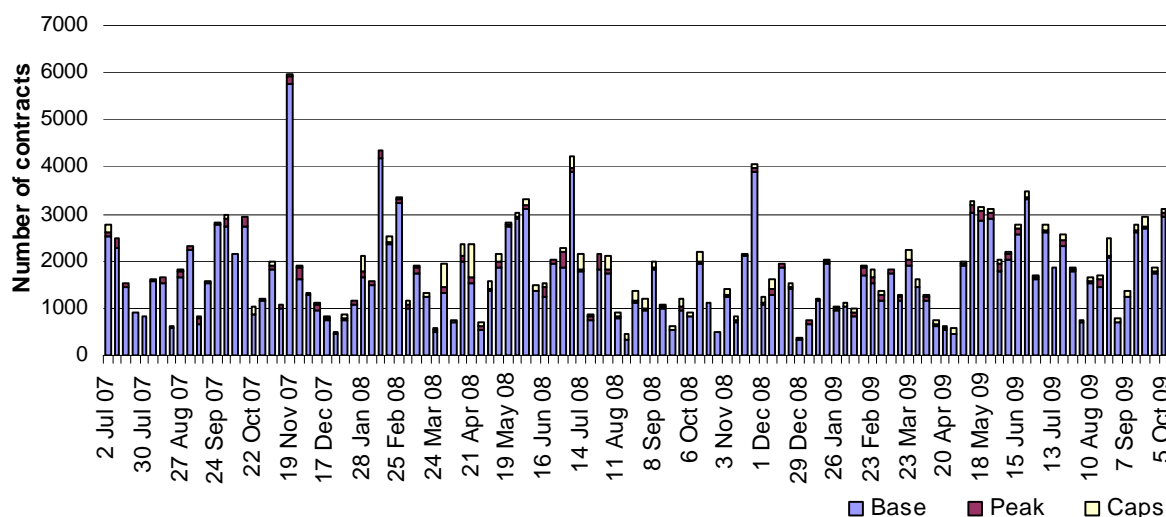
Figure 3: \$300 cap contract prices (\$/MWh)

| | QLD | | NSW | | VIC | | SA | |
|--------------------|-----|----|-----|-----|-----|-----|----|----|
| Q1 2010 (% Change) | 23 | 0% | 19 | 0% | 25* | -2% | 42 | 0% |
| 2010 (% Change) | 11 | 0% | 11 | -1% | 10 | -7% | 14 | 0% |

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

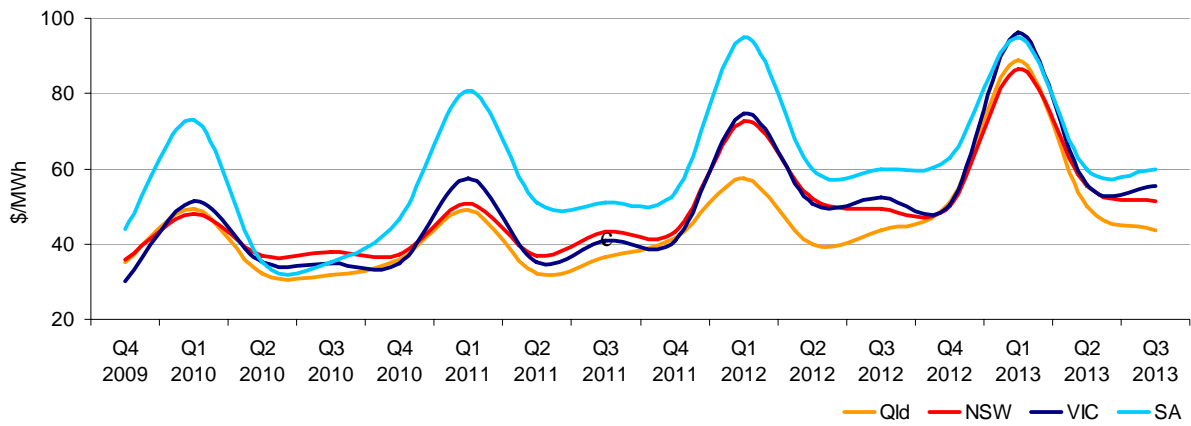


Source: d-cyphaTrade www.d-cyphatrade.com.au

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

⁴ Calculated on prices prior to rounding.

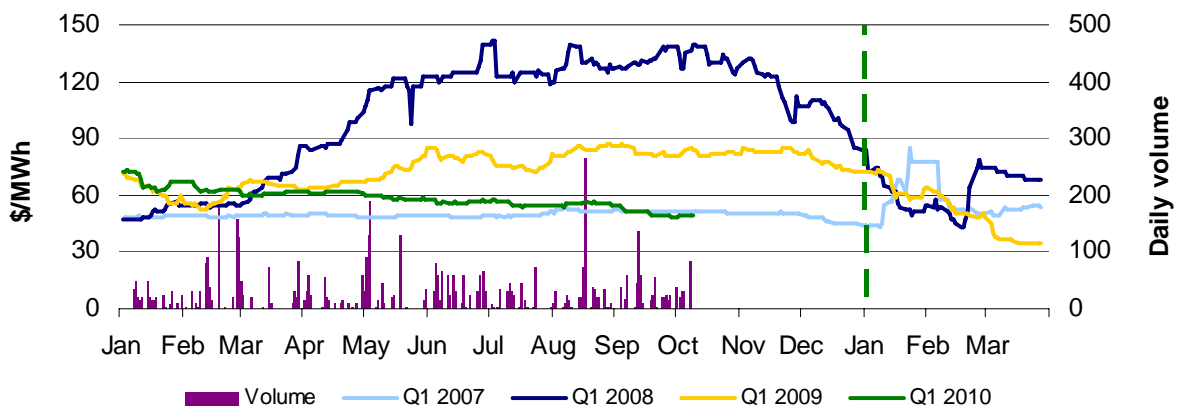
Figure 5: Quarterly base future prices Q4 2009 – Q3 2013



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

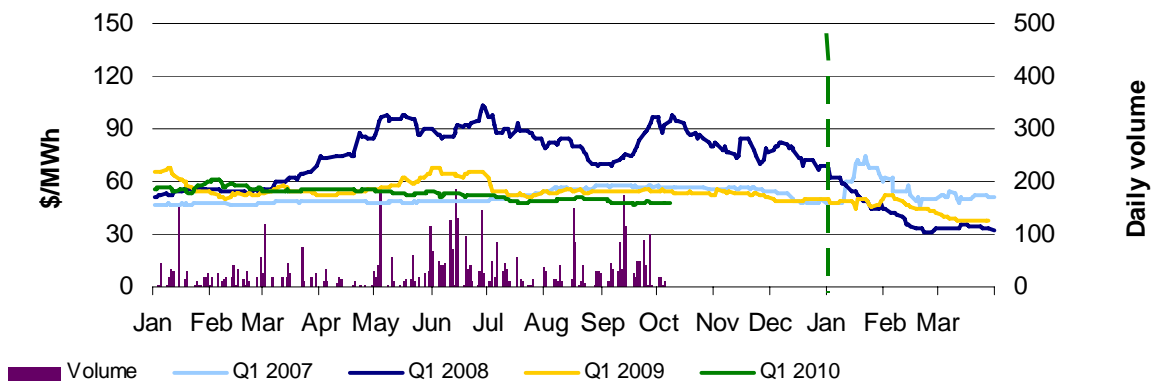
Figures 6-9 compare for each region the closing daily base contract prices for the first quarter of 2007, 2008, 2009 and 2010. Also shown is the daily volume of Q1 2010 base contracts traded. The vertical dashed line signifies the start of the Q1 period for which the contracts are being purchased. To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



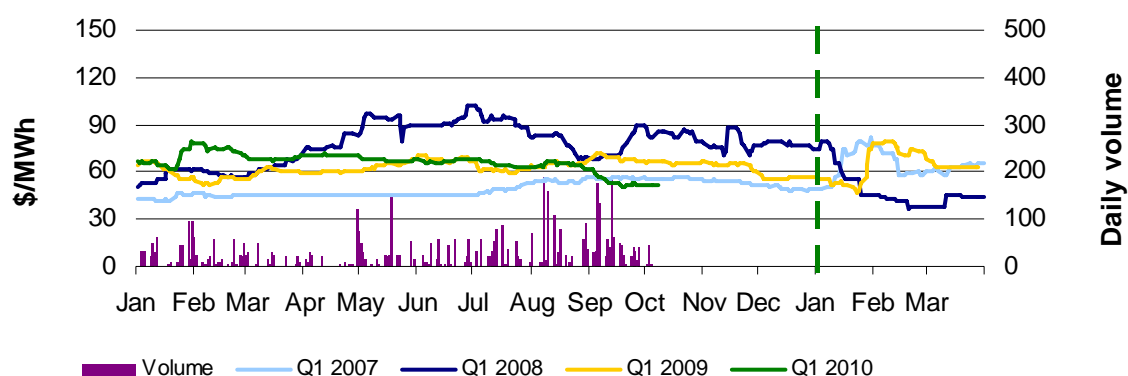
Source: d-cyphaTrade www.d-cyphatrade.com.au

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



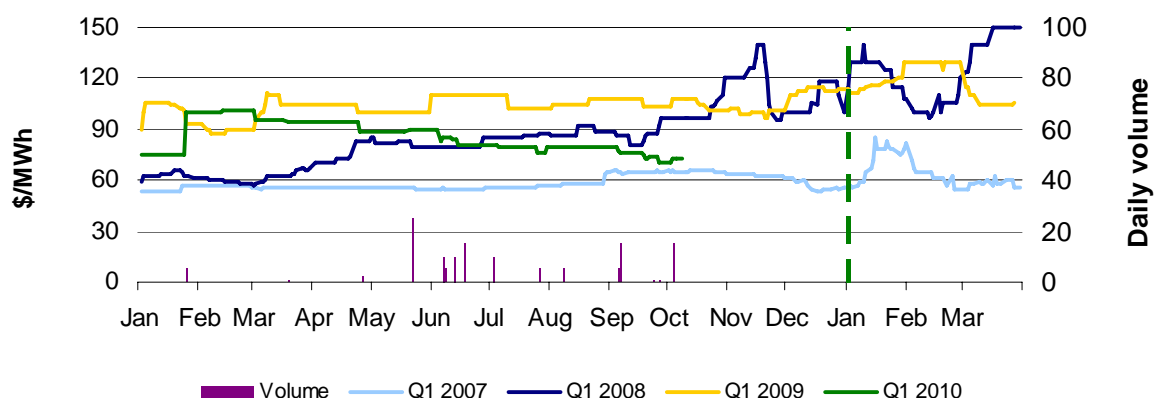
Source: d-cyphaTrade www.d-cyphatrade.com.au

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 112 trading intervals throughout the week where actual prices varied significantly from forecasts⁵. This compares to the weekly average in 2008 of 130 counts. Reasons for these variances are summarised in Figure 10⁶.

Figure 10: Reasons for variations between forecast and actual prices

| | Availability | Demand | Network | Combination |
|---------------------------|--------------|--------|---------|-------------|
| % of total above forecast | 10 | 57 | 0 | 3 |
| % of total below forecast | 25 | 1 | 0 | 4 |

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.

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 64 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 | 64 | 46 | 72 | 113 |
| NSW | -223 | -125 | -432 | -135 |
| VIC | 500 | -159 | 831 | 100 |
| SA | -258 | 64 | -140 | -70 |
| TAS | -182 | 83 | 2 | 46 |
| TOTAL | -99 | -91 | 333 | 54 |

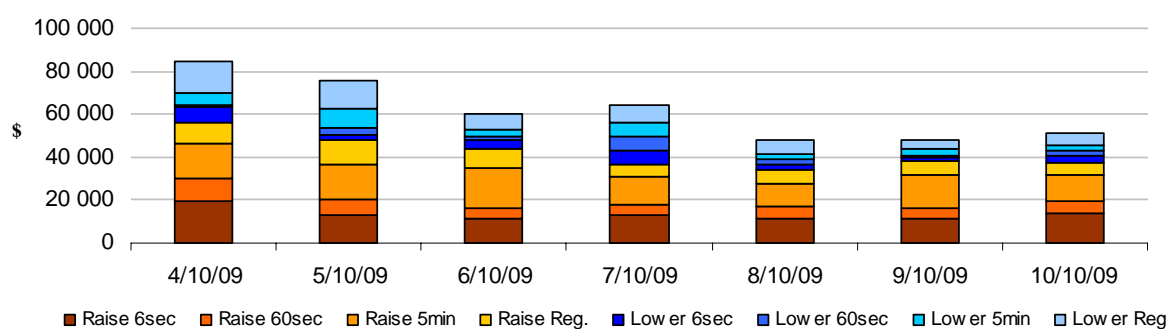
Ancillary services market

The total cost of frequency control ancillary services (FCAS) on the mainland for the week was \$302 000 or less than one per cent of energy turnover on the mainland.

The total cost of FCAS in Tasmania for the week was \$129 000 or about 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



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

Detailed NEM Price and Demand Trends

for Weekly Market Analysis
4 October - 10 October 2009



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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) | 26 | 29 | 25 | 27 | 24 |
| 2008-09 (\$/MWh) (YTD) | 36 | 41 | 42 | 41 | 43 |
| Change* | -28% | -30% | -40% | -34% | -45% |
| 2008-09 (\$/MWh) | 36 | 43 | 49 | 69 | 62 |

Table 2: NEM turnover

| Financial year | NEM Turnover** (\$, billion) | Energy (TWh) |
|----------------|------------------------------|--------------|
| 2009-10 (YTD) | \$1.537 | 57 |
| 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) |
|----------------------------------|------|------|------|------|------|------------------------|
| Jun-09 | 33 | 37 | 31 | 33 | 194 | 0.746 |
| Jul-09 | 29 | 34 | 28 | 29 | 27 | 0.539 |
| Aug-09 | 24 | 25 | 23 | 24 | 22 | 0.418 |
| Sep-09 | 25 | 26 | 24 | 28 | 22 | 0.406 |
| Oct-09 (MTD) | 31 | 31 | 28 | 30 | 22 | 0.161 |
| Q3 2009 | 26 | 28 | 25 | 27 | 24 | 1.377 |
| Q3 2008 | 36 | 41 | 42 | 42 | 44 | 2.226 |
| Change* | -29% | -31% | -41% | -36% | -46% | -38.16% |

Table 4: ASX energy futures contract prices at 12 October

| | QLD | | NSW | | VIC | | SA | |
|--------------------------------|------|------|------|------|------|------|------|------|
| | Base | Peak | Base | Peak | Base | Peak | Base | Peak |
| Q1 2010 | | | | | | | | |
| Price on 05 Oct (\$/MW) | 50 | 83 | 48 | 80 | 51 | 92 | 71 | 145 |
| Price on 12 Oct (\$/MW) | 50 | 83 | 48 | 80 | 51 | 91 | 73 | 145 |
| Open interest on 12 Oct | 2660 | 150 | 2444 | 71 | 2723 | 140 | 72 | 0 |
| Traded in the last week (MW) | 166 | 0 | 56 | 0 | 64 | 1 | 15 | 0 |
| Traded since 1 Jan 09 (MW) | 5062 | 235 | 5103 | 98 | 5085 | 246 | 130 | 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 |
|----------------------------------|------|-------|------|------|-----|-------|
| August 09 with August 08 | | | | | | |
| MW Priced <\$20/MWh | -131 | -261 | -343 | 67 | 513 | -155 |
| MW Priced \$20 to \$50/MWh | 47 | 140 | -194 | -58 | 251 | 187 |
| September 09 with September 08 | | | | | | |
| MW Priced <\$20/MWh | -236 | -1137 | -194 | 6 | 507 | -1054 |
| MW Priced \$20 to \$50/MWh | -7 | 981 | 10 | -82 | 90 | 991 |
| October 09 with October 08 (MTD) | | | | | | |
| MW Priced <\$20/MWh | -160 | -585 | 391 | -111 | 144 | -321 |
| MW Priced \$20 to \$50/MWh | -54 | 388 | -43 | -10 | 309 | 590 |

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

** Estimated value