WEEKLY MARKET ANALYSIS

AUSTRALIAN ENERGY REGULATOR

10 February – 16 February 2008

Summary

Spot prices for the week were generally lower than average for this time of the year, averaging around $25/MWh in Queensland and New South Wales.

In South Australia, Tasmania and Victoria average prices ranged between $44/MWh and $59/MWh driven by one high-priced trading interval on Friday afternoon and high prices on Saturday. These prices resulted from network outages in New South Wales that impacted on imports from Snowy. Demand across the National Electricity Market (NEM) remained moderate during the week.[1]

Prices in Queensland New South Wales and Victoria have fallen significantly since late last year to pre-drought levels but remain high in South Australia. Exchange traded base contract prices for calendar 2009 increased by six per cent in Queensland and Victoria, four per cent in New South Wales, and three per cent in South Australia, compared to the previous week. Prices for calendar 2008 contracts generally decreased. Contract prices for Q1 2008 continued to fall in all regions except South Australia.

Spot market prices

Figure 1 sets out the volume weighted average price for this week and this financial year to date across the NEM regions and compares them 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 10 – 16 February	25	26	44	47	59
Financial year to 16 February	55	47	51	71	55
% change from previous week*	-65%	-13%	12%	18%	7%
% change from year to date**	59%	23%	11%	45%	34%

*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

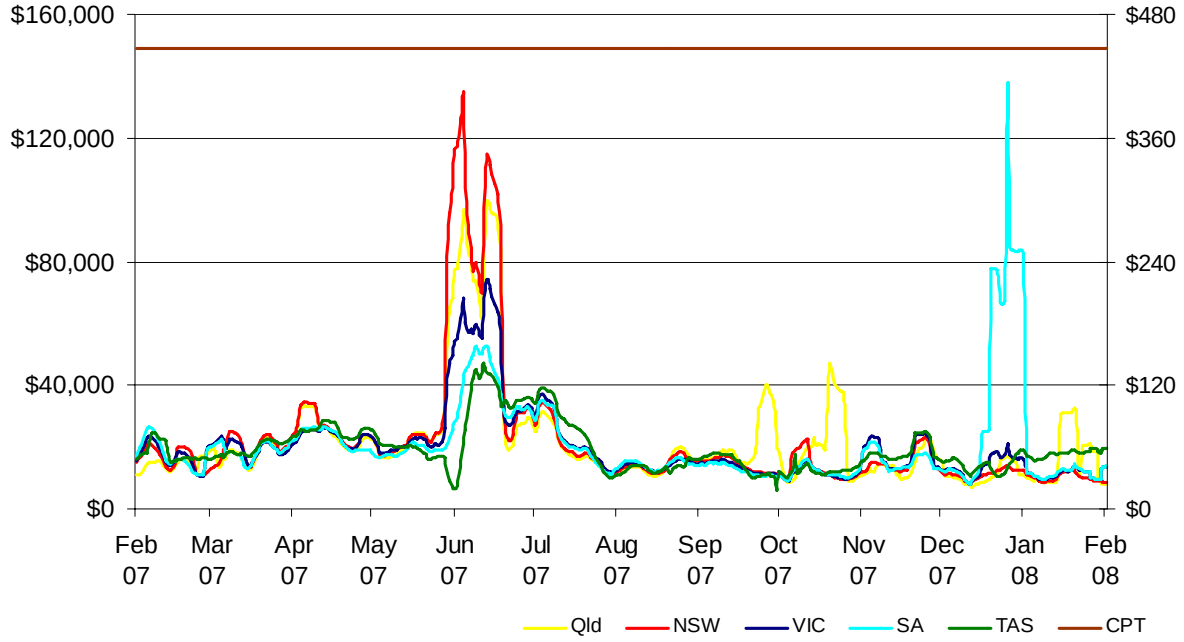
The AER provides further information if the spot price exceeds three times the weekly average. In addition, a report is prepared if the spot price exceeds $5000/MWh.

Three regions recorded prices greater than three times the weekly average. South Australia and Victoria exceeded three times the weekly average on five occasions while Tasmania had two instances. Details of these events are attached in the Appendix A. Longer term market trends are attached in Appendix B.

Figure 2 shows the weekly rolling average price. Also shown is the seven day rolling cumulative price for each region together with the CPT[2].

[1] Long term statistics are available at http://www.aer.gov.au
[2] The CPT or Cumulative Price Threshold is the trigger for the commencement of administered pricing and occurs when the rolling sum of spot prices exceeds $150 000.

Figure 2: 7 day rolling cumulative price and CPT



Financial market

Figures 3 to 10 show futures contract[3] prices and volumes traded on the Sydney Futures Exchange as at close of trade on Monday 18 February. Figure 3 shows the calendar base futures contract prices for this year and the next two years, and the three year average. Also shown are percentage changes compared to a week earlier.

Figure 3: Base calendar futures contract prices ($/MWh)

	QLD		NSW		VIC		SA	
Calendar 2008	41	-4%	40	-4%	42	-2%	66	3%
Calendar 2009	41	6%	46	4%	45	6%	57	3%
Calendar 2010	43	0%	51	-1%	49	0%	50	0%
Three year average	42	1%	46	0%	45	1%	57	2%

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

Figure 4 shows the $300 cap contract price for the current quarter and calendar year and the change from the previous week.

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

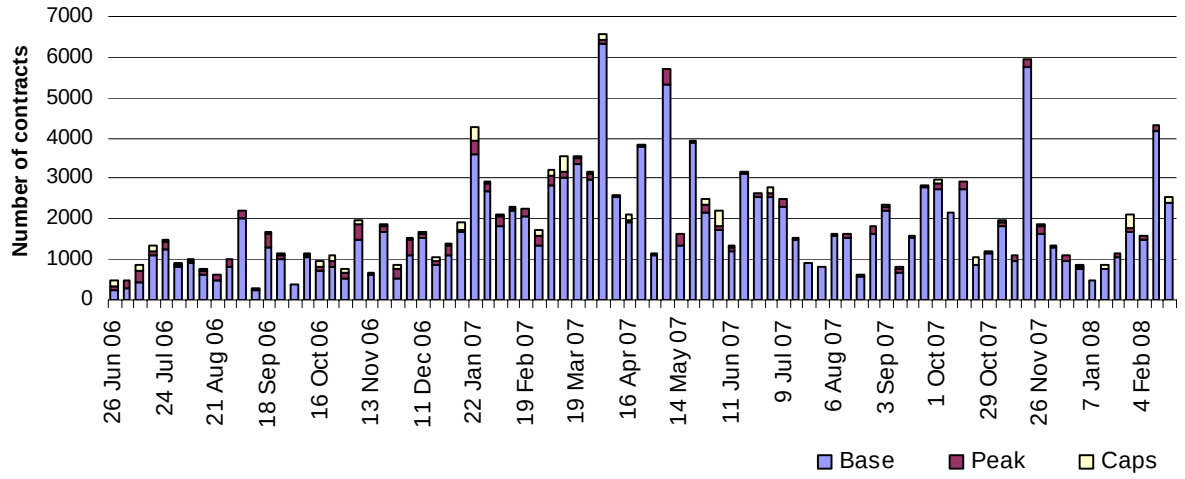
	QLD		NSW		VIC		SA	
Q1 2008 price	13	0%	6	-15%	6	0%	56	0%
Calendar 2008	7	-1%	7	-6%	6	0%	18	0%

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

Figure 5 shows the weekly trading volumes for base, peak and cap contracts. The week ending 11 February recorded the fourth highest weekly volume ever.

[3] 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 7am to 10pm Monday to Friday (excluding Public holidays) over the duration of the contract quarter.

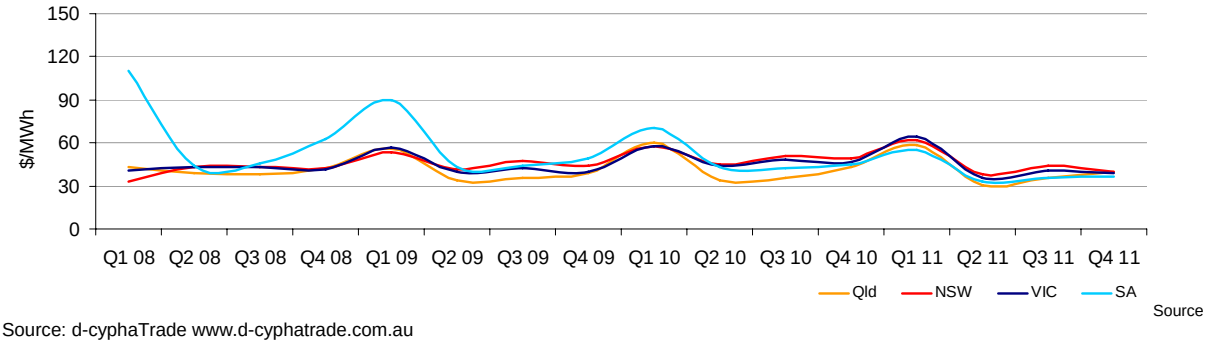
Figure 5: Number of exchange traded contracts per week



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

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

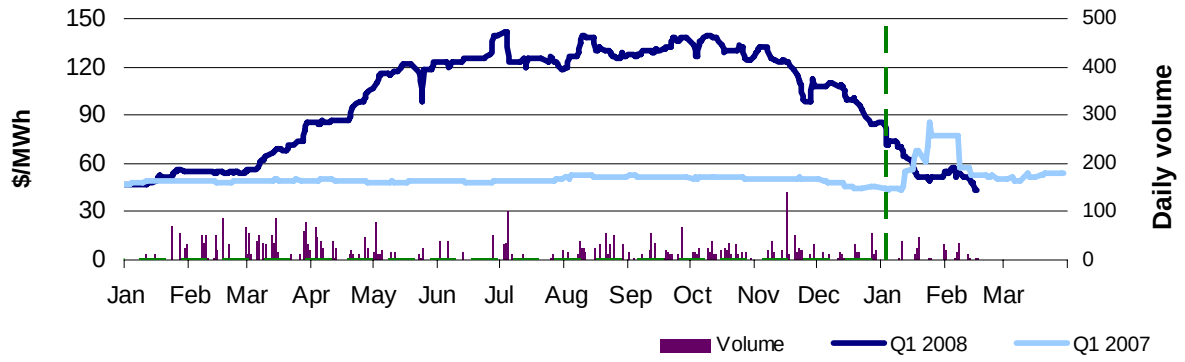
Figure 6: quarterly base future prices 2008 - 2011



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

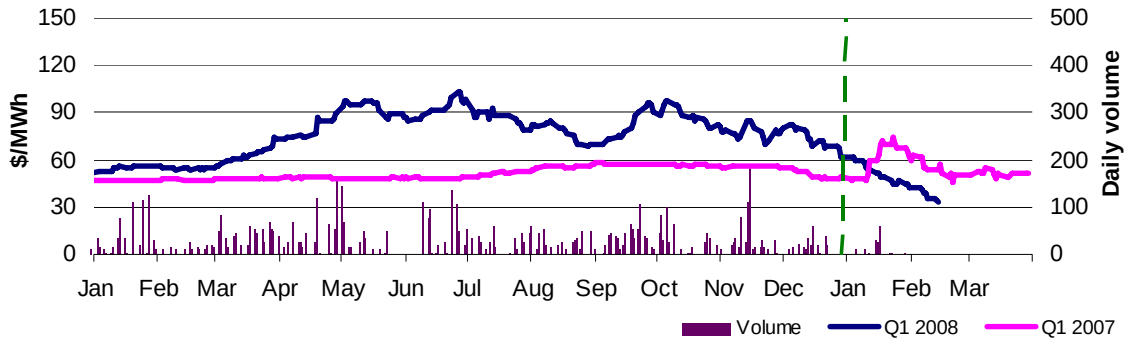
Figures 7-10 compares for each region the closing daily base contract price for the first quarter of 2007 against 2008 and also shows the daily volume of Q1 08 base contracts traded. The vertical dashed line signifies the start of the Q1 period.

Figure 7: Queensland



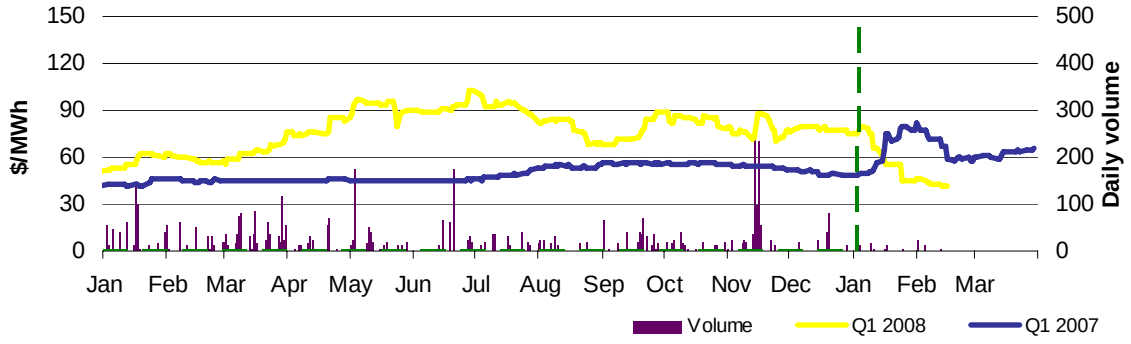
Source: d-cyphaTrade www.d-cyphatrade.com.au

Figure 8: New South Wales



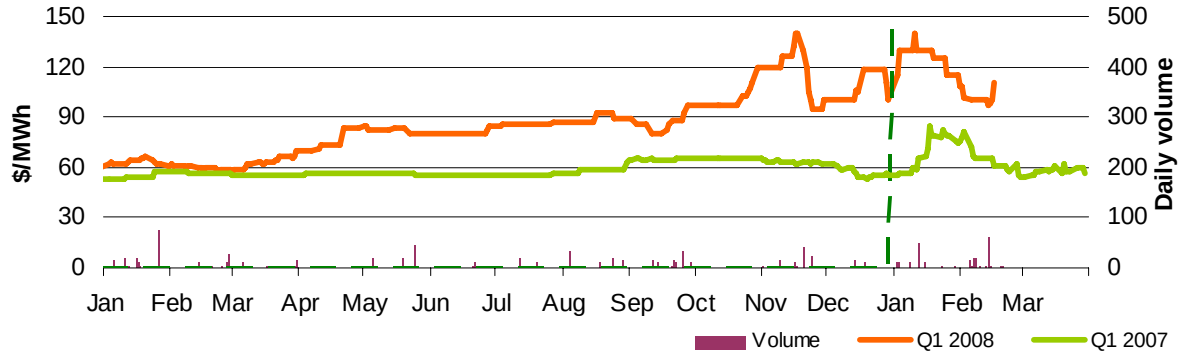
Source: d-cyphaTrade www.d-cyphatrade.com.au

Figure 9: Victoria



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

Figure 10: South Australia



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

Spot market forecasting variations

The AER is required by 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 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. For the week, there were 60 trading intervals where actual prices significantly varied from forecasts. Reasons for these variances are summarised in Figure 11. There was a higher than usual number of price variations due to unanticipated network events. The AER is reviewing this further.

Figure 11: reasons for variations between forecast and actual prices

	Availability	Demand	Network	Combination
Price is higher than forecast	9%	4%	27%	5%
Price is lower than forecast	0%	52%	1%	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 12 shows changes to the offer price and available capacity of generation in each region for the on-peak periods only[4]. For example, in Queensland 202 MW more was offered at prices less than $20/MWh this week compared to the previous week. Also included is the change in average demand during peak periods for comparison.

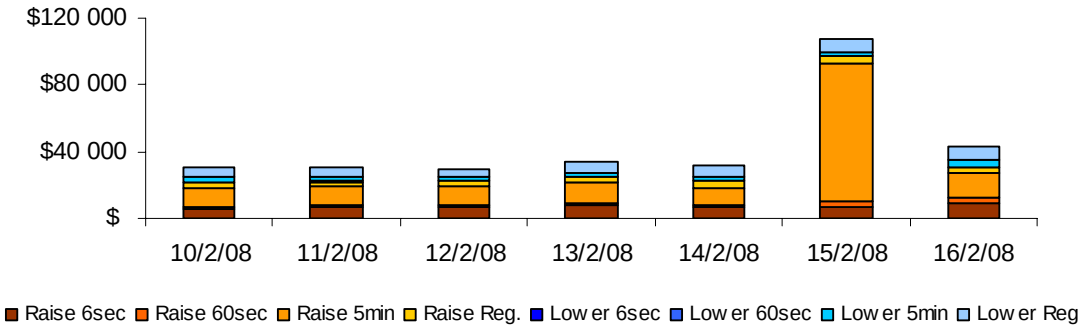
Figure 12: Changes in available generation compared to the previous week during peak times

$/MWh	<20	Between 20 and 50	Total availability	Change in average demand
Queensland	202	-96	140	-387
New South Wales	-320	354	-59	-256
Victoria	-184	-78	-468	-235
South Australia	-36	139	-57	41
Tasmania	8	-86	-69	2
Snowy	-43	25	71	-1
Total	-373	260	-442	-837

Ancillary services market

The total cost of ancillary services on the mainland for the week was $170 000 or 0.2 per cent of turnover in the energy market. The total cost of ancillary services in Tasmania for the week was $62 000 or 0.6 per cent of the turnover in the Tasmanian energy market. Figure 13 shows the daily breakdown of cost for each frequency control ancillary service.

Figure 13: daily frequency control ancillary service cost



Australian Energy Regulator
February 2008

[4] Peak periods is defined as between trading intervals ending 7.30 am and 10 pm on weekdays, which aligns with the SFE contract definition.

South Australia and Victoria: There were five occasions where the spot price in Victoria and South Australia was greater than three times the weekly average price of $44/MWh and $47/MWh respectively. Tasmania recorded two prices exceeding the tree times greater than the weekly average, one of these occurred at the same time as Victoria and South Australia.

Victoria, Friday 15 February

4:00 pm	Actual	4 hr forecast	12 hr forecast
Price ($/MWh)	3247.37	55.75	62.97
Demand (MW)	6961	7051	7040
Available capacity (MW)	7447	7658	7716

South Australia, Friday 15 February

4:00 pm	Actual	4 hr forecast	12 hr forecast
Price ($/MWh)	3134.82	56.29	64.20
Demand (MW)	2088	2109	2098
Available capacity (MW)	2732	2694	2733

Tasmania, Friday 15 February

4:00 pm	Actual	4 hr forecast	12 hr forecast
Price ($/MWh)	1735.18	75.22	75.22
Demand (MW)	1144	1181	1172
Available capacity (MW)	2075	2101	2046

Conditions at the time saw demand and available capacity close to that forecast four hours ahead.

Network constraints designed to manage a planned outage of the Wagga to Yanco 132 kV line and the Uranquinty to Wagga 132 kV were not adequately managing security with the high loads in the Wagga area. As a result, Transgrid disabled the X5 tripping scheme and NEMMCO invoked different constraints to manage flows through the Wagga region shortly before the start of the 3.55 pm dispatch interval. The two actions led to a step change on the Victoria to Snowy interconnector, with the limit changing from 1407 MW into Victoria at 3.50 pm to 181 MW into Snowy at 3.55 pm. This is a change of almost 1600 MW in the limit. At 3.50 pm flows of 1108 MW were scheduled into Victoria, which meant that the change in limit required a 1300 MW increase in generation in Victoria, South Australia and Tasmania. The five-minute prices increased from $45/MWh at 3.50 pm to close to the price cap for two dispatch intervals, which resulted in the spot price in Victoria and South Australia increasing to $3247/MWh and $3135/MWh respectively. Price increased in Tasmania to $1735/MWh as it was partially insulated by Basslink. Price returned to previous levels at 4.05 pm as generation ramped up sufficiently to satisfy the new limit.

At 3.53 pm, effective immediately, Hydro Tasmania shifted 925 MW of capacity from prices above $100/MWh to prices of less than zero. The rebid reason given was “Price higher than forecast”. Price in Tasmania subsequently fell to the price floor of $-1000/MWh at 4.05 pm.

At 4.02 pm, effective immediately, Snowy Hydro shifted 370 MW of capacity at Laverton North and Valley Power from the price cap of $10 000/MWh to zero. The rebid reason given was “Vic price higher than fcast:bndshft dn”.

There was no other significant rebidding.

Victoria, Saturday 16 February

3:30 pm	**Actual**	**4 hr forecast**	**12 hr forecast**
Price ($/MWh)	152.92	37.12	36.7
Demand (MW)	6371	6357	6245
Available capacity (MW)	7900	7974	7969
4:00 pm	**Actual**	**4 hr forecast**	**12 hr forecast**
Price ($/MWh)	144.37	36.7	36.86
Demand (MW)	6445	6337	6234
Available capacity (MW)	7921	7979	7969
4:30 pm	**Actual**	**4 hr forecast**	**12 hr forecast**
Price ($/MWh)	156.17	36.7	36.7
Demand (MW)	6443	6298	6196
Available capacity (MW)	7832	7849	7869
5:00 pm	**Actual**	**4 hr forecast**	**12 hr forecast**
Price ($/MWh)	160.02	32.59	35.45
Demand (MW)	6442	6240	6151
Available capacity (MW)	7820	7844	7869

South Australia, Saturday 16 February

3:30 pm	**Actual**	**4 hr forecast**	**12 hr forecast**
Price ($/MWh)	161.57	45.72	41.36
Demand (MW)	2216	2178	2049
Available capacity (MW)	2700	2664	2715
4:00 pm	**Actual**	**4 hr forecast**	**12 hr forecast**
Price ($/MWh)	153.41	45.72	42
Demand (MW)	2239	2246	2094
Available capacity (MW)	2686	2664	2715
4:30 pm	**Actual**	**4 hr forecast**	**12 hr forecast**
Price ($/MWh)	166.02	45.72	42
Demand (MW)	2243	2254	2109
Available capacity (MW)	2683	2662	2715
5:00 pm	**Actual**	**4 hr forecast**	**12 hr forecast**
Price ($/MWh)	166.81	45.72	41.7
Demand (MW)	2207	2252	2117
Available capacity (MW)	2691	2664	2715

Conditions at the time saw demand 200 MW higher than forecast in Victoria and close to forecast in South Australia. Available capacity was close to that forecast.

A planned outage of the Uranquinty to Wagga and Wagga to Yanco lines combined with the outage of the X5 tripping scheme, saw flows forced north across the Victoria to Snowy interconnector by up to 250 MW. At the same time, forecasts made immediately prior to dispatch, had flows south of more than 700 MW, a discrepancy of almost 1000 MW. This led to significant errors in the price forecasts.

At 2.37 pm, LYMMCO shifted 110 MW of capacity at Loy Yang unit A3 from prices of less than $20/MWh to around $150/MWh and $5000/MWh. The rebid reason given was "Price higher than forecast".

There was no other significant rebidding.

Tasmania: There was one further occasion where the spot price in Tasmania was greater than three times the Tasmania weekly average price of $59/MWh.

Saturday, 16 February

1:00 pm	Actual	4 hr forecast	12 hr forecast
Price ($/MWh)	206.14	75.22	75.22
Demand (MW)	1108	1067	1103
Available capacity (MW)	1748	1828	1773

Conditions at the time saw demand and available capacity close to that forecast 12 hours ahead.

At 12.02 pm effective immediately and only for the current trading interval, Hydro Tasmania shifted 652 MW of capacity from prices ranging from $75/MWh to $4000/MWh to less than zero. The rebid reason given was "Manage I/C constraint". Following this rebid, Basslink changed direction passing through the no-go zone and exported as much as 145 MW into Victoria.

At 12.35 pm, this capacity reverted to previous prices, and led Basslink to again change direction and commence flowing south. A combination of the impacts of the no-go zone, a Victorian network outage and FCAS constraints limited flows south and saw five-minute dispatch price in Tasmania increase to as much as $264/MWh during the 1 pm trading interval before returning to previous levels.

There was no other significant rebidding.

APPENDIX B: Detailed NEM Price and Demand Trends at 18 February

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

Financial year	QLD	NSW	SNOWY	VIC	SA	TAS
2007-08 ($/MWh) **YTD**	54	47	32	51	91	55
2006-07 ($/MWh) **YTD**	34	39	26	46	50	41
Change (YTD)	59%	22%	23%	11%	84%	33%
2006-07 ($/MWh)	57	67	38	61	59	51

Table 2: NEM turnover

Financial year	NEM TURNOVER* ($, billion)	ENERGY (TWh)
2007-08 **YTD**	$7.0	133
2006-07	$12.7	206
2005-06	$7.9	201
Change (2005-06 to 2006-07)	61%	2.7%

* estimated value

Table 3: Recent monthly and quarterly spot market volume weighted average price and turnover

Volume weighted average ($/MWh)	QLD	NSW	SNOWY	VIC	SA	TAS	TURNOVER ($, billion)
Oct-07	68	43	27	37	36	36	0.80
Nov-07	58	38	29	46	47	45	0.77
Dec-07	41	43	32	50	54	52	0.78
Jan-08	52	36	28	45	186	48	0.94
Feb-08	42	28	24	46	287	57	0.57
Q4 2006	23	27	22	29	40	37	1.40
Q4 2007	56	41	30	44	46	44	2.35
Change	142%	51%	37%	52%	15%	20%	

Table 4: ASX energy futures contract prices (and compared with settled price for Q1 2007)

	QLD		NSW		VIC		SA	
Q1 2008	Base	Peak	Base	Peak	Base	Peak	Base	Peak
Price on 11 Feb ($/MW)	51	90	40	66	43	69	100	200
Price on 18 Feb ($/MW)	43	90	33	52	41	62	110	205
% increase since 1 March	-21%	-8%	-39%	-45%	-26%	-38%	93%	103%
Contracts traded in the last week (MV	15	0	0	0	5	0	32	0
Contracts traded since 1 March	398	383	5692	382	3928	631	754	142
Settled price for Q1 07 ($/MW)	53	85	51	74	65	109	56	88

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

Comparison:							
December 07 with December 06	**QLD**	**NSW**	**SNOWY**	**VIC**	**SA**	**TAS**	**NEM**
MW Priced <$20	-575	-1,685	25	-807	182	-41	-2,901
MW Priced $20 to $50	-58	1,741	-519	134	-127	-175	996
January 08 with January 07	**QLD**	**NSW**	**SNOWY**	**VIC**	**SA**	**TAS**	**NEM**
MW Priced <$20	-8	-409	22	-83	84	13	-381
MW Priced $20 to $50	79	989	-260	116	-178	1	747
February 08 with February 07	**QLD**	**NSW**	**SNOWY**	**VIC**	**SA**	**TAS**	**NEM**
MW Priced <$20	-254	-752	5	-278	-11	-100	-1,390
MW Priced $20 to $50	343	1,304	195	-31	-13	-47	1,752