WEEKLY MARKET ANALYSIS



1 – 7 February 2009

Summary

The average spot prices on the mainland ranged from \$42/MWh in Queensland to \$82/MWh in South Australia. Despite high demands for the second consecutive week average prices were lower than the previous week in South Australia and Victoria due to the administered price cap, which caps prices at \$300/MWh. The administered price cap was invoked on 29 January and applied in Victoria until the end of the 5 February trading day (4 am Friday) and in South Australia until the end of the 6 February trading day (4 am Saturday).

In New South Wales high temperatures drove a new maximum summer demand of 14 097 MW on Friday 6 February.

On 7 February (at the height of the bushfires) the temperature in Melbourne reached 46.4 degrees driving new record Saturday demand for Victoria. The bushfires in Victoria and also in New South Wales impacted on the transmission networks causing volatile prices, including negative pricing in a number of regions.

There were 16 negative spot prices in Tasmania from midday on Saturday coinciding with the bushfires in Victoria that were affecting the transmission network around the Latrobe Valley. The average spot price for the week in Tasmania was \$37/MWh.

There was little change in the financial markets from the previous week.

Spot market prices

Figure 1 sets out the volume weighted average prices for 1 to 7 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 1 – 7 February	42	77	68	82	37
Financial year to 7 February	39	48	60	90	49
% change from previous week*	-21%	13%	-89%	-88%	-81%
% change from year to date**	-30%	1%	18%	24%	-10%

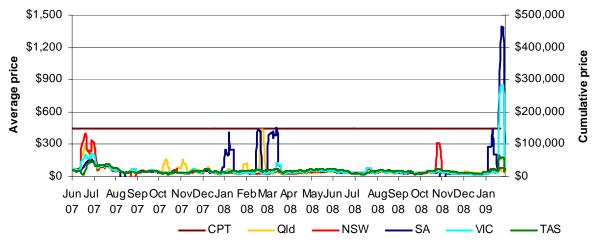
^{*}The percentage change between last week's average spot price and the average price for the previous week.

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.

^{**}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.

Figure 2 shows the seven day uncapped¹ rolling cumulative price for each region together with the Cumulative Price Threshold (CPT) (and the equivalent uncapped seven day time-weighted average price). The figure shows the cumulative price falling below the CPT in South Australia and Victoria during the week.

Figure 2: Seven day rolling cumulative price and CPT



Financial markets

Figures 3 to 10 show futures contract² prices traded on the Sydney Futures Exchange (SFE) as at close of trade on Monday 9 February. 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)

	Q	LD	N:	sw	٧	'IC	5	SA
Financial 2009-10	47	0%*	50	1%	52	-2%	63	0%*
Financial 2010-11	60	0%*	60	0%*	64	-1%*	67	8%*
Financial 2011-12	63	0%*	63	0%*	68	1%*	69	6%*
Three year average	57	0%	58	0%	61	-1%	66	5%

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

* There were no trades.

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)

	Q	LD	N:	SW	٧	IC .	S	SA SA
Q1 2009 price	29	-3%*	17	0%*	39	0%	85	0%*
Calendar 2009	13	-1%*	10	0%*	14	0%*	26	2%*

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

* There were no trades.

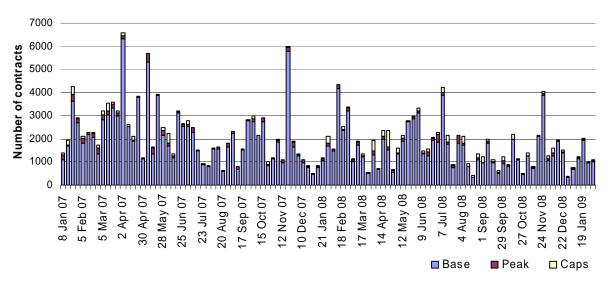
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The uncapped price is used to determine the seven day cumulative price during an administered pricing period.

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.

Figure 5 shows the weekly trading volumes for base, peak and cap contracts. The date represents the end of the trading week.

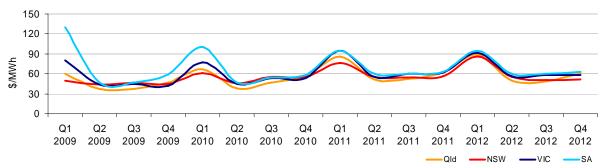
Figure 5: Number of exchange traded contracts per week



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

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

Figure 6: Quarterly base future prices 2009 - 2012



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

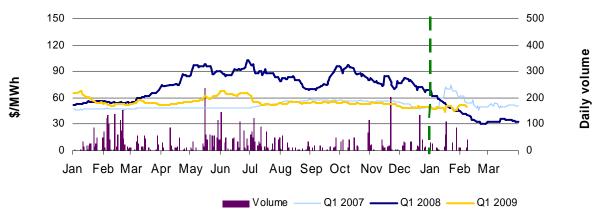
Figures 7-10 compare for each region the closing daily base contract prices for the first quarter of 2007, 2008 and 2009. Also shown is the daily volume of Q1 2009 base contracts traded. The vertical dashed line signifies the start of the Q1 period.

Figure 7: Queensland Q1 2007, 2008 and 2009



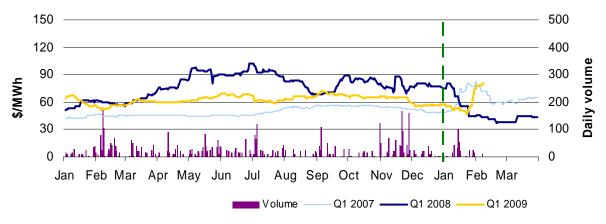
Source: d-cyphaTrade www.d-cyphatrade.com.au

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



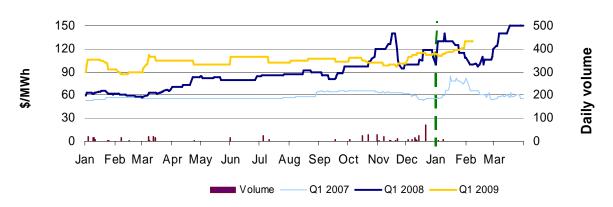
Source: d-cyphaTrade www.d-cyphatrade.com.au

Figure 9: Victoria Q1 2007, 2008 and 2009



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

Figure 10: South Australia Q1 2007, 2008 and 2009



Source: d-cyphaTrade 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 183 trading intervals where actual prices significantly varied from forecasts³ throughout the week. This compares to the weekly average in 2008 of 130 counts. Reasons for these variances are summarised in Figure 11⁴.

Figure 11: Reasons for variations between forecast and actual prices

	Availability	Demand	Network	Combination
% of total above forecast	11%	57%	3%	1%
% of total below forecast	15%	5%	8%	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 12 shows changes to the offer price and available capacity of generation in each region for the peak periods only⁵. For example, in Queensland 591 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 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	591	-30	532	232
New South Wales	-205	71	93	1028
Victoria	-323	23	273	-712
South Australia	-43	-29	152	-151
Tasmania	-392	-19	-29	-19
Total	-372	16	1,021	378

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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.

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.

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

Ancillary services market

The total cost of frequency control ancillary services on the mainland for the week was \$101 000 or less than one per cent of turnover in the energy market.

The total cost of ancillary services in Tasmania for the week was \$1.2 million or more than seventeen per cent of turnover in the energy market in Tasmania. On Saturday at 3.35 pm Basslink was rebid out of service from 3.45 pm. A further rebid at 3.59 pm returned the interconnector to service from 4.10 pm. This led to a step change in the requirements for local frequency control ancillary services. All Raise services prices reached \$10 000/MW for the 3.45 pm dispatch interval and for the 3.50 pm to 4.10 pm intervals inclusive the Raise 6 and 60 second services prices were \$10 000/MW. Lower 6 second and Lower Regulation ancillary service prices exceeded \$5000/MW for the 3.45 pm dispatch interval.

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 February 2009



New South Wales: There were six occasions where the spot price in New South Wales was greater than three times the New South Wales weekly average price of \$77/MWh.

Saturday, 7 February			
1:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	284.68	99.33	97.62
Demand (MW)	12 711	12 333	12 312
Available capacity (MW)	14 145	14 533	14 533
1:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	1679.67	104.75	99.14
Demand (MW)	12 839	12 515	12 401
Available capacity (MW)	14 143	14 543	14 543
2:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	281.98	288.99	224.42
Demand (MW)	12 872	12 626	12 532
Available capacity (MW)	14 033	14 543	14 543
3:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	304.91	299.81	224.42
Demand (MW)	12 849	12 676	12 584
Available capacity (MW)	13 980	14 073	14 543
3:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	1177.48	301.71	222.64
Demand (MW)	12 801	12 691	12 604
Available capacity (MW)	13 810	14 073	14 543
4:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	2772.67	315.90	175.38
Demand (MW)	12 756	12 856	12 572
Available capacity (MW)	13 498	14 153	14 543

Conditions at the time saw demand up to 378 MW higher than that forecast four hours ahead. Available capacity was up to 655 MW lower than that forecast four hours ahead and 1045 MW lowers than that forecast 12 hours ahead.

At 1.25 pm the simultaneous loss of the Bayswater to Mt Piper and Bayswater to Wallerawang lines were declared a credible contingency as a result of bushfires in the vicinity. This resulted in a step change on QNI capability, reducing imports into New South Wales by around 620 MW. Flows across the Terranora interconnector was being forced into Queensland. The dispatch price reached \$8800/MWh at 1.25 pm before returning to previous levels at 1.30 pm. The reclassification was cancelled at 3.45 pm.

At 3.19 pm, effective from 3.25 pm, TRU Energy's Tallawarra plant tripped reducing available capacity by 430 MW, a majority of which was priced below \$300/MWh.

Prices were aligned with South Australia and Victoria.

Victoria: There were five occasions where the spot price in Victoria was greater than three times the Victoria weekly average price of \$68/MWh.

Saturday, 7 February

1:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	289.09	93.38	95.00
Demand (MW)	8908	8529	8664
Available capacity (MW)	9310	9837	9889
1:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	1575.53	97.72	95.76
Demand (MW)	8942	8701	8738
Available capacity (MW)	9313	9837	9889
2:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	256.92	276.87	209.98
Demand (MW)	8977	8904	8849
Available capacity (MW)	9277	9781	9889
3:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	361.24	286.26	204.75
Demand (MW)	9010	8833	8789
Available capacity (MW)	9249	9495	9889
4:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	1951.33	299.65	159.86
Demand (MW)	8986	8851	8734
Available capacity (MW)	9246	9360	9889

Conditions at the time saw demand up to 380 MW higher than forecast four hours ahead and available capacity up to 530 MW lower than forecast four hours ahead.

Prices were aligned with those in New South Wales and South Australia.

Over several rebids from 10.12 am TRU Energy reduced the available capacity at Yallourn by 200 MW all of which was priced below \$5/MWh. The reason given was "Plant conditions – limit lifted".

At 11.35 am NEMMCO reclassified the loss of the Hazelwood to South Morang (#1 and #2) 500kV lines as a credible contingency as a result of bushfires. At 3.35 pm the #1 line opened and remained offline. At 3.35 pm Basslink was rebid out of service from 3.45 pm, reducing imports into Victoria by 480 MW. This step change in imports led to the 3.45 pm dispatch price spiking from around \$1000/MWh to close to the price cap.

South Australia: There were eight occasions where the spot price in South Australia was greater than three times the South Australia weekly average price of \$82/MWh.

Friday, 6 February

3:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	272.67	300.77	295.63
Demand (MW)	3143	3138	3024
Available capacity (MW)	3095	3057	3256
4:00 pm	Actual	4 hr forecast	12 hr forecast
4:00 pm Price (\$/MWh)	Actual 272.70	4 hr forecast 300.77	12 hr forecast 289.02
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Conditions at the time saw demand, available capacity and prices close to that forecast four hours ahead.

There was no significant rebidding.

Saturday, 7 February

1:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	309.40	96.34	100.05
Demand (MW)	2682	2720	2743
Available capacity (MW)	3150	3302	3235
1:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	1655.34	100.77	100.77
Demand (MW)	2661	2785	2738
Available capacity (MW)	3138	3313	3235
2:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	248.71	286.80	215.17
Demand (MW)	2647	2805	2728
Available capacity (MW)	3109	3300	3240
3:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	336.70	296.64	208.71
Demand (MW)	2634	2818	2692
Available capacity (MW)	3142	3301	3240
4:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	1762.65	305.59	162.12
Demand (MW)	2616	2789	2686
Available capacity (MW)	3146	3227	3240

Conditions at the time saw demand and available capacity lower than forecast.

Prices were aligned with Victoria and New South Wales.

At 11.58 am, effective for the 1 pm and 1.30 pm trading intervals, AGL rebid around 400 MW of available capacity at Torrens Island from prices below \$1000/MWh to above \$4900/MWh. The reason given was "Predispatch demand change::increase in demand".

Saturday, 7 February

6:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	255.51	69.77	96.83
Demand (MW)	2429	2364	2547
Available capacity (MW)	3045	3180	3141

At around 4.30 pm, first one, then the other, Dederang to South Morang 330 kV transmission lines in Victoria opened due to bushfires. As a result NEMMCO reduced flows across the Heywood interconnector into South Australia to zero. At 5.45 pm NEMMCO invoked a further constraint that forced flow into Victoria at 250 MW. This saw the dispatch price in South Australia reach \$1000/MWh at 5.45 pm before returning to previous levels.

There was no significant rebidding.

Tasmania: There were 22 occasions where the spot price in Tasmania was greater than three times the Tasmania weekly average price of \$37/MWh.

Monday, 2 February

12:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	115.18	85.16	85.16
Demand (MW)	1230	1180	1166
Available capacity (MW)	2133	2133	2133
1:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	115.47	105.30	85.14
Demand (MW)	1206	1184	1153
Available capacity (MW)	2168	2133	2133
2:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	118.18	114.60	85.14
Demand (MW)	1209	1181	1148
Available capacity (MW)	2168	2133	2133
2:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	117.44	123.71	108.71
Demand (MW)	1197	1184	1148
Available capacity (MW)	2168	2133	2133
3:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	118.22	123.71	109.55
Demand (MW)	1222	1178	1143
Available capacity (MW)	2169	2133	2133
3:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	117.81	123.71	110.34
Demand (MW)	1222	1179	1139
Available capacity (MW)	2170	2133	2133
4:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	115.15	131.25	108.57
Demand (MW)	1213	1184	1143
Available capacity (MW)	2170	2133	2133

Conditions at the time saw both demand and capacity slightly higher than forecast. Prices were close to those forecast four hours ahead.

Wednesday, 4 February

4:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	113.79	97.30	97.16
Demand (MW)	1116	1122	1123
Available capacity (MW)	2166	2133	2133

Conditions at the time saw demand, available capacity and price close to forecast.

There was no significant rebidding.

Thursday, 5 February

12:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	114.21	67.30	67.28
Demand (MW)	1155	1201	1167
Available capacity (MW)	2047	1931	1931
12:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	114.15	67.30	67.28
Demand (MW)	1165	1156	1155
Available capacity (MW)	2049	1931	1931
1:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	116.88	97.32	67.28
Demand (MW)	1177	1122	1161
Available capacity (MW)	2074	1931	1931
1:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	113.90	109.28	67.28
Demand (MW)	1180	1117	1156
Available capacity (MW)	2086	2049	2049
2:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	111.10	102.60	102.17
Demand (MW)	1141	1114	1151
Available capacity (MW)	2049	2049	2049
4:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	111.42	109.20	119.67
Demand (MW)	1141	1111	1157
Available capacity (MW)	2113	2113	2076

Conditions at the time saw demand up to 65 MW higher than forecast four hours ahead, with available capacity up to 140 MW higher than forecast.

Imports into Tasmania across Basslink were lower than forecast by around 175 MW for the 12 pm to 1.30 pm trading intervals. Prices were close to that forecast for the remaining trading intervals.

Friday, 6 February

1:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	115.51	118.28	118.30
Demand (MW)	1201	1225	1224
Available capacity (MW)	2113	2076	2076
2:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	115.70	117.85	143.60
Demand (MW)	1195	1210	1212
Available capacity (MW)	2111	2113	2076
3:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	115.48	118.18	152.75
Demand (MW)	1189	1204	1204
Available capacity (MW)	2111	2113	2076
3:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	115.77	118.20	256.73
Demand (MW)	1181	1204	1202
Available capacity (MW)	2111	2113	2076

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

There was no significant rebidding.

Saturday, 7 February

11:00 am	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	127.19	68.37	97.95
Demand (MW)	1083	1088	1108
Available capacity (MW)	1931	1931	1931
11:30 am	Actual	4 hr forecast	12 hr forecast
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Price (\$/MWh)	130.40	62.34	65.39
Price (\$/MWh) Demand (MW)	130.40 1067	62.34 1092	65.39 1121

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

Over several rebids from 8.19 am Hydro Tasmania rebid 370 MW of available capacity across its portfolio from prices above \$135/MWh to below \$5/MWh. The reasons given were "Demand different from forecast", "TAS lightning risk" and "Price different from forecast". This resulted in a change in the direction of flow across Basslink at 10.30 am from importing around 100 MW into Tasmania to exporting around 200 MW. Higher priced generation in Tasmania was dispatched.

Saturday, 7 February

6:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	152.52	118.20	99.90
Demand (MW)	1138	1066	1057
Available capacity (MW)	1863	1981	1981

Conditions at the time saw demand 70 MW higher than forecast four hours ahead and available capacity 118 MW lower than that forecast four hours ahead.

There was a step change in the offer profile at 6.05 pm which saw 400 MW of capacity that was priced below \$10/MWh repriced at above \$100/MWh.

At 4.52 pm, Hydro Tasmania reduced the available capacity of Reece Unit two by 118 MW. The reason given was "PLANT ISSUE".

There was no other significant rebidding.

10:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	149.00	99.90	99.90
Demand (MW)	1062	1028	1023
Available capacity (MW)	1981	1981	1981

Conditions at the time saw demand 33 MW higher than forecast four hours ahead and available capacity was close to that forecast four hours ahead.

Co-optimisation of ancillary service and energy led to dispatch prices of around \$240/MWh. Imports into Tasmania were being limited to around 200 MW due to ancillary service constraints.

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	48	60	90	49
2007-08 (\$/MWh) YTD	56	48	51	73	54
Change	-30%	0%	18%	24%	-10%
2007-08 (\$/MWh)	58	44	51	101	57

Table 2: NEM turnover

Financial year	NEM Turnover* (\$, billion)	Energy (TWh)
2008-09 YTD	\$6.6	128
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						Turnover
average (\$/MWh)	QLD	NSW	VIC	SA	TAS	(\$, 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 MTD	42	77	68	82	37	0.29
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 9 February

	QI	LD	NS	SW	V	IC	S	A
Q1 2009	Base	Peak	Base	Peak	Base	Peak	Base	Peak
Price on 02 Feb (\$/MW)	64	100	52	75	79	140	130	200
Price on 09 Feb (\$/MW)	60	100	50	75	80	140	130	200
Open interest on 09 Feb	2510	263	2752	221	2430	474	267	20
Traded in the last week (MW)	25	0	50	0	10	0	0	0
Traded since 1 Jan 08	6051	544	6494	275	5084	787	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	-157	221	117	333	116	630
MW Priced \$20 to \$50	320	77	77	-117	-58	299