

23 – 29 OCTOBER 2005

Average spot prices for the week were \$23/MWh in Queensland and \$24/MWh in New South Wales and Victoria. These prices represented an increase from the lows of the previous week, consistent with the reduction in low priced capacity. Prices in South Australia averaged \$27/MWh, a reduction of around a third from the previous week. Turnover in the energy market for the mainland was \$84 million. The total cost of ancillary services for the week was around \$560 000 or 0.5 per cent of turnover.

The average spot price in Tasmania was \$68/MWh, consistent with the previous week. The turnover for the week was \$12 million. The cost of ancillary services was around \$210 000 or 2 per cent of turnover.

Demand forecasts produced 4 and 12 hours ahead varied from actual by more than 5 per cent in approximately 20 per cent of all trading intervals across the market. These variations were most frequent in South Australia and Tasmania occurring in around two thirds and one third of all trading intervals respectively. Significant variations between forecast and actual prices occurred in 23, or 7 per cent, of trading intervals. Demand variations were the main contributor.

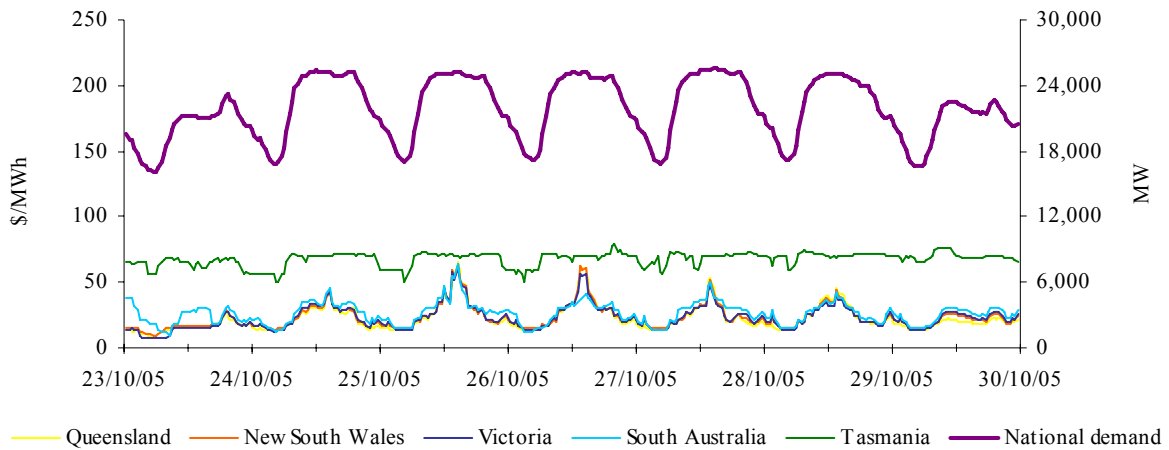
## Energy prices

Figure 1 compares the volume weighted average price with the averages for the previous week, the same quarter last year and for the financial year to date. Figure 2 sets out national demand and spot prices in each region for each trading interval. Figure 3 compares the weekly price volatility index with the averages for the previous week and the same quarter last year.

*Figure 1: volume weighted average spot price for energy market (\$/MWh)*

	QLD	NSW	VIC	SA	TAS
Last week	23	24	24	27	68
Previous week	16	20	20	41	66
Same quarter last year	48	90	38	54	-
Financial year to date	22	28	29	34	97
% change from previous week	▲43%	▲23%	▲20%	▼34%	▲2%
% change from same quarter last year	▼51%	▼73%	▼37%	▼50%	-
% change from year to date	▼35%	▼37%	▼14%	▼12%	-

**Figure 2: national demand and spot prices**

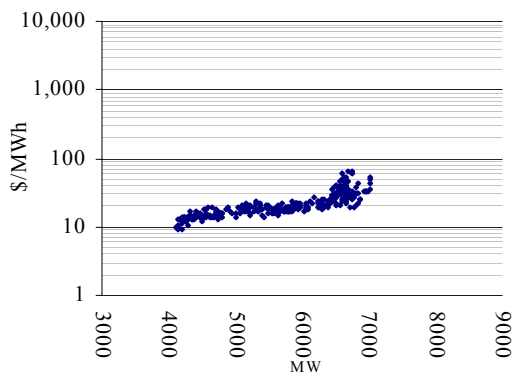


**Figure 3: volatility index during peak periods**

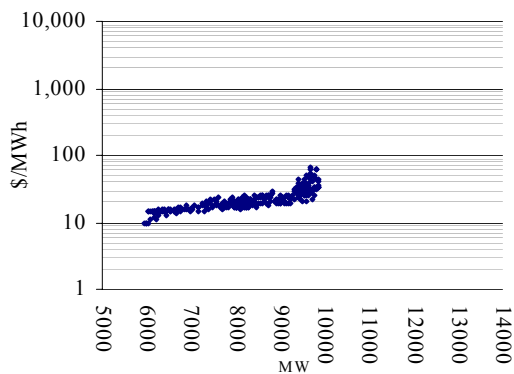
	QLD	NSW	VIC	SA	TAS
Last week	0.80	0.69	0.59	0.50	0.03
Previous week	0.17	0.44	0.52	1.26	0.17
Same quarter last year	1.13	1.23	0.96	0.77	-

Figures 4 to 8 show the weekly correlation between spot price and demand.

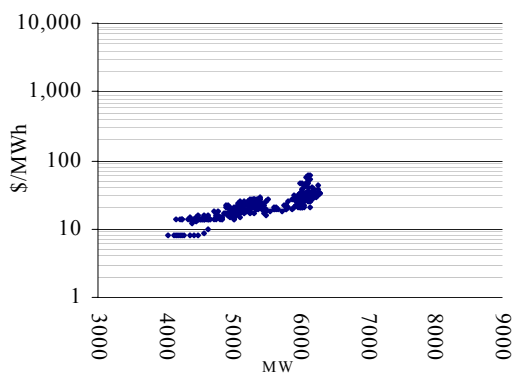
**Figure 4: Queensland**



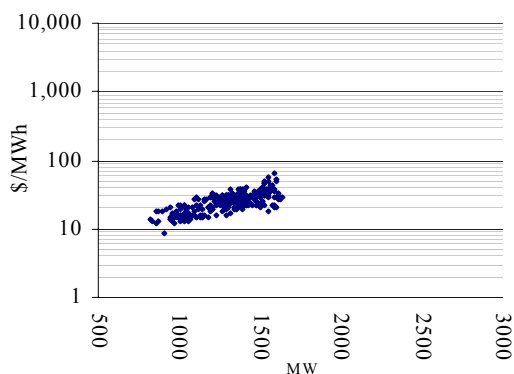
**Figure 5: New South Wales**



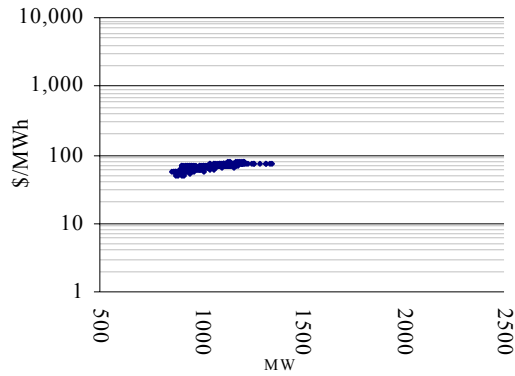
**Figure 6: Victoria**



**Figure 7: South Australia**



**Figure 8: Tasmania**



Maximum spot prices were \$65/MWh in Queensland, \$64/MWh in New South Wales, \$61/MWh in Victoria, \$64/MWh in South Australia and \$80/MWh in Tasmania.

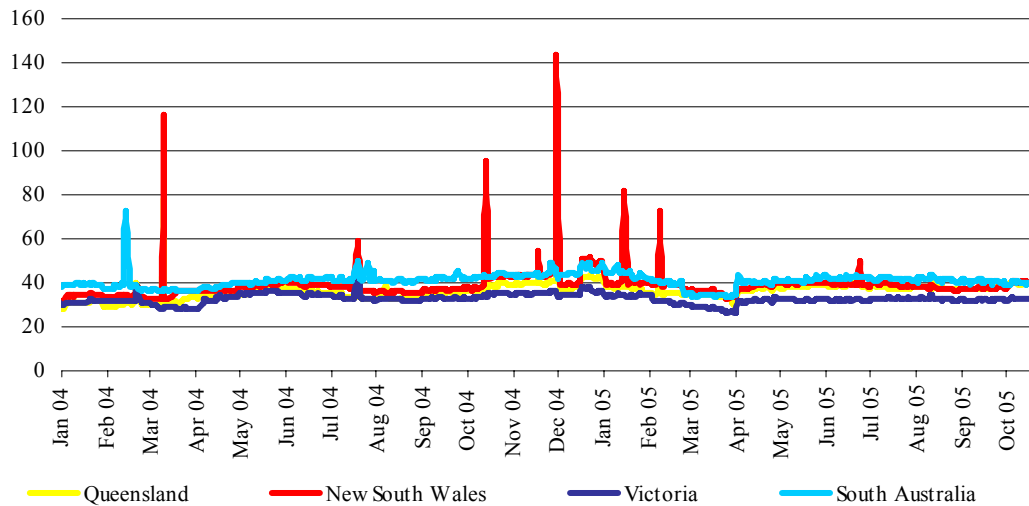
Prices on the mainland were aligned almost 90 per cent of the time.

Figure 9 sets out the d-cyphaTrade wholesale electricity price index (WEPI) for each region throughout the week excluding Tasmania. Figure 10 sets out the WEPI since 1 January 2004.

**Figure 9: d-cyphaTrade WEPI for the week**

	Monday	Tuesday	Wednesday	Thursday	Friday
Queensland	39.73	39.63	39.75	39.77	39.26
New South Wales	40.35	40.68	40.47	40.44	40.09
Victoria	33.10	33.21	33.09	33.04	33.05
South Australia	39.69	40.02	39.00	40.64	40.35

**Figure 10: d-cyphaTrade WEPI**

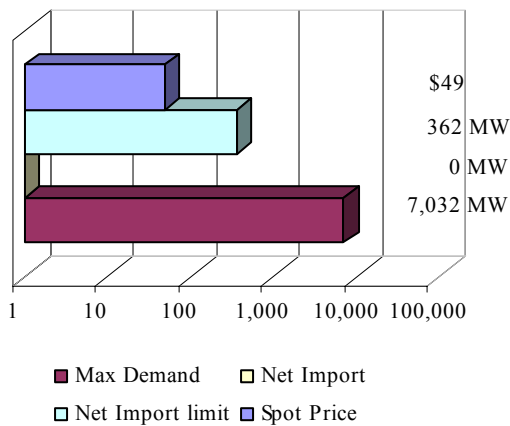


**Reserve**

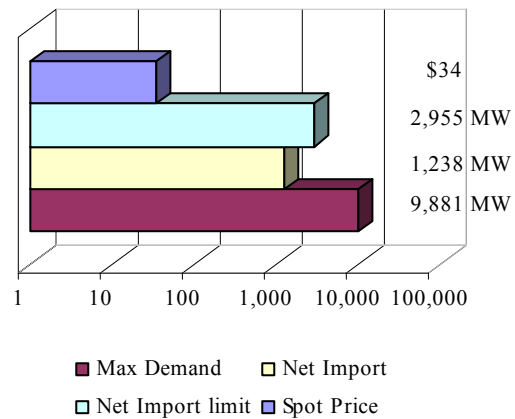
There were no low reserve conditions forecast for the week. Figures 11 to 14 show spot price, net imports and limits at the time of weekly maximum demand.

**Figures 11 to 14: spot price, net import and limit at time of weekly maximum demand**

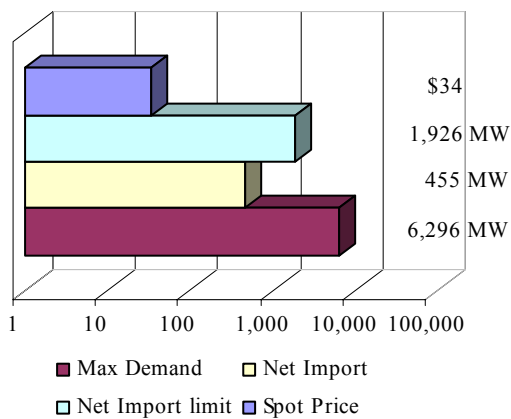
**Figure 11: Queensland**



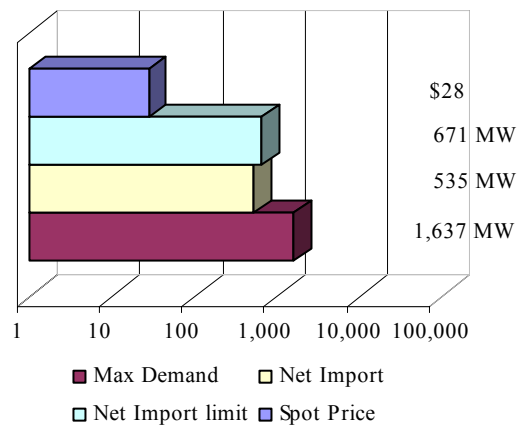
**Figure 12: New South Wales**



**Figure 13: Victoria**



**Figure 14: South Australia**

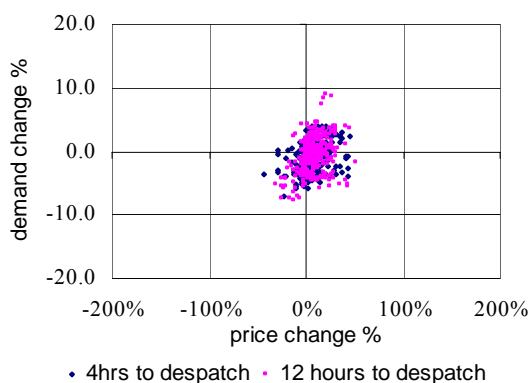


In Tasmania, demand reached a maximum of 1 349MW at 7.30am on Friday, 28 October. The spot price at the time was \$75/MWh.

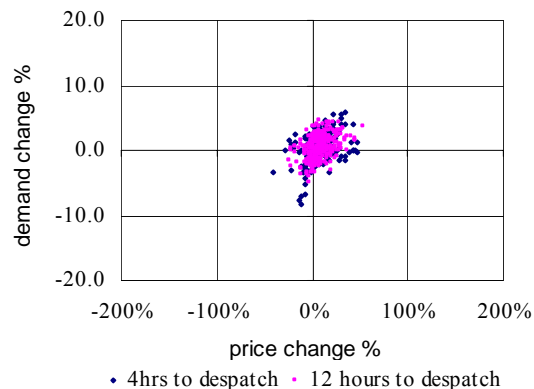
**Price variations**

There were 23 trading intervals where actual prices significantly varied from forecasts made 4 and 12 hours ahead of dispatch. Figures 15 to 18 set out the correlation between the actual price and demand and those forecast. The information is presented in terms of the percentage difference from actual. Price differences beyond 200 per cent have been capped.

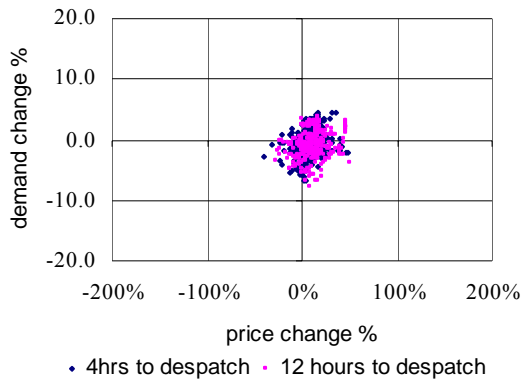
**Figure 15: Queensland**



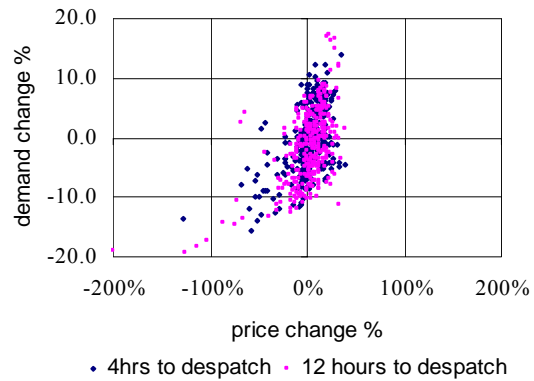
**Figure 16: New South Wales**



**Figure 17: Victoria**



**Figure 18: South Australia**



**Figure 19: Tasmania**

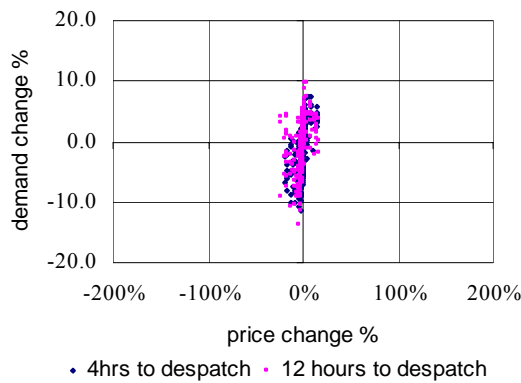
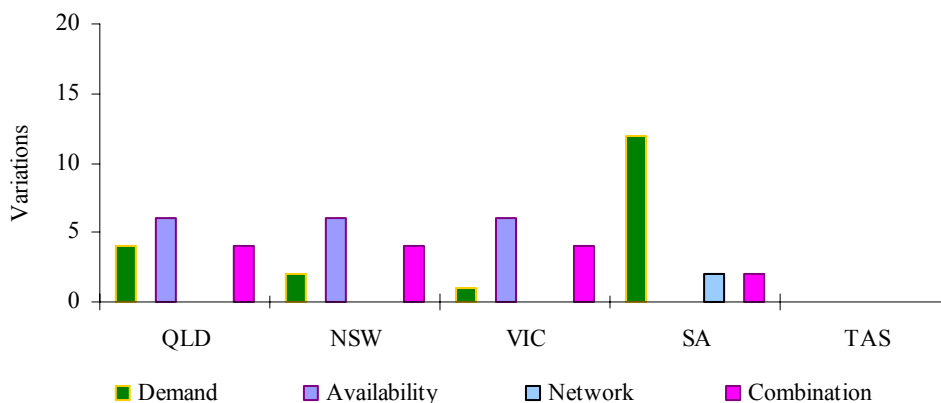


Figure 20 summarises the number and most probable reason for variations between forecast and actual prices.

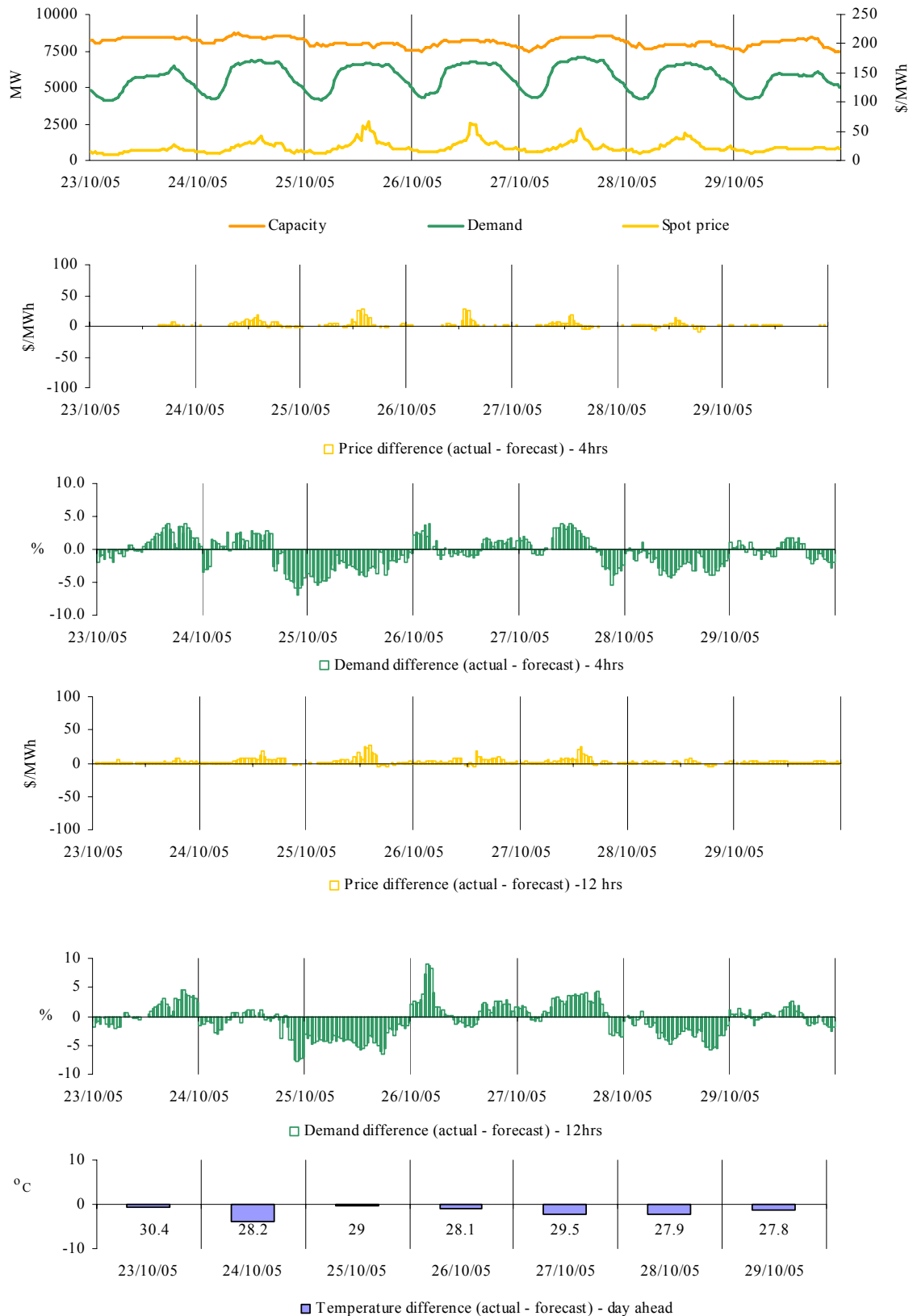
**Figure 20: reasons for variations between forecast and actual prices**



**Price and demand**

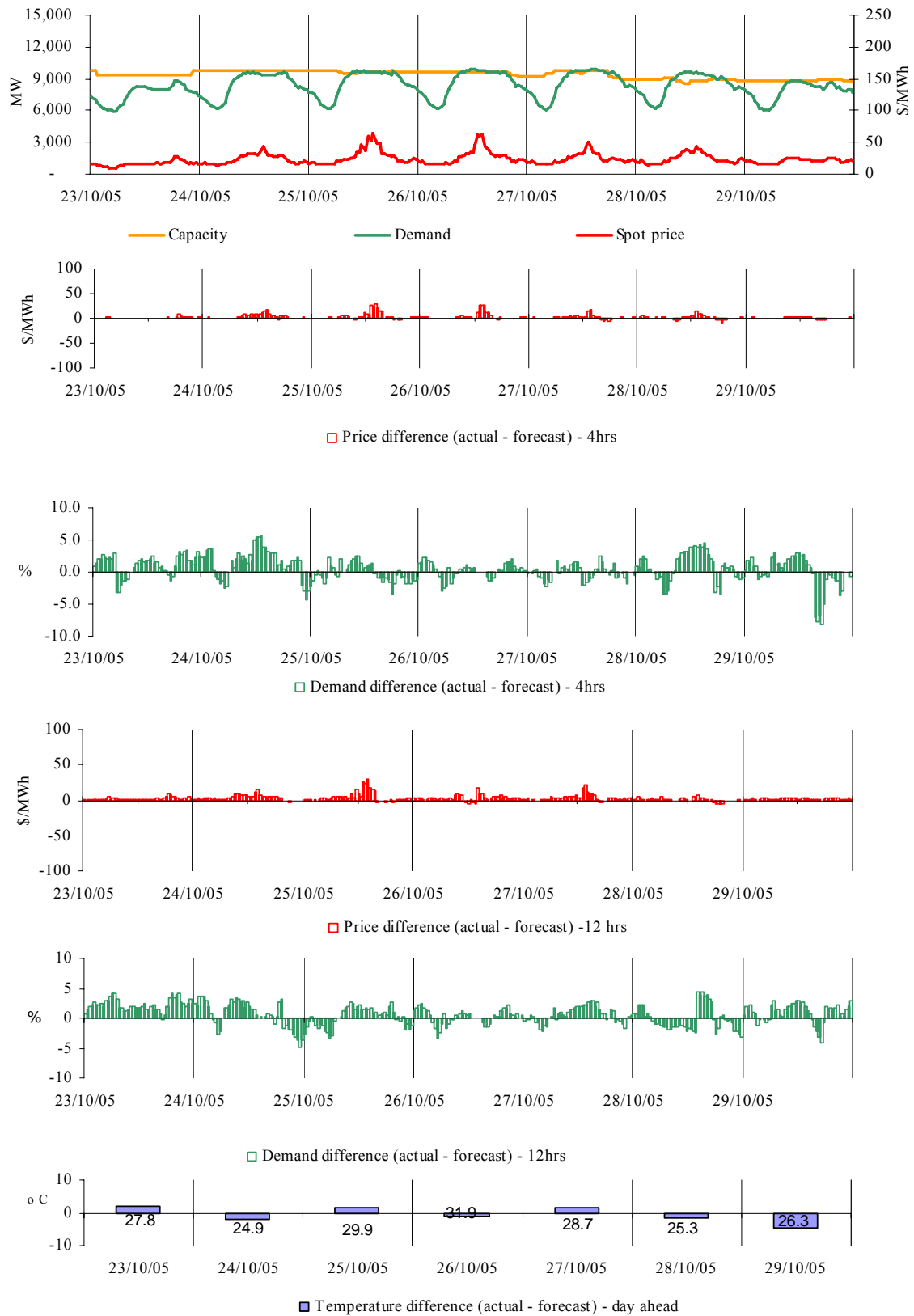
Figures 21 - 50 set out details of spot prices and demand on a regional basis. They include the actual spot price, actual demand outcomes and variation from forecasts made 4 and 12 hours ahead of dispatch on a daily basis. The differences between the maximum temperature and the temperature forecast at around 6.00 pm the day before are also included. Figures 51 - 55 set out for each region the extent of capacity offered into the market within a series of price thresholds. Actual price and generation dispatched in a region are overlaid.

**Figures 21-26: Queensland actual spot price, demand and forecast differences**



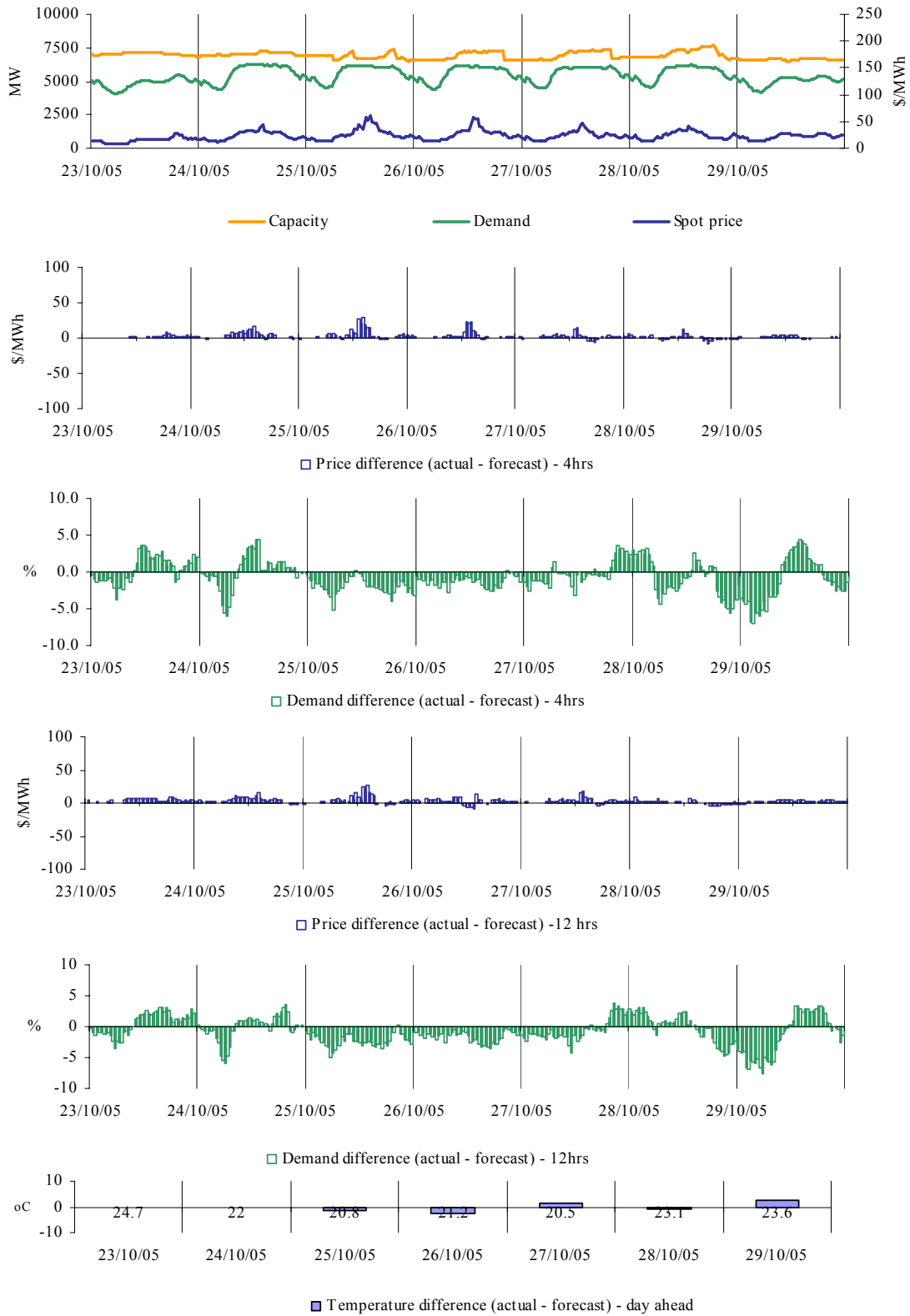
There were no occasions in Queensland where the spot price was greater than three times the weekly average price of \$23/MWh.

**Figures 27-32 New South Wales actual spot price, demand and forecast differences**



There were no occasions in New South Wales where the spot price was greater than three times the weekly average price of \$24/MWh.

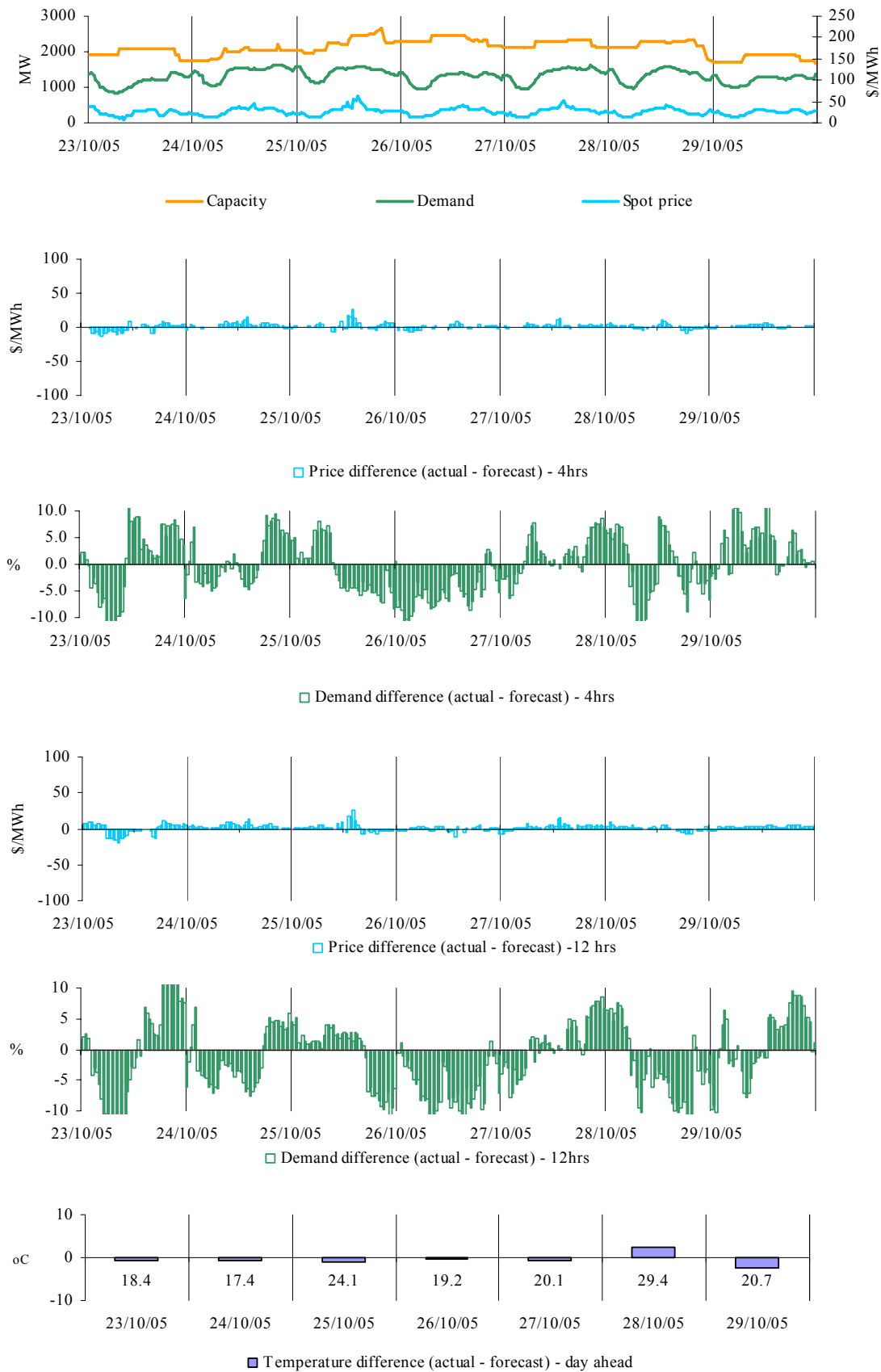
**Figures 33-38: Victoria actual spot price, demand and forecast differences**



There were no occasions in Victoria where the spot price was greater than three times the weekly average price of \$24/MWh.

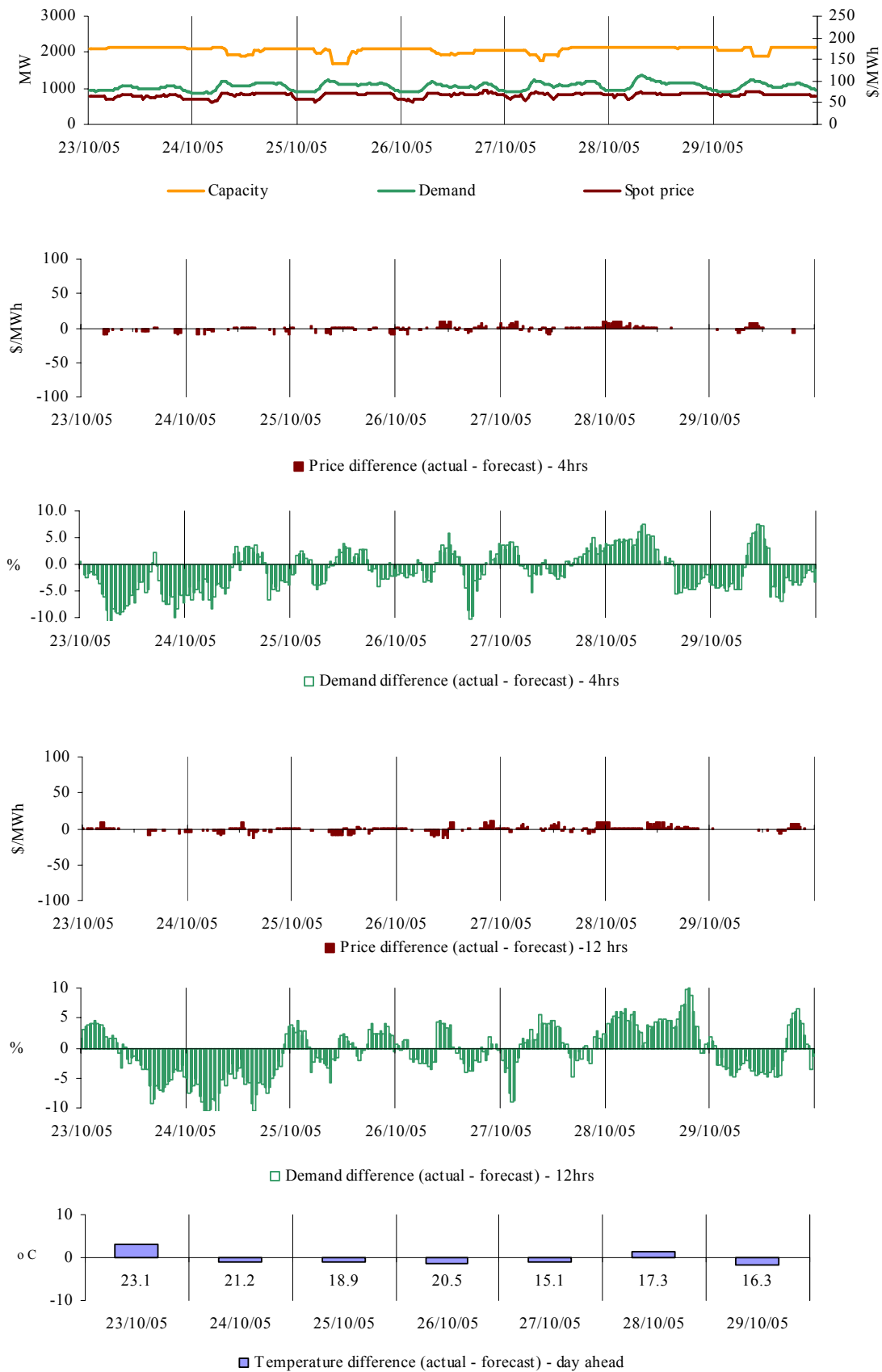


**Figures 39-44: South Australia actual spot price, demand and forecast differences**



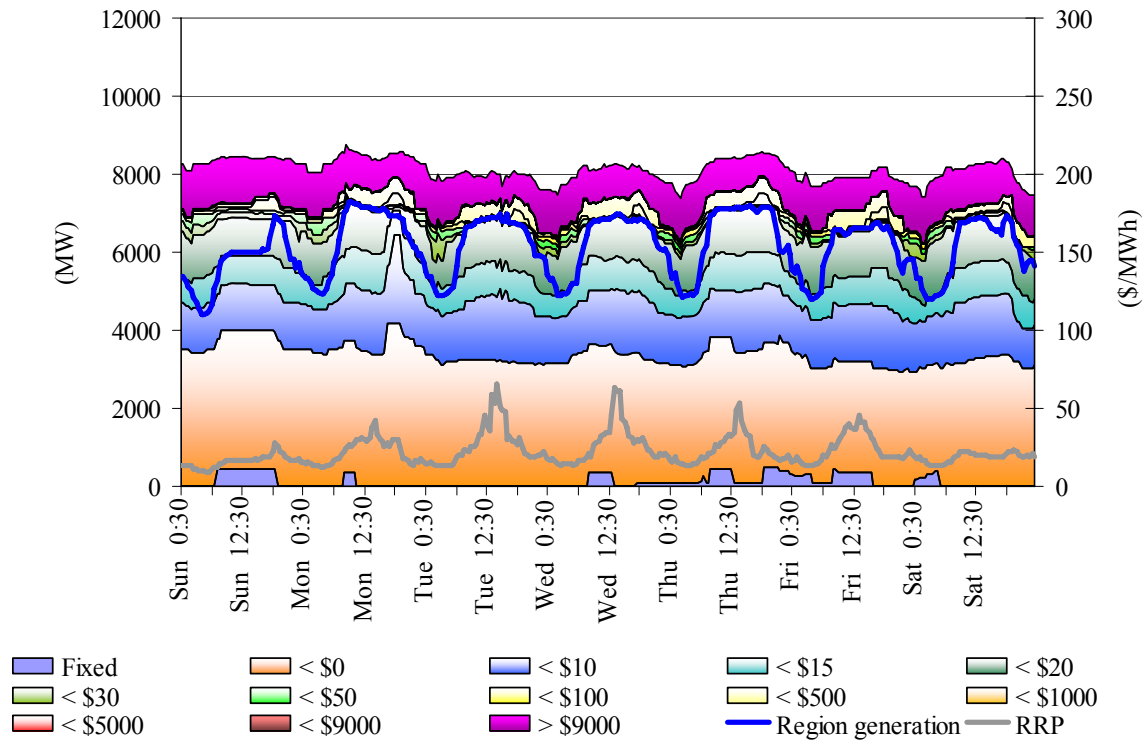
There were no occasions in South Australia where the spot price was greater than three times the weekly average price of \$27/MWh.

**Figures 45-50: Tasmania actual spot price, demand and forecast differences**

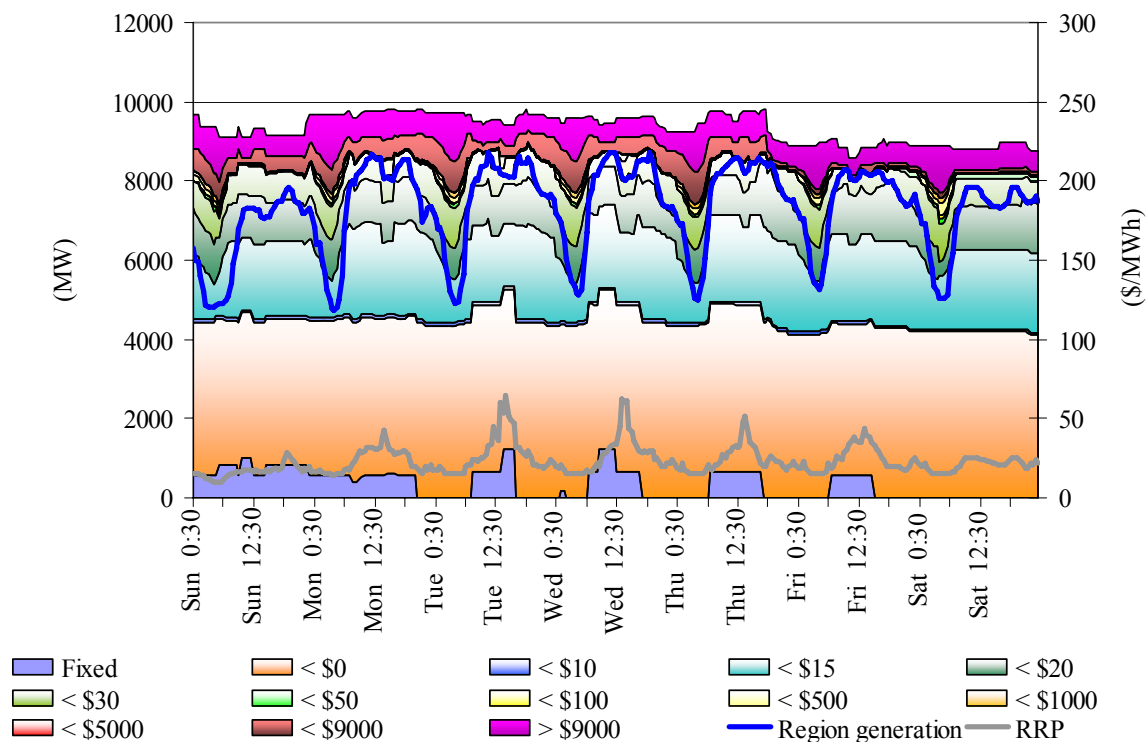


There were no occasions in Tasmania where the spot price was greater than three times the weekly average price of \$68/MWh.

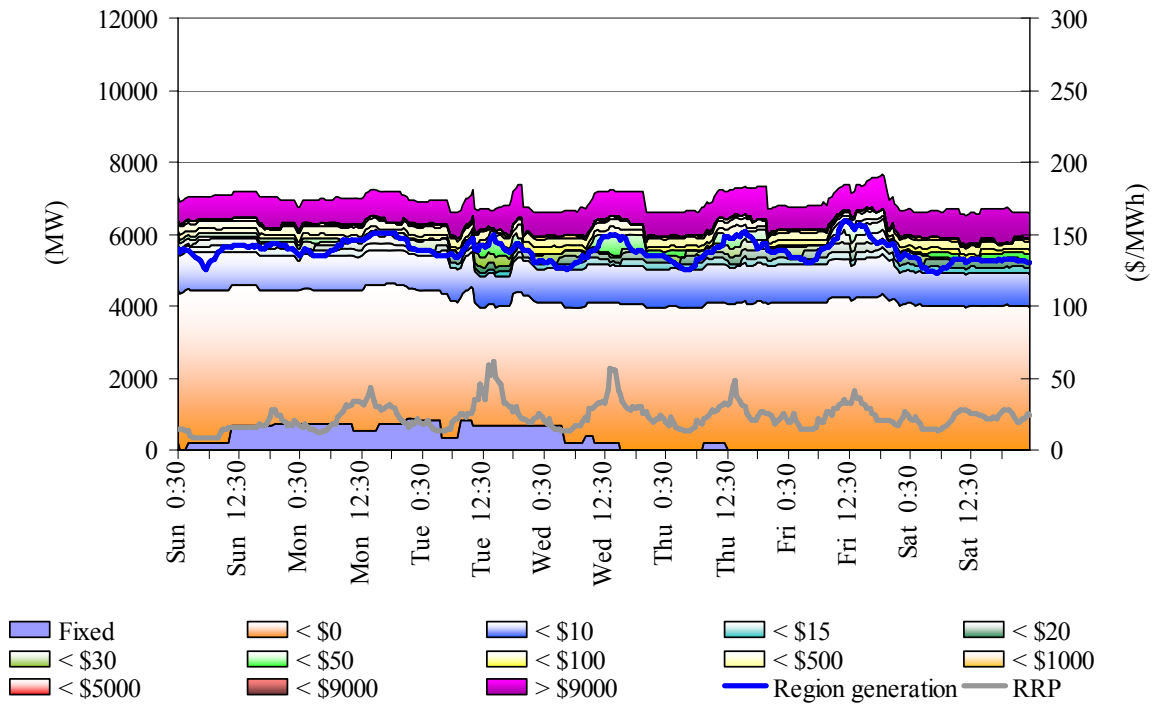
**Figure 51: Queensland closing bid prices, dispatched generation and spot price**



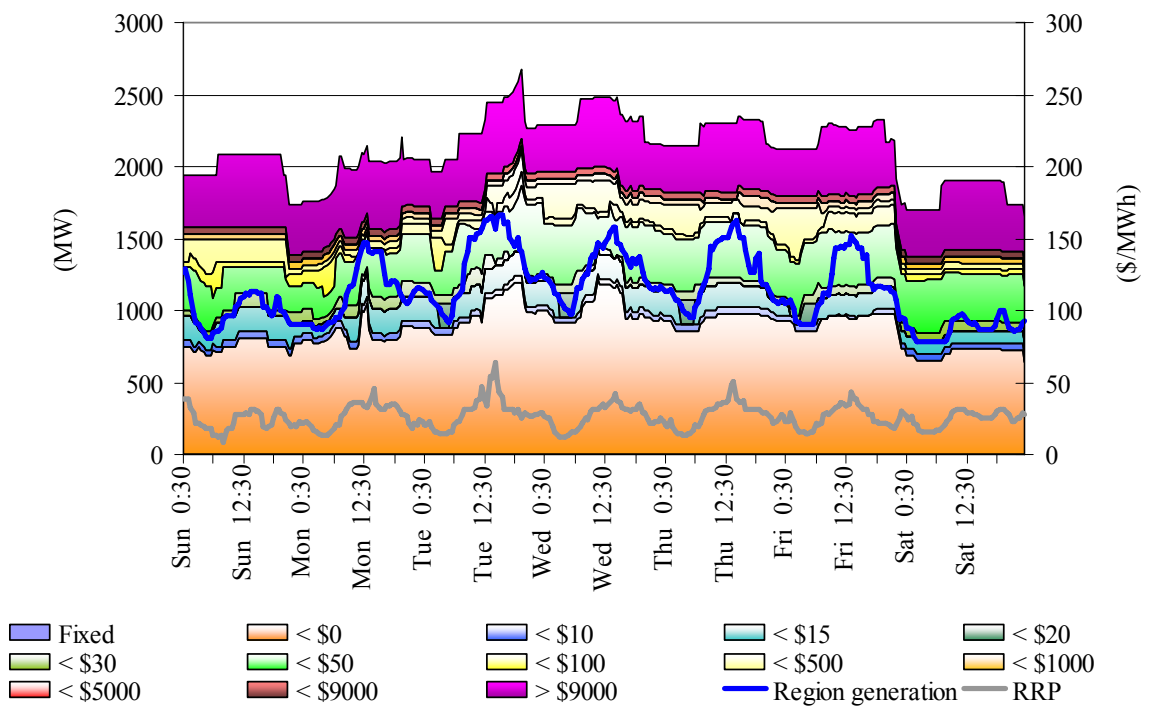
**Figure 52: New South Wales closing bid prices, dispatched generation and spot price**



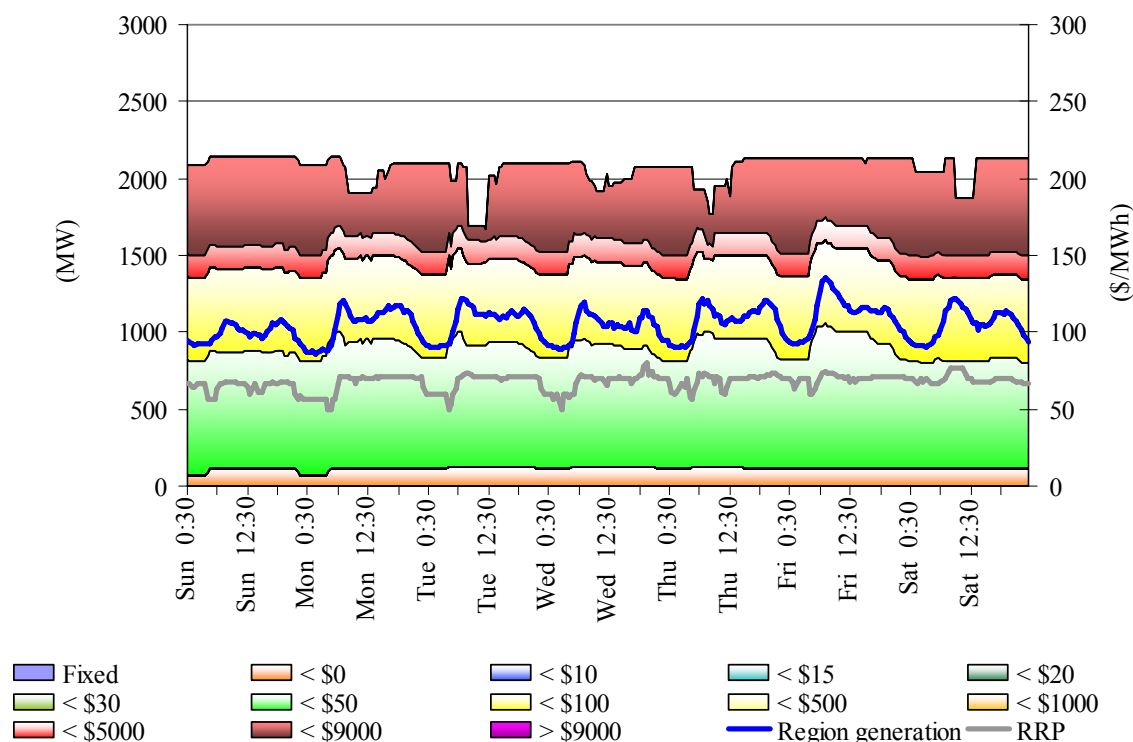
**Figure 53: Victoria closing bid prices, dispatched generation and spot price**



**Figure 54: South Australia closing bid prices, dispatched generation and spot price**



**Figure 55: Tasmania closing bid prices, dispatched generation and spot price**



**Ancillary service market**

The total cost of ancillary services on the mainland for the week was around \$560 000 or 0.5 per cent of the total turnover in the energy market. Network outages in Victoria on Sunday, Tuesday, Wednesday and Thursday led to increased requirements for lower contingency services. Figure 56 summarises the volume weighted average prices and costs for the eight frequency control ancillary services across the interconnected regions.

**Figure 56: frequency control ancillary service prices and costs**

	Raise 6 sec	Raise 60 sec	Raise 5 min	Raise reg	Lower 6 sec	Lower 60 sec	Lower 5 min	Lower reg
<b>Last week</b>	1.57	0.68	1.47	1.65	0.44	2.28	5.31	1.70
<b>Previous week</b>	1.01	0.47	0.93	1.62	0.80	4.71	11.05	1.78
<b>Last quarter</b>	1.62	0.91	1.00	1.36	0.20	0.64	2.29	1.56
<b>Market Cost (\$1000s)</b>	86	37	102	36	5	63	200	37
<b>% of energy market</b>	0.10	0.04	0.12	0.04	0.01	0.07	0.24	0.04

The total cost of ancillary services in Tasmania for the week was around \$210 000 or 2 per cent of the total turnover in the energy market in Tasmania. Figure 57 summarises the volume weighted average prices and costs for the eight frequency control ancillary services across Tasmania.

**Figure 57: frequency control ancillary service prices and costs for Tasmania**

	Raise 6 sec	Raise 60 sec	Raise 5 min	Raise reg	Lower 6 sec	Lower 60 sec	Lower 5 min	Lower reg
<b>Last week</b>	3.42	1.05	1.05	1.05	4.76	1.05	1.10	2.63
<b>Previous week</b>	1.18	1.05	1.05	1.06	1.17	1.05	1.05	1.06
<b>Last quarter</b>	19.40	1.05	1.14	2.25	6.25	1.06	1.06	1.26
<b>Market Cost (\$1000s)</b>	38	12	11	9	63	32	27	22
<b>% of energy market</b>	0.31	0.10	0.10	0.07	0.52	0.26	0.23	0.18

Figure 58 shows the daily breakdown of cost for each frequency control ancillary service.

**Figure 58: daily frequency control ancillary service costs**

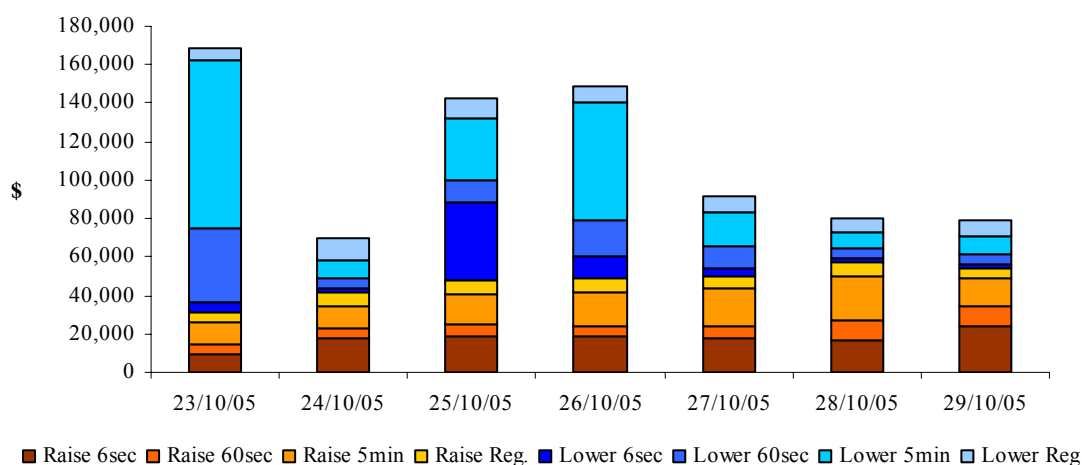
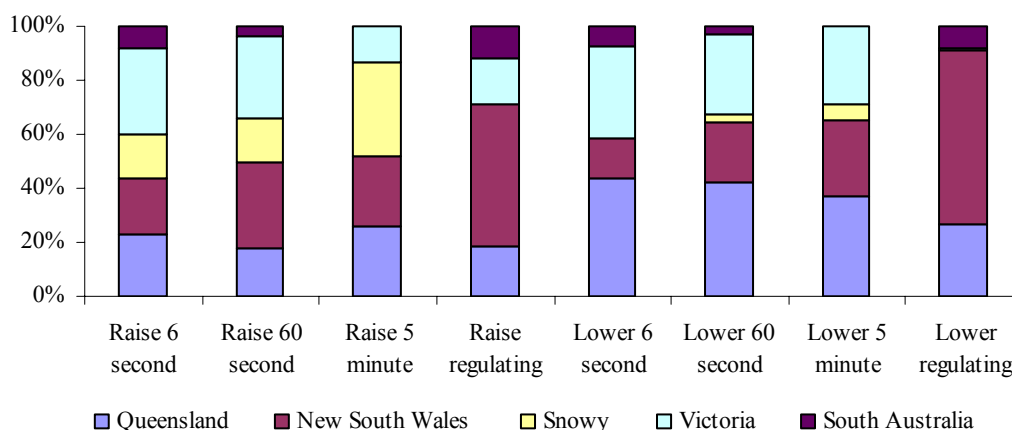


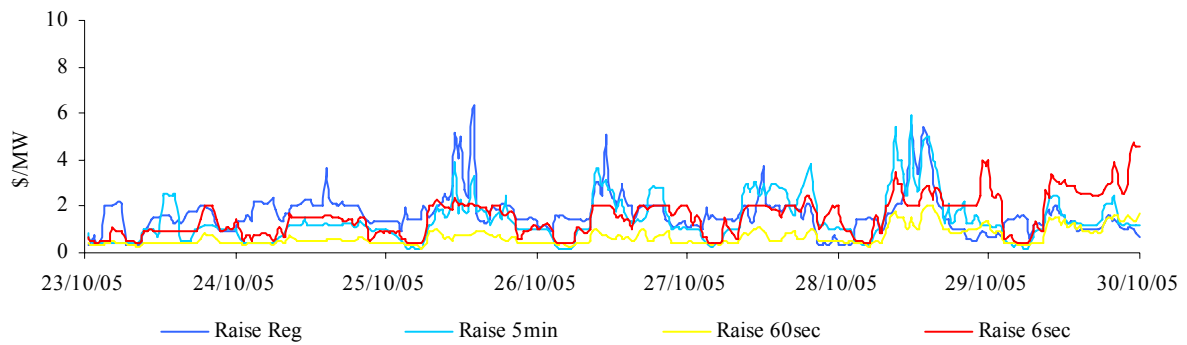
Figure 59 shows the regional weekly participation in each of the ancillary service markets on the mainland.

**Figure 59: regional participation in ancillary services on the mainland**

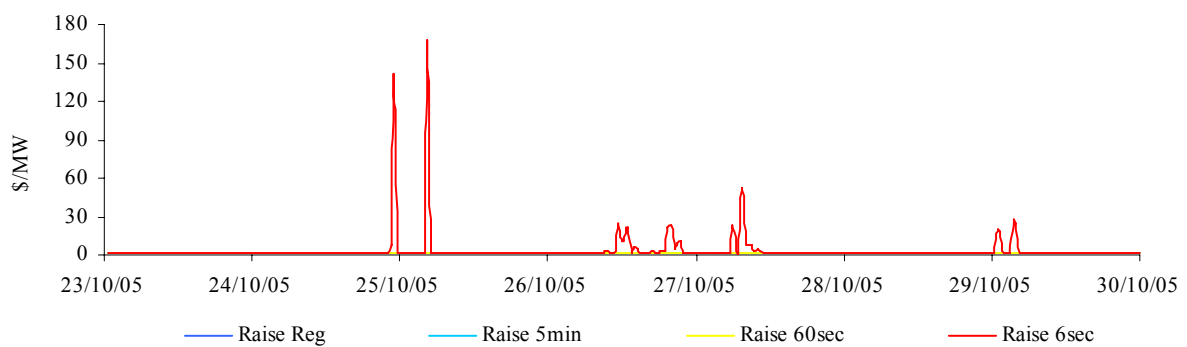


Figures 60 and 61 show 30-minute prices for each of the ancillary services.

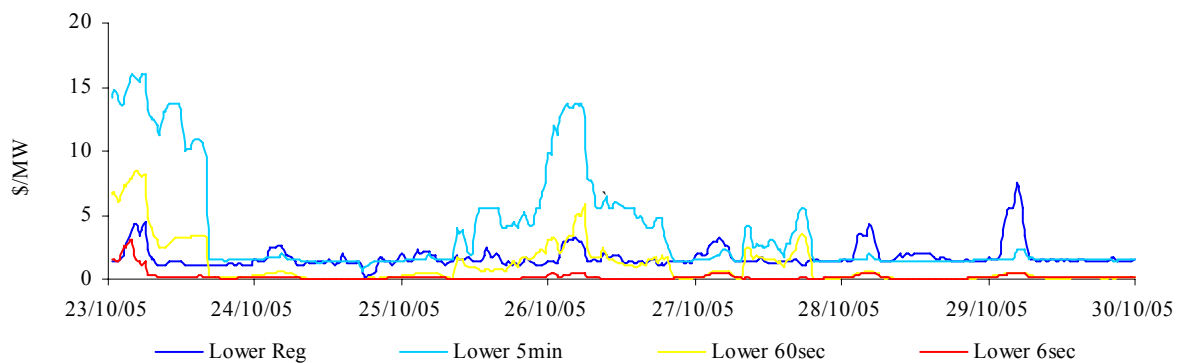
**Figure 60: prices for raise services**



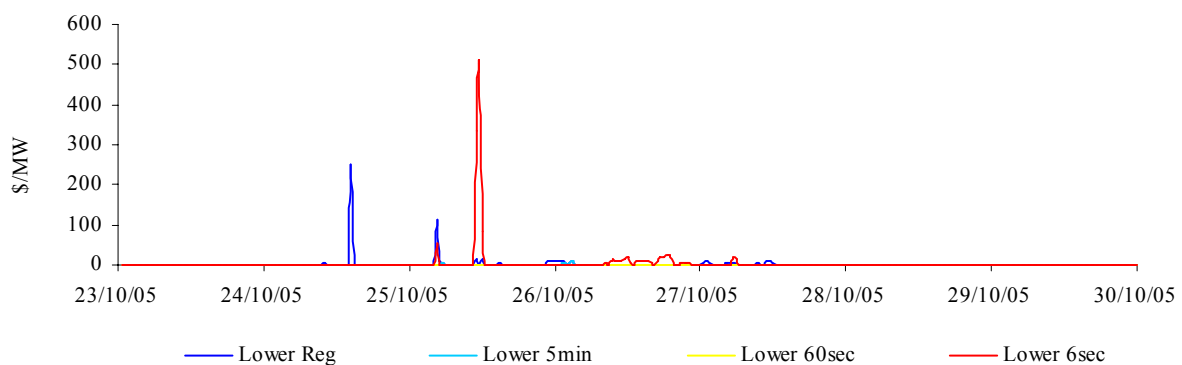
**Figure 60A: prices for raise services - Tasmania**



**Figure 61: prices for lower services**

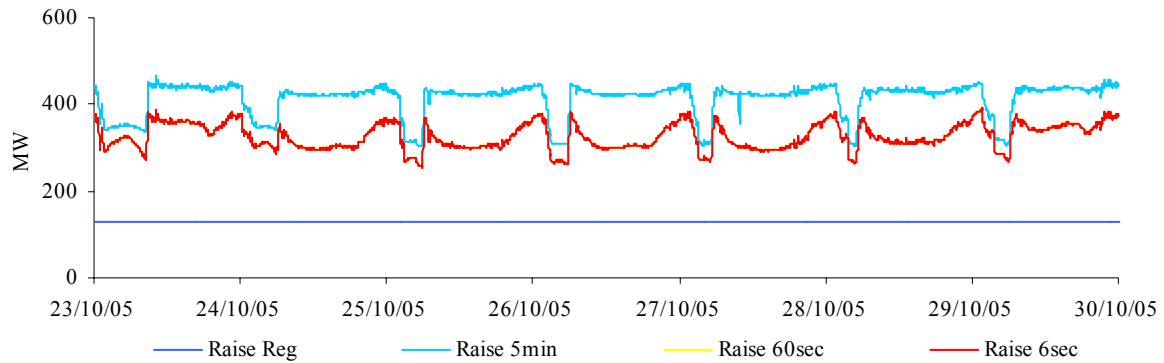


**Figure 61A: prices for lower services - Tasmania**

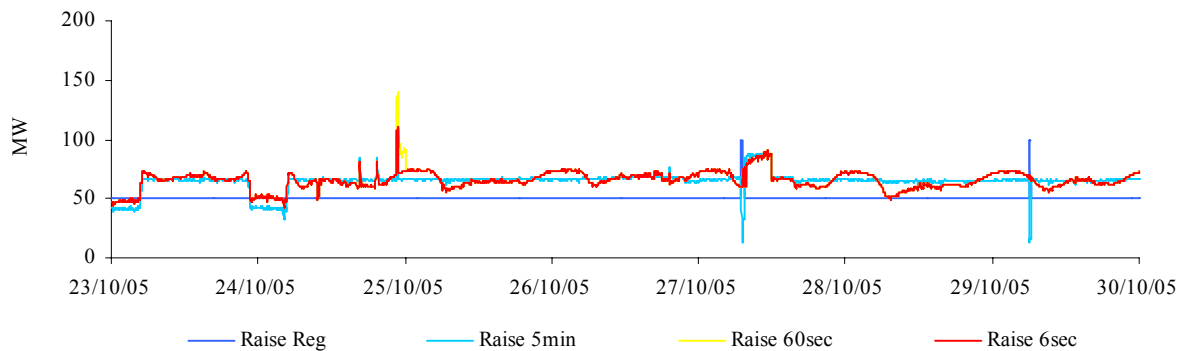


Figures 62 and 63 present for both raise and lower services the requirement for each service over the week.

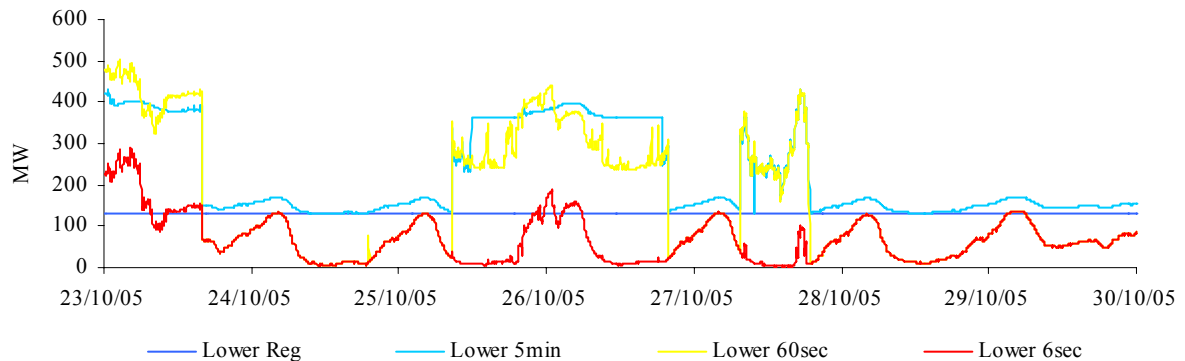
**Figure 62: raise requirements**



**Figure 62A: raise requirements - Tasmania**



**Figure 63: lower requirements**



**Figure 63A: lower requirements - Tasmania**

