

Average spot prices for the week, across the mainland, ranged from \$24/MWh in Queensland to \$32/MWh in South Australia. In Tasmania, spot prices averaged \$73/MWh. These prices were consistent with the previous week.

Turnover in the energy market for the mainland was \$89 million, with a total cost of ancillary services for the week of around \$640 000 or 0.7 per cent of turnover. The coincident loss of three 500kV lines in Victoria on Monday, led to increased requirements for lower 60 second and 5 minute contingency services across the mainland until Thursday, adding around \$200 000 to the total cost. There was, however, little impact on the energy market price. In Tasmania turnover in the energy market was \$14 million, with ancillary services costs totaling \$150 000 or one per cent of turnover.

Demand forecasts produced 4 and 12 hours ahead varied from actual by more than 5 per cent in 28 per cent of all trading intervals across the market. These variations were most frequent in South Australia and Tasmania, occurring in more than two thirds and almost half of all trading intervals in those regions, respectively. Significant variations between forecast and actual prices occurred in 51, or 15 per cent, of all 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	24	26	26	32	73
Previous week	22	24	25	29	73
Same quarter last year	48	90	38	54	-
Financial year to date	22	28	30	34	98
% change from previous week	▲11%	▲7%	▲1%	▲9%	0%
% change from same quarter last year	▼49%	▼71%	▼32%	▼41%	-
% change from last financial year	▼19%	▼9%	▲6%	▼6%	-

Figure 2: national demand and spot prices

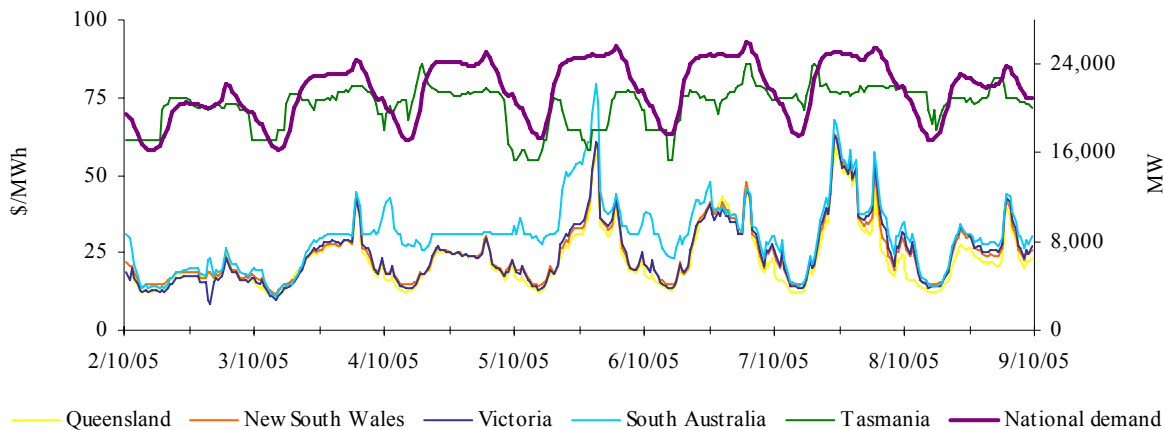


Figure 3: volatility index during peak periods

	QLD	NSW	VIC	SA	TAS
Last week	0.82	0.79	0.74	0.71	0.11
Previous week	0.56	0.57	0.88	0.66	0.18
Same quarter last year	0.64	0.74	0.71	0.56	-

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

Figure 4: Queensland

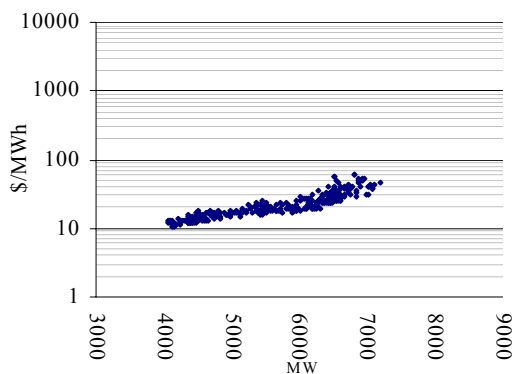


Figure 5: New South Wales

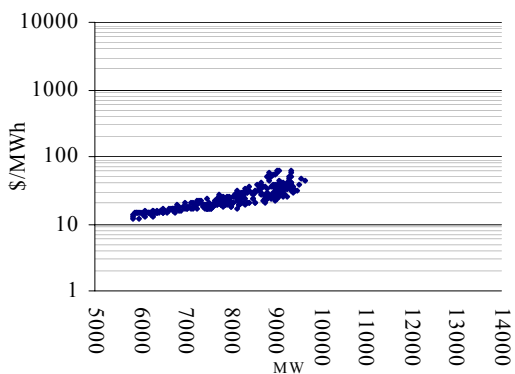


Figure 6: Victoria

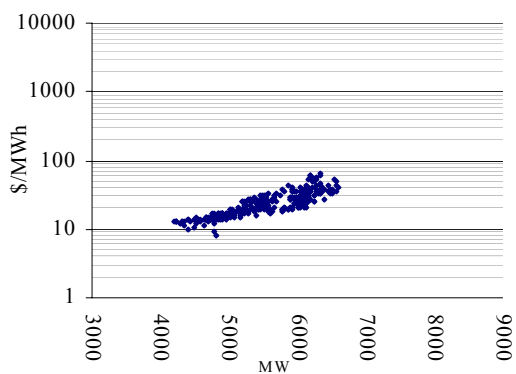


Figure 7: South Australia

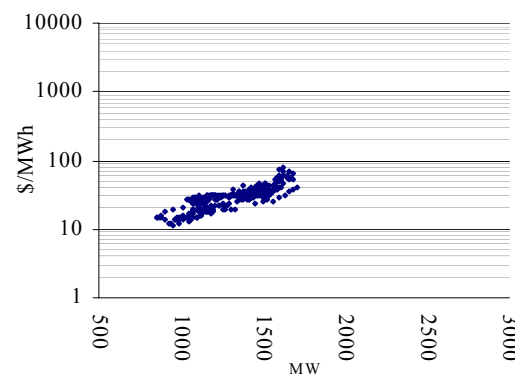
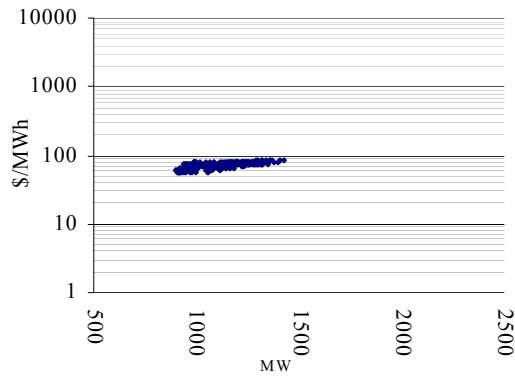


Figure 8: Tasmania



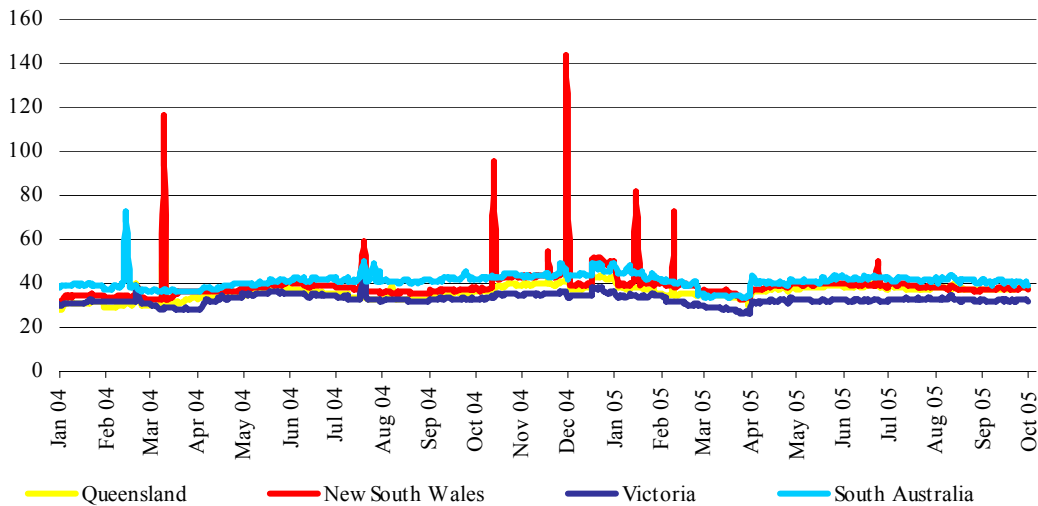
Maximum spot prices for the mainland ranged from \$59/MWh in Queensland to \$79/MWh in South Australia. In Tasmania, the maximum spot price for the week was \$86/MWh on Friday morning.

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	39.71	39.82	39.67	39.99	39.79
New South Wales	39.41	40.95	40.78	40.54	40.23
Victoria	32.91	33.20	33.15	33.13	33.16
South Australia	38.75	40.65	40.62	40.00	40.63

Figure 10: d-cyphaTrade WEPI



Reserve

There were no low reserve conditions forecast throughout 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

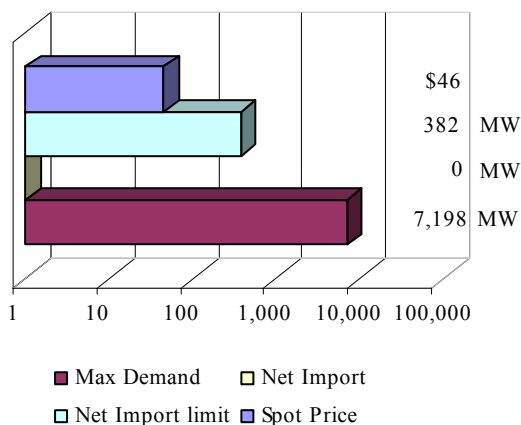


Figure 12: New South Wales

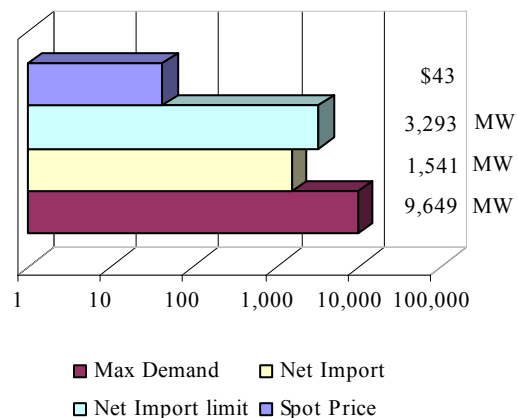


Figure 13: Victoria

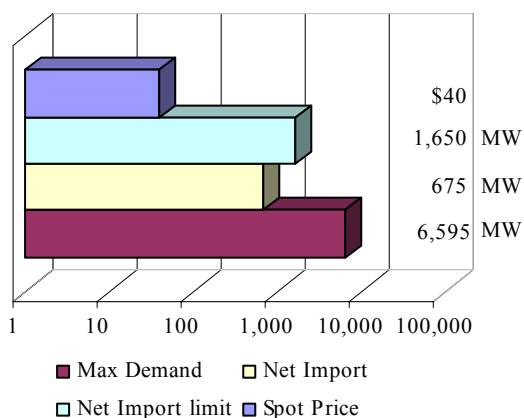
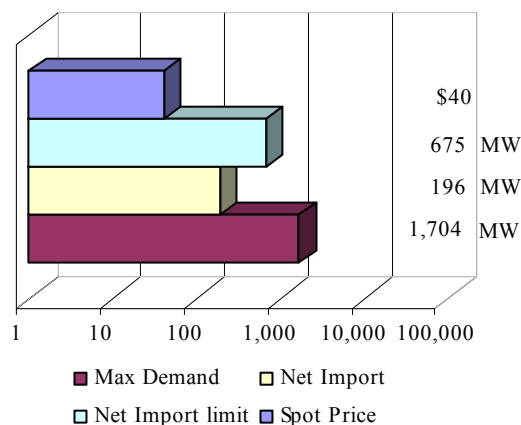


Figure 14: South Australia



In Tasmania, demand reached a maximum of 1 424MW at 7.30am on Tuesday. The spot price at the time was \$83/MWh.

Price variations

There were 51 trading intervals where actual prices significantly varied from forecasts made 4 and 12 hours ahead of despatch. 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

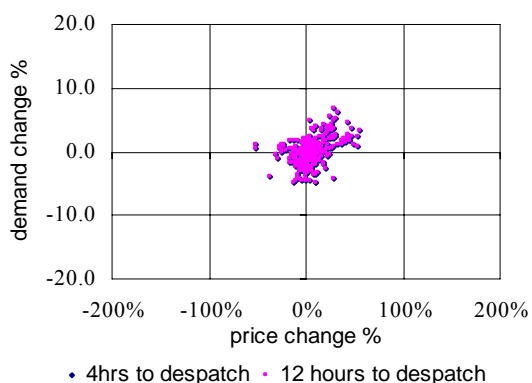


Figure 16: New South Wales

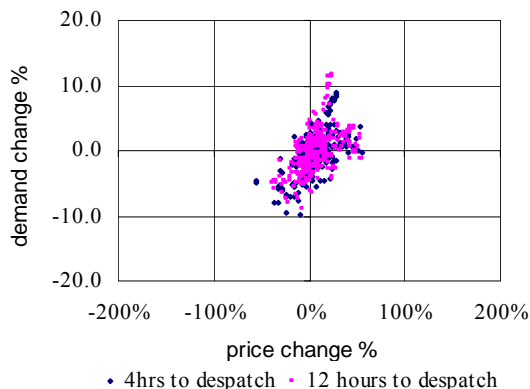


Figure 17: Victoria

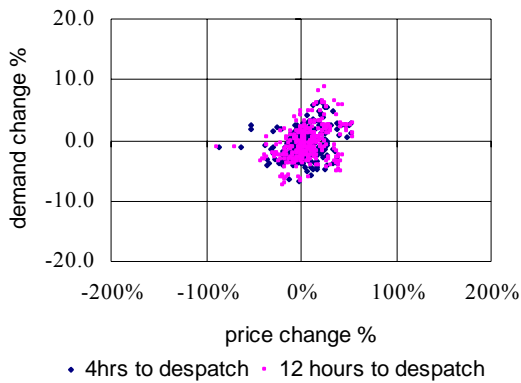


Figure 18: South Australia

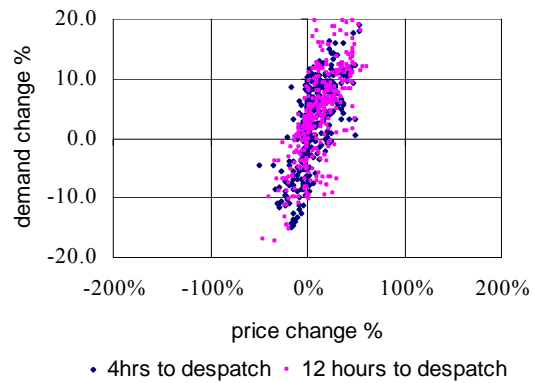


Figure 19: Tasmania

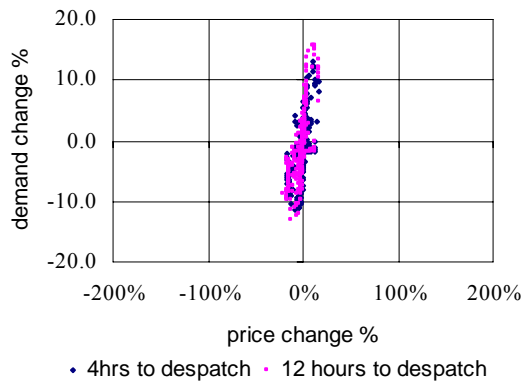
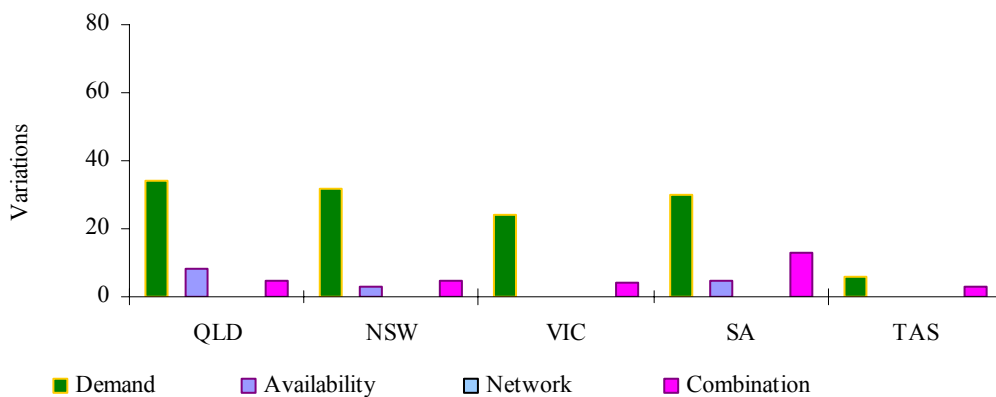


Figure 20 summarises the number and most probable reason for variations between forecast and actual prices.

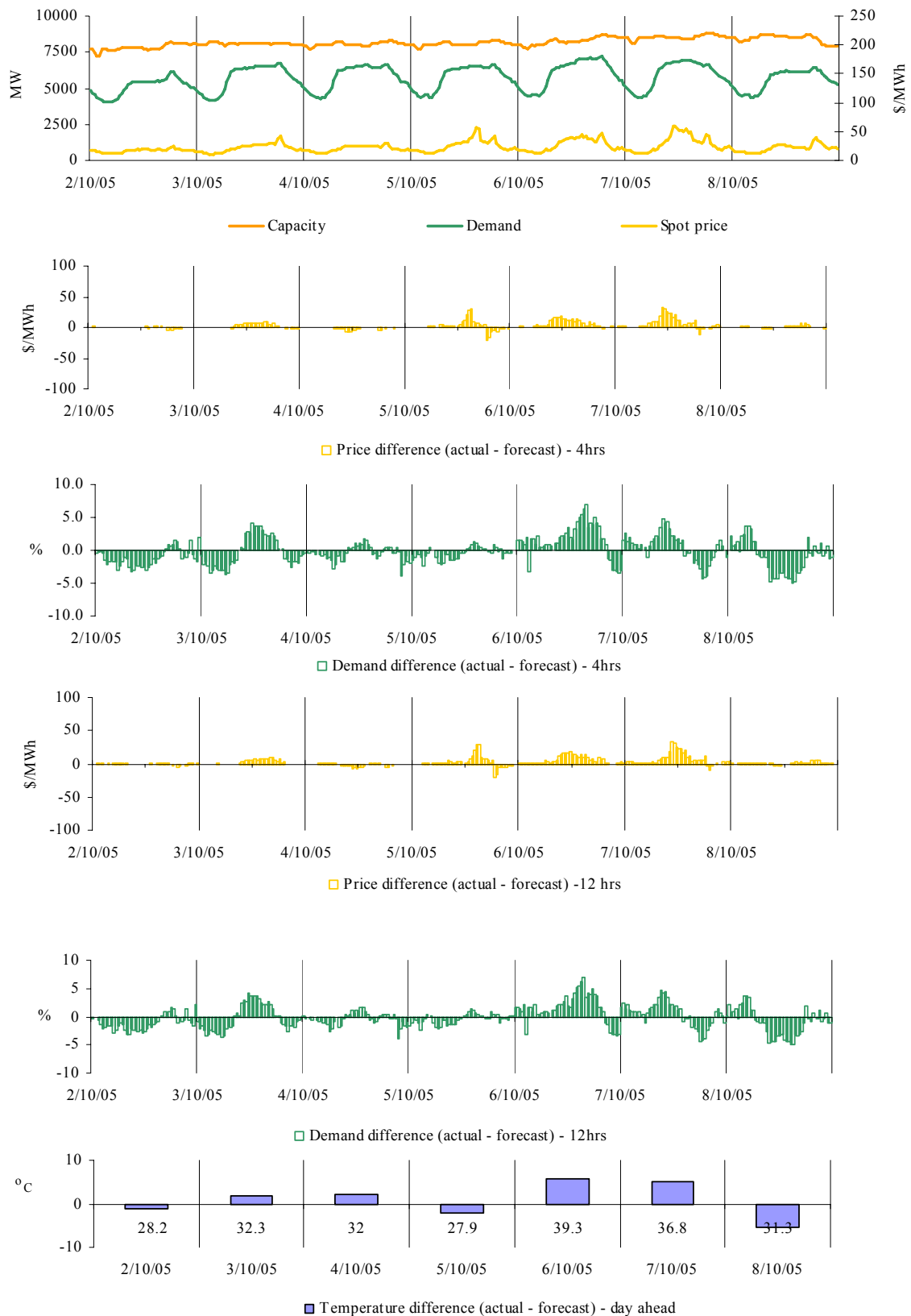
Figure 20: reasons for variations between forecast and actual prices



Price and demand

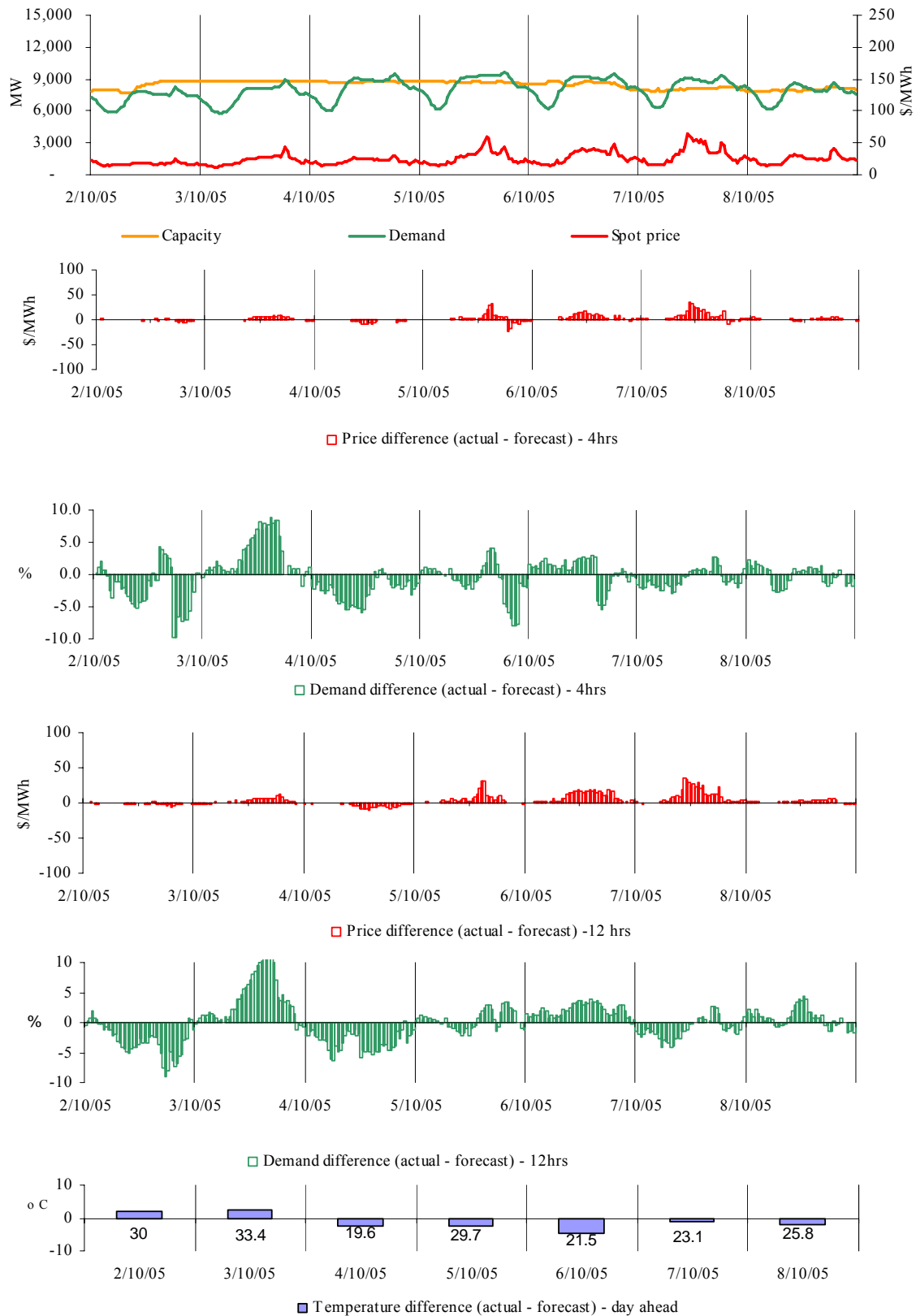
Figures 21 - 50 set out details of spot prices and demand on a regional basis. They include the actual spot price, actual demand outcomes and variation from forecasts made 4 and 12 hours ahead of despatch on a daily basis. The differences between the maximum temperature and the temperature forecast at 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 despatched in a region are overlaid.

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



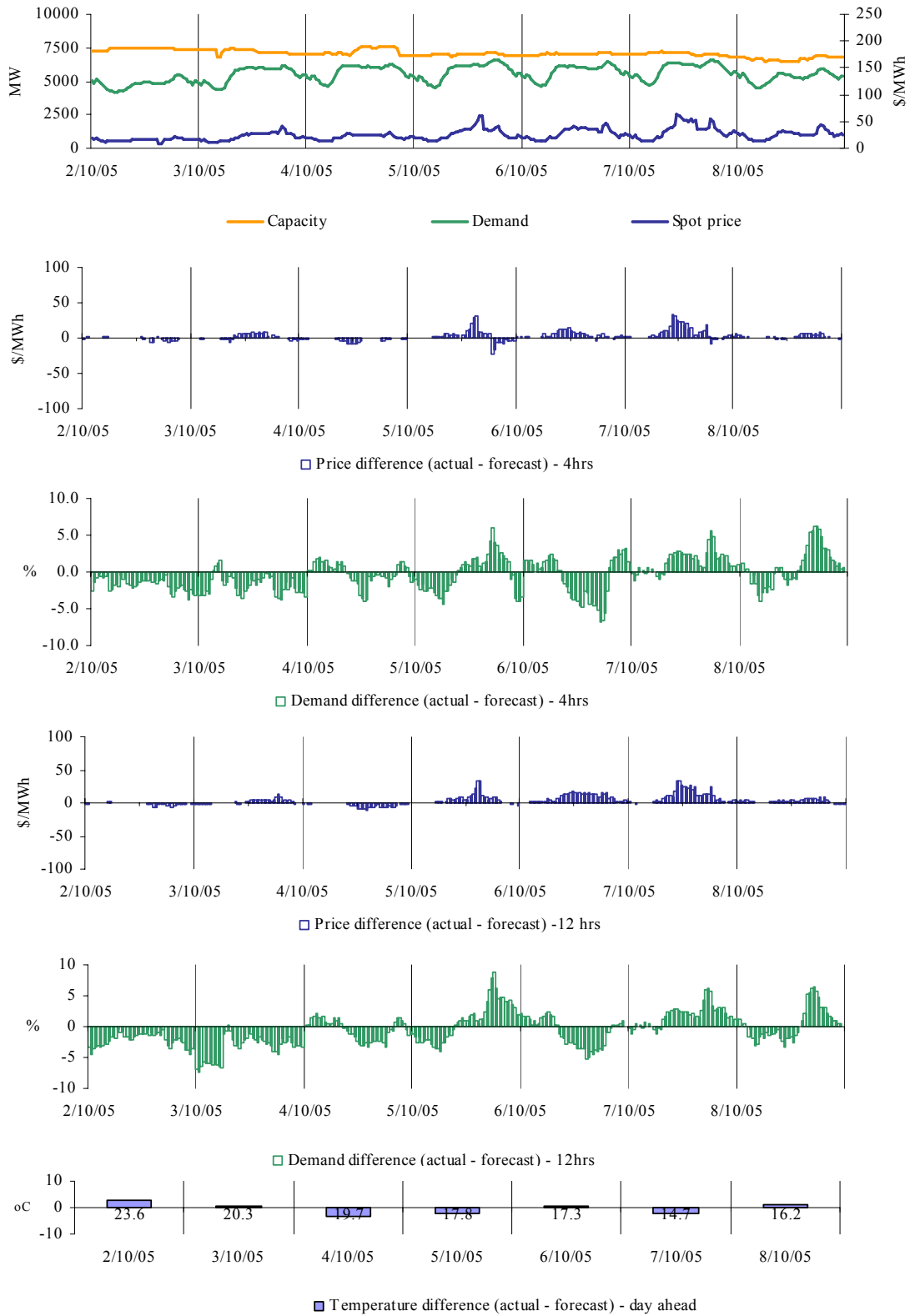
There were no occasions in Queensland where the spot price was greater than three times the weekly average price of \$24/MWh.

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



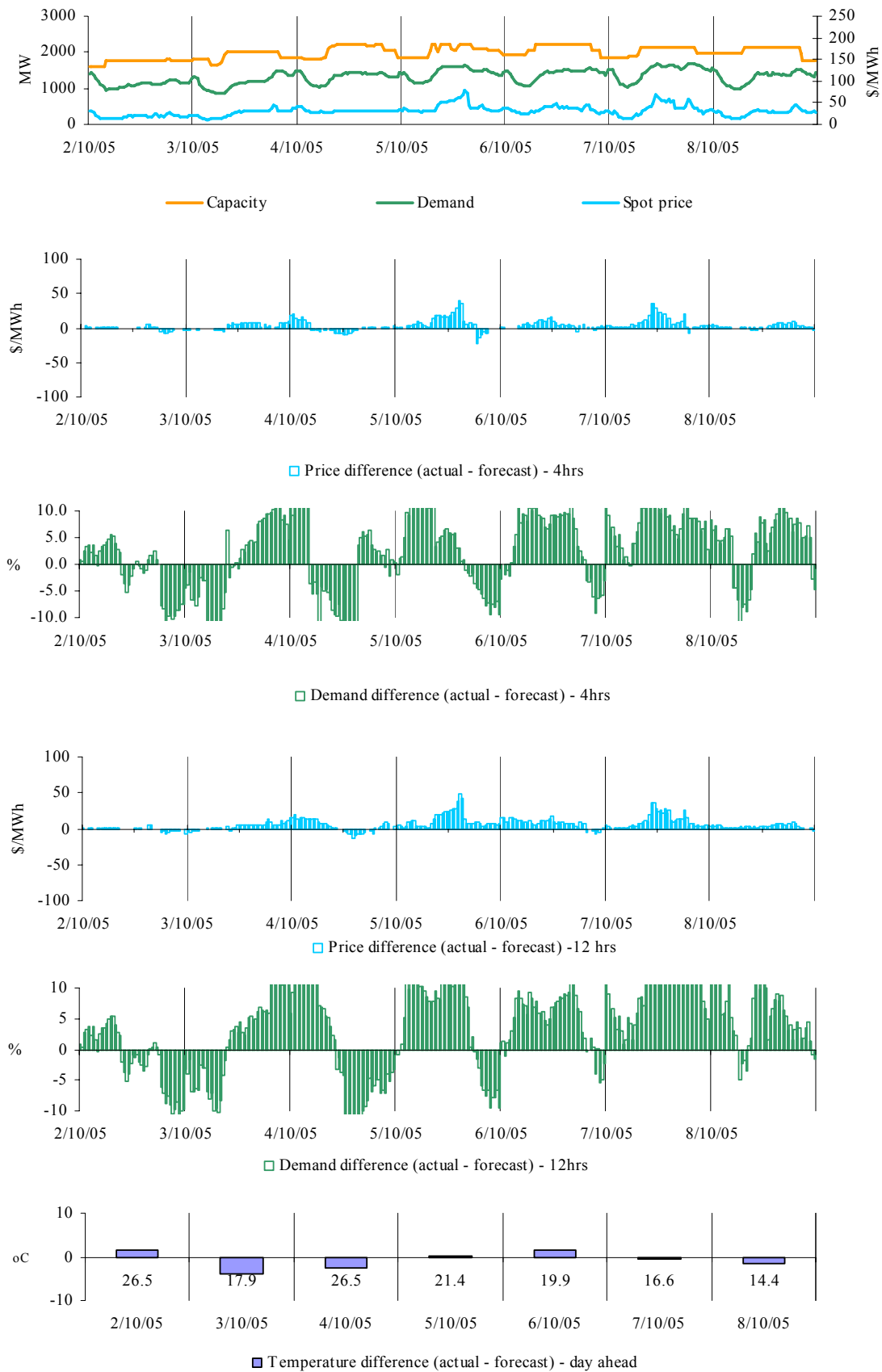
There were no occasions in New South Wales where the spot price was greater than three times the weekly average price of \$26/MWh.

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



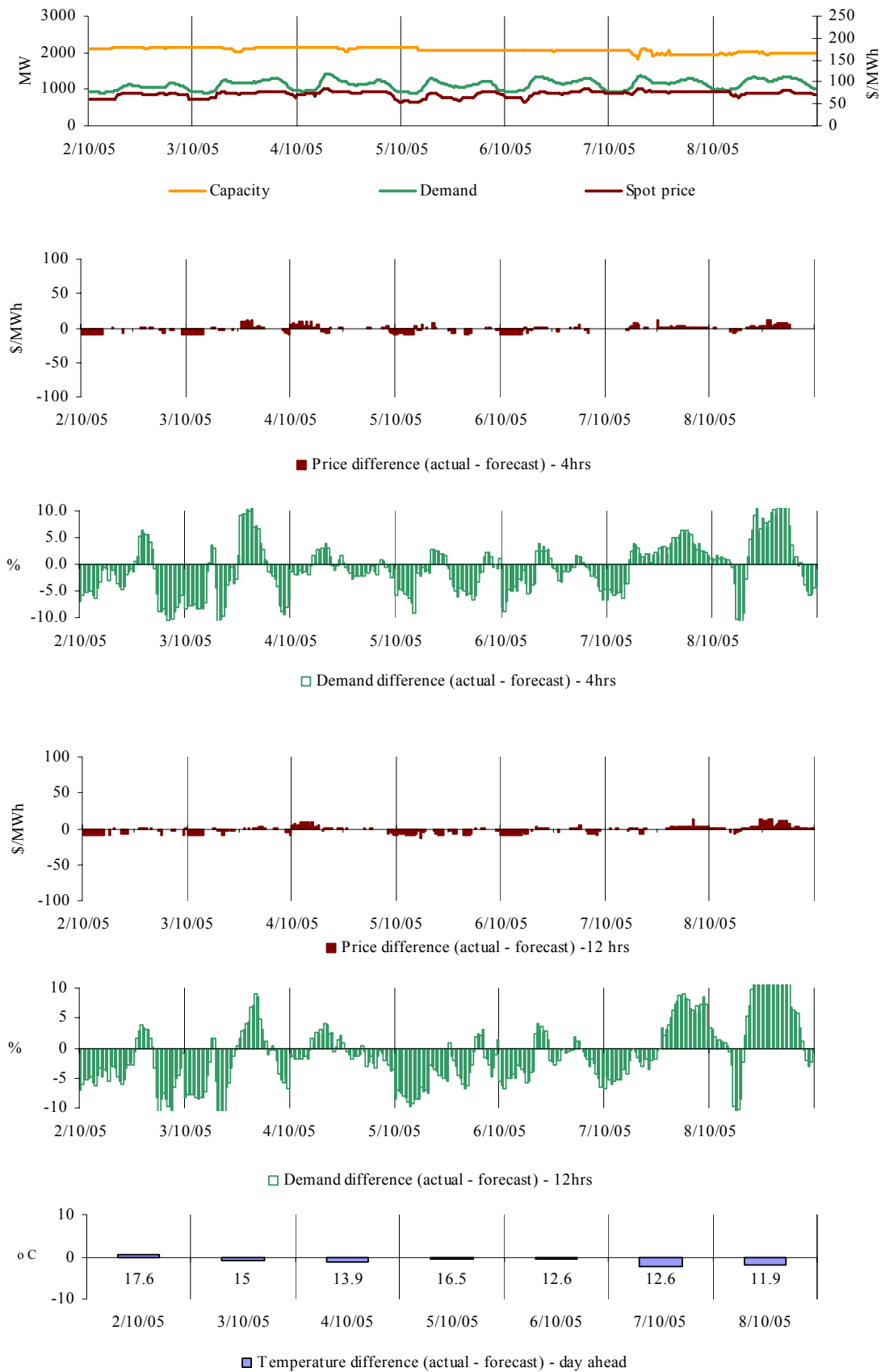
There were no occasions in Victoria where the spot price was greater than three times the weekly average price of \$26/MWh.

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 \$32/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 \$73/MWh.

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

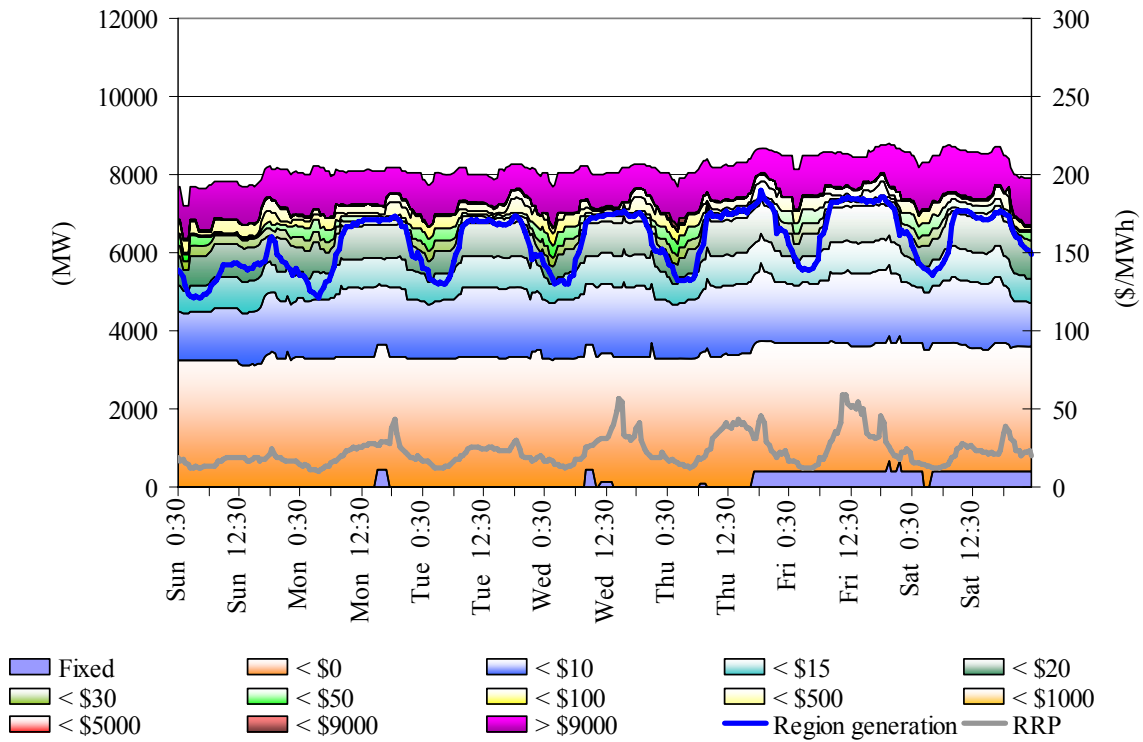


Figure 52: New South Wales closing bid prices, despatched generation and spot price

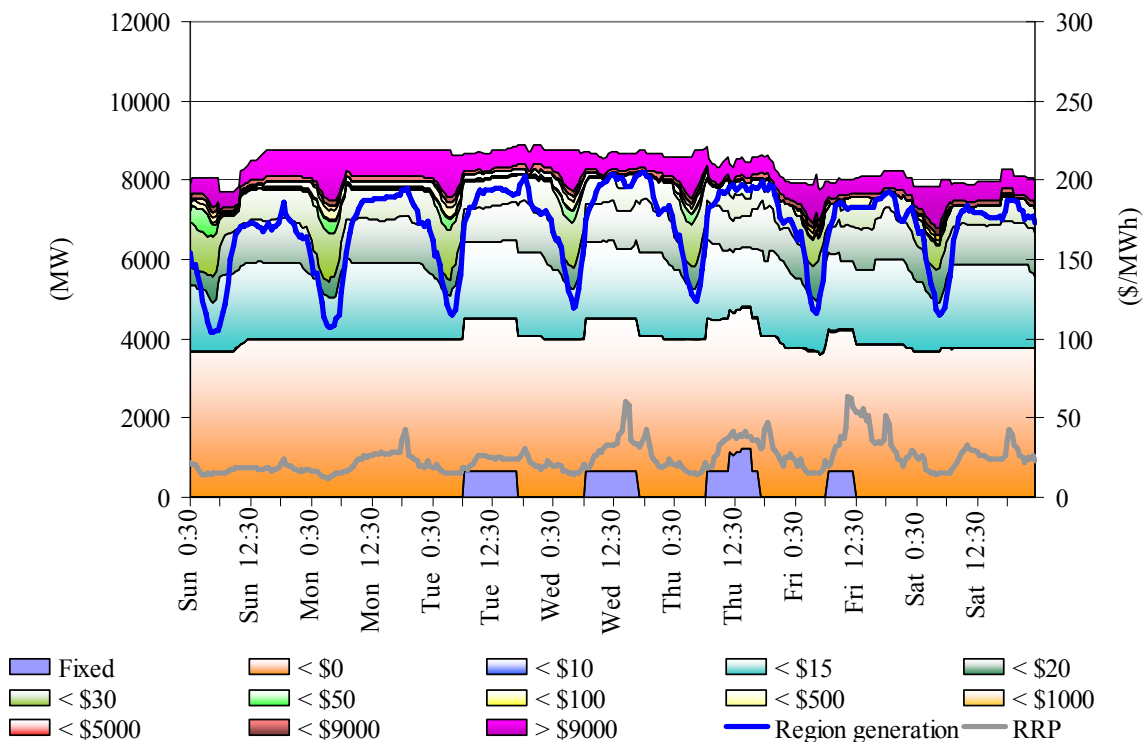


Figure 53: Victoria closing bid prices, despatched generation and spot price

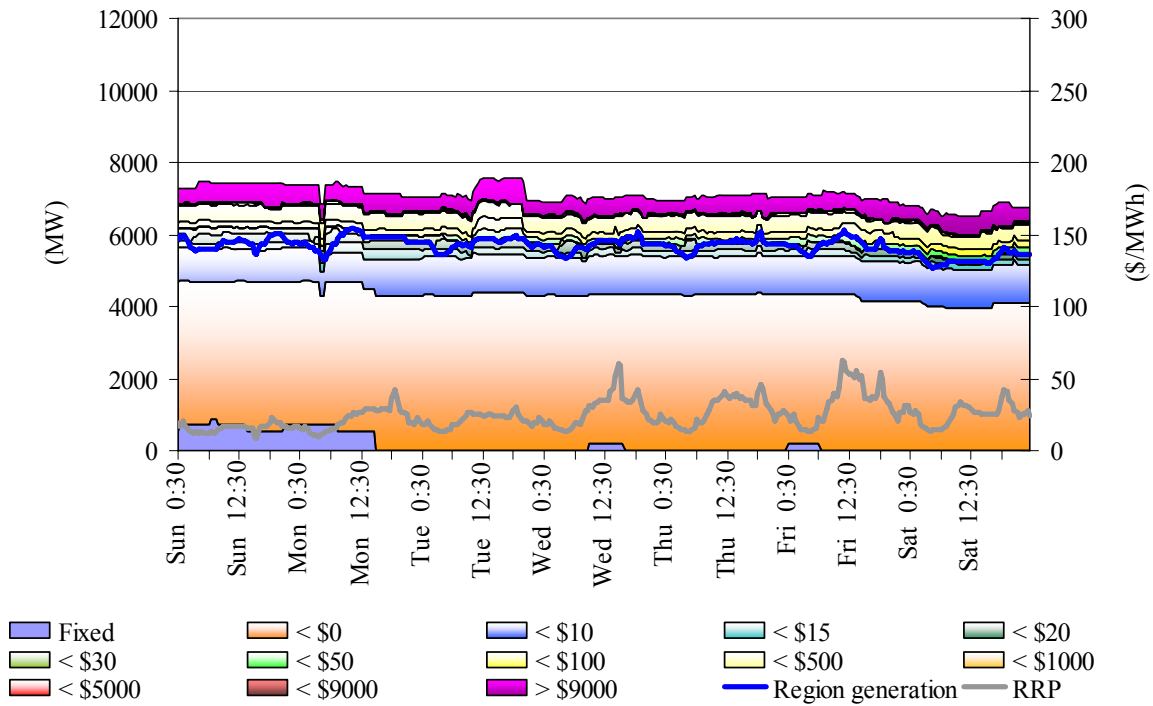


Figure 54: South Australia closing bid prices, despatched generation and spot price

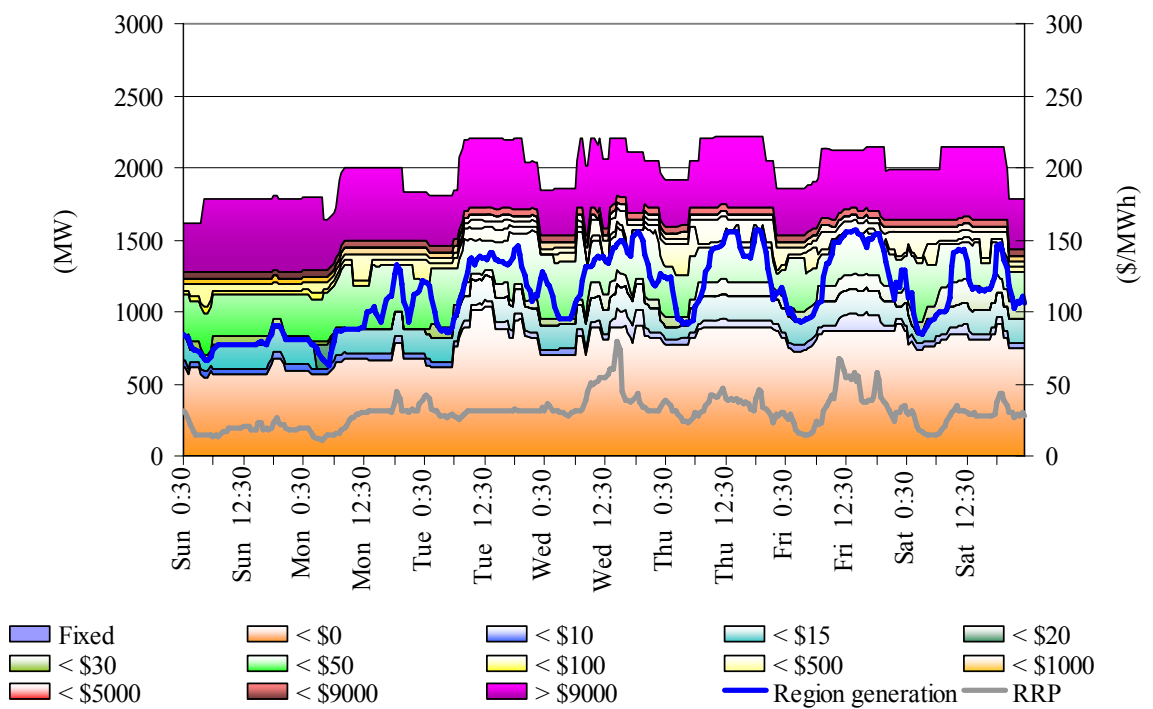
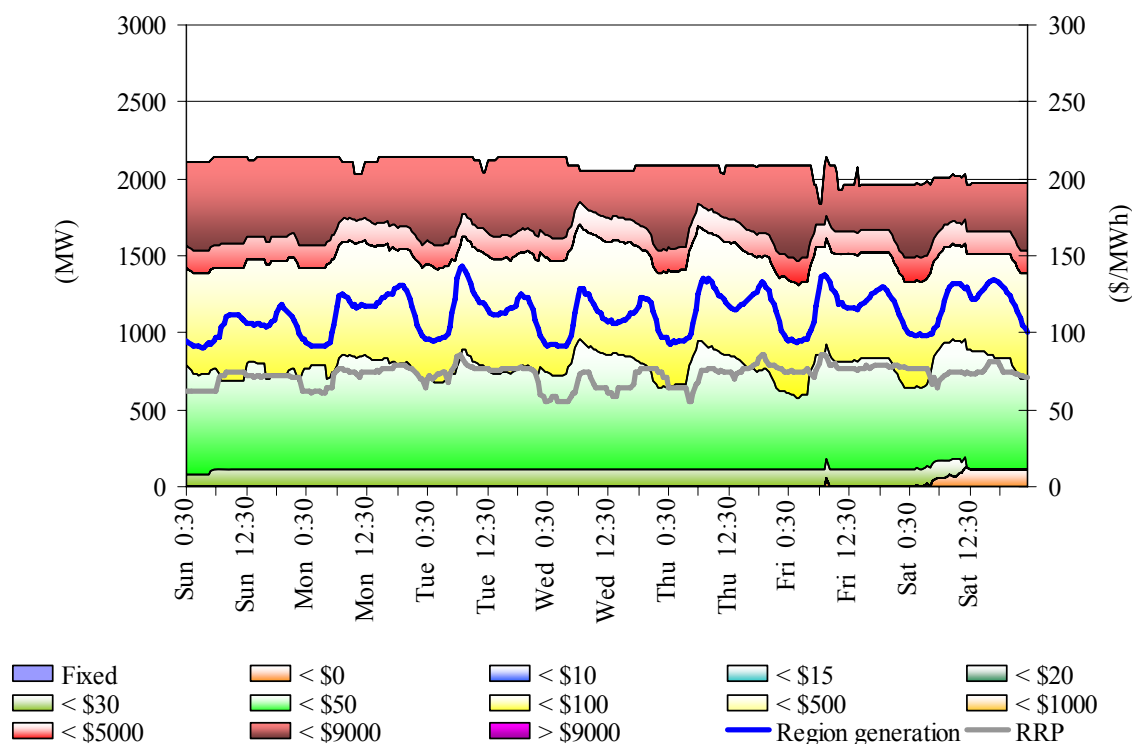


Figure 55: Tasmania closing bid prices, despatched generation and spot price



Ancillary service market

The total cost of ancillary services on the mainland for the week was \$637 000 or 0.7 per cent of the total turnover in the energy market. A non-credible contingency event occurred on Monday evening, when three 500kV lines in Victoria tripped. Flows into South Australia along the Heywood interconnector were reduced until Thursday as a result. Tradeoffs between imports and lower contingency frequency requirements set the reduced limit, at times forcing exports into Victoria. The increased requirements for lower 60 second and 5 minute contingency services added around \$200 000 to the total cost. 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
Last week (\$)	2.56	1.24	1.23	1.71	0.32	2.77	5.17	1.76
Previous week(\$)	2.39	1.43	1.33	1.55	0.25	0.36	1.52	1.57
Last Quarter(\$)	1.62	0.91	1.00	1.36	0.20	0.64	2.29	1.56
Market Cost (\$1000s)	\$143	\$70	\$87	\$37	\$4	\$79	\$180	\$38
% of energy market	0.16%	0.08%	0.10%	0.04%	0.00%	0.09%	0.20%	0.04%

In Tasmania, ancillary service costs totalled \$148 000 or one per cent of turnover. At times, increased requirements for lower and raise regulation were required to maintain the frequency within 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
Last week (\$)	2.20	1.05	1.05	1.05	2.13	1.08	1.07	1.05
Previous week(\$)	2.73	1.05	1.06	1.08	1.10	1.06	1.07	1.07
Market Cost (\$1000s)	\$22	\$11	\$11	\$9	\$28	\$32	\$26	\$9
% of energy market	0.16%	0.08%	0.08%	0.06%	0.20%	0.23%	0.19%	0.06%

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

Figure 58: daily frequency control ancillary service costs

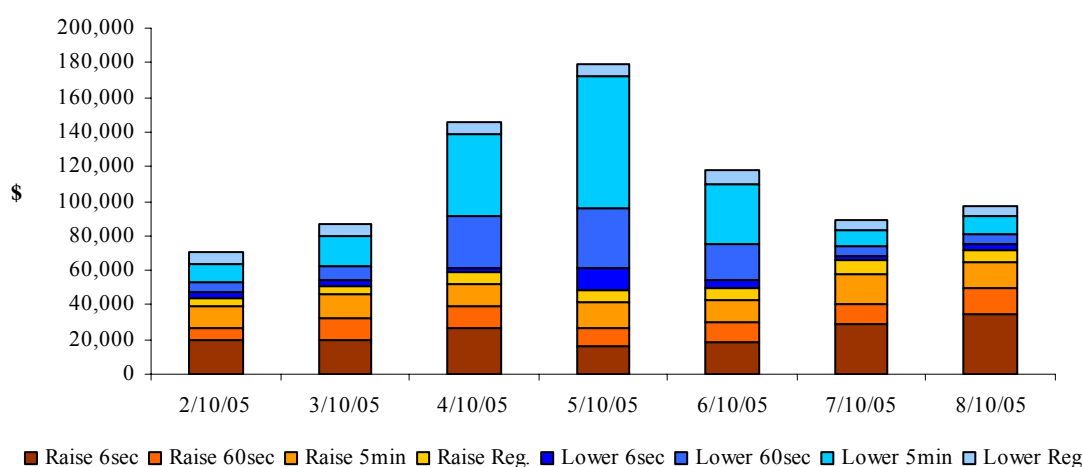
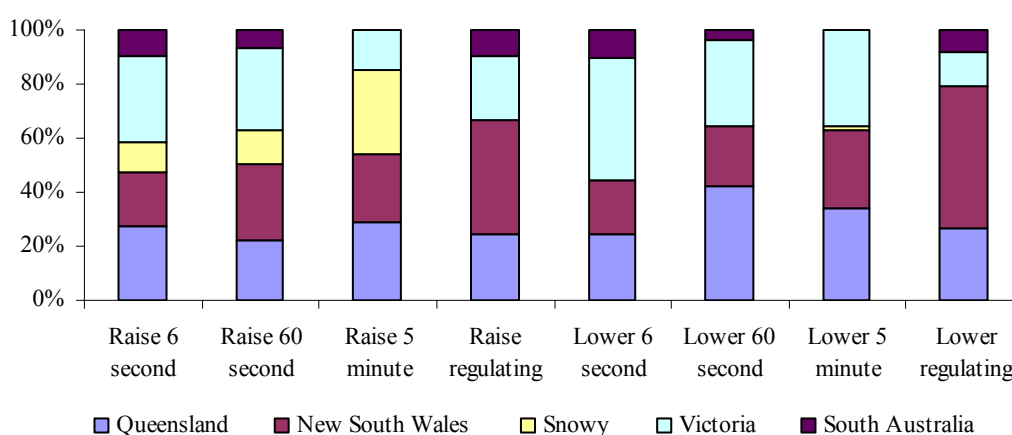


Figure 59 shows the regional weekly participation in each of the ancillary service markets on the mainland.

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

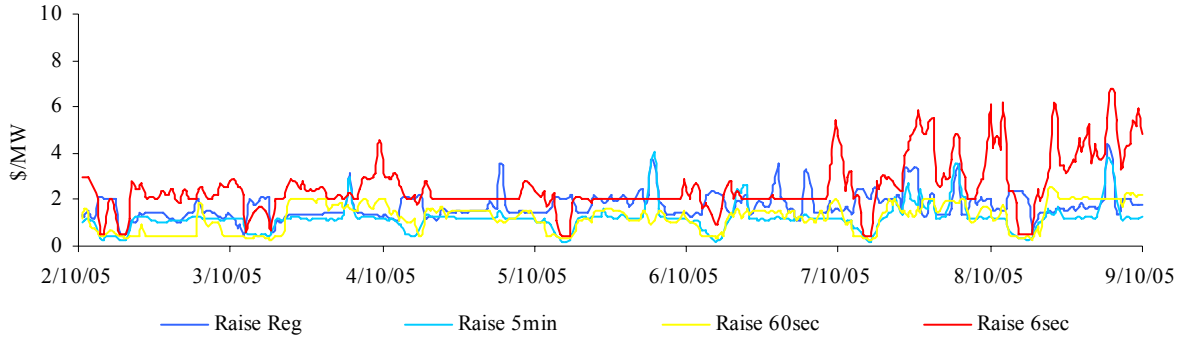


Figure 60A: prices for raise services - Tasmania

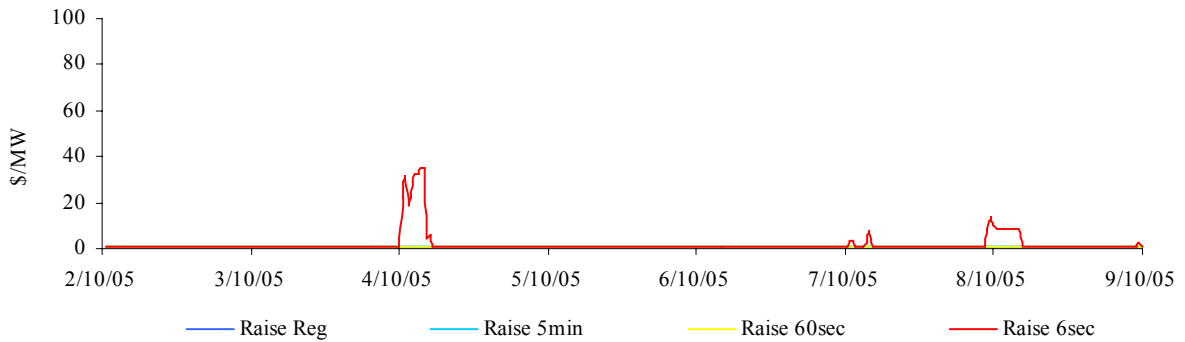


Figure 61: prices for lower services

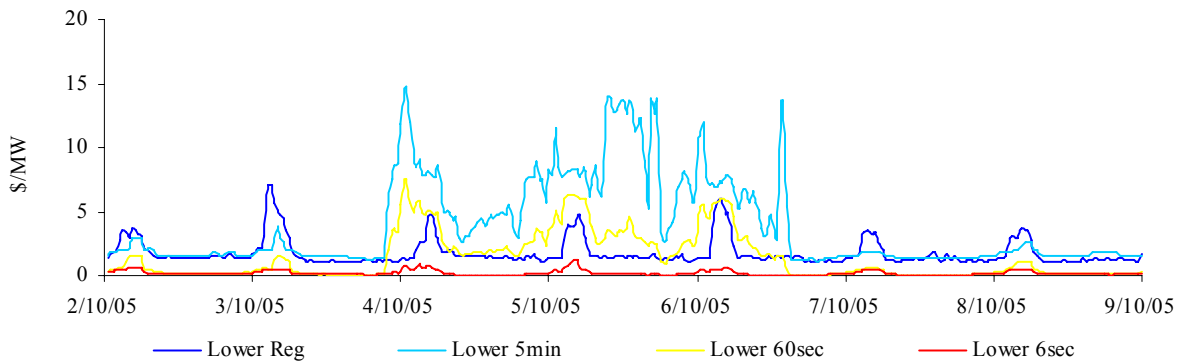
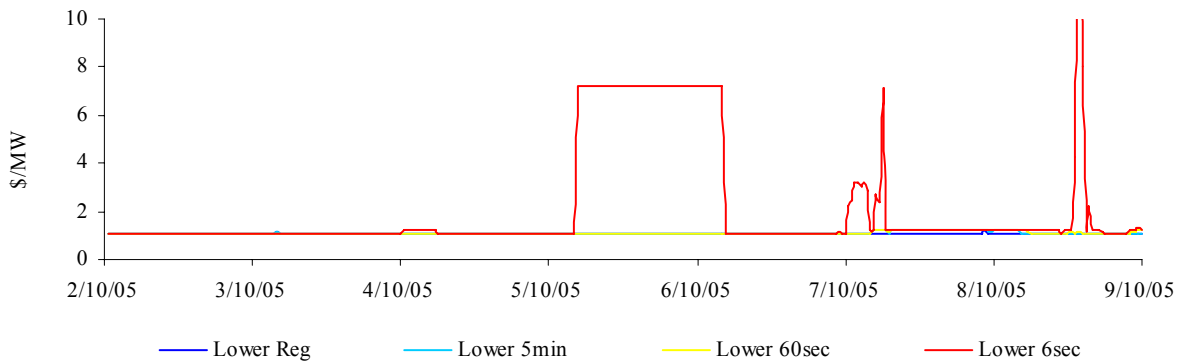


Figure 61A: prices for lower services - Tasmania



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

Figure 62: raise requirements

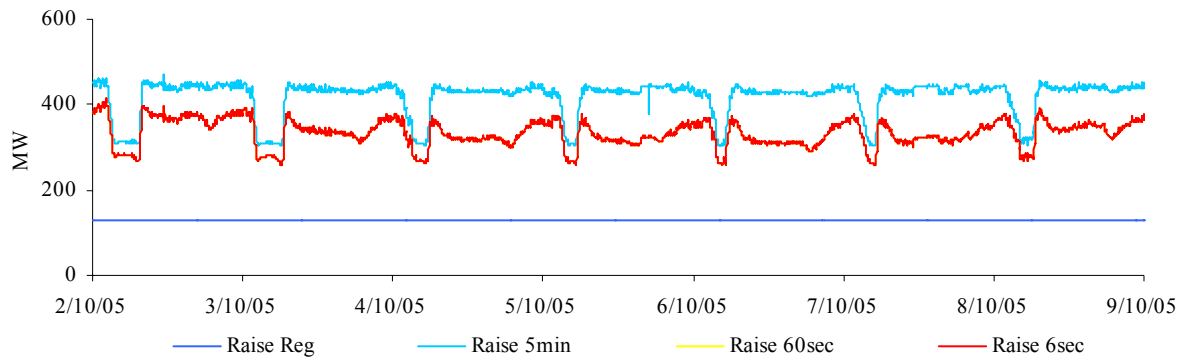


Figure 62A: raise requirements - Tasmania

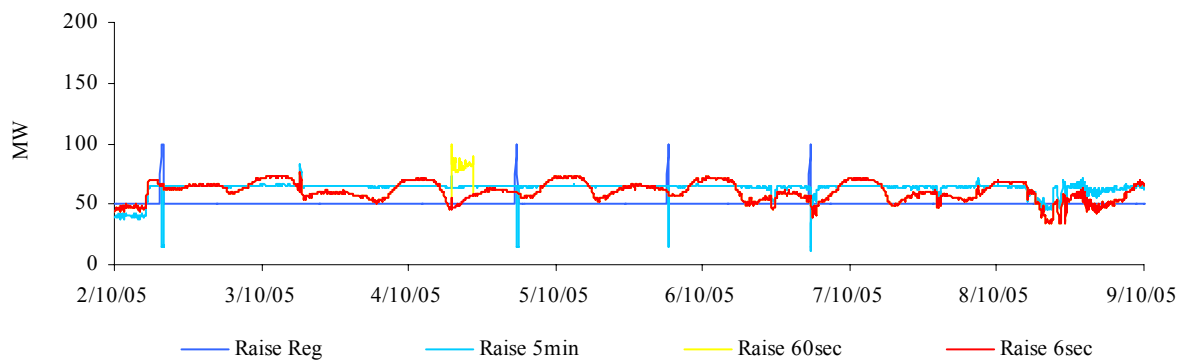


Figure 63: lower requirements

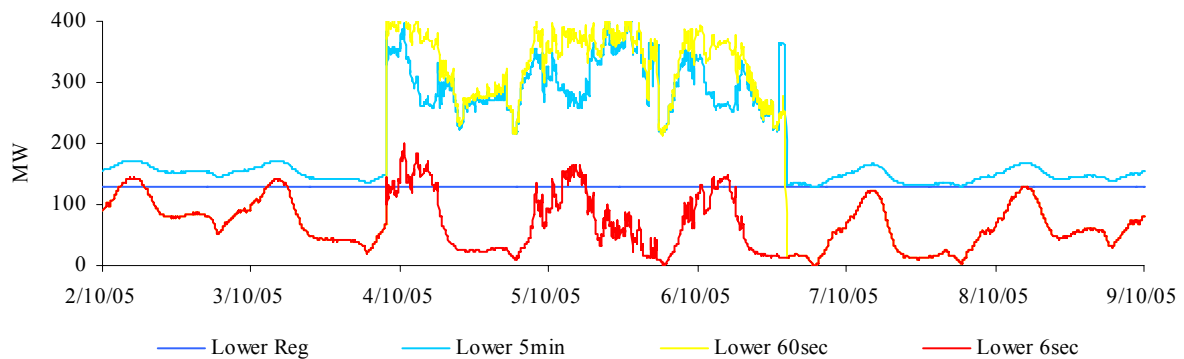


Figure 63A: lower requirements - Tasmania

