

Spot prices for the week averaged \$24/MWh in Queensland, \$27/MWh in New South Wales, \$26/MWh in Victoria and \$28/MWh in South Australia. These prices were consistent with the previous week.

In Tasmania average spot prices decreased by a third to \$66/MWh. A reduction in demand and an increase in the availability of ancillary services contributed. The 5-minute price on Friday reached \$10,000/MWh, when lightning affected network capability and reduced the availability of low priced generation. On Saturday, lightning led to the loss of three transmission lines in Tasmania’s north. Around 100MW of load was disconnected as a result.

Turnover in the energy market for the mainland was \$105 million, with a total cost of ancillary services for the week of around \$376,000 or 0.4 per cent of turnover. Turnover in Tasmania was \$13 million, with ancillary services totaling \$366,000 or three per cent of turnover.

Demand forecasts produced 4 and 12 hours ahead varied from actual by more than 5 per cent in a quarter of all trading intervals across the market. In South Australia and Tasmania demand errors occurred in around half and a third of all trading intervals respectively, on the same basis. Significant variations between forecast and actual prices occurred in 23 or 7 per cent of all trading intervals.

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 up to the end of the week. 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	27	26	28	66
Previous week	21	23	24	28	96
Same quarter last year	27	31	28	36	-
Financial year to date	21	28	29	34	108
% change from previous week	▲14%	▲16%	▲9%	▲1%	▼31%
% change from same quarter last year	▼10%	▼14%	▼7%	▼22%	-
% change from last financial year	▼21%	▼14%	2%	▼11%	-

Figure 2: national demand and spot prices

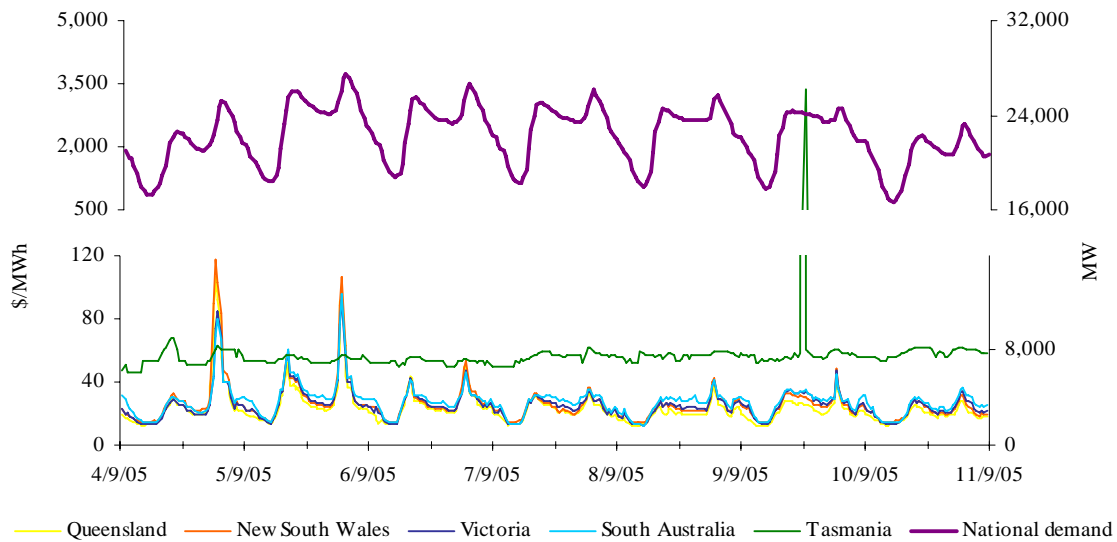


Figure 3: volatility index during peak periods

	QLD	NSW	VIC	SA	TAS
Last week	0.62	0.57	0.45	0.31	0.10
Previous week	0.50	0.56	0.57	0.44	0.59
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

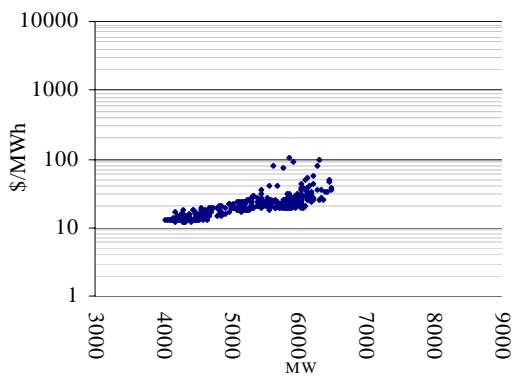


Figure 5: New South Wales

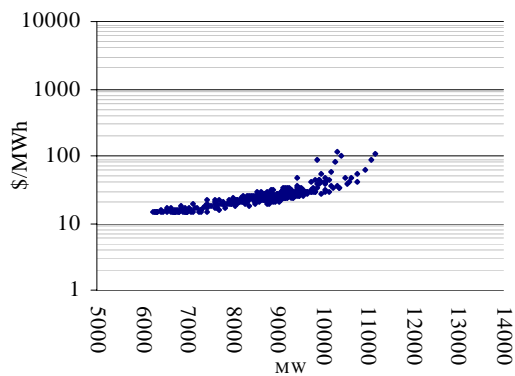


Figure 6: Victoria

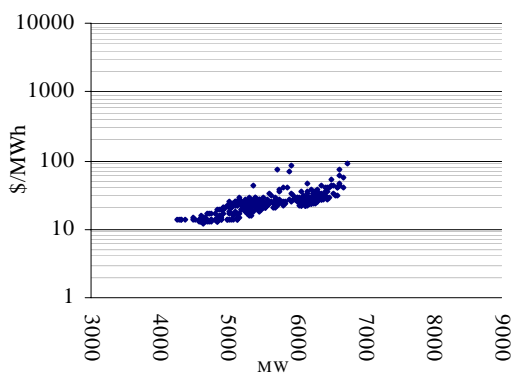


Figure 7: South Australia

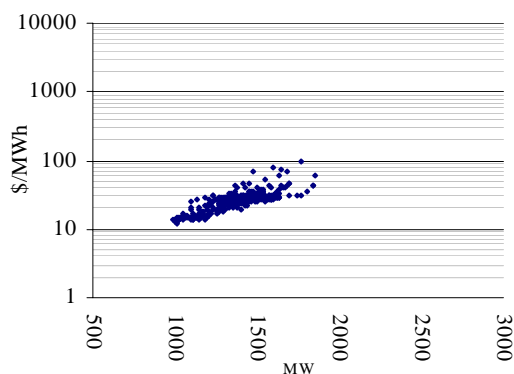
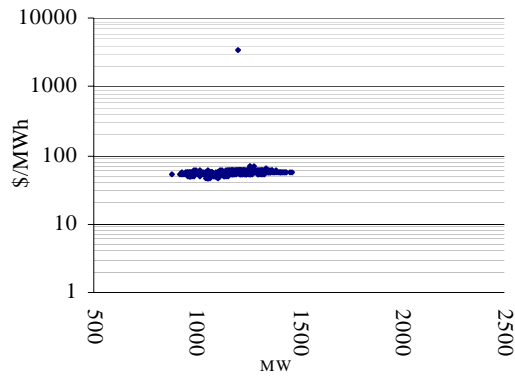


Figure 8: Tasmania



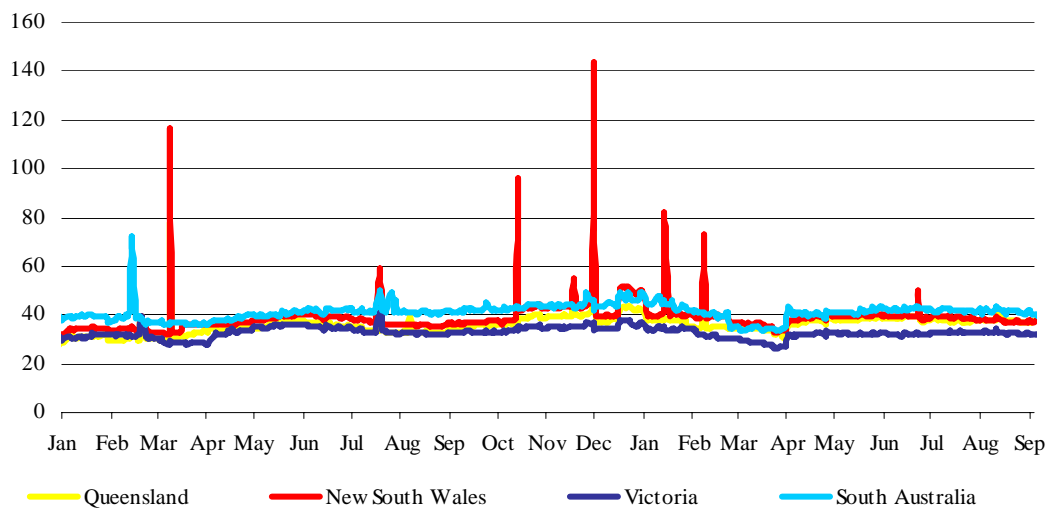
The maximum spot prices for the week across the mainland ranged from \$117/MWh in New South Wales to \$93/MWh in Victoria. These prices occurred on Sunday and Monday respectively. In Tasmania, the spot price reached \$3,373/MWh at midday on Friday.

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	37.41	37.54	37.38	37.36	37.19
New South Wales	37.52	37.35	37.03	37.15	37.14
Victoria	31.99	32.17	32.04	32.13	32.25
South Australia	40.53	39.24	40.28	41.25	40.78

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

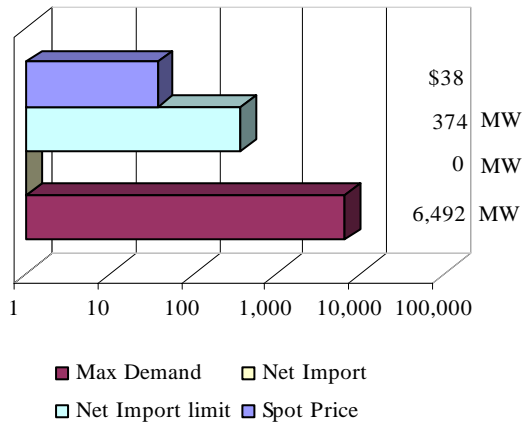


Figure 12: New South Wales

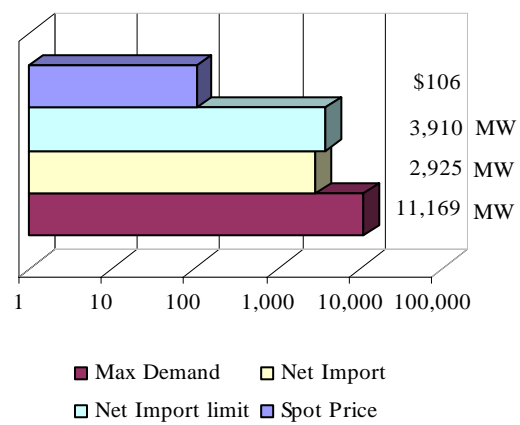


Figure 13: Victoria

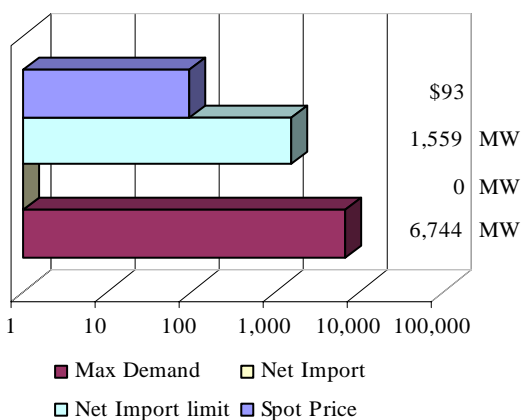
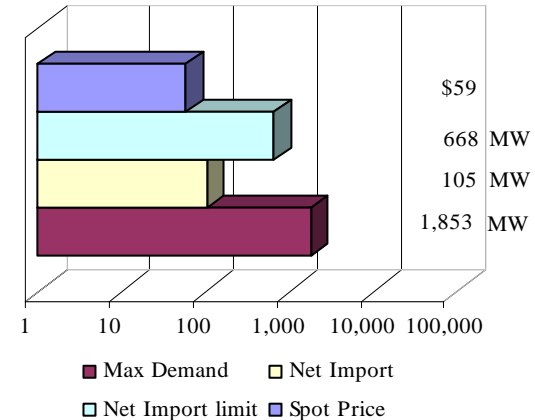


Figure 14: South Australia



In Tasmania, the demand reached a maximum of 1,463MW at 8.30am on Monday. The spot price at the time was \$55/MWh.

Price variations

There were 23 trading intervals where significant variations between forecast and actual prices occurred, calculated 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

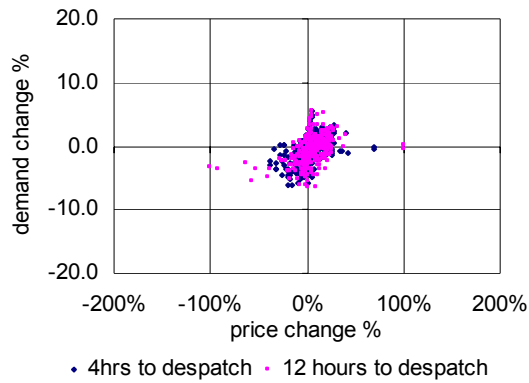


Figure 16: New South Wales

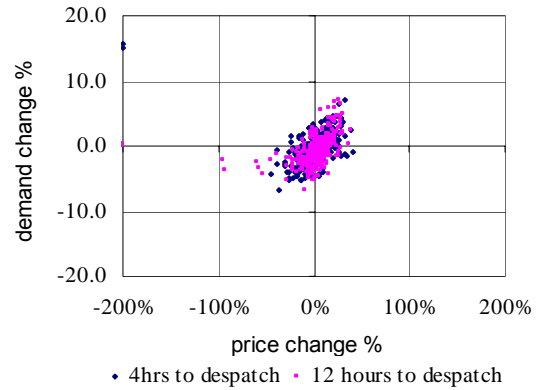


Figure 17: Victoria

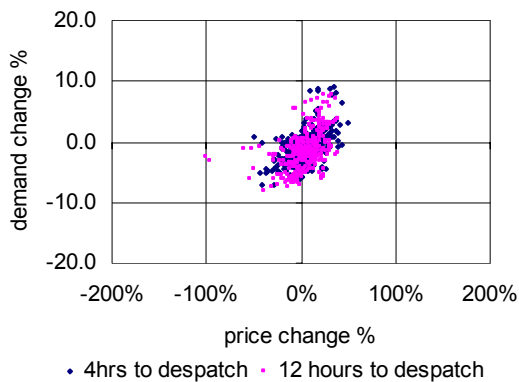


Figure 18: South Australia

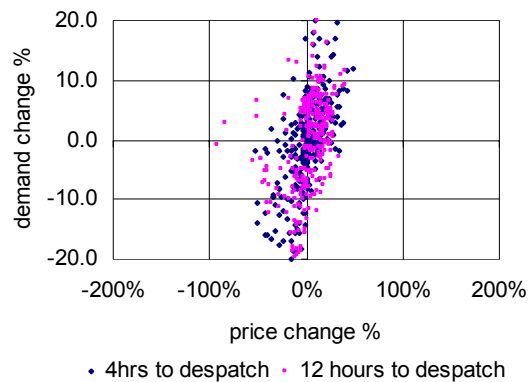


Figure 19: Tasmania

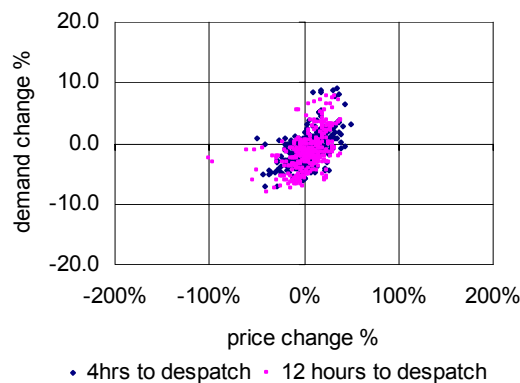
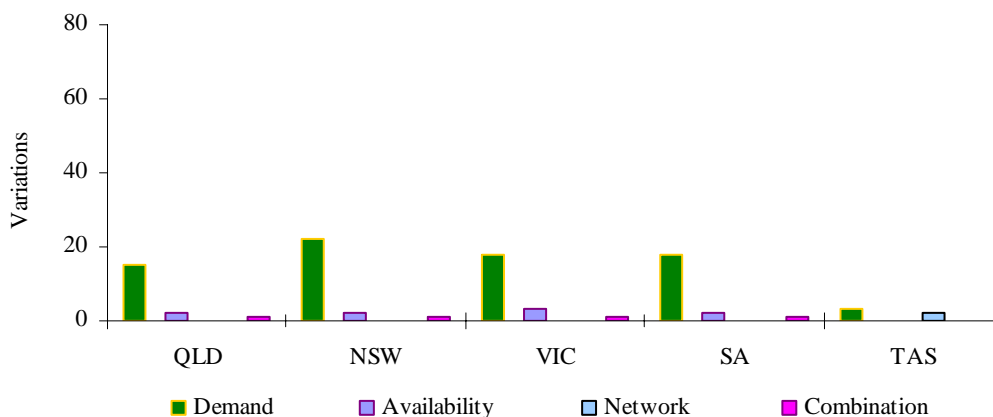


Figure 20 summarises the number and most probable reason for variations between forecast and actual prices.

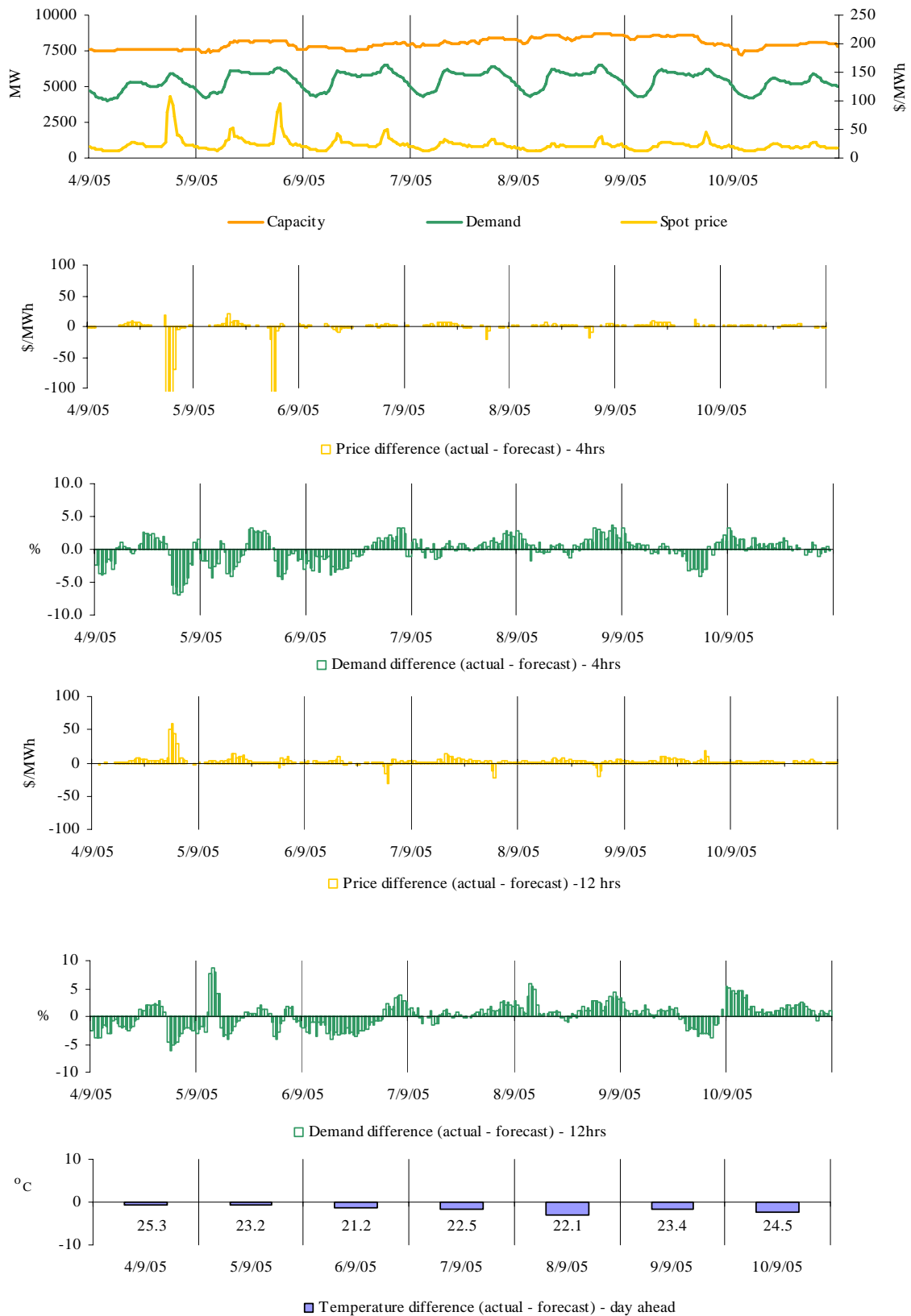
Figure 20: reasons for variations between forecast and actual prices



Price and demand

Figures 21 - 50 set out details of spot prices and demand on a regional basis. They include the actual spot price and demand outcomes and difference graphs both four and twelve 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 6 occasions in Queensland where the spot price was greater than three times the weekly average price of \$24/MWh. These occurred between 6pm and 7.30pm on Sunday and at 6.30pm and 7pm on Monday.

Sunday, 4 September

6:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	80.41	62.64	29.61
Demand (MW)	5,625	5,925	5,884
Available capacity (MW)	7,642	7,642	7,660
6:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	106.63	299.80	46.65
Demand (MW)	5,860	6,253	6,219
Available capacity (MW)	7,642	7,642	7,660
7:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	92.56	299.80	47.43
Demand (MW)	5,917	6,251	6,216
Available capacity (MW)	7,642	7,642	7,660
7:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	72.52	259.51	44.15
Demand (MW)	5,778	6,174	6,065
Available capacity (MW)	7,640	7,642	7,660

Conditions at the time saw demand as much as 400MW lower than forecast. Prices were aligned across the mainland for most of this period and were generally lower than forecast.

At 2.08pm Origin Energy committed 66MW of capacity at Roma. The rebid reason given was “Est (P) change in PDS”.

At 4.22pm, Enertrade rebid 144MW of capacity at Mt Stuart from prices above \$9,000/MWh to prices less than \$150/MWh. Of this capacity, 45MW was priced to zero. At the same time, however, 138MW of capacity was rebid from prices of less than \$50/MWh to around \$280/MWh at Gladstone. The rebid reasons given were “Amended contract position::change MW distrib” and “Portfolio rearrangement (Mt Stuart)::Change MW distrib” respectively.

There was no other significant rebidding.

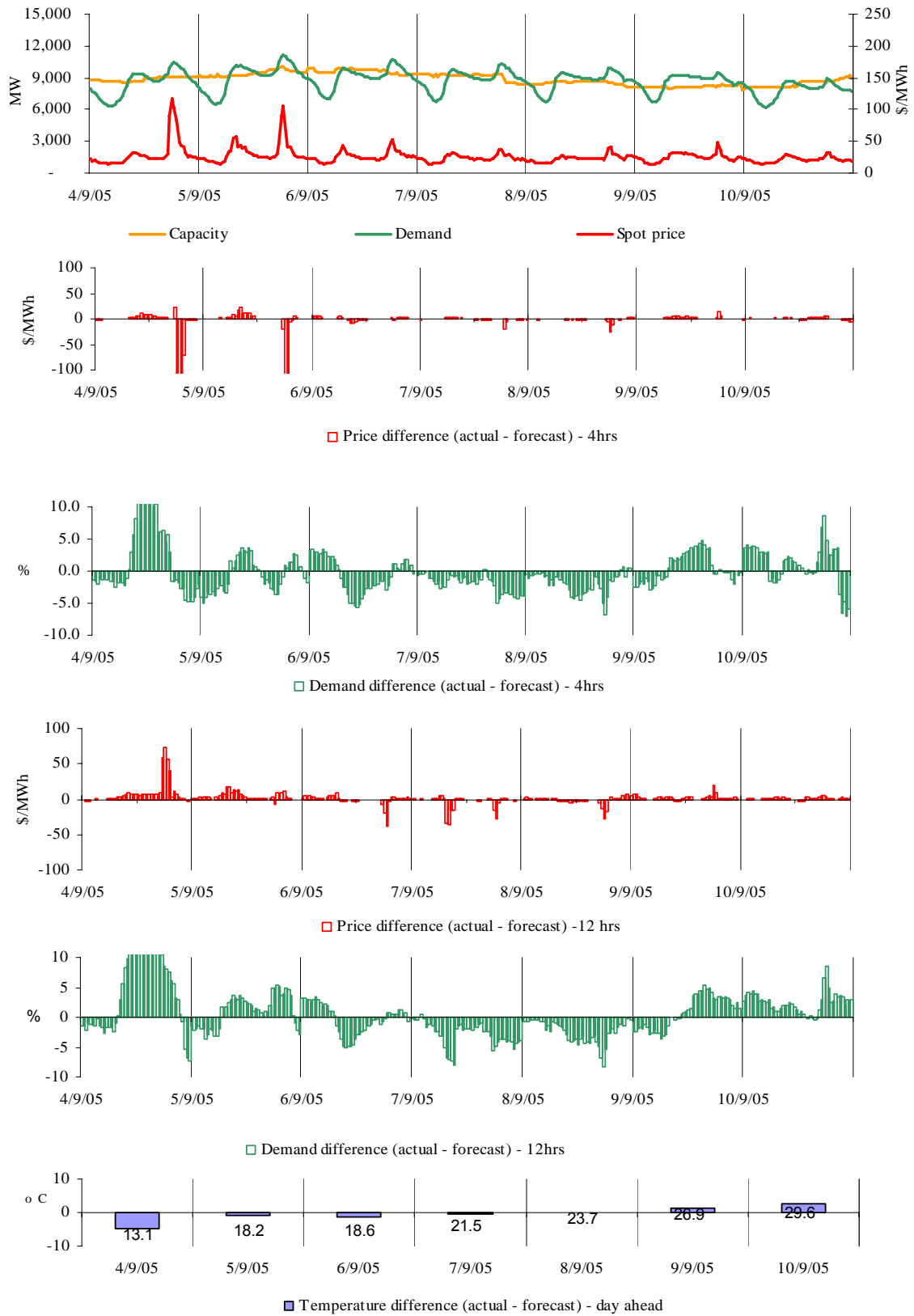
Monday, 5 September

6:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	79.11	244.89	87.09
Demand (MW)	6,287	6,553	6,541
Available capacity (MW)	8,215	8,215	8,208
7:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	94.44	243.22	87.35
Demand (MW)	6,306	6,590	6,490
Available capacity (MW)	8,215	8,215	8,208

Conditions at the time saw demand close to 300MW lower than forecast. Prices were aligned across the mainland and lower than forecast.

At 2.26pm, Origin Energy committed 66MW at Roma. The rebid reason given was ‘Est (N) change in PDS’. There was no other significant rebidding.

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



There were 6 occasions in New South Wales where the spot price was greater than three times the weekly average price of \$27/MWh. These occurred between 6pm and 7.30pm on Sunday and at 6.30pm and 7pm on Monday.

Sunday, 4 September

6:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	89.54	65.71	30.00
Demand (MW)	9,857	10,024	8,820
Available capacity (MW)	9,090	9,080	9,910
6:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	117.41	311.58	45.20
Demand (MW)	10,331	10,501	9,453
Available capacity (MW)	9,093	9,110	9,910
7:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	103.23	316.40	46.33
Demand (MW)	10,426	10,567	9,599
Available capacity (MW)	9,107	9,160	9,910
7:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	83.39	272.00	43.83
Demand (MW)	10,271	10,450	9,507
Available capacity (MW)	9,110	9,230	9,910

Conditions at the time saw demand close to 200MW lower than forecast four hours to despatch, and around 800MW higher than forecasts made earlier in the day. Prices were aligned across the mainland for most of this period and generally lower than forecast. There was a total of 150MW of capacity priced between \$25/MWh and \$250/MWh.

Delta Electricity delayed the return to service of Wallerawang unit 7 over two rebids at 11.45am and 5.26pm, effectively removing 220MW of capacity priced at less than zero. The rebid reason given was “Outage extended::capacity modification” and “RTS delayed::Capacity change”. The unit was returned to service the following morning. A number of rebids, over the course of the day, reduced the availability of Vales Point unit 5, removing as much as 120MW of capacity priced at less than zero. The rebid reasons given were ‘Dust burden::Capacity limit change’. At 4.31pm, a further rebid by Delta Electricity moved 160MW of capacity at Wallerawang unit 8 from prices above \$9,000/MWh to prices below \$30/MWh. The rebid reason given was “Price>forecast bandshift”.

At 2.24pm, Eraring Energy rebid as much as 300MW from prices of less than \$30/MWh to prices around \$9,000/MWh. The rebid reason given was ‘RRP/MW tradeoff bandshift up’.

Snowy Hydro, at 5.12pm, rebid capacity across its portfolio. Although the rebid did not alter the price of capacity offered, it moved 250MW of generation from Upper Tumut and Lower Tumut to Murray. With the prevailing conditions at the time, this had the effect of reducing the limit on the Snowy interconnector by around 200MW. The interconnector was binding during the 6.30pm trading interval at around 2,400MW. The rebid reason given was “P:Water mgmt for agg units: no change to total bi”.

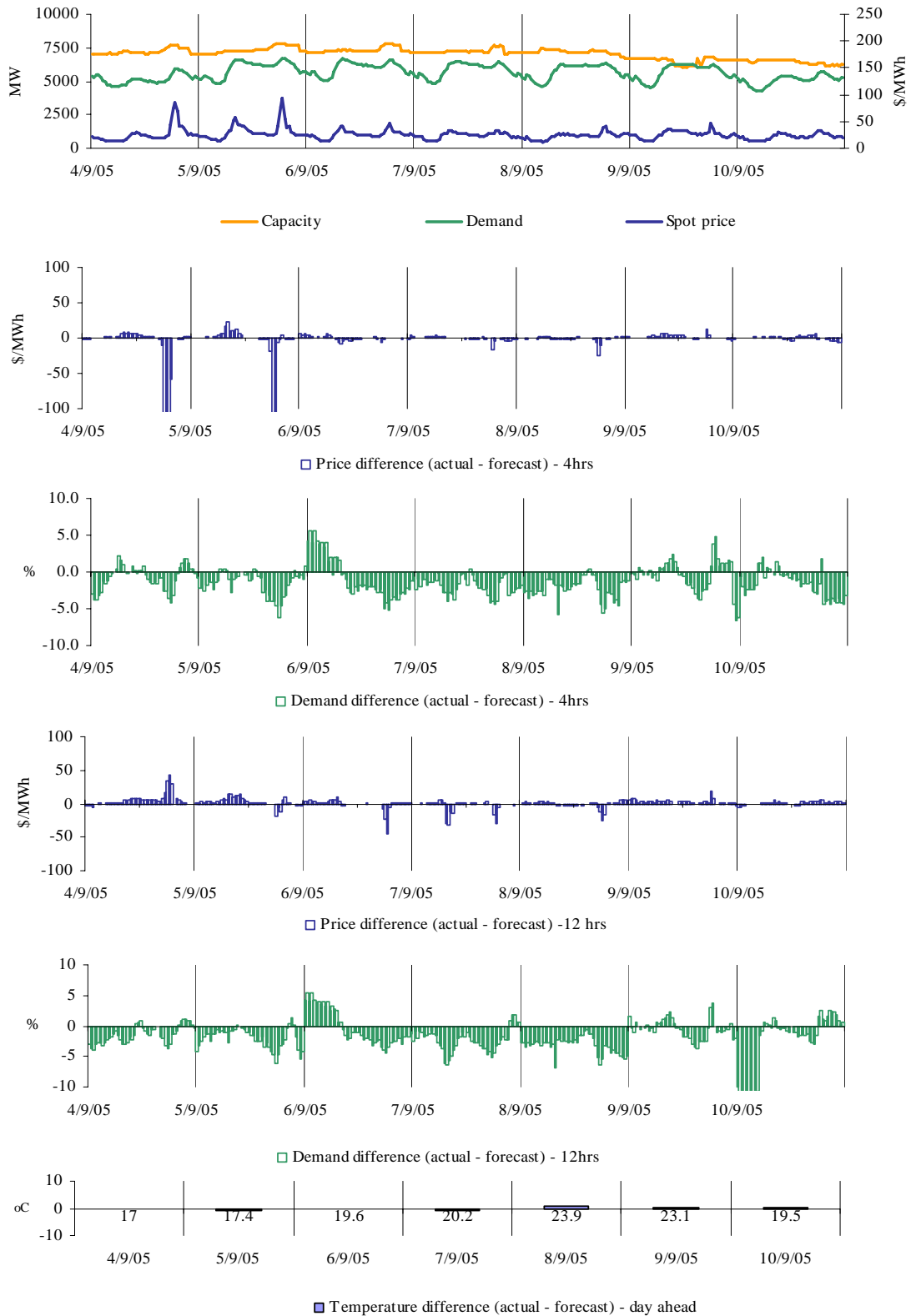
There was no other significant rebidding.

Monday, 5 September

6:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	88.63	260.00	95.71
Demand (MW)	11,059	11,151	10,524
Available capacity (MW)	9,988	9,623	10,087
7:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	106.40	260.00	96.83
Demand (MW)	11,169	11,075	10,557
Available capacity (MW)	10,009	9,653	10,087

Conditions at the time saw demand around 100MW lower than forecast four hours earlier. Prices were aligned across the mainland throughout this period and were generally lower than forecast. There was no significant rebidding.

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



There were 2 occasions in Victoria where the spot price was greater than three times the weekly average price of \$26/MWh. These occurred at 7pm on Sunday and Monday.

Sunday, 4 September

7:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	84.58	257.98	41.05
Demand (MW)	5,937	6,012	6,016
Available capacity (MW)	7,647	7,160	7,247

Conditions at the time saw demand slightly lower than forecast, with prices aligned across the mainland.

At 3.23pm, Ecogen committed Newport for the evening peak. At 4.11pm, 100MW was rebid to prices below \$50/MWh from prices of \$300/MWh or more. The rebid reasons given were “Adj unit commitment schedule due to PD conditions” and “Band adj due to contractual change (short notice)”, respectively.

Over a number of rebids, throughout the day, International Power reduced the availability of Hazelwood by around 120MW for the 7pm trading interval. The rebid reasons given included “Turbine limitation”, “Fuel limitation”, “draft plant limit”, “firing plant limit” and “condensate system limit”. Most of this capacity was priced at less than \$20/MWh.

There was no other significant rebidding.

Monday, 5 September

7:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	92.55	231.10	98.40
Demand (MW)	6,744	6,974	6,968
Available capacity (MW)	7,756	7,832	7,322

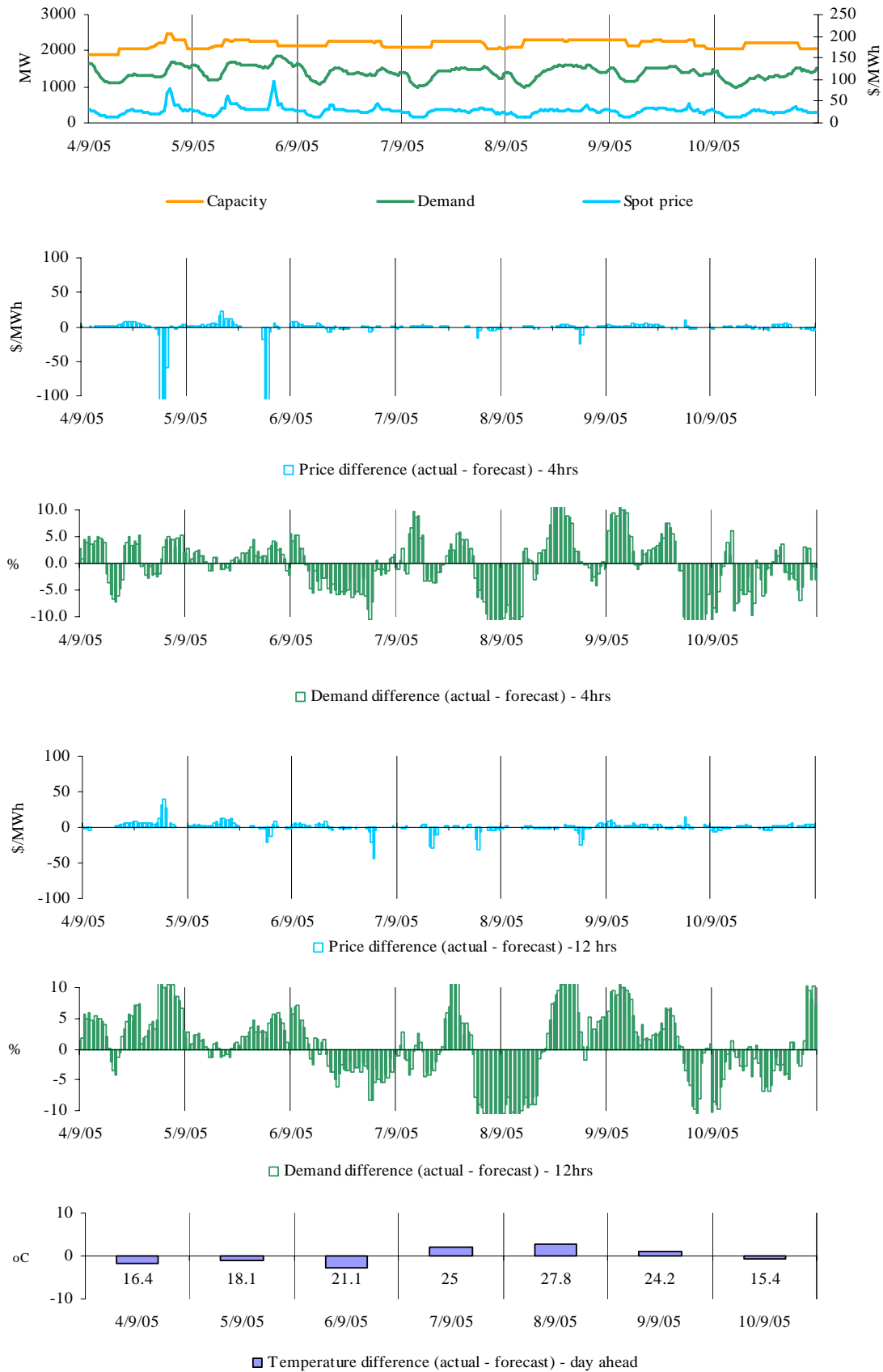
Conditions at the time saw demand around 200MW lower than forecast, with prices aligned across the mainland.

Over a number of rebids, through out the day, International Power reduced the availability of Hazelwood by around 160MW. The rebid reasons given included “Turbine limitation”, “Fuel limitation”, “draft plant limit”, “firing plant limit”, “condensate system limit”, “feed water system fault” and “plant limit relieved”. Most of this capacity was priced at less than \$20/MWh.

From midday, Ecogen committed around 280MW of capacity at Jeeralang. This followed the earlier commitment of 400MW at Newport. The rebid reasons given were “Redist of load due to portfolio plant limits”, “Adj to unit commitment due to PD conditions” and “Band adjustment to market conditions”. At 5.23pm, Jeeralang unit A4 was rebid unavailable. The rebid reason given was “Test bid close”.

There was no other significant rebidding.

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



There was one occasion in South Australia where the spot price was greater than three times the weekly average price of \$28/MWh. This occurred at 7pm on Monday.

Monday, 5 September

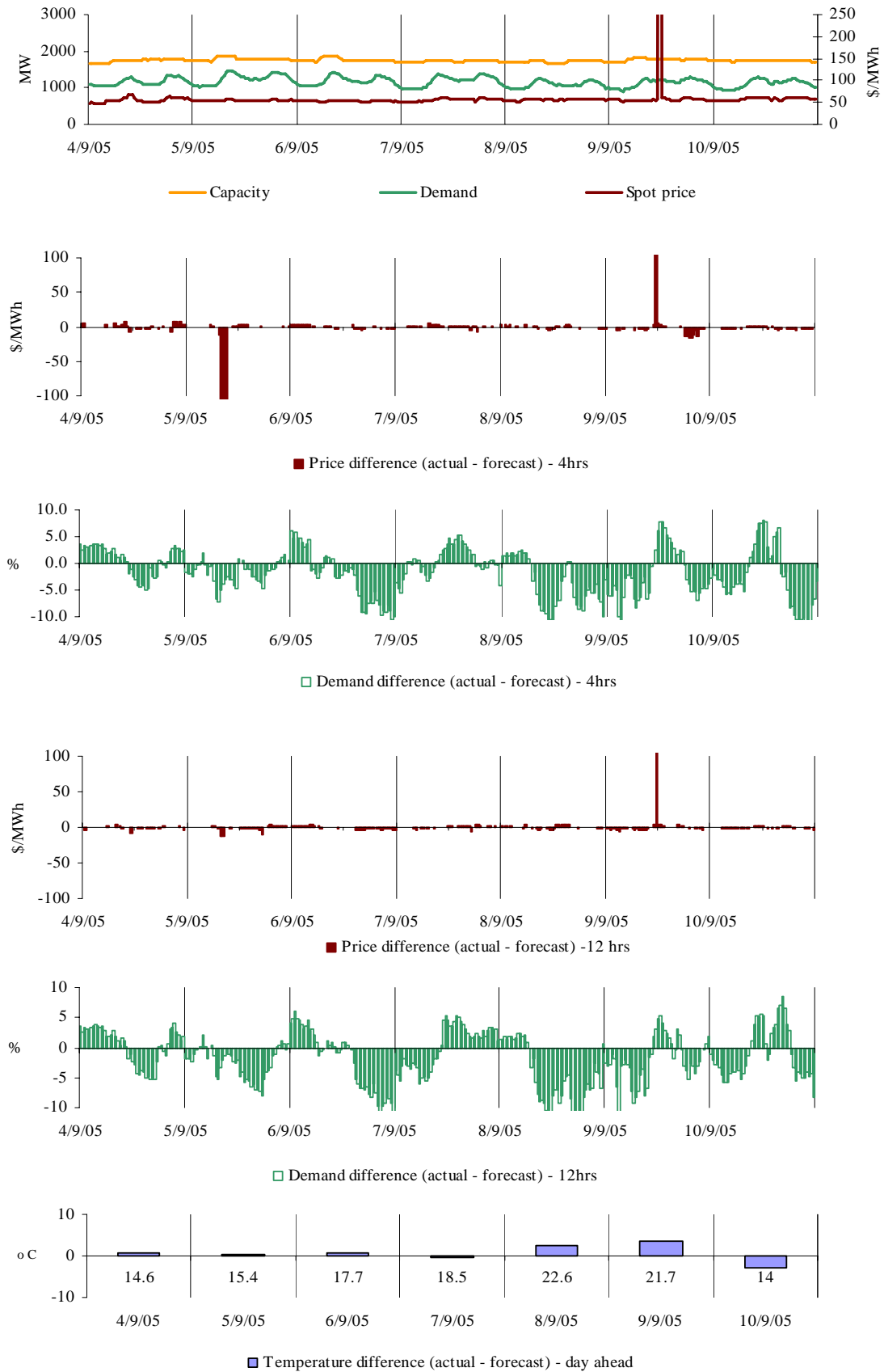
7:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	95.40	237.04	103.07
Demand (MW)	1,769	1,760	1,737
Available capacity (MW)	2,263	2,268	2,297

Conditions at the time saw demand close to forecast. Prices were aligned across the mainland and lower than forecast.

At 2,26pm, Origin Energy committed 92MW of capacity at Quarantine. This capacity had previously been priced at \$9,000/MWh. The rebid reason given was “Est (N) change in PDS”.

There was no other significant rebidding.

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



There was one occasion in Tasmania where the spot price was greater than three times the weekly average price of \$66/MWh. This price occurred at midday on Friday.

Friday, 9 September

12:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	3,373.36	55.30	55.30
Demand (MW)	1,205	1,131	1,167
Available capacity (MW)	1,775	1,780	1,780

Conditions at the time saw demand close to forecast. At 11.40am, following advice from Transend that lightning was in the vicinity of the two Farrell to Sheffield lines, NEMMCO reclassified the coincident loss of both lines as credible. Constraints were invoked to manage this reclassification.

These constraints reduced generation at Mackintosh and Reece 1 by 130MW. At the same time the requirement for raise 6 second service was increased by 70MW, and 70MW of capacity from the raise 6 second market that had been available was constrained away. As a result, the 6 second requirement could not be met for the 11.40 and 11.45am despatch intervals. The price was capped at \$10,000/MW. The energy price was set at \$10,000/MWh as a result of tradeoffs between high priced energy offers at Devils Gate and ancillary services offers from Gordon.

At 11.50am, Hydro Tasmania rebid the ancillary service offer profile for Gordon in the lower and raise 6 second services, which relieved the shortfall in ancillary services.

There was no other significant rebidding.

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

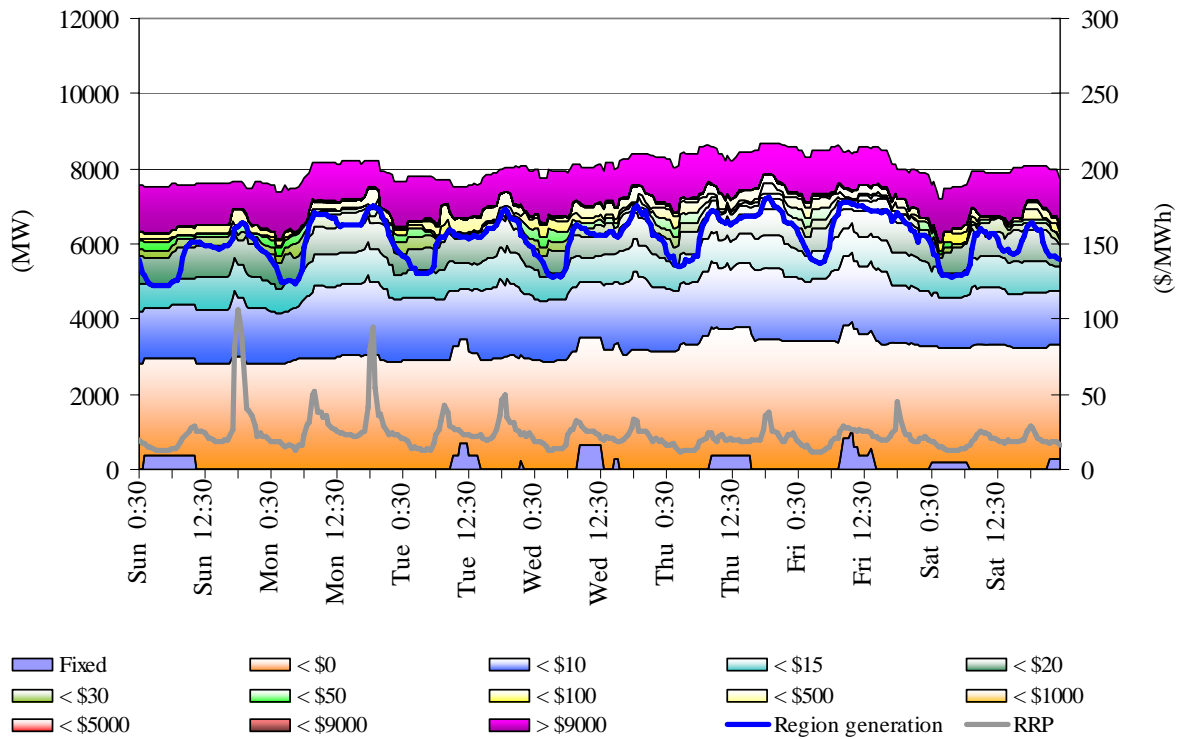


Figure 52: New South Wales closing bid prices, despatched generation and spot price

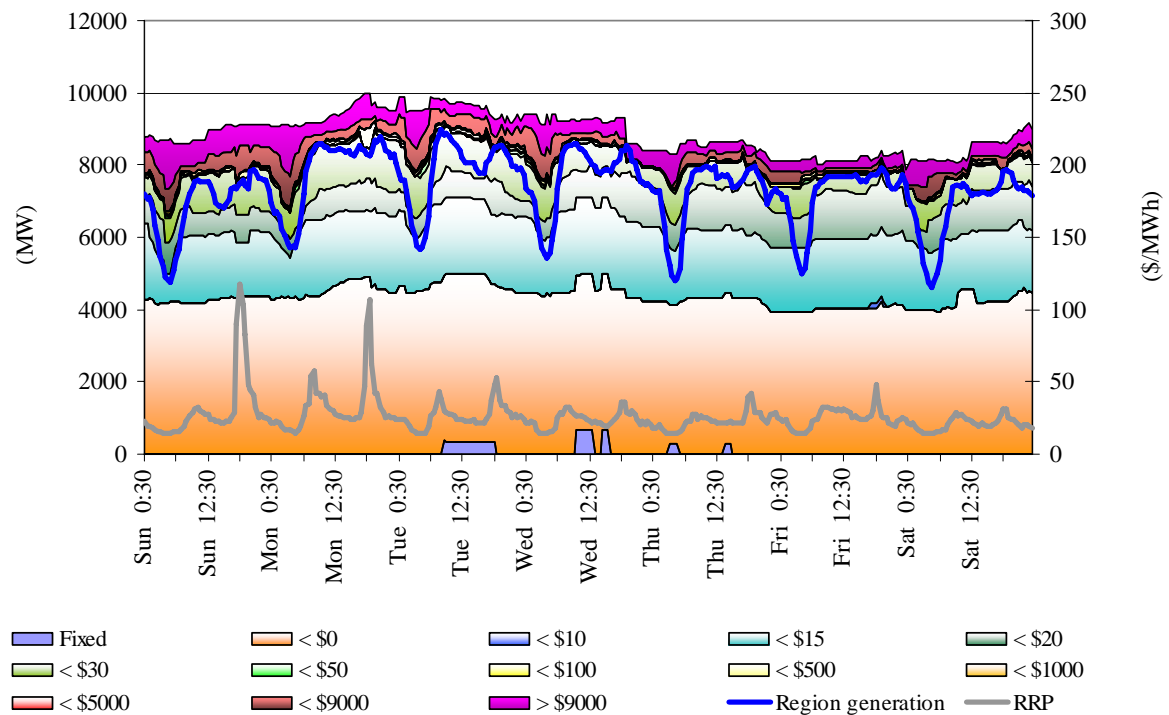


Figure 53: Victoria closing bid prices, despatched generation and spot price

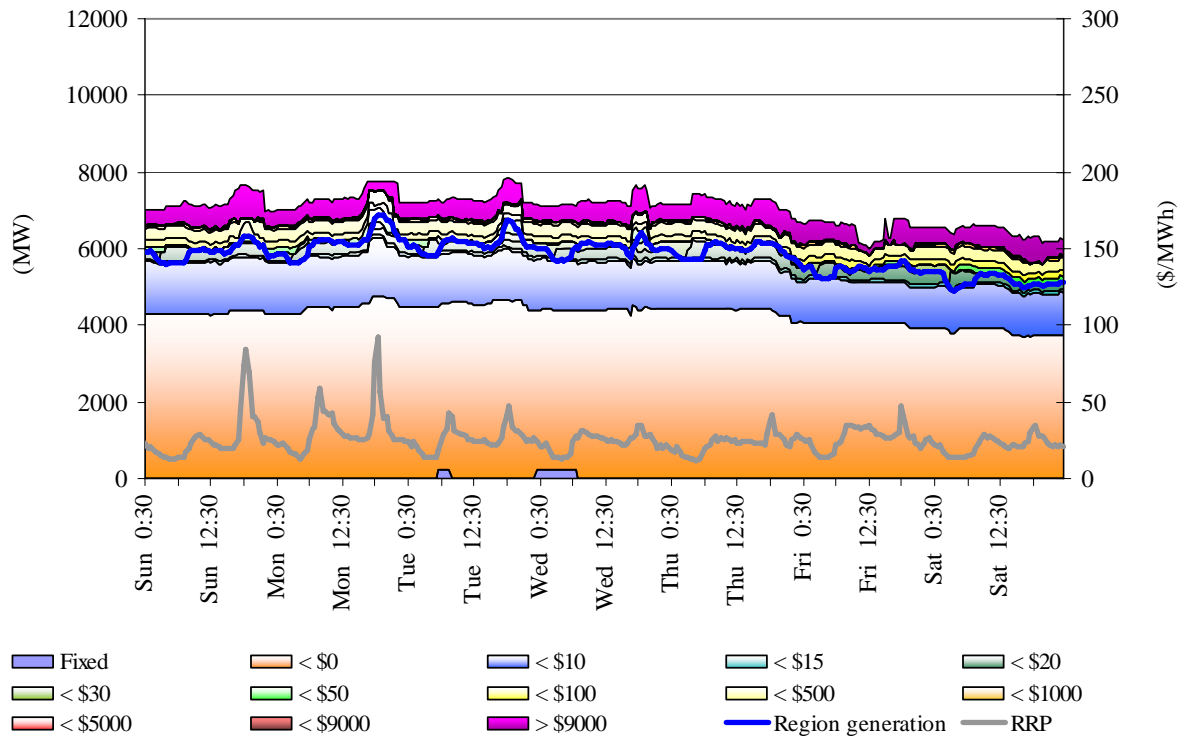


Figure 54: South Australia closing bid prices, despatched generation and spot price

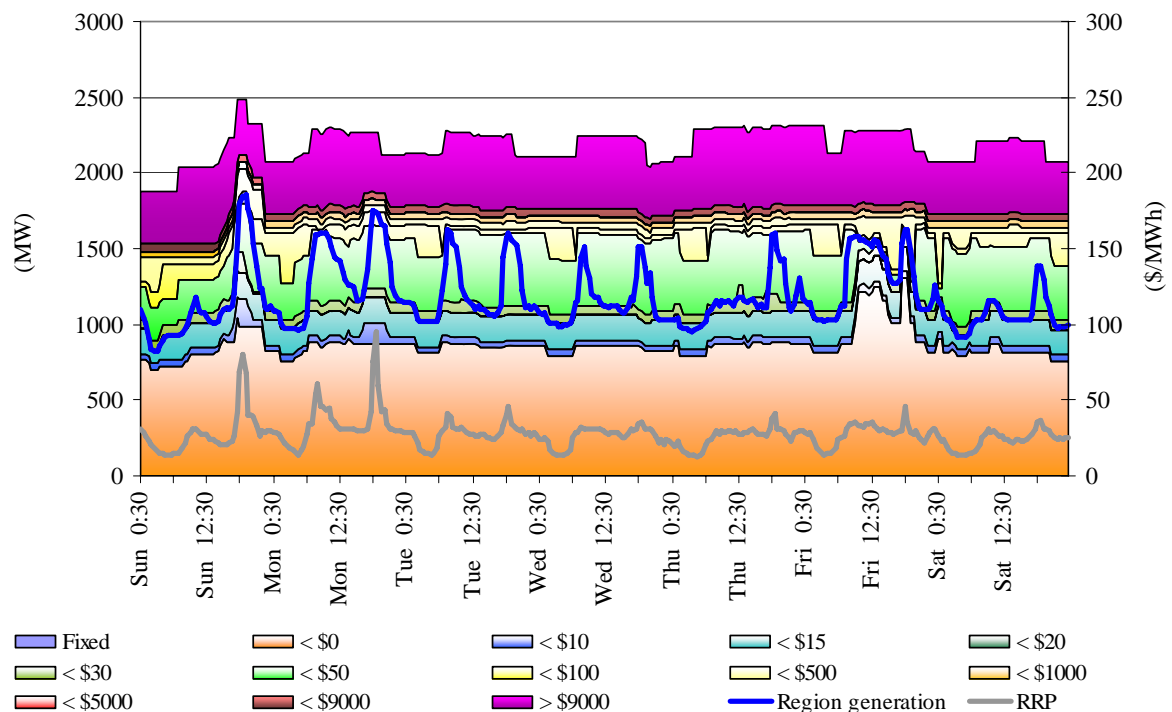
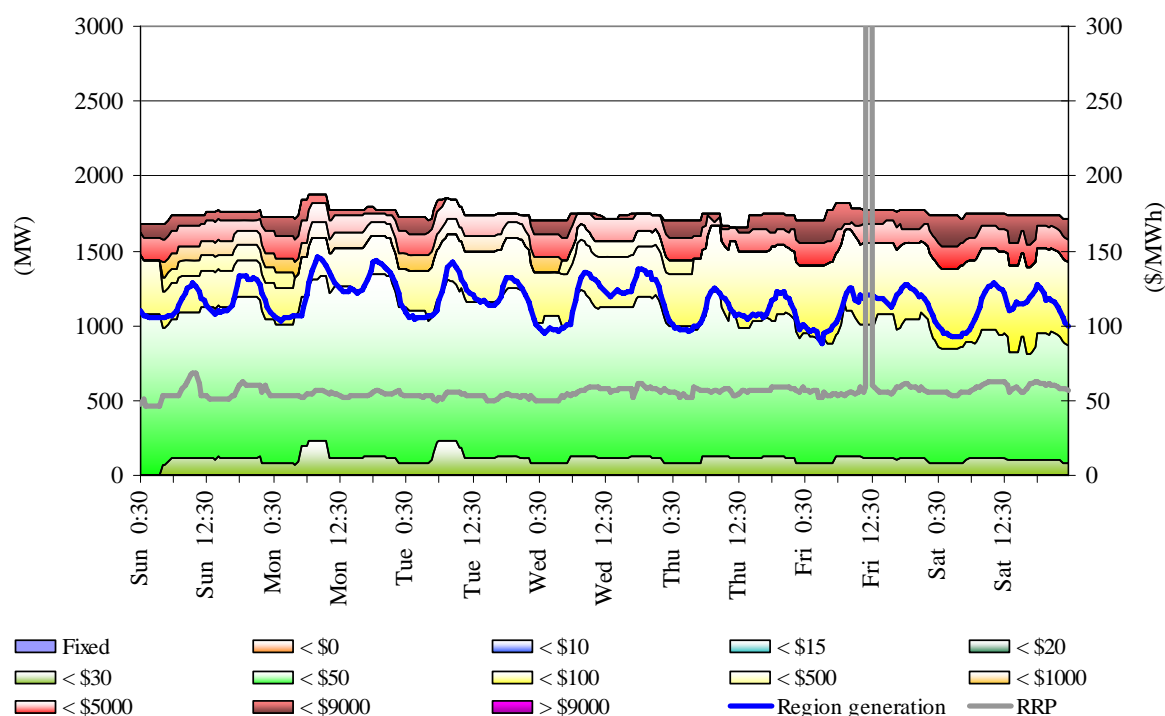


Figure 55: Tasmania closing bid prices, despatched generation and spot price



Ancillary service market

The total cost of ancillary services on the mainland for the week was \$376,000 or 0.4 per cent of the total turnover in the energy market. A short notice outage in Victoria on Monday led to an increased requirement for lower 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
Last week (\$)	1.97	1.47	1.13	1.42	0.21	0.29	1.36	1.47
Previous week(\$)	1.45	0.93	0.95	0.99	0.20	0.23	1.31	1.59
Last Quarter(\$)	1.43	0.69	0.98	1.36	0.16	0.12	1.16	1.58
Market Cost (\$1000s)	\$111	\$83	\$81	\$31	\$2	\$3	\$34	\$32
% of energy market	0.12%	0.09%	0.09%	0.03%	0.00%	0.00%	0.04%	0.03%

In Tasmania, ancillary services totaled \$366,000 or three per cent of turnover. The price for raise 6 second reached \$10,000/MW at 11.40am and 11.45am on Friday when the requirement was not met. Constraints invoked to manage the loss of both Farrell to Sheffield lines to lightning increased the requirement for raise 6 second by around 70MW and removed around 70MW, or half of the total availability of raise 6 second in the region .

On Wednesday, despatch for raise and lower regulation was zero as a result of a failure of the SCADA system. The price for these services reached \$10,000/MWh at the time. This had no impact on the cost of these services for the week. Figure 57 summarises the Tasmanian prices and costs.

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 (\$)	13.36	1.05	1.06	1.06	13.39	1.07	1.06	1.11
Previous week(\$)	54.01	1.05	1.05	4.98	13.61	1.06	1.06	1.25
Market Cost (\$1000s)	\$100	\$8	\$9	\$9	\$173	\$32	\$26	\$9
% of energy market	0.78%	0.06%	0.07%	0.07%	1.34%	0.25%	0.20%	0.07%

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

Figure 58: daily frequency control ancillary service costs

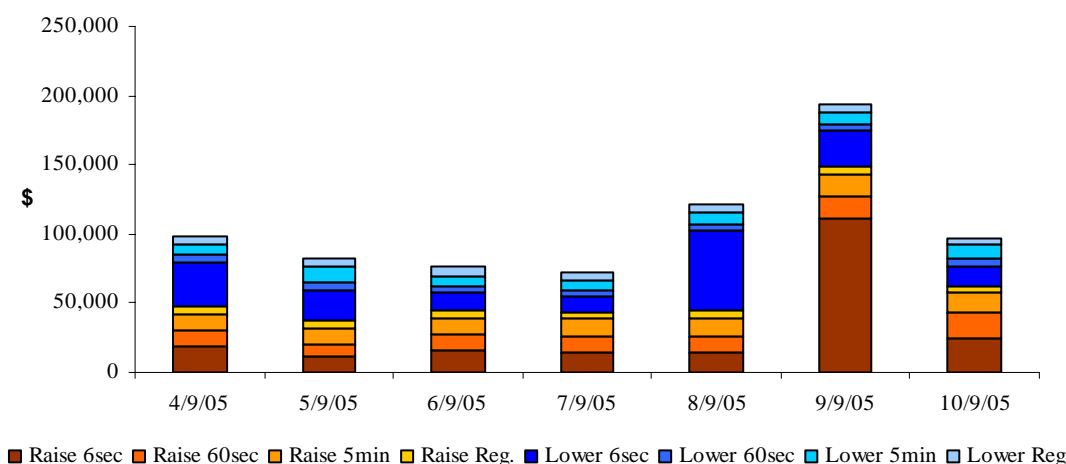
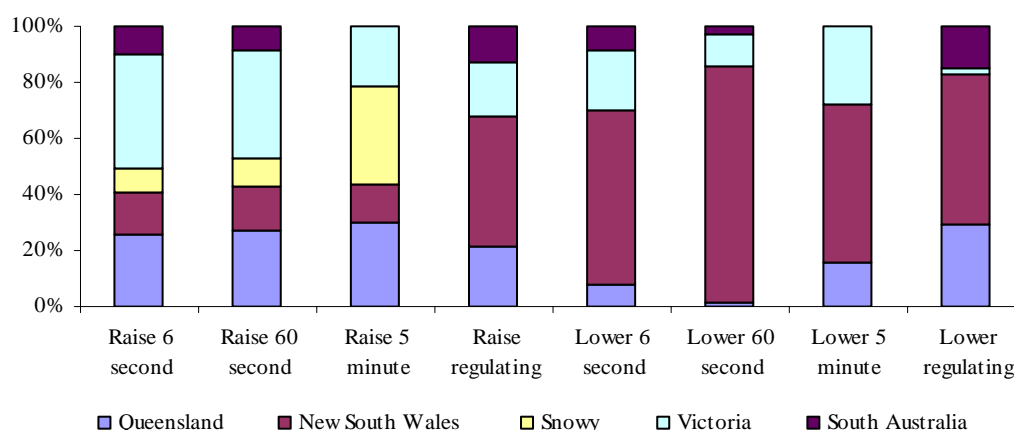


Figure 59 shows the regional weekly participation in each of the ancillary service markets on the mainland.

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

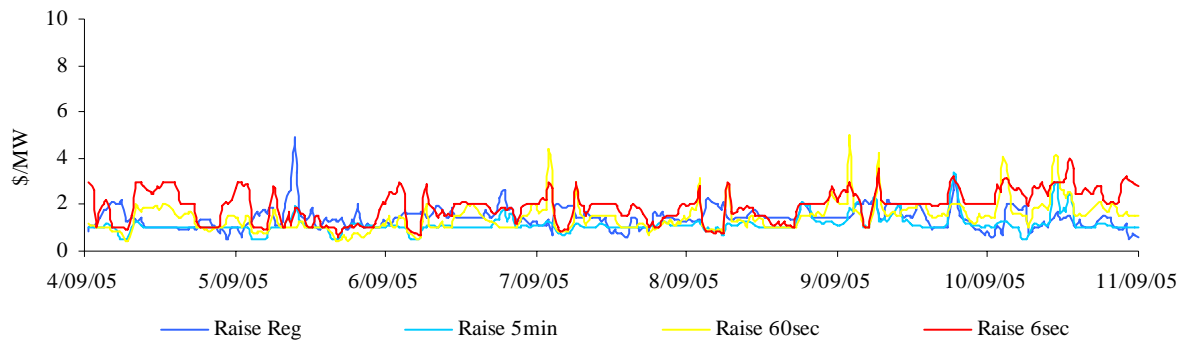


Figure 60A: prices for raise services - Tasmania

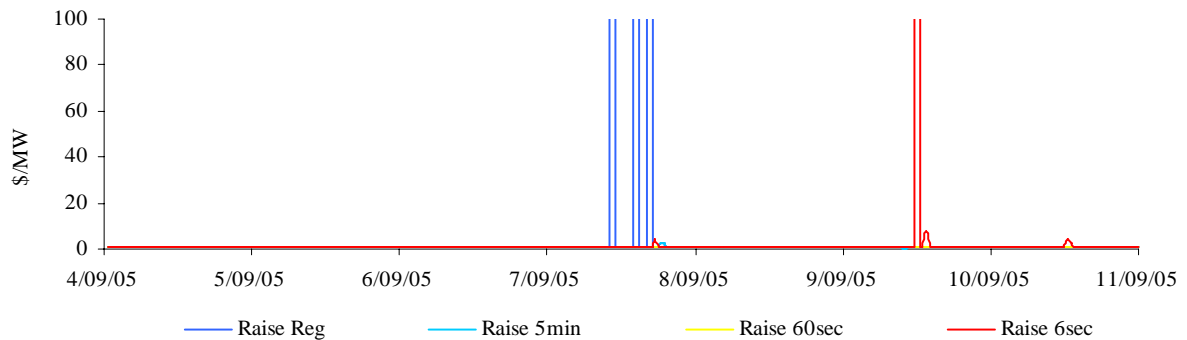


Figure 61: prices for lower services

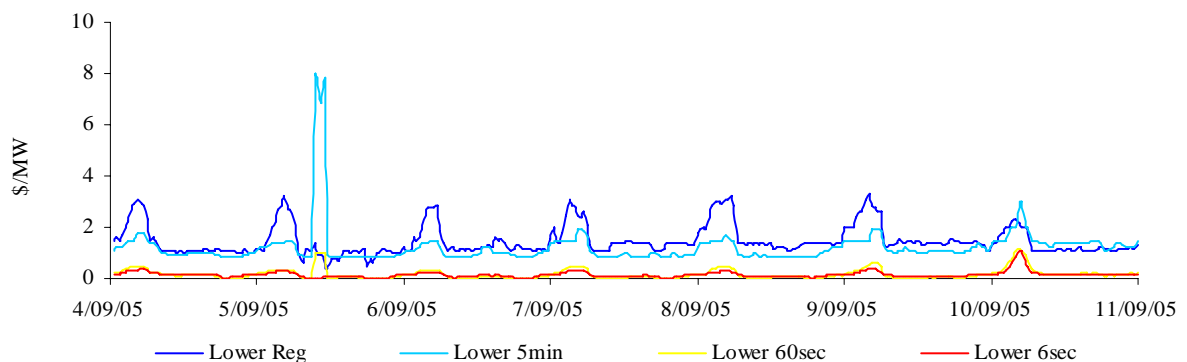
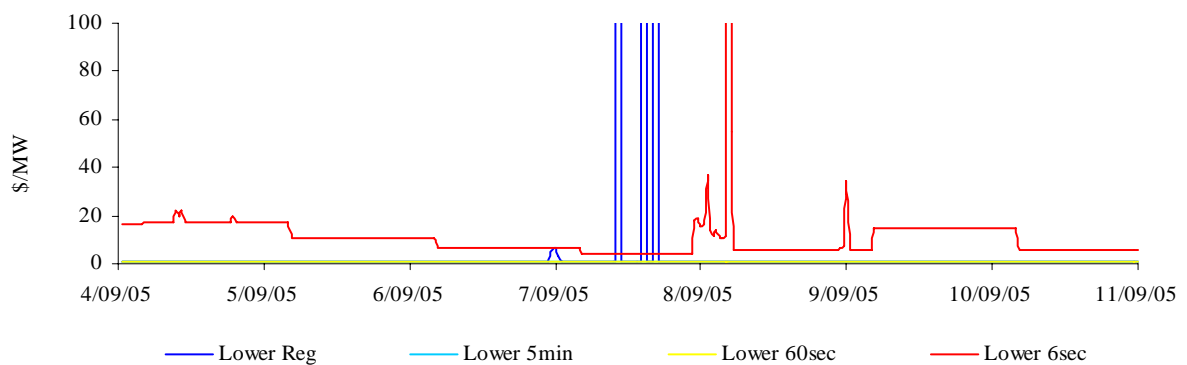


Figure 61A: prices for lower services - Tasmania



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

Figure 62: raise requirements

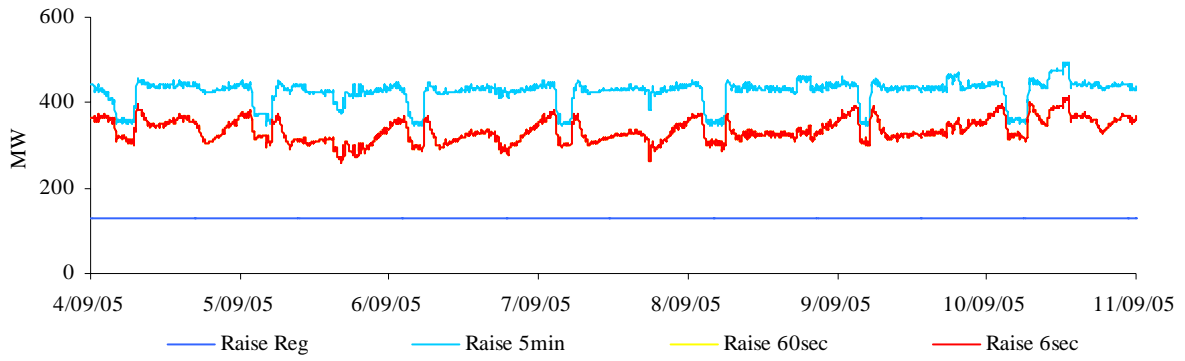


Figure 62A: raise requirements - Tasmania

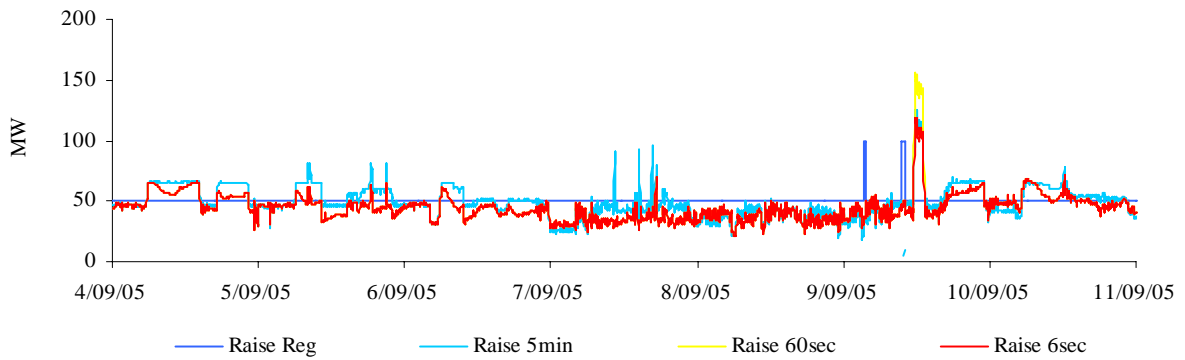


Figure 63: lower requirements

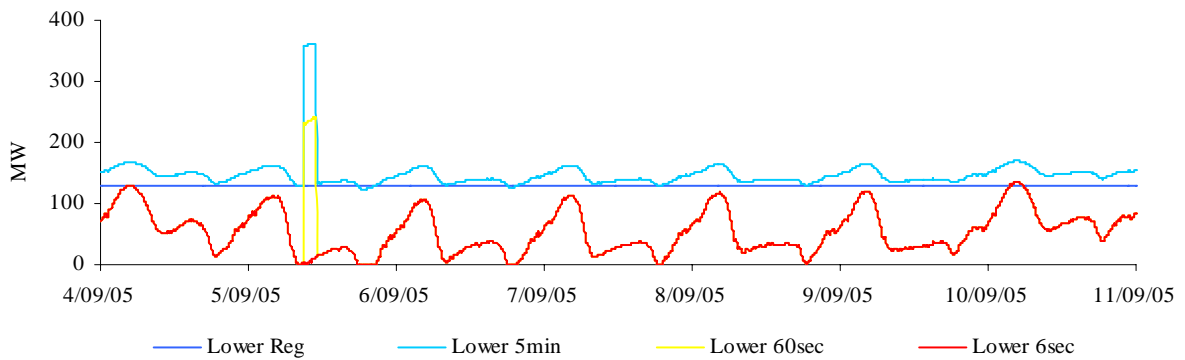


Figure 63A: lower requirements - Tasmania

