

7 MAY – 13 MAY 2006

Spot prices were aligned across the market for around 80 per cent of the time, averaging between \$21/MWh in Queensland and \$27/MWh in Tasmania for the week. The spot price in South Australia averaged \$47/MWh, primarily as a result of two high prices on Monday which coincided with planned network outages affecting the Heywood and Murraylink interconnectors.

Turnover in the energy market was \$99 million. The total cost of ancillary services for the week, including Tasmania, was \$1 million, or more than twice the recent average cost. This increase was driven mostly by a single event on Saturday in Tasmania involving Basslink.

Significant variations between actual prices and those forecast 4 and 12 hours ahead occurred in 37, or around 11 per cent of all trading intervals. Demand forecasts produced 4 and 12 hours ahead varied from actual by more than 5 per cent in a fifth of all trading intervals across the market. These variations were most frequent in South Australia, occurring in more than half of all trading intervals. In Queensland, all demand forecasts made 4 and 12 hours ahead were within 5 per cent of the actual demand.

Energy prices

Figure 1 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: national demand and spot prices

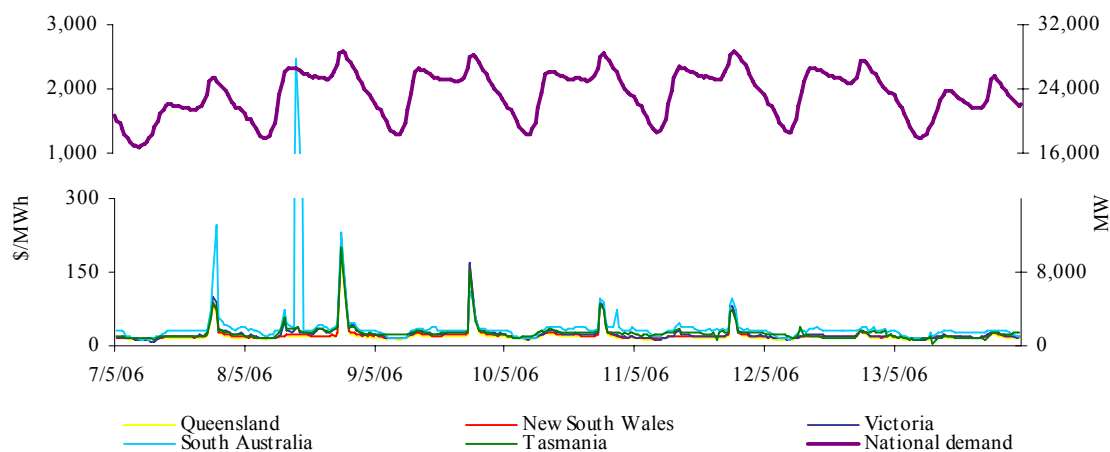


Figure 2: volume weighted average spot price for energy market (\$/MWh)

	QLD	NSW	VIC	SA	TAS
Last week	21	23	26	47	27
Previous week	18	20	22	26	22
Same quarter last year	23	28	27	36	-
Financial year to date	32	45	36	44	62
% change from previous week*	▲18%	▲16%	▲20%	▲80%	▲25%
% change from same quarter last year**	▼8%	▼17%	▼4%	▲34%	-
% change from year to date***	▼2%	▼11%	▲23%	▲9%	-

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

**The percentage change between last week's average spot price and the average price for the same quarter last year.

***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 3: volatility index during peak periods

	QLD	NSW	VIC	SA	TAS
Last week	0.39	0.39	0.52	0.41	0.48
Previous week	0.25	0.23	0.27	0.26	0.30
Same quarter last year	0.73	0.74	0.78	0.70	-

A definition of the price volatility index is available on the AER website.

<http://www.aer.gov.au/content/index.phtml/tag/MarketSnapshotLongTermAnalysis>

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

Figure 4: Queensland

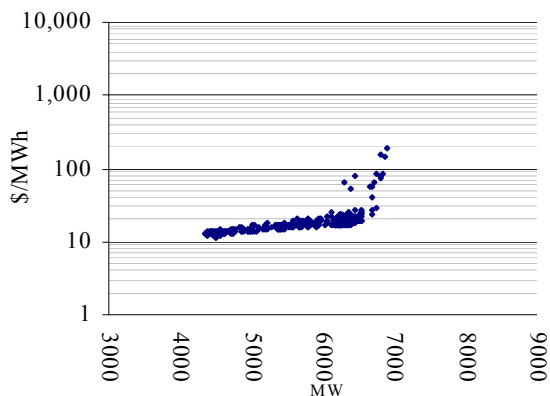


Figure 5: New South Wales

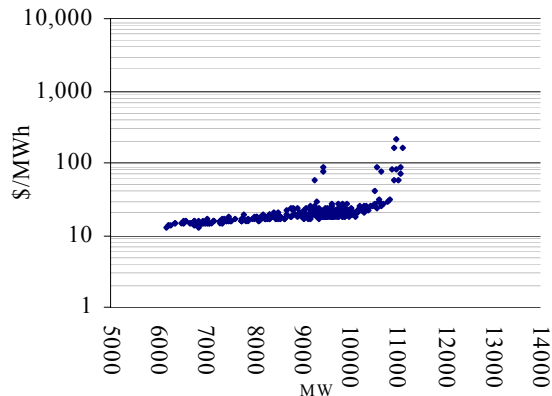


Figure 6: Victoria

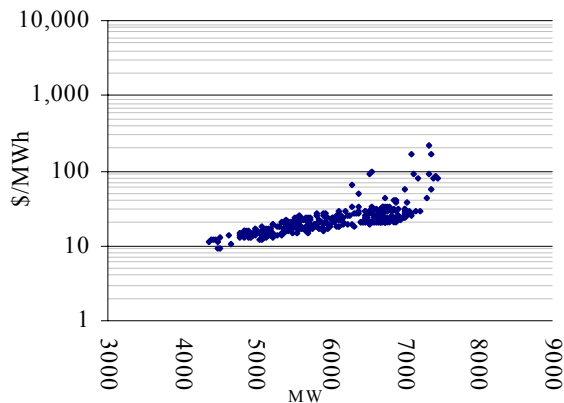


Figure 7: South Australia

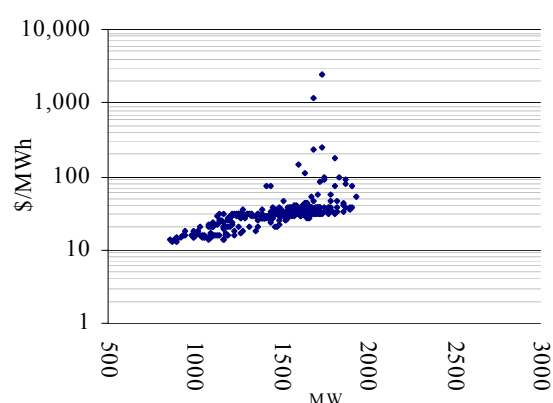
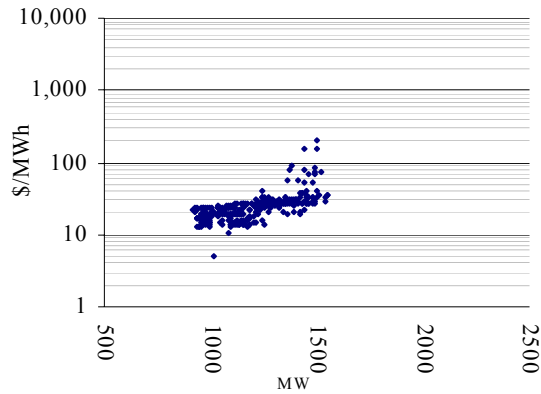


Figure 8: Tasmania



Maximum spot prices for the week were \$191/MWh in Queensland, \$198/MWh in Tasmania, \$206/MWh in New South Wales and \$218/MWh in Victoria, all occurring at 6pm on Monday. In South Australia the maximum spot price reached \$2467/MWh on Monday at 10 am during the commencement of planned network outages affecting the Heywood and Murraylink interconnectors.

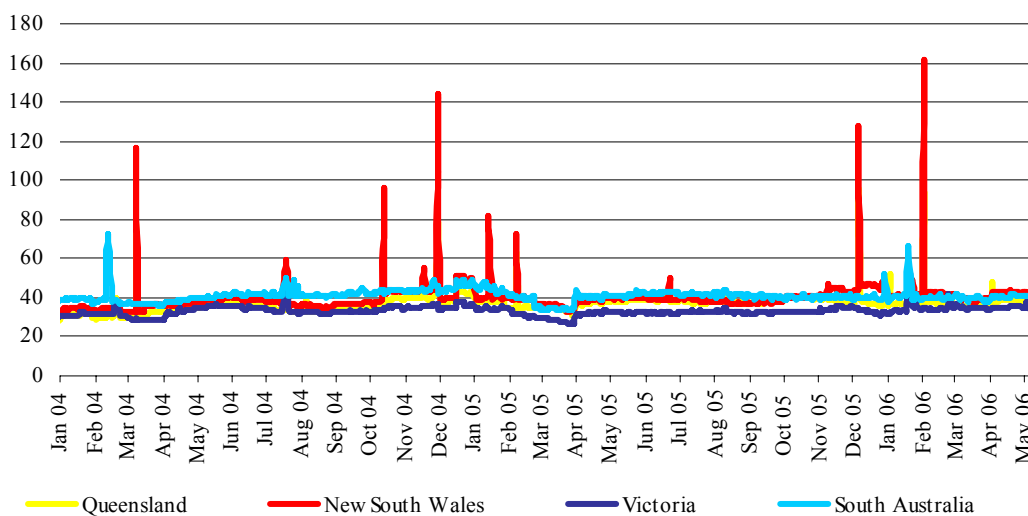
Figure 9 sets out the d-cyphaTrade wholesale electricity price index (WEPI)* for each region throughout the week excluding Tasmania. Figure 10 sets out the WEPI since 1 January 2004.

Figure 9: d-cyphaTrade WEPI for the week

	Monday	Tuesday	Wednesday	Thursday	Friday
Queensland	38.38	37.70	37.55	37.50	37.50
New South Wales	42.88	43.40	41.62	42.00	41.93
Victoria	34.32	34.24	34.28	34.33	33.98
South Australia	41.31	40.86	41.49	41.13	40.41

* A definition of the wholesale electricity price index is available on the d-cyphaTrade website http://www.d-cyphatrade.com.au/products/wholesale_electricity_price_i

Figure 10: d-cyphaTrade WEPI



Reserve

There were no low reserve conditions forecast.

Figures 11 to 15: spot price, net import and limit at time of weekly maximum demand

Figure 11: Queensland

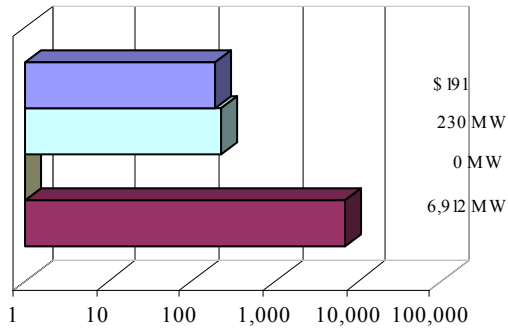


Figure 12: New South Wales

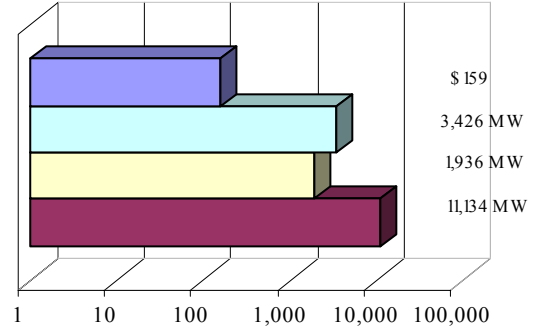


Figure 13: Victoria

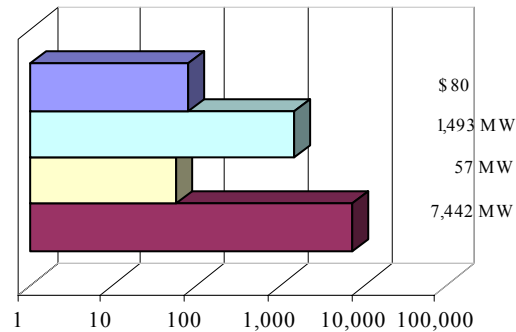


Figure 14: South Australia

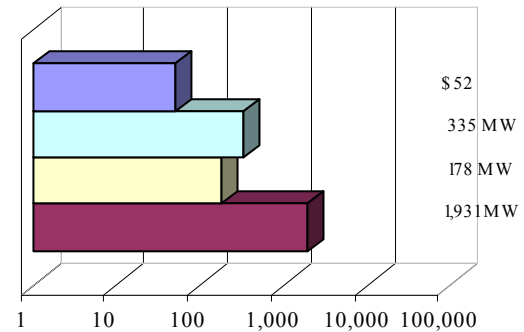
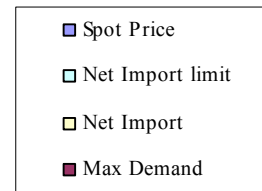
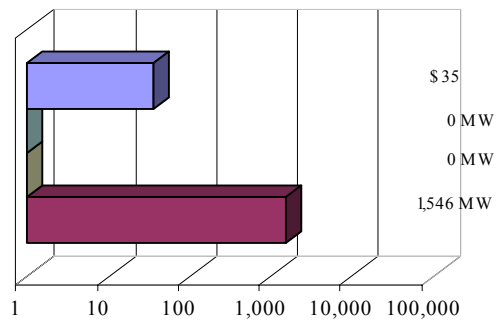


Figure 15: Tasmania



Price variations

There were 37 trading intervals where actual prices significantly varied from forecasts made 4 and 12 hours ahead of dispatch. Figures 16 to 20 show the difference in actual and forecast price versus the difference in actual and forecast demand. The figures highlight the relationship between price variation and demand forecast error. The information is presented in terms of the percentage difference from actual. Price differences beyond 100 per cent have been capped.

Figure 16: Queensland

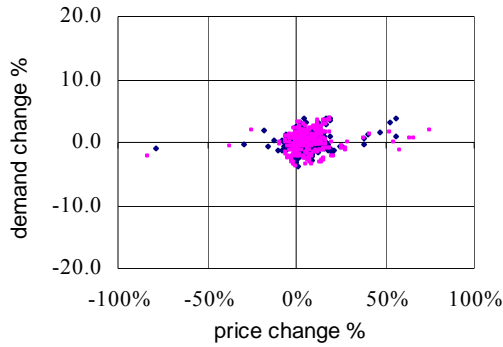


Figure 17: New South Wales

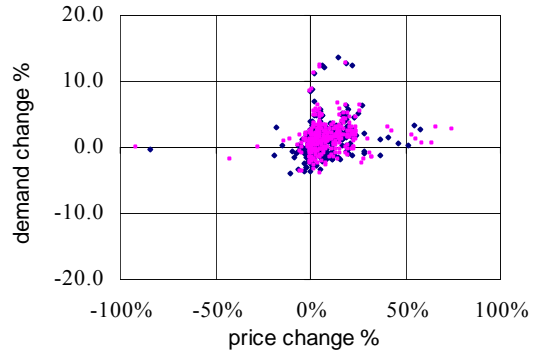


Figure 18: Victoria

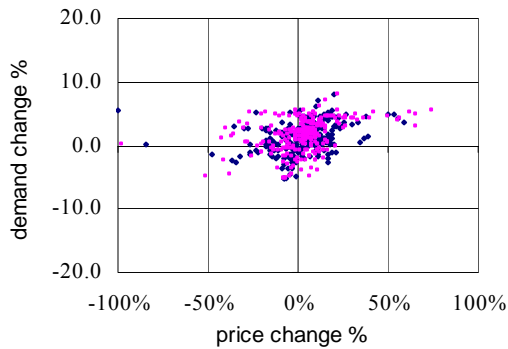


Figure 19: South Australia

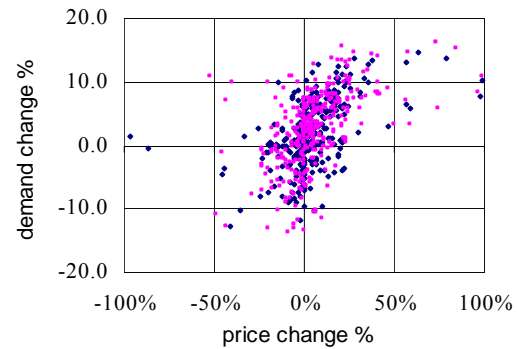


Figure 20: Tasmania

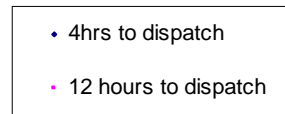
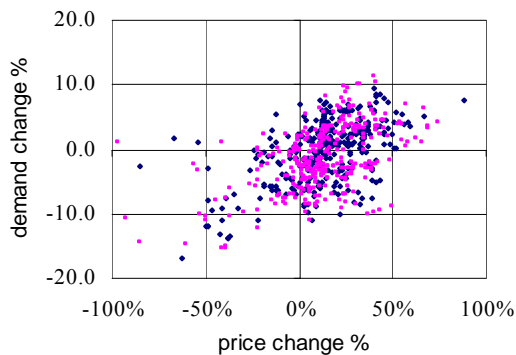
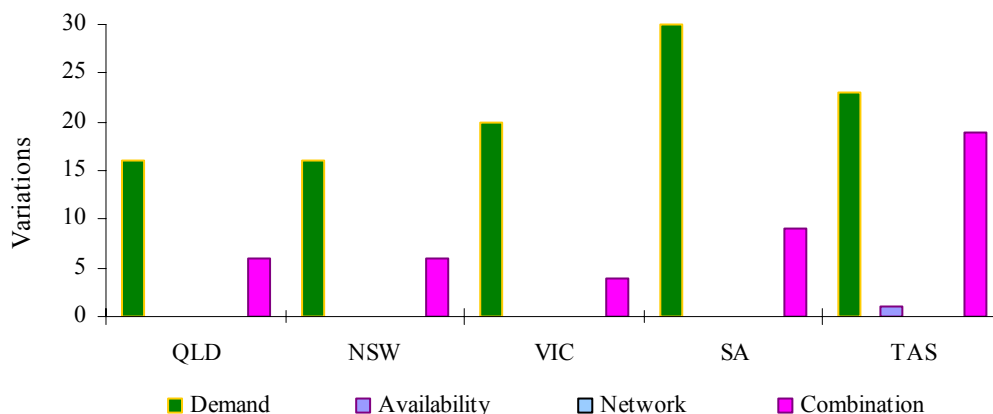


Figure 21 summarises the number and most probable reason for variations between forecast and actual prices.

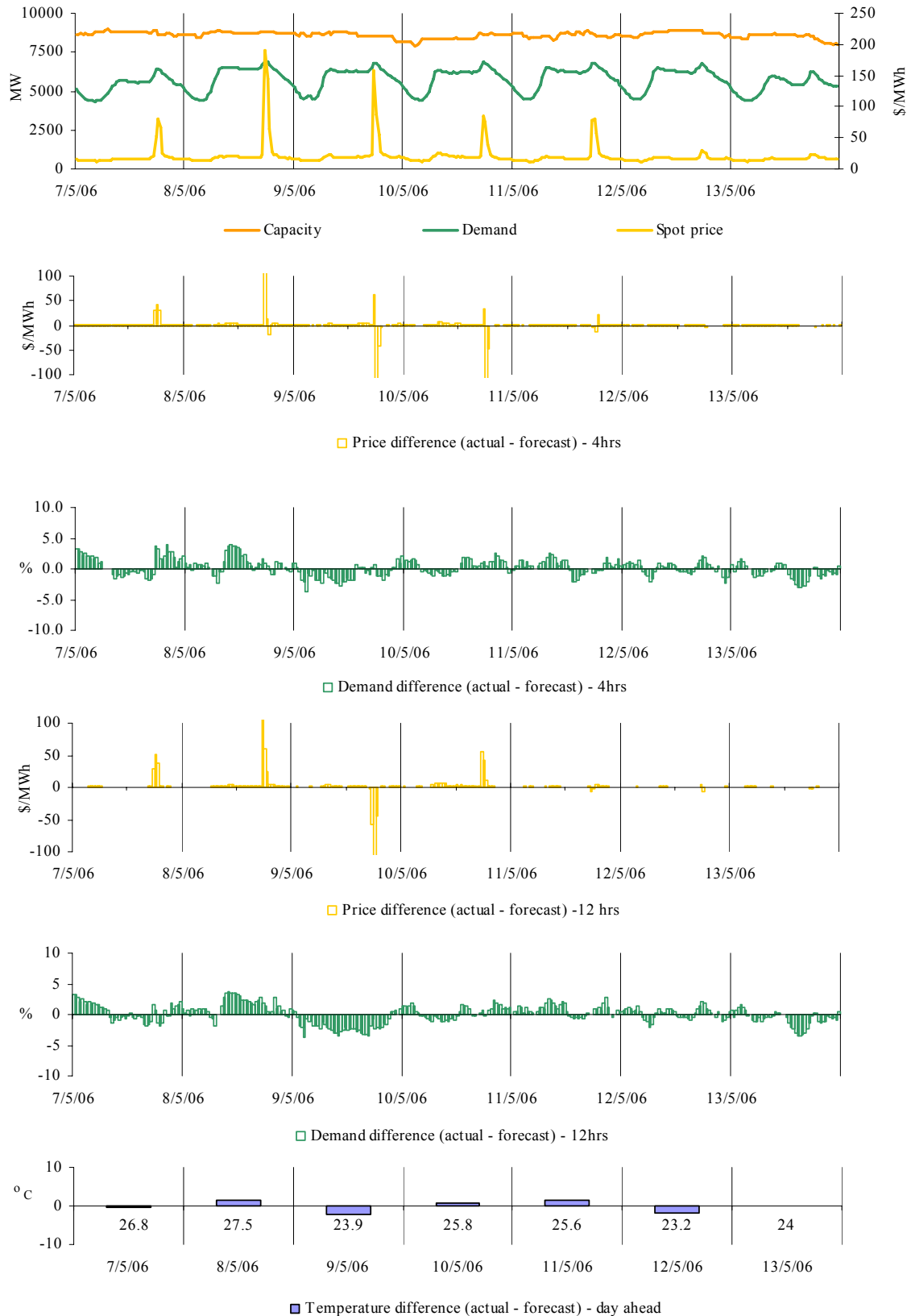
Figure 21: reasons for variations between forecast and actual prices



Price and demand

Figures 22 - 51 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 52 - 56 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 22-27: Queensland actual spot price, demand and forecast differences



There were 11 occasions where the spot price in Queensland was greater than three times the weekly average price of \$21/MWh.

Sunday, 7 May

6:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	79.60	37.84	28.87
Demand (MW)	6448	6242	6409
Available capacity (MW)	8662	8963	8963
7:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	66.09	35.13	27.63
Demand (MW)	6299	6191	6381
Available capacity (MW)	8658	8963	8963

Conditions at the time saw demand around 200 MW higher than forecast 4 hours ahead with prices generally aligned across the mainland. Demand across the mainland was more than 700 MW higher than forecast four hours ahead.

At 5.51 pm, Enertrade reduced the capacity at Gladstone unit 2 by 280 MW, a majority of this capacity was priced below zero. The rebid reason given was “Plant Problem::Change availability”.

There was no other significant rebidding.

Monday, 8 May

6:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	191.49	83.58	47.98
Demand (MW)	6912	6852	6786
Available capacity (MW)	8815	8815	8912
6:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	143.64	131.17	84.44
Demand (MW)	6881	6844	6788
Available capacity (MW)	8815	8815	8913
7:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	64.51	83.58	39.80
Demand (MW)	6726	6747	6690
Available capacity (MW)	8815	8815	8913

Conditions at the time saw price and demand close to forecast with prices aligned across the mainland. The demand in mainland regions was around 700 MW higher than forecast 4 hours ahead.

There was no significant rebidding.

Tuesday, 9 May

6:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	159.12	98.00	217.46
Demand (MW)	6814	6762	6867
Available capacity (MW)	8564	8819	8817
6:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	87.32	220.01	219.04
Demand (MW)	6745	6821	6897
Available capacity (MW)	8569	8819	8817

Conditions at the time saw price and demand close to forecast, with prices aligned across the mainland.

At 1.54 pm CS Energy reduced the available capacity of Callide B2 by 185 MW. All of this capacity was priced at less than \$100/MWh. The rebid reason given was “Cal B2 PA Fan flt (Primary air fan filter).” Further small reductions in capacity were made on the unit during the afternoon totaling 35 MW all of which was priced at less than zero. The rebid reasons given were “Ca l B2 PA Fan flt” and “Call_B_2 PA fan adjust load”.

There was no other significant rebidding.

Wednesday, 10 May

6:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	83.89	49.71	28.70
Demand (MW)	6841	6757	6795
Available capacity (MW)	8656	8635	8830
6:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	76.21	215.63	34.49
Demand (MW)	6814	6784	6823
Available capacity (MW)	8656	8635	8830

Conditions at the time saw price and demand close to forecast with prices aligned across the mainland.

Millmerran’s unit 2 returned to service early in the morning following a 3 week outage. Delays in achieving full load saw a reduction of 200 MW in the available capacity of the unit, compared to forecast, during this period. All of this capacity was priced below \$10/MWh. The rebid reason given was “Changed plant conditions”.

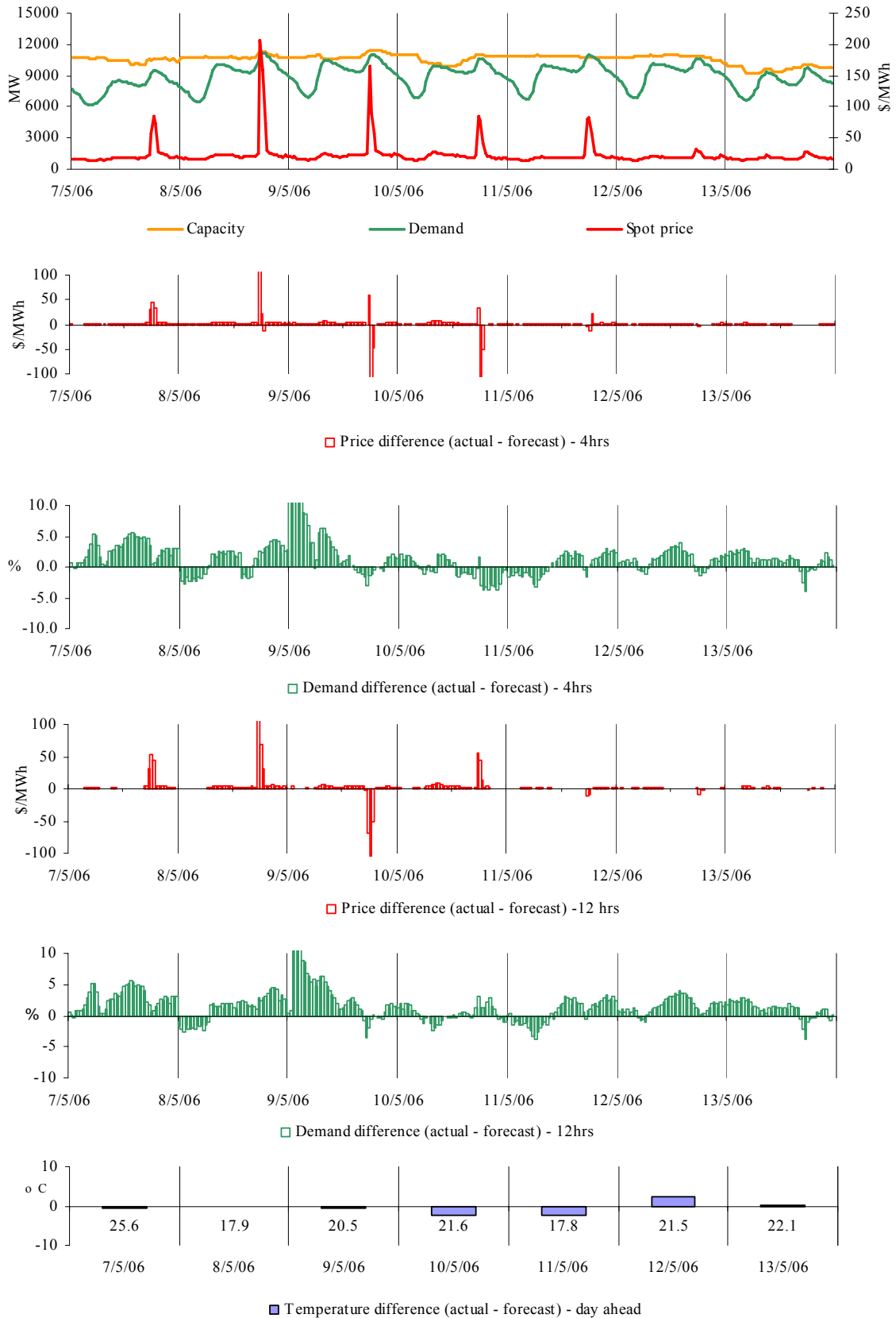
There was no other significant rebidding.

Thursday, 11 May

6:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	78.04	83.58	85.43
Demand (MW)	6809	6854	6801
Available capacity (MW)	8729	8839	8860
6:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	80.80	93.74	84.03
Demand (MW)	6799	6842	6742
Available capacity (MW)	8623	8839	8860

Conditions at the time saw price and demand close to forecast with prices aligned across the mainland. There was no significant rebidding.

Figures 28-33 New South Wales actual spot price, demand and forecast differences



There were 11 occasions where the spot price in New South Wales was greater than three times the weekly average price of \$23/MWh.

Sunday, 7 May

6:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	85.14	41.50	30.87
Demand (MW)	9442	9400	9390
Available capacity (MW)	10608	10668	10668
7:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	73.45	39.14	30.00
Demand (MW)	9440	9378	9371
Available capacity (MW)	10608	10668	10668

Conditions at the time saw demand close to forecast. Prices were largely aligned across the mainland while demand was more than 700 MW higher than forecast four hours ahead.

There was no significant rebidding.

Monday, 8 May

6:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	205.93	86.24	51.42
Demand (MW)	11005	10711	10700
Available capacity (MW)	11218	11203	11258
6:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	159.11	137.47	91.25
Demand (MW)	11134	10875	10875
Available capacity (MW)	11218	11223	11278
7:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	73.05	85.75	43.05
Demand (MW)	11088	10758	10759
Available capacity (MW)	11218	11223	11278

Conditions at the time saw demand in New South Wales around 300 MW higher than forecast 4 hours ahead. Prices were close to forecast and aligned across the mainland. Demand on the mainland was again around 700 MW higher than forecast 4 hours ahead.

There was no significant rebidding.

Tuesday, 9 May

6:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	164.59	104.50	233.32
Demand (MW)	10930	11077	11141
Available capacity (MW)	11356	11358	11278
6:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	89.71	234.52	233.15
Demand (MW)	11067	11192	11138
Available capacity (MW)	11356	11358	11278

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

There was no significant rebidding.

Wednesday, 10 May

6:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	85.16	50.54	28.51
Demand (MW)	10580	10413	10249
Available capacity (MW)	11035	11040	11050
6:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	78.14	229.71	34.29
Demand (MW)	10664	10981	10529
Available capacity (MW)	11035	11040	11050

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

There was no significant rebidding.

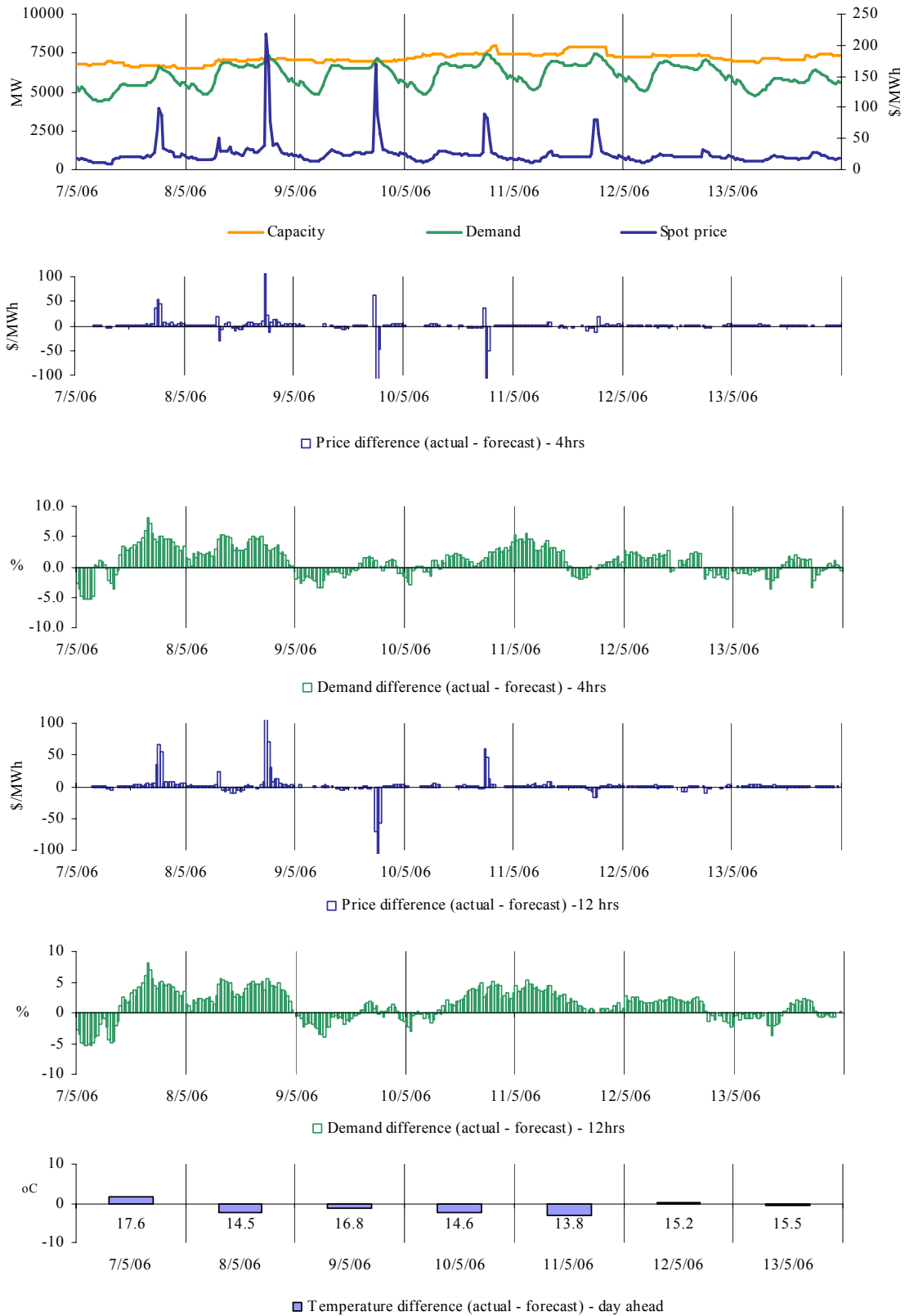
Thursday, 11 May

6:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	80.19	83.85	90.91
Demand (MW)	10904	10916	10819
Available capacity (MW)	10798	10873	10960
6:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	81.90	94.07	90.87
Demand (MW)	10994	10950	10874
Available capacity (MW)	10798	10873	10960

Conditions at the time saw price and demand close to forecast 4 hours ahead. Prices were aligned across the mainland.

There was no significant rebidding.

Figures 34-39: Victoria actual spot price, demand and forecast differences



There were 10 occasions where the spot price in Victoria was greater than three times the weekly average price of \$26/MWh.

Sunday, 7 May

6:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	99.32	46.24	33.83
Demand (MW)	6577	6248	6248
Available capacity (MW)	6662	6657	6908
7:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	87.89	44.29	33.03
Demand (MW)	6537	6212	6206
Available capacity (MW)	6651	6657	6908

Conditions at the time saw demand in Victoria around 300 MW higher than forecast 4 hours ahead. Prices across the mainland were aligned with national demand more than 700 MW higher than forecast 4 hours ahead.

There was no significant rebidding.

Monday, 8 May

6:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	218.58	90.99	55.75
Demand (MW)	7346	7078	6939
Available capacity (MW)	7065	6970	7053
6:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	166.74	144.32	96.26
Demand (MW)	7357	7162	6981
Available capacity (MW)	7066	6970	7033

Conditions at the time saw demand in Victoria around 250 MW higher than forecast 4 hours ahead. Prices were aligned across the mainland with national demand around 700 MW higher than forecast 4 hours ahead.

There was no significant rebidding.

Tuesday, 9 May

6:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	169.19	107.89	240.89
Demand (MW)	7096	7020	7022
Available capacity (MW)	6968	6939	6974
6:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	90.45	240.82	243.49
Demand (MW)	7115	7117	7123
Available capacity (MW)	6976	6939	6974

Conditions at the time saw demand and available capacity slightly higher than forecast 4 hours ahead. Prices were generally aligned across the mainland.

There was no significant rebidding.

Wednesday, 10 May

6:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	90.27	55.10	30.70
Demand (MW)	7348	7242	7131
Available capacity (MW)	7463	7411	7564
6:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	82.00	240.09	35.34
Demand (MW)	7438	7330	7121
Available capacity (MW)	7576	7411	7669

Conditions at the time saw demand 100 MW higher than forecast 4 hours ahead. Prices were aligned across the mainland.

There was no significant rebidding.

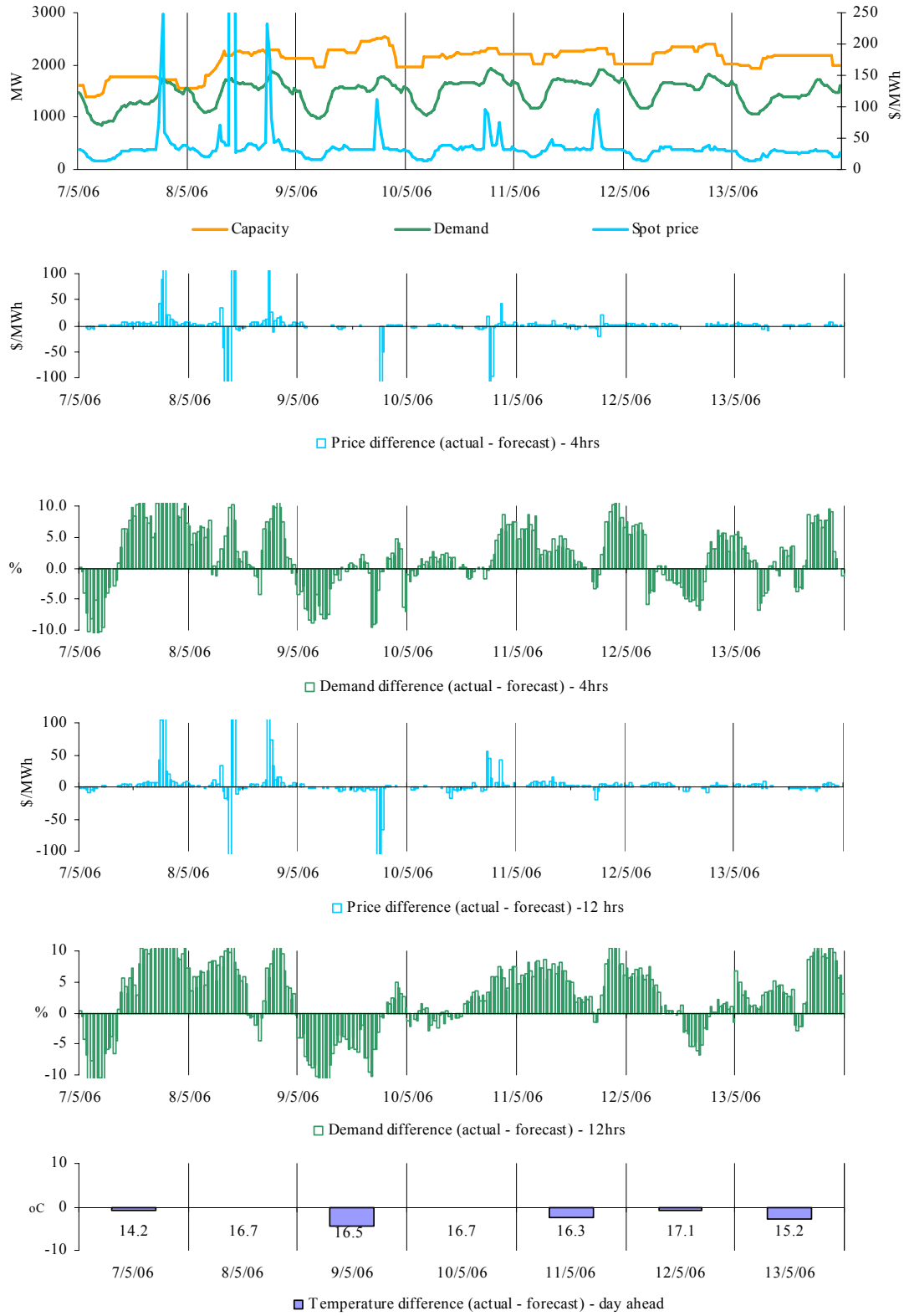
Thursday, 11 May

6:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	79.26	82.93	96.68
Demand (MW)	7388	7402	7392
Available capacity (MW)	7875	7860	7421
6:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	80.33	92.50	96.10
Demand (MW)	7442	7475	7438
Available capacity (MW)	7870	7850	7421

Conditions at the time saw price and demand close to forecast with prices aligned across the mainland.

There was no significant rebidding.

Figures 40-45: South Australia actual spot price, demand and forecast differences



There were 5 occasions where the spot price in South Australia was greater than three times the weekly average price of \$47/MWh.

Sunday, 7 May

7:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	246.62	51.01	38.05
Demand (MW)	1736	1498	1470
Available capacity (MW)	1729	1764	1764

Conditions at the time saw demand around 240 MW higher than forecast 4 hours ahead. Prices were aligned across the mainland, with national demand more than 700 MW higher than forecast 4 hours ahead.

At 5.53 pm NRG Flinders reduced the available capacity at Osborne by 35 MW. This capacity was priced at \$51/MWh. The rebid reason givens were “Adj OCPL capacity due to aux blr unavailable” and “adjust Osborne capacity due to auxiliary boiler unavailable”. There was only 37 MW of capacity priced between \$50/MWh and \$5000/MWh within the region during the 7 pm trading interval.

There was no other significant rebidding.

Monday, 8 May

10:00 am	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	2467.18	38.00	40.77
Demand (MW)	1737	1558	1547
Available capacity (MW)	2179	2155	2155
10:30 am	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	1183.31	32.56	39.00
Demand (MW)	1685	1555	1546
Available capacity (MW)	2206	2235	2235

Conditions at the time saw demand around 180 MW higher than forecast 4 hours ahead.

From 9.50 am, in preparation for a planned outage, the Heywood interconnector was ramped down from 245 MW to 150 MW. At the same time, International Power shifted 40 MW of capacity at Pelican Point from a price of \$30/MWh to \$5000/MWh and 20 MW from \$30/MWh to \$1000/MWh. The rebid reason given was “response to 5 min pd (predispatch) – change in price”. The Murraylink interconnector was limited to zero import capability during this period.

There was only 20 MW of capacity priced between \$30/MWh and \$5000/MWh at the time.

There was no other significant rebidding.

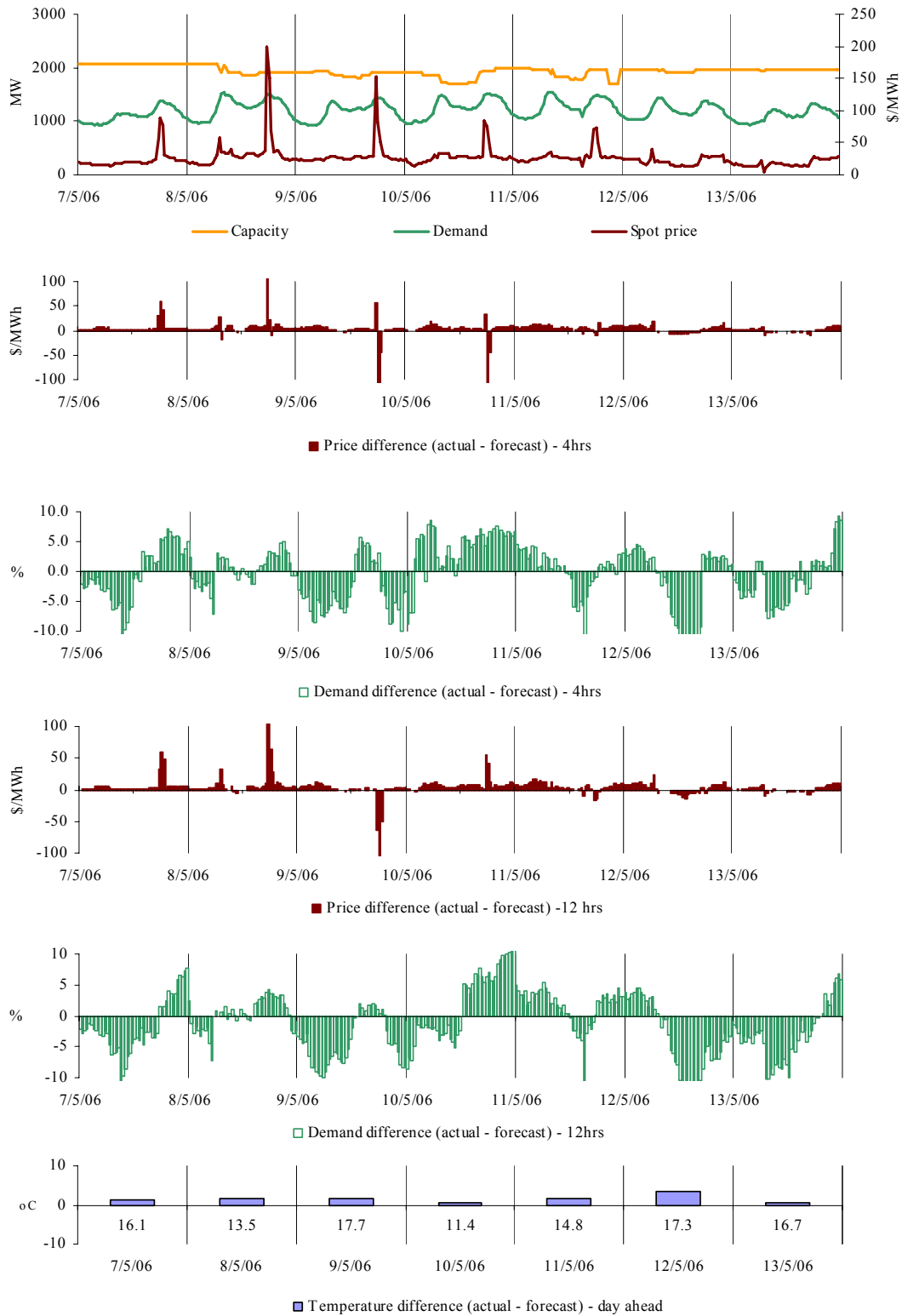
Monday, 8 May

6:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	230.96	95.46	58.78
Demand (MW)	1684	1586	1588
Available capacity (MW)	2279	2233	2235
6:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	174.03	149.00	100.37
Demand (MW)	1812	1667	1669
Available capacity (MW)	2279	2233	2235

Conditions at the time saw demand around 100 MW higher than forecast 4 hours ahead. Prices were aligned across the mainland with national demand 700 MW higher than forecast 4 hours ahead.

There was no significant rebidding.

Figures 46-51: Tasmania actual spot price, demand and forecast differences



There were 5 occasions where the spot price in Tasmania was greater than three times the weekly average price of \$27/MWh.

Sunday, 7 May

6:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	88.76	29.50	30.20
Demand (MW)	1379	1308	1365
Available capacity (MW)	2069	2069	2069

Conditions at the time saw demand around 70 MW higher than forecast 4 hours ahead, with prices following those of the mainland. National demand was more than 700 MW higher than forecast 4 hours ahead.

At 4.04 pm Hydro Tasmania shifted 80 MW of capacity at Gordon from prices below \$35/MWh to \$257/MWh. The rebid reason given was “PD price different from forecast”.

There was no other significant rebidding.

Monday, 8 May

6:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	198.38	81.24	50.16
Demand (MW)	1501	1449	1437
Available capacity (MW)	1911	1911	1911
6:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	150.63	128.86	86.61
Demand (MW)	1500	1453	1446
Available capacity (MW)	1911	1911	1911

Conditions at the time saw demand around 50 MW higher than forecast 4 hours ahead, with prices following those of the mainland

There was no capacity in Tasmania price between \$50/MWh and \$250/MWh and no significant rebidding.

Tuesday, 9 May

6:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	153.41	96.58	217.31
Demand (MW)	1441	1397	1425
Available capacity (MW)	1908	1908	1908

Conditions at the time saw demand around 50 MW higher than forecast 4 hours ahead but close to the 12 hour ahead forecast. Prices were generally aligned with the mainland.

There was no capacity in Tasmania priced between \$55/MWh and \$260/MWh.

There was no significant rebidding.

Wednesday, 10 May

6:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	83.10	49.70	27.83
Demand (MW)	1494	1410	1398
Available capacity (MW)	1948	1948	1918

Conditions at the time saw demand around 80 MW higher than forecast 4 hours ahead. Prices were generally aligned across the mainland.

There was no capacity in Tasmania priced between \$55/MWh and \$210/MWh and no significant rebidding.

Figure 52: Queensland closing bid prices, dispatched generation and spot price

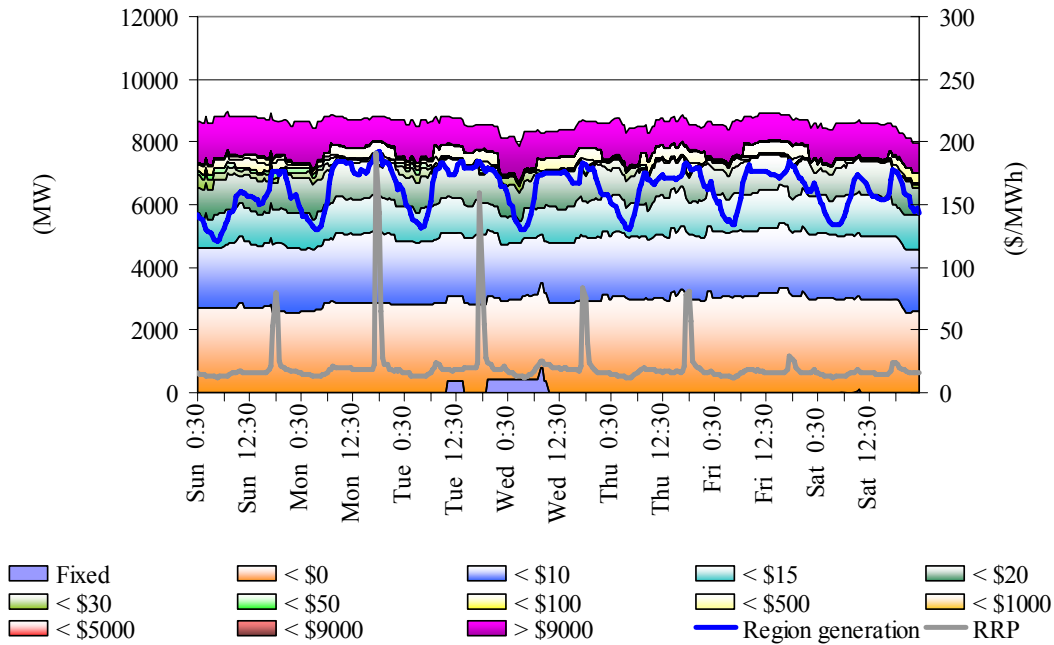


Figure 53: New South Wales closing bid prices, dispatched generation and spot price

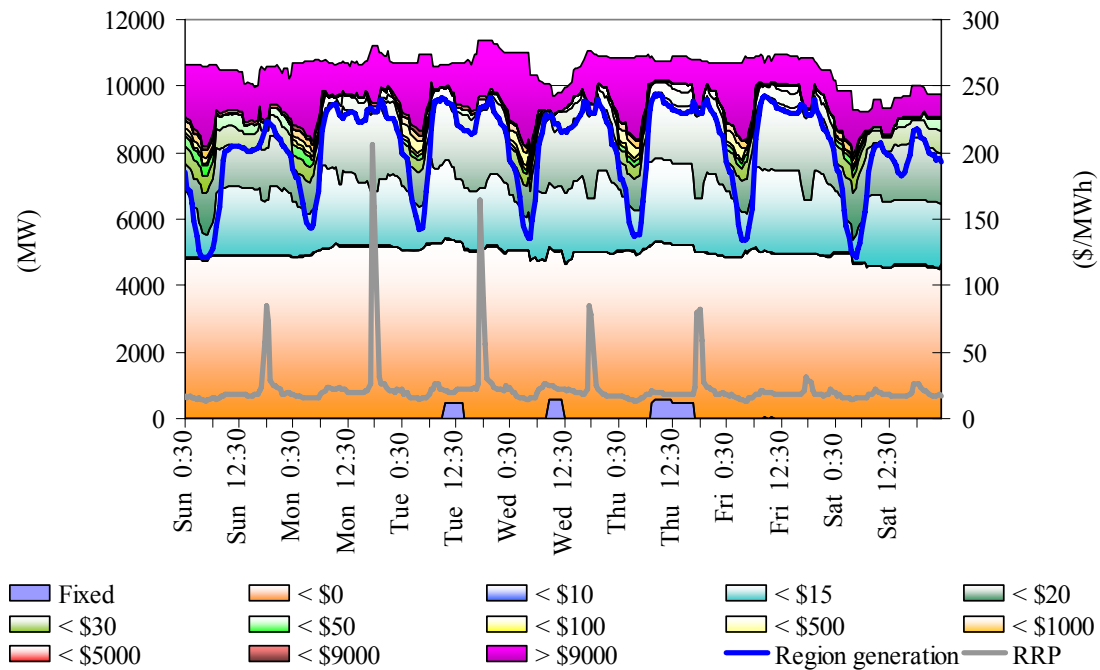


Figure 54: Victoria closing bid prices, dispatched generation and spot price

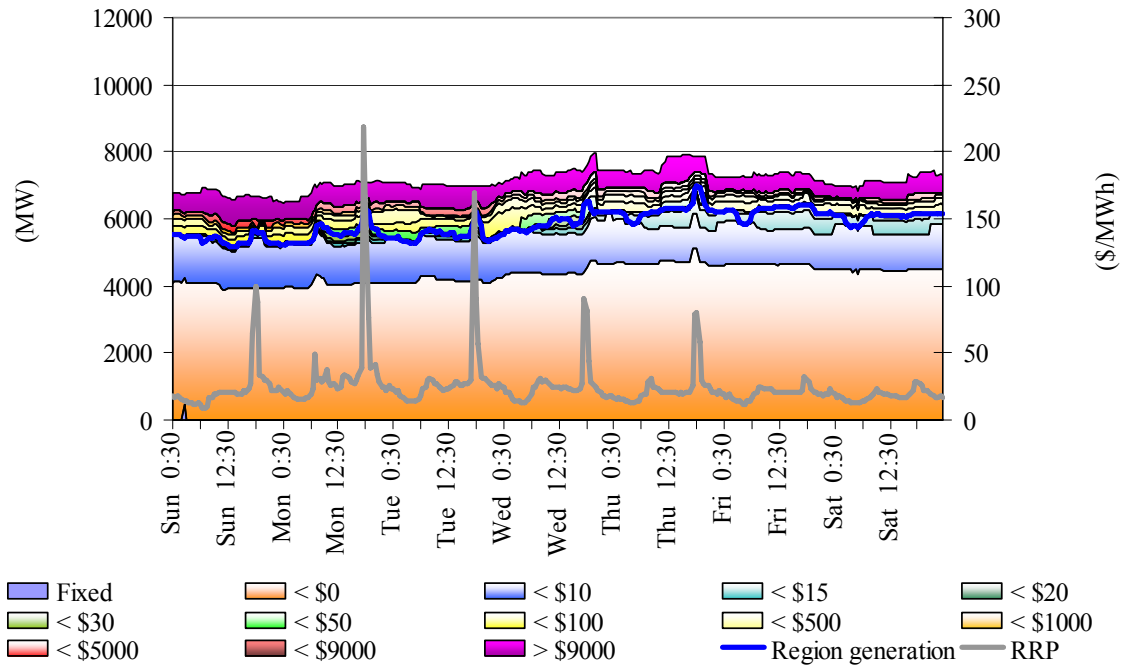


Figure 55: South Australia closing bid prices, dispatched generation and spot price

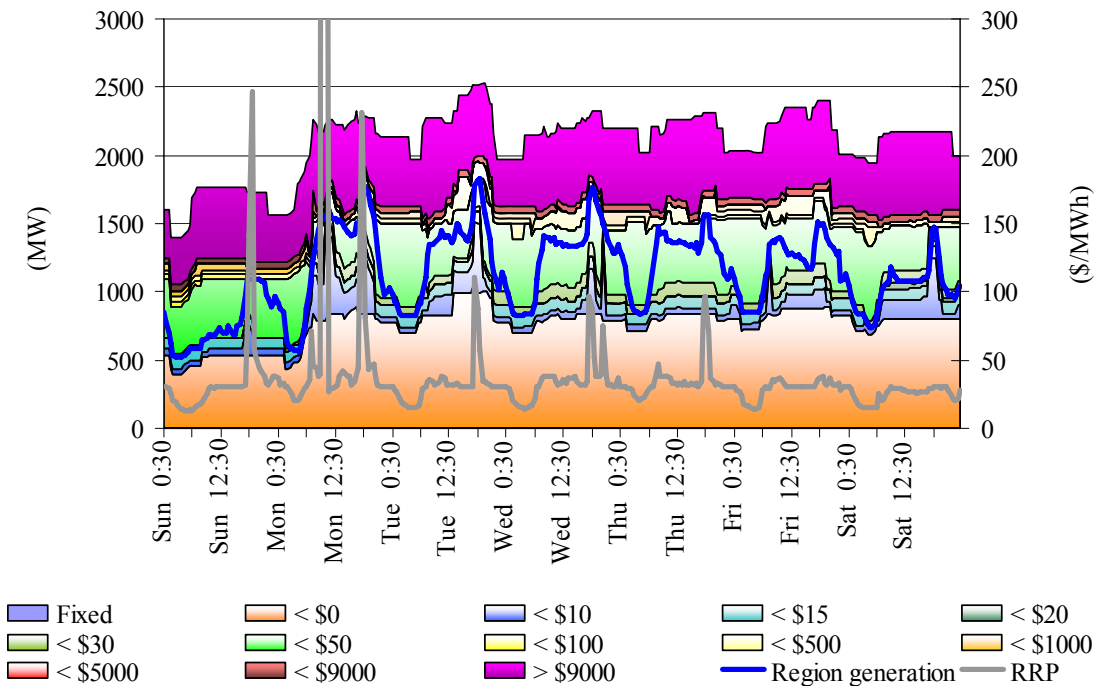
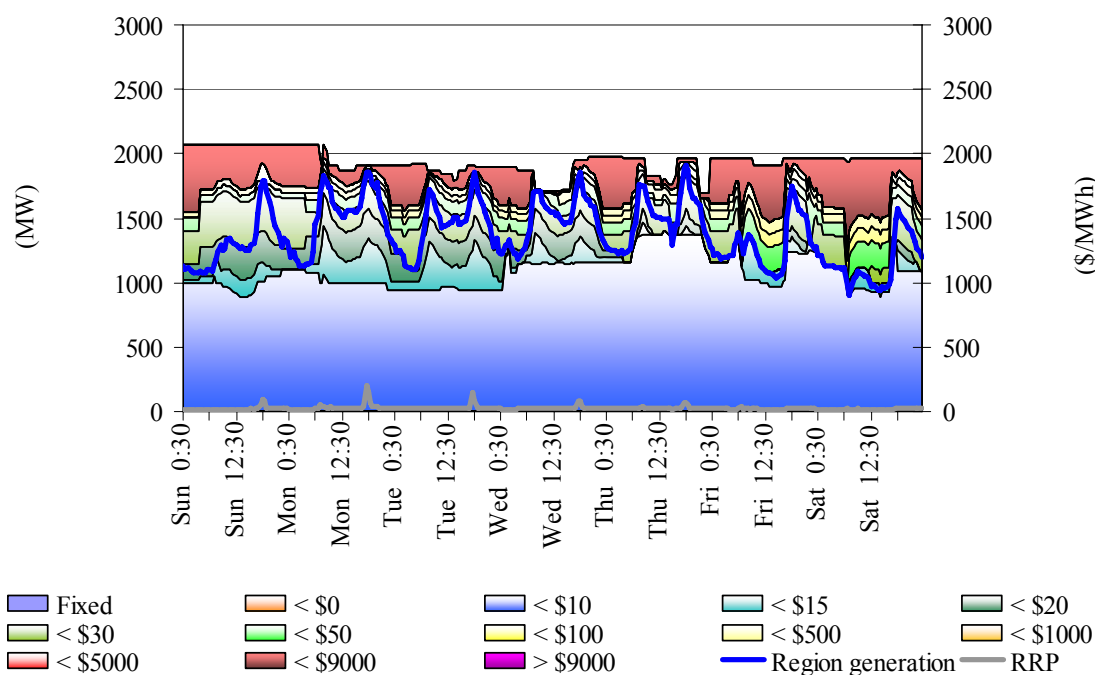


Figure 56: Tasmania closing bid prices, dispatched generation and spot price



Ancillary service market

The total cost of ancillary services on the mainland for the week was \$413 000 or 0.4 per cent of the total turnover in the energy market. Figure 57 summarises the volume weighted average prices and costs for the eight frequency control ancillary services across the mainland regions.

Figure 57: 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	1.00	0.24	1.51	0.98	0.14	1.29	5.12	0.34
Previous week	1.39	0.33	0.99	0.93	0.14	0.24	1.06	0.83
Last quarter	1.76	0.73	1.15	1.54	0.39	2.28	5.00	1.93
Market Cost (\$1000s)	41	10	99	17	0.3	31	210	4
% of energy market	0.04%	0.01%	0.11%	0.02%	0.01%	0.03%	0.22%	0.01%

The total cost of ancillary services in Tasmania for the week was \$610 000 or 11 per cent of the total turnover in the energy market in Tasmania. Prices for the lower 6 second market went to \$10 000/MW for 5 despatch intervals in Saturday following a spike in the requirement for this service. This increase coincided with a change of direction on BassLink. This event cost almost \$400 000. Figure 58 summarises for Tasmania the prices and costs for the eight frequency control ancillary services.

Figure 58: 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	3.32	1.23	5.04	1.03	65.19	1.24	2.43	0.30
Previous week	1.89	1.20	2.32	0.55	1.09	0.02	0.06	0.43
Last quarter	7.89	1.05	1.05	1.58	4.43	1.06	1.06	1.97
Market Cost (\$1000s)	4	2	10	5	487	40	58	3
% of energy market	0.07%	0.04%	0.18%	0.10%	8.81%	0.72%	1.05%	0.05%

Figure 59 shows the daily breakdown of cost for each frequency control ancillary service.

Figure 59: daily frequency control ancillary service costs

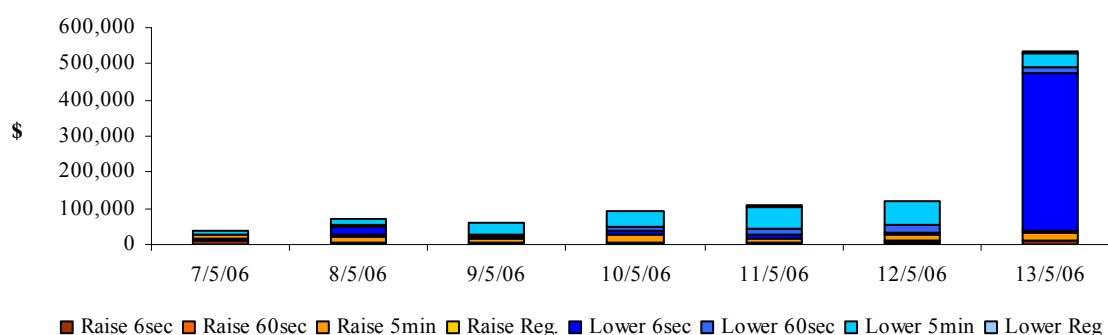
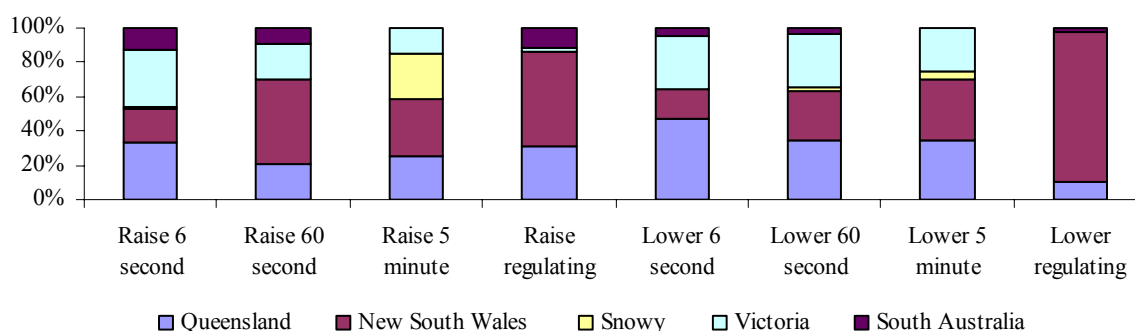


Figure 60 shows the contribution, on a percentage basis, that frequency control ancillary service providers are utilised (in each mainland region) to satisfy the total requirement for each service.

Figure 60: regional participation in ancillary services on the mainland



Figures 61 and 62 show 30-minute prices for each frequency control ancillary service throughout the week.

Figure 61: prices for raise services

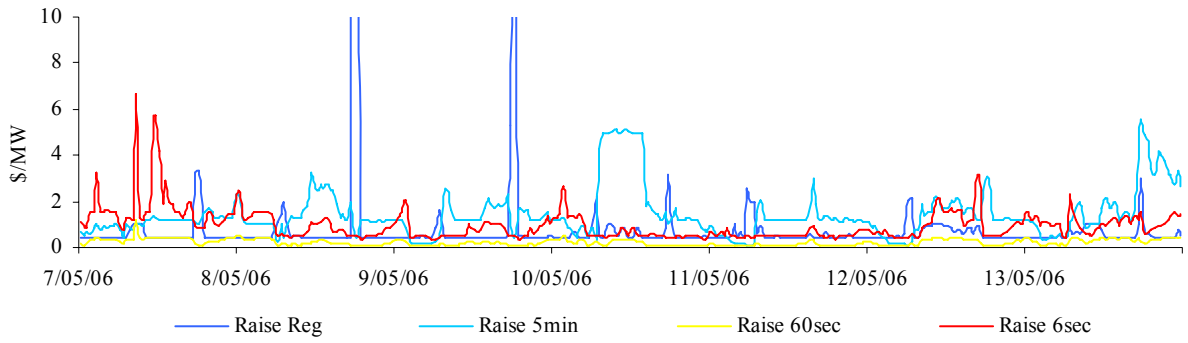


Figure 61A: prices for raise services - Tasmania

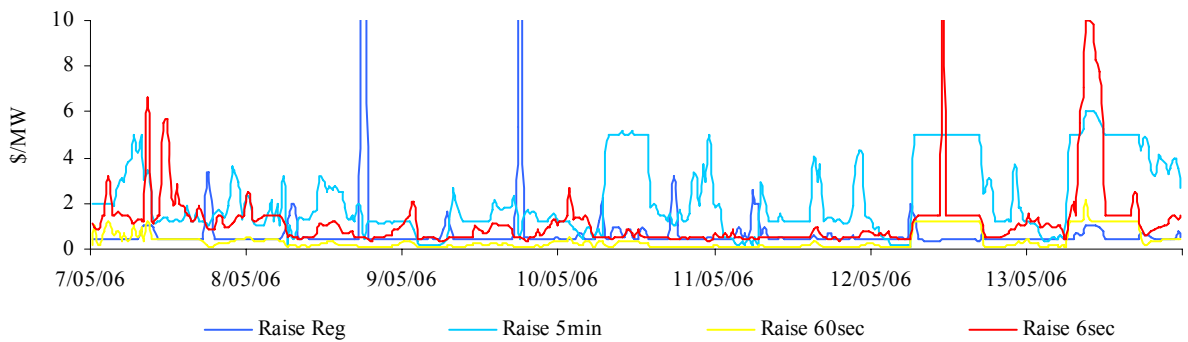


Figure 62: prices for lower services

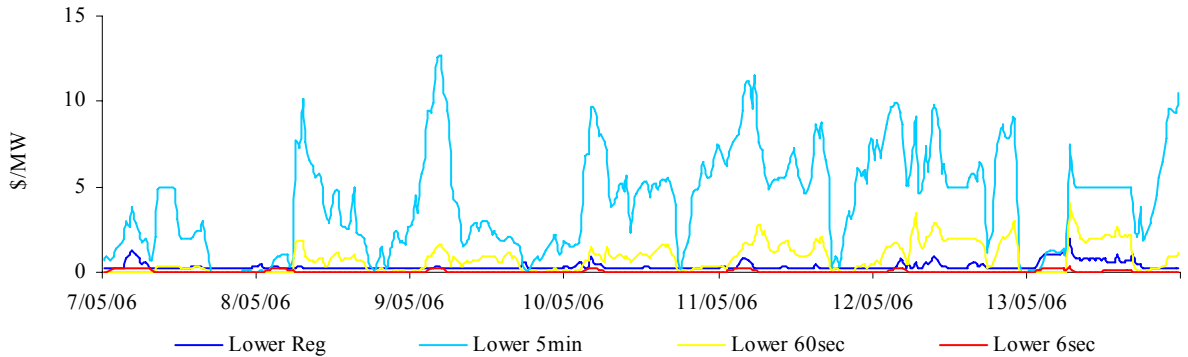
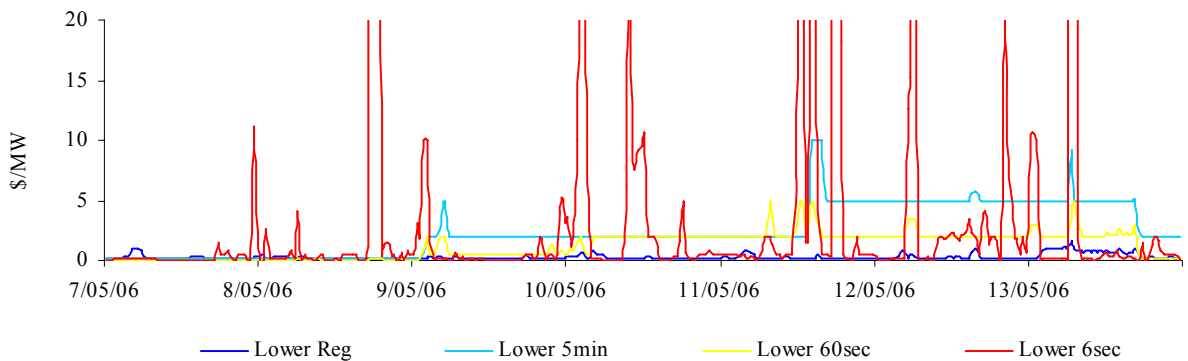


Figure 62A: prices for lower services - Tasmania



Figures 63 and 64 present for both raise and lower frequency control services the requirement, established by NEMMCO, for each service to satisfy the frequency standard.

Figure 63: raise requirements

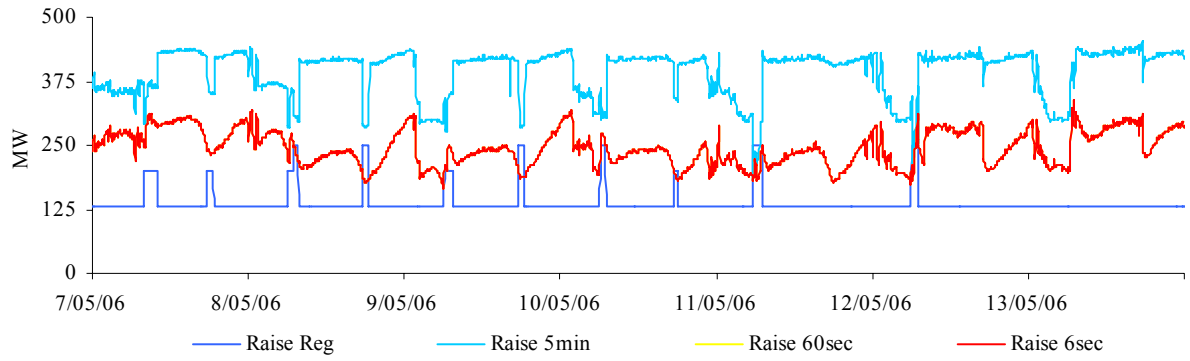


Figure 63A: raise requirements - Tasmania

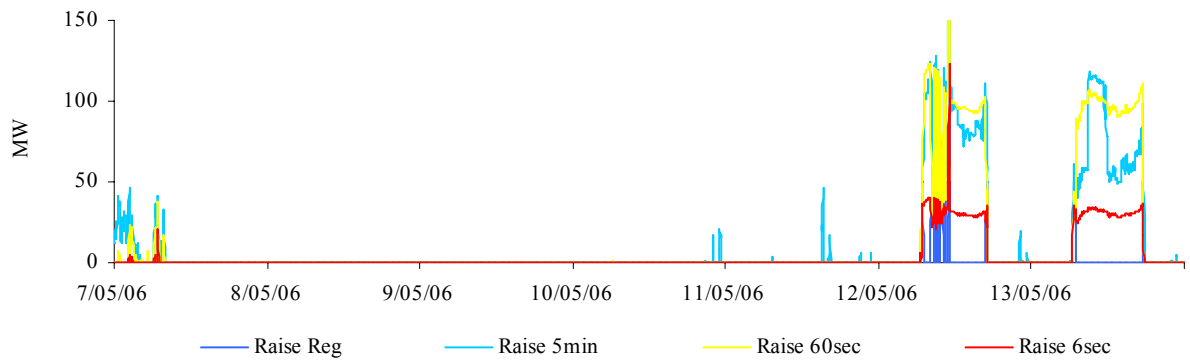


Figure 64: lower requirements

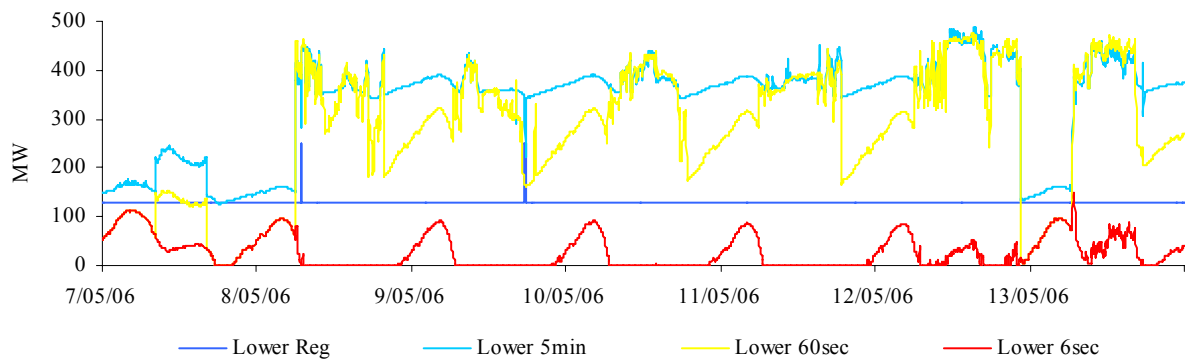


Figure 64A: lower requirements - Tasmania

