

3 June – 9 June 2007

Spot prices for the week averaged between \$49/MWh and \$77/MWh in all regions.

Turnover in the energy market was \$288 million. The total cost of ancillary services for the week was \$540 000, or 0.2 per cent of energy market turnover.

Significant variations between actual prices and those forecast 4 and 12 hours ahead occurred in 126 or 38 per cent all trading intervals. Demand forecasts produced 4 and 12 hours ahead varied from actual by more than 5 per cent in 17 per cent all trading intervals across the market. These variations were most frequent in Tasmania occurring in over a third of all trading intervals.

Energy prices

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

Figure 1: national demand and spot prices

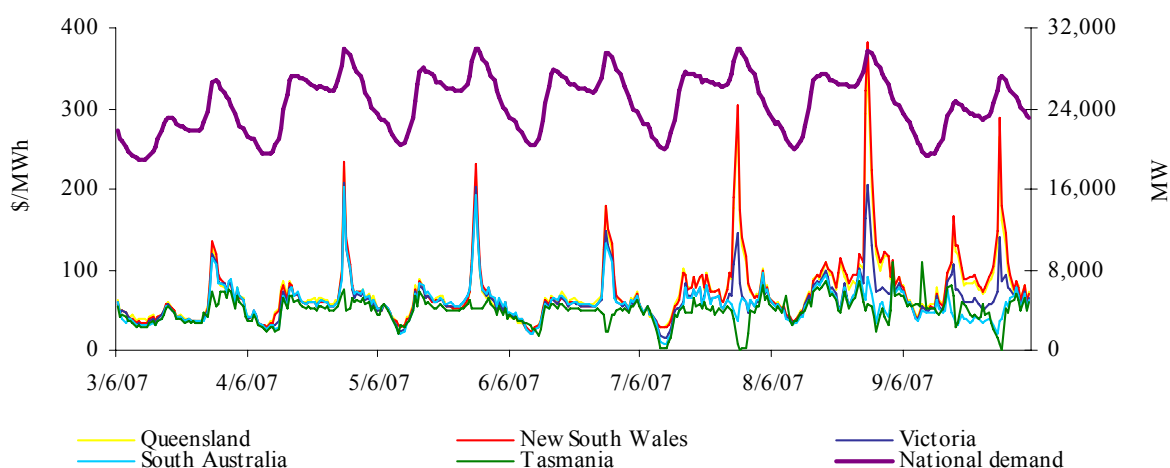


Figure 2: volume weighted average spot price for energy market (\$/MWh)

	QLD	NSW	VIC	SA	TAS
Last week	74	77	64	59	49
Previous week	76	75	71	65	60
Same quarter last year	25	28	30	38	38
Financial year to date	44	48	52	54	48
% change from previous week *	▼3%	▲2%	▼10%	▼9%	▼18%
% change from same quarter last year **	▲199%	▲177%	▲112%	▲56%	▲30%
% change from year to date ***	▲38%	▲9%	▲43%	▲22%	▼21%

*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.

Figures 3 to 7 show the weekly correlation between spot price and demand.

Figure 3: Queensland

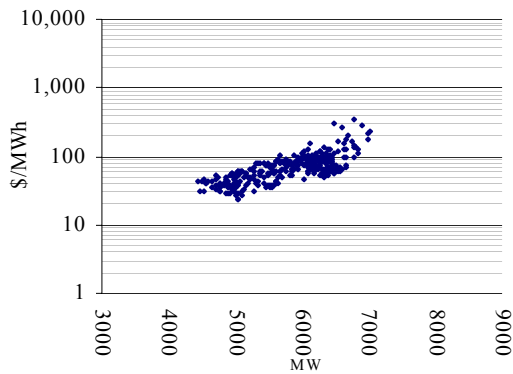


Figure 4: New South Wales

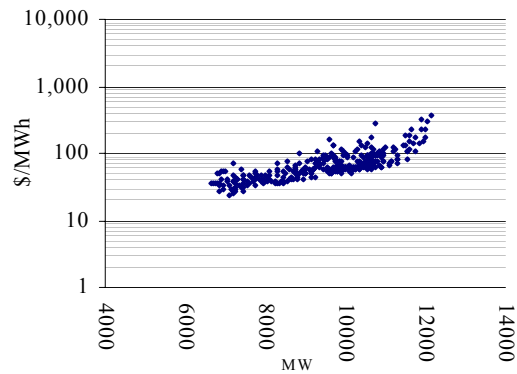


Figure 5: Victoria

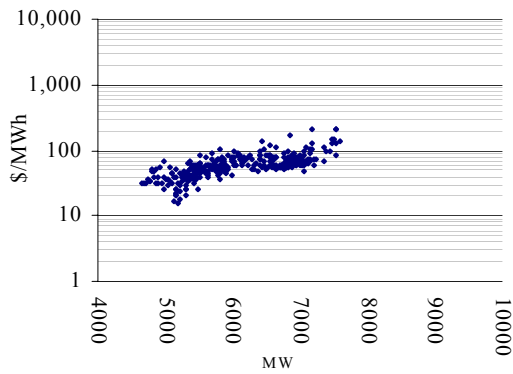


Figure 6: South Australia

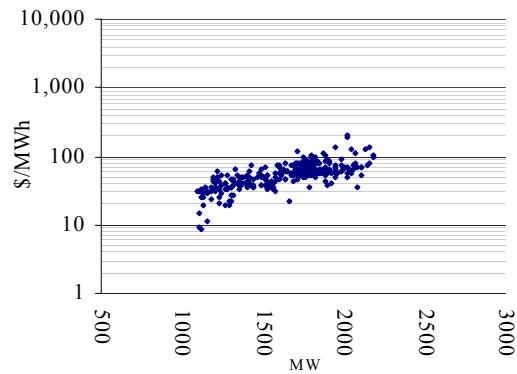
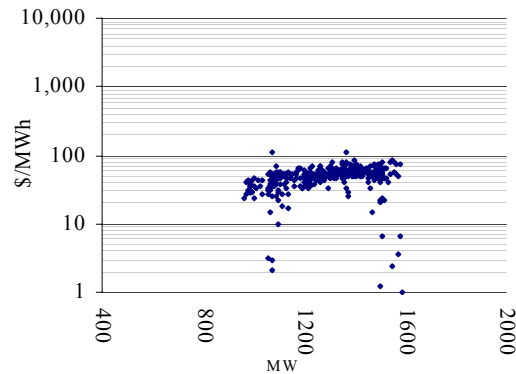


Figure 7: Tasmania



The maximum spot prices for the week ranged from \$110/MWh in Tasmania to \$381/MWh in New South Wales. Figure 8 compares the weekly price volatility index with the averages for the previous week and the same quarter last year.

Figure 8: volatility index during peak periods

	QLD	NSW	VIC	SA	TAS
Last week	0.70	0.81	0.58	0.46	0.38
Previous week	0.52	0.58	0.51	0.53	0.49
Same quarter last year	1.07	0.96	0.96	0.94	0.29

The definition of the price volatility index is available on the AER website.
<http://www.aer.gov.au/content/index.phtml/tag/MarketSnapshotLongTermAnalysis>

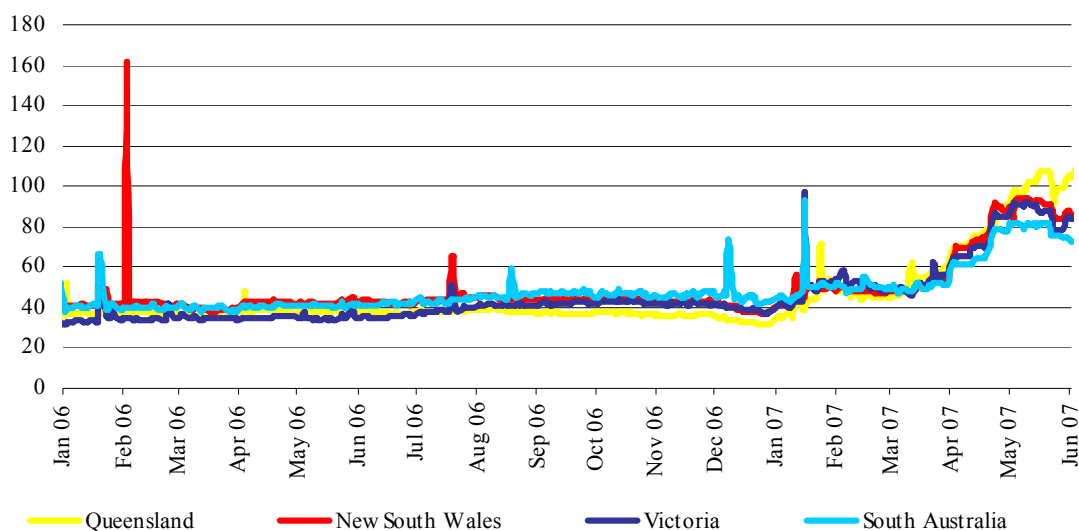
Figure 9 sets out the d-cyphaTrade wholesale electricity price index (WEPI)* for each region throughout the week excluding Tasmania. Figure 10 sets out the WEPI since 1 January 2005.

Figure 9: d-cyphaTrade WEPI for the week

	Monday	Tuesday	Wednesday	Thursday	Friday
Queensland	108.52	107.93	105.63	105.75	106.32
New South Wales	85.17	85.20	83.25	85.24	85.74
Victoria	83.82	81.59	81.17	80.65	80.71
South Australia	73.04	72.62	73.11	73.39	73.20

* The 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
 The WEPI applies for working days only.

Figure 10: d-cyphaTrade WEPI



Reserve

At around 6 pm on Friday evening, NEMMCO issued notice of low reserves for New South Wales for the 7 pm trading interval.

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

Figure 11: Queensland

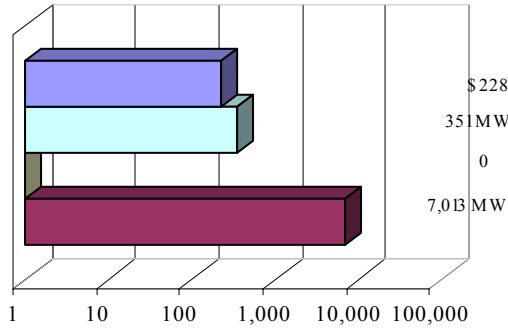


Figure 12: New South Wales

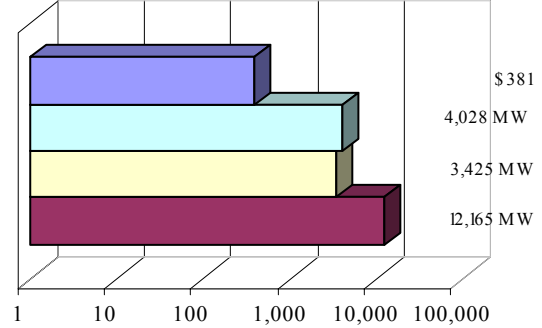


Figure 13: Victoria

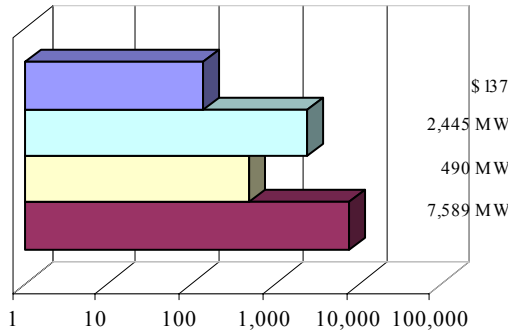


Figure 14: South Australia

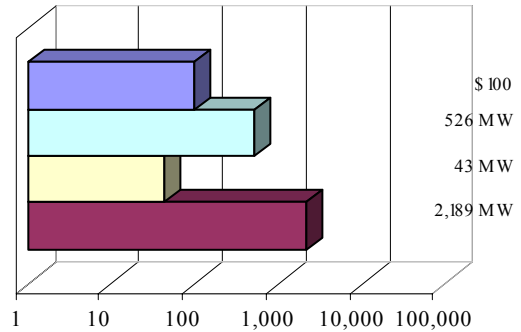
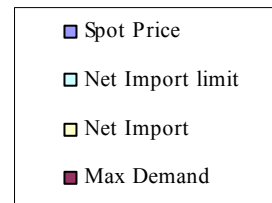
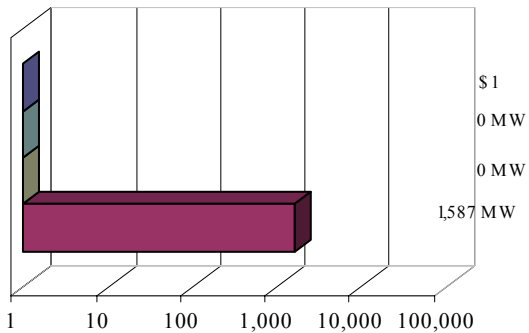


Figure 15: Tasmania



Price variations

There were 126 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

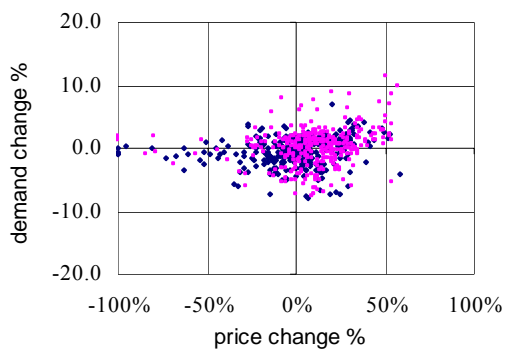


Figure 17: New South Wales

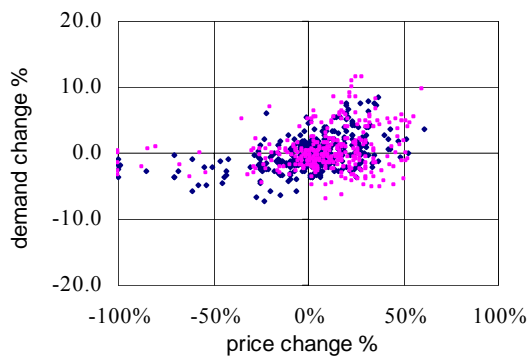


Figure 18: Victoria

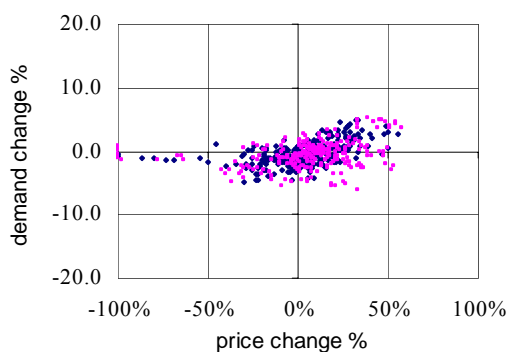


Figure 19: South Australia

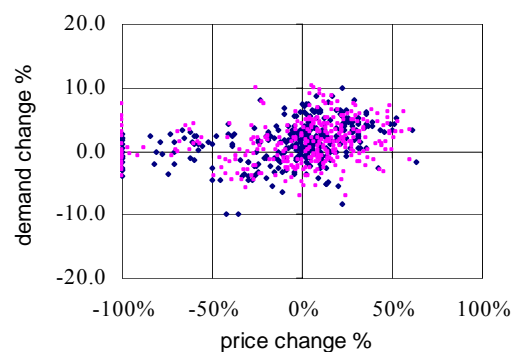


Figure 20: Tasmania

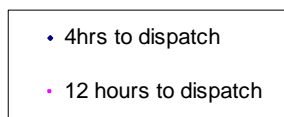
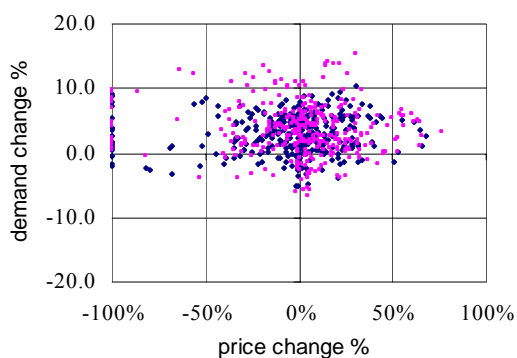
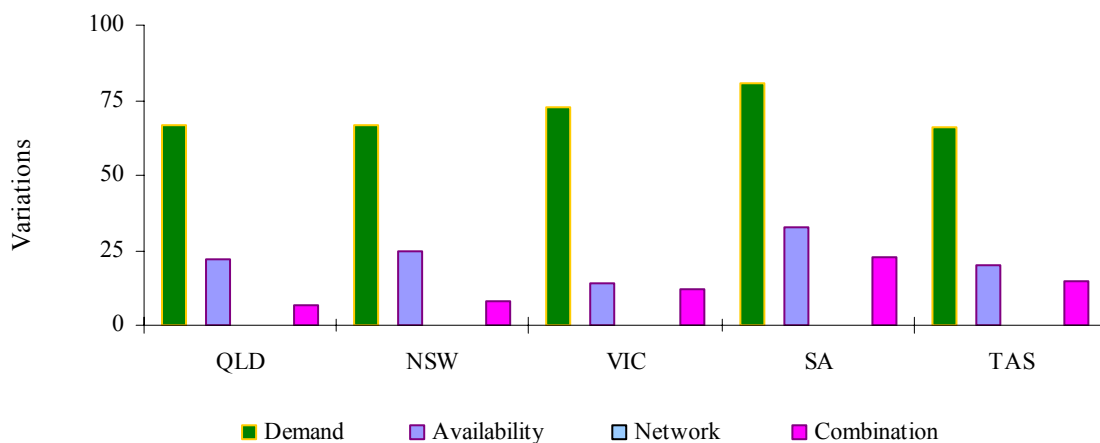


Figure 21 summarises the number and most probable reason for variations between forecast and actual prices.

Figure 21: reasons for variations between forecast and actual prices



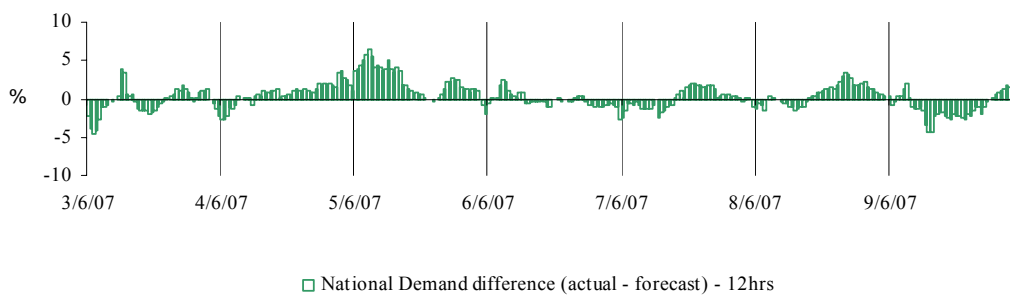
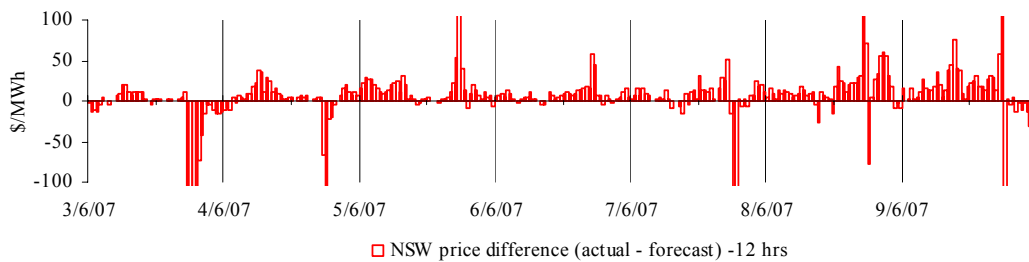
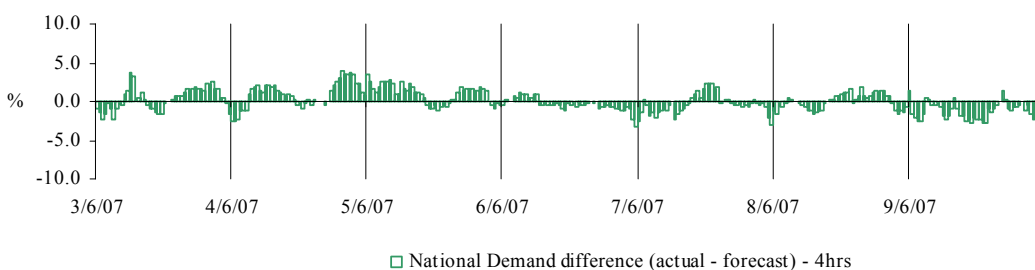
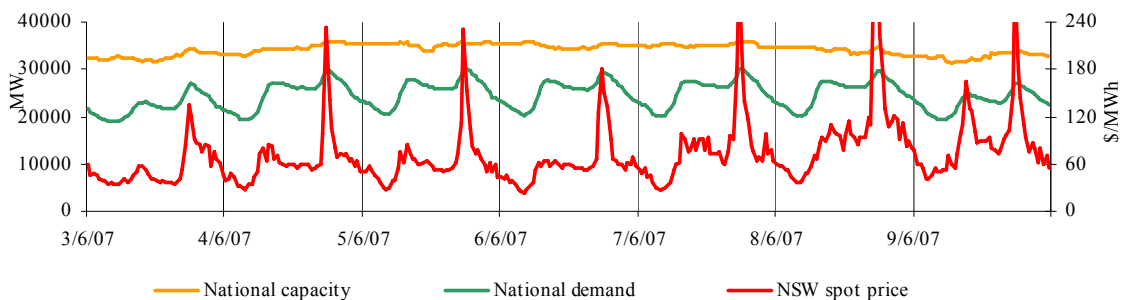
Price and demand

Figures 22 – 56 set out details of spot prices and demand on a national and regional basis. They include the actual spot price, actual demand and variation from forecasts made 4 and 12 hours ahead of dispatch.

Spot prices within the national market are regularly aligned, with conditions in one region reflected across all others. The national market outcomes section highlights pricing events that occurred when spot prices were generally aligned across all regions of the national electricity market – the New South Wales spot price has been used to represent a pseudo national price under these conditions.

On a regional basis the differences between the maximum temperature and the temperature forecast at around 6.00 pm the day before are also included. In each section, the occurrences of all prices for the week greater than three times the average have been presented. The price forecast is compared to the demand and availability forecasts made 4 and 12 hours ahead, with significant changes to these forecasts explained.

Figures 22-26: National market outcomes



There were six occasions where the spot prices were generally aligned nationally and the New South Wales price was greater than three times the New South Wales weekly average price of \$77/MWh.

Monday, 4 June

6:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	233.59	295.45	299.62
Demand (MW)	29 857	29 472	29 267
Available capacity (MW)	35 665	35 511	35 433

Conditions at the time saw demand close to that forecast and at high levels. Prices were aligned across the mainland with Tasmania exporting across Basslink at its nominal limit of 594 MW.

At 2.03 pm AGL rebid 150 MW of capacity at Somerton in Victoria from prices around \$9000/MWh to zero. The rebid reason given was “Forecast price change::Forecast price change”. A further rebid at 3.04 pm, increased the availability of McKay in Victoria by 150 MW, all of this capacity was priced below \$150/MWh. The rebid reason given was “Change in station capacity::stn.unit return to service”.

There was no other significant rebidding.

Tuesday, 5 June

6:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	230.26	112.13	105.81
Demand (MW)	29 988	29 530	29 206
Available capacity (MW)	35 446	36 165	36 406

Conditions at the time saw demand 450 MW higher than forecast four hours ahead and 800 MW higher than forecast 12 hours ahead, with around 800 MW of capacity priced between \$100/MWh and \$200/MWh. Prices were aligned across the mainland with Basslink exporting at its nominal limit of 594 MW.

At 5.36 pm, effective 5.45 pm, Macquarie generation reduced its available capacity across Liddell in New South Wales by 710 MW, 460 MW of this capacity was priced below \$20/MWh. The rebid reasons given were “Unit ashing problems” and “coal conservation”. At 5.56 pm, effective for the next trading interval, 450 MW of capacity across Bayswater was shifted from prices above \$240/MWh to below \$20/MWh, most of this capacity was priced above \$9000/MWh. The reason given was “Adjustment due to LD coal and ash problems”.

There was no other significant rebidding.

Thursday, 7 June

6:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	304.51	355.31	319.00
Demand (MW)	29 983	30 141	29 874
Available capacity (MW)	35 782	35 960	35 846

Conditions at the time saw demand and price close to forecast four and twelve hours ahead.

At 2.20 pm and 5.46 pm, Snowy Hydro shifted 450 MW of capacity into prices of less than \$300/MWh. The rebid reasons given were “Change in NSW Demand PD:Bnd shft down” and “Dispatch lower than expected:Bandshift down”.

From 4 pm AGL shifted 320 MW of capacity at Somerton in Victoria and Hallett in South Australia from prices above \$8000/MWh to zero. The rebid reason given was “Portfolio optimisation::change energy band”. At 5.28 pm, 73 MW of capacity was shifted from prices of zero to prices around \$80/MWh at Hallett. The rebid reason given was “Interconnector constraint::Forecast price change”.

Prices in Tasmania went to \$7/MWh during this trading interval following a rebids by Hydro Tasmania from 4.55 pm which shifted 700 MW of capacity to prices of less than \$10/MWh. The rebid reasons given were “Constraint Management”, and “Demand higher than forecast”. At the same time, negative settlement residues began to accrue on flows from Victoria to South Australia. NEMMCO intervened from 6 pm to limit further accumulations.

There was no other significant rebidding.

Friday, 8 June

5:30 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	322.41	125.84	129.38
Demand (MW)	28 645	28 470	27 859
Available capacity (MW)	34 429	34 691	35 250
6:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	381.45	216.1	309.83
Demand (MW)	29 709	29 396	29 191
Available capacity (MW)	34 564	34 462	35 252

Conditions at the time saw demand close to that forecast four hours ahead. Available capacity was 820 MW lower than forecast 12 hours ahead

At 12.45 pm Macquarie Generation reduced the available capacity at Liddell in New South Wales by 630 MW. “The reason given was “Coal management”. At the same time 750 MW of capacity at Bayswater in New South Wales was shifted from prices above \$200/MWh to below \$40/MWh. The reason given was “Adjustment due to LD”. At 4.44 pm, Macquarie Generation increased capacity across its portfolio by 380 MW, all priced above \$6500/MWh. The rebid reasons given were “Coal management” and “adjustment due to LD”.

At 3.39 pm Eraring Energy reduced the available capacity at Eraring in New South Wales by 125 MW. This capacity was priced around \$300/MWh. The rebid reason given was “Wet coal issues”.

From 4.54 pm and over several rebids Stanwell Corporation rebid as much as 180 MW of capacity across its portfolio in Queensland from prices below \$150/MWh to above \$9000/MWh. The rebid reasons given were “Manage Transmission constraint”, “Plant breakdown” and “Portfolio optimisation”.

There was no other significant rebidding.

Saturday, 9 June

6:00 pm	Actual	4 hr forecast	12 hr forecast
Price (\$/MWh)	288.95	606.99	157.23
Demand (MW)	27 093	27 359	27 183
Available capacity (MW)	33 672	33 417	34 182

Conditions at the time saw demand and price lower than forecast four hours ahead.

At 9.35 am CS Energy rescheduled the start up of Kogan Creek in Queensland (which is in its commissioning phase), reducing the available capacity by 300 MW.

Over several rebids from 11.30 am Eraring Energy reduced available capacity at Eraring in New South Wales by 445 MW, 335 MW of this capacity was priced below \$100/MWh. The rebid reasons given were “Wet coal limitations” and “Wet coal problems”.

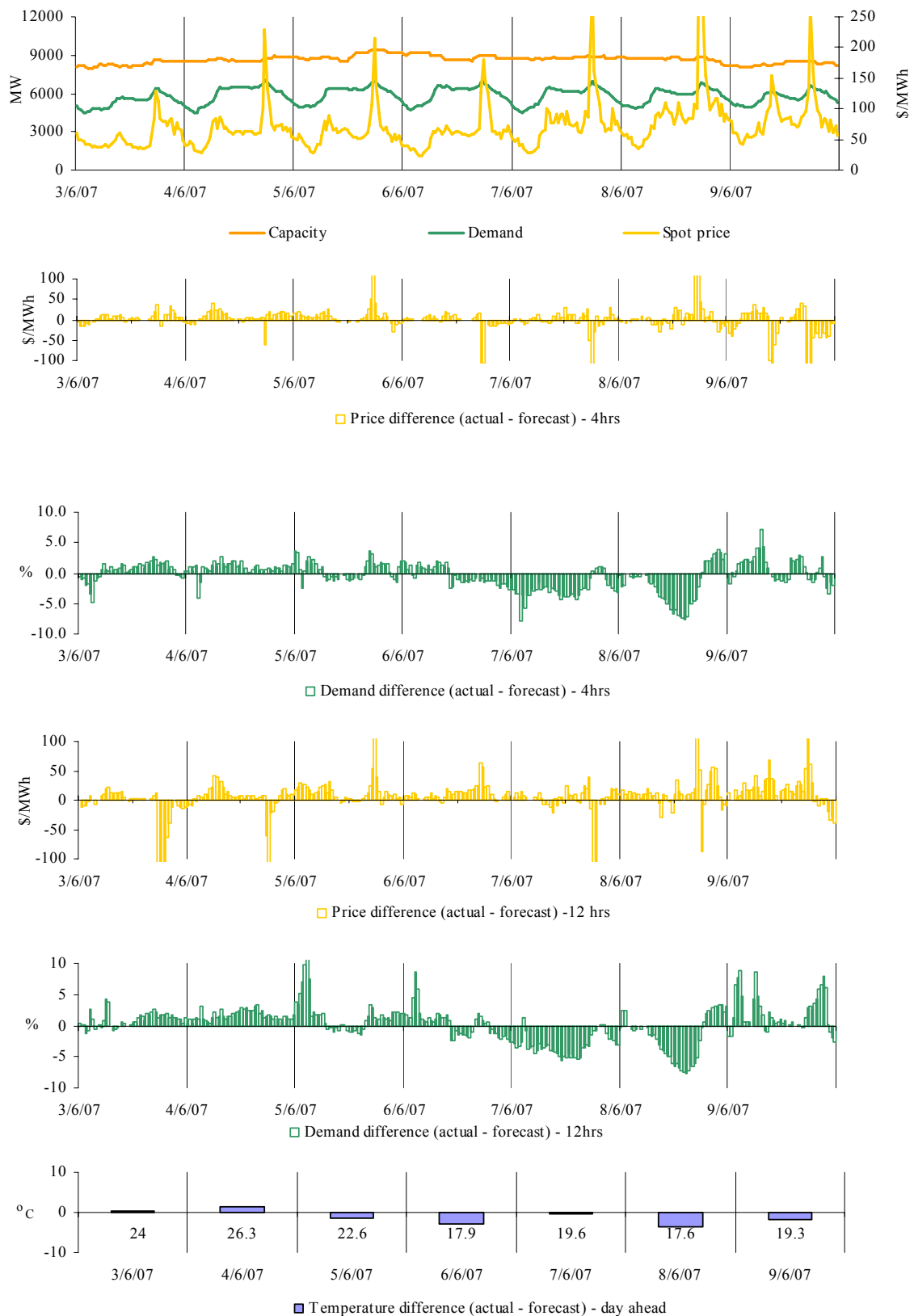
Over several rebids from 2.17 pm TRUenergy returned Yallourn unit one in Victoria to service following its trip earlier in the day. By 6 pm, 300 MW of capacity was available, all priced below zero. The rebid reason given for all rebids was “Plant conditions”.

From 4.25 pm, Ecogen Energy rebid 168 MW of capacity across Jeeralang in Victoria from prices above \$8000/MWh to below \$500/MWh. The rebid reasons given were “Adj to unit commitment due to portfol conditions” and “Adj to unit commitment due to interconnector limits”.

Over two rebids at 4.57 pm and 5.13 pm Snowy Hydro shifted 300 MW of capacity at Murray from prices above \$9000/MWh to less than \$150/MWh. The rebid reason given was “Demand higher than frst:bandshift down”.

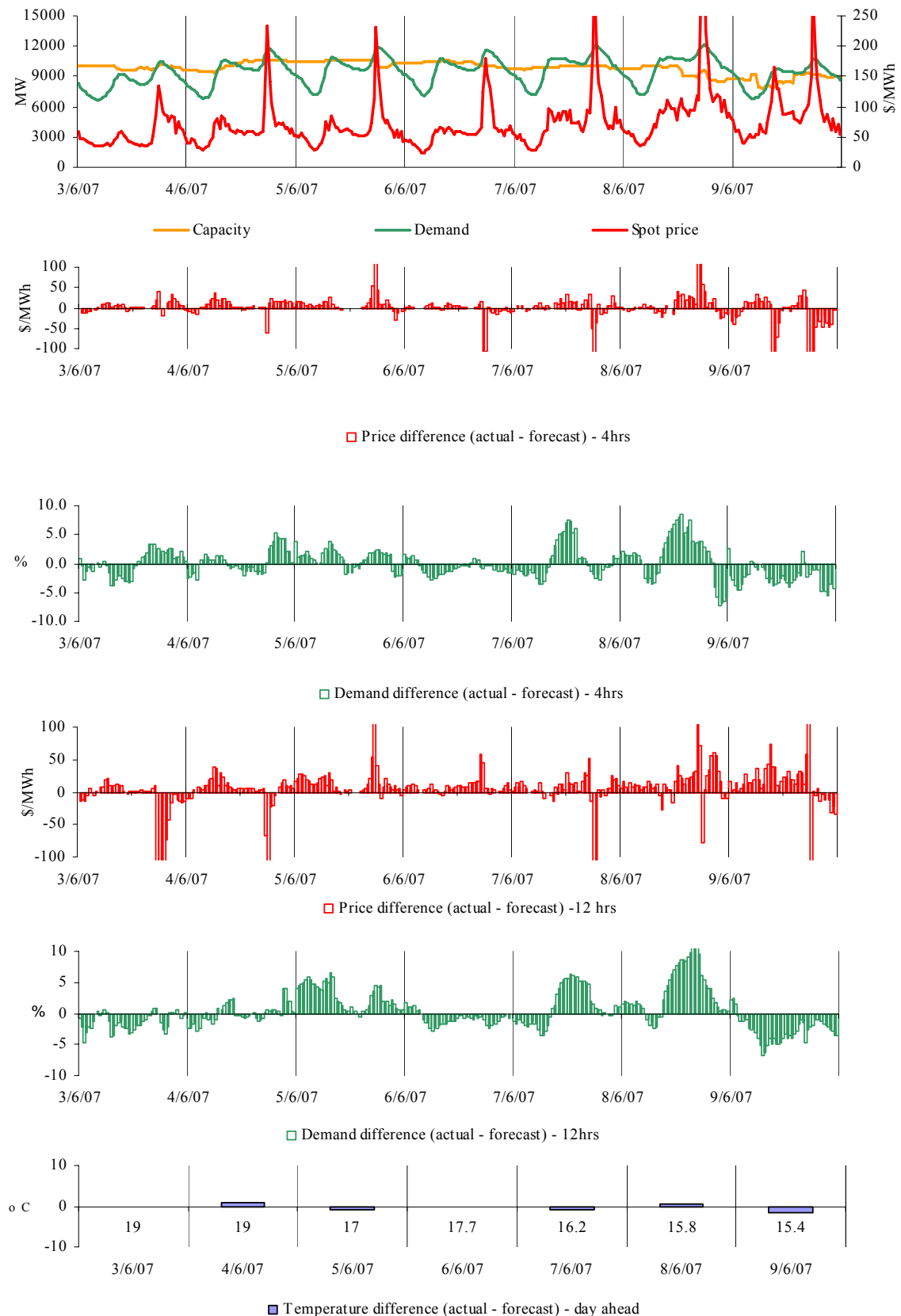
There was no other significant rebidding.

Figures 27-32: Queensland actual spot price, demand and forecast differences



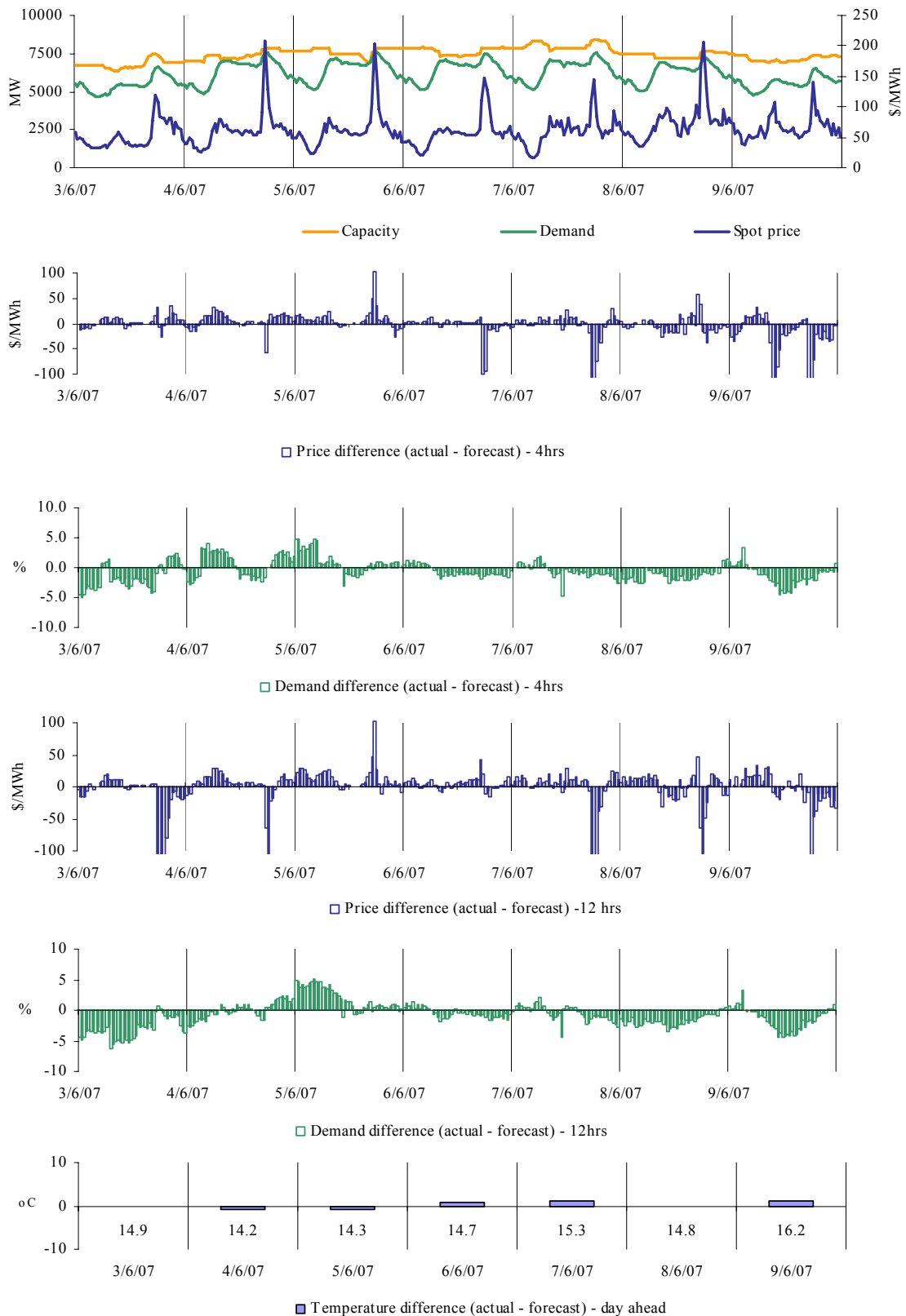
There were five occasions where the spot price in Queensland was greater than three times the Queensland weekly average price of \$74/MWh. These occurred when prices were generally aligned across all regions and is detailed in the national market outcomes section.

Figures 33-38 New South Wales actual spot price, demand and forecast differences



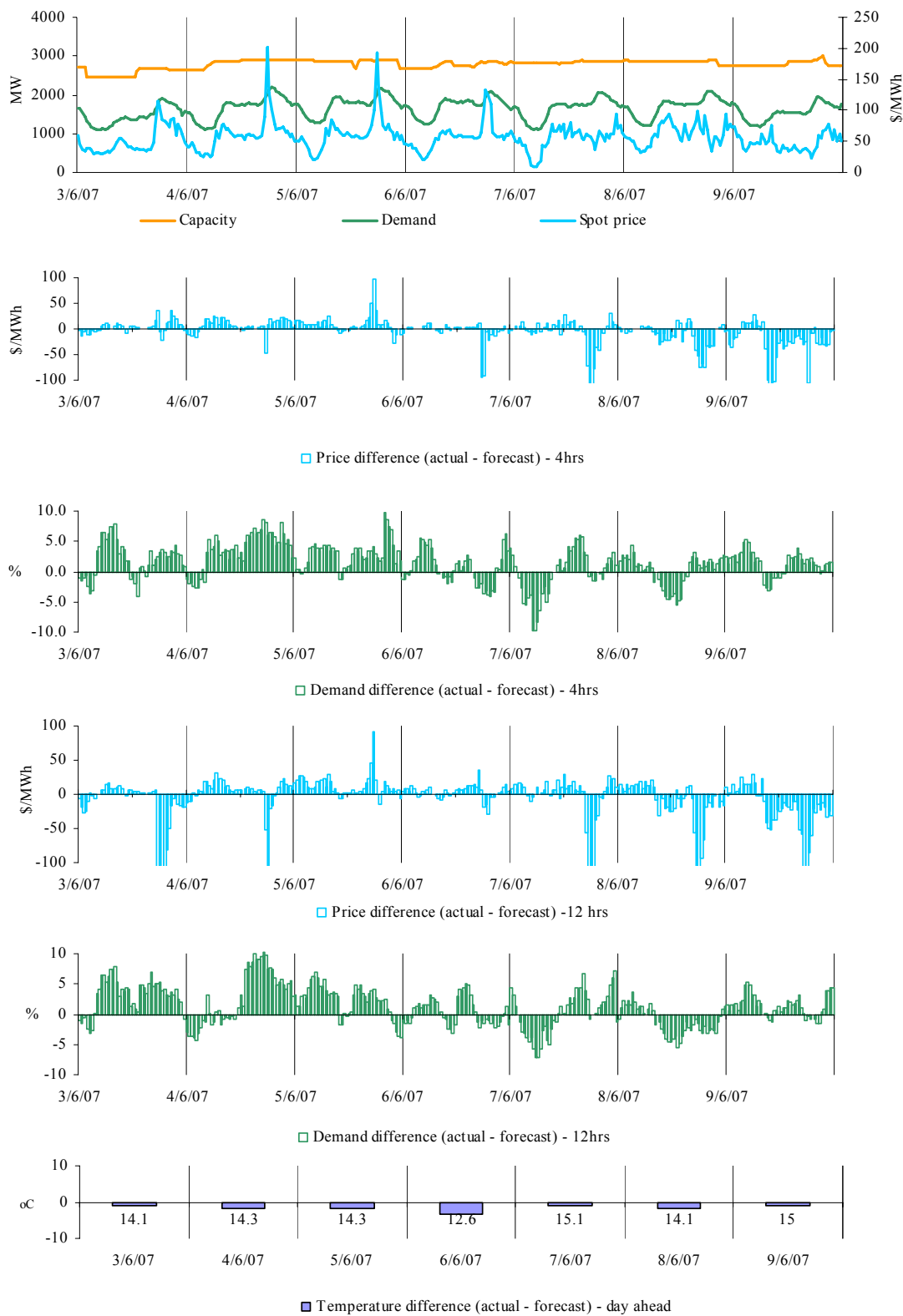
There were six occasions where the spot price in New South Wales was greater than three times the New South Wales weekly average price of \$77/MWh. These occurred when prices were generally aligned across all regions and is detailed in the national market outcomes section.

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



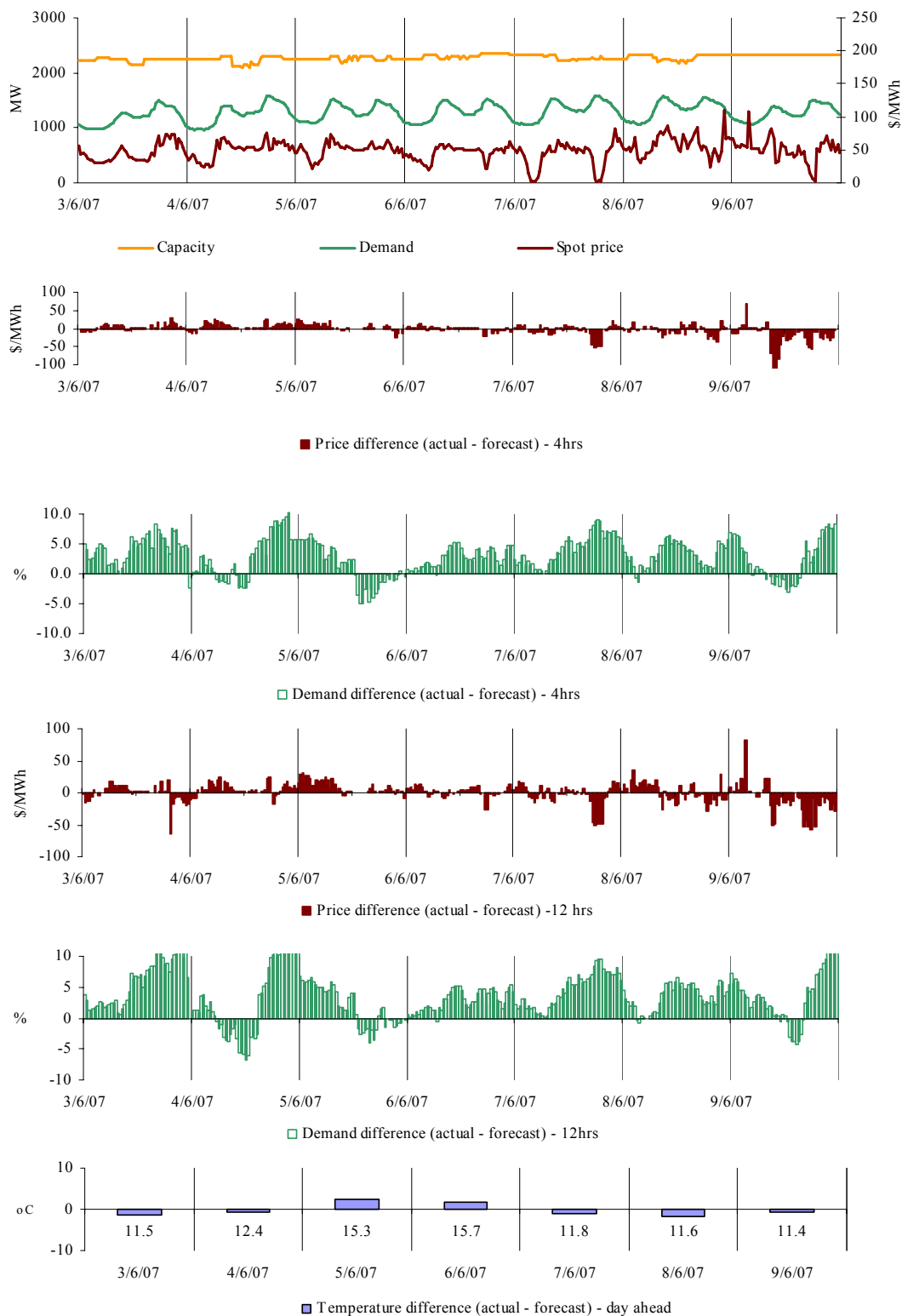
There were three occasions where the spot price in Victoria was greater than three times the Victoria weekly average price of \$64/MWh. These occurred when prices were generally aligned across all regions and is detailed in the national market outcomes section.

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



There were two occasions where the spot price in South Australia was greater than three times the South Australia weekly average price of \$59/MWh. These occurred when prices were generally aligned across all regions and is detailed in the national market outcomes section.

Figures 51-56: Tasmania actual spot price, demand and forecast differences



There was no occasion in Tasmania where the spot price was greater than three times the weekly average price of \$49/MWh.

Figures 57 – 61 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.

Figure 57: Queensland closing bid prices, dispatched generation and spot price

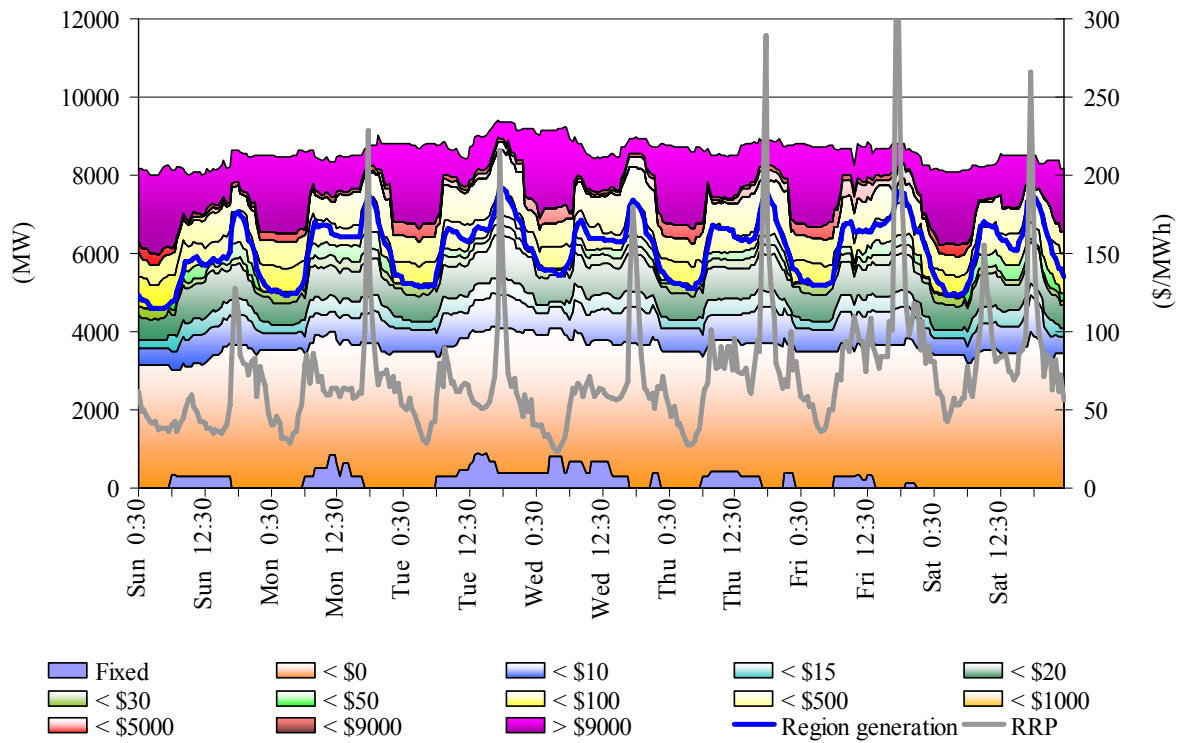


Figure 58: New South Wales closing bid prices, dispatched generation and spot price

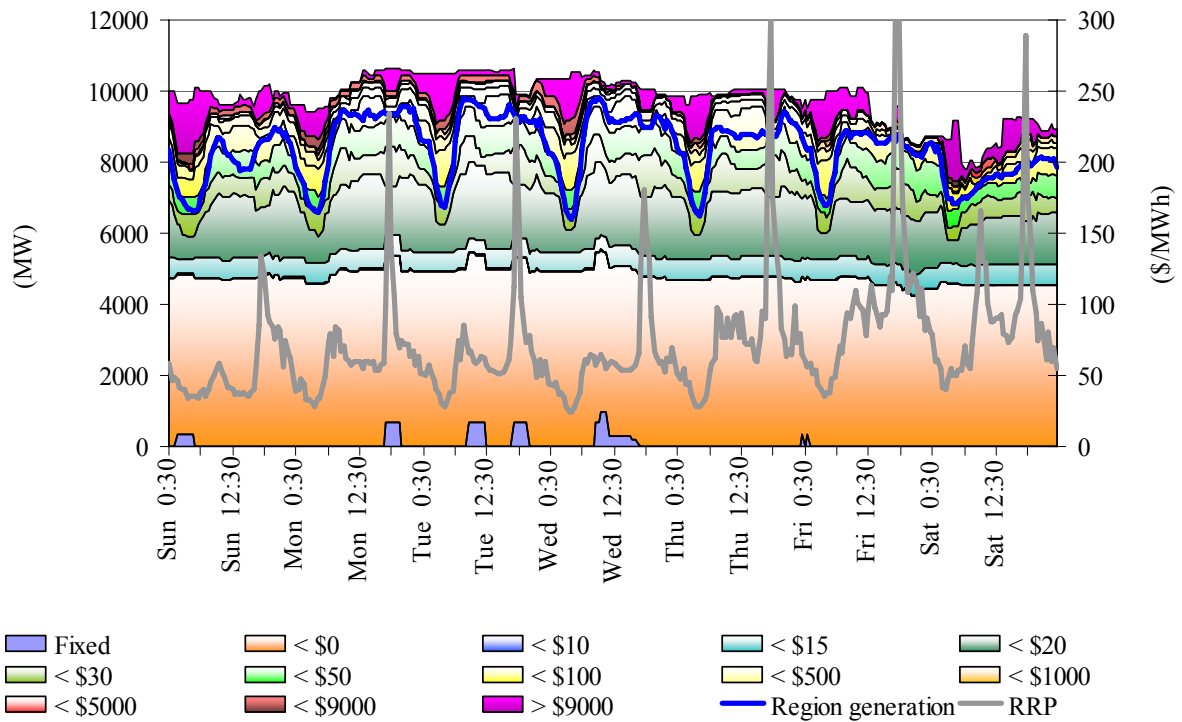


Figure 59: Victoria closing bid prices, dispatched generation and spot price

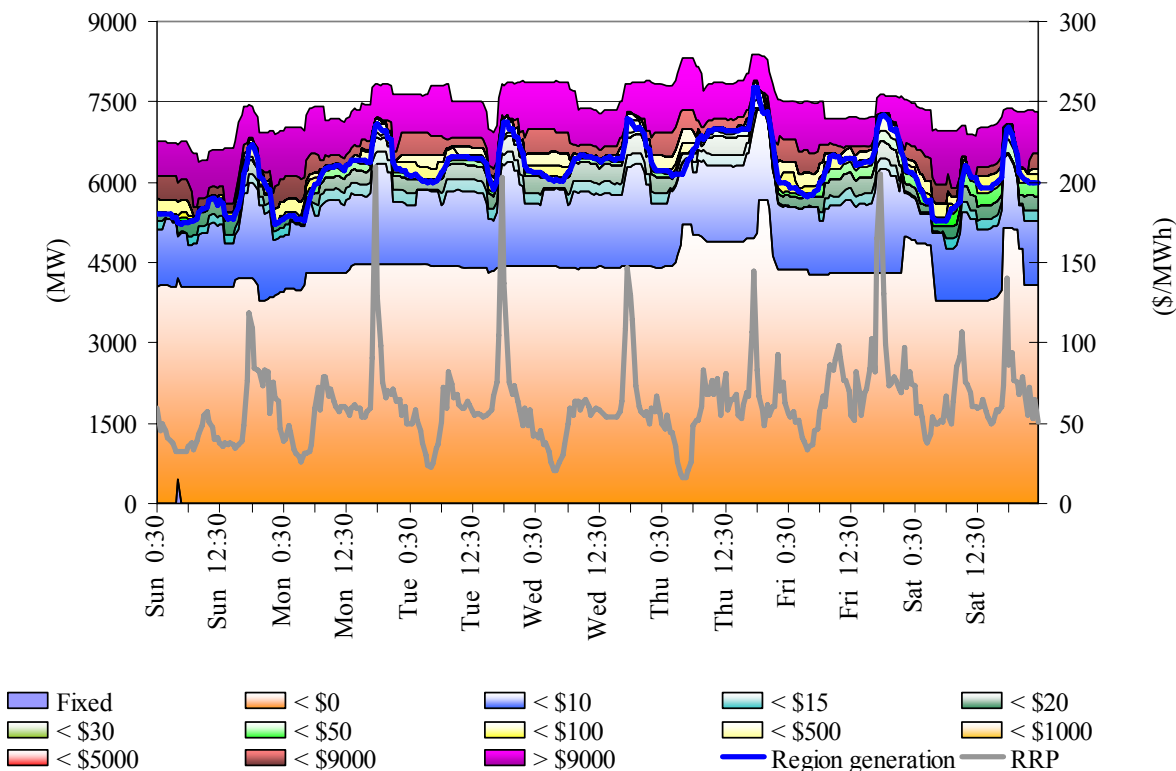


Figure 60: South Australia closing bid prices, dispatched generation and spot price

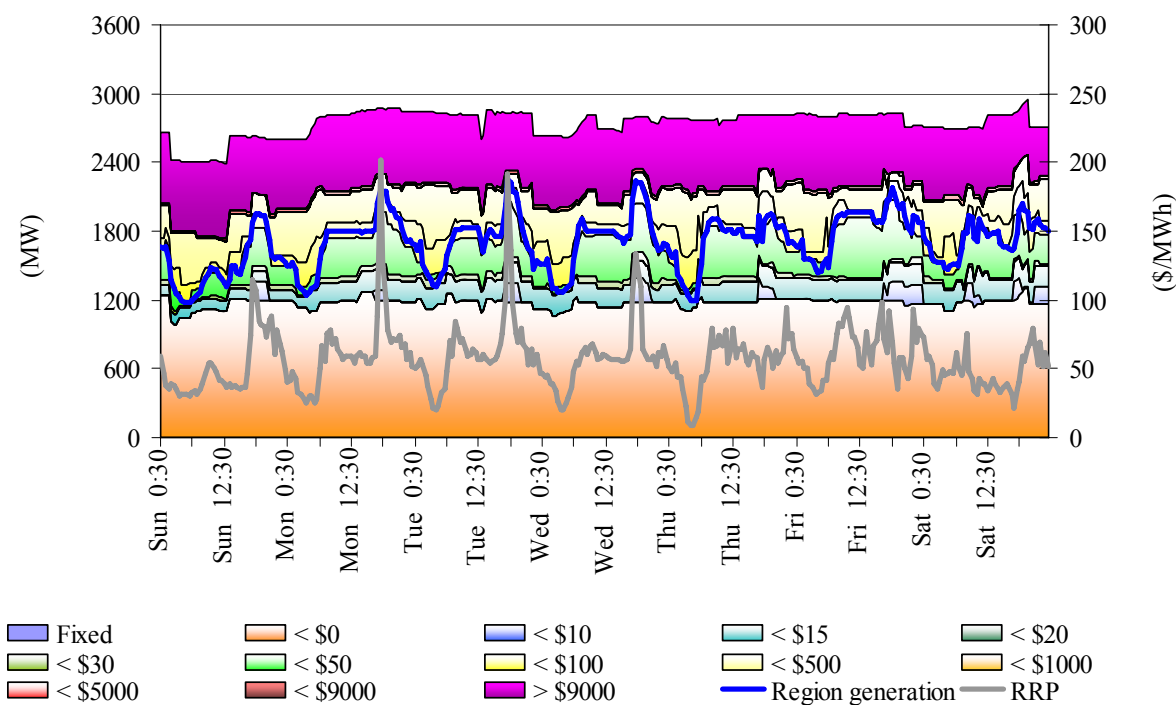
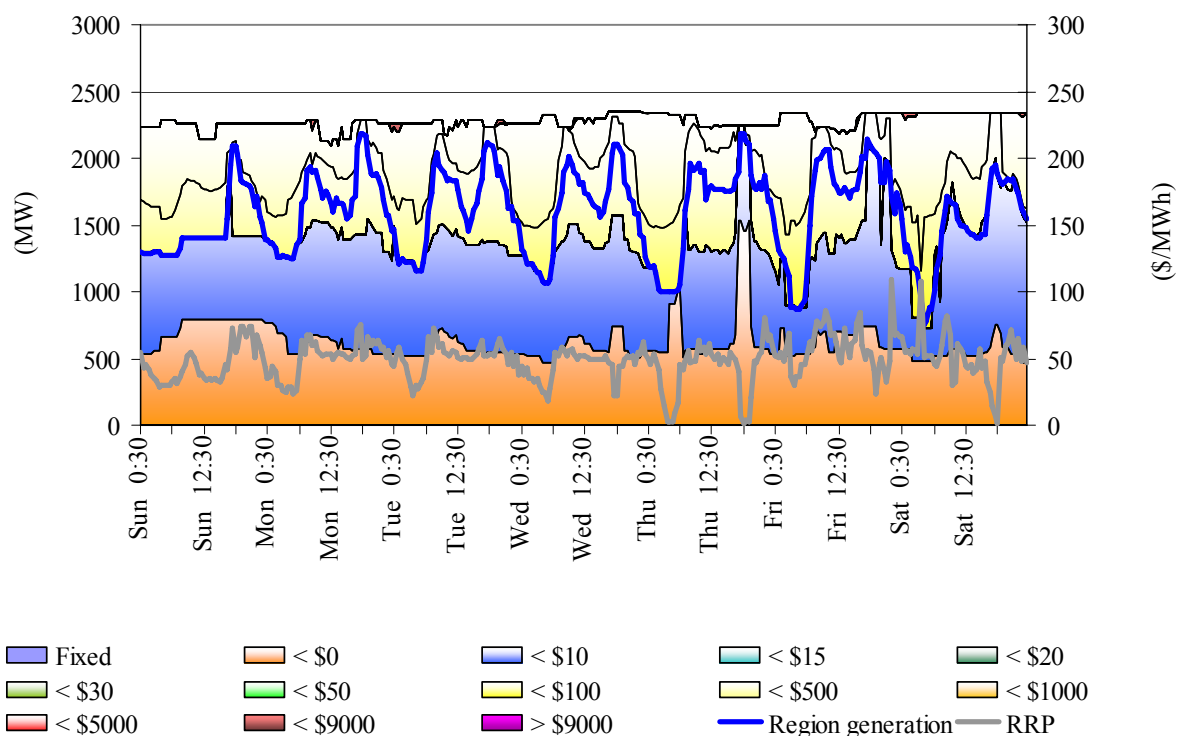


Figure 61: Tasmania closing bid prices, dispatched generation and spot price



Ancillary service market

The total cost of ancillary services on the mainland for the week was \$334 000 or 0.1 per cent of turnover in the energy market. Figure 62 summarises the volume weighted average prices and costs for the eight frequency control ancillary services across the mainland.

Figure 62: frequency control ancillary service prices and costs for the mainland

	Raise 6 sec	Raise 60 sec	Raise 5 min	Raise Reg	Lower 6 sec	Lower 60 sec	Lower 5 min	Lower reg
Last week (\$/MW)	1.37	0.68	1.74	5.09	0.15	0.09	0.42	1.45
Previous week (\$/MW)	1.33	0.74	1.88	4.79	0.11	0.06	0.42	1.68
Last quarter (\$/MW)	1.76	0.73	1.15	1.54	0.39	2.28	5.00	1.93
Market Cost (\$1000s)	58	27	108	116	0.1	0	3	21
% of energy market	0.02%	0.01%	0.04%	0.04%	0.01%	0.01%	0.01%	0.01%

The total cost of ancillary services in Tasmania for the week was \$208 000 or 2 per cent of the turnover in the energy market in Tasmania.

Figure 63: 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 (\$/MW)	7.16	1.58	1.96	4.65	0.00	2.81	2.03	1.21
Previous week (\$/MW)	11.42	1.79	1.88	3.93	0.00	3.64	7.75	1.83
Last quarter (\$/MW)	4.97	0.49	2.93	3.00	12.67	0.43	0.82	0.45
Market Cost (\$1000s)	11	7	11	15	0	97	60	7
% of energy market	0.10%	0.07%	0.11%	0.14%	0.01%	0.91%	0.57%	0.07%

Figure 64 shows the daily breakdown of cost for each frequency control ancillary service.

Figure 64: daily frequency control ancillary service cost

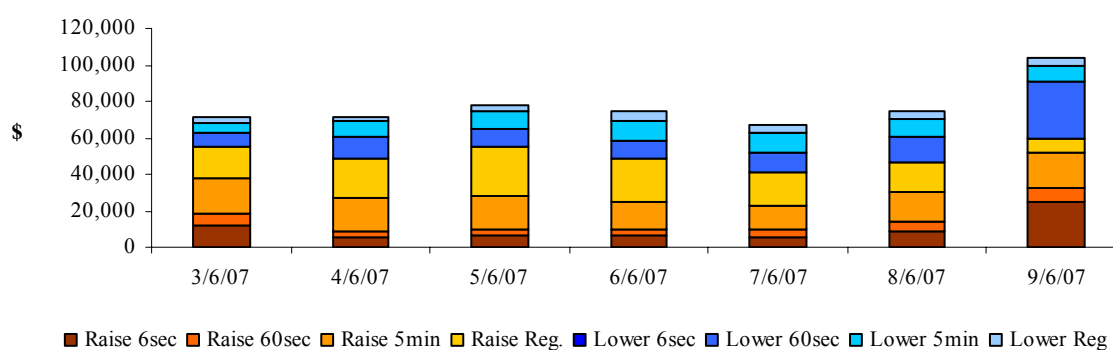
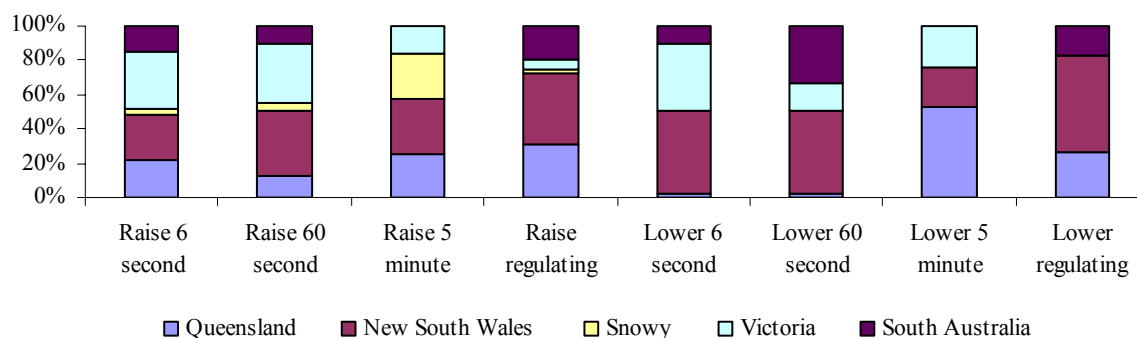


Figure 65 shows the contribution, on a percentage basis, that frequency control ancillary service providers are utilised (in each mainland region) to satisfy the total requirement for each service.

Figure 65: regional participation in ancillary services on the mainland



Figures 66 and 67 show 30-minute prices for each frequency control ancillary service throughout the week.

Figure 66: prices for raise services

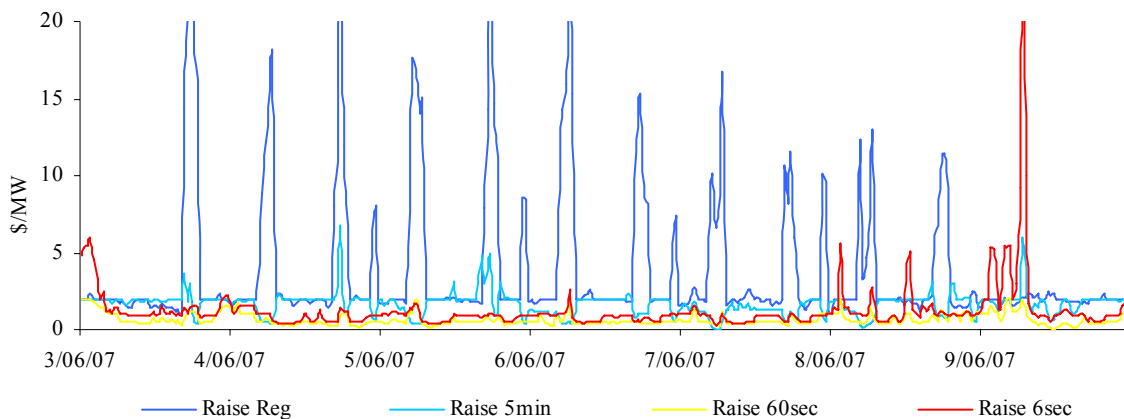


Figure 66A: prices for raise services – Tasmania

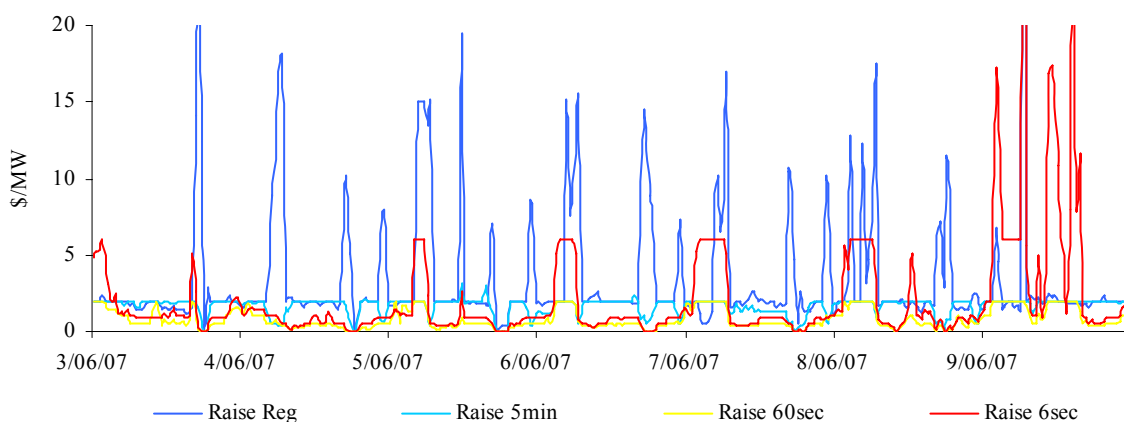


Figure 67: prices for lower services

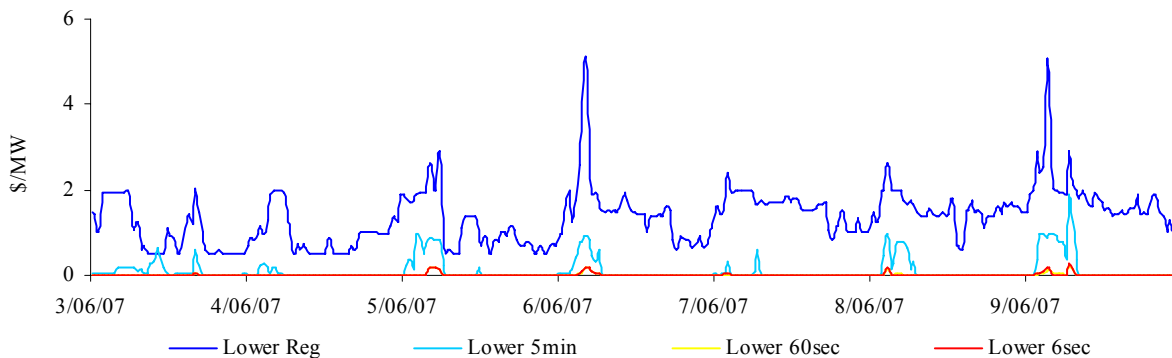
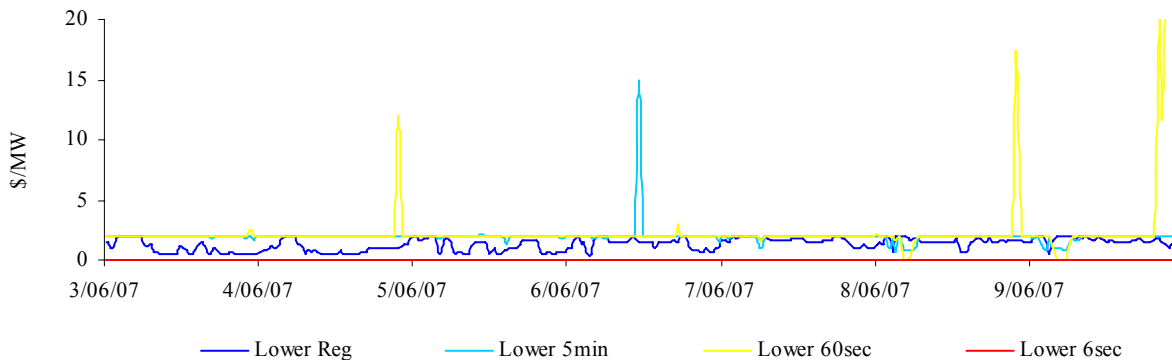


Figure 67A: prices for lower services – Tasmania



Figures 68 and 69 present for both raise and lower frequency control services the requirement, established by NEMMCO, for each service to satisfy the frequency standard.

Figure 68: raise requirements

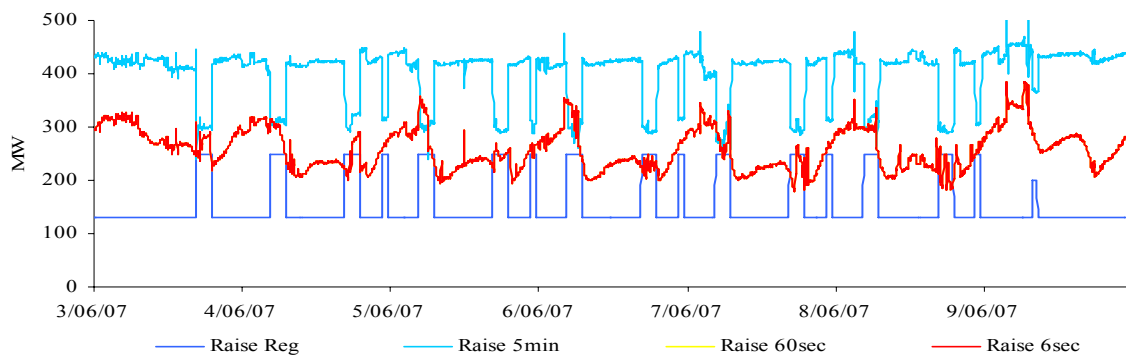


Figure 68A: raise requirements – Tasmania

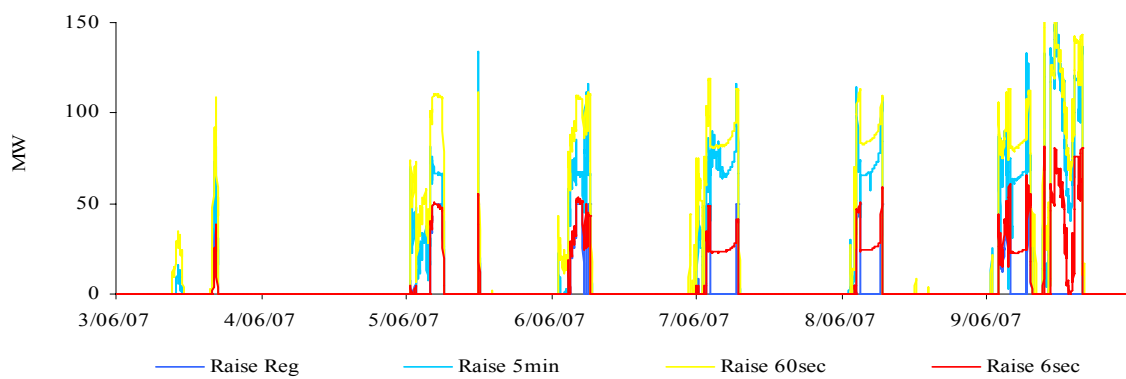


Figure 69: lower requirements

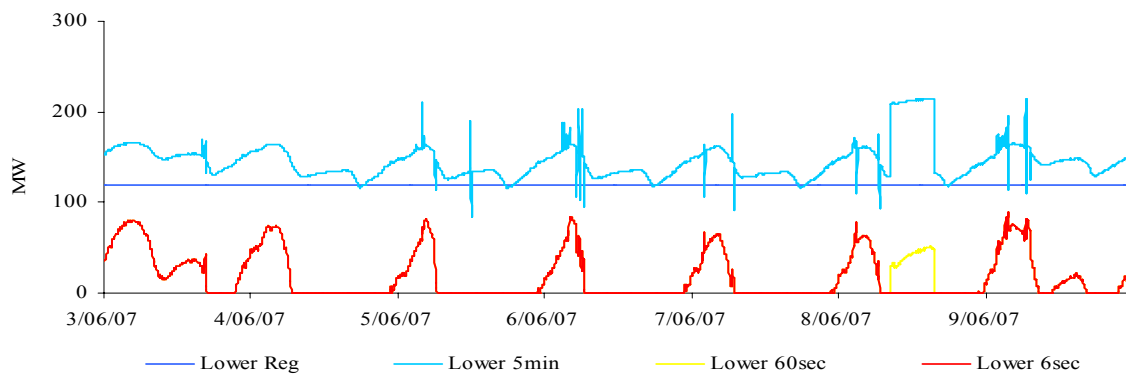


Figure 69A: lower requirements – Tasmania

