

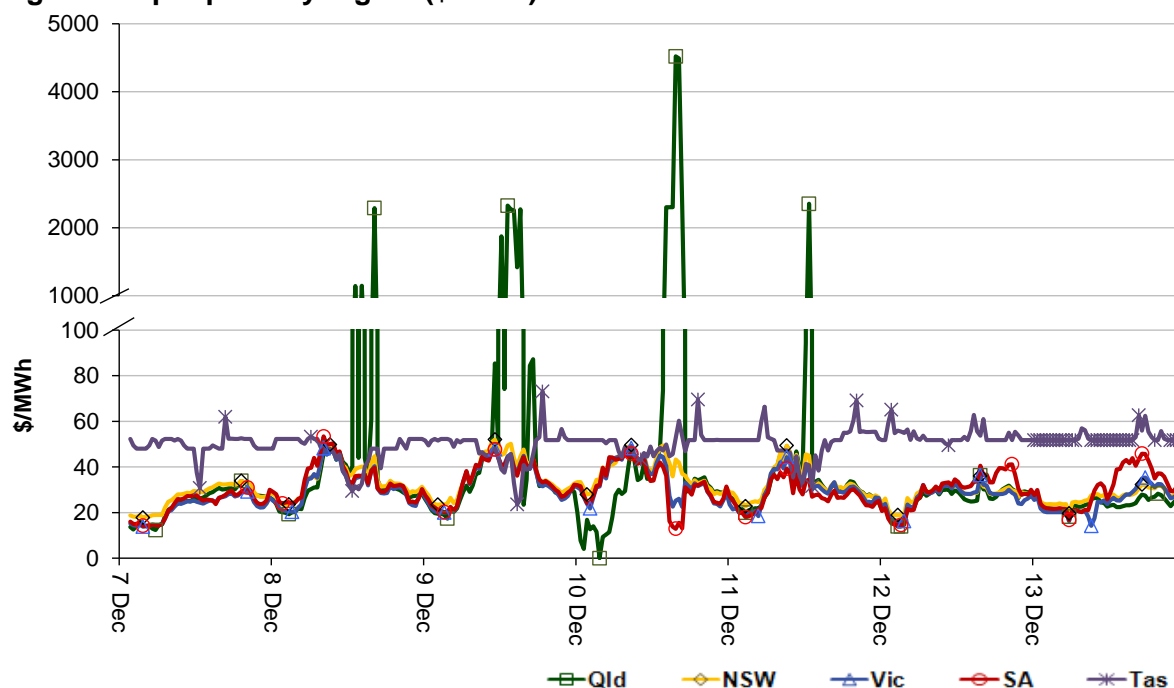
Introduction

The AER is required to publish the reasons for significant variations between forecast and actual price and is responsible for monitoring activity and behaviour in the National Electricity Market. The Electricity Report forms an important part of this work. The report contains information on significant price variations, movements in the contract market, together with analysis of spot market outcomes and rebidding behaviour. By monitoring activity in these markets, the AER is able to keep up to date with market conditions and identify compliance issues.

Spot market prices

This week was characterised by multiple high price events in Queensland, where the 5-minute dispatch price exceeded \$5000/MWh on 19 occasions, resulting in 16 spot prices above \$250/MWh, as shown in figure 1 (and discussed in the *Detailed market analysis of significant price events* section).

Figure 1: Spot price by region (\$/MWh)



The following factors contributed to the high price events:

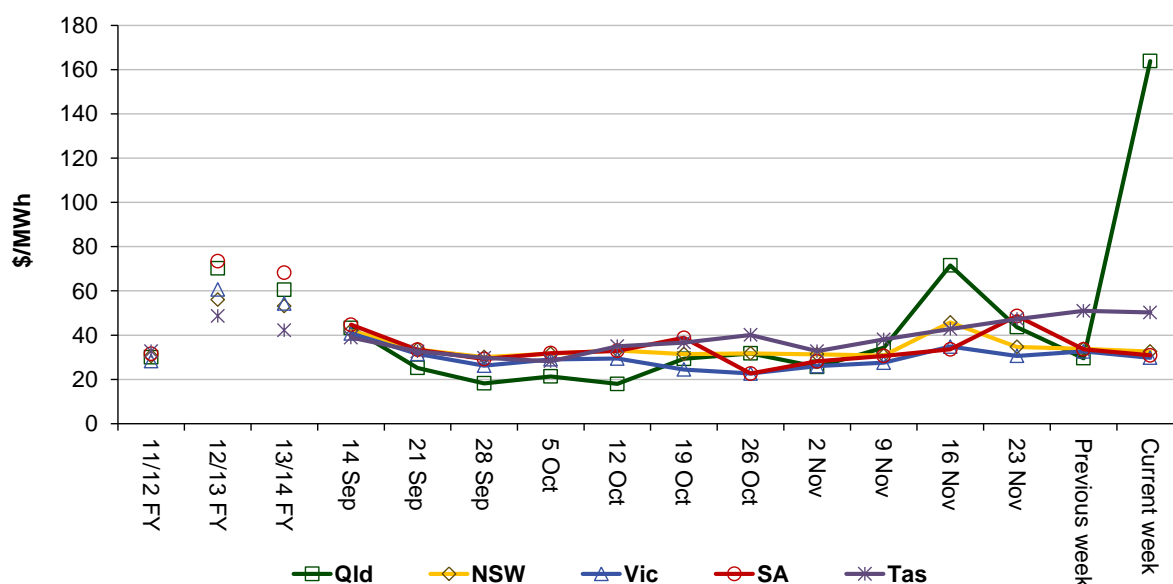
- significant rebidding close to dispatch
- network limitations, and
- limited ramp rate availability.

On only one occasion¹ where the dispatch price exceeded \$5000/MWh did a peaking plant in Queensland contribute to setting the price. Last minute rebidding can inhibit participants' ability to respond to high prices.

Attachment A to this report contains the Price Setter² for each of the high price events. Price setter identifies, for a 30 minute trading interval, each five minute dispatch interval price and the generating units involved in setting the energy price. Price Setter has been attached to this report to highlight how, in many cases during the week, high dispatch prices occurred late in the trading interval.

Figure 2 shows the volume weighted average (VWA) prices for the current week (with prices shown in Table 1) and the preceding 12 weeks, as well as the VWA price over the previous 3 financial years.

Figure 2: Volume weighted average spot price by region (\$/MWh)



The high volume weighted average price for the current week in Queensland is due to the significant number of high spot prices.

Table 1: Volume weighted average spot prices by region (\$/MWh)

Region	Qld	NSW	Vic	SA	Tas
Current week	164	33	30	31	50
13-14 financial YTD	59	54	52	63	45
14-15 financial YTD	39	37	34	42	38

Longer-term statistics tracking average spot market prices are available on the [AER website](#).

Spot market price forecast variations

The AER is required under the National Electricity Rules to determine whether there is a significant variation between the forecast spot price published by the Australian Energy

¹ Origin Energy's Mt Stuart Power Station on 10 December.

² Price setter information is published by AEMO and can be found at www.aemo.com.au

Market Operator (AEMO) and the actual spot price and, if there is a variation, state why the AER considers the significant price variation occurred. It is not unusual for there to be significant variations as demand forecasts vary and participants react to changing market conditions. A key focus of our report is whether the actual price differs significantly from the forecast price either four or 12 hours ahead. These timeframes have been chosen as indicative of the time frames within which different technology types may be able to commit (intermediate plant within four hours and slow start plant within 12 hours).

There were 182 trading intervals throughout the week where actual prices varied significantly from forecasts. This compares to the weekly average in 2013 of 97 counts and the average in 2012 of 60. Reasons for the variations for this week are summarised in Table 2. The table summarises (as a percentage) the number of times when the actual price differs significantly from the forecast price four or 12 hours ahead and the major reason for that variation. The reasons are classified as availability (which means that there is a change in the total quantity or price offered for generation), demand forecast inaccuracy, changes to network capability or as a combination of factors (when there is not one dominant reason). An instance where both four and 12 hour ahead forecasts differ significantly from the actual price will be counted as two variations.

Table 2: Reasons for variations between forecast and actual prices

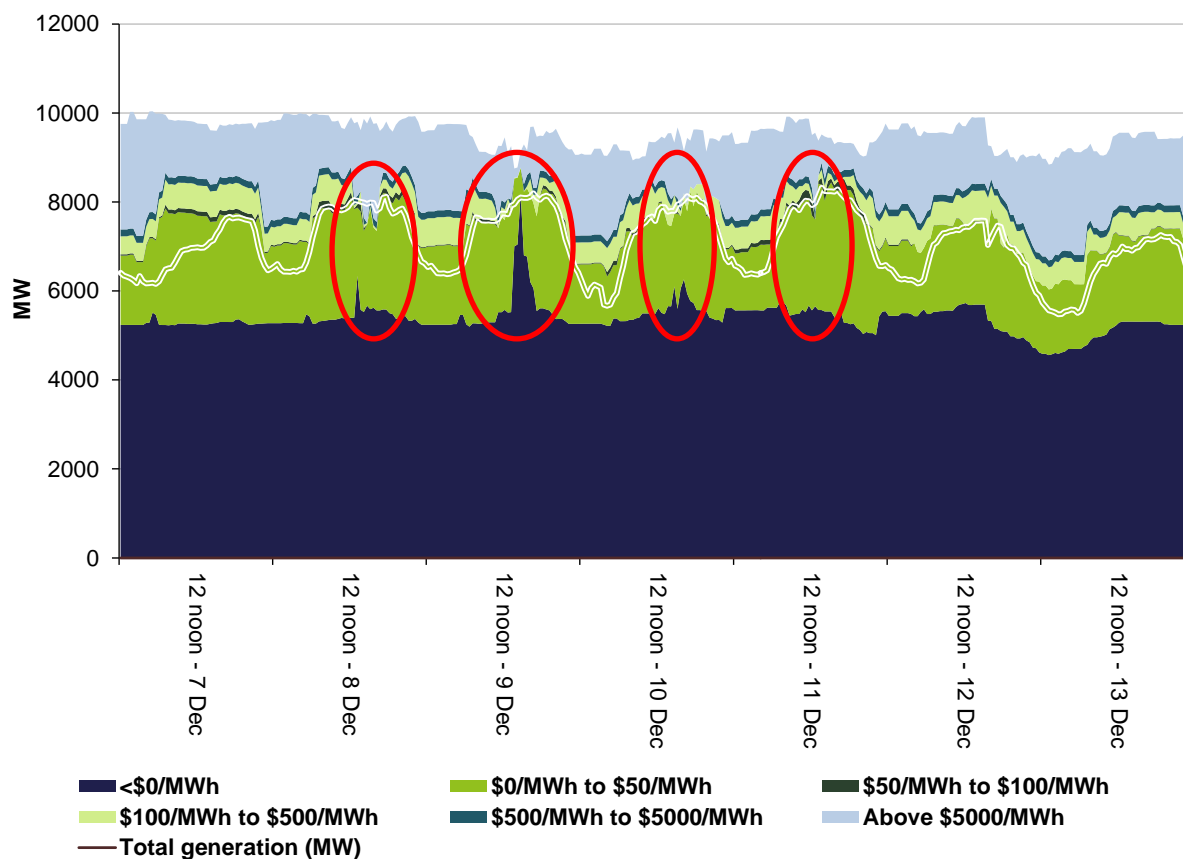
	Availability	Demand	Network	Combination
% of total above forecast	3	22	0	1
% of total below forecast	68	6	0	1

Note: Due to rounding, the total may not be 100 per cent.

Generation and bidding patterns

The AER reviews generator bidding as part of its market monitoring to better understand the drivers behind price variations. Figures 3 to 7 show the total generation dispatched and the amounts of capacity offered within certain price bands for each 30 minute trading interval in each region.

Figure 3: Queensland generation and bidding patterns



The red ellipses highlight the changes in capacity being offered at high prices which align with the high spot price periods. A detailed analysis of the events relating to these periods is in the *Detailed market analysis of significant price events* section.

Figure 4: New South Wales generation and bidding patterns

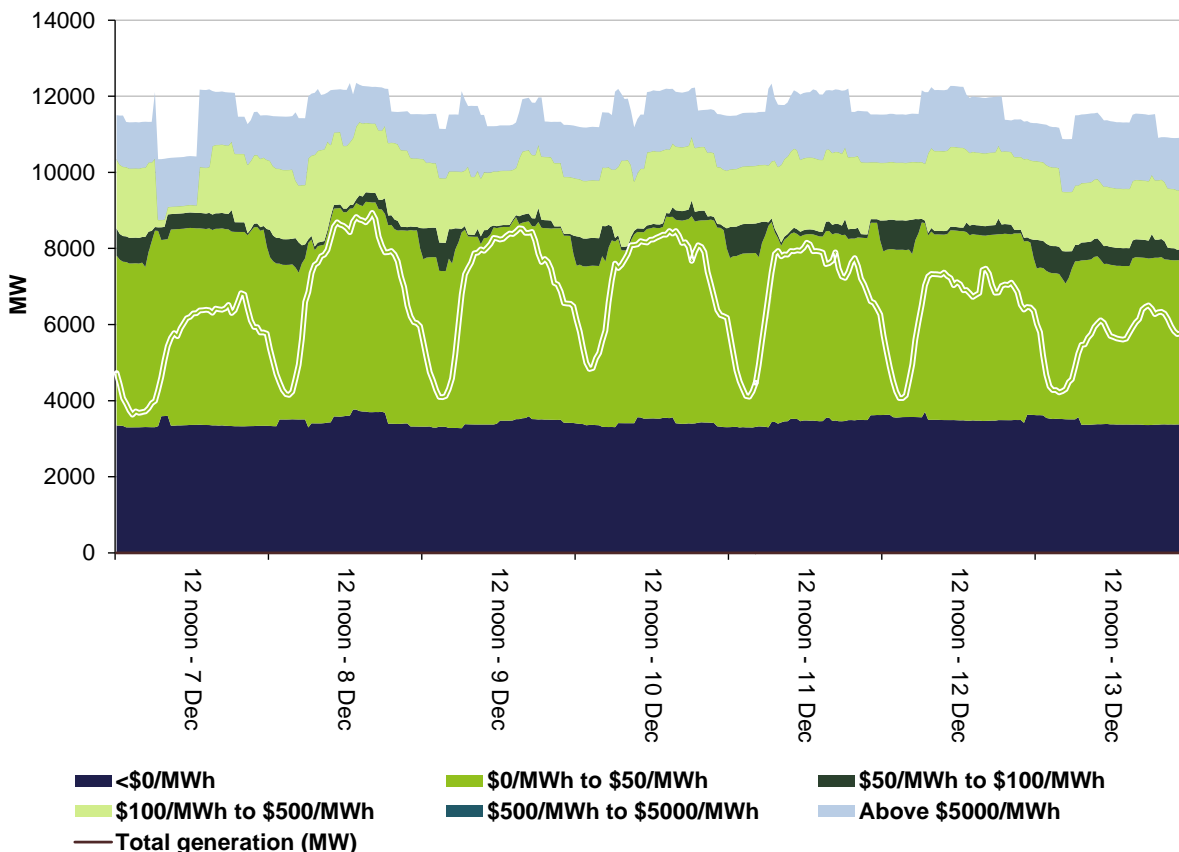


Figure 5: Victoria generation and bidding patterns

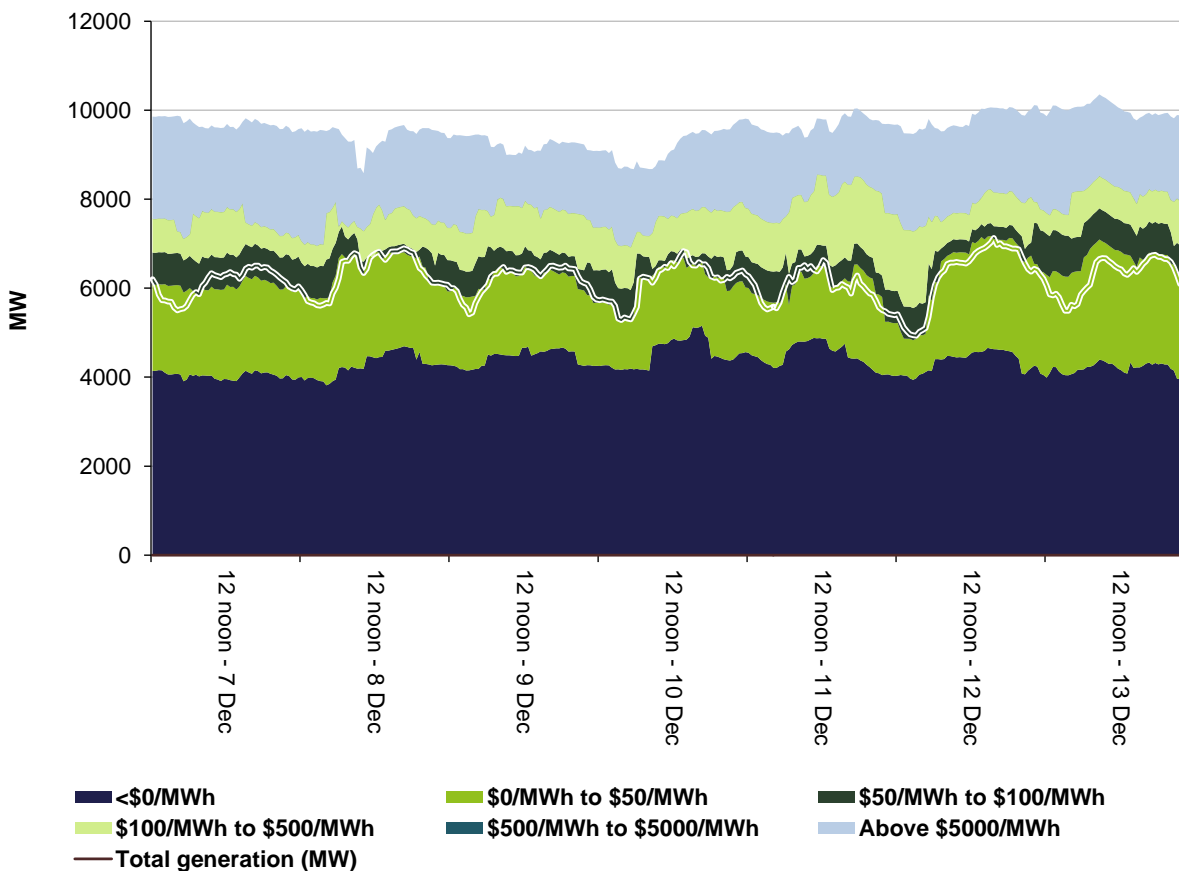


Figure 6: South Australia generation and bidding patterns

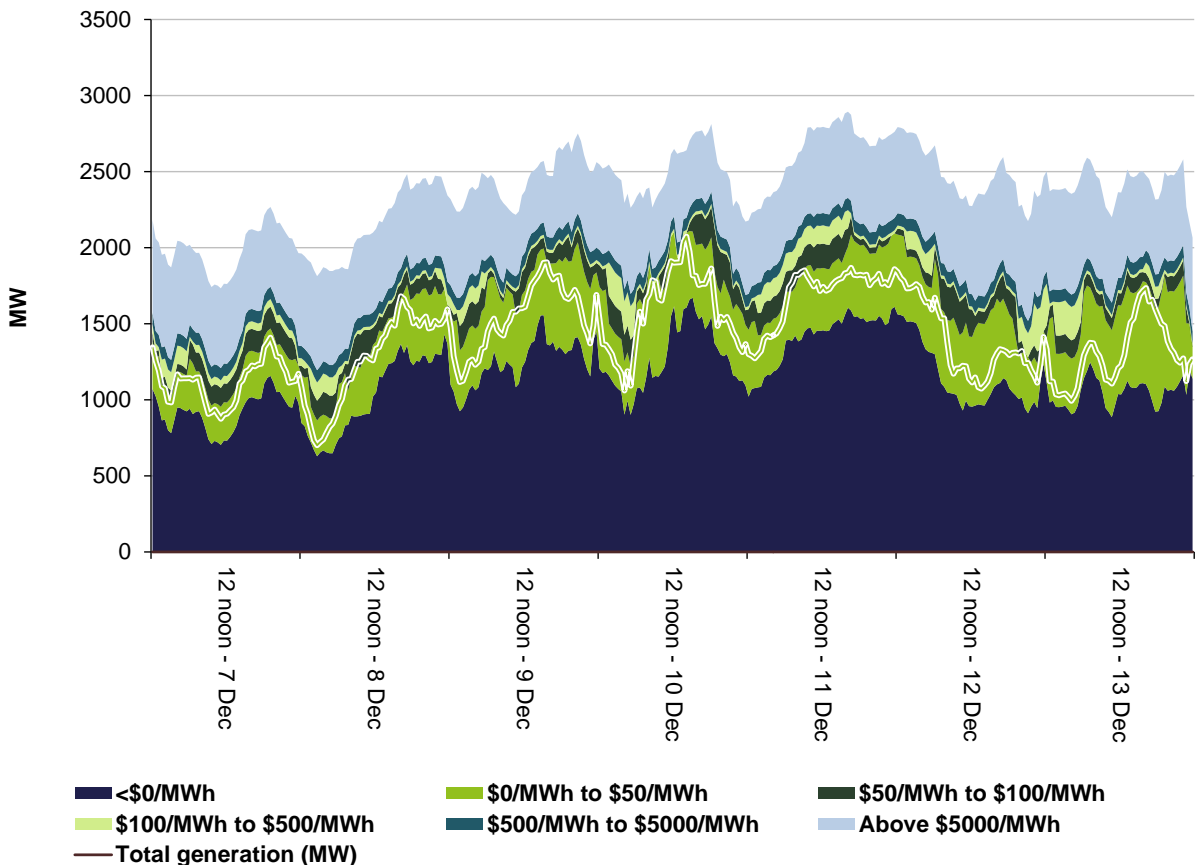
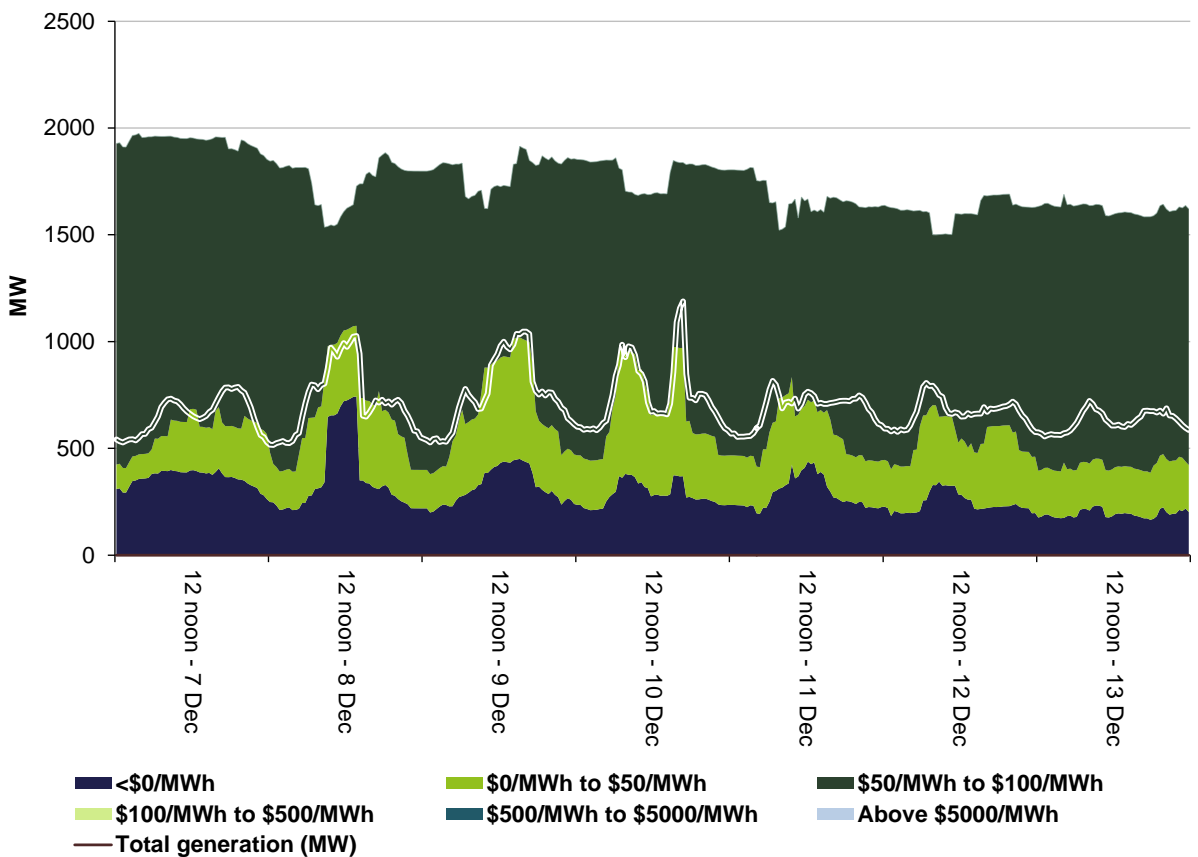


Figure 7: Tasmania generation and bidding patterns



Frequency control ancillary services markets

Frequency control ancillary services (FCAS) are required to maintain the frequency of the power system within the frequency operating standards. Raise and lower regulation services are used to address small fluctuations in frequency, while raise and lower contingency services are used to address larger frequency deviations. There are six contingency services:

- *fast services*, which arrest a frequency deviation within the first 6 seconds of a contingent event (raise and lower 6 second)
- *slow services*, which stabilise frequency deviations within 60 seconds of the event (raise and lower 60 second)
- *delayed services*, which return the frequency to the normal operating band within 5 minutes (raise and lower 5 minute) at which time the five minute dispatch process will take effect.

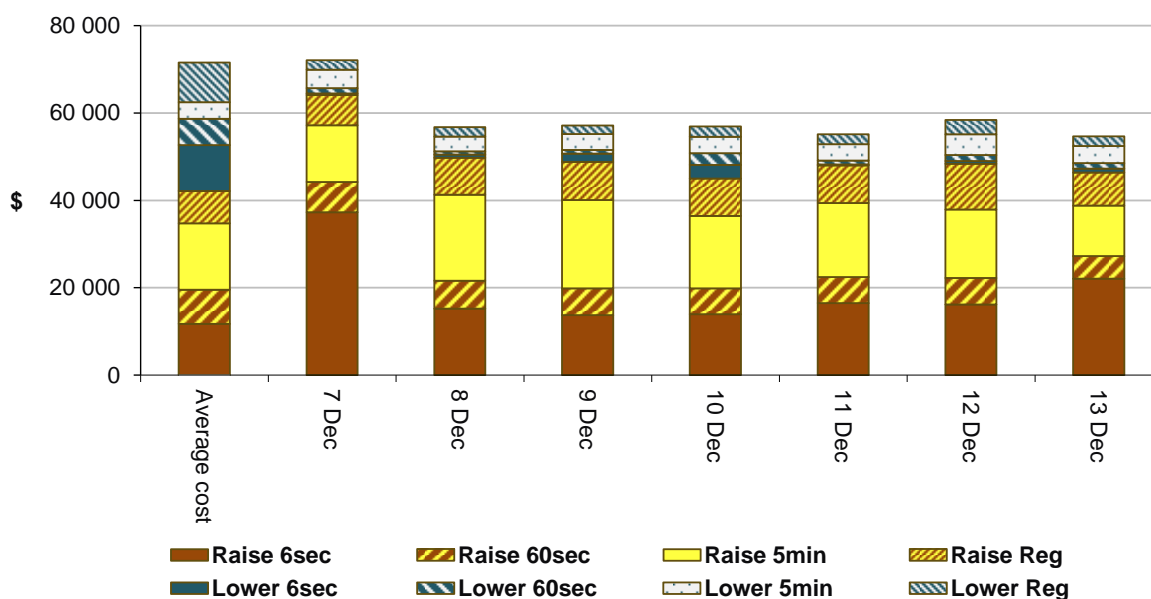
The Electricity Rules stipulate that generators pay for raise contingency services and customers pay for lower contingency services. Regulation services are paid for on a “causer pays” basis determined every four weeks by AEMO.

The total cost of FCAS on the mainland for the week was \$266 500 or less than 1 per cent of energy turnover on the mainland.

The total cost of FCAS in Tasmania for the week was \$144 500 or around 1.5 per cent of energy turnover in Tasmania.

Figure 8 shows the daily breakdown of cost for each FCAS for the NEM, as well as the average cost since the beginning of the previous financial year.

Figure 8: Daily frequency control ancillary service cost



Detailed market analysis of significant price events

We provide more detailed analysis of events where the spot price was greater than three times the weekly average price in a region and above \$250/MWh or was below -\$100/MWh.

There were sixteen occasions where the spot price in Queensland was greater than three times the Queensland weekly average price of \$164/MWh and above \$250/MWh. Indeed, all of the spot prices requiring further analysis (according to our criteria) this week occurred in Queensland. These prices were mainly driven by significant rebidding made close to dispatch (limiting other participants' ability to respond), network and ramp rate limitations.

Network limitations contributed to the high prices

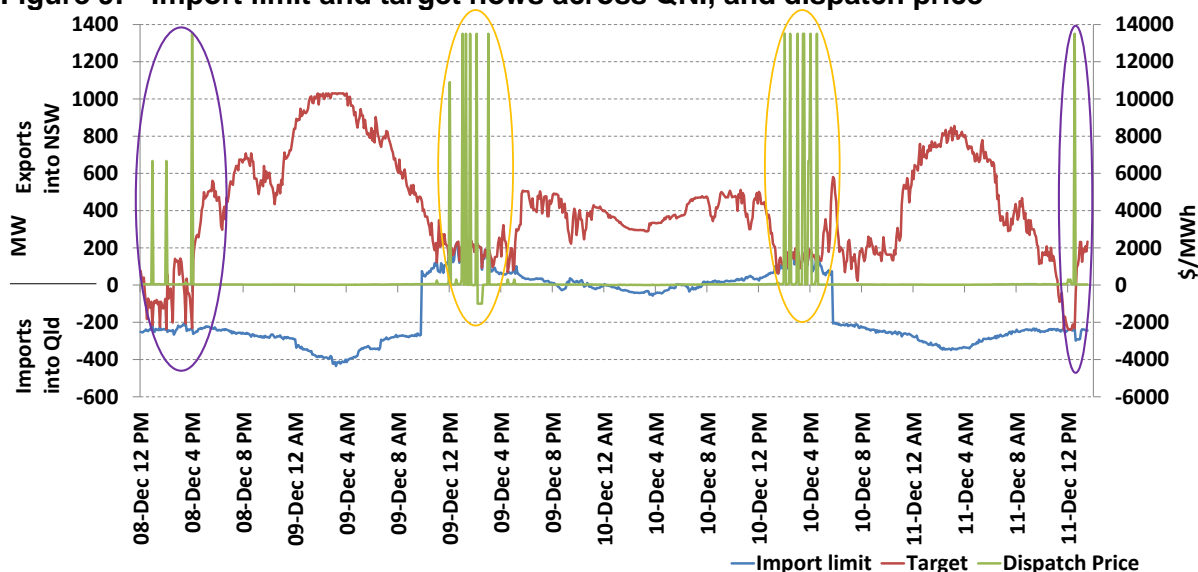
All of the high prices occurred from Monday to Thursday inclusive. Figure 9 shows, for the days of high prices, the export limit and target flows across the Queensland to New South Wales Interconnector (QNI), and the Queensland 5-minute price.

During the time of high prices, interconnector limits were, in general, close to forecast half an hour ahead. On 8 and 11 December, a system normal constraint used to manage voltage following the loss of the Kogan Creek Power Station saw imports into Queensland across QNI limited to around 250 MW (shown by the blue line at the bottom of the purple circles in Figure 9).

At the time of high prices on 9 and 10 December, the unplanned outage of the Muswellbrook to Tamworth 330 kV line saw exports forced out of Queensland into New South Wales at around 200 MW (indicated by the red line towards the bottom of the yellow circles in Figure 9).

The Terranora interconnector has been operating significantly below normal capability for some months.³ During the days of high prices, imports into Queensland across this interconnector were limited to around 20 MW.

Figure 9: Import limit and target flows across QNI, and dispatch price



³ The Terranora interconnector is scheduled to return to service in August 2015.

Analysis of other factors contributing to high prices

In general, conditions over the four days of high prices saw demand and available capacity close to forecast half an hour ahead. Demand on these days were at least 900 MW less than record Queensland demand of 8902 MW, recorded in 2010 and around 450 MW lower than recent summer peak demand. The analysis below should be read in conjunction with the analysis of network conditions presented above.

For each day where the spot prices was high the first table compares actual spot prices, the demand in Queensland and the amount of generation capacity being offered with the equivalent value that was forecast 4 and 12 hours ahead of dispatch.

The rebidding tables highlight the relevant rebids submitted by generators that impacted on market outcomes during the trading interval including; the time the rebid was submitted and used by the dispatch process, the amount of capacity involved and the change in the price of the capacity was being offered. The reason submitted at the time of the rebid is also included.

A summary of the participants and services involved in setting price for each dispatch interval of each high price trading interval during the periods in question is set out in Price Setter in Appendix A.

Monday, 8 December

Time	Price (\$/MWh)			Demand (MW)			Availability (MW)		
	Actual	4 hr forecast	12 hr forecast	Actual	4 hr forecast	12 hr forecast	Actual	4 hr forecast	12 hr forecast
1:30 PM	1144.99	52.30	49.91	8034	7800	7641	9789	9975	10 077
2:30 PM	1146.27	52.05	52.90	7992	7900	7781	9847	9969	10 082
4:30 PM	2289.55	52.90	63.37	7753	8131	7930	9762	9912	10 014

Relevant rebidding for 8 December 1.30 pm trading interval

Time submitted	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MWh)	Price to (\$/MWh)	Rebid reason
12.41 pm	12.50 pm	CS Energy	Gladstone	-135	28	N/A	1241P condenser backflush-SL
12.58 pm	1.05 pm	CS Energy	Gladstone	175	28	13 500	1257A interconnector constraint-QNI close to binding - SL
1.15 pm	1.25 pm	Stanwell	Kareeya, Stanwell, Tarong	486	<290	6666	1314A QLD rrp greater than 30 min PD price
Total capacity rebid from low to high prices				661			

With low-priced capacity either ramp rate limited or fully dispatched, the dispatch price increased from \$43/MWh at 1.20 pm to \$6667/MWh at 1.25 pm when the Stanwell 1.15 pm rebid took effect, setting price.

Relevant rebidding for 8 December 2.30 pm trading interval

Time submitted	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MWh)	Price to (\$/MWh)	Rebid reason
1.18 pm	1.25 pm	Millmerran Energy Trader	Millmerran	40	7	12 868	13:17 a latest PD demand revised upwards from 0930 PD
1.46 pm	2.05 pm	CS Energy	Gladstone	275	28	13 500	1345A interconnector constraint-QNI close to binding - SL
1.52 pm	2 pm	CS Energy	Gladstone	100	13 500	28	1352A interconnector constraint-QNI close to binding - SL
2.08 pm	2.15 pm	CS Energy	Gladstone	40	28	13 500	1407P portfolio rearrangement due to-gps 2 backflush complete - sl
2.11 pm	2.20 pm	Stanwell	Stanwell, Tarong	435	<290	6666	1350A material change in QLD generation: Mt Stuart online
2.21 pm	2.30 pm	CS Energy	Gladstone	100	28	13 500	1421A change in QLD generation - SCL-SL
2.21 pm	2.30 pm	Callide Power	Callide C	40	<950	12 859	1407A chg PD QNI flow - SL
2.21 pm	2.30 pm	Stanwell	Kareeya, Stanwell, Tarong	341	<23	>6666	1425A material change in QLD generation: Roma offline
Total capacity rebid from low to high prices				1271			

With low-priced capacity either ramp rate limited or fully dispatched, the dispatch price increased from \$46/MWh at 2.25 pm to \$6667/MWh at 2.30 pm (when the Stanwell, CS Energy and Callide Power Trading 2.21 pm rebids took effect).

Relevant rebidding for 8 December 4.30 pm trading interval

Time submitted	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MWh)	Price to (\$/MWh)	Rebid reason
1.16 pm	1.25 pm	Callide Power	Callide C	22	13	12 859	1315A latest PD demand revised upwards from 0930 PD
2.26 pm	2.35 pm	CS Energy	Gladstone	225	28	13 500	1426A interconnector constraint-QNI binding-SL
3.56 pm	4.05 pm	Stanwell	Stanwell, Tarong	395	<290	>13 064	1555A material change in QLD generation: Mt Stuart offline
4 pm	4.10 pm	Stanwell	Stanwell	220	<21	>13 086	1600A QNI transmission constraint DI1600
4.15 pm	4.25 pm	CS Energy	Gladstone	150	28	13 500	1614A interconnector constraint-QNI close to binding-SL
4.20 pm	4.30 pm	Stanwell	Kareeya, Tarong	151	<23	>13 064	1625A material change in QNI flow: DI1625
4.22 pm	4.30 pm	Callide Power	Callide C	22	-1000	12 859	1620A QNI export flow for 1630 220MW higher in 5MPD 1605/20
4.23 pm	4.30 pm	Millmerran Energy Trader	Millmerran	40	7	12 868	16:22A QNI export flow for 1630 220MW higher in 5MPD 1605/20
Total capacity rebid from low to high prices				1225			

With low-priced capacity either ramp rate limited, fully dispatched or trapped or stranded in FCAS, the dispatch price increased from \$56/MWh at 4.25 pm to the price cap at 4.30 pm.

This was also when the Stanwell, Callide Power Trading and Millmerran rebids submitted from 4.20 pm to 4.23 pm took effect.

Tuesday, 9 December

Time	Price (\$/MWh)			Demand (MW)			Availability (MW)		
	Actual	4 hr forecast	12 hr forecast	Actual	4 hr forecast	12 hr forecast	Actual	4 hr forecast	12 hr forecast
12:30 PM	1873.42	50.07	38.59	7437	7544	7528	9456	9419	9699
1:30 PM	2324.20	45.16	43.00	7635	7325	7643	9456	9398	9663
2:00 PM	2267.37	45.62	44.29	7689	7312	7729	9143	9398	9663
2:30 PM	2256.81	44.51	44.66	7740	7473	7759	9001	9366	9668
3:00 PM	1417.37	48.31	44.66	7824	7516	7775	9394	9393	9666
3:30 PM	2270.44	50.92	53.78	7847	7631	7804	9499	9353	9666

Relevant rebidding for 9 December 12.30 pm trading interval

Time submitted	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MWh)	Price to (\$/MWh)	Rebid reason
10.40 pm	10.50 pm	CS Energy	Gladstone	165	28	>13 199	1037A interconnector constraint-changed QNI limits-SL
11.36 am	11.45 pm	Stanwell	Stanwell, Tarong	170	<51	>13 086	1134A QLD 5 min price greater than 30min pd price
11.42 pm	11.50 pm	CS Energy	Gladstone	75	13 500	28	1139P portfolio rearrangement due to-G1 mill limits-SL
12.18 pm	12.25 pm	CS Energy	Gladstone	190	<28	>12 859	1214A interconnector constraint-QNI close to binding-SL
12.21 pm	12.30 pm	Callide Power	Callide C	32	-1000	12 859	1215A chng in 5 min PD QNI flow between 201412091205 and 1215
12.21 pm	12.30 pm	Millmerran Energy	Millmerran	20	7	12 868	12:20A QNI flow 12:30 material change in 5mpd 1205/15
Total capacity rebid from low to high prices				577			

With low-priced capacity either ramp rate limited or fully dispatched the dispatch price increased from \$48/MWh at 12.20 pm to \$165/MWh at 12.25 pm and then to \$10 900/MWh at 12.30 pm, coincident with an increase in 5-minute demand of 53 MW. This increase to \$10 900/MWh was also when the Millmerran and Callide Power Trading 12.21 pm rebids took effect.

Relevant rebidding for 9 December 1.30 pm trading interval

Time submitted	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MWh)	Price to (\$/MWh)	Rebid reason
11.42 am	11.50 pm	CS Energy	Gladstone	90	28	13 500	1137P mill limit-changed mill operation-SL
1.14 pm	1.25 pm	CS Energy	Gladstone, Callide B	190	28	>12 859	1312A interconnector constraint-QNI close to binding-SL
1.21 pm	1.30 pm	Millmerran Energy Trader	Millmerran	30	7	12 868	13:13 A change in 5 min PD QNI limit - SL
1.22 pm	1.30 pm	Callide Power	Callide C	32	-1000	12 859	1309A change in 5 min PD QNI limit - SL
Total capacity rebid from low to high prices				342			

With low-priced capacity either ramp rate limited or fully dispatched, the dispatch price increased from \$31/MWh at 1.20 pm to \$301/MWh at 1.25 pm and then to the price cap at 1.30 pm, coincident with an increase in 5-minute demand of 48 MW. The Millmerran Energy Trader and Callide Power Trading rebids also took effect at 1.30 pm.

Relevant rebidding for 9 December 2 pm trading interval

Time submitted	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MWh)	Price to (\$/MWh)	Rebid reason
11.34 am	12.35 pm	Callide Power	Callide C	-50	<13	N/A	1133P mill and feeder issues
1.33 am	1.40 pm	AGL	Yabulu	-155	2221	N/A	1330-F~95 unit triggered by market~95 avoid uneconomical start
1.36 pm	1.45 pm	AGL	Oakey	-148	<235	N/A	1335-P~020 reduction in avail cap~204 unit trip
1.41 pm	1.50 pm	AGL	Oakey	148	N/A	<235	1340-P~030 increase in avail cap~304 rts from trip

There was around 350 MW (50 MW+155 MW+148 MW) of capacity bid unavailable, all of which was priced below \$2500/MWh. At 1.45 pm there was an increase in 5-minute demand of 87 MW and an increase in forced exports into New South Wales of 97 MW (refer to figure 9 for more detail). With low-priced capacity either fully dispatched or ramp rate limited, high priced capacity was dispatched which saw the price increase from \$31/MWh at 1.40 pm to the price cap at 1.45 pm. AGL rebid Oakey back into the market effective from 1.50 pm (following the earlier unplanned shutdown at 1.36 pm) which saw the price return to previous levels.

2.30 pm, 9 December

Energy consumption by pump loads must be offset by an increase in generation. As a result of the zero dispatch price at 2 pm, at 2.05 pm Wivenhoe Pump 1 received a target of 184 MW, which saw a 184 MW step change in generation. With low-priced generation either fully dispatched or ramp rate limited, the dispatch price increased to the price cap at 2.05 pm.

At 2.01 pm, effective from 2.10 pm, CS Energy rebid 245 MW of capacity at the Wivenhoe Pump unavailable as a result of the price at the price cap. The reason given was “1401F avoid uneconomic dispatch-SL”. This resulted in the dispatch price falling to \$29/MWh at 2.10 pm.

There was no other significant rebidding.

3 pm, 9 December

At 2.35 pm there was a 70 MW increase in 5-minute demand and an increase in forced flows out of Queensland into New South Wales across QNI of 46 MW (from 181 MW to 227 MW). See figure 9 for more detail.

With low-priced capacity either ramp rate limited, fully dispatched or trapped/stranded in FCAS, the dispatch price increased from \$14/MWh at 2.30 pm to the price cap at 2.35 pm.

In response to the high price, participants rebid around 2000 MW of capacity from various prices to close to the price floor. Consequently, dispatch prices for the remainder of the trading interval were at or close to the price floor.

Relevant rebidding for 9 December 3.30 pm trading interval

Time submitted	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MWh)	Price to (\$/MWh)	Rebid reason
3.19 pm	3.30 pm	Stanwell	Kareeya, Stanwell, Tarong, Barron	137	-1000	13 500	1510A material change in QLD generation - Wivenhoe
Total capacity rebid from low to high prices				137			

The only capacity priced between \$29/MWh and the price cap was offered by peaking plant (which takes more than 5 minutes to synchronise). When Stanwell’s 3.19 pm rebid became effective, low-priced generation was either ramp rate limited, fully dispatched or trapped or stranded in FCAS. The dispatch price increased from \$29/MWh at 3.25 pm to the price cap at 3.30 pm, set by Stanwell’s units.

Wednesday, 10 December

Time	Price (\$/MWh)			Demand (MW)			Availability (MW)		
	Actual	4 hr forecast	12 hr forecast	Actual	4 hr forecast	12 hr forecast	Actual	4 hr forecast	12 hr forecast
2:30 PM	2302.78	30.48	42.82	7619	7344	7457	9632	9692	9697
3:00 PM	2302.53	30.40	42.88	7610	7370	7483	9446	9698	9697
3:30 PM	2303.30	30.00	43.00	7713	7404	7512	9478	9813	9810
4:00 PM	4519.92	31.00	43.90	7767	7495	7590	9554	9806	9810
4:30 PM	4489.95	37.50	43.00	7835	7592	7618	9264	9806	9810
5:00 PM	2321.94	39.49	41.74	7879	7623	7655	9287	9656	9782

Relevant rebidding for 10 December 2.30 pm trading interval

Time submitted	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MWh)	Price to (\$/MWh)	Rebid reason
2.15 pm	2.25 pm	Callide Power	Callide C	100	13	13 500	1413A constraint - QNI almost binding
2.17 pm	2.25 pm	CS Energy	Gladstone	175	28	13 500	1416A interconnector constraint-QNI almost binding-SL
2.21 pm	2.30 pm	CS Energy	Gladstone	120	28	13 500	1418P match unit ramp rate output-SL
2.22 pm	2.30 pm	Millmerran Energy	Millmerran	25	13	13 500	14:21A RRP above PD
2.23 pm	2.30 pm	Callide Power	Callide C	60	13	13 500	14:21A RRP above PD-SL
Total capacity rebid from low to high prices				480			

With low-priced capacity either ramp rate limited or fully dispatched, the dispatch price increased from \$44/MWh at 2.20 pm to \$120/MWh at 2.25 pm and then to the price cap at 2.30 pm. This was also the time at which the CS Energy, Millmerran and Callide Power Trading (2.21 pm, 2.22 pm and 2.23 pm, respectively) rebids became effective.

Relevant rebidding for 10 December 3 pm trading interval

Time submitted	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MWh)	Price to (\$/MWh)	Rebid reason
2.43 pm	2.50 pm	Callide Power	Callide C	100	13	13 500	1442A constraint - QNI almost binding
2.46 pm	2.55 pm	CS Energy	Gladstone	175	28	13 500	1444A interconnector constraint-QNI almost binding-SL
Total capacity rebid from low to high prices				275			

With low-priced capacity either ramp rate limited or fully dispatched, the dispatch price increased from \$31/MWh at 2.45 pm to \$105/MWh at 2.50 pm and then to the price cap at 2.55 pm. This was the time at which the CS Energy 2.46 pm rebid became effective.

Relevant rebidding for 10 December 3.30 pm trading interval

Time submitted	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MWh)	Price to (\$/MWh)	Rebid reason
3.14 pm	3.25 pm	Callide Power	Callide C	100	13	13 500	1513A constraint QNI binding
3.17 pm	3.25 pm	CS Energy	Gladstone	175	28	13 500	1515A interconnector constraint-QNI almost binding-SL
3.20 pm	3.30 pm	CS Energy	Gladstone	120	28	13 500	1515A interconnector constraint-QNI almost binding-SL
3.23 pm	3.30 pm	Millmerran Energy	Millmerran	20	7	13 500	15:20A 57MW drop in QNI flow for 15:30 5MPD 1520/15
3.23 pm	3.30 pm	Callide Power	Callide C	60	13	13 500	1521A change in QNI 5min PD flow - SL
Total capacity rebid from low to high prices				475			

With low-priced capacity either ramp rate limited or fully dispatched the dispatch price increased from \$31/MWh at 3.20 pm to \$200/MWh at 3.25 pm and then to the price cap at 3.30 pm. This was also the time when the CS Energy, Millmerran and Callide Power (3.20 pm and 3.23 pm, respectively) rebids became effective.

Relevant rebidding for 10 December 4 pm trading interval

Time submitted	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MWh)	Price to (\$/MWh)	Rebid reason
3.42 pm	3.50 pm	Callide Power	Callide C	100	13	13 500	1541A negative residue settlement
3.45 pm	3.55 pm	CS Energy	Gladstone	115	28	13 500	1545A negative residue settlement-SL
3.48 pm	3.55 pm	CS Energy	Gladstone	80	28	13 500	1546A negative residue settlement-SL
3.50 pm	4 pm	Callide Power	Callide C	60	13	13 500	1544A change in 5Min pd QNI flow -SL
3.51 pm	4 pm	Millmerran Energy	Millmerran	20	13	13 500	15:49A 5MPD QNI flow for 16:00 run 35/40 – 1 To – 109MW
Total capacity rebid from low to high prices				375			

With low-priced capacity either ramp rate limited or fully dispatched, the dispatch price increased from \$31/MWh at 3.50 pm to price cap at 3.55 pm and 4 pm. This was also when a number of CS Energy, Callide Power and Millmerran rebids become effective.

Relevant rebidding for 10 December 4.30 pm trading interval

Time submitted	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MWh)	Price to (\$/MWh)	Rebid reason
4.06 pm	4.15 pm	Callide Power	Callide C	100	13	13 500	1604A negative residue settlement
4.11 pm	4.20 pm	CS Energy	Gladstone	85	28	13 500	1610A negative residue settlement-SL
4.12 pm	4.20 pm	Stanwell	Stanwell, Tarong	175	290	6667	1605A material change in QLD generation: Wivenhoe offline
4.17 pm	4.25 pm	CS Energy	Gladstone	80	28	13 500	1616A negative residue settlement-SL
Total capacity rebid from low to high prices				440			

With low-priced capacity either ramp rate limited or fully dispatched the dispatch price increased from \$43/MWh at 4.15 pm to \$6667/MWh at 4.20 pm and 4.25 pm. There was a coincident increase in 5-minute demand from 4.15 pm to 4.20 pm of around 70 MW. This was also when the CS Energy and Stanwell rebids made from 4.11 pm to 4.17 pm took effect.

Relevant rebidding for 10 December 5 pm trading interval

Time submitted	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MWh)	Price to (\$/MWh)	Rebid reason
4.41 pm	4.50 pm	Callide Power	Callide C	100	13	13 500	1640A negative residue settlement
4.44 pm	4.55 pm	CS Energy	Gladstone	85	28	13 500	1642A negative residue settlement-SL
4.51 pm	5 pm	CS Energy	Gladstone	160	28	13 500	1650A negative residue settlement-SL
4.51 pm	5 pm	Callide Power	Callide C	60	13	13 500	1649A change 5 min PD QNI flow limit -SL
4.52 pm	5 pm	Millmerran Energy	Millmerran	20	7	13 500	16:51 A RRP above PD SL
Total capacity rebid from low to high prices				425			

With low-priced capacity either ramp rate limited or fully dispatched the dispatch price increased from \$38/MWh at 4.50 pm to \$298/MWh at 4.55 pm and then to the price cap at 5 pm. This was when the CS Energy, Callide Power and Millmerran rebids (made at 4.51 pm and 4.52 pm) became effective.

Thursday, 11 December

Time	Price (\$/MWh)			Demand (MW)			Availability (MW)		
	Actual	4 hr forecast	12 hr forecast	Actual	4 hr forecast	12 hr forecast	Actual	4 hr forecast	12 hr forecast
1:00 PM	2351.52	48.48	31.00	8077	7676	7487	9530	9940	10 055

Relevant rebidding for 11 December 1 pm trading interval

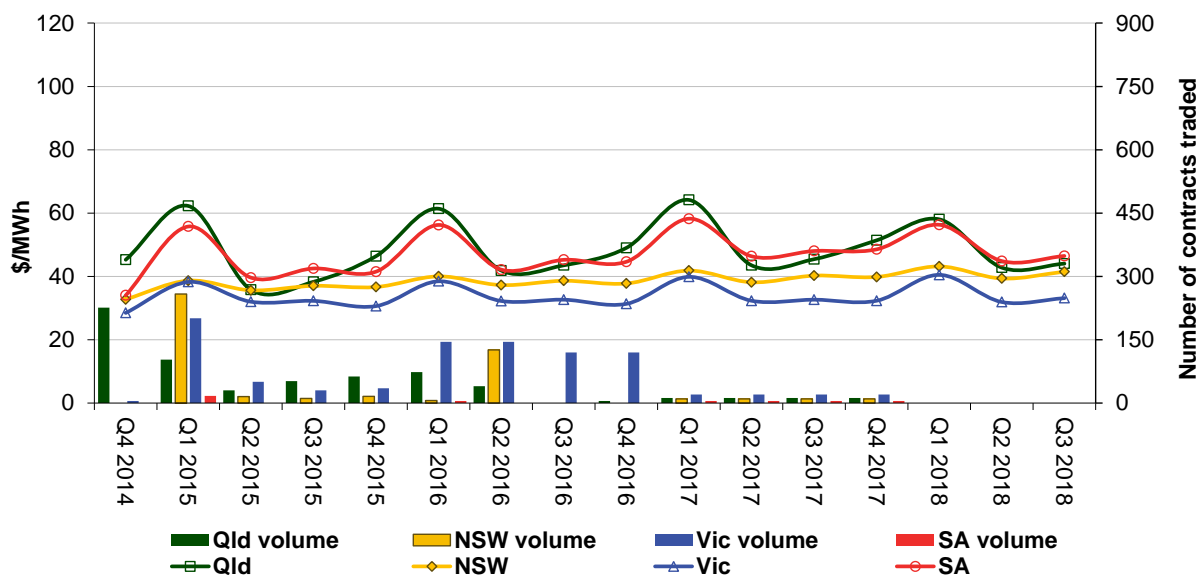
Time submitted	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MWh)	Price to (\$/MWh)	Rebid reason
12.27 pm	12.35 pm	Callide Power	Callide C	87	13	13 500	1226A constraint QNI binding
12.28 pm	12.35 pm	CS Energy	Gladstone	385	28	13 500	1222P technical issues-sync cond mode-SL
12.31 pm	12.40 pm	CS Energy	Gladstone	90	28	13 500	1228P technical issues-sync cond mode-SL
12.38 pm	12.45 pm	Stanwell	Stanwell	125	290	13 500	1237A change in QLD generation - Mt Stuart
12.39 pm	12.50 pm	CS Energy	Gladstone	90	13 500	28	1237A change in QLD generation - 3 Mt Stuart units started-SL
12.50 pm	1 pm	Stanwell	Stanwell, Kareeya, Tarong	321	<52	13 500	1249A decrease in QLD demand -107MW DI1245V1250
12.50 pm	1 pm	Callide Power	Callide C	40	13	13 500	1239A change in 5min PD QNI flow - SL
Total capacity rebid from low to high prices				1048			

With low-priced capacity either ramp rate limited or fully dispatched the dispatch price increased from \$43/MWh at 12.55 pm to the price cap at 1 pm. This was also when Stanwell and Callide Power's 12.50 pm rebids took effect.

Financial markets

Figure 10 shows for all mainland regions the prices for base contracts (and total traded quantities for the week) for each quarter for the next four financial years.

Figure 10: Quarterly base future prices Q4 2014 – Q3 2018

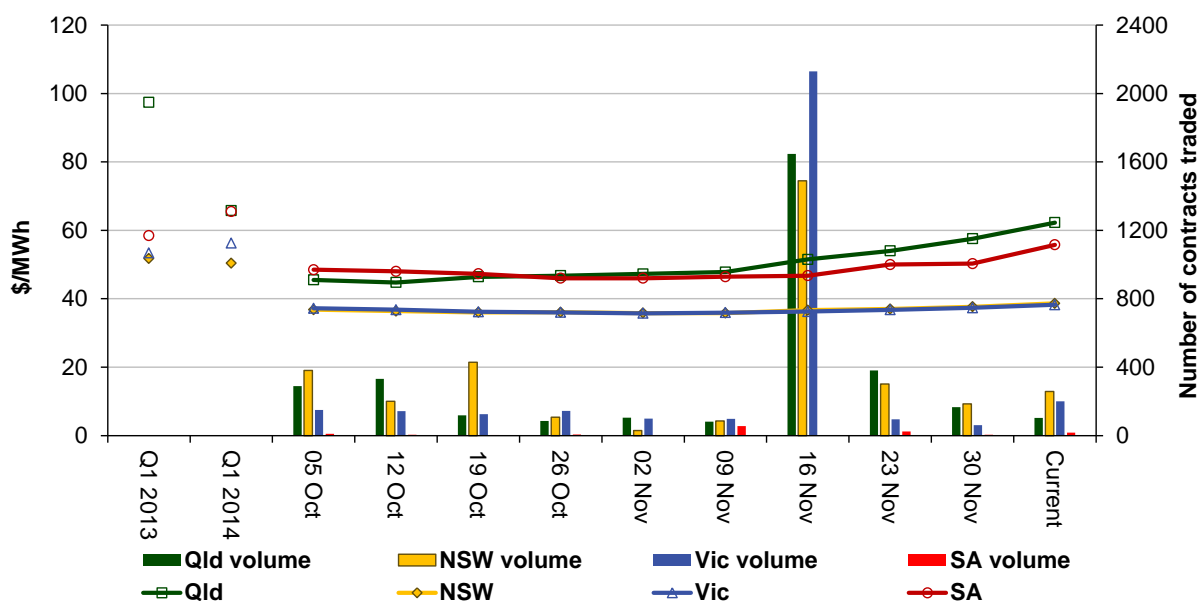


Source: ASXEnergy.com.au

Figure 11 shows how the price for each regional Quarter 1 2015 base contract has changed over the last 10 weeks (as well as the total number of trades each week). The closing quarter 1 2013 and quarter 1 2014 prices are also shown. The AER notes that data for South Australia is less reliable due to very low numbers of trades.

Note: The high volume of trades in figure 11 is due to options on calendar year base load expiring on Wednesday 19 November.

Figure 11: Price of Q1 2015 base contracts over the past 10 weeks (and the past 2 years)



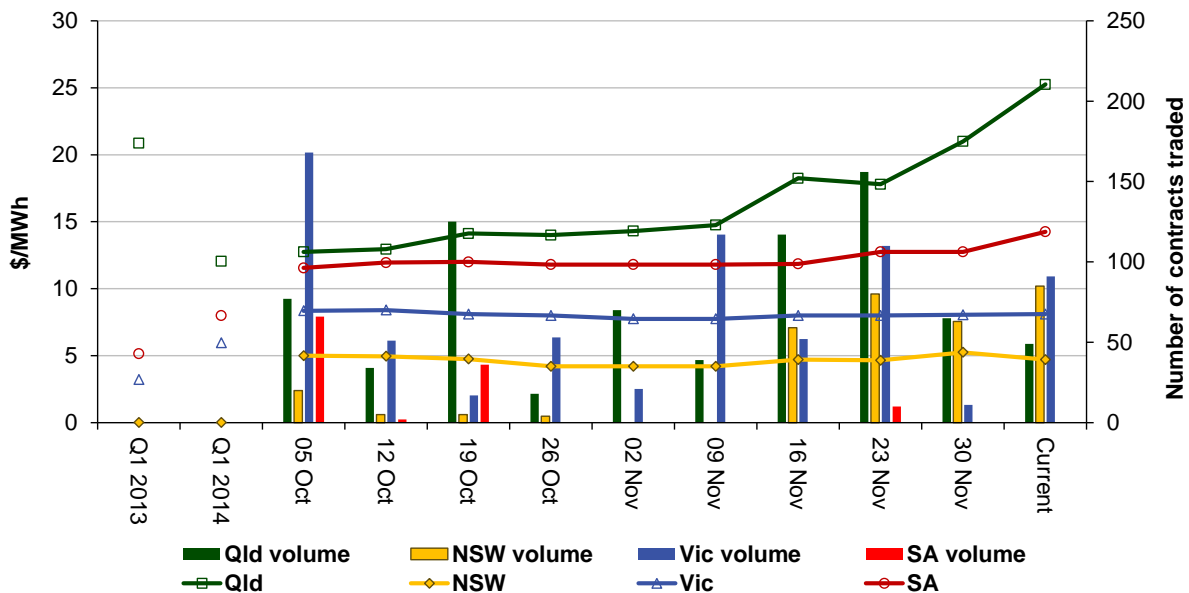
Note: Base contract prices are shown for each of the current week and the previous 9 weeks, with average prices shown for yearly periods 1 and 2 years prior to the current year

Source: ASXEnergy.com.au

Prices of other financial products (including longer-term price trends) are available in the Industry information- statistics section of our website.

Figure 12 shows how the price for each regional Quarter 1 2015 cap contract has changed over the last 10 weeks (as well as the total number of trades each week). The closing quarter 1 2013 and quarter 1 2014 prices are also shown.

Figure 12: Price of Q1 2015 cap contracts over the past 10 weeks (and the past 2 years)



Source: ASXEnergy.com.au

Australian Energy Regulator
January 2015

Appendix A – Price setter

The following table identifies for the trading interval in which the spot price exceeded \$250/MWh, each five minute dispatch interval price and the generating units involved in setting the energy price. The 30-minute spot price is the average of the six dispatch interval prices. The following tables highlight that in all but three trading intervals, the high dispatch prices occurred late in the trading interval typically with a duration of one trading interval only.

8 December 2014 1:30 PM

Time	Dispatch Price	Participant	Unit	Service	Offer price	Marginal Change	Contribution
13:05	\$34.02	GDF Suez	LOYB1	Energy	\$28.00	0.61	\$17.08
		GDF Suez	LOYB2	Energy	\$28.00	0.61	\$17.08
13:10	\$39.62	Macquarie	LD03	Energy	\$35.96	1.10	\$39.56
		Generation					
13:15	\$50.33	Alinta Power	NPS2	Energy	\$41.50	1.21	\$50.22
13:20	\$43.00	Stanwell	TARONG#1	Energy	\$43.00	1.00	\$43.00
13:25	\$6666.66	Stanwell	STAN-1	Energy	\$6666.66	0.14	\$933.33
		Stanwell	STAN-3	Energy	\$6666.66	0.14	\$933.33
		Stanwell	TARONG#1	Energy	\$6666.66	0.24	\$1600.00
		Stanwell	TARONG#3	Energy	\$6666.66	0.24	\$1600.00
		Stanwell	TARONG#4	Energy	\$6666.66	0.24	\$1600.00
13:30	\$36.28	Delta Electricity	VP5	Energy	\$32.70	0.37	\$12.10
		Delta Electricity	VP6	Energy	\$32.70	0.74	\$24.20
Spot Price		\$1144.99/MWh					

8 December 2014 2:30 PM

Time	Dispatch Price	Participant	Unit	Service	Offer price	Marginal Change	Contribution
14:05	\$43.00	Stanwell	STAN-3	Energy	\$43.00	0.50	\$21.50
		Stanwell	TARONG#1	Energy	\$43.00	0.50	\$21.50
14:10	\$39.20	CS Energy	W/HOE#1	Raise 5 min	\$2.00	1.11	\$2.22
		Delta Electricity	VP5	Raise 6 sec	\$2.00	0.74	\$1.48
		LYMMCO	LYA3	Raise 5 min	\$1.20	-1.11	-\$1.33
		LYMMCO	LYA3	Raise reg	\$0.80	1.11	\$0.89
		LYMMCO	LYA3	Raise 60 sec	\$0.80	-1.11	-\$0.89
		LYMMCO	LYA3	Raise 6 sec	\$0.80	-0.74	-\$0.59
		Eraring Energy	ER04	Energy	\$32.82	1.11	\$36.43
		Eraring Energy	ER04	Raise reg	\$0.00	-1.11	\$0.00
AGL (SA)	TORRB2	Raise 60 sec	\$0.89	1.11	\$0.99		
14:15	\$36.32	Delta Electricity	VP5	Energy	\$32.70	1.11	\$36.30
14:20	\$46.53	Snowy Hydro	UPPTUMUT	Energy	\$41.96	1.11	\$46.58
14:25	\$45.91	Snowy Hydro	UPPTUMUT	Energy	\$41.96	1.09	\$45.74
14:30	\$6666.66	Stanwell	STAN-2	Energy	\$6666.66	0.08	\$533.33
		Stanwell	TARONG#1	Energy	\$6666.66	0.38	\$2533.33
		Stanwell	TARONG#3	Energy	\$6666.66	0.27	\$1800.00
		Stanwell	TARONG#4	Energy	\$6666.66	0.27	\$1800.00
Spot Price		\$1146.27/MWh					

8 December 2014 4:30 PM

Time	Dispatch Price	Participant	Unit	Service	Offer price	Marginal Change	Contribution
16:05	\$44.60	Snowy Hydro	UPPTUMUT	Energy	\$41.96	1.06	\$44.48
16:10	\$45.69	Snowy Hydro	UPPTUMUT	Energy	\$41.96	1.09	\$45.74
16:15	\$45.69	Snowy Hydro	UPPTUMUT	Energy	\$41.96	1.09	\$45.74
16:20	\$45.70	Snowy Hydro	UPPTUMUT	Energy	\$41.96	1.09	\$45.74
16:25	\$55.65	Snowy Hydro	UPPTUMUT	Energy	\$49.90	1.12	\$55.89
16:30	\$13500.00	Callide Power	CPP_3	Energy	\$13500.00	0.10	\$1350.00
		CS Energy	GSTONE2	Energy	\$13500.00	0.06	\$810.00
		CS Energy	GSTONE5	Energy	\$13500.00	0.06	\$810.00
		CS Energy	W/HOE#1	Energy	\$13500.00	0.22	\$2970.00
		Stanwell	BARRON-1	Energy	\$13500.00	0.01	\$135.00
		Stanwell	KAREEYA1	Energy	\$13500.00	0.02	\$270.00
		Stanwell	KAREEYA2	Energy	\$13500.00	0.02	\$270.00
		Stanwell	KAREEYA4	Energy	\$13500.00	0.01	\$135.00
		Stanwell	STAN-2	Energy	\$13500.00	0.15	\$2025.00
		Stanwell	STAN-3	Energy	\$13500.00	0.12	\$1620.00
		Stanwell	STAN-4	Energy	\$13500.00	0.12	\$1620.00
		Stanwell	TARONG#4	Energy	\$13500.00	0.13	\$1755.00
Spot Price		\$2289.55/MWh					

9 December 2014 12:30 PM

Time	Dispatch Price	Participant	Unit	Service	Offer price	Marginal Change	Contribution
12:05	\$37.35		OAKEY2	Energy	\$37.35	1.00	\$37.35
12:10	\$44.11	Origin Energy	URANQ11	Energy	\$43.29	1.02	\$44.16
12:15	\$46.54	Alinta Power	NPS2	Energy	\$41.50	1.12	\$46.48
12:20	\$47.56	Snowy Hydro	MURRAY	Energy	\$41.94	1.13	\$47.39
12:25	\$164.98	Braemar Power Projects	BRAEMAR1	Energy	\$164.98	0.33	\$54.44
		Braemar Power Projects	BRAEMAR2	Energy	\$164.98	0.33	\$54.44
		Braemar Power Projects	BRAEMAR3	Energy	\$164.98	0.33	\$54.44
12:30	\$10899.98	Braemar Power Projects	BRAEMAR1	Energy	\$10899.98	0.29	\$3160.99
		Braemar Power Projects	BRAEMAR2	Energy	\$10899.98	0.37	\$4032.99
		Braemar Power Projects	BRAEMAR3	Energy	\$10899.98	0.35	\$3814.99
Spot Price		\$1873.42/MWh					

9 December 2014 13:30 PM

Time	Dispatch Price	Participant	Unit	Service	Offer price	Marginal Change	Contribution
13:05	\$30.00	Stanwell	TARONG#3	Energy	\$30.00	0.50	\$15.00
		Stanwell	TARONG#4	Energy	\$30.00	0.50	\$15.00
13:10	\$31.00	Stanwell	STAN-3	Energy	\$31.00	0.50	\$15.50
		Stanwell	STAN-4	Energy	\$31.00	0.50	\$15.50
13:15	\$52.21	Delta Electricity	VP6	Energy	\$49.94	1.05	\$52.44
13:20	\$31.00	Stanwell	STAN-3	Energy	\$31.00	1.00	\$31.00
13:25	\$300.98	ERMPower and					
		Arrow	BRAEMAR5	Energy	\$300.98	1.00	\$300.98
13:30	\$13500.00	Callide Power	CPP_3	Energy	\$13500.00	0.16	\$2160.00
		Callide Power	CPP_4	Energy	\$13500.00	0.27	\$3645.00
		CS Energy	GSTONE1	Energy	\$13500.00	0.19	\$2565.00
		CS Energy	GSTONE4	Energy	\$13500.00	0.08	\$1080.00
		CS Energy	GSTONE5	Energy	\$13500.00	0.08	\$1080.00
		CS Energy	GSTONE6	Energy	\$13500.00	0.09	\$1215.00
		Millmerran	MPP_2	Energy	\$13500.00	0.11	\$1485.00
		Stanwell	BARRON-2	Energy	\$13500.00	0.01	\$135.00
Spot Price		\$2324.20/MWh					

9 December 2014 14:00 PM

Time	Dispatch Price	Participant	Unit	Service	Offer price	Marginal Change	Contribution
13:35	\$28.90	CS Energy	GSTONE1	Energy	\$28.90	0.07	\$2.02
		CS Energy	GSTONE4	Energy	\$28.90	0.31	\$8.96
		CS Energy	GSTONE5	Energy	\$28.90	0.31	\$8.96
		CS Energy	GSTONE6	Energy	\$28.90	0.31	\$8.96
13:40	\$31.00	Stanwell	STAN-4	Energy	\$31.00	1.00	\$31.00
13:45	\$13500.00	CS Energy	GSTONE1	Energy	\$13500.00	0.24	\$3240.00
		CS Energy	W/HOE#1	Energy	\$13500.00	0.70	\$9450.00
		Stanwell	BARRON-2	Energy	\$13500.00	0.02	\$270.00
		Stanwell	KAREEYA2	Energy	\$13500.00	0.04	\$540.00
13:50	\$28.90	CS Energy	GSTONE6	Energy	\$28.90	1.00	\$28.90
13:55	\$15.43	CS Energy	W/HOE#1	Energy	\$15.43	1.00	\$15.43
		CS Energy	W/HOE#1	Raise 5 min	\$2.00	-0.83	-\$1.66
		Delta Electricity	VP5	Raise 5 min	\$2.00	0.83	\$1.66
14:00	\$0.00	CS Energy	W/HOE#1	Energy	\$0.00	1.00	\$0.00
		CS Energy	W/HOE#1	Raise 5 min	\$2.00	-0.83	-\$1.66
		Delta Electricity	VP5	Raise reg	\$2.00	0.83	\$1.66
Spot Price		\$2267.37/MWh					

9 December 2014 14:30 PM

Time	Dispatch Price	Participant	Unit	Service	Offer price	Marginal Change	Contribution
14:05	\$13500.00	CS Energy	GSTONE1	Energy	\$13500.00	0.16	\$2160.00
		CS Energy	W/HOE#1	Energy	\$13500.00	0.49	\$6615.00
		Stanwell	BARRON-1	Energy	\$13500.00	0.03	\$405.00
		Stanwell	BARRON-2	Energy	\$13500.00	0.01	\$135.00
		Stanwell	STAN-3	Energy	\$13500.00	0.05	\$675.00
		Stanwell	TARONG#3	Energy	\$13500.00	0.13	\$1755.00
		Stanwell	TARONG#4	Energy	\$13500.00	0.13	\$1755.00
14:10	\$28.90	CS Energy	GSTONE4	Energy	\$28.90	0.50	\$14.45
		CS Energy	GSTONE5	Energy	\$28.90	0.50	\$14.45
14:15	\$0.00	CS Energy	W/HOE#1	Energy	\$0.00	1.00	\$0.00
14:20	-\$1.00	Stanwell	KAREEYA1	Energy	-\$1.00	0.36	-\$0.36
		Stanwell	KAREEYA2	Energy	-\$1.00	0.36	-\$0.36
		Stanwell	KAREEYA4	Energy	-\$1.00	0.28	-\$0.28
14:25	-\$0.99	Stanwell	BARRON-1	Energy	-\$0.99	0.50	-\$0.50
		Stanwell	BARRON-2	Energy	-\$0.99	0.50	-\$0.50
14:30	\$13.94	Callide Power	CPP_4	Energy	\$13.94	1.00	\$13.94
Spot Price		\$2256.81/MWh					

9 December 2014 15:00 PM

Time	Dispatch Price	Participant	Unit	Service	Offer price	Marginal Change	Contribution
14:35	\$13500.00	CS Energy	W/HOE#1	Energy	\$13500.00	1.00	\$13500.00
		CS Energy	W/HOE#1	Raise 5 min	\$0.50	-0.83	-\$0.42
		Eraring Energy	ER01	Energy	\$32.82	-0.28	-\$9.19
		Eraring Energy	ER01	Raise 5 min	\$2.45	0.28	\$0.69
		Eraring Energy	ER03	Energy	\$32.82	-0.28	-\$9.19
		Eraring Energy	ER03	Raise 5 min	\$2.45	0.28	\$0.69
		Eraring Energy	ER04	Energy	\$32.82	-0.28	-\$9.19
		Eraring Energy	ER04	Raise 5 min	\$2.45	0.28	\$0.69
		Origin Energy	URANQ11	Energy	\$32.83	0.83	\$27.25
14:40	-\$997.67	CS Energy	W/HOE#1	Energy	-\$1000.00	1.00	-\$1000.00
		CS Energy	W/HOE#1	Raise 5 min	\$0.01	-0.83	-\$0.01
		Macquarie Generation	BW01	Raise reg	\$2.80	0.83	\$2.32
14:45	-\$998.09	CS Energy	W/HOE#1	Energy	-\$1000.00	1.00	-\$1000.00
		CS Energy	W/HOE#1	Raise 5 min	\$0.50	-0.83	-\$0.42
		Macquarie Generation	BW04	Raise reg	\$2.80	0.83	\$2.32
14:50	-\$1000.00	ERMPower and					
		Arrow	BRAEMAR5	Energy	-\$1000.00	0.07	-\$70.00
		CS Energy	GSTONE6	Energy	-\$1000.00	0.11	-\$110.00
		Stanwell	BARRON-2	Energy	-\$1000.00	0.01	-\$10.00
		Stanwell	KAREEYA1	Energy	-\$1000.00	0.01	-\$10.00
		Stanwell	KAREEYA2	Energy	-\$1000.00	0.01	-\$10.00
		Stanwell	KAREEYA4	Energy	-\$1000.00	0.01	-\$10.00
		Stanwell	MACKAYGT	Energy	-\$1000.00	0.01	-\$10.00
		Stanwell	STAN-3	Energy	-\$1000.00	0.16	-\$160.00
		Stanwell	STAN-4	Energy	-\$1000.00	0.16	-\$160.00
		Stanwell	TARONG#3	Energy	-\$1000.00	0.14	-\$140.00
		Stanwell	TARONG#4	Energy	-\$1000.00	0.14	-\$140.00
		Stanwell	TNPS1	Energy	-\$1000.00	0.16	-\$160.00

Time	Dispatch Price	Participant	Unit	Service	Offer price	Marginal Change	Contribution
14:55	-\$1000.00	ERMPower and					
		Arrow	BRAEMAR5	Energy	-\$1000.00	0.06	-\$60.00
		CS Energy	GSTONE4	Energy	-\$1000.00	0.11	-\$110.00
		CS Energy	GSTONE5	Energy	-\$1000.00	0.11	-\$110.00
		CS Energy	GSTONE6	Energy	-\$1000.00	0.09	-\$90.00
		Stanwell	BARRON-2	Energy	-\$1000.00	0.01	-\$10.00
		Stanwell	KAREEYA1	Energy	-\$1000.00	0.01	-\$10.00
		Stanwell	KAREEYA2	Energy	-\$1000.00	0.01	-\$10.00
		Stanwell	KAREEYA4	Energy	-\$1000.00	0.01	-\$10.00
		Stanwell	MACKAYGT	Energy	-\$1000.00	0.01	-\$10.00
		Stanwell	STAN-3	Energy	-\$1000.00	0.14	-\$140.00
		Stanwell	STAN-4	Energy	-\$1000.00	0.14	-\$140.00
		Stanwell	TARONG#1	Energy	-\$1000.00	0.05	-\$50.00
		Stanwell	TARONG#3	Energy	-\$1000.00	0.12	-\$120.00
Stanwell	TNPS1	Energy	-\$1000.00	0.14	-\$140.00		
15:00	-\$1000.00	ERMPower and					
		Arrow	BRAEMAR5	Energy	-\$1000.00	0.04	-\$40.00
		ERMPower and					
		Arrow	BRAEMAR7	Energy	-\$1000.00	0.04	-\$40.00
		Callide Power	CPP_3	Energy	-\$1000.00	0.11	-\$110.00
		Callide Power	CPP_4	Energy	-\$1000.00	0.09	-\$90.00
		CS Energy	GSTONE1	Energy	-\$1000.00	0.08	-\$80.00
		CS Energy	GSTONE4	Energy	-\$1000.00	0.08	-\$80.00
		CS Energy	GSTONE5	Energy	-\$1000.00	0.08	-\$80.00
		CS Energy	GSTONE6	Energy	-\$1000.00	0.07	-\$70.00
		Stanwell	BARRON-2	Energy	-\$1000.00	0.01	-\$10.00
		Stanwell	KAREEYA1	Energy	-\$1000.00	0.01	-\$10.00
		Stanwell	KAREEYA2	Energy	-\$1000.00	0.01	-\$10.00
		Stanwell	KAREEYA4	Energy	-\$1000.00	0.01	-\$10.00
		Stanwell	MACKAYGT	Energy	-\$1000.00	0.01	-\$10.00
Stanwell	STAN-3	Energy	-\$1000.00	0.10	-\$100.00		
Stanwell	STAN-4	Energy	-\$1000.00	0.10	-\$100.00		
Stanwell	TARONG#3	Energy	-\$1000.00	0.09	-\$90.00		
Stanwell	TARONG#4	Energy	-\$1000.00	0.09	-\$90.00		
Spot Price		\$1417.37/MWh					

9 December 2014 15:30 PM

Time	Dispatch Price	Participant	Unit	Service	Offer price	Marginal Change	Contribution
15:05	\$21.98	Braemar Power Projects	BRAEMAR1	Energy	\$21.98	0.35	\$7.69
		Braemar Power Projects	BRAEMAR2	Energy	\$21.98	0.33	\$7.25
		Braemar Power Projects	BRAEMAR3	Energy	\$21.98	0.32	\$7.03
15:10	\$13.94	Callide Power	CPP_3	Energy	\$13.94	0.60	\$8.36
		Callide Power	CPP_4	Energy	\$13.94	0.40	\$5.58
15:15	\$28.90	CS Energy	GSTONE4	Energy	\$28.90	0.33	\$9.54
		CS Energy	GSTONE5	Energy	\$28.90	0.33	\$9.54
		CS Energy	GSTONE6	Energy	\$28.90	0.33	\$9.54
15:20	\$28.90	CS Energy	GSTONE4	Energy	\$28.90	0.33	\$9.54
		CS Energy	GSTONE5	Energy	\$28.90	0.33	\$9.54
		CS Energy	GSTONE6	Energy	\$28.90	0.33	\$9.54
15:25	\$28.90	CS Energy	GSTONE1	Energy	\$28.90	0.25	\$7.23
		CS Energy	GSTONE4	Energy	\$28.90	0.25	\$7.23
		CS Energy	GSTONE5	Energy	\$28.90	0.25	\$7.23
		CS Energy	GSTONE6	Energy	\$28.90	0.25	\$7.23
15:30	\$13500.00	Callide Power	CPP_3	Energy	\$13500.00	0.16	\$2160.00
		CS Energy	W/HOE#1	Energy	\$13500.00	0.50	\$6750.00
		Stanwell	BARRON-2	Energy	\$13500.00	0.01	\$135.00
		Stanwell	KAREEYA1	Energy	\$13500.00	0.04	\$540.00
		Stanwell	KAREEYA2	Energy	\$13500.00	0.04	\$540.00
		Stanwell	KAREEYA4	Energy	\$13500.00	0.03	\$405.00
		Stanwell	STAN-3	Energy	\$13500.00	0.06	\$810.00
		Stanwell	STAN-4	Energy	\$13500.00	0.06	\$810.00
		Stanwell	TARONG#3	Energy	\$13500.00	0.11	\$1485.00
Spot Price		\$2270.44/MWh					

10 December 2014 14:30 PM

Time	Dispatch Price	Participant	Unit	Service	Offer price	Marginal Change	Contribution
14:05	\$51.76	Delta Electricity	VP6	Energy	\$49.94	1.04	\$51.94
14:10	\$48.82	Snowy Hydro	MURRAY	Energy	\$41.94	1.16	\$48.65
14:15	\$52.20	Delta Electricity	VP6	Energy	\$49.94	1.05	\$52.44
14:20	\$43.87	Snowy Hydro	UPPTUMUT	Energy	\$41.96	1.05	\$44.06
14:25	\$120.00	Stanwell	STAN-3	Energy	\$120.00	0.48	\$57.60
		Stanwell	TARONG#3	Energy	\$120.00	0.52	\$62.40
14:30	\$13500.00	Callide Power	CPP_3	Energy	\$13500.00	0.28	\$3780.00
		Callide Power	CPP_4	Energy	\$13500.00	0.28	\$3780.00
		CS Energy	GSTONE4	Energy	\$13500.00	0.10	\$1350.00
		CS Energy	GSTONE5	Energy	\$13500.00	0.10	\$1350.00
		CS Energy	GSTONE6	Energy	\$13500.00	0.13	\$1755.00
		CS Energy	GSTONE6	Raise reg	\$2.00	-0.13	-\$0.26
		Hydro Tasmania	POAT220	Raise 5 min	\$2.00	0.13	\$0.26
		Millmerran	MPP_2	Energy	\$13500.00	0.09	\$1215.00
		Stanwell	BARRON-1	Energy	\$13500.00	0.03	\$405.00
Spot Price		\$2302.78/MWh					

10 December 2014 15:00 PM

Time	Dispatch Price	Participant	Unit	Service	Offer price	Marginal Change	Contribution	
14:35	\$28.90	CS Energy	GSTONE1	Energy	\$28.90	0.50	\$14.45	
		CS Energy	GSTONE5	Energy	\$28.90	0.50	\$14.45	
14:40	\$30.48	CS Energy	GSTONE6	Energy	\$28.90	1.00	\$28.90	
		CS Energy	GSTONE6	Raise 60 sec	\$0.01	-1.00	-\$0.01	
		CS Energy	GSTONE6	Raise 6 sec	\$0.01	-1.00	-\$0.01	
		Hydro Tasmania	POAT110	Raise 6 sec	\$0.80	1.00	\$0.80	
		LYMMCO	LYA1	Raise 60 sec	\$0.80	1.00	\$0.80	
14:45	\$30.89	CS Energy	GSTONE6	Energy	\$28.90	1.00	\$28.90	
		CS Energy	GSTONE6	Raise reg	\$0.01	-1.00	-\$0.01	
		Hydro Tasmania	POAT110	Raise 5 min	\$2.00	1.00	\$2.00	
14:50	\$104.94	Delta Electricity	VP6	Raise 60 sec	\$2.00	-1.03	-\$2.06	
		Infigen	LKBONNY2	Energy	-\$26.78	0.03	-\$0.80	
		Macquarie						
		Generation	BW01	Raise 6 sec	\$2.80	-1.03	-\$2.88	
		Snowy Hydro	MURRAY	Energy	\$49.90	1.12	\$55.89	
		Stanwell	STAN-1	Raise 60 sec	\$4.50	1.03	\$4.64	
		Stanwell	STAN-1	Raise 6 sec	\$49.00	1.03	\$50.47	
14:55	\$13500.00	CS Energy	GSTONE6	Energy	\$13500.00	0.15	\$2025.00	
		CS Energy	GSTONE6	Lower reg	\$0.50	0.15	\$0.08	
		CS Energy	W/HOE#1	Energy	\$13500.00	0.56	\$7560.00	
		LYMMCO	LYA2	Lower 5 min	\$0.50	-0.15	-\$0.08	
		Stanwell	BARRON-1	Energy	\$13500.00	0.03	\$405.00	
		Stanwell	STAN-2	Energy	\$13500.00	0.26	\$3510.00	
15:00	\$120.00	Stanwell	STAN-1	Energy	\$120.00	0.25	\$30.00	
		Stanwell	STAN-3	Energy	\$120.00	0.25	\$30.00	
		Stanwell	STAN-4	Energy	\$120.00	0.25	\$30.00	
		Stanwell	TARONG#3	Energy	\$120.00	0.26	\$31.20	
Spot Price		\$2302.53/MWh						

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Time	Dispatch Price	Participant	Unit	Service	Offer price	Marginal Change	Contribution
15:05	\$28.90	CS Energy	GSTONE6	Energy	\$28.90	1.00	\$28.90
15:10	\$28.90	CS Energy	GSTONE5	Energy	\$28.90	1.00	\$28.90
15:15	\$31.00	Stanwell	STAN-1	Energy	\$31.00	0.33	\$10.23
		Stanwell	STAN-3	Energy	\$31.00	0.33	\$10.23
		Stanwell	STAN-4	Energy	\$31.00	0.33	\$10.23
15:20	\$31.00	Stanwell	STAN-1	Energy	\$31.00	0.33	\$10.23
		Stanwell	STAN-3	Energy	\$31.00	0.33	\$10.23
		Stanwell	STAN-4	Energy	\$31.00	0.33	\$10.23
15:25	\$200.00	ERMPower and Arrow	BRAEMAR7	Energy	\$200.00	1.00	\$200.00
15:30	\$13500.00	CS Energy	GSTONE4	Energy	\$13500.00	0.11	\$1485.00
		CS Energy	GSTONE5	Energy	\$13500.00	0.11	\$1485.00
		CS Energy	GSTONE6	Energy	\$13500.00	0.14	\$1890.00
		CS Energy	W/HOE#1	Energy	\$13500.00	0.52	\$7020.00
		Millmerran	MPP_2	Energy	\$13500.00	0.10	\$1350.00
		Stanwell	BARRON-1	Energy	\$13500.00	0.03	\$405.00
Spot Price		\$2303.30/MWh					

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Time	Dispatch Price	Participant	Unit	Service	Offer price	Marginal Change	Contribution
15:35	\$28.90	CS Energy	GSTONE5	Energy	\$28.90	1.00	\$28.90
		CS Energy	GSTONE5	Raise reg	\$2.00	-1.00	-\$2.00
		Delta Electricity	VP5	Raise 5 min	\$2.00	1.00	\$2.00
15:40	\$28.90	CS Energy	GSTONE2	Energy	\$28.90	0.33	\$9.54
		CS Energy	GSTONE4	Energy	\$28.90	0.33	\$9.54
		CS Energy	GSTONE4	Raise reg	\$2.00	-0.33	-\$0.66
		CS Energy	GSTONE5	Energy	\$28.90	0.33	\$9.54
		CS Energy	W/HOE#1	Raise 5 min	\$2.00	0.33	\$0.66
15:45	\$30.40	CS Energy	GSTONE2	Energy	\$28.90	0.50	\$14.45
		CS Energy	GSTONE2	Raise reg	\$0.50	-0.50	-\$0.25
		CS Energy	GSTONE4	Energy	\$28.90	0.50	\$14.45
		CS Energy	GSTONE4	Raise reg	\$0.50	0.50	\$0.25
		CS Energy	GSTONE4	Raise 6 sec	\$0.50	-1.00	-\$0.50
		Delta Electricity	VP6	Raise 6 sec	\$2.00	1.00	\$2.00
15:50	\$31.29	CS Energy	GSTONE2	Energy	\$28.90	0.50	\$14.45
		CS Energy	GSTONE2	Raise reg	\$0.01	-0.50	-\$0.01
		CS Energy	GSTONE4	Energy	\$28.90	0.50	\$14.45
		CS Energy	GSTONE4	Raise reg	\$0.01	-0.50	-\$0.01
		Stanwell	STAN-2	Raise reg	\$2.40	1.00	\$2.40
15:55	\$13500.00	Callide Power	CPP_3	Energy	\$13500.00	0.24	\$3240.00
		Callide Power	CPP_4	Energy	\$13500.00	0.24	\$3240.00
		CS Energy	W/HOE#1	Energy	\$13500.00	0.48	\$6480.00
		Stanwell	BARRON-1	Energy	\$13500.00	0.03	\$405.00
16:00	\$13500.00	Callide Power	CPP_3	Energy	\$13500.00	0.18	\$2430.00
		Callide Power	CPP_4	Energy	\$13500.00	0.18	\$2430.00
		CS Energy	GSTONE5	Energy	\$13500.00	0.11	\$1485.00
		CS Energy	GSTONE5	Lower reg	\$0.50	0.11	\$0.06
		CS Energy	GSTONE6	Energy	\$13500.00	0.11	\$1485.00
		CS Energy	W/HOE#1	Energy	\$13500.00	0.40	\$5400.00
		LYMMCO	LYA2	Lower 5 min	\$0.50	-0.11	-\$0.06
		Stanwell	BARRON-1	Energy	\$13500.00	0.02	\$270.00
Spot Price		\$4519.92/MWh					

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Time	Dispatch Price	Participant	Unit	Service	Offer price	Marginal Change	Contribution
16:05	\$31.29	CS Energy	GSTONE2	Energy	\$28.90	0.50	\$14.45
		CS Energy	GSTONE2	Raise reg	\$0.01	-0.50	-\$0.01
		CS Energy	GSTONE4	Energy	\$28.90	0.50	\$14.45
		CS Energy	GSTONE4	Raise reg	\$0.01	-0.50	-\$0.01
		Stanwell	STAN-2	Raise reg	\$2.40	1.00	\$2.40
16:10	\$32.09	CS Energy	GSTONE6	Energy	\$28.90	1.00	\$28.90
		CS Energy	GSTONE6	Raise 60 sec	\$0.01	-1.00	-\$0.01
		CS Energy	GSTONE6	Raise 6 sec	\$0.01	-1.00	-\$0.01
		Eraring Energy	ER01	Energy	\$35.97	-0.50	-\$17.99
		Eraring Energy	ER01	Raise 5 min	\$0.00	0.50	\$0.00
		Eraring Energy	ER01	Raise 60 sec	\$0.00	0.50	\$0.00
		Eraring Energy	ER01	Raise 6 sec	\$0.00	0.50	\$0.00
		Eraring Energy	ER03	Energy	\$35.97	-0.50	-\$17.99
		Eraring Energy	ER03	Raise 5 min	\$0.00	0.50	\$0.00
		Eraring Energy	ER03	Raise 60 sec	\$0.00	0.50	\$0.00
		Eraring Energy	ER03	Raise 6 sec	\$0.00	0.50	\$0.00
		Snowy Hydro	UPPTUMUT	Energy	\$41.96	1.00	\$41.96
		EnergyAustralia	MP2	Raise 5 min	\$2.78	-1.00	-\$2.78
16:15	\$43.00	Stanwell	STAN-1	Energy	\$43.00	0.14	\$6.02
		Stanwell	STAN-3	Energy	\$43.00	0.14	\$6.02
		Stanwell	STAN-4	Energy	\$43.00	0.14	\$6.02
		Stanwell	TARONG#3	Energy	\$43.00	0.29	\$12.47
		Stanwell	TARONG#4	Energy	\$43.00	0.29	\$12.47
16:20	\$6666.66	Stanwell	STAN-1	Energy	\$6666.66	0.20	\$1333.33
		Stanwell	STAN-3	Energy	\$6666.66	0.20	\$1333.33
		Stanwell	STAN-4	Energy	\$6666.66	0.14	\$933.33
		Stanwell	TARONG#3	Energy	\$6666.66	0.23	\$1533.33
		Stanwell	TARONG#4	Energy	\$6666.66	0.23	\$1533.33
16:25	\$6666.66	Stanwell	STAN-1	Energy	\$6666.66	0.50	\$3333.33
		Stanwell	STAN-3	Energy	\$6666.66	0.50	\$3333.33
16:30	\$13500.00	Callide Power	CPP_3	Energy	\$13500.00	0.13	\$1755.00
		Callide Power	CPP_4	Energy	\$13500.00	0.13	\$1755.00
		CS Energy	GSTONE5	Energy	\$13500.00	0.08	\$1080.00
		CS Energy	GSTONE6	Energy	\$13500.00	0.08	\$1080.00
		CS Energy	W/HOE#1	Energy	\$13500.00	0.28	\$3780.00
		Stanwell	STAN-2	Energy	\$13500.00	0.11	\$1485.00
		Stanwell	STAN-4	Energy	\$13500.00	0.04	\$540.00
		Stanwell	TARONG#3	Energy	\$13500.00	0.08	\$1080.00
Stanwell	TARONG#4	Energy	\$13500.00	0.08	\$1080.00		
Spot Price		\$4489.95/MWh					

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Time	Dispatch Price	Participant	Unit	Service	Offer price	Marginal Change	Contribution
16:35	\$34.40	CS Energy	GSTONE6	Energy	\$28.90	1.00	\$28.90
		CS Energy	GSTONE6	Raise reg	\$0.50	-1.00	-\$0.50
		Snowy Hydro	UPPTUMUT	Raise reg	\$6.00	1.00	\$6.00
16:40	\$29.90	CS Energy	GSTONE6	Energy	\$28.90	1.00	\$28.90
		CS Energy	GSTONE6	Raise reg	\$2.00	-1.00	-\$2.00
		Snowy Hydro	UPPTUMUT	Raise reg	\$3.00	1.00	\$3.00
16:45	\$31.55	CS Energy	GSTONE6	Energy	\$28.90	1.00	\$28.90
		CS Energy	GSTONE6	Raise reg	\$0.50	-1.00	-\$0.50
		Eraring Energy	ER03	Raise 5 min	\$3.15	1.00	\$3.15
16:50	\$37.64	Macquarie Generation	LD02	Energy	\$35.96	1.04	\$37.40
		Macquarie Generation	LD02	Raise reg	\$0.01	-0.05	\$0.00
		Vic Power Trader	APD01	Raise 5 min	\$4.51	0.05	\$0.23
16:55	\$298.12	Stanwell	TARONG#3	Energy	\$298.12	0.50	\$149.06
		Stanwell	TARONG#4	Energy	\$298.12	0.50	\$149.06
17:00	\$13500.00	Origin Energy	MSTUART2	Energy	\$13500.00	0.11	\$1485.00
		CS Energy	W/HOE#1	Energy	\$13500.00	0.42	\$5670.00
		Millmerran	MPP_1	Energy	\$13500.00	0.13	\$1755.00
		Millmerran	MPP_2	Energy	\$13500.00	0.08	\$1080.00
		Stanwell	TARONG#3	Energy	\$13500.00	0.13	\$1755.00
		Stanwell	TARONG#4	Energy	\$13500.00	0.13	\$1755.00
Spot Price		\$2321.94/MWh					

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Time	Dispatch Price	Participant	Unit	Service	Offer price	Marginal Change	Contribution
12:35	\$164.98	Braemar Power Projects	BRAEMAR1	Energy	\$164.98	0.33	\$54.44
		Braemar Power Projects	BRAEMAR2	Energy	\$164.98	0.33	\$54.44
		Braemar Power Projects	BRAEMAR3	Energy	\$164.98	0.33	\$54.44
		Stanwell	STAN-1	Energy	\$298.95	0.28	\$83.71
12:40	\$298.95	Stanwell	STAN-2	Energy	\$298.95	0.28	\$83.71
		Stanwell	STAN-3	Energy	\$298.95	0.16	\$47.83
		Stanwell	STAN-4	Energy	\$298.95	0.28	\$83.71
		Snowy Hydro	MURRAY	Energy	\$41.94	1.43	\$59.97
12:50	\$42.55	Snowy Hydro	MURRAY	Energy	\$32.80	1.30	\$42.64
12:55	\$42.50	Snowy Hydro	MURRAY	Energy	\$32.80	1.30	\$42.64
13:00	\$13500.00	Callide Power	CPP_3	Energy	\$13500.00	0.08	\$1080.00
		Callide Power	CPP_4	Energy	\$13500.00	0.08	\$1080.00
		CS Energy	GSTONE1	Energy	\$13500.00	0.04	\$540.00
		CS Energy	GSTONE4	Energy	\$13500.00	0.04	\$540.00
		CS Energy	GSTONE5	Energy	\$13500.00	0.04	\$540.00
		CS Energy	GSTONE6	Energy	\$13500.00	0.04	\$540.00
		CS Energy	W/HOE#1	Energy	\$13500.00	0.15	\$2025.00
		Millmerran	MPP_2	Energy	\$13500.00	0.04	\$540.00
		Stanwell	BARRON-2	Energy	\$13500.00	0.01	\$135.00
		Stanwell	KAREEYA1	Energy	\$13500.00	0.01	\$135.00
		Stanwell	KAREEYA2	Energy	\$13500.00	0.01	\$135.00
		Stanwell	KAREEYA4	Energy	\$13500.00	0.01	\$135.00
		Stanwell	STAN-2	Energy	\$13500.00	0.06	\$810.00
		Stanwell	STAN-3	Energy	\$13500.00	0.07	\$945.00
		Stanwell	STAN-4	Energy	\$13500.00	0.08	\$1080.00
		Stanwell	TARONG#1	Energy	\$13500.00	0.07	\$945.00
		Stanwell	TARONG#3	Energy	\$13500.00	0.07	\$945.00
		Stanwell	TARONG#4	Energy	\$13500.00	0.07	\$945.00
Spot Price		\$2351.52/MWh					