

# Electricity Report 1 – 7 March 2015



AUSTRALIAN ENERGY  
REGULATOR

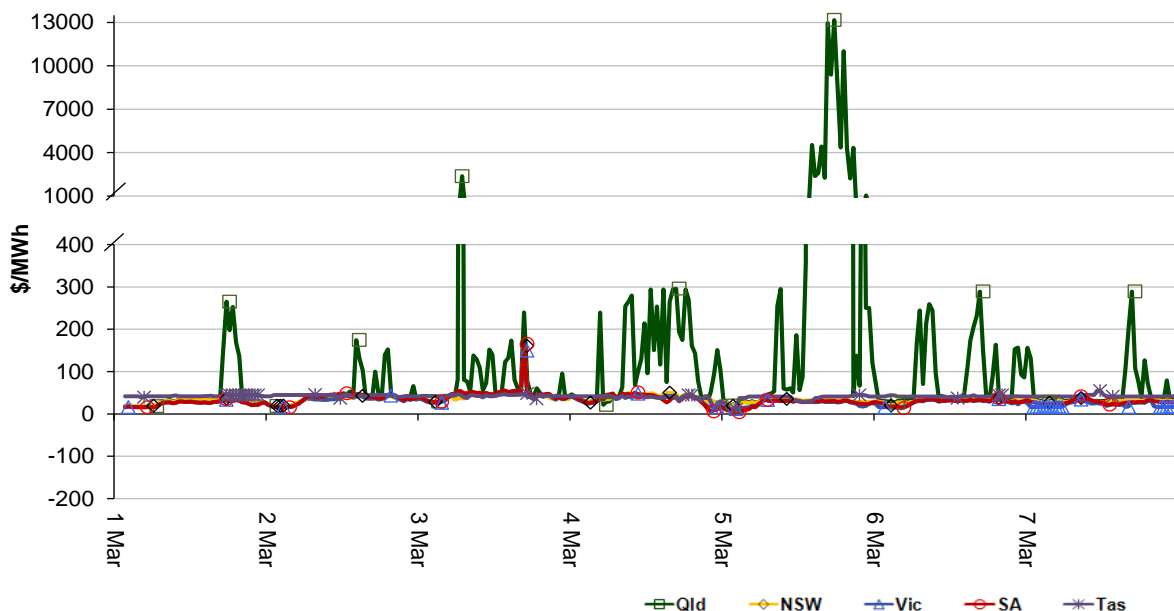
## Introduction

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, analysis of spot market outcomes and rebidding behaviours. 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

Figure 1 shows the spot prices that occurred in each region during the week 1 to 7 March 2015. There were 15 occasions<sup>1</sup> where the spot price in Queensland was above \$250/MWh and greater than three times the regional weekly average price<sup>2</sup>. On 5 March spot prices in Queensland exceeded the weekly reporting threshold from 2 pm to 8.30 pm, and exceeded the \$5000/MWh compulsory reporting threshold from 4.30 pm to 6 pm and again for the 7 pm trading interval<sup>3</sup>.

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



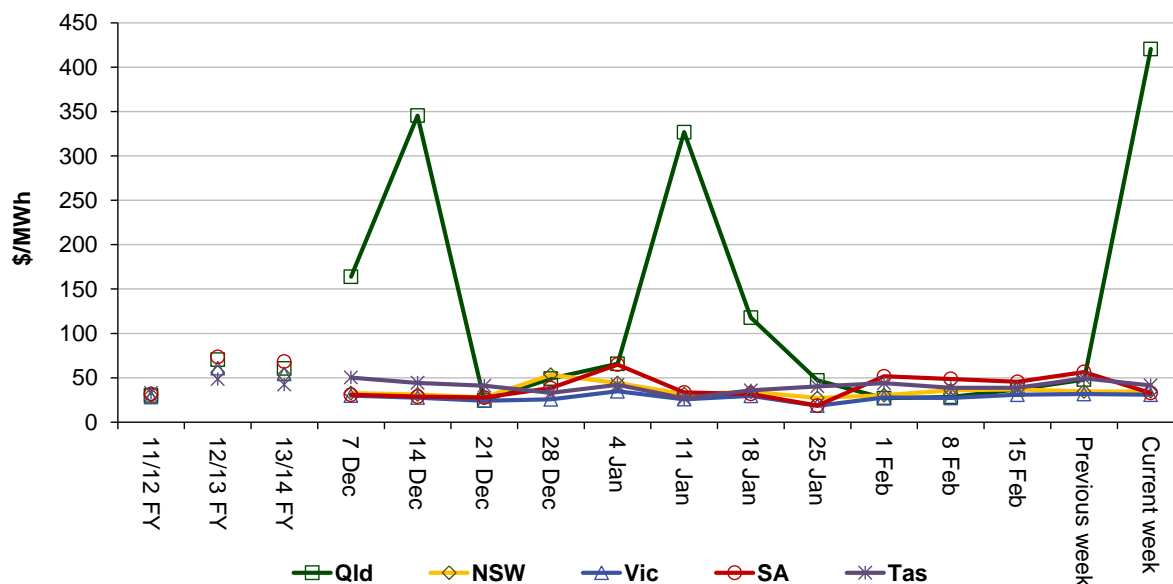
<sup>1</sup> Once on 3 March and 14 times on 5 March

<sup>2</sup> Weekly regional average price was \$420/MWh as shown in Table 1.

<sup>3</sup> The circumstances relating to the intervals from 4.30 pm to 7 pm are discussed in the Electricity spot prices above \$5000/MWh - Queensland, 5 March 2015 report available on the [AER website](#).

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)**



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

Region	Qld	NSW	Vic	SA	Tas
Current week	420	35	31	33	41
13-14 financial YTD	61	53	54	68	42
14-15 financial YTD	72	37	32	41	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 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 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 168 trading intervals throughout the week where actual prices varied significantly from forecasts. This compares to the weekly average in 2014 of 71 counts and the average in 2013 of 97.

Reasons for the variations for this week are summarised in Table 2. Based on AER analysis, 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**

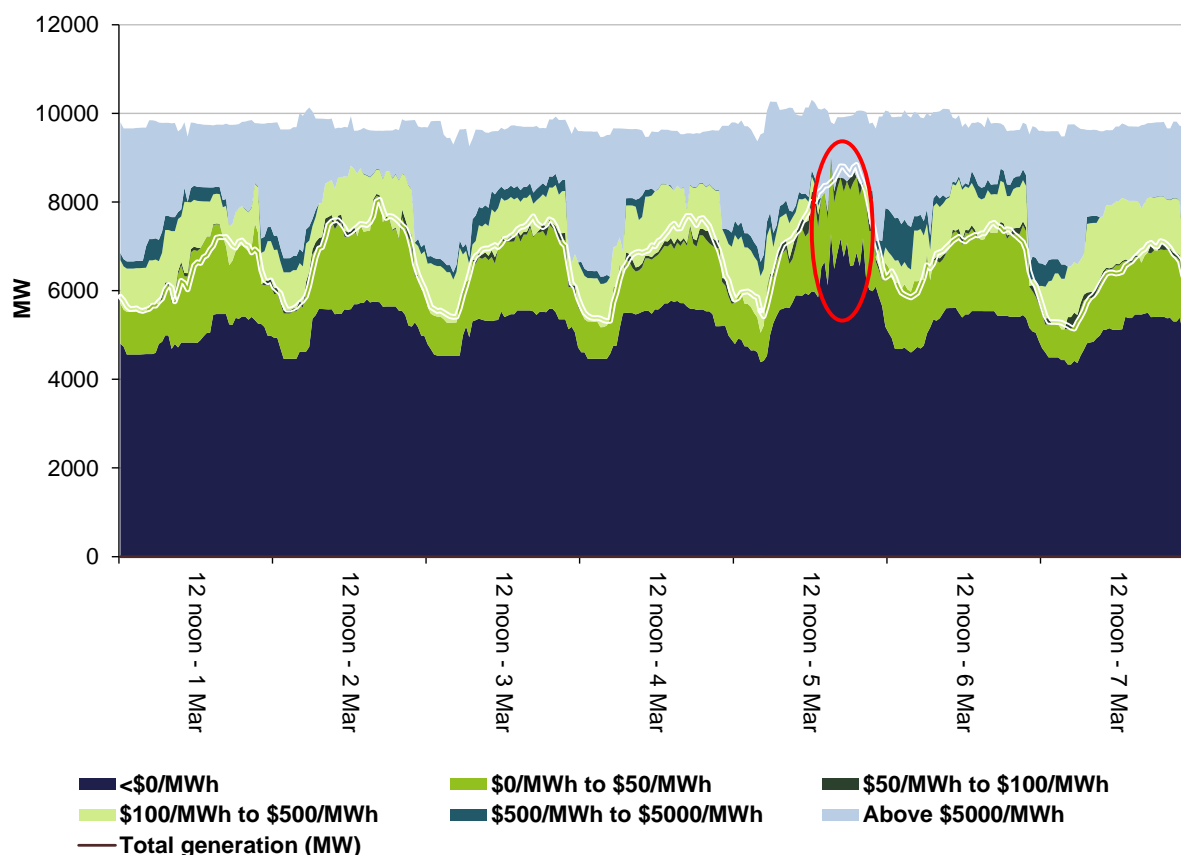
	Availability	Demand	Network	Combination
% of total above forecast	3	61	0	7
% of total below forecast	21	6	0	1

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

## Generation and bidding patterns

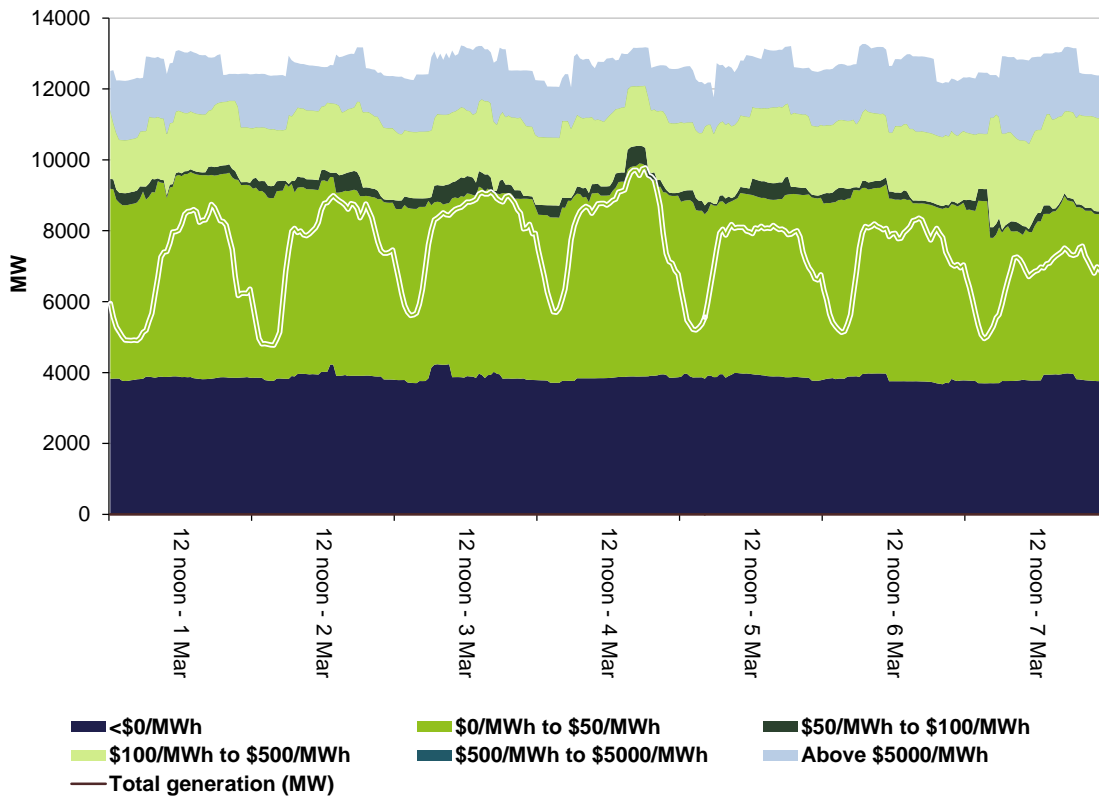
The AER reviews generator bidding as part of its market monitoring to better understand the drivers behind price variations. Figure 3 to Figure 7 show, the total generation dispatched and the amounts of capacity offered within certain price bands for each 30 minute trading interval in each region.

**Figure 3 : Queensland generation and bidding patterns**

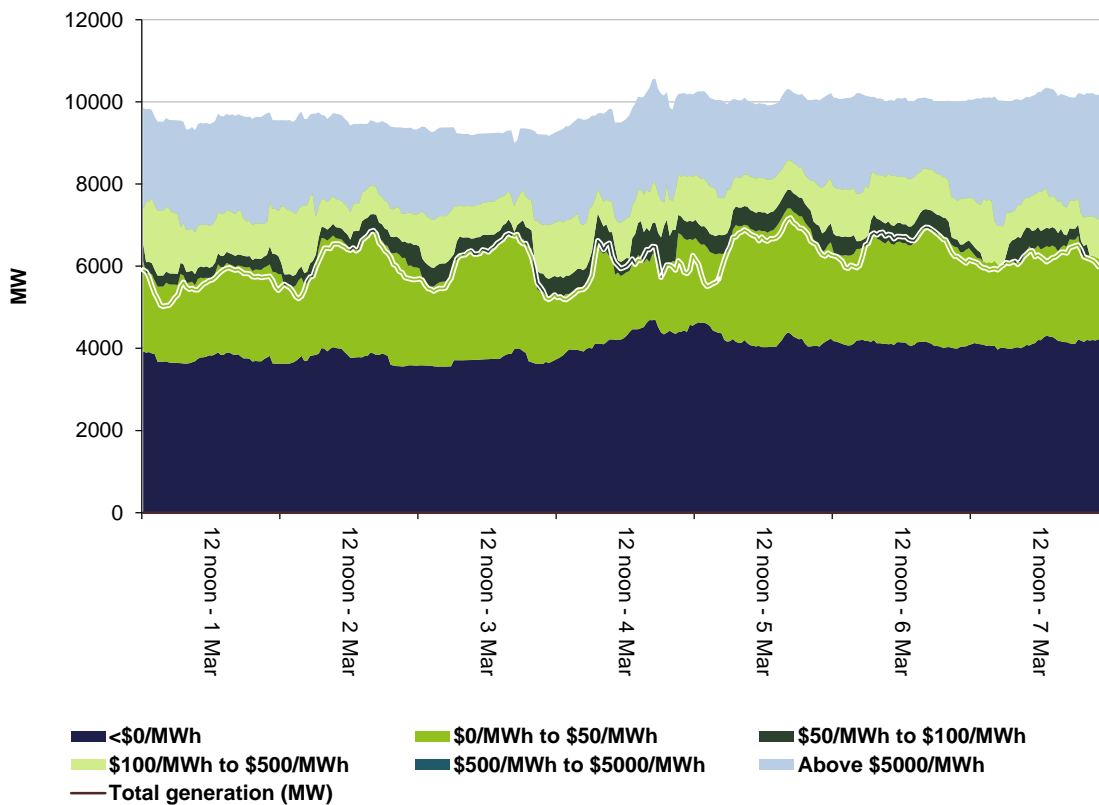


The red ellipse on Figure 3 highlights periods where a number of participants rebid capacity between high and low price bands, resulting in spot prices ranging between \$2200/MWh and \$9400/MWh over 14 consecutive trading intervals in Queensland.

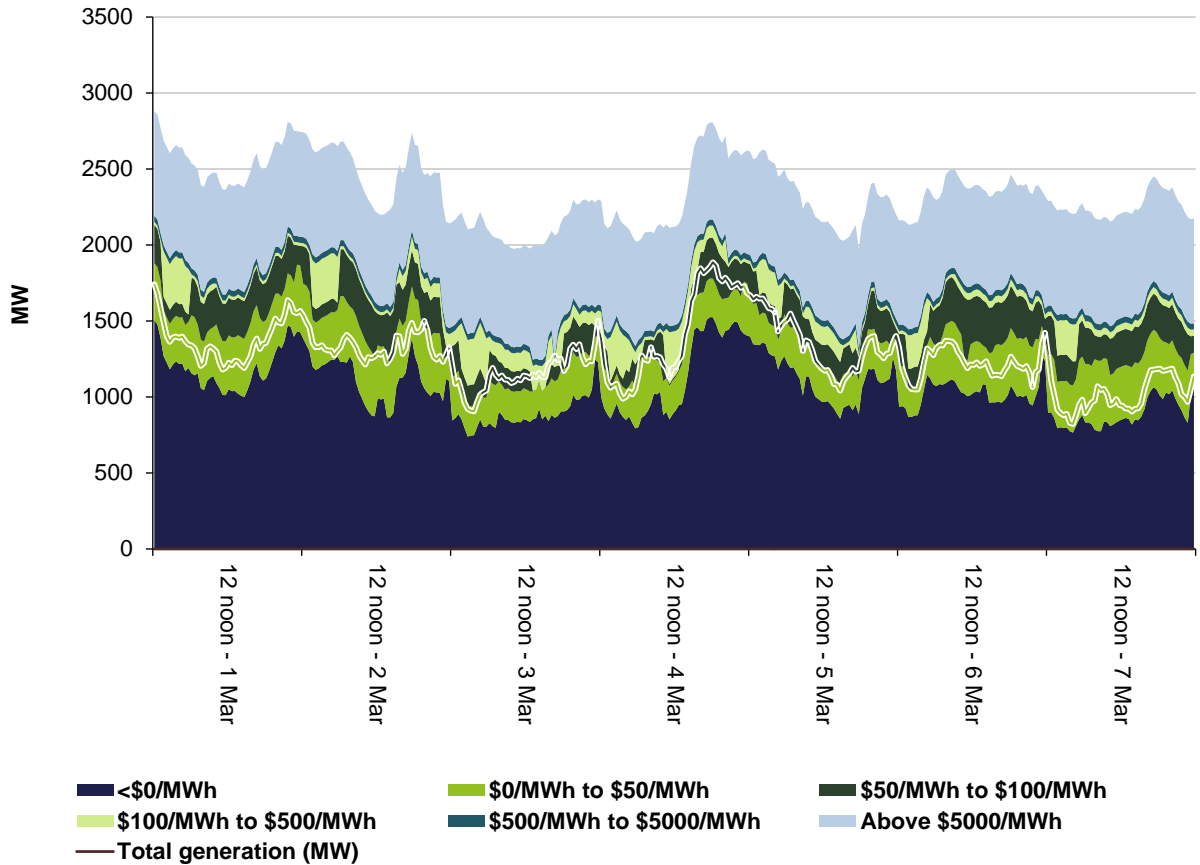
**Figure 4 : New South Wales generation and bidding patterns**



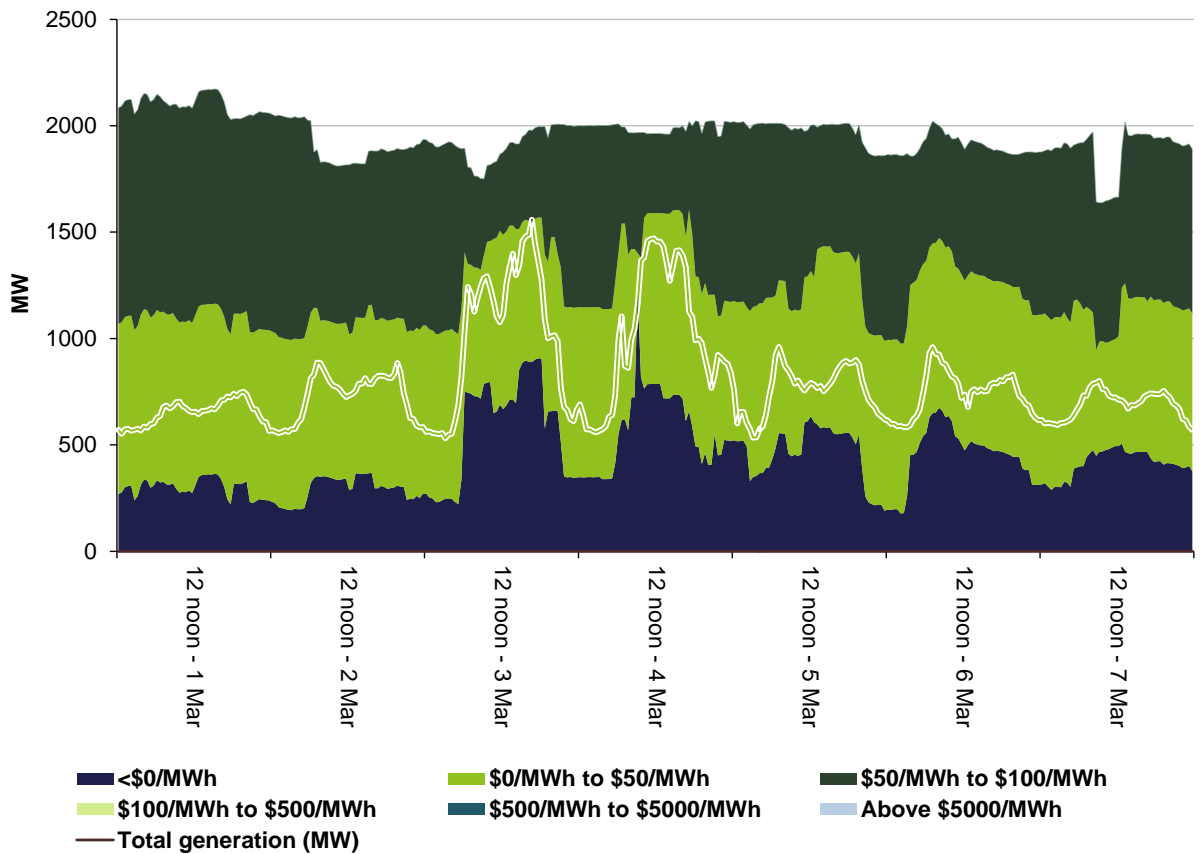
**Figure 5 : Victoria generation and bidding patterns**



**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.

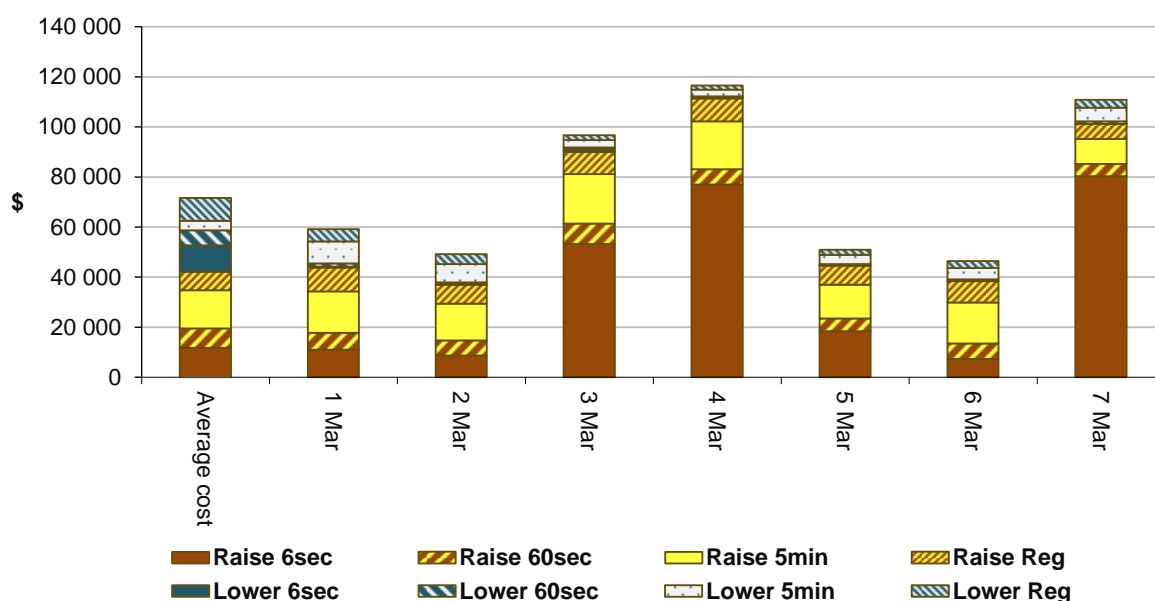
The Electricity Rules stipulate that generators pay for raise contingency services and customers pay for lower contingency services. Regulation services are paid for on a “causer pays” basis determined every four weeks by AEMO.

The total cost of FCAS on the mainland for the week was \$260 500 or less than 1 per cent of energy turnover on the mainland.

The total cost of FCAS in Tasmania for the week was \$269 000 or around 3.7 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**



During the week a system normal constraint was binding which manages the raise 6 second FCAS requirement in Tasmania for the loss of a Smithton to Woolnorth 110 kV line, or Norwood to Scotsdale to Derby 110 kV lines. While the constraint was binding, Basslink was

unable to transfer FCAS and the region had to source the service locally. Increased raise 6 second requirements saw the price spike to over \$500/MW throughout Tuesday, Wednesday and Thursday evenings, and over \$800/MW for a number of dispatch intervals on Friday.

## 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.

### Queensland

There were fifteen occasions where the spot price in Queensland was greater than three times the Queensland weekly average price of \$420/MWh and above \$250/MWh.

#### Queensland - Tuesday, 3 March

**Table 3: Price, Demand and Availability**

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
7 am	2369.86	36.37	35.20	6274	6299	6167	9514	10 072	10 062

Demand was close to the 4 hour ahead forecast, while availability was 558 MW below the 4 hours ahead forecast.

**Table 4: Rebids for 7 am**

Submit time	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MWh)	Price to (\$/MWh)	Rebid reason
4.38 am		CS Energy	Gladstone	-110	0	N/A	0437P UNIT RTS REVISED-SL
5.46 am		Stanwell Corporation	Stanwell, Tarong	125	<27	13 499	0545A CHANGE IN QLD AVAILABILITY PD 0230 HRS VS PD 0600 HRS
6.42 am	6.50 am	Arrow Energy	Braemar B	-160	301	N/A	0635A QLD PRICE HIGHER THAN FORECAST: AVOID UNECONOMIC START SL
6.45 am	6.55 am	Callide Power Trading	Callide C	-26	<14	N/A	0643P 380MW PA FANS MAXED
6.47 am	6.55 am	Callide Power Trading	Callide C	-30	<14	N/A	0646P 350MW PA FANS MAXED
6.53 am	7 am	ERM Power	Oakey	-171	<458	N/A	0652F AVOID UNECONOMIC START::CHANGE AVAIL/MW DISTRIB.

From 6 am, constraints were invoked to manage a planned outage in New South Wales on the Armidale to Tamworth 330 kV no. 86 line, setting the target flow on QNI to around 20 MW into New South Wales while flows into Queensland on Directlink were limited to around 10 MW. The constraint manages voltage stability in the event of the loss of Kogan Creek.

During the trading interval demand increased by over 300 MW (largest increase was 113 MW at 6.55 am). Pre-dispatch forecasts showed prices increase up to around \$300/MWh from 6 am but 5-minute prices were not, at this time, forecast to reach the price cap.

With low-priced capacity either ramp rate limited or fully dispatched, the dispatch price reached approximately \$300/MWh at 6.40 am and 6.55 am. The price then increased to the cap at 7 am, set by the Stanwell and Tarong units, when 171 MW of available capacity offered at Oakey power station was withdrawn. Rebidding to lower prices and reduced load at Sun Metals saw prices return to normal levels in the following intervals.

There was no other significant rebidding.

### Queensland - Thursday, 5 March

High temperatures in Queensland (36 degrees across the region) led to record demand conditions and prices were high from the 2 pm trading interval until 8.30 pm. Prices exceeded the \$5000/MWh compulsory reporting threshold from 4.30 pm trading interval to 6 pm and again for the 7 pm trading interval as shown in Table 5.<sup>4</sup>

**Table 5: Prices, Demand and Availability**

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
4.30 pm	12 957.50	59.49	55.17	8690	8510	8492	9922	10 433	10 461
5 pm	9382.83	55.17	55.17	8809	8570	8521	9911	10 427	10 460
5.30 pm	13 166.27	55.18	39.25	8758	8429	8341	9913	10 134	10 462
6 pm	8673.29	39.25	39.25	8647	8355	8260	9922	10 129	10 441
6.30 pm	4353.12	39.20	39.25	8597	8251	8268	9932	10 112	10 441
7 pm	11 024.50	39.20	39.25	8794	8298	8341	9953	10 110	10 454

High prices in the trading intervals from 2 pm to 4 pm and 7:30 pm to 8.30 pm are discussed here.

<sup>4</sup> The relevant market behaviours for the 4.30 pm to 7 pm trading intervals are discussed in detail in the Electricity spot prices above \$5000/MWh - Queensland, 5 March 2015 report available on the [AER website](#).



During these periods there was little or no Queensland generation available between \$100/MWh and \$12 500/MWh. As evident from Table 6 and Table 12, while there was adequate supply to meet demand and forecast prices were low, rebidding established supply conditions such that minor changes in demand and availability could led to significant variation in the dispatch price. Significant rebids for the relevant trading intervals are outlined in the following tables.

A number of network constraints also affected prices on the day. The system normal constraint managing voltage stability in the event of the loss of the largest Queensland generator (Kogan Creek) and preventing the post contingent loss of the parallel no. 85 line limited flows into Queensland to around 200 MW. A separate constraint managing flows on Directlink as a result of its ongoing partial outage, operated as forecast forcing flows out of Queensland at around 80 MW. At times a negative residue management constraint also violated as discussed on each relevant occasion.

### Queensland - Thursday, 5 March 2 pm to 4 pm

Table 6 lists the actual and forecast price, demand and availability four and 12 hours ahead.

**Table 6: Price, Demand and Availability**

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 pm	4537.42	39.20	39.25	8099	7884	7894	10 098	10 435	10 478
2.30 pm	2377.42	39.25	39.25	8099	8028	8019	10 118	10 445	10 478
3 pm	2587.54	39.25	39.25	8168	8108	8077	10 087	10 415	10 478
3.30 pm	4421.04	55.17	39.25	8306	8239	8197	9934	10 431	10 479
4 pm	2253.79	39.65	39.25	8497	8418	8328	9846	10 421	10 474

Demand during the intervals from 2 pm to 4 pm was between 337 MW to 534 MW higher (average error of 412 MW) than that forecast four hours ahead and availability was up to 575 MW below that forecast four hours ahead, importantly around 250 MW of the capacity made unavailable was priced less than \$17/MWh.

**Table 7: Significant rebids for 2 pm**

Submit time	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MWh)	Price to (\$/MWh)	Rebid reason
10.54 am		Alinta Energy	Braemar A	20	<600	13 500	1053A 5PD \$55.15 V 30PD \$39.25@10:54
11.06 am		CS Energy	Gladstone	40	39	13 500	1105P MILL LIMIT-SL
12.37 pm		CS Energy	Wivenhoe	-50	0	N/A	1236P TECHNICAL ISSUES-UNIT VIBRATIONS-SL

Submit time	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MWh)	Price to (\$/MWh)	Rebid reason
12.49 pm		CS Energy	Callide B	-50	17	N/A	1248P COAL QUALITY-SL
12.58 pm		CS Energy	Callide B	-125	<17	N/A	1258P TECHNICAL ISSUES-FD FAN TRIP-SL
1.21 pm	1.35 pm	CS Energy	Callide	-25	17	N/A	1320P CONDENSER UNLOADING-SL
1.21 pm	1.35 pm	Millmerran Energy Trader	Millmerran	80	7	13 500	13:20 A PRICE ABOVE PD
1.44 pm	1.55 pm	CS Energy	Gladstone	320	<1400	13 500	1343A CHANGE IN QLD GENERATION-SL
1.50 pm	2 pm	Callide Power Trading	Callide C	30	-1000	13 500	1349A RRP ABOVE PD
1.51 pm	2 pm	Alinta Energy	Braemar A	146	13 500	-1000	1350A \$13499@13:51
1.51 pm	2 pm	Arrow Energy	Braemar B	60	302	13 500	1350A QLD PRICE HIGHER THAN FORECAST SL
1.53 pm	2 pm	Millmerran Energy Trader	Millmerran	65	7	13 500	13:53 A RRP ABOVE PD

At 1.55 pm demand increased by 116 MW in combination with rebidding, with low-priced capacity either ramp rate limited, stranded in FCAS, or fully dispatched, the dispatch price increased from \$55/MWh at 1.50 pm to \$13 499/MWh at 1.55 pm and 2 pm with Stanwell and Tarong units setting the price.

**Table 8: Significant rebids for 2.30 pm**

Submit time	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MWh)	Price to (\$/MWh)	Rebid reason
10.54 am		Alinta Energy	Braemar A	20	<600	13 500	1053A 5PD \$55.15 V 30PD \$39.25@10:54
11.06 am		CS Energy	Gladstone	40	39	13 500	1105P MILL LIMIT-SL
12.37 pm		CS Energy	Wivenhoe	-50	0	N/A	1236P TECHNICAL ISSUES-UNIT VIBRATIONS-SL
12.49 pm		CS Energy	Callide B	-50	17	N/A	1248P COAL QUALITY-SL
12.58 pm		CS Energy	Callide B	-125	<17	N/A	1258P TECHNICAL ISSUES-FD FAN TRIP-SL
1.21 pm	1.35 pm	CS Energy	Callide B	-25	17	N/A	1320P CONDENSER UNLOADING-SL

Submit time	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MWh)	Price to (\$/MWh)	Rebid reason
1.44 pm	1.55 pm	CS Energy	Gladstone	320	<1400	13 500	1343A CHANGE IN QLD GENERATION-SL
1.50 pm	2 pm	Callide Power Trading	Callide C	30	-1000	13 500	1349A RRP ABOVE PD
1.51 pm	2 pm	Arrow Energy	Braemar 2	60	<302	13 500	1350A QLD PRICE HIGHER THAN FORECAST SL
1.59 pm	2.10 pm	Arrow Energy	Braemar 2	39	<302	13 500	1355A QLD PRICE HIGHER THAN FORECAST SL
2.01 pm	2.10 pm	Millmerran Energy Trader	Millmerran	85	7	13 500	14:01 A RRP ABOVE PD

Prices decreased significantly at 2.05 pm when the 5-minute demand fell by 132 MW, before returning close to the cap by 2.15 pm as demand increased by 103 MW in the following two dispatch intervals. With low-priced capacity either ramp rate limited, stranded in FCAS, or fully dispatched, the dispatch price increased from \$200/MWh at 2.05 pm to \$459/MWh at 2.10 pm and then \$13 499/MWh at 2.15 pm with Stanwell and Tarong units setting the price.

The constraint managing negative settlement residues was violated from 2.10 pm when the export limit restricting flows towards New South Wales was unable to be achieved without breaching outage constraints.

**Table 9: Significant Rebids for 3 pm**

Submit time	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MWh)	Price to (\$/MWh)	Rebid reason
11.06 am		CS Energy	Gladstone	40	39	13 500	1105P MILL LIMIT-SL
12.49 pm		CS Energy	Callide B	-50	17	N/A	1248P COAL QUALITY-SL
12.58 pm		CS Energy	Callide B	-125	<17	N/A	1258P TECHNICAL ISSUES-FD FAN TRIP-SL
1.21 pm	1.35 pm	CS Energy	Callide B	-25	17	N/A	1320P CONDENSER UNLOADING-SL
2.35 pm	2.45 pm	Origin Energy	Callide C	-96	<14	N/A	1434P CLINKER FALL, CAUSED MILL TRIP
2.48 pm	2.55 pm	Millmerran Energy Trader	Millmerran	40	7	13 500	14:48 A RRP ABOVE PD
2.50 pm	3 pm	CS Energy	Gladstone	180	<1400	>13 000	1450A INTERCONNECTOR CONSTRAINT-QNI FLOWS CHANGING-SL

Submit time	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MWh)	Price to (\$/MWh)	Rebid reason
2.50 pm	3 pm	Stanwell Corporation	Kareeya, Stanwell and Tarong	373	<27	>13 499	1450A UNFORECAST QLD RRP 1450_SL

At 3 pm, a number of rebids by CS Energy and Stanwell became effective which shifted significant amounts of generation capacity into prices near the cap. With low-priced capacity either ramp rate limited, stranded in FCAS, or fully dispatched, the dispatch price increased from \$302/MWh at 2.55 pm to \$13 499/MWh at 3 pm with Stanwell and Tarong units setting the final price.

**Table 10: Significant Rebids for 3.30 pm**

Submit time	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MWh)	Price to (\$/MWh)	Rebid reason
12.49 pm		CS Energy	Callide B	-50	17	N/A	1248P COAL QUALITY-SL
12.58 pm		CS Energy	Callide B	-125	<17	N/A	1258P TECHNICAL ISSUES-FD FAN TRIP-SL
1.21 pm		CS Energy	Callide B	-25	17	N/A	1320P CONDENSER UNLOADING-SL
2.01 pm		Millmerran Energy Trader	Millmerran	85	7	13 500	14:01 A RRP ABOVE PD
2.35 pm		Callide Power Trading	Callide C	-96	<14	N/A	1434P CLINKER FALL, CAUSED MILL TRIP
2.50 pm	3.05 pm	Stanwell	Stanwell	70	19	13 499	1450A UNFORECAST QLD RRP 1450_SL
2.53 pm	3.05 pm	ERM Power	Oakey	20	458	13499	1452F MATERIAL CHANGE IN MARKET CONDITIONS:: CHANGE MW DISTRIB.

With low-priced capacity either ramp rate limited, stranded in FCAS, or fully dispatched, the dispatch price remained at \$13 499/MWh at 3.05 pm and then \$12 949/MWh at 3.10 pm with Stanwell, Tarong and Mt Stuart units setting the prices. Prices reduced as rebids shifting capacity into lower price bands became effective from 3.15 pm.

The constraint managing negative settlement residues ceased violating after 3.15 pm and stopped binding after 3.30 pm as net interconnector targets ceased forcing large flows towards New South Wales.

**Table 11: Significant Rebids for 4 pm**

Submit time	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MWh)	Price to (\$/MWh)	Rebid reason
12.58 pm		CS Energy	Callide B	-125	<17	N/A	1258P TECHNICAL ISSUES-FD FAN TRIP-SL
1.21 pm		CS Energy	Callide B	-25	17	N/A	1320P CONDENSER UNLOADING-SL
3.18 pm	3.35 pm	ERM Power	Oakey	20	458	13 499	1517F MATERIAL CHANGE IN MARKET CONDITIONS:: CHANGE IN MW DISTRIB.
3.34 pm	3.45 pm	CS Energy	Wivenhoe	250	13 500	N/A	1534P TECHNICAL ISSUES-CONTROL SYSTEM-SL
3.40 pm	3.50 pm	Millmerran Energy Trader	Millmerran	55	13 500	N/A	15:40 P HIGH CONDENSATE TEMPS
3.47 pm	3.55 pm	Stanwell Corporation	Kareeya, Stanwell	124	19	13 499	1544A CHANGE IN QLD GEN WIVENHOE 1 OOS SL
3.52 pm	4 pm	CS Energy	Gladstone	280	<1400	>13 000	1551A INTERCONNECTOR CONSTRAINT-CHANGE IN QNI FLOWS-SL

As rebids became effective and with low-priced capacity either ramp rate limited, stranded in FCAS, or fully dispatched, the dispatch price increased from \$55/MWh at 3.50 pm to \$302/MWh at 3.55 pm and then to \$13 000/MWh at 4 pm with Gladstone units setting the price.

### Queensland - Thursday, 5 March 7.30 pm to 8.30 pm

Table 12 lists the actual and forecast price, demand and availability four and 12 hours ahead.

**Table 12: Price, Demand and Availability**

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
7.30 pm	4329.16	39.25	39.25	8750	8216	8300	10 030	10 100	10 454
8 pm	2212.65	39.20	39.25	8556	8096	8191	10 058	10 101	10 444
8.30 pm	4342.28	39.25	34.98	8383	7984	7892	10 061	9770	10 238

Demand during the intervals from 7.30 pm to 8.30 pm was between 337 MW to 534 MW higher (average error of 412 MW) than that forecast four hours ahead and availability was up to 575 MW below that forecast four hours ahead, importantly around 250 MW of the capacity made unavailable was priced less than \$17/MWh.

The system normal constraint managing voltage stability in the event of the loss of the largest Queensland generator (Kogan Creek) and preventing the post contingent loss of the parallel no. 85 line limited flows into Queensland to around 200 MW. A separate constraint managing flows on Directlink as a result of its ongoing partial outage, operated as forecast forcing flows out of Queensland at around 80 MW.

**Table 13: Significant Rebids for 7.30 pm**

Submit time	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MWh)	Price to (\$/MWh)	Rebid reason
6.02 pm		CS Energy	Wivenhoe	200	0	>12 900	1802P FUEL MANAGEMENT - MANAGE SPLIT YARD CREEK LEVEL-SL
6.02 pm		ERM Power	Oakey	22	458	13 499	1802F MATERIAL CHANGE IN MARKET CONDITIONS ::CHANGE MW DISTRIB.
7.03 pm	7.10 pm	Arrow Energy	Braemar 2	39	13 500	-1000	1900A QLD PRICE HIGHER THAN FORECAST SL
7.07 pm	7.15 pm	CS Energy	Gladstone	160	45	13 000	1906A QLD DEMAND HIGHER THAN 30MIN FORECAST-SL

With the supply conditions that had been established and demand increasing towards the evening peak, prices were significantly above forecast.

The price was \$12 900/MWh at 7.05 pm then dropped to \$55/MWh at 7.10 pm as a result of rebidding and a slight decrease in demand. At 7.15 pm the price increased to \$12 902/MWh when demand increased by 43 MW and CS Energy's Gladstone rebid became effective, before demand reduced again by 151 MW and prices stayed at \$40/MWh for the rest of the trading interval.

**Table 14: Significant Rebids for 8 pm**

Submit time	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MWh)	Price to (\$/MWh)	Rebid reason
6.02 pm		CS Energy	Wivenhoe	200	0	>12 900	1802P FUEL MANAGEMENT - MANAGE SPLIT YARD CREEK LEVEL-SL
6.02 pm		ERM Power	Oakey	22	458	13 499	1802F MATERIAL CHANGE IN MARKET CONDITIONS ::CHANGE MW DISTRIB.
7.07 pm	7.15 pm	CS Energy	Gladstone	140	1400	13 000	1906A QLD DEMAND HIGHER THAN 30MIN FORECAST-SL
7.12 pm	7.35 pm	CS Energy	Wivenhoe	150	12900	13 500	1911P WATER MANAGEMENT-SL

Submit time	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MWh)	Price to (\$/MWh)	Rebid reason
7.21 pm	7.35 pm	Millmerran Energy Trader	Millmerran	145	7	13 500	19:19 A CHANGE IN 5MIN PD DEMAND - SL
7.23 pm	7.35 pm	CS Energy	Gladstone	100	39	13 000	1920A QLD DEMAND HIGHER THAN 30MIN FORECAST-SL

A step change in the price of available capacity around the level of dispatched generation in the region saw the price of the first dispatch interval increase before rebidding shifted some capacity into lower prices as demand levels declined. The higher price was forecast in the last 30-minute dispatch run before the trading interval commenced (in line with higher projected demand).

With low-priced capacity either ramp rate limited, stranded in FCAS, or fully dispatched, the dispatch price increased from \$40/MWh at 7.30 pm to \$13 000/MWh at 7.35 pm, with Gladstone units setting the price.

**Table 15: Significant Rebids for 8.30 pm**

Submit time	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MWh)	Price to (\$/MWh)	Rebid reason
7.07 pm	7.15 pm	CS Energy	Gladstone	140	1400	13 000	1906A QLD DEMAND HIGHER THAN 30MIN FORECAST-SL
7.21 pm	7.35 pm	Millmerran Energy Trader	Millmerran	145	7	13 500	19:19 A CHANGE IN 5MIN PD DEMAND - SL
7.23 pm	7.35 pm	CS Energy	Gladstone	100	39	13 000	1920A QLD DEMAND HIGHER THAN 30MIN FORECAST-SL
7.40 pm	8.05 pm	CS Energy	Gladstone	60	39	13 000	1939A DISPATCH PRICE LOWER THAN 30MIN FORECAST-SL

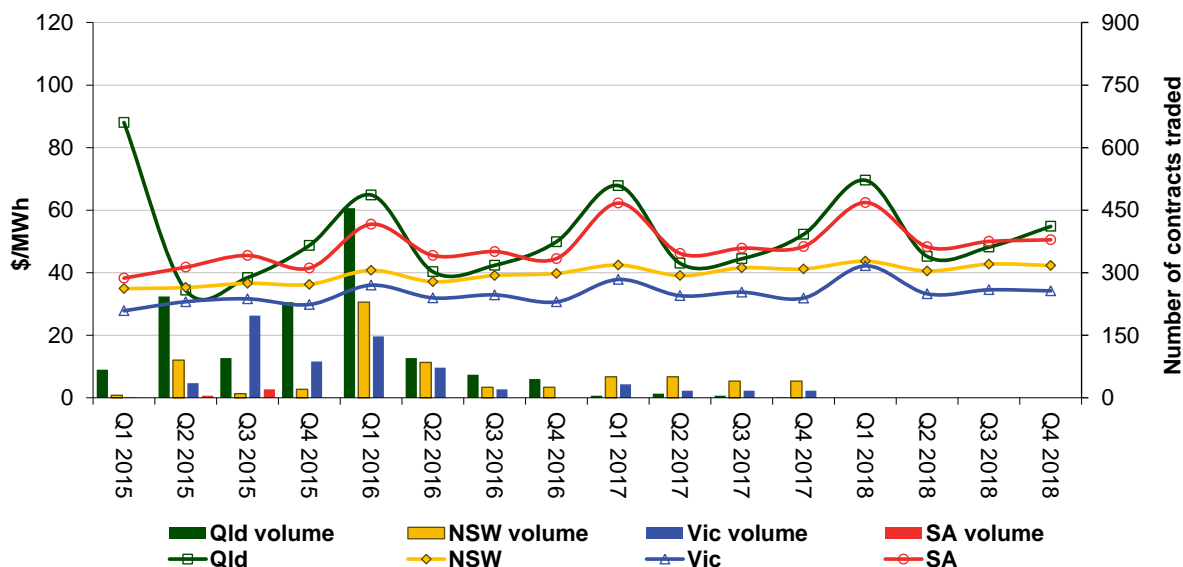
A step change in availability at the start of the trading interval saw prices increase for two dispatch intervals, with higher prices forecast for the last two 30-minute pre dispatch runs (in line with higher projected demand). Prices decreased following rebidding by a number of participants which progressively moved available capacity into lower price bands,

With low-priced capacity either ramp rate limited, stranded in FCAS, or fully dispatched, the dispatch price increased from \$55/MWh at 8 pm to \$12 949/MWh at 8.05 pm and 8.10 pm with Mt Stuart units setting the high dispatch prices.

## Financial markets

Figure 9 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.

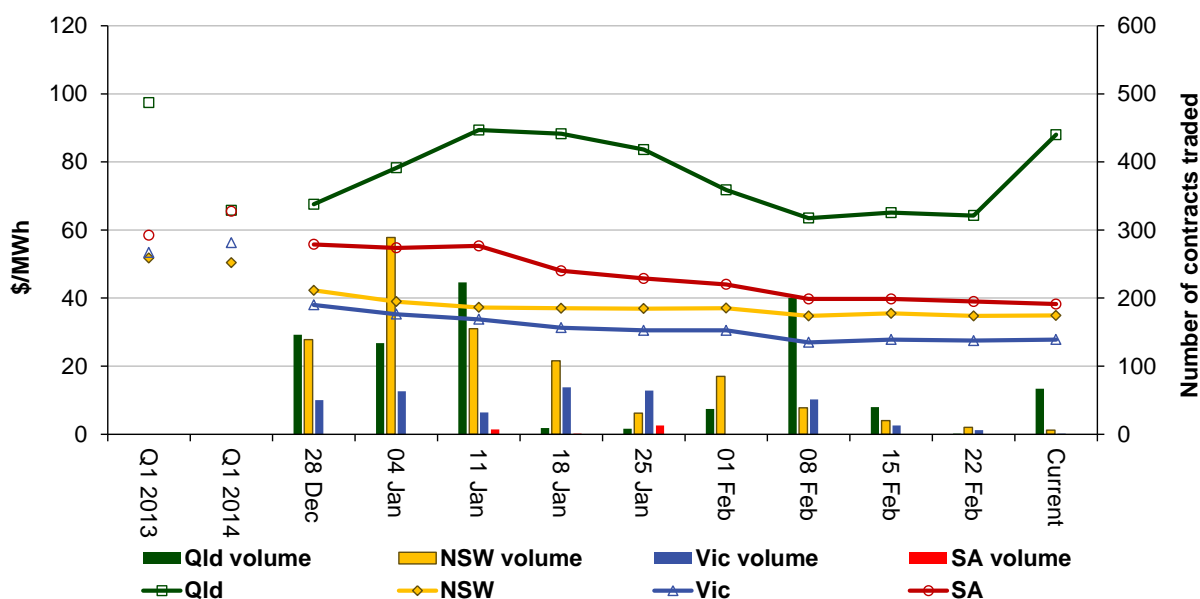
**Figure 9 : Quarterly base future prices Q1 2015 – Q4 2018**



Source: ASXEnergy.com.au

Figure 10 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.

**Figure 10 : 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.

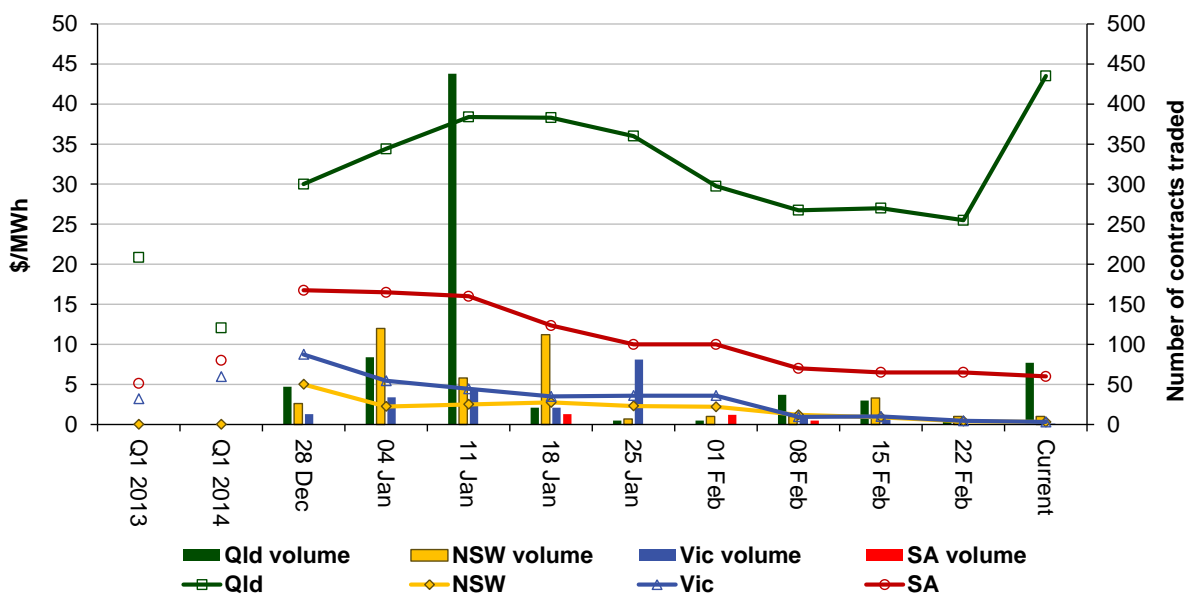


Source: ASXEnergy.com.au

Prices of other financial products (including longer-term price trends) are available in the [Performance of the Energy Sector](#) section of our website.

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



Source: ASXEnergy.com.au

**Australian Energy Regulator**

**May 2015**