Electricity Report

11 - 17 January 2015



AER reference: 39220 - D15/8712

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

Figure 1 shows the spot prices that occurred in each region during the week 11 to 17 January 2015. There were three spot prices which were above \$5000/MWh on 15 January. As required under clause 3.8.17 of the National Electricity Rules, the AER will publish a separate report into the events on that day.

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

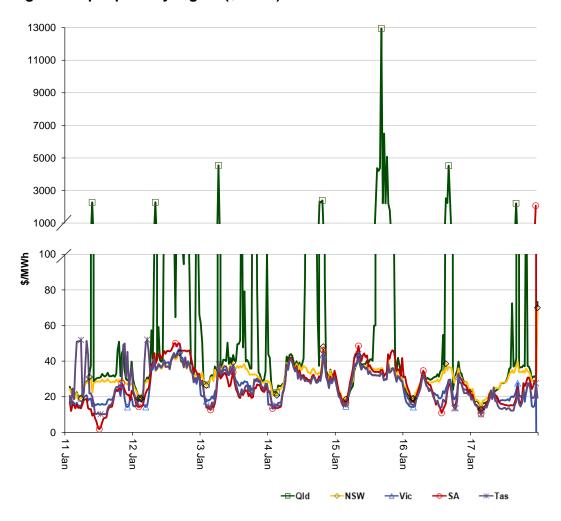


Figure 2 shows the volume weighted average (VWA) prices for the current week (with prices shown in Table 1) and the preceding 12 weeks, as well as the VWA price over the previous 3 financial years. The high prices in Queensland over the past few weeks have increased the year to date volume weighted spot price in that region from \$33/MWh to \$66/MWh.

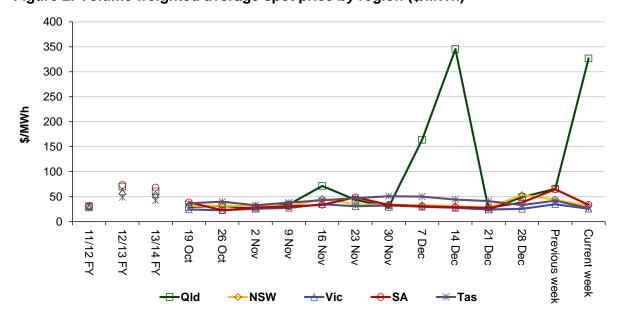


Figure 2: Volume weighted average spot price by region (\$/MWh)

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

Region	Qld	NSW	Vic	SA	Tas
Current week	327	32	26	33	27
13-14 financial YTD	61	53	54	68	42
14-15 financial YTD	66	37	33	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 135 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

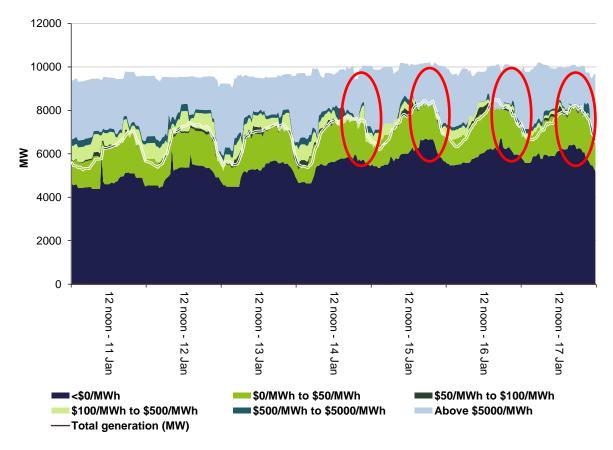
	Availabilit	Demand	Network	Combinatio
% of total above forecast	4	29	0	6
% of total below forecast	49	9	0	2

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

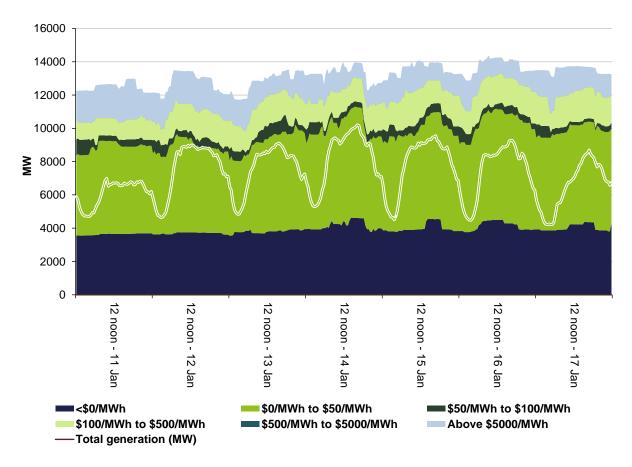


Figure 5: Victoria generation and bidding patterns

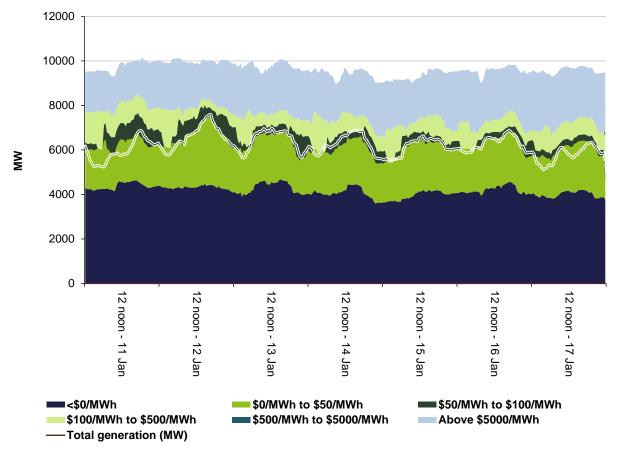


Figure 6: South Australia generation and bidding patterns

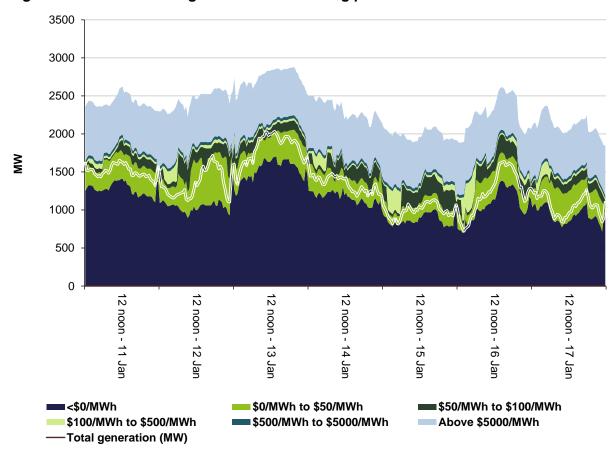
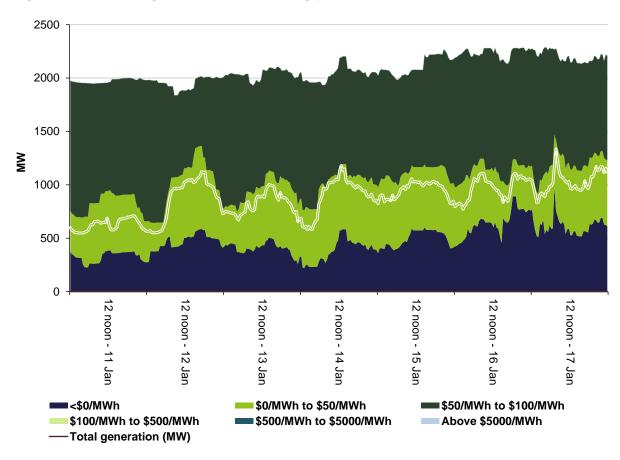


Figure 7: Tasmania generation and bidding patterns



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 \$548 500 or less than 1 per cent of energy turnover on the mainland.

The total cost of FCAS in Tasmania for the week was \$1 036 000 or around 23.5 per cent of energy turnover in Tasmania. The high FCAS cost in Tasmania was mainly driven by the lower 6 second service.

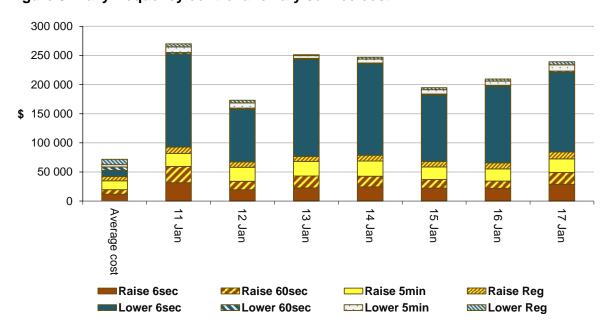


Figure 8: Daily frequency control ancillary service cost

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. During the week a system normal constraint managing the requirement for lower 6 second service for the loss of two Bell Bay Aluminium potlines was binding and Basslink was unable to transfer FCAS. This meant that all Tasmanian FCAS services had to be sourced locally. The requirement for

lower 6 second services was around 230 MW and at prices around \$40/MW throughout the week. Over the week the cost of lower 6 second services was around \$968 000.

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 eighteen occasions where the spot price in Queensland was greater than three times the Queensland weekly average price of \$372/MWh and above \$250/MWh.

Analysis of factors contributing to high prices

In general, demand and available capacity were close to the four hour ahead forecasts.

A system normal constraint used to manage voltage following the loss of the Kogan Creek power station saw imports into Queensland across QNI limited in almost all of the high price events. Imports varied from between 160 MW and 240 MW.

The Terranora interconnector has been operating significantly below normal capability for some months.¹ During the days of high prices, imports into Queensland across this interconnector were limited between 2 and 20 MW.

For each day where the spot prices were 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.

Sunday, 11 January

Time Price (\$/MWh) Demand (MW) Availability (MW) Actual 4 hr 12 hr Actual 4 hr 12 hr Actual 4 hr 12 hr forecast forecast forecast forecast forecast forecast 10:00 AM 2270.85 27.80 23.37 5880 5859 5762 9453 9667 9893

Conditions at the time saw demand close to forecast and available capacity 214 MW below that forecast four hours ahead.

¹ The Terranora interconnector is scheduled to return to service in August 2015.

At 7.33 am Callide Power Trading reduced the available capacity of Callide C unit 3 by 186 MW all of which was pried below \$15/MWh. The reason given was "0732P CC3 220MW max until 17:00 hi fab filter dust hoppers".

At 9.29 am, effective for the 9.40 am dispatch interval, CS Energy rebid 120 MW of available capacity from Gladstone power station from below \$93/MWh to the price cap. The reason provided was "0929A interconnector constraint-QNI flowing north >30min PD-SL".

At 9.50 am the 5-minute demand increased by 167 MW. With low-priced capacity either ramp rate limited or fully dispatched, the dispatch price increased from \$35/MWh at 9.45 am to the price cap at 9.50 am with Stanwell and Tarong units setting the price.

In response to the high price, participants rebid over 1000 MW of capacity to the price floor and prices returned to previous levels.

Monday, 12 January

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
8:30 AM	2277.98	79.58	38.76	6806	6773	6644	9571	9857	9935

Conditions at the time saw available capacity 286 MW below that forecast four hours ahead.

At 7.36 am Callide Power Trading reduced the available capacity of Callide C unit 3 by 186 MW all of which was pried below \$15/MWh. The reason given was "0735P high dust hopper levels".

At 8.05 am demand increased by 46 MW while both Queensland interconnectors were constrained by import limits. With low-priced capacity either ramp rate limited or fully dispatched, the dispatch price increased from \$150/MWh at 8 am to the cap at 8.05 am.

In response to the high price, participants rebid over 1800 MW of capacity to the price floor and prices returned to previous levels.

There was no other significant rebidding.

Tuesday, 13 January

Time	Price (\$/MWh)			ı	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
7:00 AM	4543.29	39.46	34.82	6143	6062	6074	9640	9928	9949

Conditions at the time saw demand slightly higher than forecast and available capacity 288 MW below that forecast four hours ahead.

Rebids for 13 January

Time submitted	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MWh)	Price to (\$/MWh)	Rebid reason
5.23 am	am	Callide Power Trading	Callide C	-186 MW	13	N/A	0522P CC3 220MW max until 17:00 hi fab filter dust levels
6.40 am	6.50 am	Callide Power Trading	Callide C	-70 MW	13	N/A	0639P 4th mill tripped
6.41 am	6.50 am	Stanwell	Stanwell and Tarong	185 MW	26	Price cap	0640A material change in QNI flow: DI0640
6.48 am	6.55 am	CS Energy	Gladstone and Callide B	170 MW	22	13 500	0646A interconnector constraint-QNI binding-SL
Total cap	acity rebid fr	om low to high	prices: 355 MW	,			

With low priced capacity either fully dispatched or ramp rate limited at the time, the dispatch price increased from \$38/MWh at 6.45 pm to \$150/MWh at 6.50 pm and then to the price cap for two dispatch intervals from 7.55 am set by Stanwell and Tarong units.

There was no other significant rebidding.

Wednesday, 14 January

Time	Price (\$/MWh)			Demand (MW)			Availability (MW)			
	Actual 4 hr 12 hr forecast forecast			Actual	4 hr forecast	12 hr forecast	Actual	4 hr forecast	12 hr forecast	
7:00 PM	2322.70	34.49	52.90	7568	7452	7279	9632	10 058	10 118	
7:30 PM	2282.40	34.74	50.01	7561	7455	7423	9464	10 076	10 126	
8:00 PM	2391.85	34.49	39.95	7550	7380	7372	9430	10 086	10 126	

Conditions at the time saw demand up to 170 MW above that forecast four hours ahead, while available capacity was up to 656 MW below that forecast four hours ahead.

Rebids for 14 January 7 pm

Time submitted	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MWh)	Price to (\$/MWh)	Rebid reason
6.29 pm	6.40 pm	Arrow Energy	Braemar	-140 MW	<285	N/A	1829P unit trip SL
6.30 pm	6.40 pm	Stanwell	Stanwell	60 MW	26	13 500	1830A material change in Qld generation: B2PS DI1830

Time submitted	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MWh)	Price to (\$/MWh)	Rebid reason
6.31 pm	6.40 pm	Arrow Energy	Braemar	-330 MW	<142	N/A	1830P full station trip SL
Total	capacity reb	old from low to high	n prices: 60	·			

With low-priced capacity either ramp rate limited or fully dispatched, the dispatch price increased from \$296/MWh at 6.35 pm to \$13 500/MWh at 6.40 pm, when 470 MW of capacity was withdrawn from the market.

Rebids for 14 January 7.30 pm

Time submitted	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MWh)	Price to (\$/MWh)	Rebid reason
6.29 pm	6.40 pm	Arrow Energy	Braemar	-140 MW	<285	N/A	1829P unit trip SL
6.31 pm	6.40 pm	Arrow Energy	Braemar	-330 MW	<142	N/A	1830P full station trip SL
6.50 pm	7.05 pm	CS Energy	Wivenhoe	250 MW	0	13 500	1848F avoid uneconomic dispatch-SL
6.51 pm	7.05 pm	Stanwell	Kareeya, Mackay Tarong	131 MW	<30	13 499	1845A material change in qld generation: Wivenhoe online
Total ca	pacity rebid	from low to high	prices: 381 MW				

At 7.05 pm, demand increased by 62 MW, with low-priced capacity either ramp rate limited or fully dispatched, the dispatch price increased from \$35/MWh at 7 pm to \$13 499/MWh at 7.05 pm, with the price set by Tarong units. Price returned to previous level at 7.10 pm when CS Energy reversed its Wivenhoe rebid.

Rebids for 14 January 8 pm

Time submitted	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MWh)	Price to (\$/MWh)	Rebid reason
6.29 pm	6.40 pm	Arrow Energy	Braemar	-140 MW	<285	N/A	1829P unit trip SL
6.31 pm	6.40 pm	Arrow Energy	Braemar	-330 MW	<142	N/A	1830P full station trip SL
7.01 pm	7.10 pm	AGL Energy	Yabulu	-155	2221	N/A	1900~F~95 unit triggered by market~95 avoid unecconomical start

Time submitted	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MWh)	Price to (\$/MWh)	Rebid reason
7.32 pm	7.40 pm	Stanwell	Stanwell	80	<30	>13 000	1935A material change in qni flow DI1935
7.45 pm	7.55 pm	Stanwell	Tarong	75	<48	>13 000	1945A material change in Qld generation: Oakey DI1945
7.49 pm	8 pm	Callide Power Trading	Callide C	63	Price floor	12 859	1946A RRP different to PD
7.53 pm	8 pm	CS Energy	Gladstone & Wivenhoe	410	<290	Price cap	1949A dispatch price higher than 30min forecast-SL
Tota	al capacity re	bid from low to h	nigh prices:	628 MW			

With low-priced capacity either ramp rate limited or fully dispatched the dispatch price increased from \$63/MWh at 7.35 pm to \$299 at 7.40 pm and stayed there until 8 pm when the price reached \$13 099/MWh, set by Stanwell and Tarong units.

Thursday, 15 January

Time	Р	rice (\$/MWh)	١	Demand (MV	V)	A	vailability (M	W)
	Actual	4 hr forecast	12 hr forecast	Actual	4 hr forecast	12 hr forecast	Actual	4 hr forecast	12 hr forecast
3:00 PM	2290.74	85.99	300.45	8324	8342	8358	10 106	10 162	10 211
3:30 PM	4375.84	96.00	300.45	8320	8416	8420	10 112	10 160	10 214
4:00 PM	4203.73	96.00	300.45	8424	8472	8464	10 153	10 177	10 213
4:30 PM	4371.52	150.03	300.45	8484	8515	8496	10 150	10 192	10 196
5:00 PM	12 950.00	96.00	300.45	8561	8540	8535	10 149	10 245	10 163
5:30 PM	2213.60	95.00	300.45	8497	8452	8430	10 188	10 179	10 182
6:00 PM	6493.30	53.00	300.45	8443	8331	8315	10 116	10 029	10 172
6:30 PM	2207.79	39.00	85.99	8360	8178	8149	10 186	10 047	10 172
7:00 PM	5075.99	44.49	94.49	8363	8251	8207	10 205	10 060	10 179
7:30 PM	2191.82	39.30	94.49	8399	8328	8273	10 063	10 209	10 185
8:00 PM	1783.73	40.73	85.99	8381	8273	8234	10 072	10 191	10 173

Events of 15 January 2015 will be discussed in the relevant *Spot prices above \$5000/MWh* report.

Friday, 16 January

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		
4:00 PM	2522.29	44.49	85.99	8327	8334	8461	10 051	10 086	10 268		
4:30 PM	2230.95	44.49	95.00	8313	8391	8516	10 097	10 083	10 228		
5:00 PM	4523.27	44.49	95.00	8355	8408	8528	10 116	10 024	10 229		
5:30 PM	2272.06	30.26	85.99	8244	8280	8420	10 058	10 059	10 237		

Conditions at the time saw demand and available capacity close to that forecast 4 hours ahead. Actual demand on the day was above 8200 MW during the affected intervals due to warm weather, with the maximum temperature in Brisbane above 32 degrees.

Rebids for 16 January 4 pm

Time submitted	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MWh)	Price to (\$/MWh)	Rebid reason
3.29 pm	3.40 pm	Millmerran Energy	Millmerran	70 MW	7	12 868	15:28 A RRP above PD
3.32 pm	3.40 pm	Arrow	Braemar	18 MW	285	1423	1528P change in water availability SL
3.37 pm	3.45 pm	CS Energy	Callide B	50 MW	16	12 859	1535F reduce dispatch margin-SL
3.45 pm	3.55 pm	CS Energy	Callide B, Gladstone & Wivenhoe	505 MW	<300	>12 859	1542A interconnector constraint-potential to bind-SL
3.45 pm	3.55 pm	Callide Power Trading	Callide C	23 MW	<13	12 859	1544A QNI potential to bind
Tota	I capacity re	bid from low to	high prices	666 MW			

With low-priced capacity either ramp rate limited or fully dispatched, the dispatch price increased from \$37/MWh at 3.50 pm to \$13 499/MWh at 3.55 pm, set by Stanwell, Tarong and Kareeya units.

Rebids for 16 January 4.30 pm

Time submitted	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MWh)	Price to (\$/MWh)	Rebid reason
4.15 pm	4.25 pm	CS Energy	Callide B, Gladstone and Wivenhoe	505 MW	<300	Price cap	1613A interconnector constraint-potential to bind-SL
4.17 pm	4.25 pm	Callide Power Trading	Callide C	23 MW	13	12 859	1616A QNI potential to bind
4.21 pm	4.30 pm	Callide Power Trading	Callide C	25 MW	-952	12859	1621A RRP above PD
4.22 pm	4.30 pm	Stanwell	Kareeya	31 MW	-1	>13 000	1622A unforecast RRP 1625- SL
Tota	al capacity re	bid from low to	high prices	584 MW			

With low-priced capacity either ramp rate limited or fully dispatched, the dispatch price increased from \$150/MWh at 4.25 pm to \$13 099/MWh at 4.30 pm, with the price set by Kareeya power station.

Rebids for 16 January 5 pm

Time submitted	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MWh)	Price to (\$/MWh)	Rebid reason				
4.44 pm	4.55 pm	CS Energy	Gladstone, Callide B & Wivenhoe	505 MW	<300	Price cap	1641A interconnector constraint-potential to bind-SL				
4.45 pm	4.55 pm	Callide Power Trading	Callide C	23 MW	13	Price cap	1643A QNI potential to bind				
4.51 pm	5 pm	Callide Power Trading	Callide C	40 MW	-952	Price cap	1646A RRP above PD				
Total cap	Total capacity rebid from low to high prices: 568 MW										

With low-priced capacity either ramp rate limited or fully dispatched, the dispatch price increased from \$37/MWh at 4.50 pm to \$13 499/MWh for the remainder of the trading interval, with the price set by Stanwell owned generators.

Rebids for 16 January 5.30 pm

Time submitted	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MWh)	Price to (\$/MWh)	Rebid reason
5.13 pm	5.20 pm	Arrow Energy	Braemar	165 MW	<1423	N/A	1713P unit trip SL
5.15 pm	5.25 pm	CS Energy	Callide B, Gladstone and Wivenhoe	505 MW	<300	Price cap	1713A interconnector constraint-potential to bind-SL
5.15 pm	5.25 pm	Callide Power Trading	Callide C	23 MW	13	Price cap	1714A QNI potential to bind
5.21 pm	5.30 pm	Callide Power Trading	Callide C	40 MW	-952	Price cap	1719A QLD RRP higher than PD
Total cap	pacity rebid	from low to high	prices: 568 MW				

With low-priced capacity either ramp rate limited or fully dispatched, the dispatch price increased from \$22/MWh at 5.20 pm to \$13 499/MWh at 5.25 pm. The 5.25 pm price was set by Stanwell's Kareeya and Barron power stations.

Demand decreased by 127 MW at 5.30 pm and prices returned to previous levels.

Saturday, 17 January

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	
5:00 PM	2209.01	30.47	36.51	8198	8152	8204	10 084	9997	10 255	

Conditions at the time saw demand and available capacity close to forecast levels. High demand in the region was again influenced by temperatures reaching over 35 degrees in Brisbane, the third consecutive day above 32 degrees. Demand in Queensland was at its highest level when the 5-minute price spiked, climbing from 8111 MW at the start of the trading interval to 8297 MW by 4.55 pm.

Rebids for 17 January 5 pm

Time submitted	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MWh)	Price to (\$/MWh)	Rebid reason
4.38 pm	4.45 pm	Millmerran Energy Trader	Millmerran	40	7	12 868	16:35 A change in QNI PD - SL
4.47 pm	4.55 pm	CS Energy	Gladstone	100 MW	<35	Price cap	1645A interconnector constraint-QNI binding-SL

Time submitted	Time effective	Participant	Station	Capacity rebid (MW)	Price from (\$/MWh)	Price to (\$/MWh)	Rebid reason			
4.48 pm	4.55 pm	Callide Power Trading	Callide C	27 MW	-952	Price cap	1647A chnage in QNI PD - SL			
Total cap	Total capacity rebid from low to high prices: 167 MW									

With low-priced capacity either ramp rate limited or fully dispatched, the dispatch price increased from \$86/MWh at 4.50 pm to \$12 950/MWh at 4.55 pm. The 4.55 pm price was set by Kareeya power station.

Prices returned to previous levels following a 190 MW decrease in demand at 5 pm.

Victoria and South Australia

There was one occasion where the spot price in South Australia was greater than three times the South Australia weekly average price of \$35/MWh and above \$250/MWh. For the same trading interval there was one occasion where the spot price in Victoria was below -\$100/MWh.

Sunday, 18 January

South Australia

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	
Midnight	2067.68	22.50	22.57	1419	1482	1441	1847	2018	1964	

Victoria

Time	Price (\$/MWh)			ı	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	
Midnight	-148.26	19.88	19.92	4510	4466	4395	9506	9444	9430	

Conditions at the time saw demand and availability close to forecast in Victorian and South Australia. Reduced availability in South Australia was the result of lower than forecast wind output.

In South Australia demand increased by 218 MW, from 1325 MW at 11.30 pm to 1543 MW at 11.35 pm. This was related to off peak hot water load.

The change in demand could not be met by South Australian generators who were either offline, ramp rate up constrained or fully dispatched. Heywood was importing at its limit and as a result Murraylink flow exceeded its import limit causing a system normal constraint which manages flow across Murraylink and the Vic to NSW interconnector to violate. This saw the dispatch price in South Australia increase from \$28 MW/h at 11.30 pm to \$12 283 MW/h at 11.35 pm.

The violated constraint also caused the target flows on the VIC to NSW interconnector to switch from exporting 746 MW in to New South Wales to importing into Victoria at 105 MW. Excess generation in Victoria was then constrained down or off and the price was set at the price floor at 11.35 pm by wind generation.

There was no significant rebidding.

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.

120 900 100 750 Number of contracts traded 80 600 \$/MWh 450 60 40 300 20 150 0 0 Ö Ö ႙ Q3 2015 Q4 2015 ನ Q2 2016 Q3 2016 Q4 2016 Q2 2017 Q3 2017 Q4 2017 2 Q3 2018 2 2015 2016 2018 2015 2017 2018 2018 -NSW volume SA volume Qld volume Vic volume

NSW

Figure 9: Quarterly base future prices Q1 2015 - Q4 2018

Source: ASXEnergy.com.au

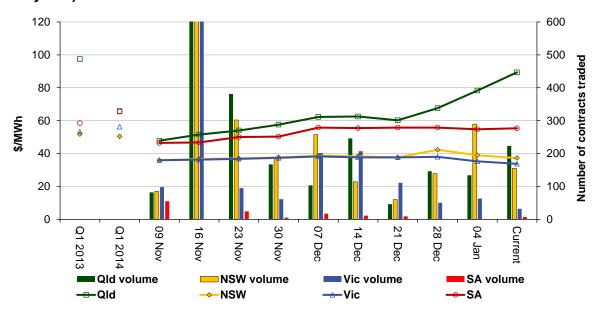
---Qld

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. The off scale number of trades in week commencing 16 November in figure 10 was due to options on calendar year base load expiring.

-Vic

SA

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



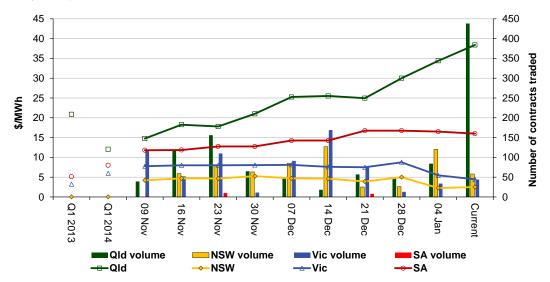
Note: Base contract prices are shown for each of the current week and the previous 9 weeks, with average prices shown for yearly periods 1 and 2 years prior to the current year

Source: ASXEnergy.com.au

Prices of other financial products (including longer-term price trends) are available in the <u>Performance of the Energy Sector</u> section of our website.

Figure 11 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. The Queensland Q1 2015 cap contract price has now reached levels that were experienced in Q1 2013 when network capacity in central Queensland was providing opportunities for generation portfolios to raise prices.

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 February 2015