Electricity prices above $5,000 per MWh

July to September 2023

December 2023

AUSTRALIAN ENERGY REGULATOR

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Obligation

The Australian Energy Regulator (AER) has an obligation under the National Electricity Rules (energy rules) to monitor and report on significant price outcomes in the National Energy Market (NEM). The energy rules require us to produce a guideline for how we report significant price events.[1] Our guideline commits us to reporting whenever the 30-minute price exceeds $5,000 per megawatt hour (MWh).[2]

30-minute prices rarely reach $5,000 per MWh, but with a market price cap over $16,600 per MWh prices can occasionally exceed this reporting threshold.[3] This reporting framework is intended to examine these outlier events.

This report describes the significant factors contributing to 30-minute prices exceeding $5,000 per MWh, considering market conditions, available generation capacity, network availability, as well as offer and rebidding behaviour.

The AER also analyses trends in prices and other market events through our quarterly wholesale markets report, available from www.aer.gov.au/wholesale-markets/performance-reporting.

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1 AER, Significant price reporting guidelines, September 2022.

2 A trading interval is a 5 minute period and the spot price is the price for a trading interval. The 30-minute price is the average of 6 trading intervals.

3 The market price cap in 2022/23 was $15,500 per MWh and in 2023/24 is $16,600 per MWh.

Summary

While average wholesale prices across the NEM from July to September 2023 were significantly below the levels from the same quarter in 2022, there were still some short-term price events where prices exceeded $5,000 per MWh.[4] During the July to September 2023 quarter, 30-minute prices exceeded $5,000 per MWh 10 times – 8 times in South Australia and once each in Queensland and NSW (in a combined event). This compares to 16 high prices in the previous quarter and 16 high prices over the same period last year.

Generally, it requires a combination of factors to drive prices above $5,000 per MWh.

A common driver across all these high price events was that during the high prices, the relevant region was limited in its ability to import cheaper generation from a neighbouring region due to network outages or other network limitations. In South Australia, the high prices on 1 and 11 August occurred during planned outages on the South East to Tailem Bend line.

A second driver was the reduced supply of low-priced capacity. In South Australia, this was primarily due to low wind and low solar output. As South Australia has little base-load capacity, during hours of low renewable output it is dependent on imports from Victoria or more expensive gas generation. In NSW and Queensland, the reduced supply of low-priced capacity was due to ongoing baseload generator outages and plant issues on the afternoon of 4 September, including a unit trip at Bayswater Power Station.

Common drivers of high price events

Date and region	Reduced supply	High demand	Network limitations	Technical rebids[5]	Commercial rebids[6]
1 August, SA	✓	×	✓	×	✓
11 August, SA	✓	×	✓	✓	✓
4 Sept, Qld, NSW	✓	×	✓	✓	✓

Rebidding also contributed to the high prices discussed in this report. On some occasions, these rebids were for technical reasons, such as unit trips and other plant issues. However, on other occasions, these rebids were for commercial reasons in response to changing forecasts.

The market is increasingly competitive during the middle of the day when renewable output is high. However, supply and demand conditions are generally tighter when low renewable or

[4] The AER's Wholesale Markets Quarterly Q3 2023 describes these broader market price dynamics from July to September 2023 in more detail.

[5] Technical rebids are those which are categorised as 'P' (plant) as defined in the AER's Rebidding and Technical Parameters Guideline 2019

[6] Commercial rebids are those which are categorised as 'F' (financial) or 'A' (AEMO communications including demand and price forecasts, constraints, and directions).

baseload availability in a region coincides with a network issue that limits imports. Participants may try to take advantage of these tight market conditions by withdrawing capacity or rebidding it to higher prices. The AER continues to monitor trends in rebidding as part of our role in identifying whether there is effective competition in the NEM.

1. 1 August, South Australia

The wholesale price of electricity exceeded $5,000 per MWh for two 30-minute periods during the evening of 1 August in South Australia. The 30-minute price at 6.30 pm was $5,856 per MWh and at 7 pm it was $7,061 per MWh (Table 1.1). Prices were forecast to be at the price cap of $16,600 per MWh when first forecast the day before.

Table 1.1 Breakdown of the 30-minute high prices

Date	Time	5-minute price ($ per MWh)
1 August	6.05 pm	11,955
	6.10 pm	1,886
	6.15 pm	3,969
	6.20 pm	2,090
	6.25 pm	5,251
	6.30 pm	10,042
6.30 pm average 30-minute price		**5,856**
	6.35 pm	16,600
	6.40 pm	9,900
	6.45 pm	9,900
	6.50 pm	3,969
	6.55 pm	999
	7.00 pm	999
7 pm average 30-minute price		**7,061**

A combination of factors drove these high prices:

- A planned network outage impacted the Heywood interconnector and reduced South Australia's access to cheaper generation from Victoria.
- Very low output from wind generation reduced the amount of low-priced capacity available.
- Rebidding of capacity from low to high prices contributed to the higher prices. In particular, AGL rebid capacity at Torrens Island for commercial reasons which contributed to all of the high price intervals.

1.1 Overview of market conditions

Market conditions were tight, and prices were high across the mainland leading up to the high price event in South Australia. At 6.30 pm, imports across the interconnectors between Victoria and South Australia reached their reduced limits (discussed in section 1.1.1) and prices in South Australia rose above those in the other regions. The price in South Australia exceeded $5,000 per MWh for two 30-minute periods, while the prices in the other regions did not.

We compared actual with forecast outcomes an hour prior for both 30-minute periods (Table 1.2) and observed:

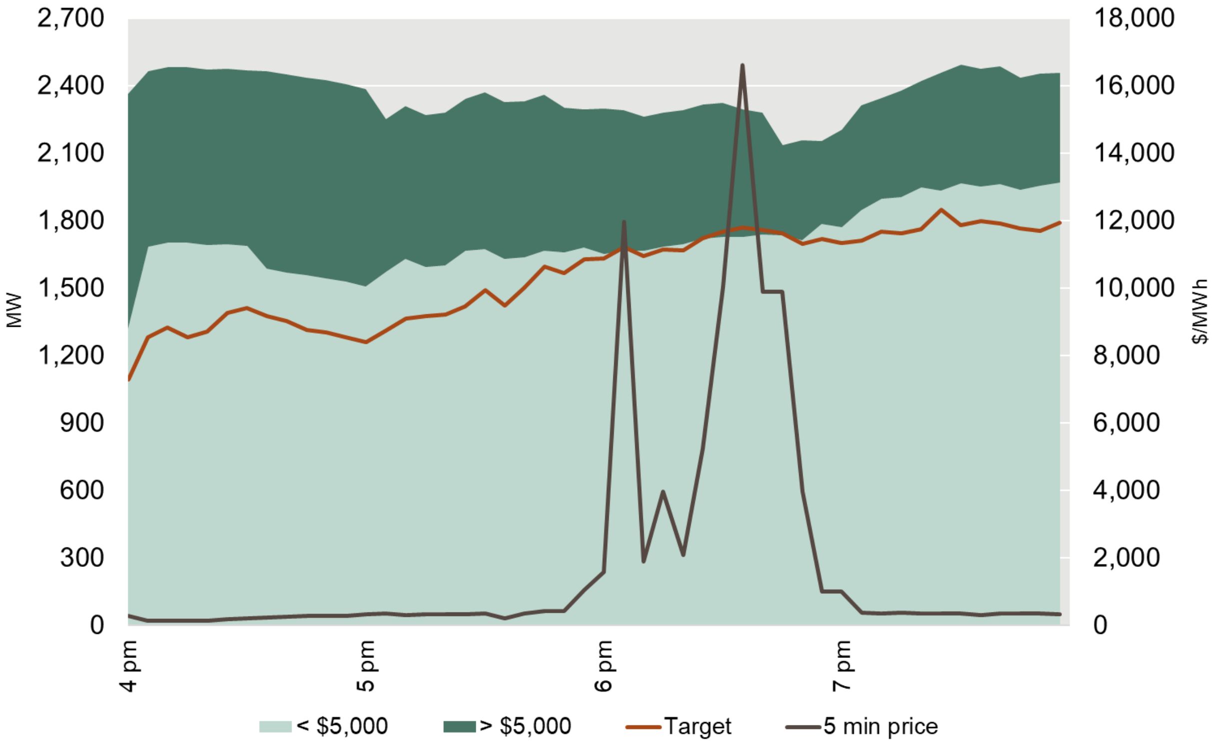
- the 30-minute prices were forecast to exceed $15,000 per MWh
- actual demand was lower (25 MW and 44 MW) than forecast
- actual availability was lower (76 MW and 151 MW) than forecast.

Table 1.2 Actual and forecast 30-minute price, demand and availability

Date	Time	Price ($/MWh)		Demand (MW)		Availability (MW)	
		Actual	1 hr forecast	Actual	1 hr forecast	Actual	1 hr forecast
1 August	6.30 pm	5,865	15,353	1,868	1,892	2,312	2,388
	7 pm	7,061	16,500	1,957	2,001	2,262	2,413

Due to limited imports from Victoria, as well as low wind generation and rebidding of low-priced capacity, up to 41 MW of high-priced capacity was needed to meet demand during the high-priced intervals (Figure 1.1). During these intervals, 37% of capacity was offered above $5,000 per MWh.

Figure 1.1 Capacity offered above and below $5,000 per MWh in South Australia on 1 August 2023



Source: AER analysis using NEM data.
Note: Capacity available below $5,000 per MWh refers to effective capacity.

1.1.1 Network outages limited access to cheaper generation

A planned network outage restricted imports over the Heywood Interconnector to between 16 MW and 79 MW across the high-priced-intervals, out of a nominal capacity of 600 MW. The outage on the South-East to Tailem Bend line started that morning and was scheduled to last several days.

The restricted imports over the Heywood interconnector into South Australia placed greater reliance on accessing low-priced generation from Victoria via the Murraylink interconnector. The Murraylink interconnector has a lower nominal limit of 220 MW.

During the high price intervals, the Murraylink Interconnector was importing between 86 MW and 172 MW, with 172 MW being the maximum amount Murraylink was able to import into South Australia at the time to maintain system security.[7] When the Murraylink Interconnector reached that maximum limit at 6.30 pm it limited South Australia's ability to access enough low-priced generation from Victoria to prevent the high prices.

1.1.2 Limited output from wind generation

Average wind output was extremely low at 42 MW to 84 MW out of around 2,500 MW of installed capacity. Normally wind farm capacity is offered at negative prices, so lower wind generation reduces the amount of low-priced capacity available in the region.

1.2 Rebidding for commercial reasons contributed to the high prices

Rebidding of capacity for commercial reasons from low to high prices contributed to all 6 of the high 5-minute prices. Up to 41 MW of high-priced capacity was needed to meet demand (Appendix A).

- At 2.50 pm and 5.24 pm, AGL rebid a total of 130 MW of capacity at Torrens Island from below, to the price cap in response to changes in forecast generation and demand. This contributed to all 6 of the high price intervals.
- At 4.47 pm and at 6.21 pm, Neoen rebid 30 MW of capacity at the Hornsdale battery from below the high price, to the high price or above, in response to a change in forecast state of charge, and contributed to the high 5-minute price at 6.25 pm, 6.30 pm, 6.40 pm and 6.45 pm. The battery set the price for 3 of the 6 high 5-minute prices.

[7] To maintain system security - in the event of a line failure in Victoria which could have led to a voltage collapse.

2. 11 August, South Australia

The wholesale price of electricity exceeded $5,000 per MWh for six 30-minute periods during the evening of 11 August in South Australia (Table 2.1).

Table 2.1 Summary of 30-minute high price events

Date	Time	Price ($/MWh)
11 August	5.30 pm	8,673
	7 pm	5,869
	7.30 pm	9,615
	8 pm	11,693
	8.30 pm	9,291
	9 pm	8,026

A combination of factors drove these high prices:

- Extremely low output from wind generation which was also lower than forecast for almost all high-priced intervals resulted in limited amounts of low-priced capacity available.
- Network limitations on the Heywood and Murraylink interconnectors meant that South Australia had limited access to cheaper generation from Victoria.
- South Australia experienced multiple spikes in 5-minute demand, coinciding with high price intervals.
- Rebidding of capacity for technical and commercial reasons contributed to most of the high 30-minute prices.
- Nexif's Snapper Point Power Station tripped at 8.25 pm, effectively withdrawing 150 MW of low-priced capacity.

The key drivers of the high-priced-intervals are summarised in Table 2.2.

Table 2.2 Key drivers across 30-minute intervals.

30-minute period ending	Low Wind	Network Limitations	Demand	Rebids	Unit trip
5.30 pm	✓	✓	✓	×	×
7 pm	✓	✓	✓	✓	×
7.30 pm	✓	✓	✓	✓	×
8 pm	✓	✓	×	✓	×
8.30 pm	✓	✓	×	✓	×
9 pm	✓	✓	×	×	✓

2.1 Overview of market conditions

Prices were forecast to be high intermittently for all six 30-minute periods, from the previous day. However, an hour before, only the 30-minute price at 8.30 pm was forecast to exceed $5,000 per MWh.

The Australian Energy Market Operator (AEMO) had concerns around lack of spare or reserve capacity the previous day and issued a Forecast Lack of Reserve level 1 (LOR1) notice for all high-priced intervals and a level 2 notice (LOR2) from 6.30 pm to 7.30 pm. On the day, however, actual LOR conditions did not eventuate.[8]

We compared actual with forecast outcomes an hour prior (Table 2.3), and observed:

- the 30-minute price was not forecast to exceed $5,000 per MWh except for 8.30 pm
- actual demand was lower than forecast by up to 74 MW, except for 5.30 pm
- actual availability was lower than forecast by up to 253 MW, except for 7 pm.

Table 2.3 Actual and forecast 30-minute price, demand and availability

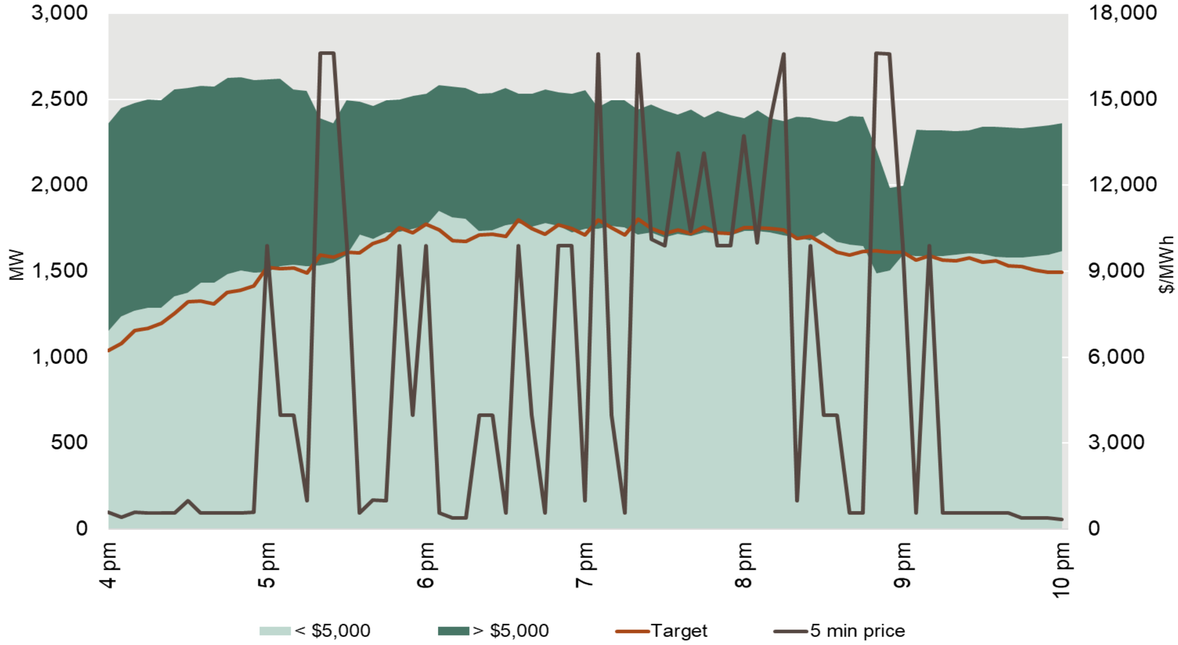
Date	Time	Price ($/MWh)		Demand (MW)		Availability (MW)	
		Actual	1 hr forecast	Actual	1 hr forecast	Actual	1 hr forecast
11 August	5.30 pm	8,673	591	1,562	1,524	2,570	2,686
	7 pm	5,869	999	1,930	1,958	2,557	2,537
	7.30 pm	9,615	556	1,923	1,966	2,497	2,569
	8 pm	11,693	3,969	1,877	1,951	2,433	2,597
	8.30 pm	9,291	9,805	1,855	1,922	2,429	2,602
	9 pm	8,026	556	1,802	1,874	2,290	2,543

Due to low wind generation, limited imports from Victoria and rebidding, between 5 MW and 133 MW (33 MW average) of high-priced capacity was needed to meet demand for twenty five 5-minute intervals (Figure 2.1). During these high-priced-intervals, there was little capacity available between $550 per MWh and $12,500 per MWh which meant that small changes in demand, or offers, had a significant impact on price. There were 5-minute spikes in demand which coincided with high price intervals. On 4 separate occasions, demand increased by more than 70 MW with the largest above 100 MW.

Around a third of capacity in South Australia was offered above $5,000 per MWh.

[8] AEMO ‘NEM Lack of Reserve Framework Report, 1 July to 30 September 2023’, October 2023

Figure 2.1 Capacity offered above and below $5,000 per MWh on 11 August 2023

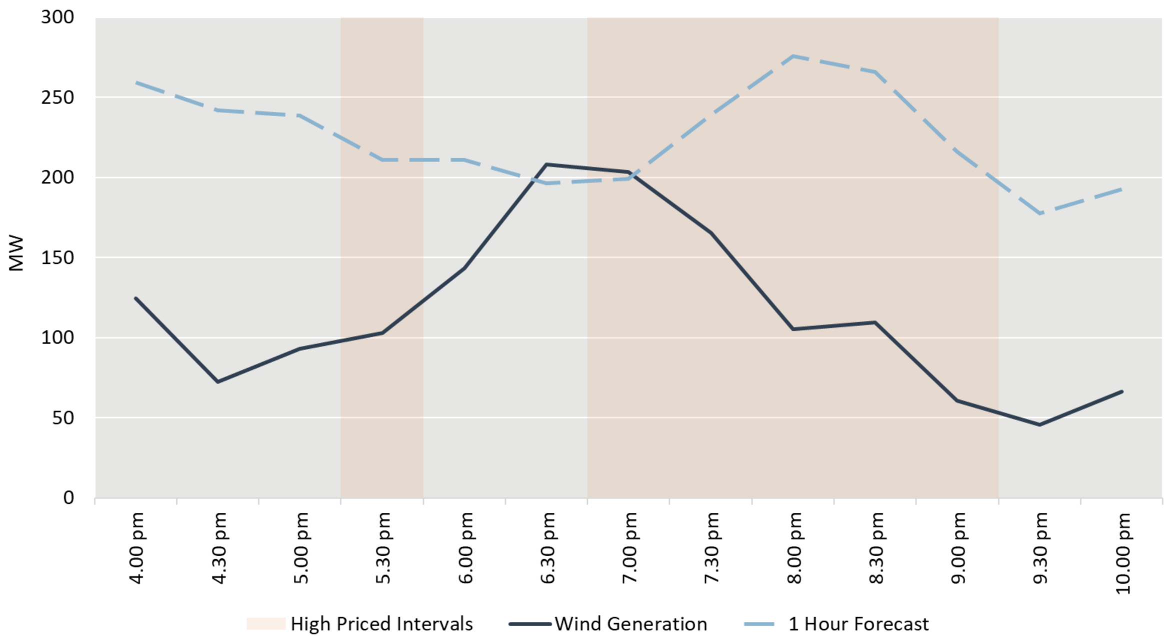


Source: AER analysis using NEM data.
Note: Capacity available below $5,000 per MWh refers to effective capacity.

2.1.1 Limited output from wind generation

Average wind output was extremely low at 125 MW out of around 2,500 MW installed. Normally, wind farm capacity is offered at negative prices so the less wind generation means that less low-priced capacity is available. On average, this was around half the capacity forecast one hour prior and explains why available capacity was lower than forecast (Figure 2.2).

Figure 2.2 Actual and forecast wind generation.



Source: AER analysis using NEM data.

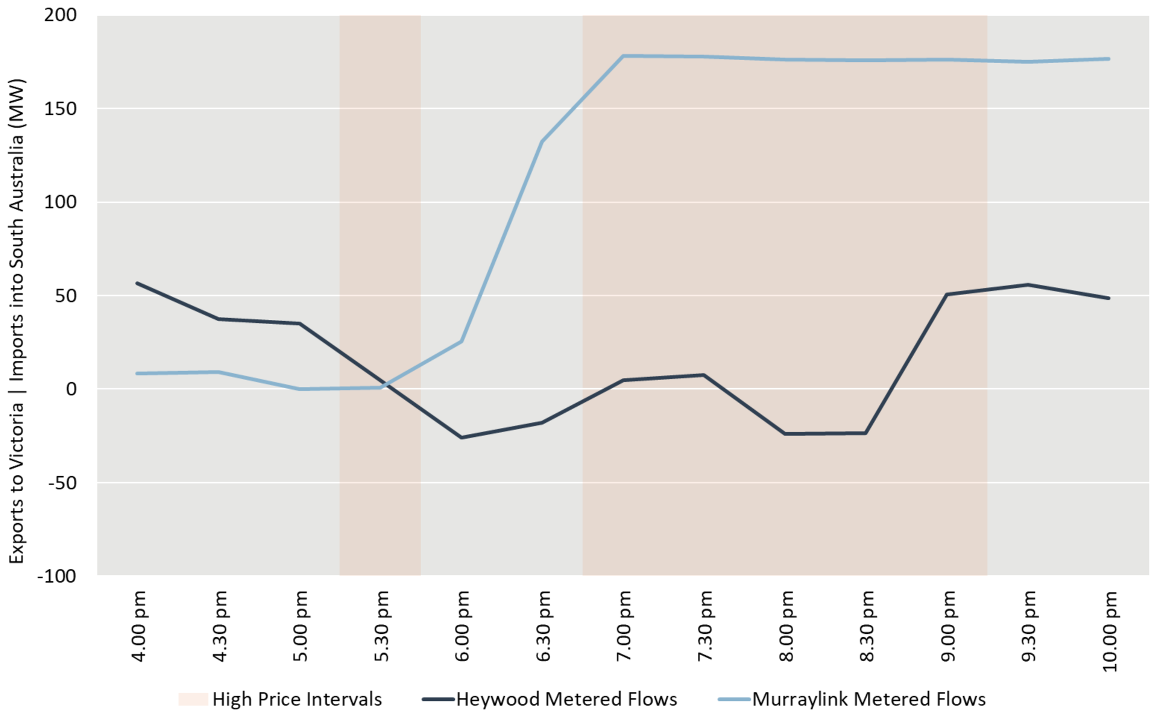
2.1.2 Network outages limited access to cheaper generation

The Heywood interconnector was limited due to a planned 5-day network outage on the South East to Tailem Bend line which started that morning. The constraint managing this outage restricted imports over Heywood to around 0 MW on average across high-priced-intervals out of its nominal capacity of 600 MW (Figure 2.3) and affected generation in the southeast of South Australia.[9]

The Murraylink interconnector was also limited as a constraint managing a line outage in Victoria restricted imports to around 0 MW for the 30-minutes ending at 5.30 pm, out of its nominal capacity of 220 MW.[10] Flows improved after 6 pm, averaging 177 MW from 7 pm to 9 pm.

As a result of these network limitations, South Australia could not access enough cheaper generation from Victoria to prevent the high prices.

Figure 2.3 Interconnector flows of Heywood and Murraylink



Source: AER analysis using NEM data.

2.1.3 Other drivers for some of the high five-minute prices

Some of the high five-minute prices were the result of other factors.

A high price occurred at 7.25 pm and 7.40 pm because of the interaction between the National Electricity Market Dispatch Engine (NEMDE) and the formulation of the constraint managing

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[9] AEMO, Interconnector Capabilities for the National Electricity Market, accessed 20 November 2023.

[10] AEMO, Interconnector Capabilities for the National Electricity Market, accessed 20 November 2023.

the outage on the South East to Tailem Bend line. While Infigen had offered capacity at Lake Bonney battery at $996 per MWh, it resulted in a high price because of the constraint (multiplying) factor that applied to that offer. This was a cheaper option than dispatching capacity at prices higher than the 5-minute price.

A high price occurred at 8.50 pm and 8.55 pm following a trip of the Snapper Point Power Station. AEMO invoked a constraint at 8.50 pm limiting the station's target to zero, effectively removing 150 MW of low-priced capacity. The constraint at 8.55 pm limited the power station's target to 29 MW. The station was almost back to full output by 9 pm.

2.2 Rebidding for commercial and technical reasons contributed to the high prices

Rebidding of capacity from low to high prices contributed to the high 30-minute prices between 7 pm to 8.30 pm. There were twenty 5-minute intervals where rebidding of capacity contributed to the high prices. Between 5 MW to 133 MW of high-priced capacity was needed to meet demand.

Rebidding for commercial reasons

- At the Hornsdale battery, Neoen shifted between 25 MW to 65 MW of capacity from low to high prices over multiple rebids, impacting all the 5-minute intervals from 6.35 pm to 9 pm. The reasons given for these rebids were a "change in state of charge". For 16 of these intervals the capacity shifted was more than the amount of high-priced capacity needed to meet demand. In four other intervals the rebids partly contributed to the high prices. The battery set 15 of the 25 high priced intervals on the day. In fact, in total, batteries in South Australia set the price for 20 of the 25 high priced intervals.
- AGL shifted between 15 MW and 65 MW of capacity from low to high prices at Barker Inlet and Torrens Island Power Stations between 6.35 pm and 7.40 pm and contributed to the high 30-minute prices that occurred at 7 pm and 7.30 pm. These rebids were related to changes in forecast demand and prices.
- Infigen Energy's Lake Bonney Battery shifted 17 MW of low-priced capacity to high prices at 7.41 pm for the 7.50 pm interval, where only 5 MW of high-priced capacity was needed. Its rebid reason was "an elevated price in the dispatch interval".

Rebidding for technical reasons

- Engie's Pelican Point Power Station shifted 29 MW of low-priced capacity to $9,998 per MWh (most of it became effective at 8.25 pm) due to a revised start-up priority for the 8.25 pm dispatch interval. Only 22 MW of high-priced capacity was needed.

2.2.1 Why did prices not go high for other intervals?

There were two consecutive 30-minute intervals (6 pm and 6.30 pm) where prices did not exceed $5,000 per MWh. Prices did not breach the threshold for these intervals as the Murraylink interconnector flows improved to be better than forecast, demand was lower than forecast and wind generation was closer to forecast (Figure 2.2 and Figure 2.3). These conditions meant that high-priced generation was not needed to meet demand.

3. 4 September, Queensland and NSW

The wholesale price of electricity exceeded $5,000 per MWh for the 6 pm 30-minute period in Queensland and NSW. The 30-minute price reached $5,349 per MWh in Queensland and $6,020 per MWh in NSW (Table 3.1). Prices were generally aligned across Queensland and NSW during these high price periods, so our analysis treats these as one region.[11] The high prices were not forecast.

Table 3.1 Summary of 30-minute high price event

Date	Time	Queensland 5-minute price ($ per MWh)	NSW 5-minute price ($ per MWh)
4 September	5.35 pm	14,777	16,600
	5.40 pm	1,174	1,336
	5.45 pm	14,705	16,600
	5.50 pm	1,252	1,402
	5.55 pm	67	65
	6.00 pm	122	122
Average 30-minute price		**5,349**	**6,020**

A combination of factors drove these high prices:

- A planned network outage of the Lower Tumut-Canberra line limited the regions' access to cheaper generation from southern NSW and Victoria. This outage was expected to end at 4 pm but late that afternoon it was extended into the evening peak (6 pm).
- A Bayswater unit tripped at 2.53 pm removing 685 MW of mostly low-priced base load capacity. Vales Point and Millmerran also experienced technical issues removing a further 210 MW. This was on top of 3,215 MW of ongoing baseload outages across the 2 regions.
- Combined demand increased by 157 MW at 5.35 pm and 226 MW at 5.45 pm.
- Rebidding for commercial as well as technical reasons contributed to the high prices. In particular, EnergyAustralia shifted 490 MW from lower prices to the price cap at Mt Piper for commercial reasons.
- There was only 43 MW of capacity offered between $400 per MWh and $14,700 per MWh for the 5.35 pm interval, and 103 MW for the 5.45 pm interval.
- Technical limitations on some generating units prevented capacity below $5,000 per MWh being dispatched in time.

[11] As the interconnector flows between Queensland and NSW were unconstrained during the high prices discussed in this report, the regions were price aligned and the same units set price across both regions. Therefore, our analysis considers them as one region and the same drivers drove the high prices in both regions. Note, however, the 5-minute price for each of the high-priced intervals is lower in Queensland than NSW (see Table 3.1) due to transmission loss factors.

3.1 Overview of market conditions

We compared actual with forecast outcomes an hour prior (Table 3.2) and observed:

- the high price was not forecast
- actual combined demand was 250 MW higher than forecast
- actual combined availability was 110 MW lower than forecast.

Table 3.2 Actual price, demand and availability compared to the 1 hour forecast

Date	30-min period	Price ($ per MWh)				Combined demand (MW)		Combined availability (MW)	
		Actual		1 hr forecast		Actual	1 hr forecast	Actual	1 hr forecast
		Qld	NSW	Qld	NSW				
4 Sep	6 pm	5,349	6,021	372	393	16,497	16,248	19,350	19,460

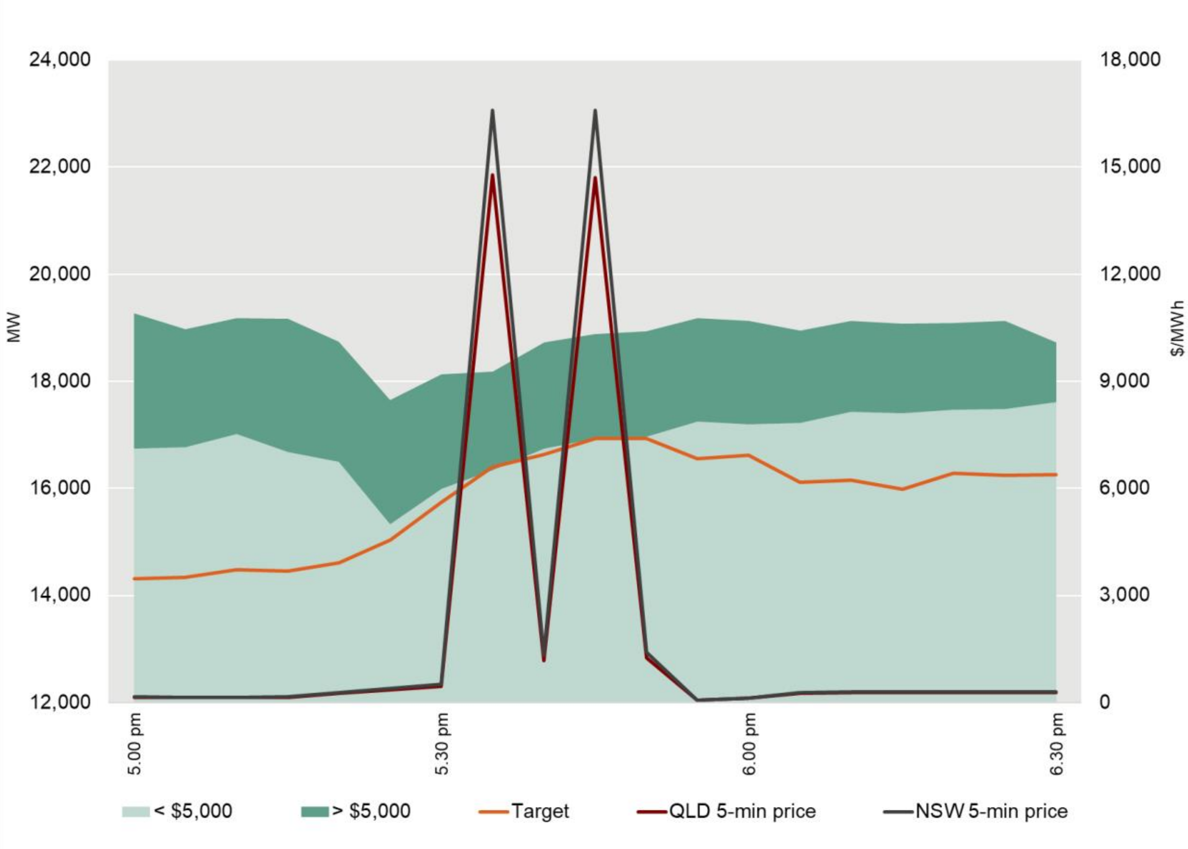
The loss of base load generation in NSW that afternoon, on the top of ongoing outages, led AEMO to announce a forecast lack of spare or reserve capacity in NSW (LOR1) at 4.19 pm. At 5.47 pm it announced an actual LOR1 for the period 5.30 pm to 6.30 pm in NSW.[12]

Even though most capacity was offered below $5,000 per MWh, some high-priced capacity was needed to meet demand (Figure 3.1):

- at 5.35 pm 56 MW of high-priced capacity was needed
- at 5.45 pm just 16 MW of high-priced capacity was needed.

[12] AEMO 'NEM Lack of Reserve Framework Report, 1 July to 30 September 2023', October 2023.

Figure 3.1 Combined capacity offered above and below $5,000 per MWh in Queensland and NSW on 4 September



Source: AER analysis using NEM data.
Note: Capacity available below $5,000 per MWh refers to effective capacity in both regions.

3.1.1 Planned network outage reduced access to cheaper generation from southern NSW and Victoria

A planned network outage of the Canberra to Lower Tumut line impacted the Victoria-NSW interconnector, and reduced Queensland and NSW's access to cheaper generation from southern NSW and Victoria. While the network outage was scheduled to finish by 4 pm, at 3.49 pm it was extended to 6 pm.

From 5.25 pm onwards, flows from Victoria into NSW progressively fell from over 1,200 MW down to 379 MW. Then from 5.35 pm to 5.50 pm, up to 460 MW was forced from NSW into Victoria.[13]

This change in flows over the interconnector was a result of Snowy Hydro rebidding around 1,500 MW of capacity to the price floor at Tumut for the 5.35 pm to 5.55 pm intervals. While the network outage contributed to the high price, Snowy Hydro's rebid and the change in flows over the interconnector did not. Rather, the 1,500 MW increase in low priced capacity in southern NSW meant some of that low-priced capacity flowed into Victoria.

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[13] Flows over the Victoria-NSW interconnector can be up to 1,600 MW. AEMO, Interconnector Capabilities for the National Electricity Market, accessed 20 November 2023.

At 5.50 pm the network outage finished, NSW was able to access the cheap generation in the south and there were no further high prices.

3.1.2 Loss of base load generation on the day

There were already 3,215 MW of ongoing base load outages across Queensland and NSW.

At 2.53 pm, a Bayswater unit tripped causing AGL to remove 685 MW of capacity from the market (Appendix C). Then at 5.05 pm, Vales Point experienced mill issues resulting in Delta Electricity removing 90 MW of capacity. It was able to return 60 MW at 5.40 pm. In addition, InterGen progressively removed 90 MW at Millmerran due to technical issues across the afternoon. The relevant participants rebid their available capacity accordingly (section 3.2).

3.1.3 Spikes in demand contributed to high prices

Average combined demand was 250 MW higher than forecast for the 30-minute period ending at 6.30pm. Spikes in 5-minute demand contributed to both high-priced intervals, with combined demand increasing by 157 MW at 5.35 pm and 226 MW at 5.45 pm.

3.1.4 Wind generation was lower than forecast

Combined wind output was around 800 MW out of around 3,710 MW maximum installed capacity. On average, wind output was 180 MW less than forecast an hour earlier and explains why availability was lower than forecast. Most wind is offered at negative prices. The output of some wind farms located in the south of NSW was capped because of the network outage and Snowy Hydro's rebid.

3.2 Rebidding for commercial and technical reasons contributed to the high price

Rebidding for commercial reasons contributed to the high price:

- At 5.09 pm, EnergyAustralia shifted 490 MW at Mt Piper from low prices to the price cap in response to a change in forecast prices which significantly impacted both high-priced dispatch intervals and contributed to the high price.
- AGL shifted 40 MW of capacity at Wandoan battery from low prices to the price cap impacting the 5.35 pm dispatch interval.

Rebidding for technical reasons contributed to the high price (discussed in section 3.1.2):

- At 2.53 pm, a Bayswater unit tripped and AGL removed 685 MW of capacity.
- At 5.05 pm, Vales Point experienced mill issues and Delta Electricity removed 90 MW of capacity. It was able to return 60 MW at 5.40 pm.
- Millmerran experienced technical issues across the afternoon and InterGen progressively removed 90 MW.

3.2.1 Ramp rates

Technical limits on some generating units prevented capacity below $5,000 per MWh being dispatched in time. At 3.07 pm, Delta rebid Vales Point's unit 6 ramp up rate from 6 MW to

3 MW per minute.[14] When Delta put back 60 MW of Vales Point's capacity at 5.40 pm (see section 3.1.2), because the unit was ramp up constrained, 32 MW of this 60 MW was prevented from making it to market.

[14] The "ramp rate" is the rate at which the output of a generating unit may be varied up or down. Delta's rebid reason was 'A Load adjust to pd forecast changes pd1500 vs pd1400'.

Appendix A – Significant rebids, 1 August

These tables highlight rebids that contributed to the high prices on 1 August 2023 in South Australia. Only the 5-minute intervals with a high price and where rebidding contributed to the high price are included.

6.05 pm (16 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
2.50 pm		AGL Energy	Torrens Island	60	100	16,600	050 Chg in AEMO PD~13:02 - 14:32 PD DISPATCHABLEGENERATION increase [SA,VIC] [371MW AVG] for PE 17:00-20:30
5.09 pm		Pacific Hydro	Clements Gap WF	47	-69	16,600	co-optimisation of energy revenues & cr-fcas costs - sl
5.24 pm		AGL Energy	Torrens Island	70	100	16,600	050 Chg in AEMO PD~16:02 - 17:02 PD DEMAND_AND_NONSCHEDGEN decrease [SA,VIC] [-186MW AVG] for PE 17:30-19:00

6.25 pm (1 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
2.50 pm		AGL Energy	Torrens Island	60	100	16,600	050 Chg in AEMO PD~13:02 - 14:32 PD DISPATCHABLEGENERATION increase [SA,VIC] [371MW AVG] for PE 17:00-20:30
4.47 pm		Neoen	Hornsdale Power Reserve	30	3,969	9,900	Change in forecast SOC
5.24 pm		AGL Energy	Torrens Island	70	100	16,600	050 Chg in AEMO PD~16:02 - 17:02 PD DEMAND_AND_NONSCHEDGEN decrease [SA,VIC] [-186MW AVG] for PE 17:30-19:00
6.18 pm	6.25 pm	Pacific Hydro	Clements Gap WF	47	-118	16,600	co-optimisation of energy revenues & cr-fcas costs - sl

6.30 pm (25 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
2.50 pm		AGL Energy	Torrens Island	60	100	16,600	050 Chg in AEMO PD~13:02 - 14:32 PD DISPATCHABLEGENERATION increase [SA,VIC] [371MW AVG] for PE 17:00-20:30
4.47 pm		Neoen	Hornsdale Power Reserve	30	3,969	9,900	Change in forecast SOC
5.24 pm		AGL Energy	Torrens Island	70	100	16,600	050 Chg in AEMO PD~16:02 - 17:02 PD DEMAND_AND_NONSCHEDGEN decrease [SA,VIC] [-186MW AVG] for PE 17:30-19:00

6.35 pm (41 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
2.50 pm		AGL Energy	Torrens Island	60	100	16,600	050 Chg in AEMO PD~13:02 - 14:32 PD DISPATCHABLEGENERATION increase [SA,VIC] [371MW AVG] for PE 17:00-20:30
5.24 pm		AGL Energy	Torrens Island	70	100	16,600	050 Chg in AEMO PD~16:02 - 17:02 PD DEMAND_AND_NONSCHEDGEN decrease [SA,VIC] [-186MW AVG] for PE 17:30-19:00

6.40 pm (19 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
2.50 pm		AGL Energy	Torrens Island	60	100	16,600	050 Chg in AEMO PD~13:02 - 14:32 PD DISPATCHABLEGENERATION increase [SA,VIC] [371MW AVG] for PE 17:00-20:30
5.24 pm		AGL Energy	Torrens Island	70	100	16,600	050 Chg in AEMO PD~16:02 - 17:02 PD DEMAND_AND_NONSCHEDGEN decrease [SA,VIC] [-186MW AVG] for PE 17:30-19:00
6.21 pm		Neoen	Hornsdale Power Reserve	30	3,969	9,900	Change in forecast SOC

6.45 pm (10 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
2.50 pm		AGL Energy	Torrens Island	60	100	16,600	050 Chg in AEMO PD~13:02 - 14:32 PD DISPATCHABLEGENERATION increase [SA,VIC] [371MW AVG] for PE 17:00-20:30
5.24 pm		AGL Energy	Torrens Island	70	100	16,600	050 Chg in AEMO PD~16:02 - 17:02 PD DEMAND_AND_NONSCHEDGEN decrease [SA,VIC] [-186MW AVG] for PE 17:30-19:00
6.21 pm		Neoen	Hornsdale Power Reserve	30	3,969	9,900	Change in forecast SOC

Appendix B – Significant rebids, 11 August

These tables highlight rebids that contributed to the high prices on 11 August 2023 in South Australia. Only the 5-minute intervals with a high price and where rebidding contributed to the high price are included. There were over 1,000 rebids that impacted the 23 high priced intervals.

6.35 pm (19 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
4.31 pm		AGL Energy	Barker Inlet	10	16,600	100	040 Chg in AEMO DISP~41 Demand change vs PD [SA] 1635.33MW vs 1523.95MW PE1730
4.57 pm		AGL Energy	Barker Inlet	15	100	16,600	050 Chg in AEMO PD~51 PD TOTALINTERMITTENTGENERATION + SEMISCHEDULE_CLEAREDMWchange [SA] avg 50MW PE 1700-0000 PD 1531-1631
4.57 pm		AGL Energy	Torrens Island	20	16,600	-1,000	050 Chg in AEMO PD~51 PD TOTALINTERMITTENTGENERATION +SEMISCHEDULE_CLEAREDMWchange [SA] avg 50MW PE 1700-0000 PD 1531-1631
6.02 pm	6.10 pm	Neoen	Hornsdale Power Reserve	25	999	16,575	Change in forecast SOC
6.11 pm	6.20 pm	AGL Energy	Barker Inlet	40	100	16,600	050 Chg in AEMO PD~55 PD price change [SA] avg -$1344 PE 1830-1930

6.50 pm (9 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
4.31 pm		AGL Energy	Barker Inlet	10	16,600	100	040 Chg in AEMO DISP~41 Demand change vs PD [SA] 1635.33MW vs 1523.95MW PE1730
4.57 pm		AGL Energy	Barker Inlet	15	100	16,600	050 Chg in AEMO PD~51 PD TOTALINTERMITTENTGENERATION + SEMISCHEDULE_CLEAREDMWchange [SA] avg 50MW PE 1700-0000 PD 1531-1631
4.57 pm		AGL Energy	Torrens Island	20	16,600	-1,000	050 Chg in AEMO PD~51 PD TOTALINTERMITTENTGENERATION +SEMISCHEDULE_CLEAREDMWchange [SA] avg 50MW PE 1700-0000 PD 1531-1631
6.02 pm		Neoen	Hornsdale Power Reserve	25	999	16,575	Change in forecast SOC
6.11 pm	6.20 pm	AGL Energy	Barker Inlet	40	100	16,600	050 Chg in AEMO PD~55 PD price change [SA] avg -$1344 PE 1830-1930
6.33 pm	6.40 pm	AGL Energy	Barker Inlet	20	100	16,600	040 Chg in AEMO DISP~45 Price change vs PD [SA] $9899.50 vs $555.55 PE 1900

6.55 pm (23 MW of high-priced capacity was needed)

Submitted time	Time effec tive	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
4.31 pm		AGL Energy	Barker Inlet	10	16,600	100	040 Chg in AEMO DISP~41 Demand change vs PD [SA] 1635.33MW vs 1523.95MW PE1730
4.57 pm		AGL Energy	Barker Inlet	15	100	16,600	050 Chg in AEMO PD~51 PD TOTALINTERMITTENTGENERATION + SEMISCHEDULE_CLEAREDMWchange [SA] avg 50MW PE 1700-0000 PD 1531-1631
4.57 pm		AGL Energy	Torrens Island	20	16,600	-1,000	050 Chg in AEMO PD~51 PD TOTALINTERMITTENTGENERATION +SEMISCHEDULE_CLEAREDMWchange [SA] avg 50MW PE 1700-0000 PD 1531-1631
6.02 pm		Neoen	Hornsdale Power Reserve	25	999	16,575	Change in forecast SOC
6.11 pm		AGL Energy	Barker Inlet	40	100	16,600	050 Chg in AEMO PD~55 PD price change [SA] avg -$1344 PE 1830-1930
6.33 pm	6.40 pm	AGL Energy	Barker Inlet	20	100	16,600	040 Chg in AEMO DISP~45 Price change vs PD [SA] $9899.50 vs $555.55 PE 1900
6.45 pm	6.55 pm	AGL Energy	Barker Inlet	20	100	16,600	050 Chg in AEMO PD~51 PD SEMISCHEDULE_CLEAREDMWchange [SA] avg 46MW increase PE 1900-2030 PD 1801-1831
6.47 pm	6.55 pm	Neoen	Hornsdale Power Reserve	15	3,969	16,575	Change in forecast SOC

7.05 pm (53 MW of high-priced capacity was needed)

Submitted time	Time effec tive	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
4.31 pm		AGL Energy	Barker Inlet	10	16,600	100	040 Chg in AEMO DISP~41 Demand change vs PD [SA] 1635.33MW vs 1523.95MW PE1730
4.57 pm		AGL Energy	Barker Inlet	15	100	16,600	050 Chg in AEMO PD~51 PD TOTALINTERMITTENTGENERATION + SEMISCHEDULE_CLEAREDMWchange [SA] avg 50MW PE 1700-0000 PD 1531-1631
4.57 pm		AGL Energy	Torrens Island	20	16,600	-1,000	050 Chg in AEMO PD~51 PD TOTALINTERMITTENTGENERATION +SEMISCHEDULE_CLEAREDMWchange [SA] avg 50MW PE 1700-0000 PD 1531-1631
6.02 pm		Neoen	Hornsdale Power Reserve	25	999	16,575	Change in forecast SOC
6.11 pm		AGL Energy	Barker Inlet	40	100	16,600	050 Chg in AEMO PD~55 PD price change [SA] avg -$1344 PE 1830-1930
6.33 pm	6.40 pm	AGL Energy	Barker Inlet	10	100	16,600	040 Chg in AEMO DISP~45 Price change vs PD [SA] $9899.50 vs $555.55 PE 1900

Submitted time	Time effec tive	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
6.45 pm	6.55 pm	AGL Energy	Barker Inlet	25	100	16,600	050 Chg in AEMO PD~51 PD SEMISCHEDULE_CLEAREDMW change [SA] avg 46MW increase PE 1900-2030 PD 1801-1831
6.47 pm	6.55 pm	Neoen	Hornsdale Power Reserve	15	3,969	16,575	Change in forecast SOC

7.20 pm (91 MW of high-priced capacity was needed)

Submitted time	Time effec tive	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
4.57 pm		AGL Energy	Barker Inlet	15	100	16,600	050 Chg in AEMO PD~51 PD TOTALINTERMITTENTGENERATION + SEMISCHEDULE_CLEAREDMWchange [SA] avg 50MW PE 1700-0000 PD 1531-1631
4.57 pm		AGL Energy	Torrens Island	20	16,600	-1,000	050 Chg in AEMO PD~51 PD TOTALINTERMITTENTGENERATION +SEMISCHEDULE_CLEAREDMWchange [SA] avg 50MW PE 1700-0000 PD 1531-1631
6.02 pm		Neoen	Hornsdale Power Reserve	25	999	16,575	Change in forecast SOC
6.11 pm		AGL Energy	Barker Inlet	40	100	16,600	050 Chg in AEMO PD~55 PD price change [SA] avg -$1344 PE 1830-1930
6.33 pm		AGL Energy	Barker Inlet	10	100	16,600	040 Chg in AEMO DISP~45 Price change vs PD [SA] $9899.50 vs $555.55 PE 1900
6.45 pm	6.55 pm	AGL Energy	Barker Inlet	25	100	16,600	050 Chg in AEMO PD~51 PD SEMISCHEDULE_CLEAREDMWchange [SA] avg 46MW increase PE 1900-2030 PD 1801-1831
6.47 pm	6.55 pm	Neoen	Hornsdale Power Reserve	15	3,969	16,575	Change in forecast SOC
7.06 pm	7.15 pm	Neoen	Hornsdale Power Reserve	10	3,969	16,575	Change in forecast SOC

7.25 pm (23 MW of high-priced capacity was needed)

Submitted time	Time effec tive	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
4.31 pm		AGL Energy	Barker Inlet	10	16,600	100	040 Chg in AEMO DISP~41 Demand change vs PD [SA] 1635.33MW vs 1523.95MW PE1730
4.57 pm		AGL Energy	Barker Inlet	15	100	16,600	050 Chg in AEMO PD~51 PD TOTALINTERMITTENTGENERATION + SEMISCHEDULE_CLEAREDMWchange [SA] avg 50MW PE 1700-0000 PD 1531-1631
4.57 pm		AGL Energy	Torrens Island	20	16,600	-1,000	050 Chg in AEMO PD~51 PD TOTALINTERMITTENTGENERATION +SEMISCHEDULE_CLEAREDMWchange [SA] avg 50MW PE 1700-0000 PD 1531-1631
6.02 pm		Neoen	Hornsdale Power Reserve	25	999	16,575	Change in forecast SOC

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
6.11 pm		AGL Energy	Barker Inlet	40	100	16,600	050 Chg in AEMO PD~55 PD price change [SA] avg -$1344 PE 1830-1930
6.33 pm		AGL Energy	Barker Inlet	10	100	16,600	040 Chg in AEMO DISP~45 Price change vs PD [SA] $9899.50 vs $555.55 PE 1900
6.45 pm		AGL Energy	Barker Inlet	25	100	16,600	050 Chg in AEMO PD~51 PD SEMISCHEDULE_CLEAREDMWchange [SA] avg 46MW increase PE 1900-2030 PD 1801-1831
6.47 pm		Neoen	Hornsdale Power Reserve	15	3,969	16,575	Change in forecast SOC
7.06 pm	7.15 pm	Neoen	Hornsdale Power Reserve	10	3,969	16,575	Change in forecast SOC
7.17 pm	7.25 pm	AGL Energy	Barker Inlet	25	16,600	100	040 Chg in AEMO DISP~41 Demand change vs PD [SA] 1971 19:20 vs 1923 30minPD 19:30

7.30 pm (24 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
4.31 pm		AGL Energy	Barker Inlet	10	16,600	100	040 Chg in AEMO DISP~41 Demand change vs PD [SA] 1635.33MW vs 1523.95MW PE1730
4.57 pm		AGL Energy	Barker Inlet	15	100	16,600	050 Chg in AEMO PD~51 PD TOTALINTERMITTENTGENERATION + SEMISCHEDULE_CLEAREDMWchange [SA] avg 50MW PE 1700-0000 PD 1531-1631
4.57 pm		AGL Energy	Torrens Island	20	16,600	-1,000	050 Chg in AEMO PD~51 PD TOTALINTERMITTENTGENERATION +SEMISCHEDULE_CLEAREDMWchange [SA] avg 50MW PE 1700-0000 PD 1531-1631
6.02 pm		Neoen	Hornsdale Power Reserve	25	999	16,575	Change in forecast SOC
6.11 pm		AGL Energy	Barker Inlet	40	100	16,600	050 Chg in AEMO PD~55 PD price change [SA] avg -$1344 PE 1830-1930
6.33 pm		AGL Energy	Barker Inlet	10	100	16,600	040 Chg in AEMO DISP~45 Price change vs PD [SA] $9899.50 vs $555.55 PE 1900
6.45 pm		AGL Energy	Barker Inlet	25	100	16,600	050 Chg in AEMO PD~51 PD SEMISCHEDULE_CLEAREDMWchange [SA] avg 46MW increase PE 1900-2030 PD 1801-1831
6.47 pm		Neoen	Hornsdale Power Reserve	15	3,969	16,575	Change in forecast SOC
7.06 pm	7.15 pm	Neoen	Hornsdale Power Reserve	10	3,969	16,575	Change in forecast SOC
7.17 pm	7.25 pm	AGL Energy	Barker Inlet	25	16,600	100	040 Chg in AEMO DISP~41 Demand change vs PD [SA] 1971 19:20 vs 1923 30minPD 19:30

7.35 pm (20 MW of high-priced capacity was needed)

Submitted time	Time effec tive	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
4.31 pm		AGL Energy	Barker Inlet	10	16,600	100	040 Chg in AEMO DISP~41 Demand change vs PD [SA] 1635.33MW vs 1523.95MW PE1730
4.57 pm		AGL Energy	Barker Inlet	15	100	16,600	050 Chg in AEMO PD~51 PD TOTALINTERMITTENTGENERATION + SEMISCHEDULE_CLEAREDMWchange [SA] avg 50MW PE 1700-0000 PD 1531-1631
4.57 pm		AGL Energy	Torrens Island	20	16,600	-1,000	050 Chg in AEMO PD~51 PD TOTALINTERMITTENTGENERATION +SEMISCHEDULE_CLEAREDMWchange [SA] avg 50MW PE 1700-0000 PD 1531-1631
6.02 pm		Neoen	Hornsdale Power Reserve	25	999	16,575	Change in forecast SOC
6.45 pm		AGL Energy	Barker Inlet	40	100	16,600	050 Chg in AEMO PD~51 PD SEMISCHEDULE_CLEAREDMWchange [SA] avg 46MW increase PE 1900-2030 PD 1801-1831
6.47 pm		Neoen	Hornsdale Power Reserve	15	3,969	16,575	Change in forecast SOC
7.06 pm	7.15 pm	Neoen	Hornsdale Power Reserve	10	3,969	16,575	Change in forecast SOC
7.27 pm	7.35 pm	Neoen	Hornsdale Power Reserve	15	9,900	16,575	Change in forecast SOC
7.28 pm	7.35 pm	AGL Energy	Barker Inlet	10	16,600	100	040 Chg in AEMO DISP~44 Price change vs PD [SA] $9,899.50 19:30 vs $3,968.60 30minPD19:30

7.40 pm (12 MW of high-priced capacity was needed)

Submitted time	Time effec tive	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
4.31 pm		AGL Energy	Barker Inlet	10	16,600	100	040 Chg in AEMO DISP~41 Demand change vs PD [SA] 1635.33MW vs 1523.95MW PE1730
4.57 pm		AGL Energy	Barker Inlet	15	100	16,600	050 Chg in AEMO PD~51 PD TOTALINTERMITTENTGENERATION + SEMISCHEDULE_CLEAREDMWchange [SA] avg 50MW PE 1700-0000 PD 1531-1631
4.57 pm		AGL Energy	Torrens Island	20	16,600	-1,000	050 Chg in AEMO PD~51 PD TOTALINTERMITTENTGENERATION +SEMISCHEDULE_CLEAREDMWchange [SA] avg 50MW PE 1700-0000 PD 1531-1631
6.02 pm		Neoen	Hornsdale Power Reserve	25	999	16,575	Change in forecast SOC
6.45 pm		AGL Energy	Barker Inlet	40	100	16,600	050 Chg in AEMO PD~51 PD SEMISCHEDULE_CLEAREDMWchange [SA] avg 46MW increase PE 1900-2030 PD 1801-1831
6.47 pm		Neoen	Hornsdale Power Reserve	15	3,969	16,575	Change in forecast SOC

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
7.06 pm	7.15 pm	Neoen	Hornsdale Power Reserve	10	3,969	16,575	Change in forecast SOC
7.27 pm	7.35 pm	Neoen	Hornsdale Power Reserve	15	9,900	16,575	Change in forecast SOC
7.28 pm	7.35 pm	AGL Energy	Barker Inlet	10	16600	100	040 Chg in AEMO DISP~44 Price change vs PD [SA] $9,899.50 19:30 vs $3,968.60 30minPD19:30

7.45 pm (29 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
6.02 pm		Neoen	Hornsdale Power Reserve	25	999	16,575	Change in forecast SOC
6.47 pm		Neoen	Hornsdale Power Reserve	15	3,969	16,575	Change in forecast SOC
7.06 pm		Neoen	Hornsdale Power Reserve	10	3,969	16,575	Change in forecast SOC
7.27 pm	7.35 pm	Neoen	Hornsdale Power Reserve	15	9,900	16,575	Change in forecast SOC

7.50 pm (5 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
6.02 pm		Neoen	Hornsdale Power Reserve	25	999	16,575	Change in forecast SOC
6.47 pm		Neoen	Hornsdale Power Reserve	15	3,969	16,575	Change in forecast SOC
7.06 pm		Neoen	Hornsdale Power Reserve	10	3,969	16,575	Change in forecast SOC
7.41 pm	7.50 pm	Infigen Energy	Lake Bonney BESS	17	-1,000	9,900	Elevated price in dispatch interval

7.55 pm (10 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
6.02 pm		Neoen	Hornsdale Power Reserve	25	999	16,575	Change in forecast SOC
6.47 pm		Neoen	Hornsdale Power Reserve	15	3,969	16,575	Change in forecast SOC
7.06 pm		Neoen	Hornsdale Power Reserve	10	3,969	16,575	Change in forecast SOC

8 pm (20 MW of high-priced capacity was needed)

Submitted time	Time effec tive	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
6.02 pm		Neoen	Hornsdale Power Reserve	25	999	16,575	Change in forecast SOC
6.47 pm		Neoen	Hornsdale Power Reserve	15	3,969	16,575	Change in forecast SOC
7.06 pm		Neoen	Hornsdale Power Reserve	10	3,969	16,575	Change in forecast SOC
7.27 pm	7.35 pm	Neoen	Hornsdale Power Reserve	15	9,900	16,575	Change in forecast SOC

8.05 pm (17 MW of high-priced capacity was needed)

Submitted time	Time effec tive	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
6.02 pm		Neoen	Hornsdale Power Reserve	25	999	16,575	Change in forecast SOC
6.45 pm		AGL Energy	Barker Inlet	40	100	16,600	050 Chg in AEMO PD~51 PD SEMISCHEDULE_CLEAREDMWchange [SA] avg 46MW increase PE 1900-2030 PD 1801-1831
6.47 pm		Neoen	Hornsdale Power Reserve	15	3,969	16,575	Change in forecast SOC
7.06 pm		Neoen	Hornsdale Power Reserve	10	3,969	16,575	Change in forecast SOC

8.10 pm (19 MW of high-priced capacity was needed)

Submitted time	Time effec tive	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
6.02 pm		Neoen	Hornsdale Power Reserve	25	999	16,575	Change in forecast SOC
6.47 pm		Neoen	Hornsdale Power Reserve	15	3,969	16,575	Change in forecast SOC
7.06 pm		Neoen	Hornsdale Power Reserve	10	3,969	16,575	Change in forecast SOC
7.27 pm		Neoen	Hornsdale Power Reserve	15	9,900	16,575	Change in forecast SOC

8.15 pm (31 MW of high-priced capacity was needed)

Submitted time	Time effec tive	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
6.02 pm		Neoen	Hornsdale Power Reserve	25	999	16,575	Change in forecast SOC

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
6.47 pm	6.55 pm	Neoen	Hornsdale Power Reserve	15	3969	16,575	Change in forecast SOC
7.06 pm	7.15 pm	Neoen	Hornsdale Power Reserve	10	3969	16,575	Change in forecast SOC
7.27 pm		Neoen	Hornsdale Power Reserve	15	9900	16,575	Change in forecast SOC

8.25 pm (22 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
6.02 pm		Neoen	Hornsdale Power Reserve	25	999	16,575	Change in forecast SOC
6.47 pm		Neoen	Hornsdale Power Reserve	15	3,969	16,575	Change in forecast SOC
7.06 pm		Neoen	Hornsdale Power Reserve	10	3,969	16,575	Change in forecast SOC
7.47 pm		Engie	Pelican Point	4	999	9989	P Revised Start-up priority
8.17 pm		Neoen	Hornsdale Power Reserve	10	9,900	3,969	Change in forecast SOC
8.18 pm		Engie	Pelican Point	20	999	9989	P Revised Start-up priority

8.55 pm (104 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
6.02 pm		Neoen	Hornsdale Power Reserve	25	999	16,575	Change in forecast SOC
6.47 pm		Neoen	Hornsdale Power Reserve	15	3,969	16,575	Change in forecast SOC
8.37 pm		Neoen	Hornsdale Power Reserve	10	3,969	16,575	Change in forecast SOC
8.37 pm		Neoen	Hornsdale Power Reserve	10	9,900	16,575	Change in forecast SOC

9 pm (14 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
6.02 pm		Neoen	Hornsdale Power Reserve	25	999	16,575	Change in forecast SOC

Submitted time	Time effec tive	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
6.47 pm		Neoen	Hornsdale Power Reserve	15	3,969	16,575	Change in forecast SOC
8.37 pm		Neoen	Hornsdale Power Reserve	10	3,969	16,575	Change in forecast SOC

Appendix C – Significant rebids, 4 September

These tables highlight rebids that contributed to the high prices on 4 September 2023 in Queensland and NSW. Only the 5-minute intervals with a high price and where rebidding contributed to the high price are included.

Queensland

5.35 pm (56 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
1.39 pm – 4.02 pm		Genuity	Millmerran	-120	-1,000	N/A	Fuel/Mill/CV Limitation
4.57 pm		AGL Energy	Wandoan battery	40	0	16,600	050 Chg in AEMO PD~56 Price increase [QLD] avg $872.58 5MPD PE 1735-1755 vs $371.52 PD PE 1800

5.45 pm (16 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
1.39 pm – 4.02 pm		Genuity	Millmerran	-85	-1,000	N/A	Fuel/Mill/CV Limitation

NSW

5.35 pm (56 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
2.53 pm		AGL Energy	Bayswater	-685	≤ $61	N/A	020 Reduction in avail cap~204 unit trip
4.55 pm		Delta Electricity	Vales Point	-90	≤ $138	N/A	Milling/Feeder limit
5.09 pm	5.15 pm	EnergyAustralia	Mt Piper	490	≤ $287	16,600	Adj bands change in NSW P5 RRP $1620 vs $15081 @ 1800 SL

5.45 pm (16 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
2.53 pm		AGL Energy	Bayswater	-685	≤ $61	N/A	020 Reduction in avail cap~204 unit trip
4.55 pm		Delta Electricity	Vales Point	30	≤ $138	N/A	Milling/Feeder limit
5.09 pm	5.15 pm	EnergyAustralia	Mt Piper	490	≤ $287	16,600	Adj bands change in NSW P5 RRP $1620 vs $15081 @ 1800 SL