Electricity prices above $5,000 per MWh

July to September 2024

November 2024

AUSTRALIAN ENERGY REGULATOR

Inquiries about this publication should be addressed to:

Australian Energy Regulator
GPO Box 3131
Canberra ACT 2601
Tel: 1300 585 165

AER reference: 24009559

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1 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 energy price exceeds $5,000 per megawatt hour (MWh); or 2 consecutive 30-minute Frequency Control Ancillary Service (FCAS) prices exceed $5,000 per MW.[2]

With a market price cap over $17,500 per MWh prices can occasionally exceed this 30-minute reporting threshold.[3] This reporting framework is intended to pick up these 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.

[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 2024/25 is $17,500 per MWh.

2 Summary

The wholesale 30-minute price of electricity exceeded $5,000 per MWh 54 times in July to September 2024 (Table 1), compared to 10 in the same period last year. This was the second highest number of quarterly high prices on record and the most since 2008. Half of these occurred in South Australia. Most of the high prices were forecast by the market operator (AEMO). There were also three high frequency control ancillary service (FCAS) prices in Tasmania.

Table 1: Count of 30-minute electricity prices above $5,000 per MWh by region

Date	New South Wales	Queensland	Victoria	South Australia	Tasmania
18 July	-	-	-	2	-
28 July	-	-	-	6	-
30 July	1	1	1	5	1
5 August*	8	4	8	5	3
6 August	-	-	-	2	-
22 August	-	-	-	1	-
6 September	-	-	-	1	-
23 September	-	-	-	5	-
Total	**9**	**5**	**9**	**27**	**4**

Source: AER analysis using NEM data.
Note: There were also three FCAS prices in Tasmania on 5 August which has not been included.

There were common drivers across most of the high price periods including network limitations, high demand and very low-wind output which gave the opportunity for some participants to put upward pressure on prices (Table 2).

Network limitations meant that at times regions with low-priced capacity were unable to export excess cheaper generation to high-priced neighbouring regions. On most occasions the interconnectors had hit its nominal export limits.[4] This meant one region would have low prices while the rest of the NEM regions would have high prices.

Out of the 5,000 5-minute dispatch intervals where imports into South Australia on the Heywood interconnector were limited this quarter, 145 of these dispatch intervals had prices exceeding $5,000 per MWh which equates to around 3%.

South Australia was affected by multiple, and at times, simultaneous network outages. This limited its ability to access cheaper generation, so it had to dispatch its own more expensive generation. Planned line outages near Balranald in New South Wales and Parafield in South Australia were coincident from 21 to 27 September. During the coincident outage period, high prices only eventuated during the evening on 23 September and was due to low wind

[4] AEMO, Interconnector Capabilities, April 2024.

output which normally is offered at low prices and the high amount of capacity offered in above $5,000 per MWh by participants.

There was a recent increase to the capacity that South Australia can import across Heywood when the loss of it becomes a credible risk from 50 MW to 250 MW. This may help to ease the likelihood of future high prices occurring in South Australia under similar conditions as this quarter and we encourage ongoing consideration of constraints to maximise benefits from existing network infrastructure. Transmission network service providers (TNSP) should continue to collaborate with AEMO and AEMC and discuss potential areas for improvements or potential rule changes that may help to improve the planning of network outages including minimising scheduling multiple outages that occur at the same time.

Compared to the same quarter last year, wind generation was 21% higher which drove a record number of negative prices for the NEM (refer to section 7.1).[5] However, there were some periods of very low wind generation with output less than 7% of installed capacity. Wind generation was lower than forecast in all regions during the high price periods.

Multiple cold fronts in July and August meant cooler than average winter temperatures across most of the NEM drove high demand for heating during the morning and evening peaks.[6] Minimum temperatures were at times below average (in the lowest 10% of all Julys since 1910) for parts of southern Australia.

Baseload outages this quarter averaged around 3,500 MW and was similar to Q3 2023.[7] A Loy Yang A unit (560 MW) had an unplanned outage on 5 August – the only unexpected generator outage that occurred on a high-priced day which would not have been included in initial forecasts (section 8.5.1.4).

In some of the high-priced events, we observed rebidding both from high to low and low to high, which had a counter balancing effect on the price outcome. In other cases, we observed rebidding putting upward pressure on prices by reducing the amount of low-priced capacity offered. Subject to bids and rebids not being false or misleading and being properly submitted and substantiated, the National Electricity Rules do not prohibit rebids that put upward pressure on spot prices. However, patterns of this kind of behaviour could lead to inefficiencies in the market and may not be in the best interests of energy consumers.

[5] Australian Energy Regulator, Q3 Wholesale Markets Quarterly Report, October 2024.

[6] Bureau of Meteorology, Australia in July 2024, 1 August 2024, and Australia in August 2024, 2 September 2024.

[7] Australian Energy Regulator, Q3 Wholesale Markets Quarterly Report, October 2024.

Table 2: Number and common drivers of high prices

Date	Number of prices	High prices forecast*	Network	High Demand	Low Wind	Rebidding
18 July, SA	2	✓	✓	×	✓	✓
28 July, SA	6	✓	✓	×	✓	✓
30 July, NEM	5	✓	✓	✓	✓	✓
30 July, SA	4	✓	✓	✓	✓	✓
5 August, NEM	28	✓	✓	✓	✓	✓
5 August (FCAS), Tas	3	×	✓	-	✓	×
6 August, SA	2	✓	✓	×	✓	✓
22 August, SA	1	✓	✓	×	✓	✓
6 September, SA	1	×	✓	✓	✓	✓
23 September, SA	5	✓	✓	×	✓	✓

Source: AER analysis using NEM data.
Note: *High prices were forecast at least 4 hours before the 30-minute dispatch interval.

3 Network limitations

Planned network outages and interconnectors reaching their nominal limits impacted some regions' ability to access low-priced generation from neighbouring regions.

3.1 Multiple regions unable to access cheaper generation

In one high price event, when Queensland and Tasmania did not have high prices at certain periods, we observed these states exporting their excess cheaper generation to New South Wales and Victoria (who had high prices) at the nominal limits of the Queensland-New South Wales interconnector of around 1,300 MW and Basslink interconnector of around 600 MW.[8]

At the same time, South Australia had a reduced limit of 200 MW on Heywood into Victoria due to FCAS requirements and was unable to export much generation into Victoria during the high prices.

Despite these interconnectors flowing at their maximum nominal capacities, the cheaper generation from Queensland and Tasmania was still not enough to alleviate the high prices in multiple regions.

3.2 South Australia limitations

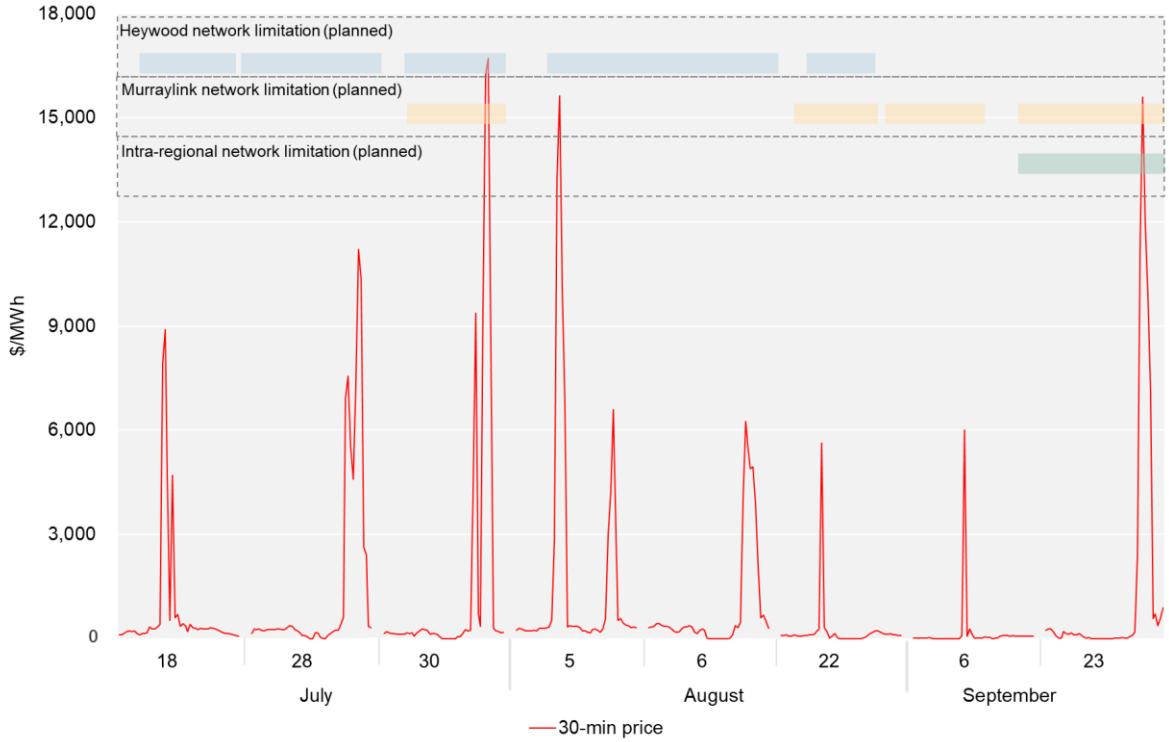
There are two interconnectors between South Australia and Victoria, Heywood and Murraylink, which enable transfer of energy between the regions. The nominal capacity of flows into South Australia on Heywood is 600 MW while on Murraylink it is 220 MW.[9]

During the high price periods in South Australia, multiple planned network outages led to constraints limiting flows on the Heywood and Murraylink interconnectors (Figure 1). These limitations impacted South Australia's ability to access low-priced generation.

[8] AEMO, Interconnector Capabilities, April 2024; APA, Update on return of Basslink dynamic capacity, 2024. Queensland-New South Wales interconnect recently upgraded its nominal capacity to 1,300 MW.

[9] AEMO, Interconnector Capabilities, April 2024.

Figure 1 Network limitations during high prices in South Australia



Source: AER analysis using NEM data.

On 23 September, a planned line outage on the Para to Parafield Gardens West line resulted in three gas generators being constrained, preventing low-priced capacity making it to market. Additionally, there was a planned line outage in southern New South Wales that caused a reduction in flows on the Murraylink interconnector into South Australia. Despite Heywood importing around 600 MW of capacity into South Australia during the high-priced periods, the cheaper generation into South Australia was still not enough to alleviate the high prices.

Planned network outages limited the export capacity of the Heywood interconnector from Victoria to South Australia for 19% of intervals across the quarter.[10] This suggests that despite the large number of high prices this quarter, there was still a large portion of intervals in the quarter that did not have high prices during network outages. This confirms that network outages do not always solely cause high prices and it often requires a combination of other contributing factors such as low renewable generation, higher than expected demand, or rebidding.

3.3 Recent constraint changes to Heywood

There was a recent increase to the capacity that South Australia can import across Heywood when the loss of it becomes a credible risk from 50 MW to 250 MW. This may help to ease the likelihood of future high prices occurring in South Australia under similar conditions as this quarter.

[10] Australian Energy Market Operator, Quarterly Energy Dynamics Q3 2024, October 2024.

3.4 Planning for network outages

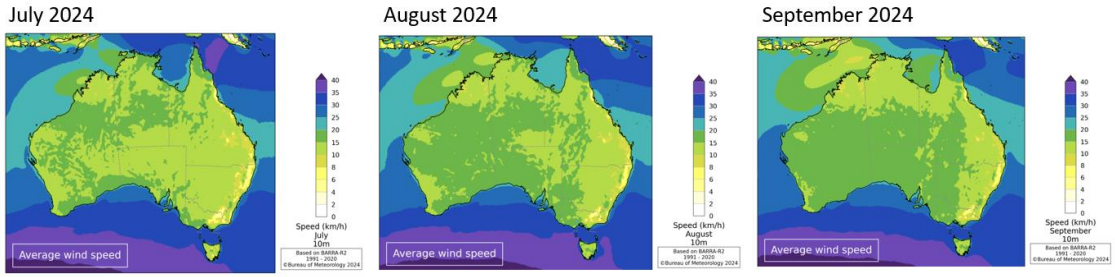
Traditionally, scheduling network outages during shoulder months such as spring and autumn was often preferred to avoid outages when demand is high during winter and summer. However, we have observed that these shoulder months appear to be getting more unpredictable with greater swings in weather patterns and more unexpected weather events occurring (e.g. shorter spring/autumn/extreme weather events).

Where possible, scheduling of multiple outages at the same time should be minimised. Further, TNSPs should continue to collaborate with AEMO and AEMC and discuss potential areas for improvements or potential rule changes that may help to improve the planning of network outages.

4 Variable output from wind generation

While wind generation was 21% higher this quarter compared with the same period in 2023, variability of output in July and early August resulted in the need for more expensive generation such as batteries and gas generation (Figure 2).[11] Wind generated capacity is generally offered at low prices, so the relatively low wind generation reduced the amount of low-priced capacity available in the regions. Wind output was lower than forecast for all high price periods.

Figure 2 Average wind speed across Australia for July to September 2024



Source: Bureau of Meteorology.

For the high prices involving multiple regions across the NEM, the highest average wind output was 954 MW out of 13,689 MW of installed capacity.[12] This equates to around 7% of total installed capacity for the NEM.

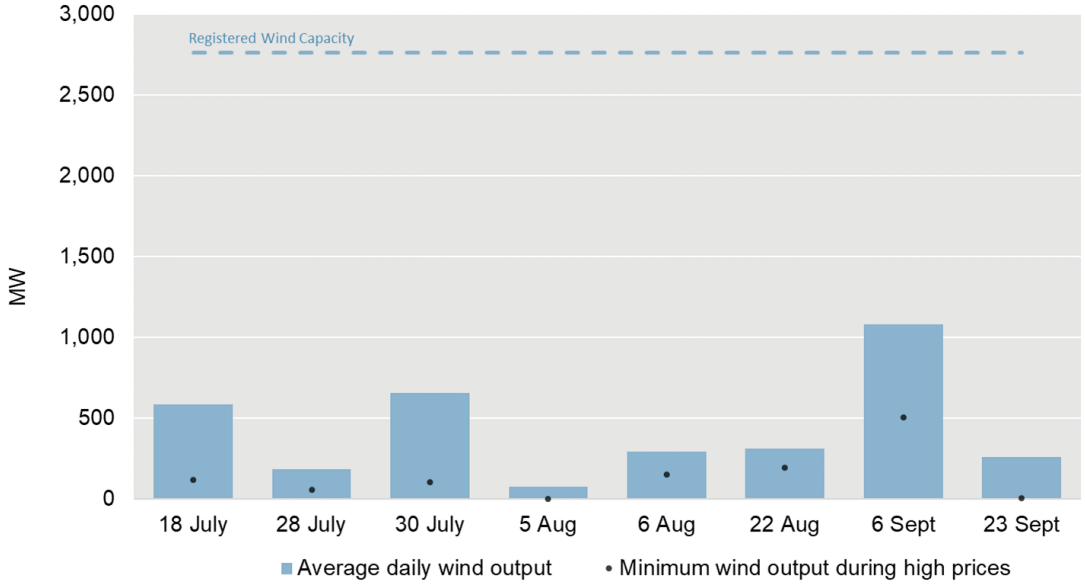
On the high price days in South Australia, wind output was variable and well below registered capacity of 2,763 MW (Figure 3).[13] During the high price periods, minimum wind output was below 150 MW on five of the eight high-priced days. The highest average daily wind output occurred on 6 September with 1,080 MW which is significantly higher than the other high priced days. Despite the high output on this day, high prices still occurred due to a combination of factors including, low wind and solar output, network limitations, generation not being able to start quickly enough and rebidding from low to high prices. Some of these factors were not present on the other days (section 8.9).

[11] Australian Energy Regulator, Q3 Wholesale Markets Quarterly Report, October 2024.

[12] Installed capacity is based on registered wind capacity as at 1 October 2024.

[13] Installed capacity is based on registered wind capacity as at 1 October 2024.

Figure 3 Average and minimum wind output during high prices in South Australia



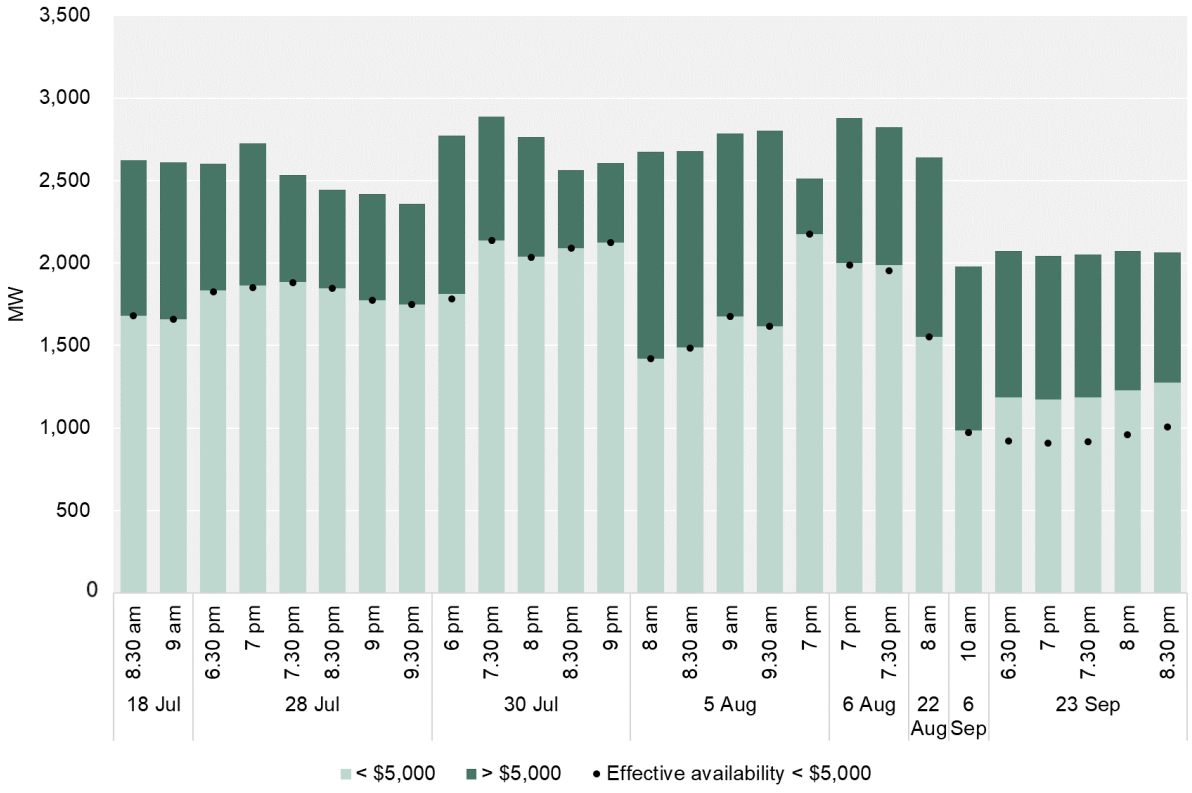
Source: AER analysis using NEM data.

5 Participants reduced their share of capacity offered at low prices

On average, around 70% of capacity in South Australia was offered below $5,000 per MWh during the high prices between 18 July and 22 August (Figure 4).

For the high prices on 6 September and 23 September, there was a noticeable change in offer behaviour where participants offered significantly less total and low-priced capacity, averaging 57% of capacity offered below $5,000 per MWh. Very low wind output and unit outages likely contributed to participants' offering less total and low-priced capacity for those days.

Figure 4 Capacity above and below $5,000 per MWh for each high price period in South Australia



Source: AER analysis using NEM data.

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

In some high-priced events, we observed a high number of rebids from high to low and low to high prices, sometimes leading to high prices and at times reducing forecast high prices. The reasons for these rebids included technical issues such as unit tripping or delayed return to service while others took the opportunity to put upward pressure on prices.

Details of participant rebidding are included in the individual high priced day sections in Chapter 8 and the appendices.

7 Impact of high price events on average spot and forward prices

7.1 Impact on average spot prices

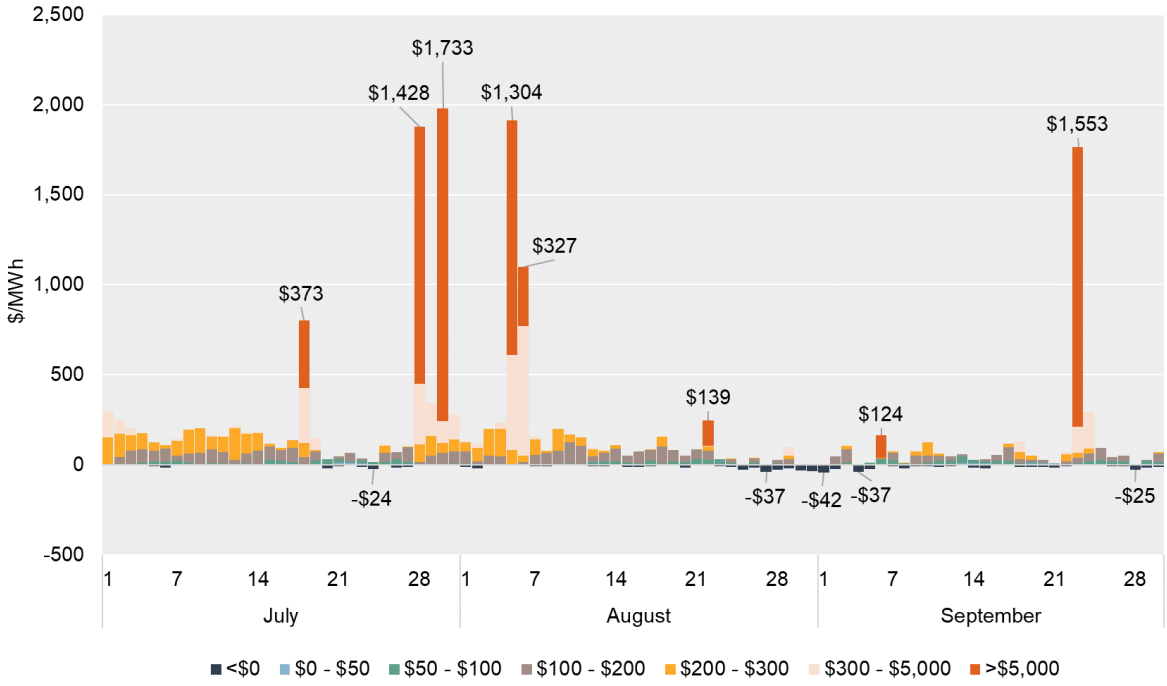
Average volume weighted prices in Q3 2024 ranged from $114 per MWh in Queensland to $201 per MWh in South Australia.[14]

Prices above $5,000 per MWh contributed to the average quarterly price per region as follows:

- $77 per MWh (38%) in South Australia
- $29 per MWh (20%) in NSW
- $28 per MWh (22%) in Victoria
- $12 per MWh (11%) in Queensland
- $10 per MWh (8%) in Tasmania.

Lower, but still elevated prices between $200 to $500 per MWh also contributed to the higher prices in the first half of the quarter (Figure 5).

Figure 5 Daily contribution by price band for South Australia



Source: AER analysis using NEM data.

Despite the large number of high prices, this quarter had a record number of negative prices for the NEM (4,341) and the highest for quarter 3 for South Australia (1,134) which reduced

[14] Australian Energy Regulator, Q3 Wholesale Markets Quarterly Report, October 2024.

the average quarterly price by around $8 per MWh in South Australia. Most of these negative prices were due in part to higher wind generation, mainly in late August and September.[15]

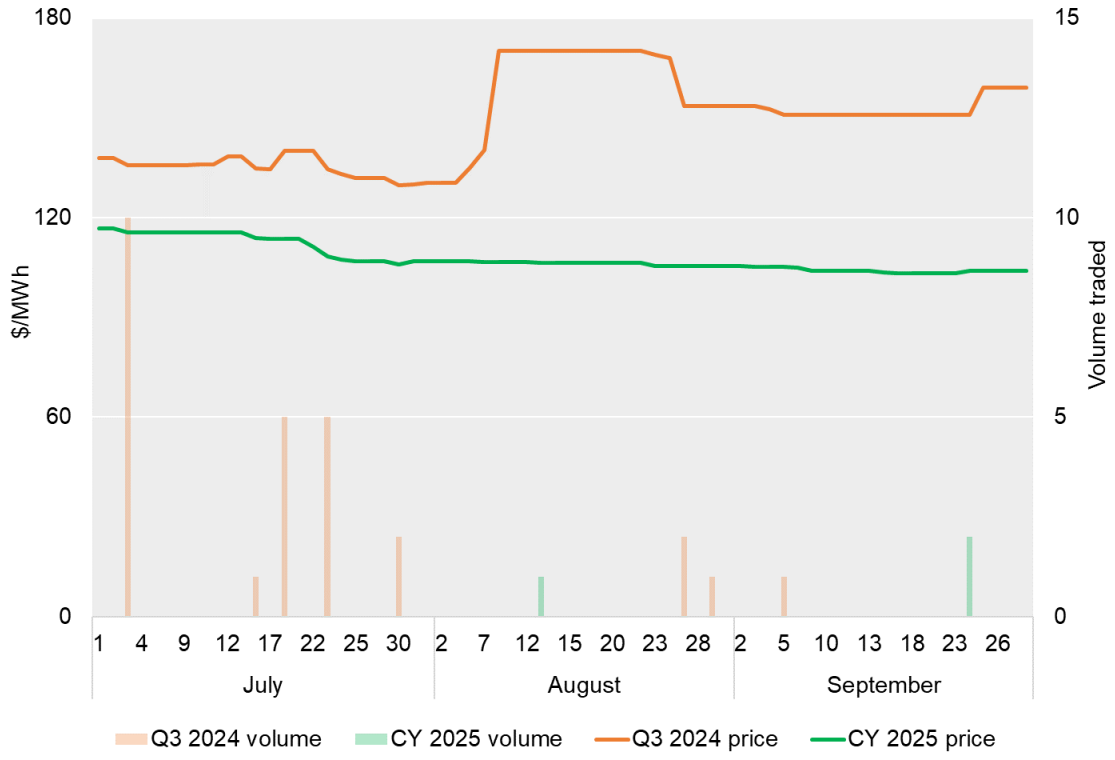
7.2 Impact on South Australia forward contract prices

Generators and retailers enter derivative contracts to fix the price of electricity in the future.

In South Australia, base future contract prices for Q3 2024 increased following the large number of high price periods this quarter (Figure 6). CY 2025 prices declined marginally despite very little trade volumes for CY 2025.[16]

In recent years, cap contracts have become the most traded contract types in South Australia and base future contracts were scarcely traded.[17] Cap prices for Q3 2024 increased from $20 per MWh to $76 per MWh during the quarter. While cap prices paid at the start of the quarter are driven by expectations of risk of high spot price events, the cap price increases observed during the quarter were in direct response to the observed high spot prices.

Figure 6 South Australia traded volumes and contracts prices, Q3 2024



Source: AER analysis using ASX and NEM data.

[15] Australian Energy Regulator, Q3 Wholesale Markets Quarterly Report, October 2024.

[16] Australian Energy Regulator, Q3 Wholesale Markets Quarterly Report, October 2024.

[17] Australian Energy Regulator, Issues Paper – Default Market Offer – Price determination 2024-25, 5 October 2023.

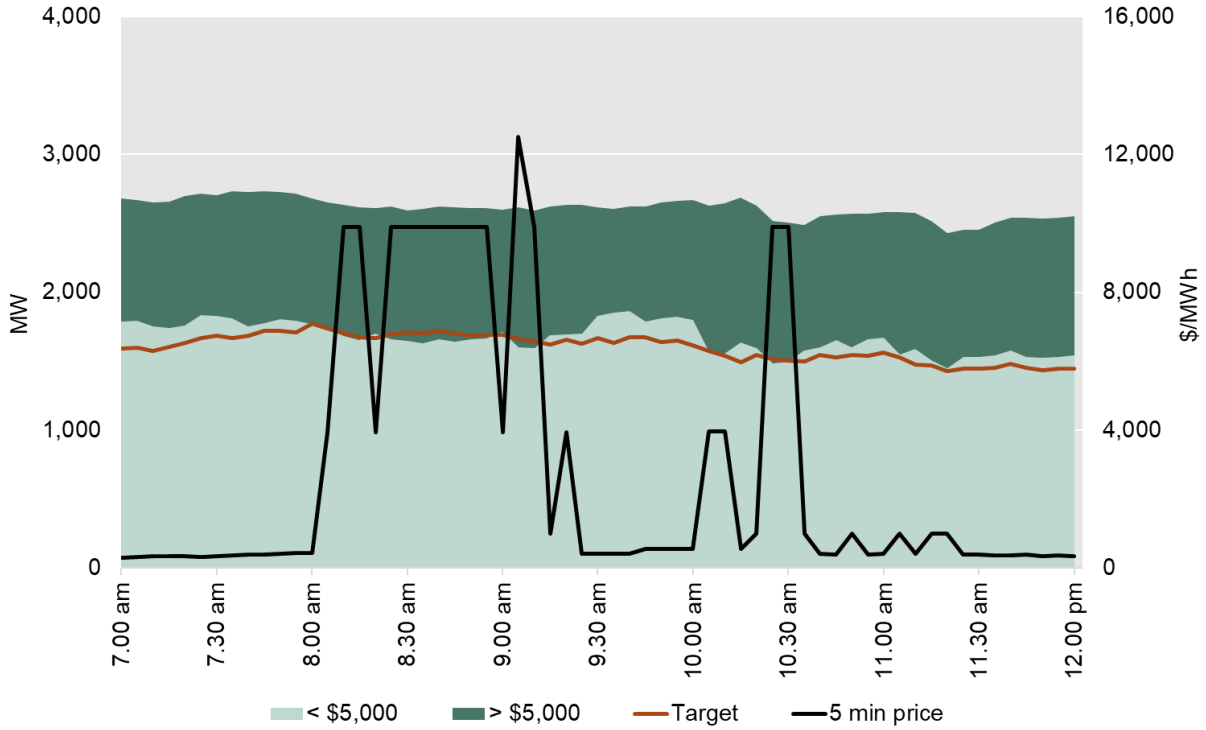
8 High price events

This chapter includes further analysis not earlier covered.

8.1 18 July, South Australia

On 18 July, the 30-minute price in South Australia exceeded $5,000 per MWh twice in the morning: $7,913 per MWh at 8.30 am and $8,906 per MWh at 9 am. The high prices were forecast. Around 64% of capacity was offered below $5,000 per MWh.

Figure 7 Capacity offered above and below $5,000 per MWh, 18 July



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

8.1.1 Limited output from wind generation

Wind output was lower than forecast, averaging 163 MW out of around 2,763 MW of installed capacity during the high prices. This equates to around 6% of installed capacity in South Australia.

8.1.2 Network limitations

A planned outage of the Heywood to South East line meant flows into South Australia on the Heywood interconnector were reduced to 50 MW due to FCAS requirements. This meant that South Australia was unable to import sufficient low-priced capacity during the high prices.

8.1.3 Rebidding for commercial reasons

Between 16 MW and 70 MW of high-priced capacity was needed to meet demand. Rebidding for commercial reasons contributed to the high price (Appendix A).

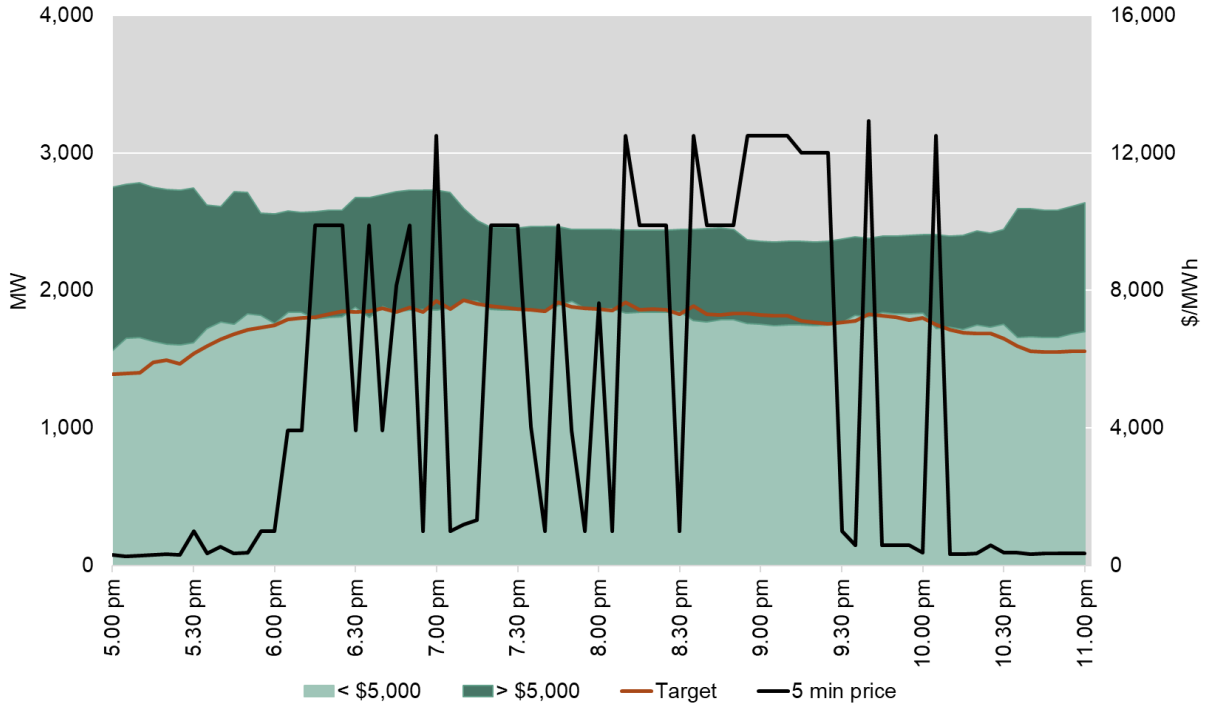
Over two rebids from 6.41 am, AGL shifted up to 57 MW of capacity at Barker Inlet Power Station from $138 per MWh to $17,500 per MWh due to a change in forecast prices.

Neoen and Iberdrola rebid around 50 MW and 25 MW of capacity at their Hornsdale and Lake Bonney batteries respectively. Capacity was shifted from under $4,000 per MWh to above $9,900 per MWh and back down again for almost every five minutes shortly before dispatch. Reasons given included changes in forecast price, enablement in FCAS, state of charge, and actual prices. This meant prices fluctuated between $3,900 per MWh and $9,900 per MWh with both batteries setting price (Hornsdale eight times and Lake Bonney three times) during the 11 high price periods.

8.2 28 July, South Australia

On 28 July, 30-minute prices in South Australia exceeded $5,000 per MWh six times in the evening (6.30 pm to 7.30 pm and 8.30 pm to 9.30 pm). The price ranged between $5,536 per MWh and $11,200 per MWh. The high prices were not forecast. Around 73% of capacity was offered below $5,000 per MWh.

Figure 8 Capacity offered above and below $5,000 per MWh on 28 July



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

8.2.1 Limited output from wind generation

Wind output was lower than forecast, averaging around 80 MW out of 2,763 MW installed capacity during the high prices. This equates to around 3% of installed capacity in South Australia.

8.2.2 Network limitations

There was a planned outage of the Heywood to South East line, originally scheduled to end at 5.30 pm on 28 July. However, at 11.42 am it was extended to 29 July. The outage meant flows on Heywood were reduced to 50 MW due to FCAS requirements and South Australia was unable to import sufficient low-priced capacity during the high prices.

Murraylink flows were also reduced due to system normal constraints in place to prevent voltage collapse.

8.2.3 Rebids

Between 9 MW and 107 MW of high-priced capacity was needed to meet demand. Rebidding for commercial reasons contributed to the high price (Appendix B).

At 3.42 pm, effective until 7 pm, AGL shifted 50 MW of capacity at Barker Inlet Power Station from $0 per MWh to $17,500 per MWh due to a change in forecast prices.

Like 18 July, Neoen rebid 55 MW of capacity at Hornsdale battery from under $4,000 per MWh to above $9,900 per MWh and back down again for almost every five minutes from 6.05 pm to 6.45 pm after which its capacity remained at high prices. The reason given was a change in forecast enablement in FCAS. This meant that prices fluctuated between around $3,900 per MWh and $9,900 per MWh, with Hornsdale setting the price five times at $3,937 per MWh and 15 times at $9,900 per MWh.

At 7.07 pm, Iberdrola shifted 25 MW of capacity at Lake Bonney battery from $392 per MWh to greater than $9,900 per MWh due to a change in forecast state of charge. This rebid was effective from 7.20 pm for the rest of the high price periods.

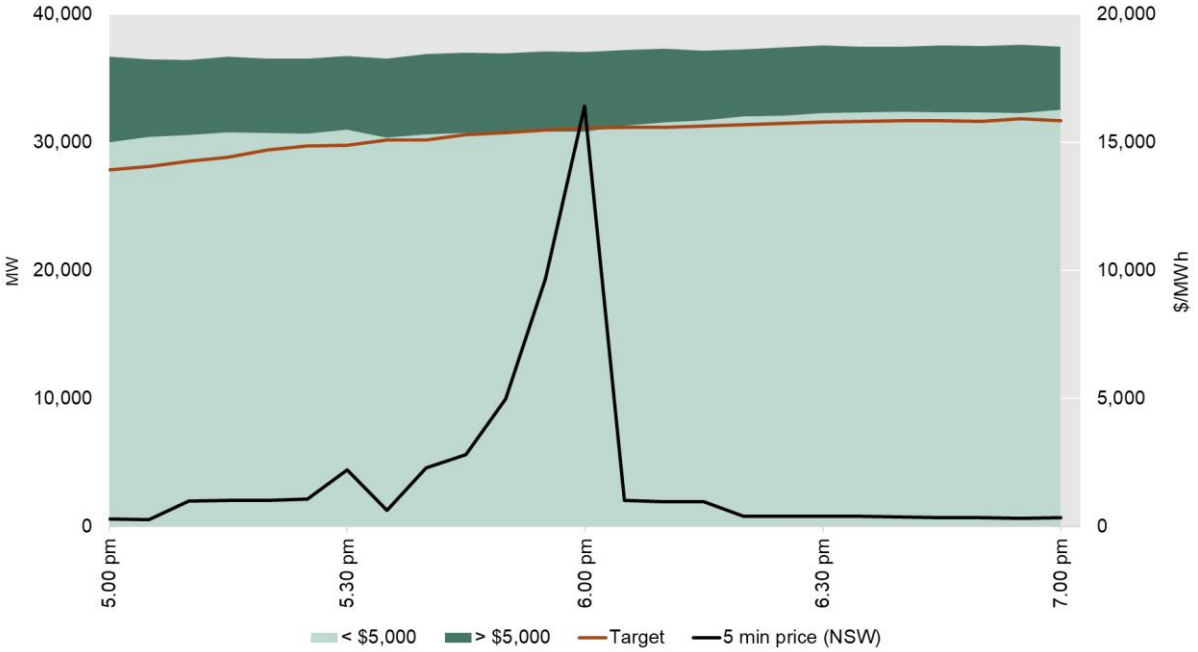
8.3 30 July, all regions

On 30 July, 30-minute prices exceeded $5,000 per MWh in all regions at 6 pm. Low wind output and high demand due to cooler temperatures across the NEM meant there was not enough low-priced capacity below $5,000 per MWh to meet demand. The price ranged between $5,006 per MWh in Tasmania and $9,382 per MWh in South Australia. The high prices were intermittently forecast. Around 83% of capacity offered was below $5,000 per MWh.

In this event all regions were price aligned. When regions are price aligned the NEM functions more like a single market than a collection of regional markets as generators are exposed to competition from generators in other regions.[18]

High prices also occurred later in the evening (7.30 pm to 9 pm) in South Australia but have been treated separately from this event.

Figure 9 Capacity offered above and below $5,000 per MWh on 30 July



Source: AER analysis using NEM data.
Note: Capacity available below $5,000/MWh refers to effective capacity. NSW is used as the proxy in this chart as prices were aligned across the regions.

8.3.1 High demand

NEM-wide total demand peaked at around 32,000 MW. This was the seventh highest maximum demand day for the quarter driven by cool winter temperatures increasing the need for heating.

[18] AER, State of the Energy Market 2024, Australian Energy Regulator, November 2024.

8.3.2 Limited output from wind generation

Wind output was lower than forecast, with all regions averaging around 857 MW out of 13,689 MW of installed capacity during the high prices. This equates to 6% of installed capacity for the NEM.

8.3.3 Rebids

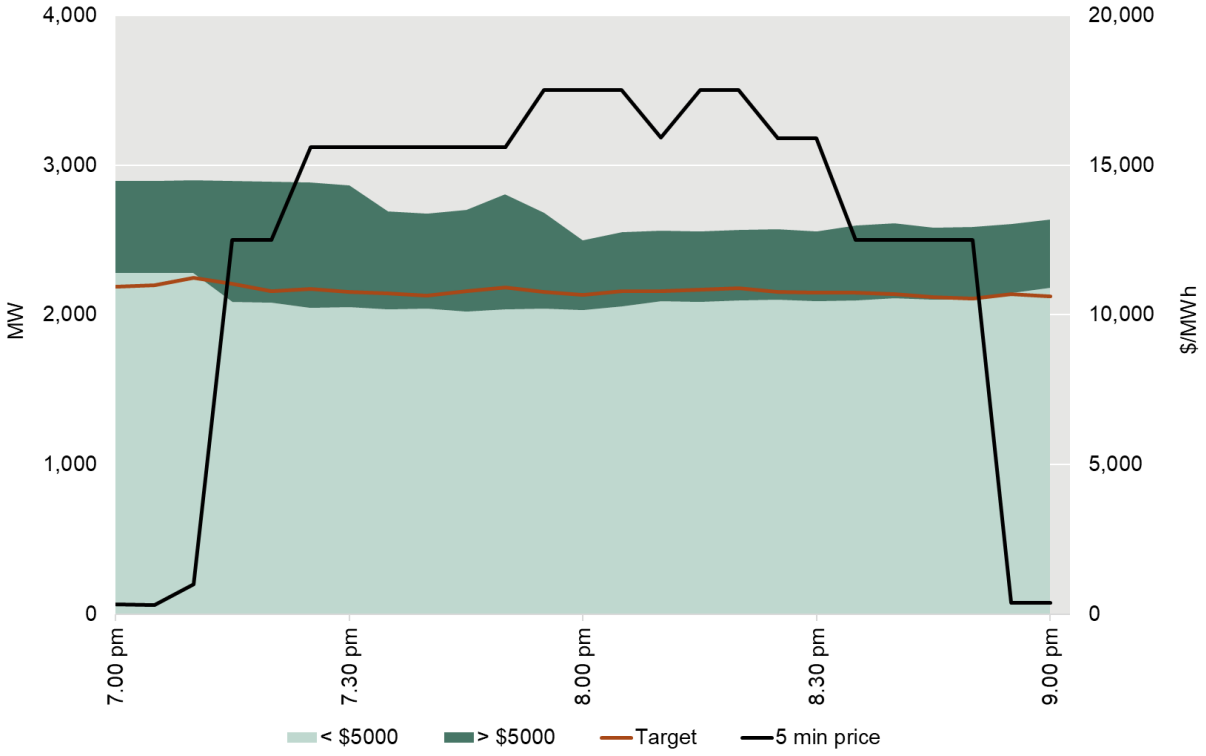
157 MW and 314 MW of high-priced capacity was needed to meet demand for the 5.55 pm and 6 pm 5-minute intervals. Rebidding for commercial and technical reasons contributed to the high price (Appendix C).

Over three rebids from 5.21 pm, AGL rebid a total of 508 MW of capacity across its Victorian portfolio from below $207 per MWh to above $17,000 per MWh due to a change in forecast prices. Around the same time, they removed 60 MW of capacity priced $0 per MWh at Eildon power station due to a delay in its return to service.

8.4 30 July, South Australia

On 30 July, 30-minute prices exceeded $5,000 per MWh in South Australia four times in the evening (7.30 pm to 9 pm). The price ranged between $8,460 per MWh and $16,235 per MWh. The high prices were intermittently forecast. Around 78% of capacity was offered below $5,000 per MWh.

Figure 10 Capacity offered above and below $5,000 per MWh on 30 July



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

8.4.1 Limited output from wind generation

Wind output was lower than forecast, averaging 280 MW out of around 2,763 MW of installed capacity during the high prices. This equates to around 10% of installed capacity in South Australia.

8.4.2 Network limitations

A planned outage of the Moorabool to Mortlake line meant that flows on Heywood were reduced to 50 MW into South Australia due to FCAS requirements, and South Australia was unable to import sufficient low-priced capacity during the high prices.

Murraylink was on a planned outage with flows reduced to 0 MW.

8.4.3 Rebids

Between 9 MW and 149 MW of high-priced capacity was needed to meet demand. Rebidding for commercial and technical reasons contributed to the high price (Appendix D).

For the high price periods, over two rebids from 4.49 pm AGL shifted up to 140 MW of capacity at Barker Inlet Power Station from below $140 per MWh to $17,500 per MWh due to

a change in forecast prices and a change in unit operation. Effective from 8.05 pm, AGL rebid 35 MW of capacity back to prices around $0 per MWh due to a change in forecast prices.

At 6.52 pm effective for most of the high price periods, Engie rebid around 138 MW of capacity from less than $230 per MWh to above $12,500 per MWh at Pelican Point station to manage the constraint on Heywood and set the price ten times at between $12,500 per MWh and just below $17,500 per MWh.

From 7.40 pm, Neoen removed up to 25 MW of capacity priced at $999 per MWh due to state of charge management for the remaining high price periods.

8.5 5 August, multiple regions

8.5.1.1 Morning high prices

On 5 August, 30-minute prices exceeded $5,000 per MWh 15 times from 8 am to 9.30 am. The high prices occurred in New South Wales, South Australia, and Victoria for all four 30-minute periods, while high prices occurred in Tasmania for three 30-minute periods. Prices were aligned across the relevant regions during the high prices and ranged between $6,754 per MWh and $15,812 per MWh. Around 77% of capacity was offered below $5,000 per MWh on average.

In Queensland, prices did not exceed $5,000 per MWh, with milder weather conditions and excess cheaper generation flowing south. Flows on both the Queensland-New South Wales and Terranora interconnectors were at their respective export limits into NSW during the high prices.

High prices were forecast in all relevant regions for the morning periods.

8.5.1.2 Evening high prices

On 5 August, 30-minute prices exceeded $5,000 per MWh 13 times from 5.30 pm to 7 pm. The high prices occurred in New South Wales, Queensland and Victoria for all four 30-minute periods, while only one high price period occurred in South Australia. Prices were aligned across the relevant regions during the high prices and ranged between $6,092 per MWh and $15,887 per MWh. Around 85% of capacity was offered below $5,000 per MWh on average.

In South Australia, prices did not exceed $5,000 per MWh for the first three 30-minute periods of the evening as there was a reduced limit of 200 MW on Heywood into Victoria due to FCAS requirements and South Australia was unable to export its excess cheaper generation into Victoria during the high prices.[19] This meant New South Wales, Queensland and Victoria were unable to access cheaper generation from South Australia during the high prices. South Australia subsequently had a high price period at 7 pm when demand increased above its low-priced capacity.

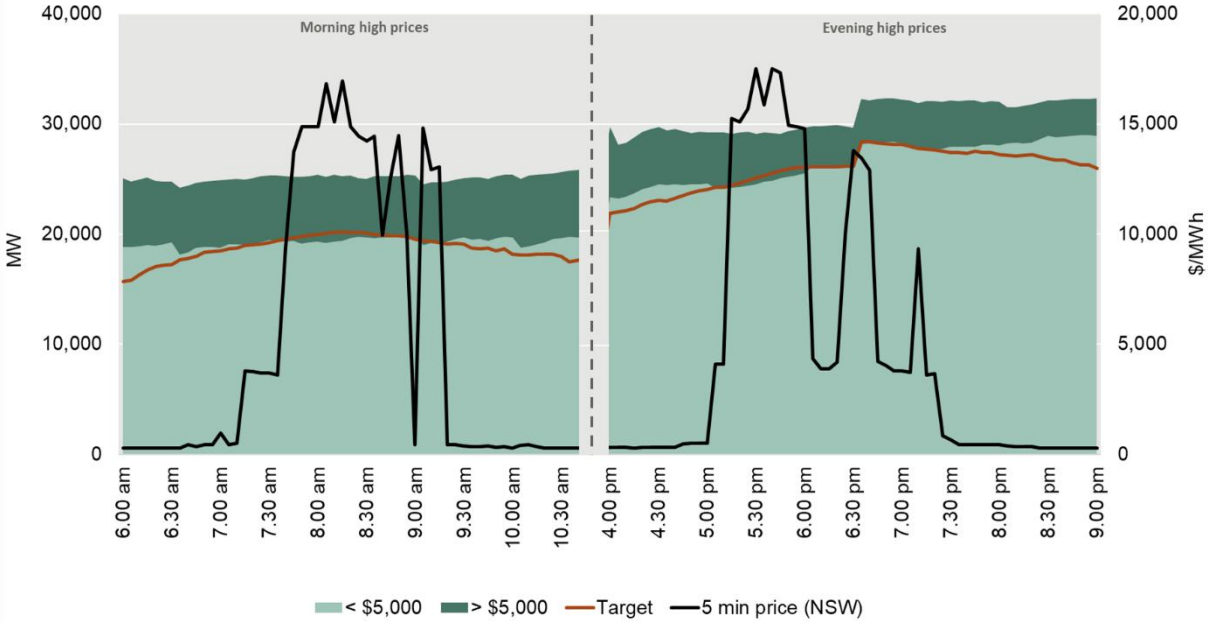
In Tasmania, prices did not exceed $5,000 per MWh, with excess cheaper generation flowing to the mainland during the high prices with Basslink flows at its export limits.

High prices were forecast in all relevant regions for the evening periods. AEMO forecast a low-level reserve shortfall in South Australia for 7 pm to 10 pm, with an actual shortfall occurring from 8.30 pm to 9.30 pm.[20]

[19] The nominal capacity of flows from South Australia into Victoria into is 550 MW.

[20] Market notice 117547: forecast LOR for South Australia. Market notice: 117563: actual LOR in South Australia. Australian Energy Market Operator, “LOR Factsheet”, AEMO, December 2022

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



Source: AER analysis using NEM data.
Note: Capacity available below $5,000/MWh refers to effective capacity. NSW is used as the proxy in this chart as prices were aligned across the regions.

8.5.1.3 Limited output from wind generation

Wind output was lower than forecast in all relevant regions for both the morning and evening high price periods.

During the morning high price periods, average wind output for all regions (including Queensland) was 954 MW out of around 13,689 MW of installed capacity. This equates to around 7% of installed capacity in the NEM.

During the evening high price periods, average wind output for all regions (including South Australia and Tasmania) was 865 MW out of around 13,689 MW of installed capacity. This equates to around 6% of installed capacity in the NEM.

8.5.1.4 Less generation in Victoria due to baseload outages

Baseload outages meant that 920 MW of generally low-priced capacity was unavailable in Victoria on 5 August.

EnergyAustralia's Yallourn unit 1 (which has a 360 MW baseload capacity) had been offline since 2 August due to an unplanned outage.

At 5.00 pm, EnergyAustralia's Loy Yang A unit 4 went offline due to an unplanned unit outage removing 560 MW of available baseload capacity.

8.5.1.5 Rebidding

8.5.1.5.1 Morning High prices

Between 1 MW and 927 MW of high-priced capacity was needed to meet demand. Rebidding for commercial and technical reasons contributed to the high price (Appendix E).

As prices were forecast to be high during the high price periods, price sensitivities published by AEMO showed that at times it would have taken at least a 500 MW increase in low-priced

capacity to bring prices below $5,000 per MWh. There was a significant amount of rebidding occurring across the NEM in the lead up to the high price periods shifting capacity from high to low and low to high prices.

For example, at 7.23 am, effective from 7.30 am, AGL rebid up to 400 MW of capacity at Bayswater from $36 per MWh to $17,500 per MWh due to a change in forecast available generation. This was partially offset by AGL rebidding capacity from high to low prices. Over several rebids from 8.03 am, effective from 8.10 am, AGL shifted up to 373 MW of capacity at Somerton, Dartmouth and McKay from $17,500 per MWh to $0 per MWh to avoid uneconomical start/stop.

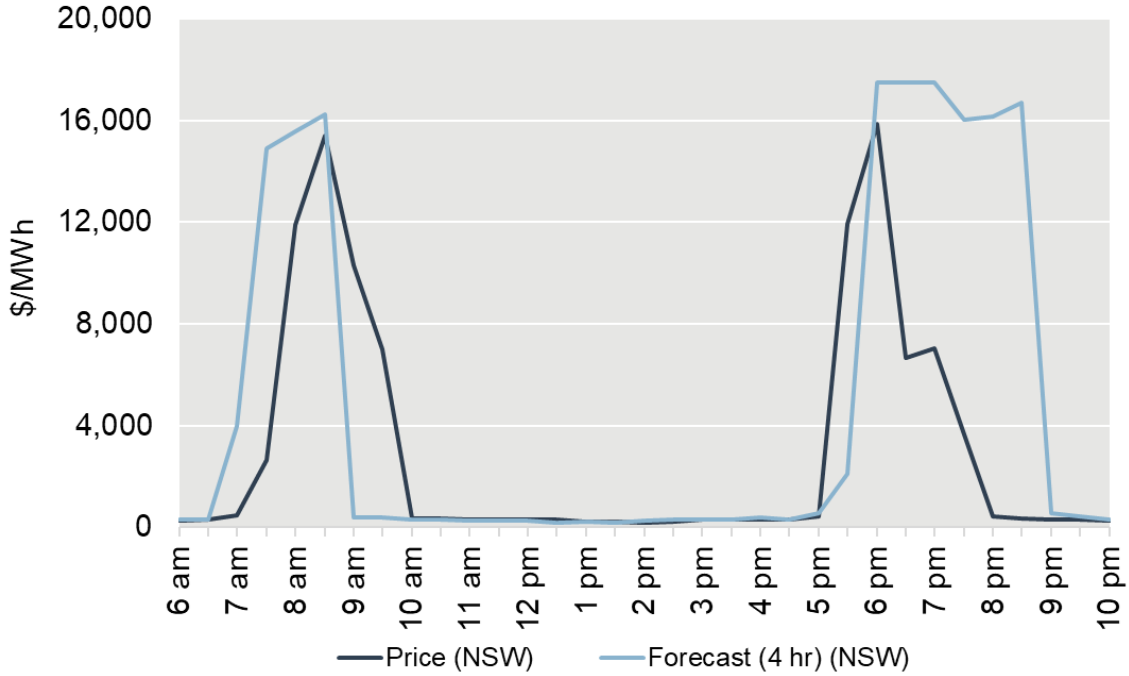
During this period, we observed a high number of rebids. While this resulted in prices being slightly reduced from forecast prices, many offset each other. We did not identify any systematic behaviour which materially impacted the price outcomes over extended intervals. For this reason, we have not listed all rebids.

8.5.1.5.2 Evening high prices

Between 32 MW and 716 MW of high-priced capacity was needed to meet demand. Rebidding for commercial and technical reasons contributed to the high price (Appendix E).

There were significant amounts of rebidding occurring across NSW, Queensland and Victoria within four hours of dispatch. NSW and Queensland had numerous rebids shifting capacity from high to low prices. The full benefit of these bids could not be realised as there was rebidding from low to high prices and the withdrawal of low-priced capacity. The effect of this was lower than forecast prices (Figure 12). For example, for the 5.35 pm interval, across the three regions around 800 MW of capacity was added to below $300 per MWh.

Figure 12 Actual and 4 hour ahead forecast prices for NSW on 5 August



Source: AER analysis using NEM data.

The actual price for the 5.30 pm interval was higher than forecast due to more rebids from low to high prices than the other high price periods. Origin Energy shifted a total of 546 MW of capacity from below $50 per MWh to $17,500 per MWh at Eraring, Uranquinty and Mortlake due to a decrease in NEM forecast demand. EnergyAustralia's Tallawarra unit was returning to service after technical issues but there was a delay which effectively reduced the capacity available by 215 MW all of which was priced at -$1,000 per MWh. The unit returned to full capacity after 5.30 pm.

The most significant rebid was AGL Energy's withdrawal of capacity at Loy Yang A due to a tube leak and its eventual trip at 4.55 pm. This removed 560 MW of capacity, of which 550 MW was priced below $10 per MWh. It remained offline until 11 August.

8.6 5 August, Tasmania (FCAS)

On 5 August, the local raise regulation price in Tasmania exceeded $5,000 per MW for three 30-minute periods in the morning (8 am to 9 am). The prices ranged between $7,576 per MWh and $13,845 per MWh.

Regulation services continuously adjust to small changes in demand or supply to maintain the frequency of the power system within set frequency operating standards.

To manage power system security constraints have been implemented to guarantee the dispatch of 50 MW of regulation FCAS in Tasmania.

During the three 30-minute periods, there was over 900 MW of raise regulation services offered, all under $10 per MW. Due to the trade-off between the FCAS and Energy markets (section 8.6.1) only 50 MW of this capacity was effectively available to meet the 50 MW requirement and price was set at above $5,000 per MWh.

8.6.1 Energy FCAS trade-off sets the price

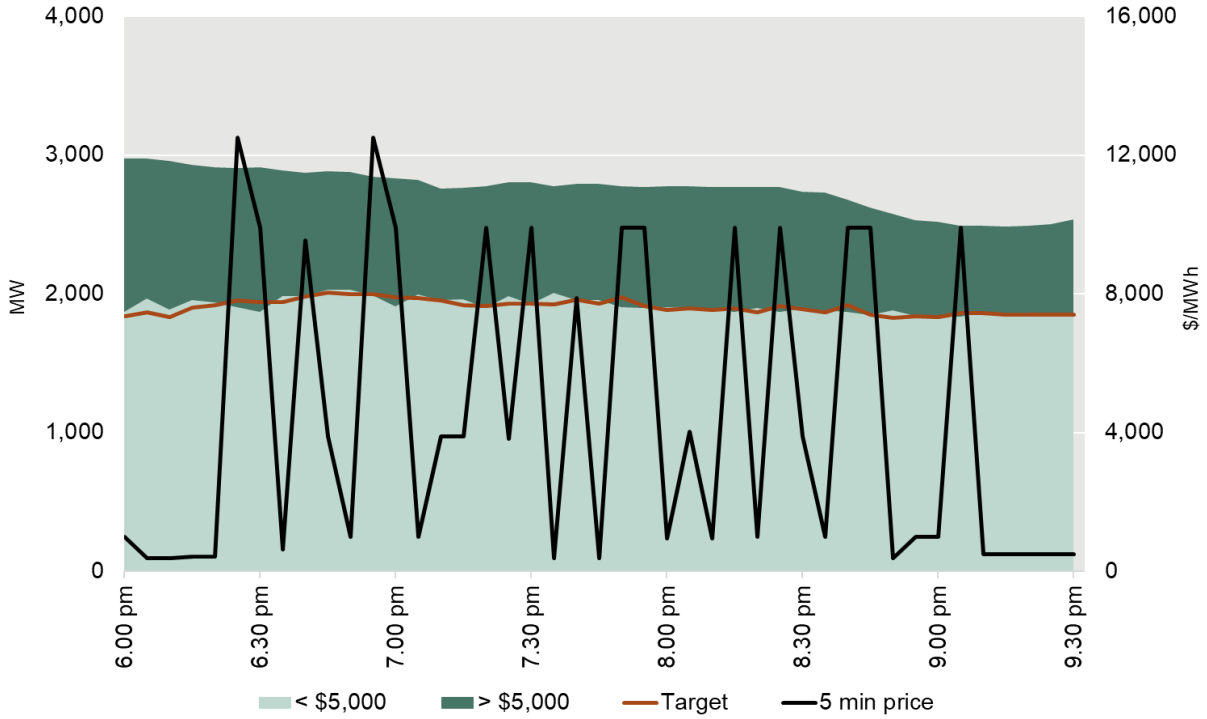
The market operator's dispatch engine simultaneously optimises the FCAS and energy markets, every dispatch interval, to determine the least cost outcome. This can lead to a trade-off between the FCAS and energy markets. For example, a generator may be reduced in providing raise ancillary services so it can provide additional energy or vice versa. This can impact the prices in both the energy and FCAS markets.

On this day, as detailed above (section 8.5), prices were high across the NEM and Tasmania was exporting to the mainland at close to the nominal limit of Basslink. This meant that generation in Tasmania that offer in raise regulation services were also generating at high levels for the energy market to meet Tasmanian demand and exports to the mainland. This reduced the amount of raise regulation capacity effectively available to the minimum to cover the 50 MW requirement. As a result, the FCAS price was reflecting the cost of energy at the time which was above $5,000 per MWh.

8.7 6 August, South Australia

On 6 August, the 30-minute price in South Australia reached $6,245 per MWh at 7 pm and $5,402 per MWh at 7.30 pm. High prices were mostly forecast. Around 70% of capacity was offered below $5,000 per MWh.

Figure 13 Capacity offered above and below $5,000 per MWh on 6 August



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

8.7.1 Limited output from wind generation

Wind output was lower than forecast, averaging 187 MW out of around 2,763 MW installed during the high prices. This equates to around 7% of installed capacity in South Australia.

8.7.2 Network limitations

A planned outage of the Tailem Bend to Tungkillo line meant flows on Heywood were limited into South Australia due to FCAS requirements and South Australia was unable to import sufficient low-priced capacity during the high prices.

8.7.3 Rebids

Between 2 MW and 64 MW of high-priced capacity was needed to meet demand. Rebidding for commercial reasons contributed to the high price (Appendix F).

For the high price periods, AGL rebid up to 44 MW of capacity to high prices. This was mainly a result of AGL shifting 70 MW of capacity at its Torrens Island gas units from below $138 per MWh to $17,500 per MWh at 6.20 pm due to a change in forecast prices. There were other rebids where they shifted capacity from high to low prices.

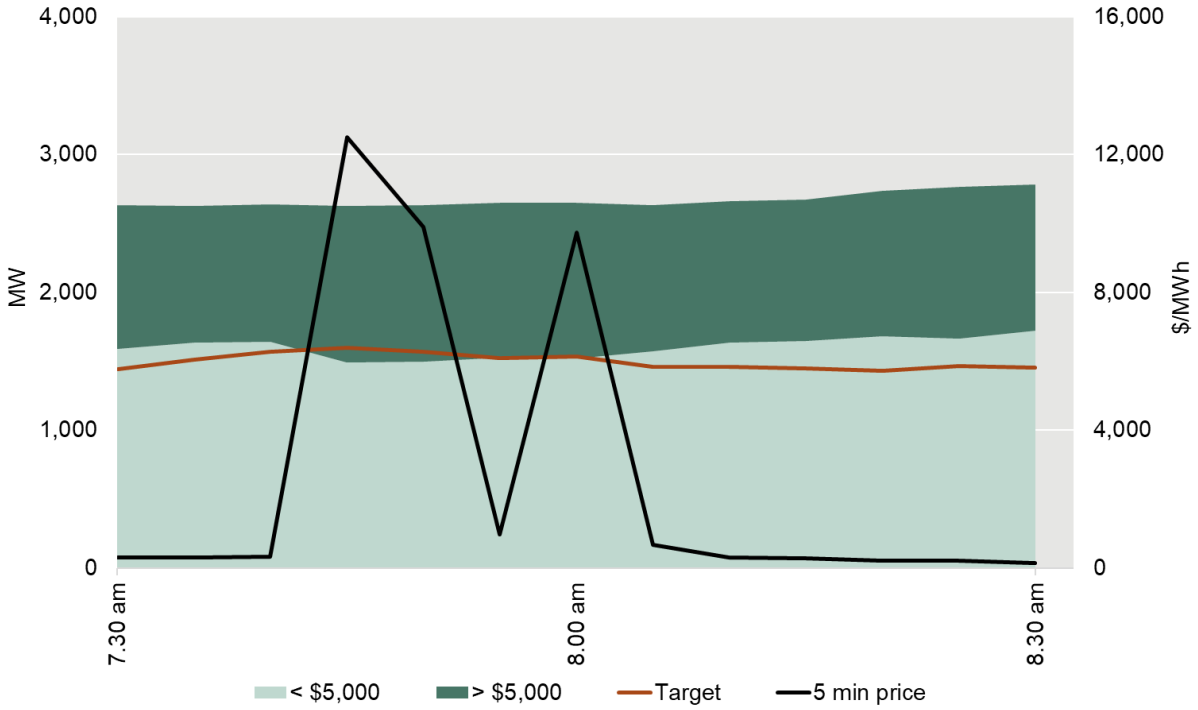
At 6.53 pm, effective from 7 pm, Neoen shifted 52 MW of capacity at its Hornsdale battery from under $4,000 per MWh to above $9,900 per MWh due to a change in forecast

enablement and set the price for 7 pm. It set the price six times during the high price periods - three times at $3,898 per MWh and three times at $9,900 per MWh.

8.8 22 August, South Australia

On 22 August, the 30-minute price in South Australia exceeded $5,000 per MWh once in the morning. The price reached $5,623 per MWh at 8 am. The high price was forecast. Around 59% of capacity was offered below $5,000 per MWh.

Figure 14 Capacity offered above and below $5,000 per MWh on 22 August



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

8.8.1 Limited output from wind generation

Wind output was lower than forecast, averaging 200 MW out of 2,763 MW installed capacity during the high prices. This equates to around 7% of installed capacity in South Australia.

8.8.2 Network limitations

A planned outage of the Heywood to Mortlake line meant flows on Heywood were reduced to 50 MW into South Australia due to FCAS requirements and South Australia was unable to import sufficient low-priced capacity during the high prices.

Flows over the Murraylink interconnector was also limited to 22 MW due to planned network outage on the Kerang to Wemen line.

8.8.3 Rebidding

Between 11 MW and 106 MW of high-priced capacity was needed to meet demand. Rebidding for commercial and technical reasons contributed to the high price (Appendix G).

Over three rebids from 6.19 am, EnergyAustralia removed 35 MW of capacity from the price floor (-$1,000 per MWh) at Hallett due to its gas turbine tripping during the high price periods.

At 7.39 am, effective for all high price periods, AGL rebid 50 MW of capacity at Torrens Island battery from $177 per MWh to the price cap due to changes in forecast prices.

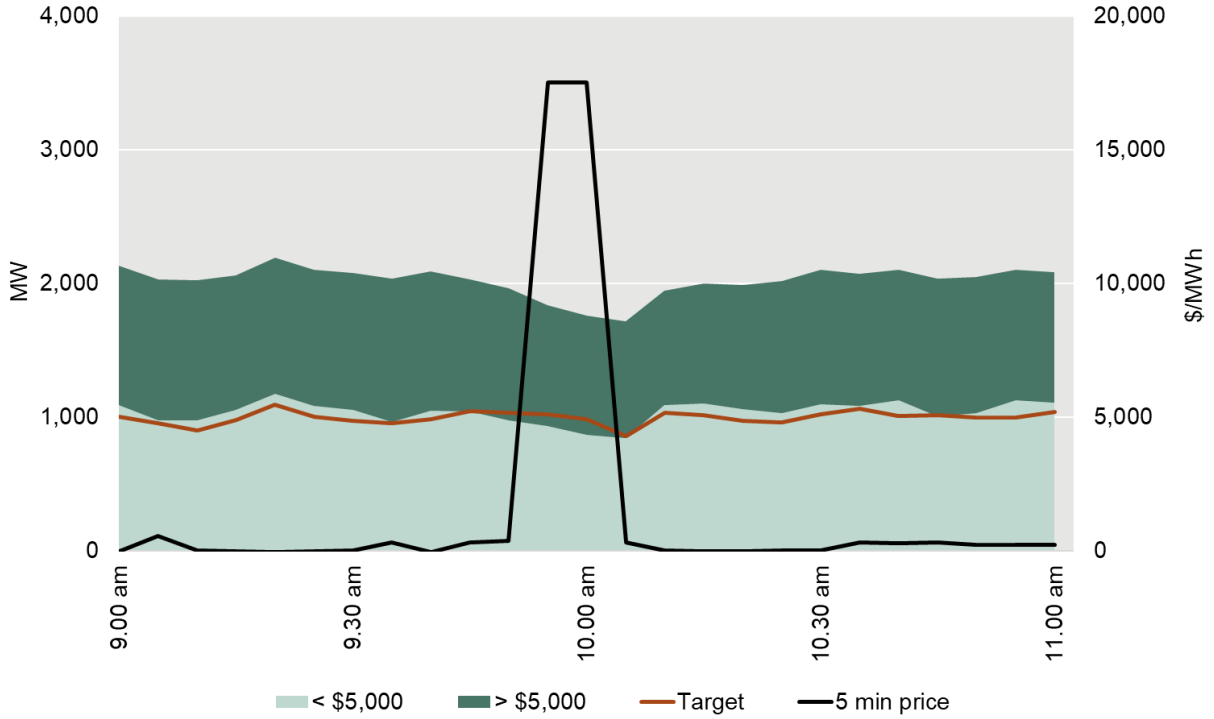
At 7.41 am, effective from 7.50 am, Neoen rebid 80 MW of capacity at Hornsdale battery from $277 per MWh to $9,900 per MWh due to a change in forecast prices and set the price for 7.50 am.

Iberdrola was shifting 25 MW of capacity from high to low prices and back down again almost every 5 minutes in the lead up to the high price periods due to changes in its state of charge and forecast prices. At 7.42 am, effective from 7.50 am, Iberdrola shifted 25 MW of capacity at Lake Bonney battery from below $240 per MWh to greater than $9,900 per MWh due to a change in forecast state of charge and set the price at 8 am.

8.9 6 September, South Australia

On 6 September, the 30-minute price in South Australia exceeded $5,000 per MWh once in the morning. The price reached $6,002 per MWh at 10 am. The high price was not forecast. Around 50% of capacity was offered below $5,000 per MWh.

Figure 15 Capacity offered above and below $5,000 per MWh on 6 September



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

8.9.1 Low wind and solar generation

Wind output averaged 602 MW out of around 2,763 MW installed capacity during the high prices, which equates to around 22% of installed capacity in South Australia.

Average solar output was 191 MW out of around 600 MW of maximum capacity due to cloudy conditions.[21]

The cloudy conditions also meant rooftop solar output was low which resulted in higher demand. Total demand at 10 am was 1,425 MW compared to the previous month average of 1,073 MW.

8.9.2 Network limitations

In addition to the poor wind and solar conditions, system normal constraints on the Heywood interconnector capped wind, solar and battery generation in the south-east region. Murraylink was also on a planned outage with flows reduced to 0 MW which limited South Australia's ability to access cheaper generation to alleviate the high prices.

[21] Installed capacity is based on maximum capacity.

8.9.3 Generation outages and start up constrained

Generators were unavailable or unable to start up quickly enough to help lower the price. Engie's Pelican Point station (478 MW registered capacity) had been on a planned outage since 31 August and Dry Creek unit 2 could not start fast enough to help lower the price. The Dry Creek unit had 35 MW priced at the floor (-$1,000 per MWh) for the 10 am 5-minute interval, none of which could be dispatched in time.

8.9.4 Rebidding

Between 6 MW and 38 MW of high-priced capacity was needed to meet demand.[22]

At 9.29 am, effective from 9.35 am, AGL shifted 50 MW of capacity at Barker Inlet from $561 per MWh to $17,500 per MWh due to a change in demand and non-scheduled generation forecasts (Appendix H).

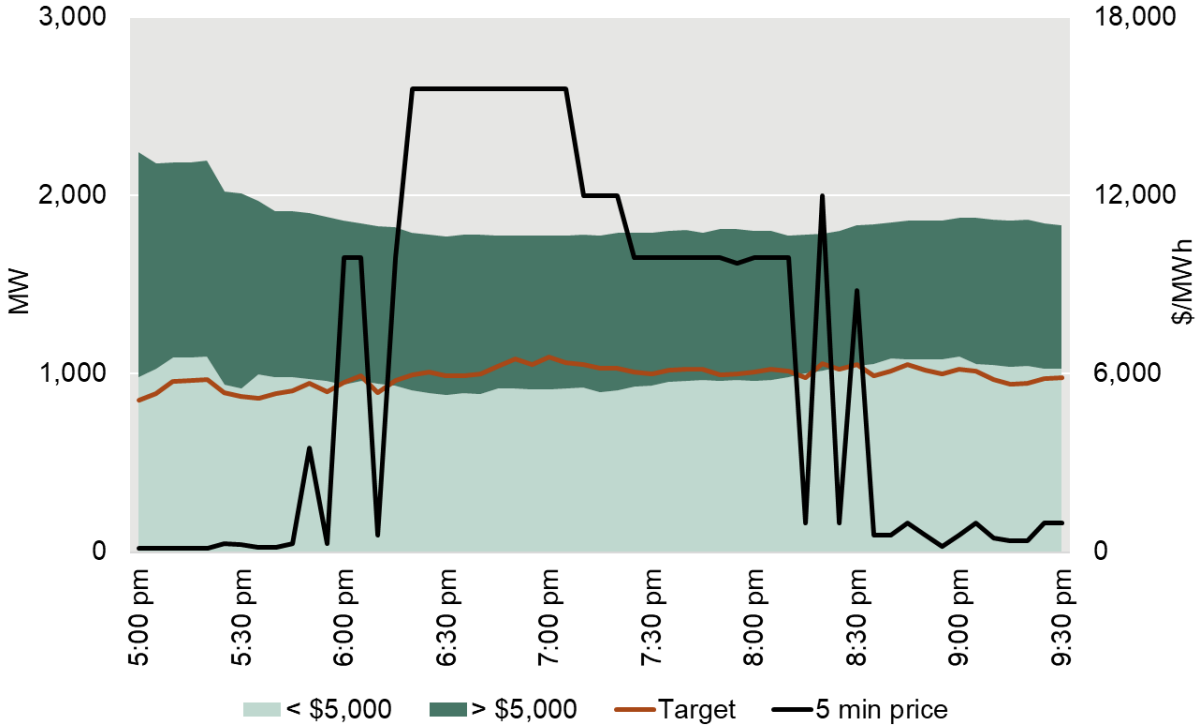
[22] The actual high price capacity needed was between 86 MW and 118 MW but AGL had 80 MW of this capacity under direction by AEMO. This capacity was not taken into account as it must be dispatched and was unable to set the price.

8.10 23 September, South Australia

On 23 September, 30-minute prices exceeded $5,000 per MWh five times in the evening (6.30 pm to 8.30 pm). The price ranged between $7,095 per MWh and $15,600 per MWh. High prices were forecast with known supply constraints.

Around 59% of capacity was priced below $5,000 per MWh on average. This compares to 70% of capacity offered below $5,000 per MWh during the high prices between 18 July and 22 August. This was not due to significant rebidding, rather it was mostly set up a day ahead by market participants. For example, on average AGL offered 85% of its capacity above $5,000 per MWh, which accounts for 64% of capacity above $5,000 per MWh in South Australia (Table 3).

Figure 16 Capacity offered above and below $5,000 per MWh, 23 September



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

Table 3: Percentage of South Australian capacity above $5,000 per MWh by participant

AGL	Engie	Origin	Neoen	Snowy	Iberdrola	Vena Energy
64%	11%	9%	8%	6%	2%	1%

Source: AER analysis using NEM data.
Note: Participants with more than 1% are shown.

8.10.1 Limited output from wind generation

Wind output was lower than forecast, averaging 25 MW out of 2,763 MW of installed capacity during the high prices, which equates to around 1% of installed capacity in South Australia.

8.10.2 Network limitations

Equipment maintenance led to a planned line outage on the Para to Parafield Gardens West 275 kV line. This resulted in three stations (Snapper Point, Pelican Point and Bolivar) that had 267 MW of low-priced capacity constrained, preventing low-priced capacity making it to market. The outage was planned on 8 August to occur from 18 September until 1 October.

Flows on Murraylink into South Australia was reduced to around 25 MW out of its 220 MW nominal capacity due to a planned line outage around the Balranald area in New South Wales to avoid voltage collapse. The outage was planned since 8 August and commenced on 21 September and finished on 27 September.

Despite Heywood importing around 600 MW of capacity into South Australia during the high-priced periods, the cheaper generation into South Australia was still not enough to alleviate the high prices.

8.10.3 Rebidding

Rebidding was only relevant for the 8.30 pm high price period where between 8 MW and 60 MW of high-priced capacity was needed to meet demand (Appendix I). The other periods required up to 177 MW of high-priced capacity.

At 7.07 pm, effective from 7.20 pm, Iberdrola shifted 25 MW of capacity at Lake Bonney battery from $3,500 per MWh to above $12,900 per MWh due to an increase in price.

Over four rebids from 7.52 pm, Neoen gradually removed 77 MW of capacity at Hornsdale battery at $9,900 per MWh. Reasons given were a change in forecast enablement and internal price forecast differing from the AEMO price. They were setting the price at $9,900 per MWh at 8.05 pm and 8.10 pm. By 8.20 pm, they had removed 77 MW of capacity and the actual price increased to the next highest generator at $12,001 per MWh.

Over two rebids from 7.56 pm, SA Water removed a total of 10 MW of capacity at its Desalination Plant and Happy Valley battery at around $1,000 per MWh due to being close to its state of charge limit.

9 Appendix A – Significant rebids, 18 July

8.10 am (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
6.41 am		AGL Energy	Barker Inlet	17	138	17,500	050 Chg in AEMO PD~56 Price increase [SA] avg $461.88 5MPD vs avg $304.16 PD PE 0700-0800
6.53 am		AGL Energy	Barker Inlet	40	138	17,500	050 Chg in AEMO PD~56 Price increase [region] avg $11027.69 5MPD vs $392.61 PD PE 0800
7.37 am	7.45 am	Neoen	Hornsdale Battery	55	9,900	3,937	Difference in forecasted enablement at time 2024-07-18 07:45:00 AEST, SL
7.42 am	7.50 am	Neoen	Hornsdale Battery	34	<3,937	9,900	Difference in forecasted enablement at time 2024-07-18 07:50:00 AEST, SL
7.43 am	7.50 am	Iberdrola	Lake Bonney Battery	25	<996	12,936	Change in forecast prices
7.47 am	7.55 am	Neoen	Hornsdale Battery	21	421	9,900	Difference in forecasted enablement at time 2024-07-18 08:00:00 AEST, SL
7.52 am	8.00 am	Neoen	Hornsdale Battery	55	9,900	3,937	Difference in forecasted enablement at time 2024-07-18 08:30:00 AEST, SL
7.52 am	8.00 am	Iberdrola	Lake Bonney Battery	25	12,936	<996	Change in forecast SOC
8.02 am	8.10 am	Neoen	Hornsdale Battery	46	3,937	9,900	Difference in forecasted enablement at time 2024-07-18 08:10:00 AEST, SL
8.02 am	8.10 am	Iberdrola	Lake Bonney Battery	25	996	12,936	Elevated price in dispatch interval

8.15 am (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
6.41 am		AGL Energy	Barker Inlet	17	138	17,500	050 Chg in AEMO PD~56 Price increase [SA] avg $461.88 5MPD vs avg $304.16 PD PE 0700-0800
6.53 am		AGL Energy	Barker Inlet	40	138	17,500	050 Chg in AEMO PD~56 Price increase [region] avg $11027.69

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
							5MPD vs $392.61 PD PE 0800
7.37 am		Neoen	Hornsdale Battery	55	9,900	3,937	Difference in forecasted enablement at time 2024-07-18 07:45:00 AEST, SL
7.42 am	7.50 am	Neoen	Hornsdale Battery	28	<3,937	9,900	Difference in forecasted enablement at time 2024-07-18 07:50:00 AEST, SL
7.43 am	7.50 am	Iberdrola	Lake Bonney Battery	20	<996	12,936	Change in forecast prices
7.47 am	7.55 am	Neoen	Hornsdale Battery	27	421	9,900	Difference in forecasted enablement at time 2024-07-18 08:00:00 AEST, SL
7.47 am	7.55 am	Iberdrola	Lake Bonney Battery	5	<392	12,936	Change in forecast prices
7.52 am	8.00 am	Neoen	Hornsdale Battery	55	9,900	3,937	Difference in forecasted enablement at time 2024-07-18 08:30:00 AEST, SL
7.52 am	8.00 am	Iberdrola	Lake Bonney Battery	25	12,936	<996	Change in forecast SOC
8.06 am	8.15 am	Iberdrola	Lake Bonney Battery	25	996	12,936	Change in forecast SOC
8.07 am	8.15 am	Neoen	Hornsdale Battery	55	3,937	9,900	Difference in forecasted enablement at time 2024-07-18 09:10:00 AEST, SL

8.25 am (35 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
6.41 am		AGL Energy	Barker Inlet	17	138	17,500	050 Chg in AEMO PD~56 Price increase [SA] avg $461.88 5MPD vs avg $304.16 PD PE 0700-0800
6.53 am		AGL Energy	Barker Inlet	40	138	17,500	050 Chg in AEMO PD~56 Price increase [region] avg $11027.69 5MPD vs $392.61 PD PE 0800
7.37 am		Neoen	Hornsdale Battery	55	9,900	3,937	Difference in forecasted enablement at time

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
							2024-07-18 07:45:00 AEST, SL
7.52 am	8.00 am	Neoen	Hornsdale Battery	55	421	9,900	Difference in forecasted enablement at time 2024-07-18 08:30:00 AEST, SL
7.52 am	8.00 am	Iberdrola	Lake Bonney Battery	25	<392	12,936	Change in forecast SOC
7.57 am	8.05 am	Iberdrola	Lake Bonney Battery	25	12,936	996	Change in forecast prices
8.02 am	8.10 am	Iberdrola	Lake Bonney Battery	25	996	9,900	Elevated price in dispatch interval
8.12 am	8.20 am	Neoen	Hornsdale Battery	22	9,900	3,937	Difference in forecasted enablement at time 2024-07-18 09:10:00 AEST, SL
8.12 am	8.20 am	Iberdrola	Lake Bonney Battery	12	12,936	996	Elevated price in dispatch interval
8.17 am	8.25 am	Neoen	Hornsdale Battery	22	3,937	9,900	Difference in forecasted enablement at time 2024-07-18 09:15:00 AEST, SL
8.17 am	8.25 am	Iberdrola	Lake Bonney Battery	12	996	9,900	Elevated price in dispatch interval

8.30 am (58 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
6.41 am		AGL Energy	Barker Inlet	17	138	17,500	050 Chg in AEMO PD~56 Price increase [SA] avg $461.88 5MPD vs avg $304.16 PD PE 0700-0800
6.52 am		Iberdrola	Lake Bonney Battery	13	<996	12,936	Change in forecast SOC
6.53 am		AGL Energy	Barker Inlet	40	138	17,500	050 Chg in AEMO PD~56 Price increase [region] avg $11027.69 5MPD vs $392.61 PD PE 0800
7.06 am		Iberdrola	Lake Bonney Battery	12	<996	12,936	Change in forecast SOC
7.21 am		Iberdrola	Lake Bonney Battery	4	12,936	<9,900	Change in forecast prices
7.28 am		Iberdrola	Lake Bonney Battery	4	<9,900	12,936	Change in forecast prices
7.37 am		Iberdrola	Lake Bonney Battery	12	12,936	<996	Change in forecast SOC
7.43 am		Iberdrola	Lake Bonney Battery	13	12,936	<996	Change in forecast prices
7.52 am		Iberdrola	Lake Bonney Battery	13	<996	12,936	Change in forecast SOC
7.57 am	8.05 am	Iberdrola	Lake Bonney Battery	13	12,936	996	Change in forecast prices

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
8.02 am	8.10 am	Neoen	Hornsdale Battery	55	3,937	9,900	Difference in forecasted enablement at time 2024-07-18 08:10:00 AEST, SL
8.12 am	8.20 am	Neoen	Hornsdale Battery	16	9,900	3,937	Difference in forecasted enablement at time 2024-07-18 08:10:00 AEST, SL
8.17 am	8.25 am	Neoen	Hornsdale Battery	16	3,937	9,900	Difference in forecasted enablement at time 2024-07-18 08:10:00 AEST, SL

8.35 am (70 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
6.41 am		AGL Energy	Barker Inlet	17	138	17,500	050 Chg in AEMO PD~56 Price increase [SA] avg $461.88 5MPD vs avg $304.16 PD PE 0700-0800
6.53 am		AGL Energy	Barker Inlet	38	138	17,500	050 Chg in AEMO PD~56 Price increase [region] avg $11027.69 5MPD vs $392.61 PD PE 0800
7.57 am	8.20 am	Neoen	Hornsdale Battery	47	3,937	9,900	Difference in forecasted enablement at time 2024-07-18 09:15:00 AEST, SL
8.12 am	8.20 am	Neoen	Hornsdale Battery	12	9,900	3,937	Difference in forecasted enablement at time 2024-07-18 09:15:00 AEST, SL
8.17 am	8.25 am	Neoen	Hornsdale Battery	36	9,900	3,937	Difference in forecasted enablement at time 2024-07-18 09:15:00 AEST, SL
8.17 am	8.25 am	Iberdrola	Lake Bonney Battery	25	9,900	996	Elevated price in dispatch interval
8.21 am	8.30 am	Iberdrola	Lake Bonney Battery	25	996	9,900	Elevated price in dispatch interval
8.22 am	8.30 am	Neoen	Hornsdale Battery	18	3,937	9,900	Difference in forecasted enablement at time 2024-07-18 09:15:00 AEST, SL

8.40 am (61 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
6.41 am		AGL Energy	Barker Inlet	17	138	17,500	050 Chg in AEMO PD~56 Price increase [SA] avg $461.88 5MPD vs avg $304.16 PD PE 0700-0800
6.53 am		AGL Energy	Barker Inlet	38	138	17,500	050 Chg in AEMO PD~56 Price increase [region] avg $11027.69 5MPD vs $392.61 PD PE 0800
8.28 am	8.35 am	Iberdrola	Lake Bonney Battery	22	996	9,900	Change in forecast SOC

8.45 am (60 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
6.41 am		AGL Energy	Barker Inlet	17	138	17,500	050 Chg in AEMO PD~56 Price increase [SA] avg $461.88 5MPD vs avg $304.16 PD PE 0700-0800
6.53 am		AGL Energy	Barker Inlet	38	138	17,500	050 Chg in AEMO PD~56 Price increase [region] avg $11027.69 5MPD vs $392.61 PD PE 0800
7.57 am		Iberdrola	Lake Bonney Battery	25	<996	12,936	Change in forecast prices
8.02 am		Iberdrola	Lake Bonney Battery	25	12,936	9,900	Elevated price in dispatch interval
8.06 am		Iberdrola	Lake Bonney Battery	25	9,900	12,936	Change in forecast SOC
8.12 am	8.20 am	Iberdrola	Lake Bonney Battery	25	12,936	9,900	Elevated price in dispatch interval
8.17 am	8.25 am	Iberdrola	Lake Bonney Battery	12	9,900	996	Elevated price in dispatch interval
8.21 am	8.30 am	Iberdrola	Lake Bonney Battery	12	996	9,900	Elevated price in dispatch interval

8.50 am (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
6.41 am		AGL Energy	Barker Inlet	17	138	17,500	050 Chg in AEMO PD~56 Price increase [SA] avg $461.88 5MPD vs avg $304.16 PD PE 0700-0800
6.53 am		AGL Energy	Barker Inlet	38	138	17,500	050 Chg in AEMO PD~56 Price increase [region] avg $11027.69 5MPD vs $392.61 PD PE 0800
7.37 am		Neoen	Hornsdale Battery	55	9,900	3,937	Difference in forecasted enablement at time 2024-07-18 07:45:00 AEST, SL
7.37 am		Iberdrola	Lake Bonney Battery	25	12,936	<996	Change in forecast SOC
7.57 am		Neoen	Hornsdale Battery	28	3,937	9,900	Change in forecasted enablement SL
7.57 am		Iberdrola	Lake Bonney Battery	18	<996	12,936	Change in forecast prices
8.02 am		Neoen	Hornsdale Battery	27	3,937	9,900	Difference in forecasted enablement at time 2024-07-18 08:10:00 AEST, SL
8.02 am		Iberdrola	Lake Bonney Battery	7	996	9,900	Elevated price in dispatch interval
8.12 am		Neoen	Hornsdale Battery	3	3,937	3,937	Difference in forecasted enablement at time

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
							2024-07-18 09:10:00 AEST, SL
8.12 am		Iberdrola	Lake Bonney Battery	1	12,936	996	Elevated price in dispatch interval
8.17 am	8.25 am	Neoen	Hornsdale Battery	27	9,900	3,937	Difference in forecasted enablement at time 2024-07-18 09:15:00 AEST, SL
8.17 am	8.25 am	Iberdrola	Lake Bonney Battery	11	9,900	996	Elevated price in dispatch interval
8.22 am	8.30 am	Neoen	Hornsdale Battery	30	3,937	9,900	Difference in forecasted enablement at time 2024-07-18 09:20:00 AEST, SL
8.21 am	8.30 am	Iberdrola	Lake Bonney Battery	12	996	9,900	Elevated price in dispatch interval
8.43 am	8.50 am	Iberdrola	Lake Bonney Battery	25	9,900	996	Elevated price in dispatch interval

8.55 am (31 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
6.41 am		AGL Energy	Barker Inlet	17	138	17,500	050 Chg in AEMO PD~56 Price increase [SA] avg $461.88 5MPD vs avg $304.16 PD PE 0700-0800
6.53 am		AGL Energy	Barker Inlet	38	138	17,500	050 Chg in AEMO PD~56 Price increase [region] avg $11027.69 5MPD vs $392.61 PD PE 0800
7.37 am		Neoen	Hornsdale Battery	55	9,900	3,937	Difference in forecasted enablement at time 2024-07-18 07:45:00 AEST, SL
8.02 am		Neoen	Hornsdale Battery	55	3,937	9,900	Difference in forecasted enablement at time 2024-07-18 08:10:00 AEST, SL
8.02 am		Iberdrola	Lake Bonney Battery	25	996	12,936	Elevated price in dispatch interval
8.21 am	8.30 am	Iberdrola	Lake Bonney Battery	6	9,900	996	Elevated price in dispatch interval
8.28 am	8.35 am	Iberdrola	Lake Bonney Battery	6	996	9,900	Change in forecast SOC
8.47 am	8.55 am	Iberdrola	Lake Bonney Battery	25	9,900	996	Change in forecast SOC

10 Appendix B – Significant rebids, 28 July

6.15 pm (18 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
3.42 pm		AGL Energy	Barker Inlet	50	0	17,500	050 Chg in AEMO PD~54 PD price change [SA] $-8900 PE 1700 PD 1532
5.33 pm		Neoen	Hornsdale Battery	55	9,900	3,937	Difference in forecasted enablement at time 2024-07-28 18:25:00 AEST, SL
5.43 pm	5.50 pm	Neoen	Hornsdale Battery	55	3,937	9,900	Difference in forecasted enablement at time 2024-07-28 17:55:00 AEST, SL
5.52 pm	6 pm	Neoen	Hornsdale Battery	55	9,900	3,937	Difference in forecasted enablement at time 2024-07-28 18:20:00 AEST, SL
6.07 pm	6.15 pm	Neoen	Hornsdale Battery	55	3,937	9,900	Difference in forecasted enablement at time 2024-07-28 19:00:00 AEST, SL

6.20 pm (28 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
3.42 pm		AGL Energy	Barker Inlet	50	0	17,500	050 Chg in AEMO PD~54 PD price change [SA] $-8900 PE 1700 PD 1532
5.33 pm		Neoen	Hornsdale Battery	44	9,900	<3,937	Difference in forecasted enablement at time 2024-07-28 18:25:00 AEST, SL
5.37 pm		Neoen	Hornsdale Battery	55	3,937	9,900	Difference in forecasted enablement at time 2024-07-28 18:05:00 AEST, SL
5.58 pm	6.05 pm	Neoen	Hornsdale Battery	55	9,900	3,937	Difference in forecasted enablement at time 2024-07-28 18:10:00 AEST, SL
6.02 pm	6.10 pm	Neoen	Hornsdale Battery	55	3,937	9,900	Difference in forecasted enablement at time 2024-07-28 18:25:00 AEST, SL
6.07 pm	6.15 pm	Neoen	Hornsdale Battery	55	9,900	3,937	Difference in forecasted enablement at time 2024-07-28 19:00:00 AEST, SL
6.13 pm	6.20 pm	Neoen	Hornsdale Battery	55	3,937	9,900	Difference in forecasted enablement at time 2024-07-28 18:25:00 AEST, SL

6.25 pm (42 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
3.42 pm		AGL Energy	Barker Inlet	50	0	17,500	050 Chg in AEMO PD~54 PD price change [SA] $-8900 PE 1700 PD 1532
5.28 pm		Neoen	Hornsdale Battery	3	999	9,900	Difference in forecasted enablement at time 2024-07-28 18:00:00 AEST, SL
5.33 pm		Neoen	Hornsdale Battery	52	9,900	<3,937	Difference in forecasted enablement at time 2024-07-28 18:25:00 AEST, SL
5.37 pm		Neoen	Hornsdale Battery	55	3,937	9,900	Difference in forecasted enablement at time 2024-07-28 18:05:00 AEST, SL
6.13 pm	6.20 pm	Neoen	Hornsdale Battery	55	9,900	3,937	Difference in forecasted enablement at time 2024-07-28 18:25:00 AEST, SL
6.18 pm	6.25 pm	Neoen	Hornsdale Battery	55	3,937	9,900	Difference in forecasted enablement at time 2024-07-28 18:35:00 AEST, SL

6.35 pm (45 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
3.42 pm		AGL Energy	Barker Inlet	50	0	17,500	050 Chg in AEMO PD~54 PD price change [SA] $-8900 PE 1700 PD 1532
5.43 pm		Neoen	Hornsdale Battery	55	9,900	421	Difference in forecasted enablement at time 2024-07-28 17:55:00 AEST, SL
5.52 pm		Neoen	Hornsdale Battery	55	421	9,900	Difference in forecasted enablement at time 2024-07-28 18:20:00 AEST, SL
6.13 pm	6.20 pm	Neoen	Hornsdale Battery	51	9,900	3,937	Difference in forecasted enablement at time 2024-07-28 18:25:00 AEST, SL
6.18 pm	6.25 pm	Neoen	Hornsdale Battery	51	3,937	9,900	Difference in forecasted enablement at time 2024-07-28 18:35:00 AEST, SL
6.22 pm	6.30 pm	Neoen	Hornsdale Battery	55	9,900	3,937	Difference in forecasted enablement at time 2024-07-28 18:40:00 AEST, SL
6.28 pm	6.35 pm	Neoen	Hornsdale Battery	55	3,937	9,900	Difference in forecasted enablement at time 2024-07-28 18:40:00 AEST, SL

6.45 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
3.42 pm		AGL Energy	Barker Inlet	50	0	17,500	050 Chg in AEMO PD~54 PD price change [SA] $-8900 PE 1700 PD 1532
5.52 pm		Neoen	Hornsdale Battery	55	9,900	3,937	Difference in forecasted enablement at time 2024-07-28 18:20:00 AEST, SL
6.07 pm		Neoen	Hornsdale Battery	55	3,937	9,900	Difference in forecasted enablement at time 2024-07-28 19:00:00 AEST, SL
6.13 pm		Neoen	Hornsdale Battery	32	9,900	3,937	Difference in forecasted enablement at time 2024-07-28 18:25:00 AEST, SL
6.18 pm	6.25 pm	Neoen	Hornsdale Battery	32	3,937	9,900	Difference in forecasted enablement at time 2024-07-28 18:35:00 AEST, SL
6.32 pm	6.40 pm	Neoen	Hornsdale Battery	28	9,900	3,937	Difference in forecasted enablement at time 2024-07-28 19:20:00 AEST, SL
6.37 pm	6.45 pm	Neoen	Hornsdale Battery	28	3,937	9,900	Difference in forecasted enablement at time 2024-07-28 19:05:00 AEST, SL

6.50 pm (18 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
3.42 pm		AGL Energy	Barker Inlet	50	0	17,500	050 Chg in AEMO PD~54 PD price change [SA] $-8900 PE 1700 PD 1532
5.52 pm		Neoen	Hornsdale Battery	55	9,900	3,937	Difference in forecasted enablement at time 2024-07-28 18:20:00 AEST, SL
6.07 pm		Neoen	Hornsdale Battery	55	3,937	9,900	Difference in forecasted enablement at time 2024-07-28 19:00:00 AEST, SL

6.13 pm		Neoen	Hornsdale Battery	32	9,900	3,937	Difference in forecasted enablement at time 2024-07-28 18:25:00 AEST, SL
6.18 pm	6.25 pm	Neoen	Hornsdale Battery	32	3,937	9,900	Difference in forecasted enablement at time 2024-07-28 18:35:00 AEST, SL
6.32 pm	6.40 pm	Neoen	Hornsdale Battery	28	9,900	3,937	Difference in forecasted enablement at time 2024-07-28 19:20:00 AEST, SL
6.37 pm	6.45 pm	Neoen	Hornsdale Battery	28	3,937	9,900	Difference in forecasted enablement at time 2024-07-28 19:05:00 AEST, SL

7 pm (66 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
3.42 pm		AGL Energy	Barker Inlet	50	0	17,500	050 Chg in AEMO PD~54 PD price change [SA] $-8900 PE 1700 PD 1532

For the high prices between 7.20 pm and 8.35 pm (9 MW to 107 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
7.07 pm	7.15 pm	Iberdrola	Lake Bonney Battery	25	392	12,936	Change in forecast SOC

8.40 pm to 9 pm (30 MW to 69 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
7.17 pm		Iberdrola	Lake Bonney Battery	25	3,937	12,936	Change in forecast SOC

9.05 pm to 9.15 pm (14 MW to 69 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
7.57 pm		Iberdrola	Lake Bonney Battery	12	3,937	12,936	Elevated price in dispatch interval

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
8.03 pm		Iberdrola	Lake Bonney Battery	7	3,937	12,936	SA1 RRP DP@20:00 for 20:00 is $6,635.42 higher than 5PD@19:55 ($7,634.85 vs $999.43) SL
8.09 pm		Iberdrola	Lake Bonney Battery	5	9,900	17,500	SA1 RRP DP@20:10 for 20:10 is $11,504.50 higher than 5PD@20:05 ($12,500.44 vs $995.94) SL

9.20 pm (26 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
7.52 pm		Iberdrola	Lake Bonney Battery	2	3,937	12,936	Elevated price in dispatch interval
7.57 pm		Iberdrola	Lake Bonney Battery	7	3,937	12,936	Elevated price in dispatch interval
8.03 pm		Iberdrola	Lake Bonney Battery	7	3,937	12,936	SA1 RRP DP@20:00 for 20:00 is $6,635.42 higher than 5PD@19:55 ($7,634.85 vs $999.43) SL
8.09 pm		Iberdrola	Lake Bonney Battery	5	9,900	17,500	SA1 RRP DP@20:10 for 20:10 is $11,504.50 higher than 5PD@20:05 ($12,500.44 vs $995.94) SL

9.25 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
7.57 pm		Iberdrola	Lake Bonney Battery	3	3,937	12,936	Elevated price in dispatch interval
8.03 pm		Iberdrola	Lake Bonney Battery	16	3,937	12,936	SA1 RRP DP@20:00 for 20:00 is $6,635.42 higher than 5PD@19:55 ($7,634.85 vs $999.43) SL
8.09 pm		Iberdrola	Lake Bonney Battery	5	9,900	17,500	SA1 RRP DP@20:10 for 20:10 is $11,504.50 higher than 5PD@20:05 ($12,500.44 vs $995.94) SL

11 Appendix C – Significant rebids, 30 July all regions

5.55 pm and 6 pm (157 MW to 314 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
5.21 pm	5.30 pm	AGL Energy	Dartmouth	173	0	17,500	050 Chg in AEMO PD~16.32 - 17.02 PD RRP decrease [VIC] [-$1332 AVG] for PE 17.30-18.30
5.24 pm	5.30 pm	AGL Energy	Eildon	-60	0	N/A	020 Reduction in avail cap~208 RTS later than exp
5.39 pm	5.45 pm	AGL Energy	Somerton	60	207	17,199	040 Chg in AEMO DISP~Price decrease [VIC] 5MD $406.48 for DI ending 17.40 vs 30MPD $3944.96 for PE 18.00
5.39 pm	5.45 pm	AGL Energy	Loy Yang A	75	9	17,500	040 Chg in AEMO DISP~Price decrease [VIC] 5MD $406.48 for DI ending 17.40 vs 30MPD $3944.96 for PE 18.00
5.49 pm	5.55 pm	AGL Energy	Loy Yang A	200	9	17,500	050 Chg in AEMO PD~Price decrease [VIC] 5MPD $1444.02 for TI ending 18.10 vs 30MPD $2808.65 for PE 18.30

12 Appendix D – Significant rebids, 30 July South Australia

7.15 pm and 7.20 pm (77 MW to 120 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
4.49 pm		AGL Energy	Barker Inlet	17	<138	17,500	050 Chg in unit operation~eng #4 LFO operation
6.52 pm	7 pm	Engie	Pelican Point	138	<225	17,500	Constraint Management. V_VS_LB_HY_50 - SL
7.07 pm	7.15 pm	AGL Energy	Barker Inlet	123	<138	17,500	040 Chg in AEMO DISP~45 Price change vs PD [SA] $1000.09 vs $299.99 PE 1930

For the high prices from 7.25 pm to 8 pm (86 MW to 137 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
4.49 pm		AGL Energy	Barker Inlet	17	<138	17,500	050 Chg in unit operation~eng #4 LFO operation
6.52 pm		Engie	Pelican Point	38	<225	17,500	Constraint Management. V_VS_LB_HY_50 - SL
7.07 pm	7.15 pm	AGL Energy	Barker Inlet	123	<138	17,500	040 Chg in AEMO DISP~45 Price change vs PD [SA] $1000.09 vs $299.99 PE 1930
7.18 pm	7.25 pm	Engie	Pelican Point	100	12,500	17,500	Constraint Management. V_VS_LB_HY_50

The high prices from 8.05 pm to 8.30 pm (52 MW to 102 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
4.49 pm		AGL Energy	Barker Inlet	17	<138	17,500	050 Chg in unit operation~eng #4 LFO operation
7.24 pm		AGL Energy	Barker Inlet	123	<138	17,500	050 Chg in AEMO PD~56 Price increase [SA] avg $579.77 5MPD vs $230.96 PD PE 2030
7.43 pm	7.50 pm	AGL Energy	Barker Inlet	35	17,500	0	050 Chg in AEMO PD~55 PD price change [SA] avg $16287 PE 2000-2030 PD 1932
7.53 pm	8.05 pm	Engie	Pelican Point	137	<225	>12,500	Constraint Management. VS_050_DYN - SL

8.35 pm and 8.40 pm (24 to 51 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
4.49 pm		AGL Energy	Barker Inlet	17	<138	17,500	050 Chg in unit operation~eng #4 LFO operation
8.18 pm	8.25 pm	Engie	Pelican Point	137	<225	17,500	Constraint Management. V_VS_LB_HY_50 - SL
8.21 pm	8.30 pm	AGL Energy	Barker Inlet	88	<138	17,500	050 Chg in AEMO PD~55 PD MWFLOW change [Heywood] avg +58MW 5MPE 2035-2105 5MPD 2015-2020

8.45 pm and 8.50 pm (9 to 18 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
4.49 pm		AGL Energy	Barker Inlet	17	<138	17,500	050 Chg in unit operation~eng #4 LFO operation
7.40 pm		Neoen	Hornsdale Battery	-25	999	N/A	SOC MANAGEMENT
8.18 pm	8.25 pm	Engie	Pelican Point	137	<225	17,500	Constraint Management. V_VS_LB_HY_50 - SL
8 pm	8.30 pm	AGL Energy	Barker Inlet	88	<138	17,500	050 Chg in AEMO PD~55 PD MWFLOW change [Heywood] avg +58MW 5MPE 2035-2105 5MPD 2015-2020

13 Appendix E – Significant rebids, 5 August

Morning high prices

8.40 am to 9.15 am (1 MW to 927 MW of combined high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
7.23 am		AGL Energy	Bayswater	400	36	17,500	050 Change in AEMO PD~50 PD (06:01-07:01) available generation change ['QLD1','NSW1','VIC1','SA1'] [225MW avg] for PE 08:00-09:00 - SL
8.03 am		AGL Energy	Dartmouth	173	17,500	0	F 095 Unit triggered by market~095 Avoid uneconomical start/stop
8.14 am		AGL Energy	McKay	160	17,500	0	F 095 Unit triggered by market~095 Avoid uneconomical start/stop
8.14 am		AGL Energy	Somerton	20	17,199	0	F 095 Unit triggered by market~095 Avoid uneconomical start/stop
8.24 am		AGL Energy	Somerton	20	17,199	0	040 Chg in testing requ~GT2 Test Run full load: EST 30 min

Evening high prices

5.15 pm to 5.30 pm (200 MW to 445 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
2.35 pm		EnergyAustralia	Tallawarra	-215	<89	N/A	Adj avail and ROC due to revised RTS on cooling water screen issue, ROC=1 on RTS requirement SL
3.07 pm		Origin Energy	Eraring	250	<50	17,500	A DEC NEM DEM 5PD 23486MW < 30PD 23638MW @ 1540 SL
3.08 pm		Origin Energy	Mortlake	296	<166	17,500	DEC NEM DEM 5PD 23486MW < 30PD 23638MW @ 1540 SL
3.36 pm		Origin Energy	Mortlake	40	-1,000	17,500	MW Redistribution SL
3.49 pm		AGL Energy	Loy Yang A	-250	<9	N/A	020 Reduction in avail cap~ Potential Tube Leak

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
4.10 pm		Origin Energy	Mortlake	40	-1,000	17,500	Correct bid - PMW redistribution SL
4.22 pm		Origin Energy	Uranquinty	80	17,500	-1,000	A constraint management – F_S++TBTU_L6 SL
4.25 pm		AGL Energy	Loy Yang A	-300	-1,000	N/A	010 Unexpected/plant limits~106 Aux/Plant failure

14 Appendix F – Significant rebids, 6 August

6.40 pm and 6.55 pm (1 MW to 7 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
6.20 pm	6.30 pm	AGL Energy	Torrens Island	70	138	17,500	050 Chg in AEMO PD~18:02 PD RRP decrease SA -$2,526 AVG for PE 18:30 - 19:00

7 pm (64 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
6.20 pm	6.30 pm	AGL Energy	Torrens Island	70	138	17,500	050 Chg in AEMO PD~18:02 PD RRP decrease SA - $2,526 AVG for PE 18:30 - 19:00
6.53 pm	7 pm	Neoen	Hornsdale Battery	52	<3,898	>9,900	Change in forecasted enablement SL

7.20 pm and 7.30 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
6.20 pm		AGL Energy	Torrens Island	70	138	17,500	050 Chg in AEMO PD~18:02 PD RRP decrease SA - $2,526 AVG for PE 18:30 - 19:00

15 Appendix G – Significant rebids, 22 August

7.45 am (106 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
6.19 am		EnergyAustralia	Hallett	-1	-1,000	N/A	Adj avail/PASA due to GT tripped SL
6.24 am		EnergyAustralia	Hallett	-16	-1,000	N/A	Adj avail/PASA due to GT tripped SL
6.31 am		EnergyAustralia	Hallett	-18	-1,000	N/A	Adj avail/PASA due to GT tripped SL
7.07 am		Iberdrola	Lake Bonney Battery	25	12,936	<392	Change in forecast SOC
7.23 am	7.30 am	Iberdrola	Lake Bonney Battery	2	36	12,936	Change in forecast prices
7.27 am	7.35 am	Iberdrola	Lake Bonney Battery	23	<240	12,936	Change in forecast prices
7.31 am	7.40 am	Iberdrola	Lake Bonney Battery	25	12936	<240	Change in forecast SOC
7.38 am	7.45 am	Iberdrola	Lake Bonney Battery	25	<240	12,936	Change in forecast SO
7.39 am	7.45 am	AGL Energy	Torrens Island Battery	50	177	17,504	Change in forecast SOC

7.50 am (72 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
6.19 am		EnergyAustralia	Hallett	-1	-1,000	N/A	Adj avail/PASA due to GT tripped SL
6.24 am		EnergyAustralia	Hallett	-16	-1,000	N/A	Adj avail/PASA due to GT tripped SL
6.31 am		EnergyAustralia	Hallett	-18	-1,000	N/A	Adj avail/PASA due to GT tripped SL
7.02 am		Iberdrola	Lake Bonney Battery	25	<9,725	12,936	Change in forecast prices
7.07 am		Iberdrola	Lake Bonney Battery	25	12,936	<949	Change in forecast SOC
7.23 am	7.30 am	Iberdrola	Lake Bonney Battery	25	<240	12,936	Change in forecast SOC
7.31 am	7.40 am	Iberdrola	Lake Bonney Battery	25	12,936	<240	Change in forecast SOC
7.39 am	7.45 am	AGL Energy	Torrens Island Battery	50	177	17,504	Change in forecast SOC
7.41 am	7.50 am	Neoen	Hornsdale Battery	80	277	9,900	SA1 energy 5PD@2024-08-22 07.45.00 AEST for 2024-08-22 07.50.00 AEST is 12,500.44 vs 5PD@2024-08-22 07.40.00 AEST for 2024-08-22 07.50.00 AEST is 330.00

8 am (11 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
6.19 am		EnergyAustralia	Hallett	-1	-1,000	N/A	Adj avail/PASA due to GT tripped SL
6.24 am		EnergyAustralia	Hallett	-16	-1,000	N/A	Adj avail/PASA due to GT tripped SL
6.31 am		EnergyAustralia	Hallett	-18	-1,000	N/A	Adj avail/PASA due to GT tripped SL
7.07 am		Iberdrola	Lake Bonney Battery	25	12,936	<3,500	Change in forecast SOC
7.39 am	7.45 am	AGL Energy	Torrens Island Battery	50	177	17,504	Change in forecast SOC

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
7.41 am	7.50 am	Neoen	Hornsdale Battery	80	277	9,900	SA1 energy 5PD@2024-08-22 07.45.00 AEST for 2024-08-22 07.50.00 AEST is 12,500.44 vs 5PD@2024-08-22 07.40.00 AEST for 2024-08-22 07.50.00 AEST is 330.00
7.42 am	7.50 am	Iberdrola	Lake Bonney Battery	25	<240	>9,725	Change in forecast SOC

16 Appendix H – Significant rebids, 6 September

9.55 am and 10 am (6 MW to 38 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
9.29 am	9.35 am	AGL Energy	Barker Inlet	50	561	17,500	050 Chg in AEMO PD~50 PD DEMAND_AND_NONSCHEDGEN change SA by an avg. 114MW for 30MPD 09.02 from PE 09.30 to 11.30

17 Appendix I – Significant rebids, 23 September

8.05 pm and 8.10 pm (34 MW to 60 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
7.07 pm		Iberdrola	Lake Bonney Battery	25	3,500	>12,900	Elevated price in dispatch interval
7.56 pm	8.05 pm	South Australian Water Corporation	Adelaide Desalination Plant	-6	996	N/A	Updated SOC close to limit
8.03 pm	8.10 pm	South Australian Water Corporation	Happy Valley Plant	-4	994	N/A	Updated SOC close to limit

8.20 pm (40 MW of high-priced capacity was needed)

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
7.07 pm		Iberdrola	Lake Bonney Battery	25	3,500	>12,900	Elevated price in dispatch interval
7.52 pm	8 pm	Neoen	Hornsdale Battery	-9	9,900	N/A	Change in forecasted enablement SL
7.56 pm	8.05 pm	South Australian Water Corporation	Adelaide Desalinatio n Plant	-6	996	N/A	Updated SOC close to limit
8.03 pm	8.10 pm	South Australian Water Corporation	Happy Valley Plant	-4	994	N/A	Updated SOC close to limit
8.03 pm	8.10 pm	Neoen	Hornsdale Battery	44	9,900	N/A	Internal price forecast expectation differs from the AEMO price SL
8.07 pm	8.15 pm	Neoen	Hornsdale Battery	17	9,900	N/A	Change in forecasted enablement SL
8.12 pm	8.20 pm	Neoen	Hornsdale Battery	7	9,900	N/A	Change in forecasted enablement SL

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

Submitted time	Time effective	Participant	Station	Capacity rebid (MW)	Price from ($/MWh)	Price to ($/MWh)	Rebid reason
7.07 pm		Iberdrola	Lake Bonney Battery	25	3,500	>12,900	Elevated price in dispatch interval
7.56 pm	8.05 pm	South Australian Water Corporation	Adelaide Desalination Plant	-6	996	N/A	Updated SOC close to limit
8.03 pm	8.10 pm	South Australian Water Corporation	Happy Valley Plant	-4	994	N/A	Updated SOC close to limit