

# Significant price variation report

19 June 2023 variation in Sydney  
STTM hub provisional prices

July 2023

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AER Reference: AER14953694

# Contents

<b>1</b>	<b>Obligation .....</b>	<b>1</b>
<b>2</b>	<b>The Sydney STTM hub.....</b>	<b>2</b>
<b>3</b>	<b>Background – Price scheduling .....</b>	<b>3</b>
<b>4</b>	<b>Analysis .....</b>	<b>5</b>
4.1	Summary.....	5
4.2	Analysis of event triggering the significant price variation .....	5
4.3	Simultaneous capacity constraint .....	7

# 1 Obligation

The Australian Energy Regulator (AER) regulates energy markets and networks under national legislation and rules in eastern and southern Australia (known as the National Energy Market), as well as networks in the Northern Territory. Its functions include:

- monitoring wholesale electricity and gas markets to ensure energy businesses comply with the legislation and rules, and taking enforcement action where necessary;
- setting the amount of revenue that network businesses can recover from customers for using networks (electricity poles and wires and gas pipelines) that transport energy;
- regulating retail energy markets in Queensland, New South Wales, South Australia, Tasmania (electricity only), and the ACT;
- operating the Energy Made Easy website, which provides a retail price comparator and other information for energy consumers;
- publishing information on the performance of energy markets, including the annual State of the Energy Market report and biennial effective competition report, to assist stakeholders and the wider community.

In accordance with the National Gas Rules (the Rules), the AER is required to publish a report whenever there is a significant price variation (SPV) in the Victorian Declared Wholesale Gas Market (DWGM) or Short Term Trading Markets (STTM). The AER has published guidelines setting out what constitutes a SPV event.<sup>1</sup>

Outcomes that constitute a SPV in the STTM include when there is a variation of greater than \$14 per GJ between the D-2 price and ex ante price. On the 19 June gas day in the Sydney hub, there was a variation of just over \$14 per GJ between the D-2 price and the ex ante price.

<sup>1</sup> Under Rule 355 of Part 19 of the National Gas Rules (Gas Rules), the AER is required to identify and report on any significant price variations (SPVs) in the DWGM. The Victorian SPV reporting triggers are published in the [DWGM Significant Price Variation Guideline](#).

Under Rule 498 of Part 20 of the Gas Rules, the AER is required to identify and report on any significant price variations (SPVs) in the STTM. The STTM reporting triggers are published in the [STTM Significant Price Variation Guideline](#).

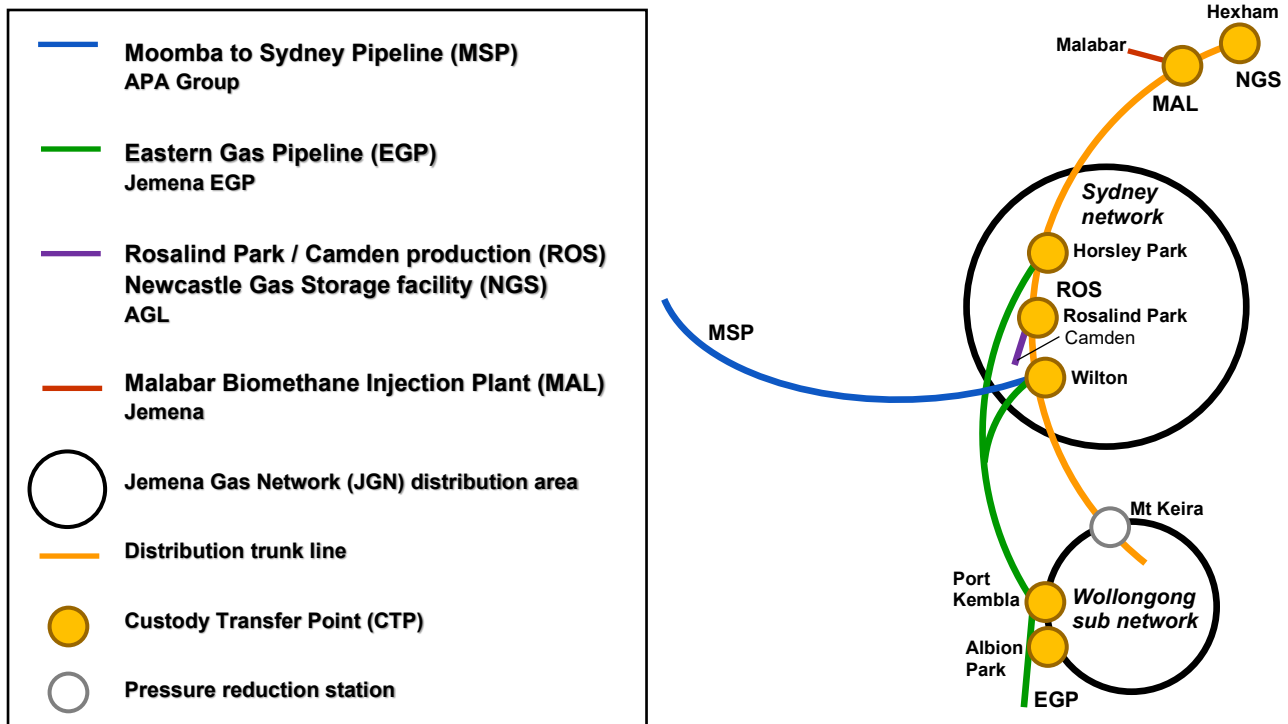
## 2 The Sydney STTM hub

Figure 1 illustrates the connection points of the Sydney hub.

There are two pipelines that can provide MOS to Sydney; the Eastern Gas Pipeline (**EGP**) and the Moomba to Sydney Pipeline (**MSP**).

Sydney also sources gas from the Rosalind Park/Camden facility (**ROS**) and the Newcastle gas storage facility (**NGS**). The Malabar (**MAL**) connection point was also recently added to the hub to connect a biomethane gas production facility to the distribution network.<sup>2</sup>

**Figure 1 The Sydney hub**

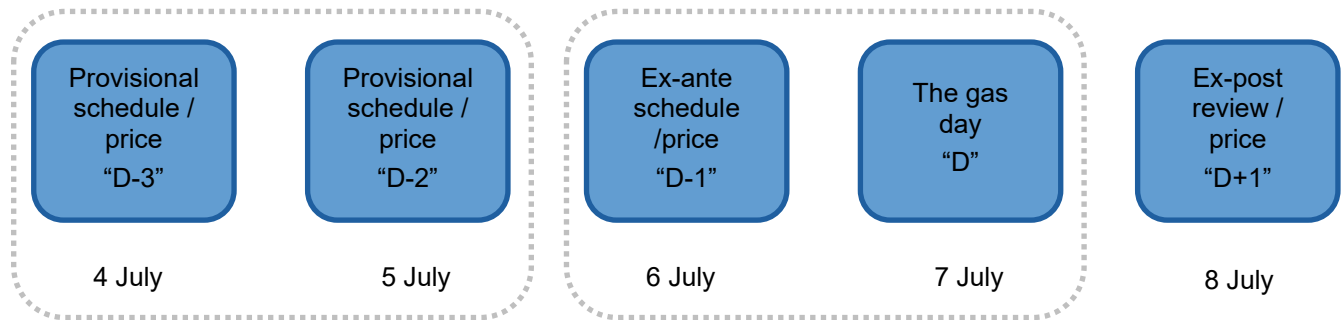


<sup>2</sup> STTM Procedure changes to incorporate the new receipt point became effective from 12 January 2023.

### 3 Background – Price scheduling

Pricing in the gas short term trading markets occurs through a published, 3-day, price discovery process. Figure 1 below shows schematically how this process operates using the 7 July gas day as an example. Participants make offers and bids first for the schedule three days prior (D-3), which produces a forecast price, then the D-2 schedule, and lastly final submissions including updated/new forecast quantities for the D-1 schedule.<sup>3</sup>

**Figure 2 Short Term Trading Market schedule example timeline – 7 July**



Source: AER analysis.

Provisional schedules provide indicative prices. The ex-ante schedule price then sets the actual price paid (or sold) for gas supply scheduled to be traded each gas day in the market. The ex-post price is used to calculate prices when gas scheduled to be shipped or used is supplied or consumed differently to what was scheduled. It is based on what the price would have been if the gas used was scheduled in the market. Both the ex-ante price and ex-post prices are relevant to gas trade – a participant buying gas would pay the ex-ante price for any gas it is scheduled to buy and the ex-post price (if higher) for any gas it consumes above and beyond what it was scheduled to buy.

The AER continually monitors compliance with the NGR including rule 410(2) while taking into account the ability of participants to estimate how much gas they can supply or will use during periods of price volatility.

Rule 410(2) sets out the timing for bids and offers into the STTMs:

#### **Rule 410 – Timing of submissions of ex-ante offers, ex-ante bids and price taker bids**

- (1) *If a Trading Participant expects to supply quantities of natural gas to, or withdraw quantities of natural gas from, a hub on a gas day, the Trading Participant must submit to AEMO in good faith:*
  - (a) *ex-ante offers, ex-ante bids or price taker bids for that gas day that reflect; or*
  - (b) *revisions to an earlier ex-ante offer, ex-ante bid or price taker bid for that gas day so as to reflect,*

<sup>3</sup> Gas quantities include price taker (uncontrollable participant demand forecast) bids, priced bids (for controllable demand), supply offer quantities (for each pipeline facility supplying the STTM hub), and other information such as pipeline capacity limitations.

After the gas day, a further ex-post pricing schedule accounts for changes between what was scheduled to be delivered and what was delivered. The focus of this SPV report is not on the ex-post schedule (as reporting thresholds were not reached for differences between ex-ante prices and ex-post prices).

*the Trading Participant's best estimate of the quantities of natural gas it expects to supply or withdraw on that gas day, as at each of the times specified in subrule (2).*

**(2)** *Any submissions required in accordance with subrule (1) must be made no later than:*

- (a) 7.5 hours after the start of the gas day that is 3 gas days before the relevant gas day; and*
- (b) if revised or not previously submitted, 7.5 hours after the start of the gas day that is 2 gas days before that gas day; and*
- (c) if revised or not previously submitted, 5.5 hours after the start of the gas day before that gas day.*

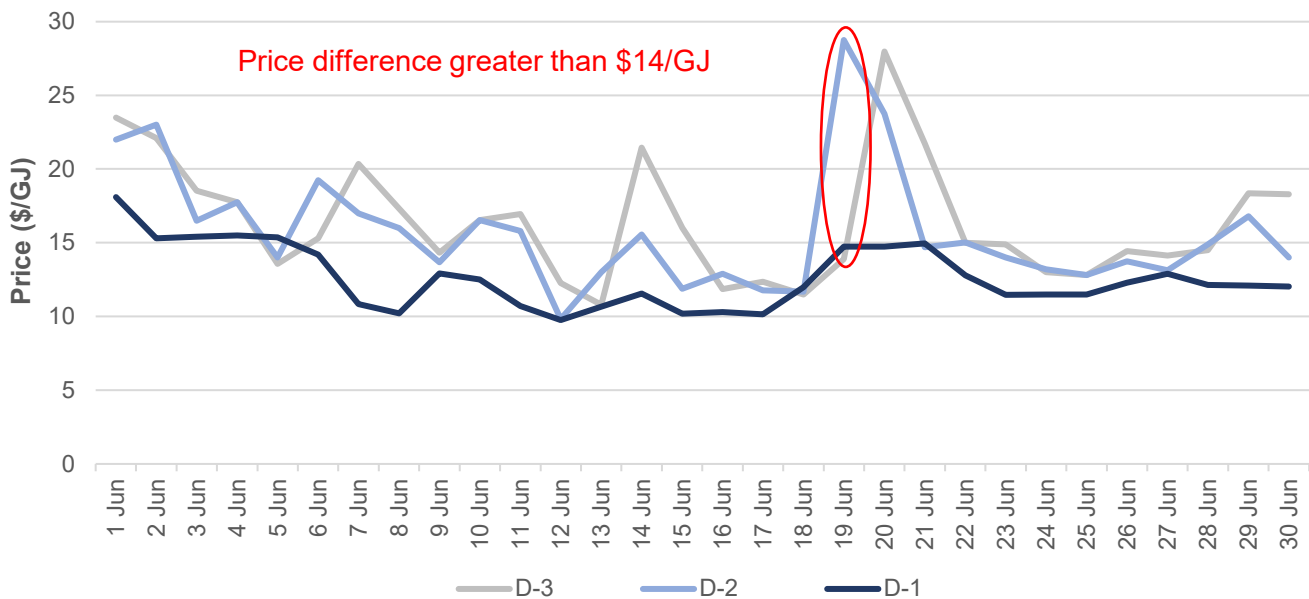
In accordance with rule 410(2), participants must submit offers on either the D-3, D-2 and D-1 when they expect to supply gas. In general market outcomes are optimised when market participants have access to information as early as possible i.e. from the D-3 schedule

## 4 Analysis

### 4.1 Summary

On 19 June 2023, a significant price variation occurred in the Sydney Short Term Trading Market, when the D-2 provisional forecast price increased to \$28.75 per GJ before reducing by just over \$14 per GJ which breached the reporting threshold. The large step change in price occurred following a significant reduction in forecast Moomba to Sydney Pipeline capacity that restricted cheaper offers from being scheduled. Participants subsequently responded to the market price signal and rebid supply offers to reduce the ex ante price closer to the D-3 forecast level. The effect of this was that participants did not ultimately face the peak prices reached prior to rebidding.

**Figure 3 Provisional and ex ante (D-1) prices over June (\$/GJ)**



Note: The increase in provisional price from D-3 to D-2 was similarly large, but is not a trigger for significant price variation reporting.

Source: AER analysis using STTM data.

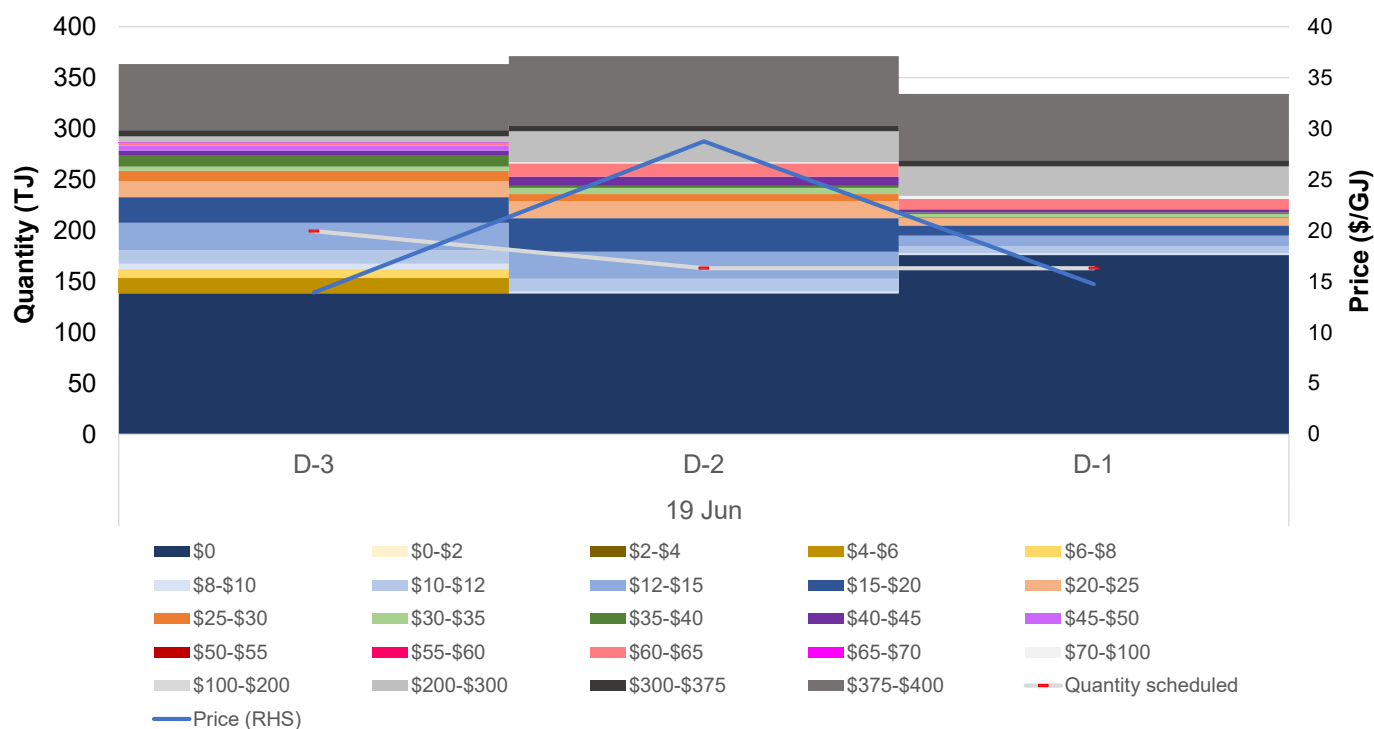
### 4.2 Analysis of event triggering the significant price variation

On 19 June, the D-2 capacity on the Moomba to Sydney pipeline almost halved to 163 TJ, down from the D-3 forecast capacity of 307.1 TJ. The reduction in capacity was related to the pipeline's owner (APA Group) conducting a filter change on Filter 1 at Wilton meter station, reducing the pipeline's ability to supply the STTM. This led to 72.8 TJ of cheaper supply (ranging from \$14-28 per GJ) not being scheduled on the Moomba to Sydney pipeline. In turn, this resulted in the D-2 price rapidly increasing to \$28.75 per GJ.

Through rebidding between D-2 and D-1, participants offered less gas on the Moomba to Sydney Pipeline while shifting a higher proportion of offers into lower price bands. As a result, the total amount of gas scheduled for D-1 was priced at the floor (\$0 per GJ). This led to 26.9 TJ of cheaper supply capacity (at prices ranging from \$0-14.69 per GJ) not being scheduled on the MSP in the ex ante (D-1) schedule, around 16.7 TJ less than unscheduled quantities in the D-2 schedule.



**Figure 4 Offers available on the Moomba to Sydney Pipeline for the 19 June gas day**



Source: AER analysis using STTM data.

This quantity of cheaper offers not scheduled was made up through further rebidding of more cheap supply offers into the Sydney hub via the Eastern Gas pipeline. Capacity offered under \$20 per GJ increasing by 21.1 TJ in the ex ante schedule.

In total, scheduled quantities of gas remained the same from D-2 to D-1, while rebidding significantly reduced the cost of the gas that was scheduled.

**Table 1 Supply quantities scheduled in the Sydney hub for 19 June**

Facility	Provisional and ex ante schedule quantities (TJ)		Highest offer price cleared on each facility (\$/GJ)	
	D-2	D-1	D-2	D-1
Moomba to Sydney Pipeline	163	163	14	0
Eastern Gas Pipeline	138.8	138.4	28.75	14.74
Camden / Rosalind Park	5.8	5.8	0.01	0.01
Newcastle Gas Storage facility	0.5	0.5	0.0001	0.0001
Malabar biomethane plant	0	0	0	0
<b>Total quantity and market price</b>	<b>308</b>	<b>307.6</b>	<b>28.75</b>	<b>14.74</b>

Source: AER analysis using STTM data.

## 4.3 Simultaneous capacity constraint

As a result of the same works, a capacity constraint reduced the Moomba to Sydney pipeline supply capability from 18 to 21 June and led to capacity prices above \$14 per GJ for the 19, 20 and 21 June gas days. This was due to all the Moomba to Sydney pipeline capacity being scheduled at \$0 per GJ, setting capacity constraint prices equal to the ex ante price outcomes for those days.<sup>4</sup> While ex ante prices on the affected days were slightly elevated, they remained relatively stable across the month compared to the average price across the surrounding days of \$12.40 per GJ over June. Due to all the gas in the D-1 scheduled on the Moomba to Sydney pipeline being at the price floor, the capacity price ended at a similar level in both the D-2 and D-1 schedules.

Table 1 shows the days on which the STTM capacity was reduced due to the capacity constraint on the Moomba to Sydney Pipeline.

**Table 2 Capacity limits and prices on the Moomba to Sydney Pipeline (MSP)**

Date	Provisional forecast and schedule capacity limits (TJ)			Capacity prices (\$/GJ)		
	D-3	D-2	D-1	D-3	D-2	D-1
17 Jun	362	326	325			
18 Jun	323	323	<b>163</b>			0.78
19 Jun	307	<b>163</b>	<b>163</b>		14.75	14.74
20 Jun	<b>169</b>	<b>169</b>	<b>169</b>	13.96	9.75	14.74
21 Jun	<b>175</b>	<b>175</b>	<b>175</b>			14.96
22 Jun	342	295	313			

Source: AER analysis using STTM data.

<sup>4</sup> Capacity constraint prices are part of a mechanism used to compensate shippers with firm transportation rights when unscheduled firm quantities resulting from constrained flows occur alongside scheduled as-available supply.