Significant price variation report

High MOS payments in the Sydney Short Term Trading Market

30 June 2025
06 August 2025

October 2025

AUSTRALIAN ENERGY REGULATOR

Inquiries about this publication should be addressed to:

Australian Energy Regulator
GPO Box 3131
Canberra ACT 2601
Email: aerinquiry@aer.gov.au
Tel: 1300 585 165

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Contents

1 Executive Summary

Market operator service (MOS) payments in the Sydney Short Term Trading Market (STTM) exceeded $250,000 twice, in June and August 2025.[1] Prior to these events, this Significant Price Variation (SPV) threshold has been triggered eleven times since 2014, with three of these occurring in late 2024 and reported on by the AER in March 2025.[2] Over the last 12 months all SPV events have involved MOS service payments in the Sydney STTM, each with distinguishable triggers.

Table 1 summarises the main drivers of the SPV events on 30 June and 6 August 2025.

Table 1: Summary of drivers of high MOS service payments in the Sydney STTM

Date	Unplanned reduced network pressure^	Pipeline flow and pressure dynamics	Supply (over or under supply)	Demand (over or under forecasting)	Low pipeline flows	Pipeline nominations
30 June	x	✓*	✓	x	x	✓*
6 August	x	✓*	✓	x	x	x

Note:✓* indicates that the driver did contribute to high MOS service costs on a certain day, but only in combination with other drivers.
x indicates that the driver was not a main contributor to high MOS service costs on a certain day.
^ The AER has a compliance bulletin designed to avoid MOS when there are pressure reductions. However, this relies on prior knowledge (before the gas day) that network pressures need to be reduced.

Source: AER analysis using STTM and pipeline nominations data.

On 30 June the main contributing factor to the SPV event was the nomination of gas to the Port Kembla pressure control point being larger than demand in the Wollongong sub network. This resulted in gas parked on the Eastern Gas pipeline (EGP) and not being available for transport further up the EGP into the Sydney network causing decrease MOS on the EGP. As a result, there was insufficient gas to meet the Sydney network demand and additional gas was required to be delivered by the Moomba to Sydney pipeline (MSP) pressure control point at Wilton resulting in increase MOS on the MSP.

Although the National Gas Rules only require market participants to deliver scheduled gas to the STTM, the AER would like to emphasise the importance of participants being aware of the interaction between delivery to pressure control points and downstream distribution network demand. In this regard, we also highlight that it is the shipper's responsibility to ensure their actions in the market do not purposefully contribute to MOS.

The AER will continue its investigation into the interaction between the STTM market operation and the physical aspects and constraints of the Sydney and Wollongong distribution networks.

[1] MOS, also known as balancing gas, is required to manage everyday pipeline deviations. A pipeline deviation occurs when there is a difference between the total quantity of gas nominated by the pipeline's shippers and the quantity of gas physically delivered. There are two kinds of pipeline deviations; positive (when more gas is delivered) and negative (when less gas is delivered, resulting in gas being 'parked' upstream of the hub on a pipeline).

[2] AER, Significant price variation report Sydney STTM - November and December 2024, Australian Energy Regulator, accessed 18 September 2025.

Our investigations will also consider consumer outcomes and we will engage with AEMO and market participants accordingly.

On 6 August the main contributing factor to the SPV event was human error resulting in more gas flow delivered into the Sydney network from the EGP at Horsley Park flow control point than what was supposed to be scheduled. This resulted in increase MOS on the EGP. As more gas was delivered from the EGP into the Syndey distribution network gas deliveries on the MSP at the Wilton pressure control point were parked on the MSP. This resulted in decrease MOS on the MSP.

We remind market participants of their obligations to have appropriate systems in place to ensure flow parameters and intended delivery information entered is accurate at all times.

2 Obligation

The 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 AER is required to publish a report whenever there is a SPV in the Victorian Declared Wholesale Gas Market (DWGM) or Adelaide, Brisbane and Sydney STTMs. The AER has published guidelines setting out what constitutes a SPV event.[3]

Outcomes that constitute a SPV in the STTM include when the MOS service payments exceed $250,000.[4] Table 2 shows a breakdown of the MOS service payments for the two gas days where the reporting threshold were breached in the Sydney hub.[5]

Table 2: MOS service payments in the Sydney STTM

Gas Day	MOS Service Payments
30 June 2025	$310,525.82
06 August 2025	$448,202.96

Source: AER analysis using STTM data

[3] 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.

[4] There are two kinds of payments which relate to MOS; service payments (which cover the cost of providing the service) and commodity payments (which cover the cost of the actual gas). This report relates to MOS service payments.

[5] A gas day runs from 6AM to 6AM the following day.

3 Background – Market Operator Service

MOS, also known as balancing gas, is required to manage everyday pipeline deviations. A pipeline deviation occurs when there is a difference between the total quantity of gas nominated by the pipeline's shippers and the quantity of gas physically delivered. There are two kinds of pipeline deviations; positive (when more gas is delivered) and negative (when less gas is delivered, resulting in gas being 'parked' upstream of the hub on a pipeline).

When actual gas deliveries are higher than final nominations, the difference is allocated as increase MOS and when actual gas flows are lower than final nominations, the difference is allocated as decrease MOS.[6]

AEMO publishes, amongst other things, an estimate of the maximum quantities of increase and decrease MOS likely to be required for a given gas day during a particular calendar month.

Participants are requested to provide monthly MOS offers ahead of the calendar month commencing and must specify the:

- Type of MOS (increase or decrease)
- Price (up to $50/GJ)
- Quantity
- Transmission Pipeline

When MOS is required, the offers are allocated in merit order (i.e., from lowest price to highest price) until the required quantity is met.

If an increase MOS offer is met, gas is moved from the transmission pipeline to the STTM hub. If a decrease MOS offer is used, gas is stored on the transmission pipeline (instead of flowing to the STTM hub).

In the Sydney and Adelaide hubs, one pipeline can provide increase MOS while another provides decrease MOS on the same gas day. This occurrence is known as counter-acting MOS (CMOS), which has the effect of increasing costs to market participants when MOS is not being used to balance differences in forecast supply and demand. The high MOS payments that occurred on both the 30th of June and 6th of August were primarily the result of CMOS allocations.

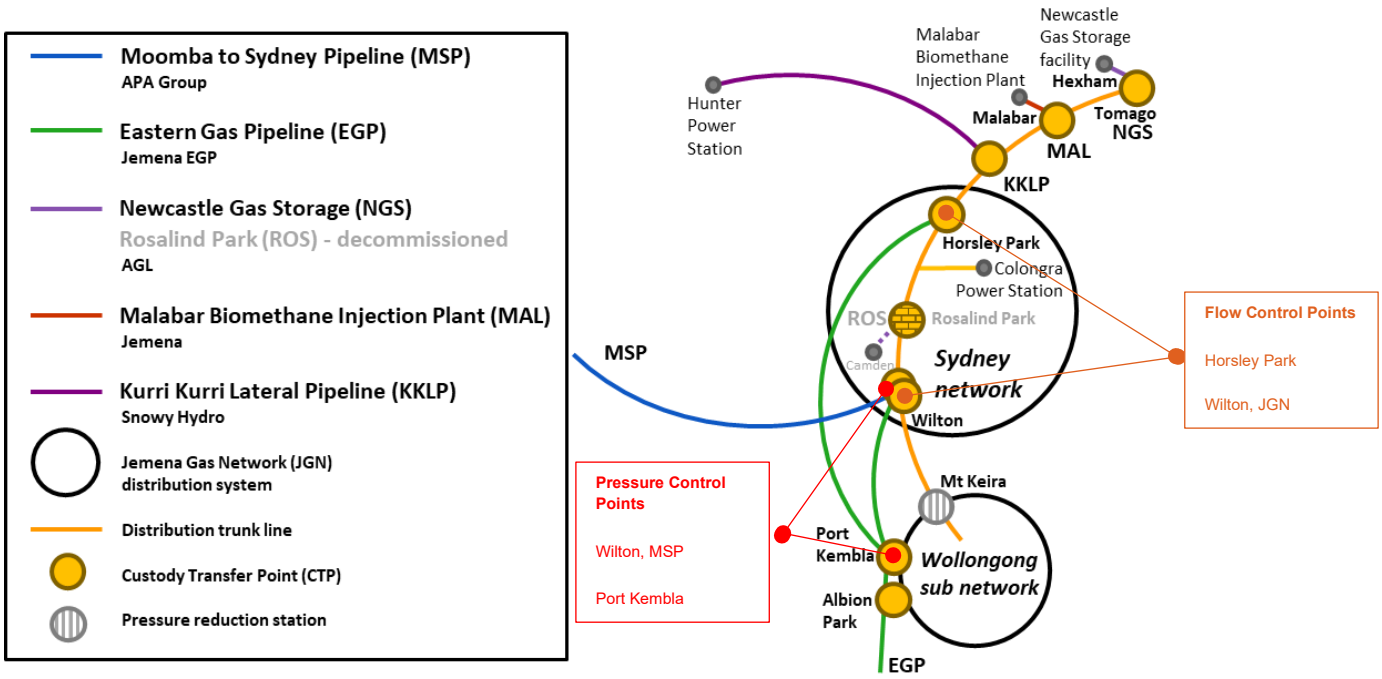
[6] Increase MOS is provided to the hub from gas stored on the pipeline. Participants who loan this gas are compensated for this service through service payments. Decrease MOS requires the use of capacity on the pipeline to store gas which could not be delivered to the hub. Similarly, participants who park this gas are compensated for this service through service payments.

4 The Sydney STTM Hub

4.1 Pipelines and facilities

Figure 1 illustrates the connection points of the Sydney STTM hub which comprises of the Sydney network and the Wollongong sub network.

Figure 1: The Sydney STTM Hub



Note: The Kuri Kuri lateral pipeline (KKLP) was commissioned in March 2025 with a nameplate capacity of 72.3 TJ/day.[7] Whilst not technically within the Sydney STTM, the KKLP connects the EGP to the Hunter Power Project with two open-cycle gas turbines.

There are two pipelines that can provide MOS to Sydney: the EGP and the MSP. The main connection points along the EGP servicing the Sydney STTM are at Albion Park and Port Kembla (Wollongong sub network), and Wilton JGN and Horsley Park (Sydney network). The MSP connects into the Sydney network at Wilton and is operated on pressure control.

Sydney can also source smaller amounts of gas from the Newcastle gas storage facility (NGS). In January 2023, the Malabar (MAL) connection point was added to the hub to connect a biomethane gas production facility to the distribution network.

[7] The Kuri Kuri Lateral Pipeline is operated by APA

4.2 Pipeline dynamics and flow

Delivery points where gas from the EGP and MSP enter the Sydney STTM are either pressure controlled, or flow controlled.

At pressure control points, the flow of gas is dictated by pressure dynamics between the pipeline and the distribution network. For gas to flow from a pipeline into the distribution network through a pressure-controlled delivery point, there must be a differential greater than a set threshold. This is often the case when the pressure in the network decreases as users withdraw gas from the network for consumption. If the differential is met, the connection point allows gas to flow from the higher pressured pipeline into the lower pressured distribution network. If there is inadequate demand of withdrawals in the distribution network, that pressure differential cannot be met and consequently, gas not entering the network remains parked on the pipeline which can further complicate gas flows downstream.

Flow controlled delivery points are points where the flow of gas is set and maintained by physical control assets. These parameters are dictated by the volume of gas nominated and scheduled to be delivered into the network through AEMO and the pipeline operator. Once the schedule has been confirmed, the pipeline operator ensures that the gas is delivered as nominated by shippers.

5 Analysis

In analysing the two SPV events we reviewed relevant market data and obtained additional information from engagement with relevant market participants.

5.1 30 June – Over supply to the Wollongong sub-network

On 30 June, CMOS was required with increase MOS on the MSP (18.9 TJ) being offset by a decrease MOS on the EGP (28.4 TJ). This resulted in total MOS service payments of $310,525.82.

The main factors which led to CMOS were:

- A greater nomination of gas at the Port Kembla pressure control point than demand in the Wollongong sub network resulted in gas parked on the EGP and not being available for transport further up the EGP into the Sydney network. This resulted in decrease MOS on the EGP.
- Due to the gas being parked on the pipeline at Port Kembla gas flowing into the Sydney network at the Horsley Park flow control point was not sufficient to meet the Sydney network demand.
- The Sydney network demand was then met by additional gas being delivered by the MSP pressure control point at Wilton resulting in increase MOS on the MSP.

5.1.1 Large nominations to Port Kembla that could not be delivered

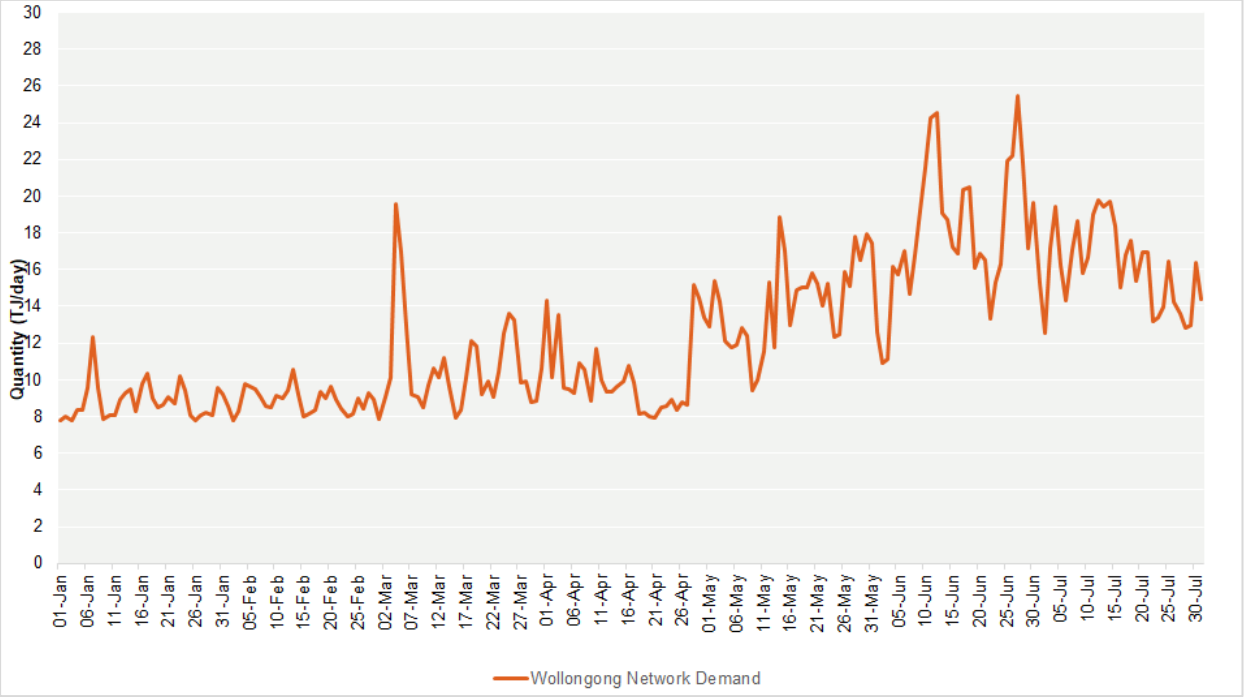
On 30 June 2025, a large volume of gas was nominated into the Wollongong sub-network in the Sydney STTM through the Port Kembla delivery point compared to downstream demand. The Port Kembla delivery point is a pressure-controlled point where pressure differentials between the transmission pipeline and distribution network dictate gas flow.

On this gas day, 47.9 TJ of gas was scheduled for delivery at the Wollongong sub-network in the Sydney STTM, with 46 TJ of nominated gas scheduled by a single shipper. However, only approximately 17 TJ of gas was supplied at Port Kembla with the remainder of the nominated gas flow being parked on the EGP. As gas flows through Port Kembla are contingent on downstream withdrawals, there was no physical ability for the remaining gas to be delivered into Sydney, resulting in decrease MOS.

Over the course of the gas day, increasingly higher gas withdrawals occurred in the Sydney network as users increased consumption. With inadequate supply being sourced off the EGP due to the pressure dynamics limiting flow at Port Kembla, additional gas flowed from the MSP as increase MOS.

Figure 2 below shows the Wollongong network demand from January to July 2025. During this period the average daily demand was 12.5 TJ/day varying between a low of 7.8 TJ/day and a maximum of 25.5 TJ/day.

Figure 2: Wollongong sub network downstream demand for January to July 2025



Note: The Wollongong network demand includes gas delivery to the Albion Park and Port Kembla delivery points.
Source: AER analysis using Gas Bulletin Board data

5.1.2 MOS requirements

The high MOS service costs were caused by CMOS allocations, where approximately 18.9 TJ of increase MOS on the MSP was offset by 28.4 TJ of decrease MOS on the EGP (Table 3).

Table 3: 30 June – Sydney MOS service payment quantities and cost breakdown

Facility	MOS type	MOS stack allocation (TJ)	MOS service payments
EGP	Decrease	28.4 TJ	$273,935.60
MSP	Increase	18.9 TJ	$36,590.22
Total		47.3 TJ	$310,525.82

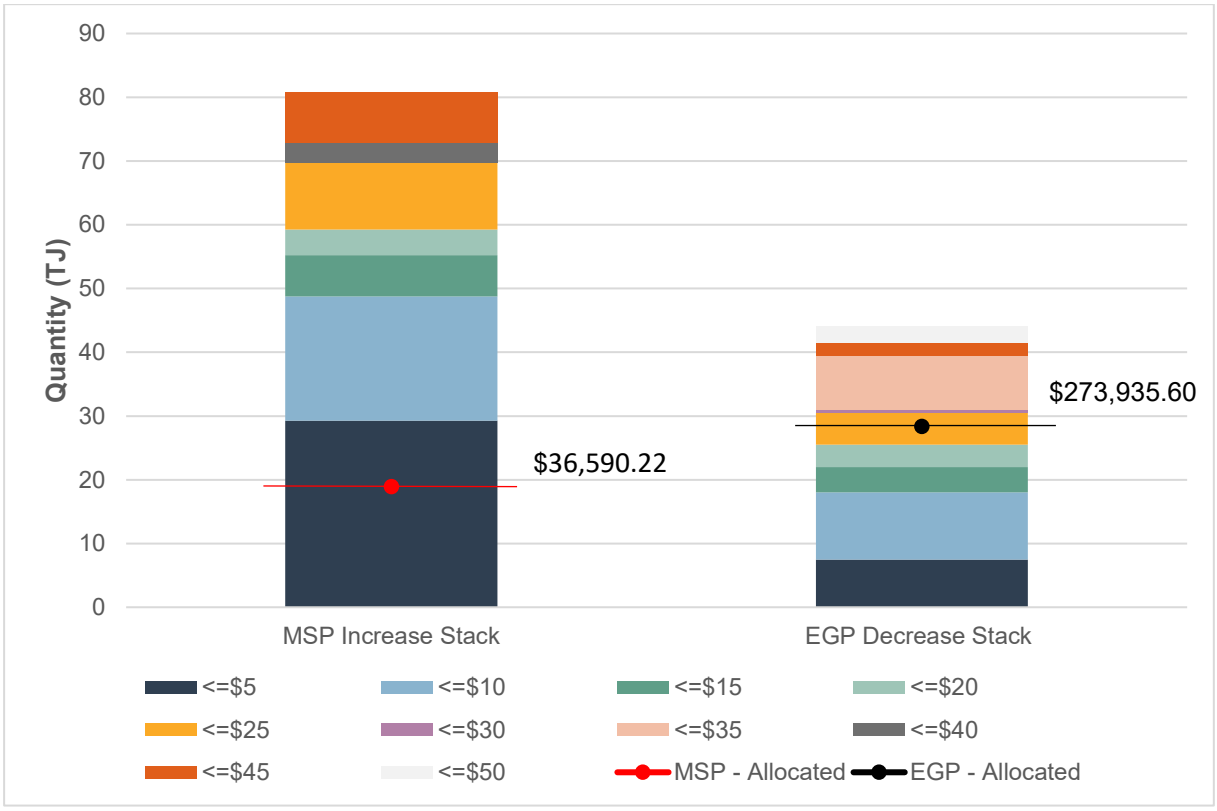
Source: AER analysis using STTM data

Figure 3 shows that 64.5% of the June 2025 EGP decrease MOS stack was allocated on 30 June with the highest pay-as-bid offer range of $20-25/GJ. In contrast, only 23.4% of the June 2025 MSP increase MOS stack was required at a pay-as-bid offer range of $5/GJ. The EGP decrease MOS service payment contributed to most of the total MOS costs of the day.

For June, 8 participants offered into the MSP increase stack and 4 participants offered into the EGP decrease stack. The market participant that nominated an excess amount of gas for

delivery at Port Kembla did not participate in the commodity or MOS (ancillary) markets for June 2025 and did not receive any MOS payment.

Figure 3: 30 June - MOS stacks, allocation requirements and service costs



Source: AER analysis using STTM data.

5.2 6 August – Excess delivery into the Sydney distribution network on the EGP

On 6 August 2025, Sydney's MOS service payments breached $250,000, reaching $448,202.96. High MOS service payments were a result of CMOS requirements, where there was 44.2 TJ of increase MOS on the EGP, offset by decrease MOS on the MSP (37.1 TJ).

The main factors which led to CMOS were:

- Human error resulting in more gas flow delivered into the Sydney network from the EGP at Horsley Park flow control point than what was supposed to be scheduled. This resulted in increase MOS on the EGP.
- As more gas was delivered from the EGP into the Sydney distribution network gas deliveries on the MSP at the Wilton pressure control point were backed off and parked on the MSP. This resulted in decrease MOS on the MSP.

5.2.1 Human error in setting gas volume through the Horsley Park delivery point

Gas delivery into the Sydney network from the EGP is supplied at two delivery points, namely Horsely Park and Wilton JGN, that is set on flow control (see Figure 1). Following a shift changeover, human error in setting the flow parameters at Horsley Park resulted in higher than intended deliveries. Duplicate volumes were entered into the Supervisory Control and Data Acquisition (SCADA) system at Horsley Park due to a failure to consider volumes already set to flow in the preceding shift at Wilton JGN. More specifically, this error resulted in an additional 28.3 TJ of gas delivered at Horsley Park.

Gas flows through flow controlled system points needs to be accurately calculated to deliver the quantities nominated to supply the hub. Higher than anticipated supply to the Sydney distribution network from the EGP increased the pressure in the main distribution network. This caused the gas scheduled to flow from the MSP to be parked on the pipeline resulting in decrease MOS.

The participant has confirmed it has implemented corrective actions including interface modifications to the SCADA system as a preventative action to avoid a reoccurrence of this event.

5.2.2 MOS requirements

The high MOS service costs were driven by CMOS allocations, with 44.2 TJ of increase MOS allocated on the EGP and 37.1 TJ of decrease MOS on the MSP (Table 4). 28.3 TJ of CMOS was attributed to the error at Horsley Park, the remainder of MOS allocations were due to variances in injections and withdrawals that deviated from the schedule.

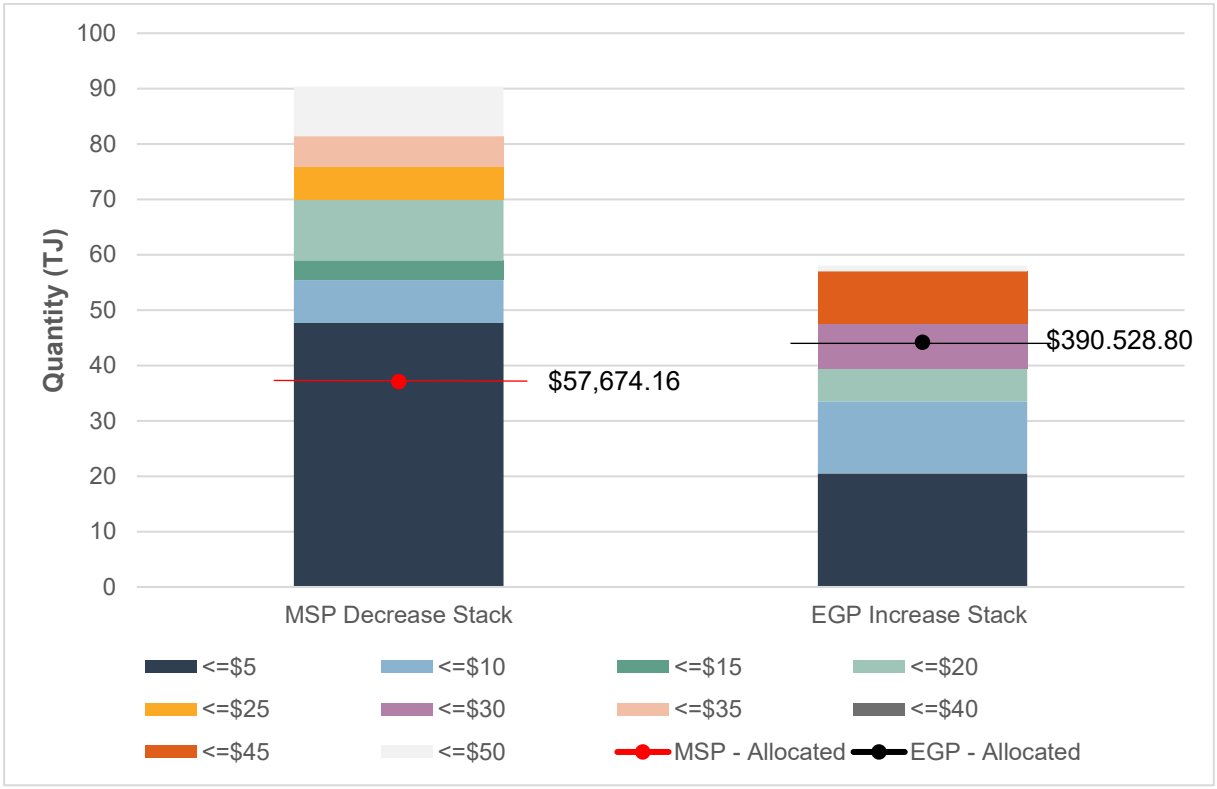
Table 4: 6 August - MOS service payment quantities and cost breakdown

Facility	MOS type	MOS stack allocation (TJ)	MOS service payments
EGP	Increase	44.2	$390,528.80
MSP	Decrease	37.1	$57,674.16
Total		81.3	$448,202.96

Source: AER analysis using STTM data.

Figure 4 shows that 76.2% of the August EGP increase MOS stack was allocated on 6 August with the highest pay-as-bid offer range of $20-$30/GJ. In contrast, 41% of the MSP decrease MOS stack was used with low pay-as-bid offers under $5/GJ. The EGP increase MOS service payment contributed to the majority of the total MOS costs of the day. The AER calculated that MOS costs would have been under $50,000 on 6 August had it not been for the human error.

Figure 4: 6 August - MOS stacks, allocation requirements and service costs



Source: AER analysis using STTM data.

6 Acronyms and Abbreviations

ACCC	Australian Competition and Consumer Commission
ACT	Australian Capital Territory
AER	Australian Energy Regulator
CC	Creative Commons
CMOS	Counteracting Market Operator Service
CTP	Custody Transfer Point
DWGM	Declared Wholesale Gas Market
EGP	Eastern Gas Pipeline
GJ	Gigajoule
JGN	Jemena Gas Network
kPa	Kilopascal
LHS	Left Hand Side
MAL	Malabar
MOS	Market Operator Service
MSP	Moomba to Sydney Pipeline
NGS	Newcastle Gas Storage
RHS	Right Hand Side
ROS	Rosalind Park
SPV	Significant Price Variation
STTM	Short Term Trading Market
TJ	Terajoule