

MOS ESTIMATES REPORT

MOS PERIODS: DECEMBER 2021, JANUARY 2022 & FEBRUARY 2022

Important notice

PURPOSE

This document has been prepared for the sole purpose of the Short Term Trading Market ('STTM') in accordance with rule 397 of the National Gas Rules (STTM rules).

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Acknowledgement

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VERSION CONTROL

Version	Release date	Changes
1.0	05/12/2019	New document published quarterly

1. Introduction

MOS (Market Operator Service) estimates provide a guide of the largest daily increase and decrease MOS quantities that market participants may reasonably expect for each STTM pipeline. The MOS estimate is based on historical data and therefore does not limit the quantity of MOS that may be experienced in the future.

The MOS estimates also determine the value of any overrun MOS. If the MOS estimate (increase or decrease) for an STTM pipeline exceeds the total quantity of MOS offered for that pipeline (increase or decrease respectively), then any overrun MOS is paid at the weighted average price within the relevant MOS stack. Otherwise, if the total quantity of MOS offered for an STTM pipeline exceeds the MOS estimate then overrun MOS is paid at the highest priced offer within the stack.

In accordance with rule 397 of the National Gas Rules (STTM Rules), AEMO publishes MOS increase and decrease estimates for each STTM pipeline prior to the commencement of each monthly MOS period. In determining the MOS estimates for each MOS period, AEMO must use the data specified in Section 5.2 (b) of the STTM Procedures.

2. The MOS period

MOS periods are defined in section 5.1 of the STTM Procedures. The MOS estimates contained in this document relate to MOS periods: December 2021, January 2022 and February 2022.

The MOS quantities for each STTM pipeline and each gas day are as determined in accordance with the published methodology for determining MOS estimates¹.

2.1 Sydney, Adelaide and Brisbane hubs

The Sydney and Adelaide STTM hubs commenced operations on 1 September 2010, while the Brisbane STTM hub commenced operations on 1 December 2011. Therefore, the MOS estimate quantities are based on 'Method 3' for year 6 + of an STTM hub². This means they are derived using the actual daily MOS allocation quantities for the periods December from 2016 to 2020; January from 2017 to 2021; and February from 2017 to 2021; for the following STTM pipelines:

- Moomba to Sydney Pipeline (MSP) and Eastern Gas Pipeline (EGP) these pipelines supply gas to the Sydney STTM hub; and
- Moomba to Adelaide Pipeline (MAP) and SEA Gas pipeline (SEA) these pipelines supply gas to the Adelaide STTM hub.
- Roma to Brisbane Pipeline (RBP) the sole pipeline that supplies gas to the Brisbane STTM hub.

The input data collected from the previous years was combined to create a larger and more representative sample of MOS allocations.

2.2 Explanation of MOS quantities and summary statistics

Positive MOS quantities indicate the requirements for increase MOS, whereas negative MOS quantities indicate the requirements for decrease MOS.

¹ AEMO, *Methodology for determining MOS estimates*, Available at: http://www.aemo.com.au/Gas/Short-Term-Trading-Market-STTM/Market-operations/Market-Operator_Service.

² AEMO, Methodology for determining MOS estimates, pg 22

STTM Rule 397(1)(a) requires AEMO to publish its estimate of the maximum quantity of MOS (by way of increase and decrease) likely to be required on any gas day in the relevant MOS period. This is provided in Table 1 below.

STTM Rule 397(1)(b) requires AEMO to publish its estimate of the range of daily quantities of MOS likely to be required, together with the number of gas days in the MOS period to which each of those estimated quantities applies. This is provided by month in the following sections tables and charts.

3. MOS Estimates

3.1 MOS Period December 2021

Table 1 Maximum MOS quantities (GJ)

	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
MOS increase	22,771	8,946	9,110	519	8,520
MOS decrease	42,025	16,031	10,595	11,169	6,943

Figure 1 Curves of daily MOS quantities

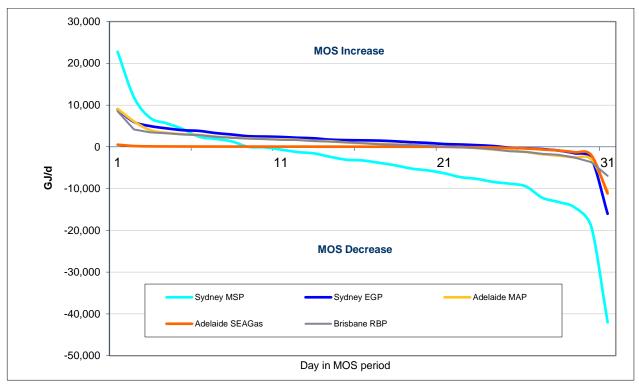


Table 2 Summary statistics of daily MOS quantities

	Summary statistics GJ/d					
	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP	
Maximum	22,771	8,946	9,110	519	8,520	
95%	9,402	5,473	5,039	157	3,806	
75%	646	2,748	2,112	62	2,061	
50%	-3,257	1,562	891	35	852	
25%	-8,045	298	-469	-114	-443	
5%	-16,854	-2,163	-2,765	-1,644	-3,122	
Minimum	-42,025	-16,031	-10,595	-11,169	-6,943	
Mean	-3,982	1,267	775	-489	751	
Std deviation	10,737	3,962	3,242	2,039	2,698	
% days positive	29%	77%	68%	68%	68%	
% days negative	71%	23%	32%	32%	32%	

Figure 2 Distribution of daily MOS quantities

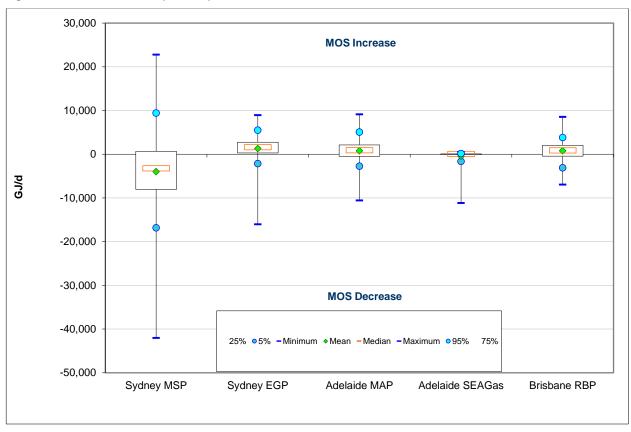


Table 3 Daily MOS quantities (GJ/d) for December 2021

No of days	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
1	22,771	8,946	9,110	519	8,520
1	11,889	5,976	6,091	195	4,152
1	6,915	4,969	3,986	118	3,459
1	5,644	4,422	3,352	95	3,230
1	4,241	3,987	3,002	85	2,967
1	2,411	3,814	2,835	72	2,798
1	1,904	3,301	2,450	67	2,385
1	1,289	2,950	2,205	63	2,157
1	2	2,547	2,019	61	1,965
1	-124	2,468	1,908	57	1,857
1	-652	2,372	1,813	54	1,677
1	-1,245	2,180	1,698	53	1,610
1	-1,550	2,056	1,431	50	1,380
1	-2,379	1,726	1,343	46	1,239
1	-3,082	1,612	1,035	41	1,079
1	-3,257	1,562	891	35	852
1	-3,816	1,496	718	34	619
1	-4,431	1,328	587	32	508
1	-5,211	1,103	469	23	456
1	-5,642	947	194	16	337
1	-6,328	674	41	4	61
1	-7,254	562	-44	-50	-130
1	-7,684	404	-308	-90	-308
1	-8,406	192	-630	-137	-578
1	-8,820	-185	-946	-272	-1,044
1	-9,477	-343	-1,227	-377	-1,203
1	-12,189	-533	-1,771	-627	-1,650
1	-13,217	-894	-2,096	-882	-1,916
1	-14,556	-1,549	-2,542	-1,288	-2,576
1	-19,152	-2,776	-2,987	-2,000	-3,668
1	-42,025	-16,031	-10,595	-11,169	-6,943

3.2 MOS Period January 2022

Table 4 Maximum MOS quantities (GJ)

	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
MOS increase	19,788	6,566	4,867	1,517	7,839
MOS decrease	39,222	7,305	10,302	4,954	9,387

Figure 3 Curves of daily MOS quantities

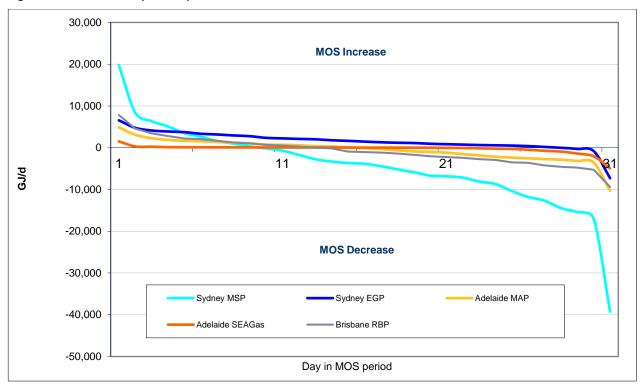


Table 5 Summary statistics of daily MOS quantities

	Summary statistics GJ/d					
	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP	
Maximum	19,788	6,566	4,867	1,517	7,839	
95%	7,361	4,442	2,683	276	3,980	
75%	650	2,851	1,128	74	1,143	
50%	-3,845	1,465	-119	30	-1,041	
25%	-8,401	610	-1,993	-189	-2,822	
5%	-16,211	-550	-3,361	-1,734	-5,020	
Minimum	-39,222	-7,305	-10,302	-4,954	-9,387	
Mean	-4,562	1,578	-497	-267	-828	
Std deviation	10,004	2,316	2,683	1,047	3,353	
% days positive	29%	87%	48%	65%	42%	
% days negative	71%	13%	52%	35%	58%	

Figure 4 Distribution of daily MOS quantities

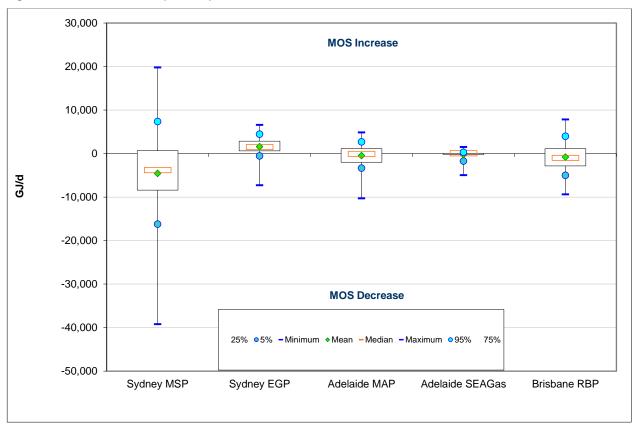


Table 6 Daily MOS quantities (GJ/d) for January 2022

No of days	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
1	19,788	6,566	4,867	1,517	7,839
1	8,368	4,758	3,091	307	4,532
1	6,354	4,126	2,275	245	3,428
1	5,093	3,882	1,888	137	2,786
1	3,500	3,725	1,656	109	2,214
1	2,659	3,346	1,534	92	2,075
1	1,597	3,174	1,368	87	1,686
1	979	2,941	1,195	80	1,256
1	320	2,761	1,060	68	1,030
1	-180	2,355	763	64	662
1	-724	2,238	717	60	531
1	-1,726	2,112	592	55	247
1	-2,759	2,016	370	50	39
1	-3,309	1,786	298	44	-150
1	-3,661	1,643	75	36	-918
1	-3,845	1,465	-119	30	-1,041
1	-4,409	1,304	-310	26	-1,154
1	-5,174	1,192	-621	21	-1,372
1	-5,863	1,128	-878	19	-1,686
1	-6,674	951	-1,014	10	-2,059
1	-6,847	840	-1,181	-43	-2,218
1	-7,162	748	-1,546	-67	-2,423
1	-8,092	640	-1,818	-145	-2,720
1	-8,709	580	-2,168	-233	-2,923
1	-10,373	510	-2,358	-285	-3,518
1	-11,797	386	-2,533	-476	-3,596
1	-12,688	190	-2,716	-734	-4,233
1	-14,458	-23	-2,863	-923	-4,558
1	-15,415	-290	-3,160	-1,402	-4,775
1	-17,007	-810	-3,562	-2,065	-5,264
1	-39,222	-7,305	-10,302	-4,954	-9,387

3.3 MOS Period February 2022

Table 7 Maximum MOS quantities (GJ)

	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
MOS increase	27,841	6,338	4,921	533	7,611
MOS decrease	24,902	12,228	8,621	2,219	7,879

Figure 5 Curves of daily MOS quantities

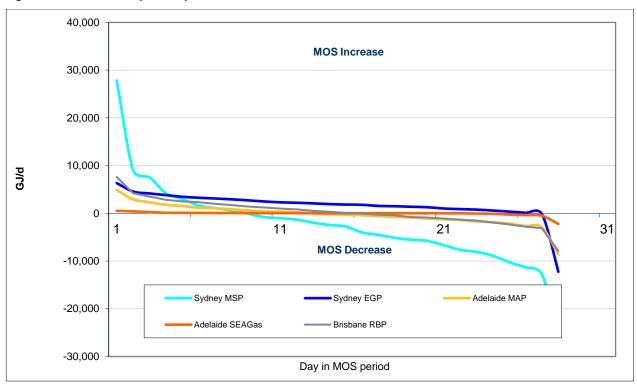


Table 8 Summary statistics of daily MOS quantities

	Summary statistics GJ/d					
	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP	
Maximum	27,841	6,338	4,921	533	7,611	
95%	8,531	4,430	2,724	356	3,964	
75%	722	2,985	916	67	1,800	
50%	-2,596	1,891	-228	36	219	
25%	-6,917	981	-1,286	11	-1,150	
5%	-12,255	-65	-2,828	-460	-3,016	
Minimum	-24,902	-12,228	-8,621	-2,219	-7,879	
Mean	-2,525	1,649	-305	-50	276	
Std deviation	8,979	3,087	2,379	468	2,816	
% days positive	29%	93%	43%	79%	54%	
% days negative	71%	7%	57%	21%	46%	

Figure 6 Distribution of daily MOS quantities

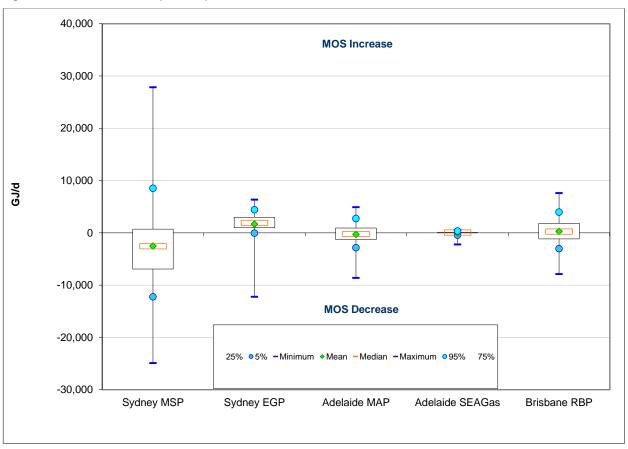


Table 9 Daily MOS quantities (GJ/d) for February 2022

No of days	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
1	27,841	6,338	4,921	533	7,611
1	9,061	4,572	2,940	407	4,205
1	7,548	4,167	2,324	261	3,517
1	4,236	3,827	1,789	125	2,829
1	2,994	3,473	1,545	102	2,492
1	1,656	3,272	1,175	88	2,340
1	1,113	3,111	1,062	78	2,008
1	592	2,943	867	63	1,730
1	-83	2,730	624	53	1,438
1	-771	2,494	402	47	1,236
1	-1,024	2,310	334	44	995
1	-1,317	2,218	207	40	825
1	-1,937	2,089	-26	39	539
1	-2,437	1,935	-189	38	337
1	-2,755	1,847	-267	34	100
1	-3,998	1,791	-391	28	-88
1	-4,499	1,555	-586	27	-294
1	-5,131	1,493	-737	21	-421
1	-5,525	1,383	-870	19	-779
1	-5,776	1,281	-1,069	17	-865
1	-6,677	1,012	-1,244	14	-1,090
1	-7,636	888	-1,410	2	-1,328
1	-8,091	782	-1,686	-40	-1,534
1	-8,883	586	-1,895	-95	-1,918
1	-10,238	363	-2,163	-260	-2,340
1	-11,307	115	-2,656	-361	-2,803
1	-12,765	-162	-2,921	-514	-3,130
1	-24,902	-12,228	-8,621	-2,219	-7,879