



MOS ESTIMATES REPORT

MOS PERIODS: MARCH 2021,
APRIL 2021 & MAY 2021

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	26/06/2020	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: March 2021, April 2021 and May 2021.

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 March from 2016 to 2020; April from 2016 to 2020; and May from 2016 to 2020; 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 March 2021

Table 1 Maximum MOS quantities (GJ)

	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
MOS increase	16,023	17,570	11,641	1,170	5,702
MOS decrease	20,350	16,360	7,184	8,852	14,952

Figure 1 Curves of daily MOS quantities

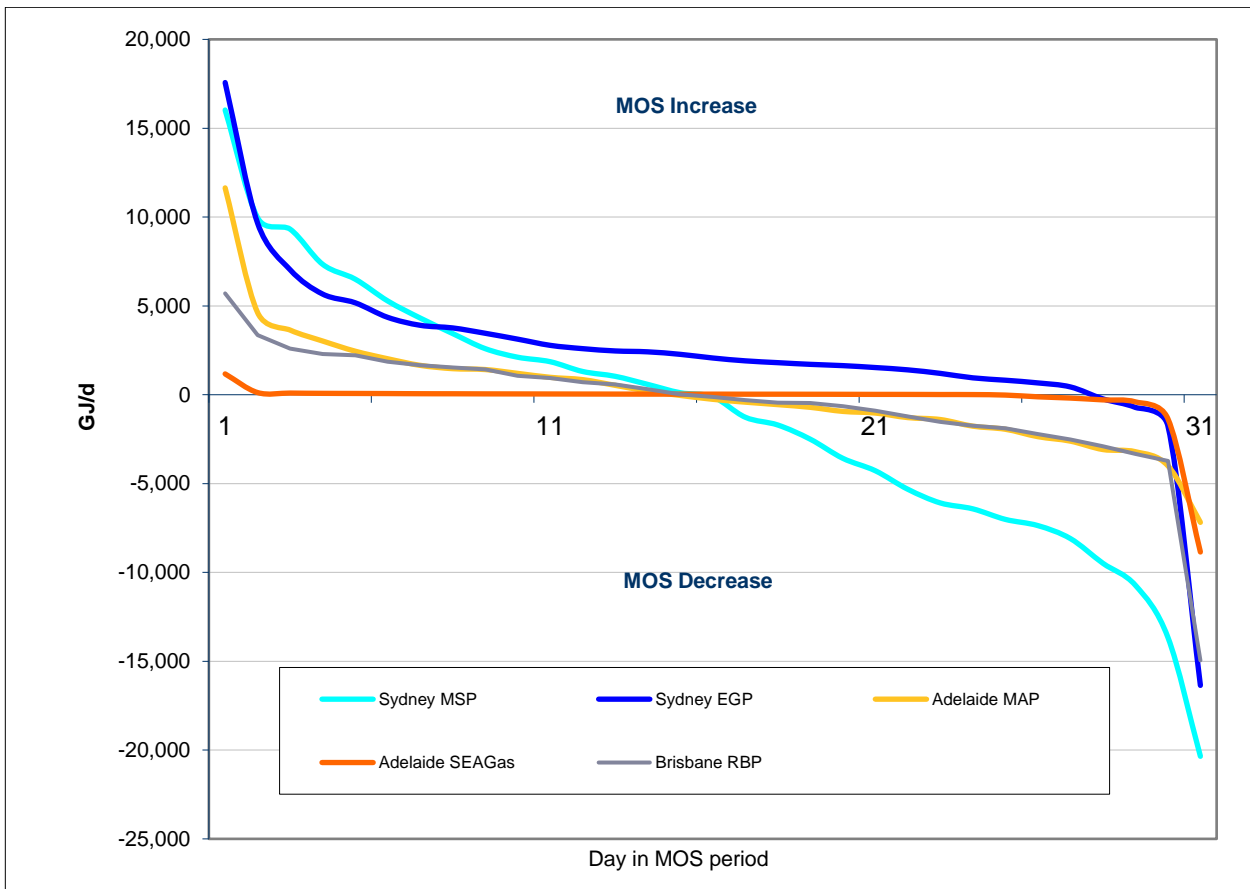


Table 2 Summary statistics of daily MOS quantities

	Summary statistics GJ/d				
	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
Maximum	16,023	17,570	11,641	1,170	5,702
95%	9,637	8,342	4,129	107	2,978
75%	3,019	3,609	1,442	51	1,486
50%	-116	2,067	-258	32	-119
25%	-6,258	1,075	-1,583	11	-1,638
5%	-12,189	-1,232	-3,604	-876	-3,529
Minimum	-20,350	-16,360	-7,184	-8,852	-14,952
Mean	-1,168	2,364	93	-292	-407
Std deviation	7,519	4,948	3,228	1,626	3,414
% days positive	39%	87%	39%	77%	52%
% days negative	61%	13%	61%	23%	48%

Figure 2 Distribution of daily MOS quantities

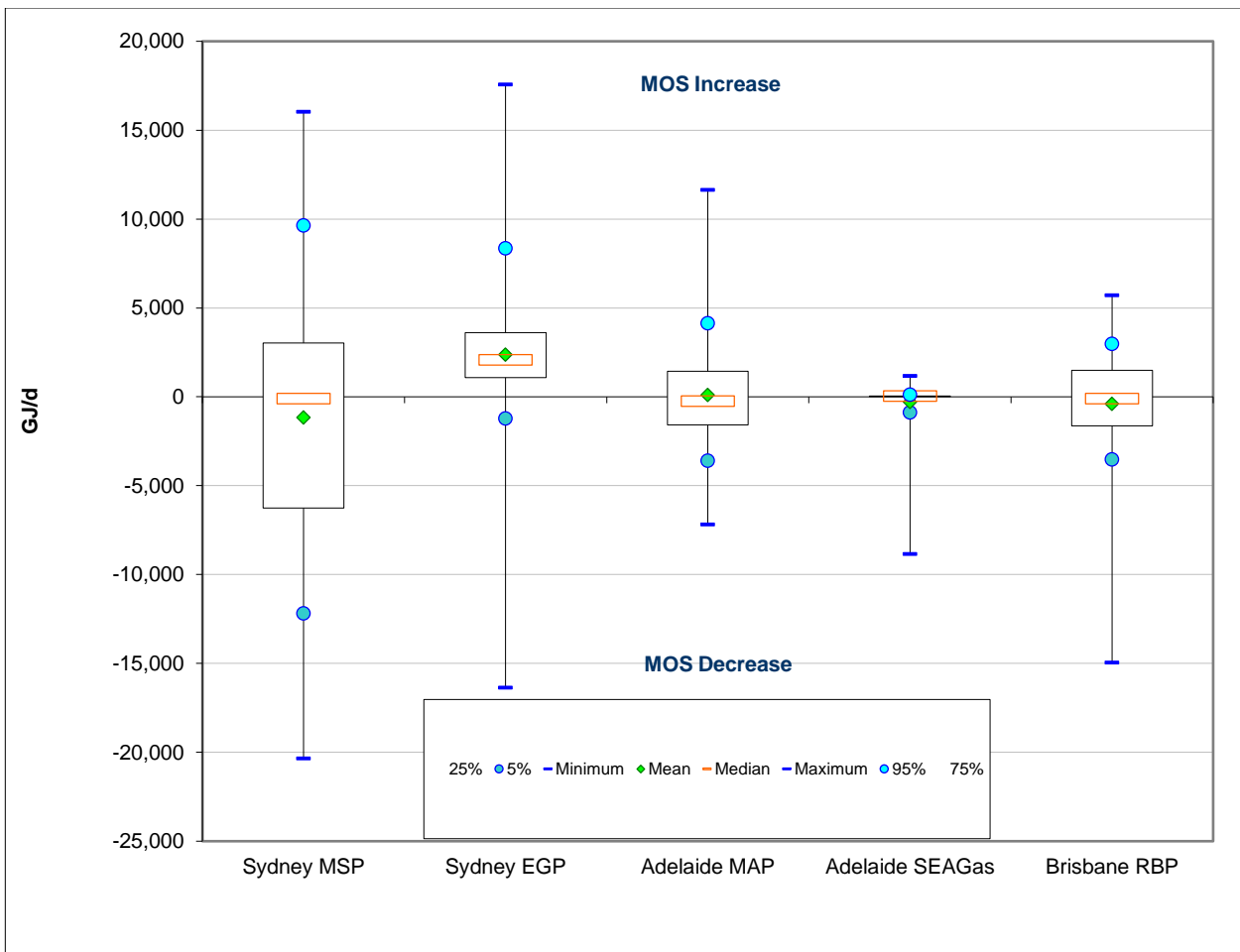


Table 3 Daily MOS quantities (GJ/d) for March 2021

No of days	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
1	16,023	17,570	11,641	1,170	5,702
1	9,957	9,651	4,620	121	3,355
1	9,317	7,032	3,637	93	2,600
1	7,340	5,665	3,022	77	2,297
1	6,506	5,175	2,450	72	2,219
1	5,278	4,356	2,024	65	1,862
1	4,316	3,907	1,652	56	1,668
1	3,443	3,759	1,467	54	1,537
1	2,594	3,459	1,417	48	1,434
1	2,111	3,127	1,201	45	1,071
1	1,858	2,779	978	41	941
1	1,307	2,593	848	39	698
1	1,036	2,464	528	36	582
1	580	2,414	208	34	306
1	110	2,273	-39	33	20
1	-116	2,067	-258	32	-119
1	-1,267	1,906	-418	30	-302
1	-1,705	1,804	-557	29	-440
1	-2,503	1,709	-710	27	-472
1	-3,579	1,638	-938	23	-652
1	-4,279	1,529	-1,031	19	-903
1	-5,322	1,399	-1,288	18	-1,228
1	-6,091	1,201	-1,397	12	-1,522
1	-6,424	950	-1,769	9	-1,753
1	-7,017	816	-1,944	-20	-1,895
1	-7,366	664	-2,360	-118	-2,207
1	-8,096	440	-2,612	-189	-2,526
1	-9,485	-234	-3,084	-291	-2,893
1	-10,725	-716	-3,208	-403	-3,332
1	-13,653	-1,748	-3,999	-1,349	-3,725
1	-20,350	-16,360	-7,184	-8,852	-14,952

3.2 MOS Period April 2021

Table 4 Maximum MOS quantities (GJ)

	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
MOS increase	12,492	9,247	7,758	462	4,823
MOS decrease	42,677	8,174	10,755	9,166	7,751

Figure 3 Curves of daily MOS quantities

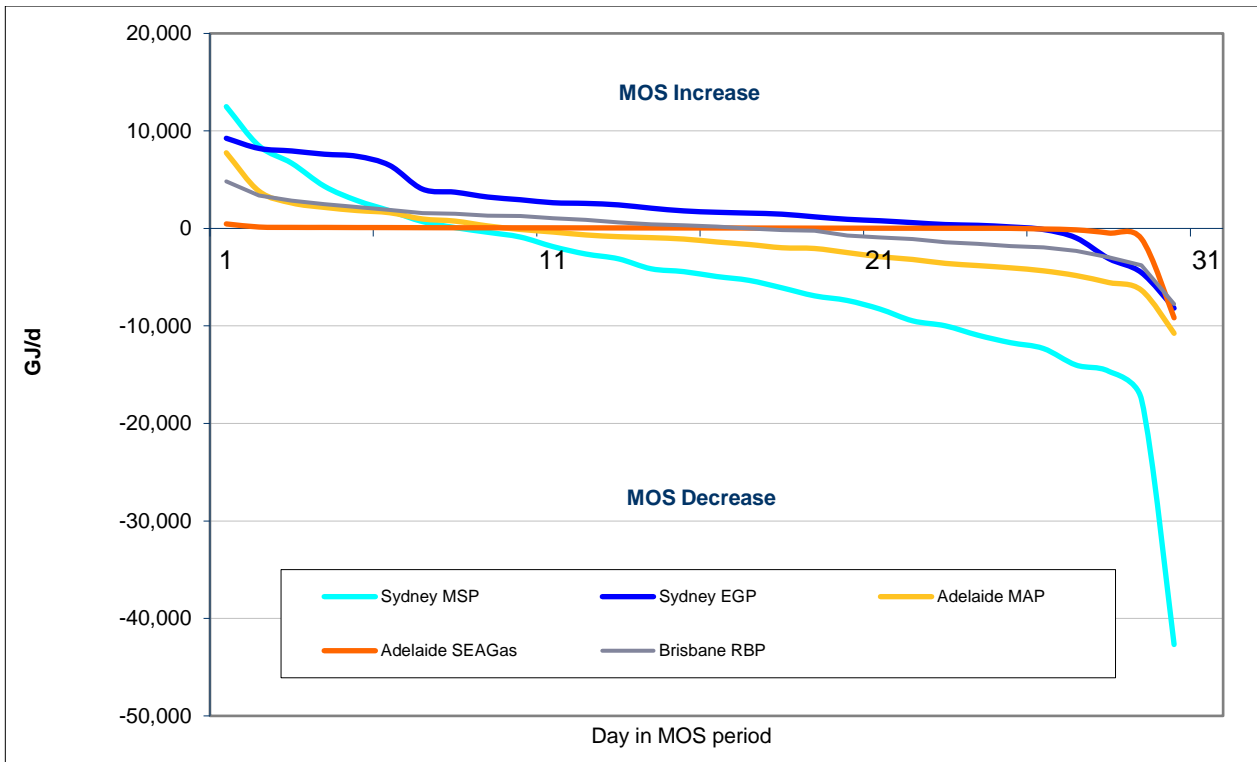


Table 5 Summary statistics of daily MOS quantities

	Summary statistics GJ/d				
	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
Maximum	12,492	9,247	7,758	462	4,823
95%	7,672	8,089	3,280	127	3,151
75%	-34	3,595	626	69	1,460
50%	-4,680	1,727	-1,238	47	247
25%	-9,862	446	-3,484	19	-1,334
5%	-16,230	-3,881	-5,980	-790	-3,417
Minimum	-42,677	-8,174	-10,755	-9,166	-7,751
Mean	-5,408	2,149	-1,371	-303	4
Std deviation	9,969	3,790	3,478	1,691	2,429
% days positive	30%	83%	37%	90%	60%
% days negative	70%	17%	63%	10%	40%

Figure 4 Distribution of daily MOS quantities

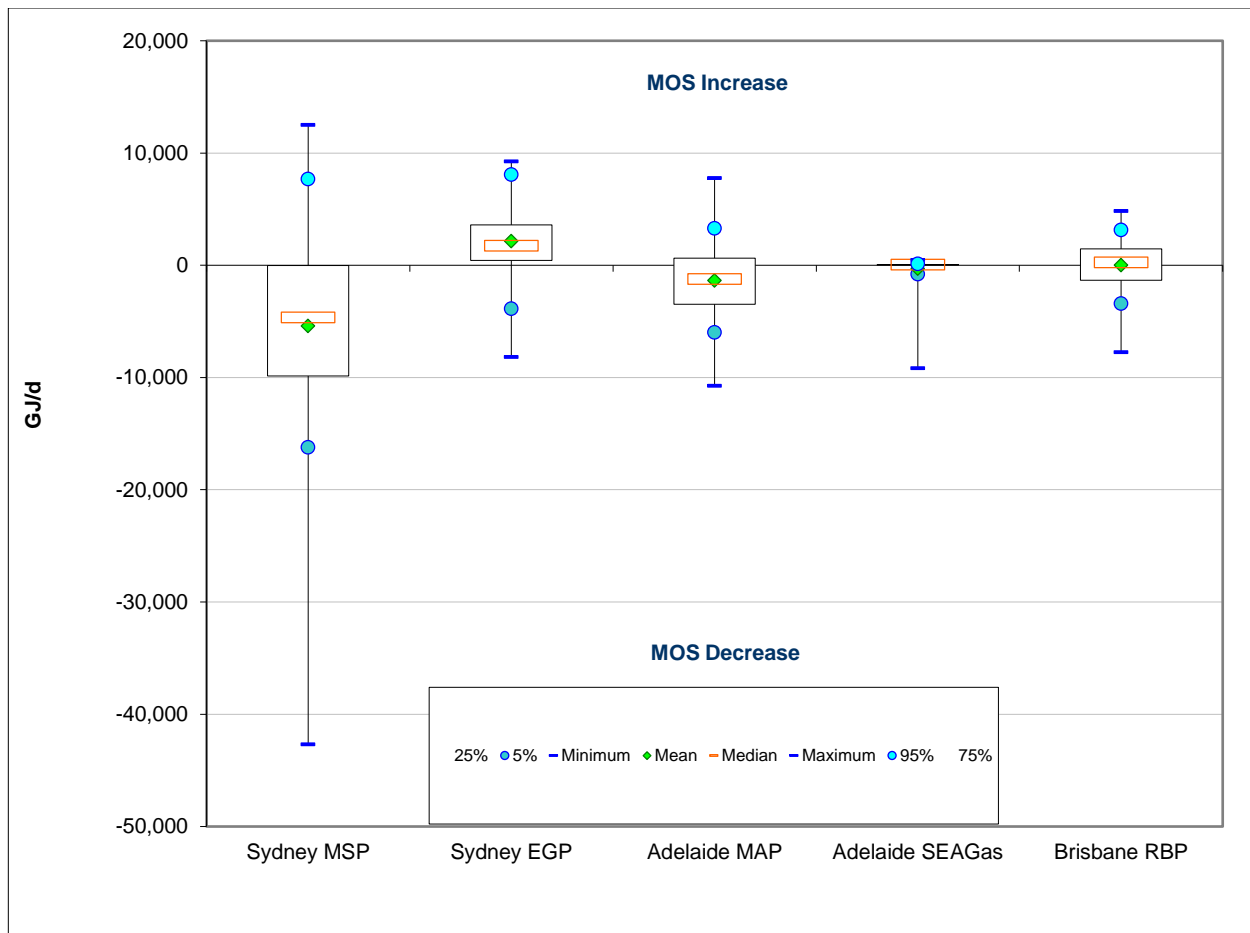


Table 6 Daily MOS quantities (GJ/d) for April 2021

No of days	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
1	12,492	9,247	7,758	462	4,823
1	8,474	8,206	3,824	144	3,391
1	6,692	7,945	2,615	107	2,857
1	4,331	7,612	2,159	103	2,502
1	2,859	7,398	1,837	92	2,210
1	1,813	6,462	1,610	89	1,898
1	705	4,037	973	77	1,587
1	86	3,719	750	70	1,506
1	-393	3,221	254	66	1,323
1	-885	2,942	-103	63	1,263
1	-1,868	2,635	-368	60	1,045
1	-2,623	2,566	-668	56	875
1	-3,120	2,414	-846	53	634
1	-4,139	2,076	-946	50	433
1	-4,431	1,797	-1,088	48	317
1	-4,929	1,657	-1,388	46	177
1	-5,329	1,571	-1,647	42	11
1	-6,094	1,463	-1,980	35	-184
1	-6,915	1,189	-2,058	31	-244
1	-7,389	936	-2,478	26	-727
1	-8,271	787	-2,901	23	-933
1	-9,477	593	-3,183	21	-1,082
1	-9,990	397	-3,584	18	-1,418
1	-10,953	319	-3,811	15	-1,596
1	-11,721	153	-4,043	8	-1,813
1	-12,314	-109	-4,348	-60	-1,948
1	-14,014	-966	-4,832	-148	-2,292
1	-14,651	-3,089	-5,548	-470	-2,970
1	-17,521	-4,529	-6,333	-1,052	-3,782
1	-42,677	-8,174	-10,755	-9,166	-7,751

3.3 MOS Period May 2021

Table 7 Maximum MOS quantities (GJ)

	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
MOS increase	12,137	16,395	11,082	239	5,979
MOS decrease	23,970	9,676	8,957	11,657	24,223

Figure 5 Curves of daily MOS quantities

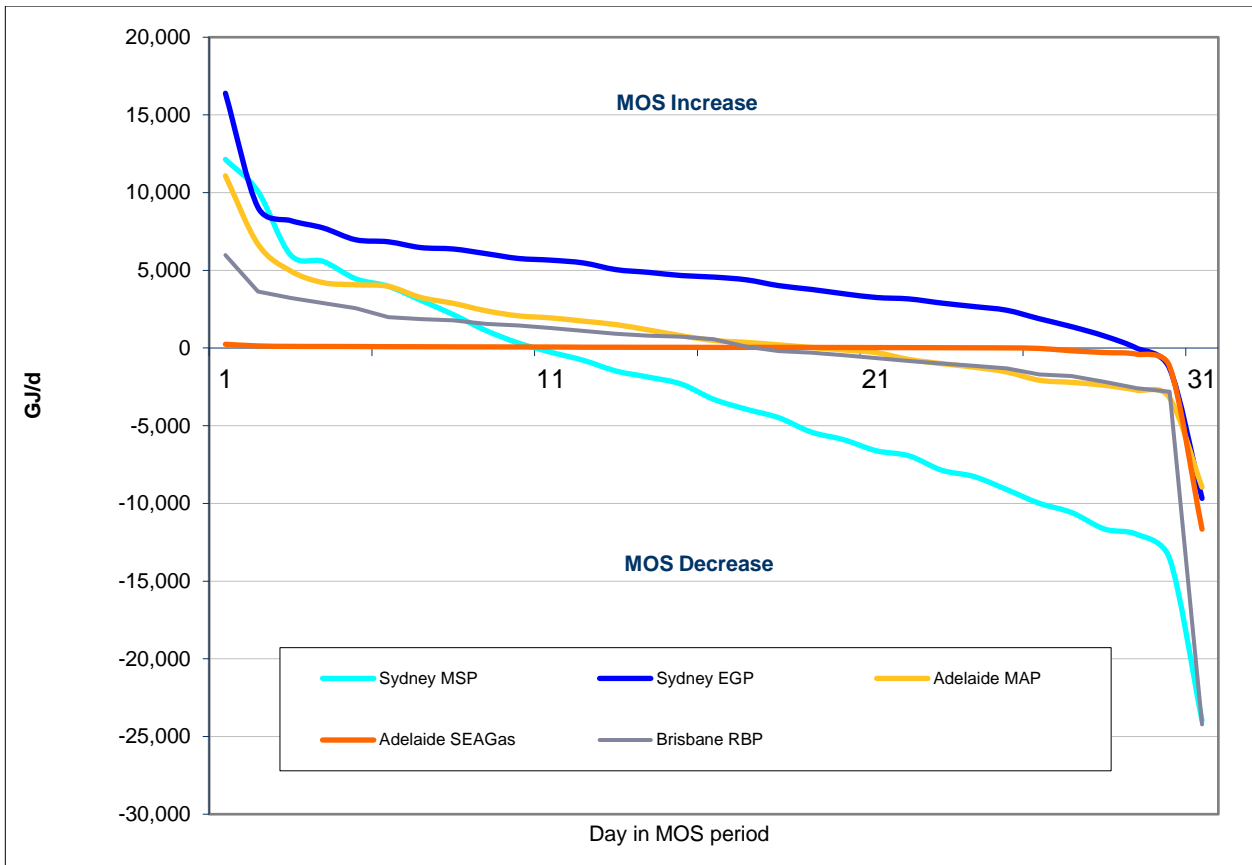


Table 8 Summary statistics of daily MOS quantities

	Summary statistics GJ/d				
	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
Maximum	12,137	16,395	11,082	239	5,979
95%	8,030	8,624	5,820	120	3,426
75%	1,640	6,224	2,637	75	1,665
50%	-3,301	4,565	487	42	568
25%	-8,067	2,780	-1,118	18	-1,074
5%	-12,762	-660	-2,956	-786	-2,700
Minimum	-23,970	-9,676	-8,957	-11,657	-24,223
Mean	-3,272	4,298	880	-390	-285
Std deviation	7,553	4,130	3,543	2,105	4,864
% days positive	32%	90%	61%	81%	52%
% days negative	68%	10%	39%	19%	48%

Figure 6 Distribution of daily MOS quantities

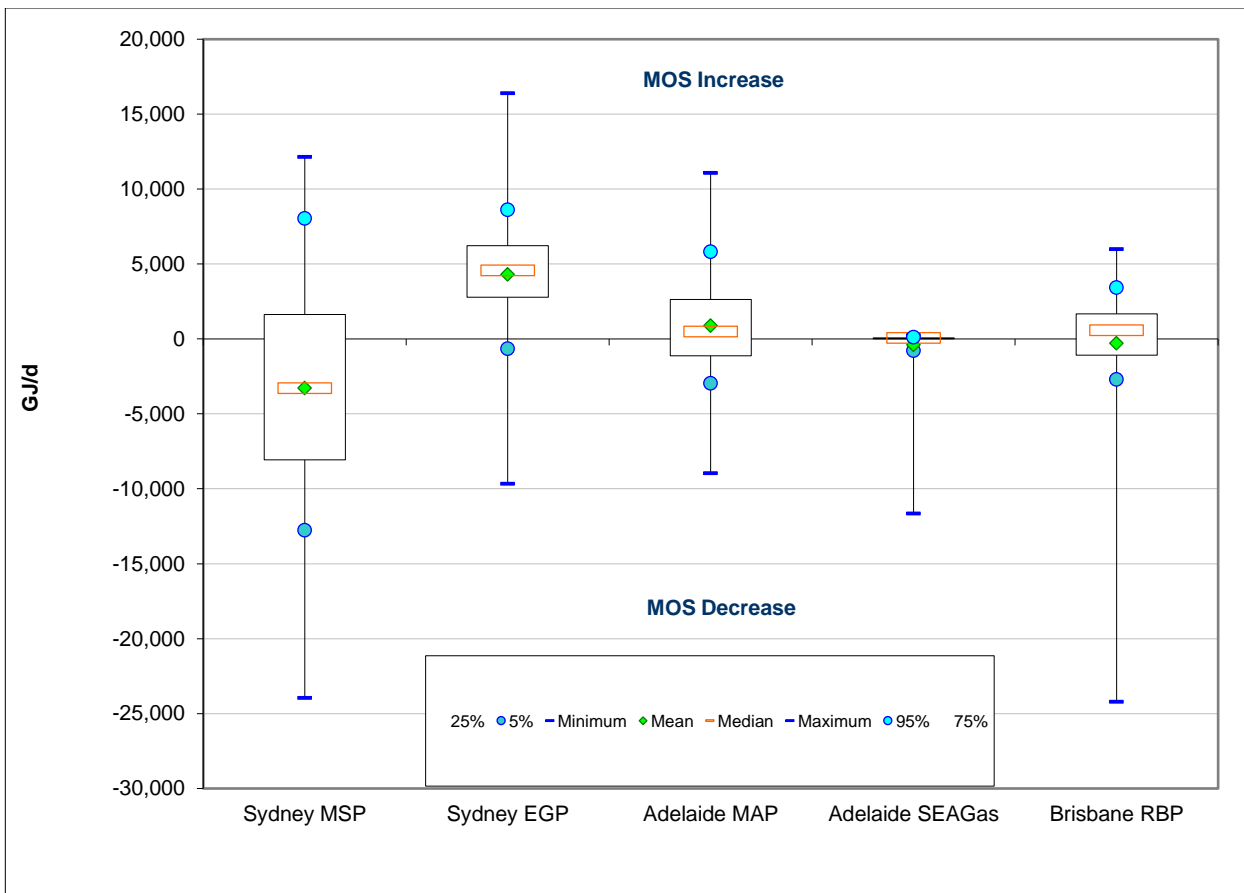


Table 9 Daily MOS quantities (GJ/d) for May 2021

No of days	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
1	12,137	16,395	11,082	239	5,979
1	10,070	9,046	6,679	134	3,625
1	5,990	8,201	4,961	106	3,226
1	5,576	7,729	4,209	102	2,903
1	4,456	6,966	4,068	97	2,567
1	3,974	6,838	3,972	86	1,984
1	3,071	6,464	3,254	82	1,868
1	2,149	6,373	2,875	76	1,771
1	1,130	6,076	2,398	73	1,558
1	319	5,764	2,070	67	1,448
1	-271	5,654	1,939	65	1,280
1	-794	5,474	1,728	54	1,107
1	-1,481	5,043	1,505	51	911
1	-1,875	4,869	1,161	47	783
1	-2,317	4,665	791	45	730
1	-3,301	4,565	487	42	568
1	-3,938	4,389	364	41	81
1	-4,488	4,014	204	40	-194
1	-5,411	3,772	33	38	-304
1	-5,905	3,491	-126	34	-473
1	-6,614	3,251	-298	29	-655
1	-6,938	3,159	-738	25	-846
1	-7,862	2,892	-1,002	21	-993
1	-8,272	2,668	-1,234	15	-1,155
1	-9,108	2,431	-1,542	9	-1,303
1	-9,993	1,884	-2,073	-26	-1,699
1	-10,591	1,370	-2,211	-178	-1,798
1	-11,647	772	-2,398	-290	-2,169
1	-11,992	-18	-2,712	-401	-2,582
1	-13,532	-1,302	-3,200	-1,170	-2,817
1	-23,970	-9,676	-8,957	-11,657	-24,223