



MOS ESTIMATES REPORT

MOS PERIODS: JUNE 2021, JULY
2021 & AUGUST 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	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: June 2021, July 2021 and August 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 June from 2016 to 2020; July from 2016 to 2020; and August 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 June 2021

Table 1 Maximum MOS quantities (GJ)

	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
MOS increase	12,956	15,143	15,569	205	6,965
MOS decrease	21,868	4,168	8,687	17,632	9,692

Figure 1 Curves of daily MOS quantities

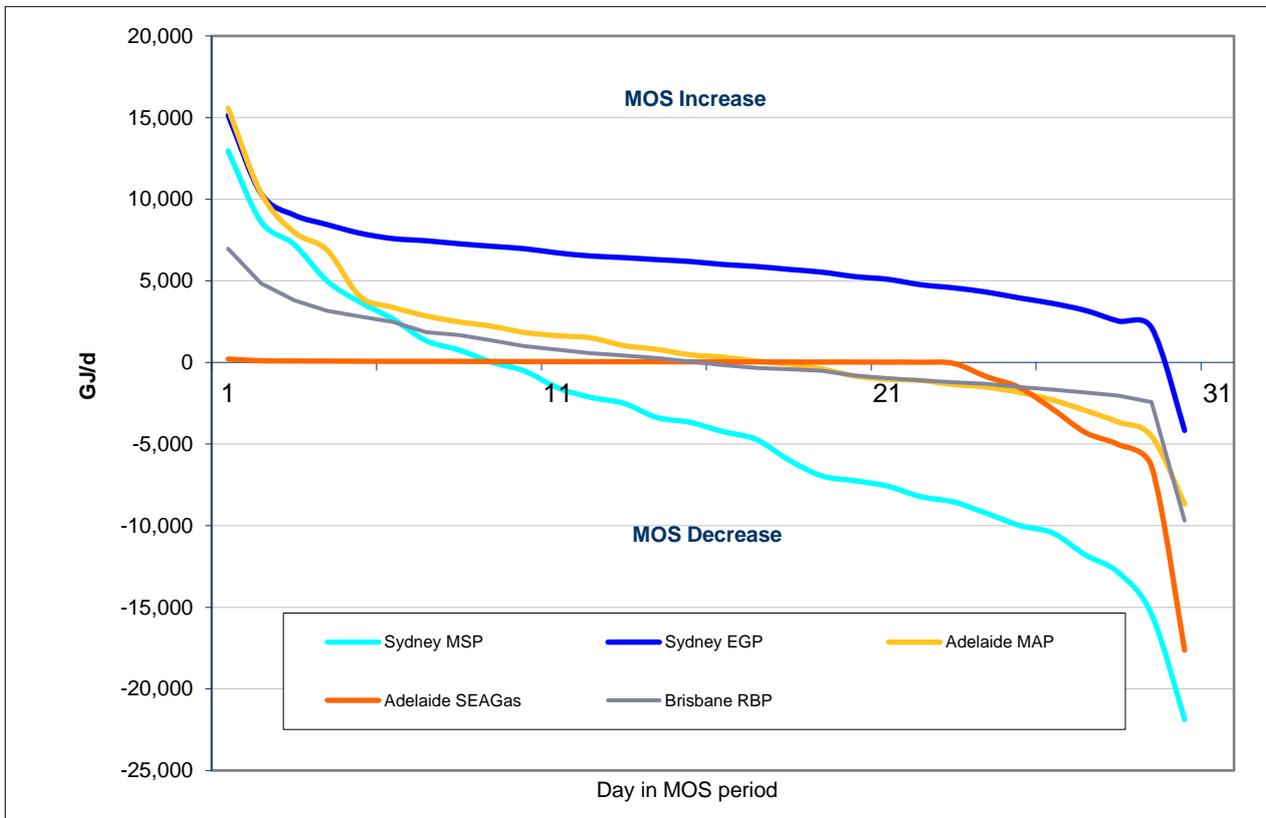


Table 2 Summary statistics of daily MOS quantities

	Summary statistics GJ/d				
	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
Maximum	12,956	15,143	15,569	205	6,965
95%	7,999	9,756	9,292	95	4,381
75%	572	7,231	2,415	61	1,588
50%	-3,952	6,093	400	35	-53
25%	-8,467	4,616	-1,288	-45	-1,195
5%	-14,286	2,307	-4,131	-5,774	-2,249
Minimum	-21,868	-4,168	-8,687	-17,632	-9,692
Mean	-3,889	5,924	1,105	-1,249	201
Std deviation	7,470	3,146	4,606	3,524	2,868
% days positive	30%	97%	57%	73%	50%
% days negative	70%	3%	43%	27%	50%

Figure 2 Distribution of daily MOS quantities

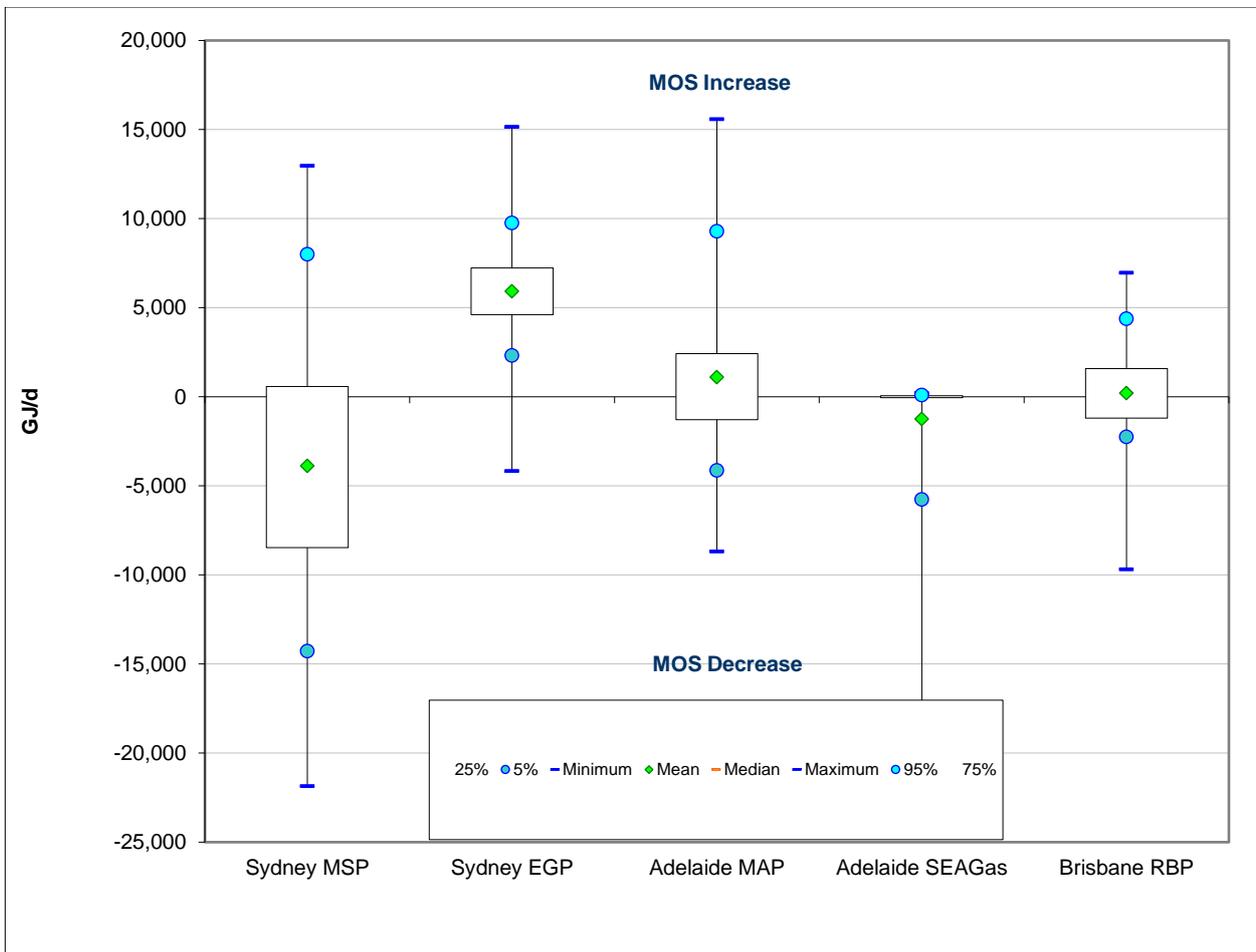


Table 3 Daily MOS quantities (GJ/d) for June 2021

No of days	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
1	12,956	15,143	15,569	205	6,965
1	8,625	10,349	10,365	102	4,841
1	7,234	9,030	7,980	87	3,818
1	4,990	8,446	6,883	81	3,155
1	3,689	7,916	4,037	71	2,820
1	2,656	7,586	3,370	69	2,475
1	1,337	7,453	2,852	68	1,858
1	760	7,270	2,481	63	1,671
1	9	7,114	2,216	55	1,340
1	-539	6,964	1,830	53	991
1	-1,561	6,707	1,633	50	770
1	-2,146	6,519	1,506	45	572
1	-2,506	6,421	1,032	44	418
1	-3,375	6,297	799	41	277
1	-3,666	6,184	473	36	47
1	-4,237	6,001	326	34	-153
1	-4,708	5,879	88	31	-329
1	-5,973	5,701	-104	24	-413
1	-6,952	5,531	-399	21	-513
1	-7,246	5,260	-832	20	-811
1	-7,580	5,094	-1,034	16	-963
1	-8,222	4,761	-1,105	10	-1,100
1	-8,549	4,567	-1,349	-63	-1,226
1	-9,245	4,306	-1,516	-875	-1,310
1	-9,991	3,947	-1,835	-1,544	-1,509
1	-10,446	3,614	-2,302	-2,859	-1,661
1	-11,803	3,179	-2,949	-4,300	-1,851
1	-12,880	2,530	-3,657	-5,038	-2,036
1	-15,436	2,125	-4,518	-6,377	-2,423
1	-21,868	-4,168	-8,687	-17,632	-9,692

3.2 MOS Period July 2021

Table 4 Maximum MOS quantities (GJ)

	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
MOS increase	10,626	18,639	13,234	2,022	5,081
MOS decrease	30,618	901	11,412	12,659	5,960

Figure 3 Curves of daily MOS quantities

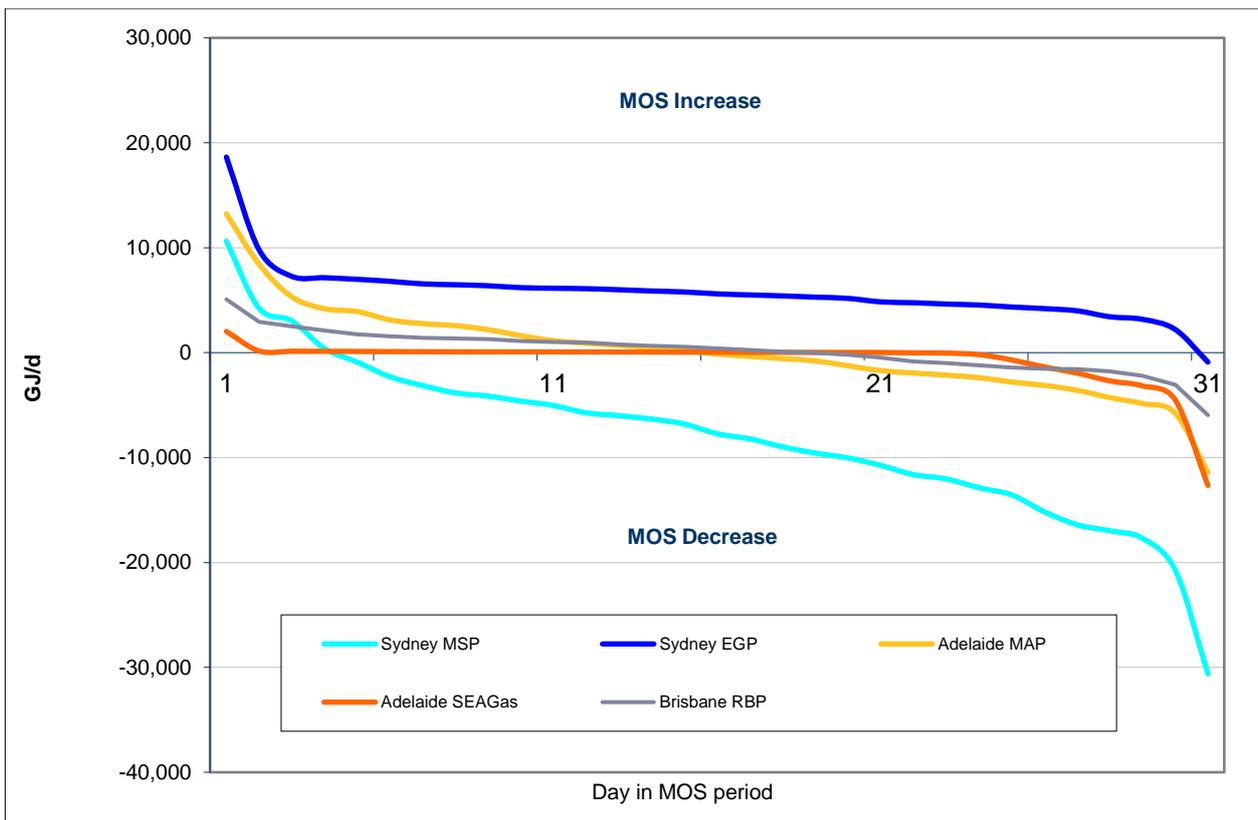


Table 5 Summary statistics of daily MOS quantities

	Summary statistics GJ/d				
	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
Maximum	10,626	18,639	13,234	2,022	5,081
95%	3,634	8,535	6,874	142	2,720
75%	-3,991	6,423	2,381	74	1,314
50%	-7,729	5,601	-133	38	419
25%	-12,454	4,584	-2,267	-119	-1,090
5%	-19,201	2,691	-5,315	-3,835	-2,642
Minimum	-30,618	-901	-11,412	-12,659	-5,960
Mean	-8,179	5,751	116	-772	144
Std deviation	8,018	3,017	4,460	2,515	2,027
% days positive	13%	97%	48%	68%	58%
% days negative	87%	3%	52%	32%	42%

Figure 4 Distribution of daily MOS quantities

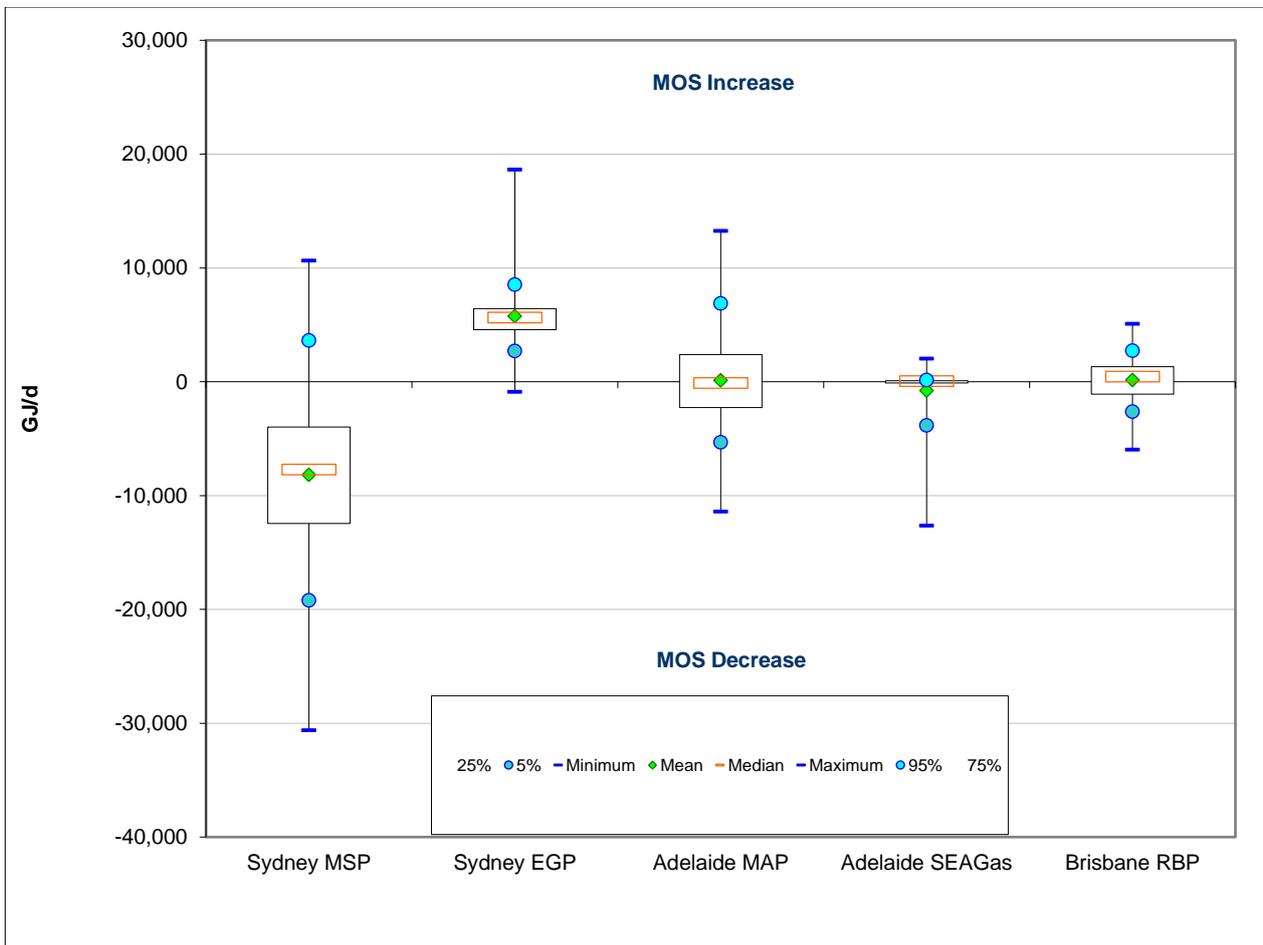


Table 6 Daily MOS quantities (GJ/d) for July 2021

No of days	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
1	10,626	18,639	13,234	2,022	5,081
1	4,234	9,801	8,429	152	2,926
1	3,034	7,269	5,318	132	2,513
1	396	7,143	4,183	124	2,119
1	-905	6,988	3,916	111	1,757
1	-2,297	6,795	3,116	97	1,554
1	-3,145	6,553	2,764	84	1,407
1	-3,834	6,472	2,574	78	1,352
1	-4,147	6,375	2,188	70	1,275
1	-4,623	6,194	1,611	68	1,109
1	-5,042	6,137	1,144	67	1,000
1	-5,740	6,094	897	63	948
1	-6,017	5,994	695	61	757
1	-6,334	5,876	490	53	638
1	-6,810	5,782	199	48	544
1	-7,729	5,601	-133	38	419
1	-8,222	5,499	-356	33	261
1	-8,982	5,405	-572	24	79
1	-9,574	5,287	-790	21	-24
1	-10,037	5,171	-1,257	17	-211
1	-10,753	4,838	-1,717	14	-489
1	-11,625	4,756	-1,944	-23	-844
1	-12,035	4,631	-2,148	-48	-980
1	-12,872	4,537	-2,386	-190	-1,199
1	-13,556	4,348	-2,804	-695	-1,412
1	-15,171	4,198	-3,127	-1,369	-1,530
1	-16,405	3,987	-3,591	-1,948	-1,570
1	-16,979	3,421	-4,283	-2,694	-1,774
1	-17,695	3,174	-4,854	-3,170	-2,212
1	-20,706	2,208	-5,776	-4,500	-3,071
1	-30,618	-901	-11,412	-12,659	-5,960

3.3 MOS Period August 2021

Table 7 Maximum MOS quantities (GJ)

	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
MOS increase	16,076	10,914	11,396	890	12,425
MOS decrease	21,577	0	10,860	9,939	5,962

Figure 5 Curves of daily MOS quantities

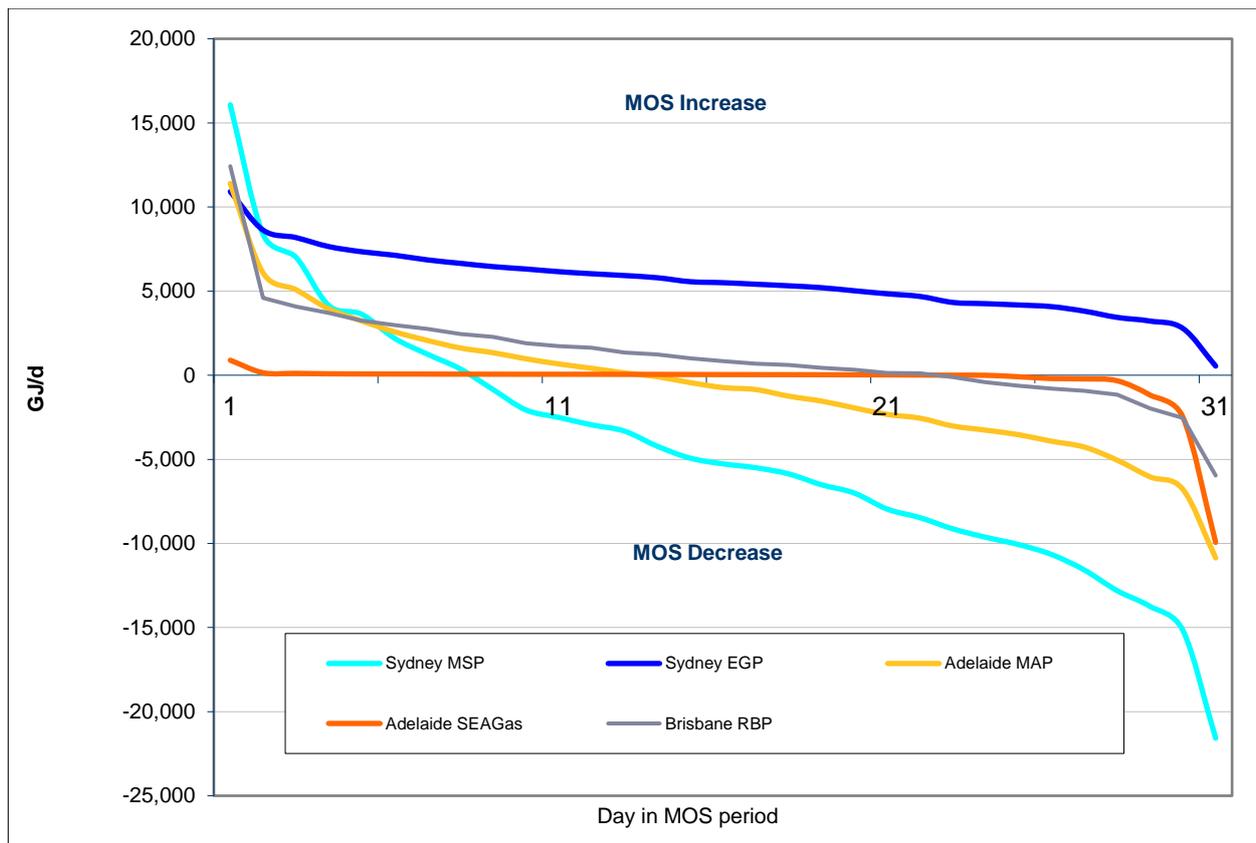


Table 8 Summary statistics of daily MOS quantities

	Summary statistics GJ/d				
	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
Maximum	16,076	10,914	11,396	890	12,425
95%	7,694	8,406	5,583	129	4,337
75%	-236	6,554	1,481	62	2,358
50%	-5,268	5,501	-733	39	846
25%	-9,384	4,290	-3,144	-2	-263
5%	-14,451	3,003	-6,411	-1,829	-2,263
Minimum	-21,577	542	-10,860	-9,939	-5,962
Mean	-4,475	5,555	-611	-398	1,160
Std deviation	7,658	1,958	4,231	1,848	2,984
% days positive	26%	100%	42%	74%	71%
% days negative	74%	0%	58%	26%	29%

Figure 6 Distribution of daily MOS quantities

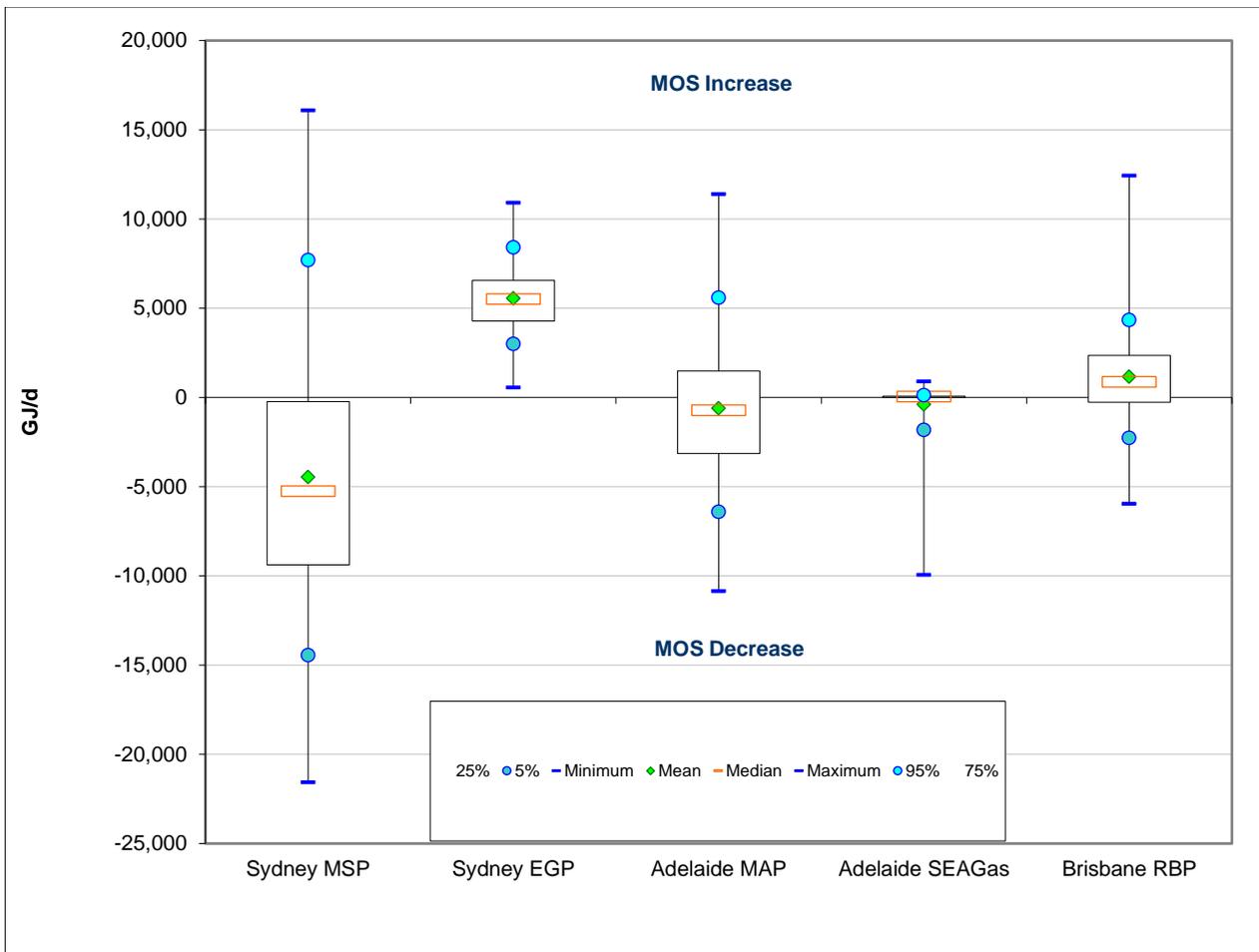


Table 9 Daily MOS quantities (GJ/d) for August 2021

No of days	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
1	16,076	10,914	11,396	890	12,425
1	8,371	8,628	6,078	147	4,595
1	7,016	8,184	5,087	111	4,079
1	4,142	7,648	3,940	86	3,706
1	3,624	7,341	3,226	75	3,250
1	2,197	7,133	2,581	72	2,991
1	1,251	6,857	2,069	68	2,749
1	379	6,652	1,621	63	2,442
1	-850	6,456	1,340	60	2,273
1	-2,065	6,314	977	58	1,891
1	-2,509	6,156	670	57	1,722
1	-2,951	6,032	413	56	1,625
1	-3,322	5,926	138	52	1,348
1	-4,221	5,796	-87	49	1,229
1	-4,928	5,562	-437	44	999
1	-5,268	5,501	-733	39	846
1	-5,500	5,410	-852	35	677
1	-5,866	5,316	-1,245	33	612
1	-6,511	5,204	-1,539	31	443
1	-7,006	5,020	-1,943	26	323
1	-7,957	4,841	-2,329	19	141
1	-8,468	4,683	-2,556	12	118
1	-9,135	4,327	-3,021	1	-104
1	-9,633	4,254	-3,266	-4	-422
1	-10,067	4,175	-3,536	-91	-631
1	-10,654	4,078	-3,923	-197	-797
1	-11,576	3,810	-4,270	-218	-931
1	-12,808	3,439	-5,048	-329	-1,152
1	-13,739	3,220	-6,040	-1,175	-1,976
1	-15,163	2,786	-6,781	-2,483	-2,550
1	-21,577	542	-10,860	-9,939	-5,962