



MOS ESTIMATES REPORT

MOS PERIODS: DECEMBER 2020,
JANUARY 2021 & FEBRUARY 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: December 2020, January 2021 and February 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 December from 2015 to 2019; January from 2016 to 2020; and February 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 December 2020

Table 1 Maximum MOS quantities (GJ)

	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
MOS increase	14,542	8,946	6,068	519	10,460
MOS decrease	28,638	16,031	10,595	4,974	6,943

Figure 1 Curves of daily MOS quantities

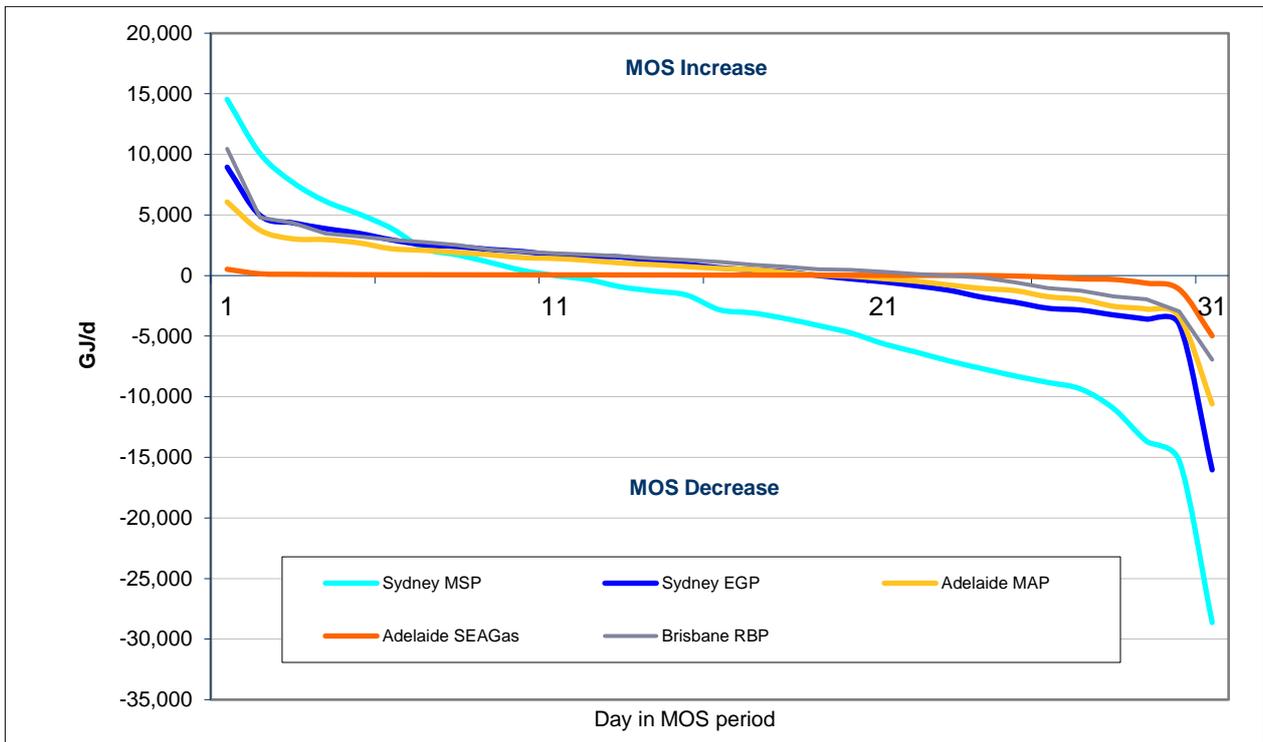


Table 2 Summary statistics of daily MOS quantities

	Summary statistics GJ/d				
	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
Maximum	14,542	8,946	6,068	519	10,460
95%	8,881	4,661	3,387	128	4,561
75%	1,400	2,278	1,814	62	2,339
50%	-2,826	646	587	42	1,127
25%	-7,370	-1,506	-922	7	-90
5%	-14,489	-3,818	-3,082	-886	-2,471
Minimum	-28,638	-16,031	-10,595	-4,974	-6,943
Mean	-2,948	216	251	-185	1,097
Std deviation	8,250	4,133	2,871	930	2,887
% days positive	35%	61%	61%	77%	71%
% days negative	65%	39%	39%	23%	29%

Figure 2 Distribution of daily MOS quantities

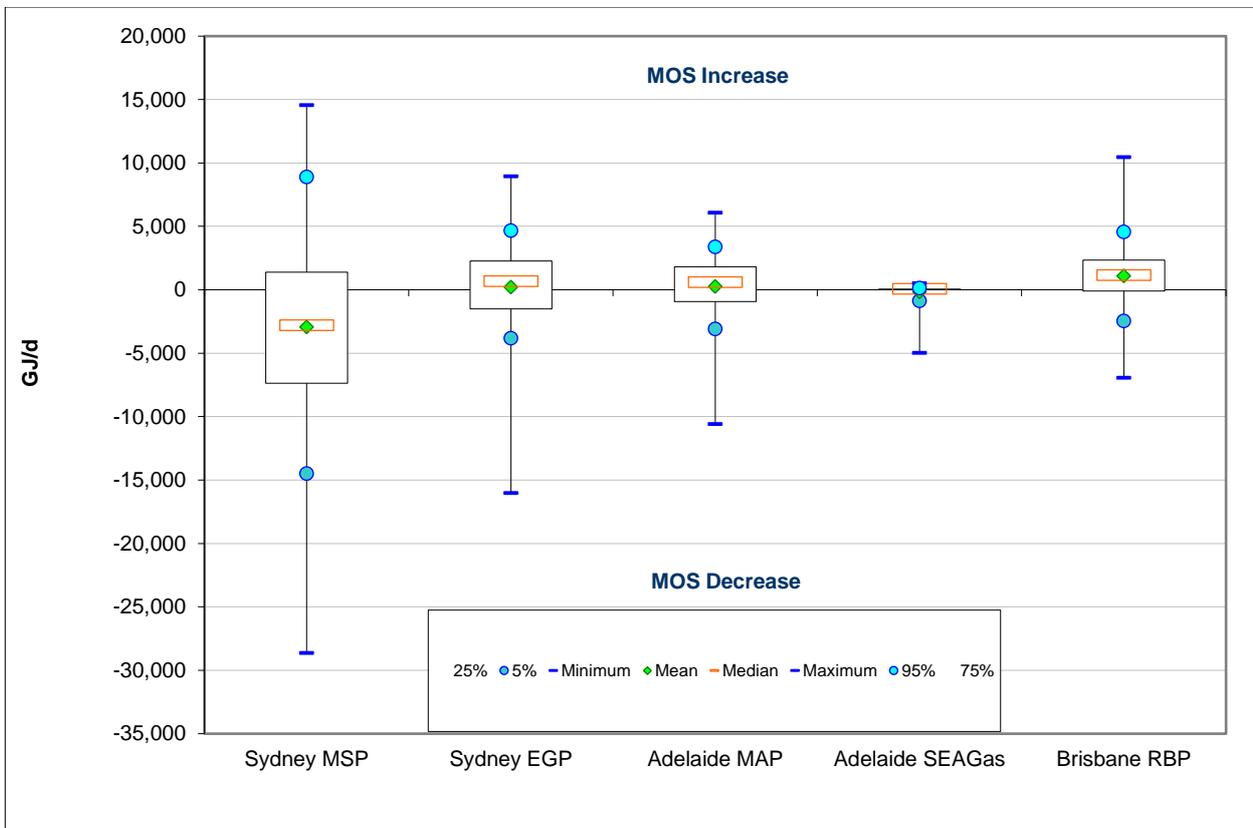


Table 3 Daily MOS quantities (GJ/d) for December 2020

No of days	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
1	14,542	8,946	6,068	519	10,460
1	10,073	4,969	3,741	148	4,786
1	7,689	4,354	3,033	107	4,336
1	6,123	3,876	2,971	89	3,459
1	5,093	3,495	2,703	76	3,230
1	3,902	2,950	2,217	70	2,935
1	2,226	2,536	2,083	67	2,771
1	1,710	2,398	1,908	63	2,525
1	1,089	2,158	1,719	61	2,153
1	423	1,984	1,481	59	1,964
1	0	1,700	1,410	55	1,839
1	-342	1,584	1,248	54	1,729
1	-939	1,531	1,035	53	1,610
1	-1,278	1,185	902	50	1,404
1	-1,615	935	741	48	1,287
1	-2,826	646	587	42	1,127
1	-3,086	469	490	39	891
1	-3,547	316	256	35	730
1	-4,120	5	51	34	510
1	-4,738	-272	-44	32	456
1	-5,638	-528	-252	23	313
1	-6,328	-850	-471	16	126
1	-7,055	-1,222	-779	10	-17
1	-7,684	-1,790	-1,065	4	-162
1	-8,292	-2,203	-1,241	-41	-566
1	-8,820	-2,698	-1,745	-123	-1,034
1	-9,368	-2,852	-1,965	-272	-1,250
1	-10,980	-3,250	-2,539	-321	-1,726
1	-13,672	-3,591	-2,766	-627	-1,970
1	-15,305	-4,044	-3,398	-1,144	-2,971
1	-28,638	-16,031	-10,595	-4,974	-6,943

3.2 MOS Period January 2021

Table 4 Maximum MOS quantities (GJ)

	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
MOS increase	19,788	5,346	6,682	1,517	7,839
MOS decrease	40,396	18,655	10,302	5,941	7,263

Figure 3 Curves of daily MOS quantities

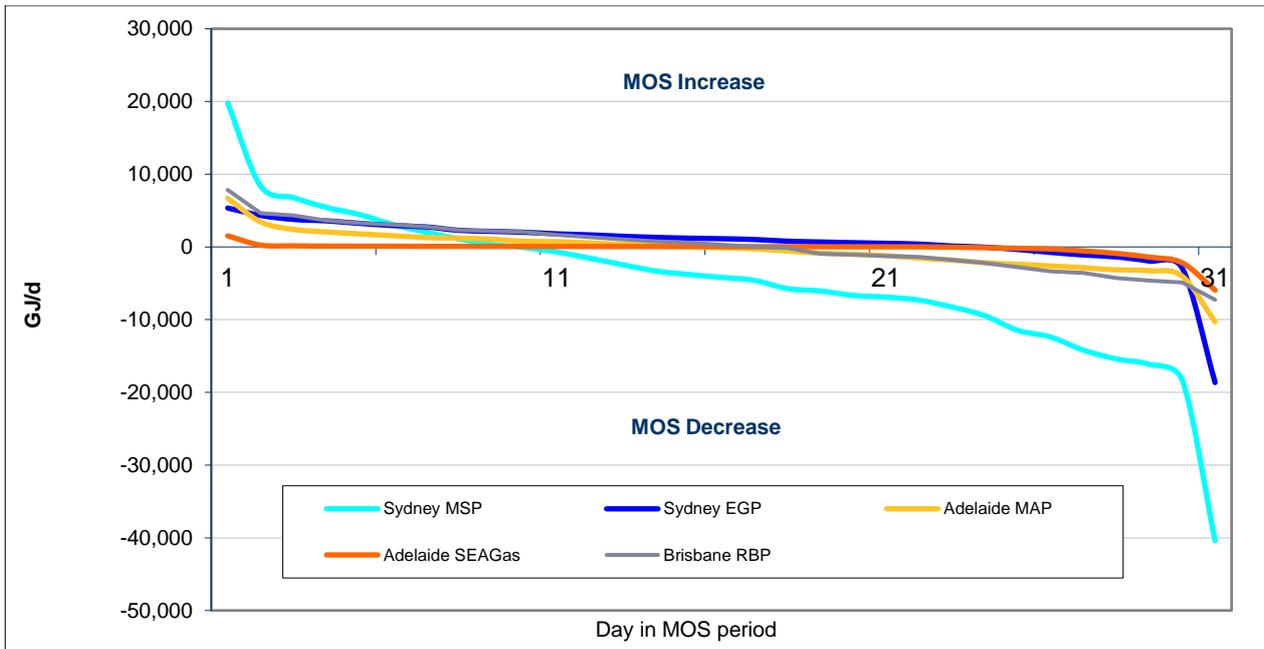


Table 5 Summary statistics of daily MOS quantities

	Summary statistics GJ/d				
	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
Maximum	19,788	5,346	6,682	1,517	7,839
95%	7,570	4,052	2,925	197	4,471
75%	735	2,213	1,132	71	2,245
50%	-4,196	1,128	-105	38	301
25%	-8,857	44	-1,993	-73	-1,989
5%	-17,236	-2,439	-3,655	-1,799	-4,760
Minimum	-40,396	-18,655	-10,302	-5,941	-7,263
Mean	-4,774	577	-453	-279	73
Std deviation	10,431	4,018	2,884	1,202	3,290
% days positive	29%	74%	48%	71%	55%
% days negative	71%	26%	52%	29%	45%

Figure 4 Distribution of daily MOS quantities

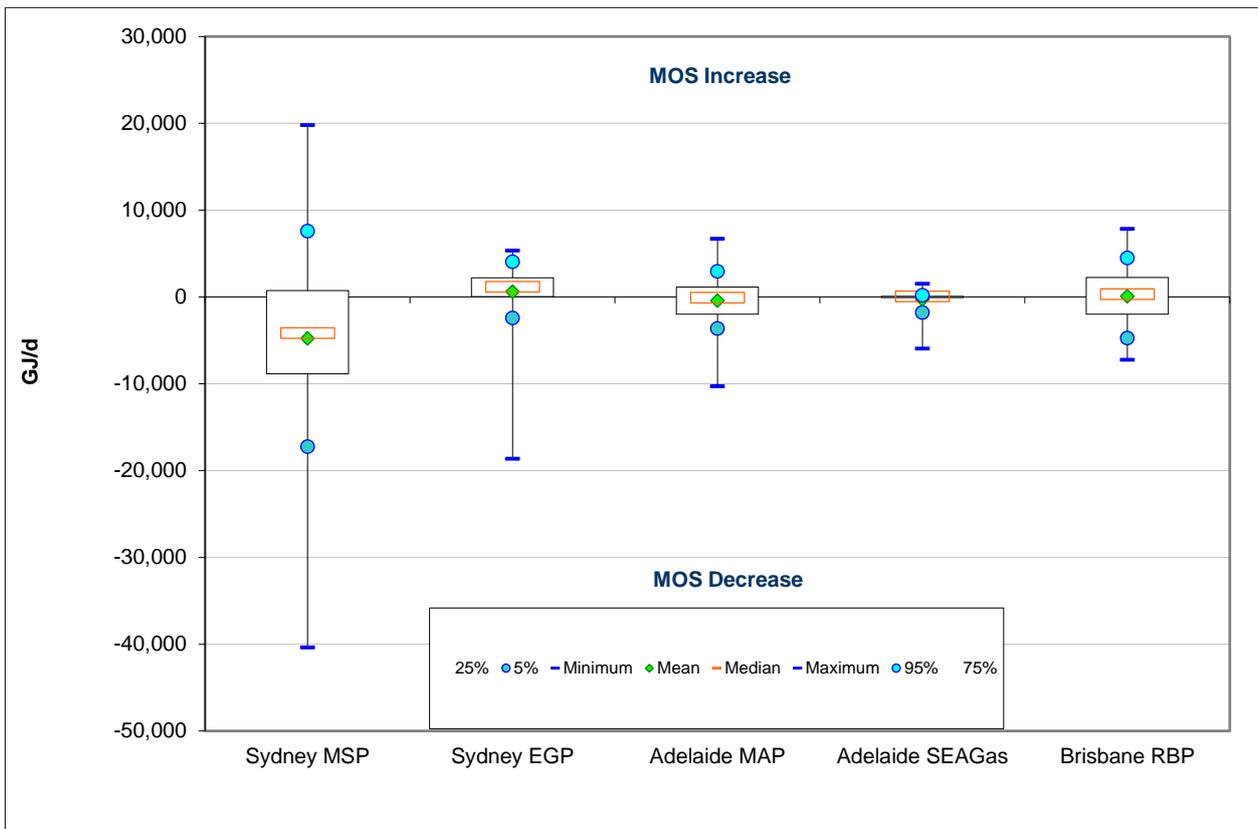


Table 6 Daily MOS quantities (GJ/d) for January 2021

No of days	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
1	19,788	5,346	6,682	1,517	7,839
1	8,368	4,324	3,442	245	4,625
1	6,771	3,781	2,408	148	4,317
1	5,431	3,581	2,054	109	3,643
1	4,454	3,240	1,789	101	3,267
1	3,110	2,941	1,554	90	3,046
1	2,042	2,761	1,292	85	2,786
1	1,118	2,288	1,195	75	2,324
1	352	2,139	1,068	66	2,166
1	-82	2,017	769	63	2,066
1	-700	1,793	717	61	1,666
1	-1,556	1,654	538	57	1,351
1	-2,453	1,465	352	55	1,030
1	-3,309	1,311	239	51	751
1	-3,792	1,203	42	43	594
1	-4,196	1,128	-105	38	301
1	-4,599	1,018	-271	34	6
1	-5,732	790	-561	30	-152
1	-6,056	679	-871	25	-928
1	-6,674	580	-1,014	20	-1,087
1	-6,905	492	-1,198	19	-1,233
1	-7,315	386	-1,546	9	-1,377
1	-8,263	125	-1,818	-42	-1,760
1	-9,450	-36	-2,168	-104	-2,218
1	-11,473	-353	-2,391	-186	-2,774
1	-12,393	-753	-2,615	-285	-3,337
1	-14,201	-1,105	-2,863	-557	-3,596
1	-15,415	-1,377	-3,160	-889	-4,256
1	-16,158	-1,952	-3,279	-1,402	-4,642
1	-18,314	-2,927	-4,030	-2,195	-4,878
1	-40,396	-18,655	-10,302	-5,941	-7,263

3.3 MOS Period February 2021

Table 7 Maximum MOS quantities (GJ)

	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
MOS increase	27,841	7,095	4,888	533	7,611
MOS decrease	24,902	12,228	8,621	8,611	7,879

Figure 5 Curves of daily MOS quantities

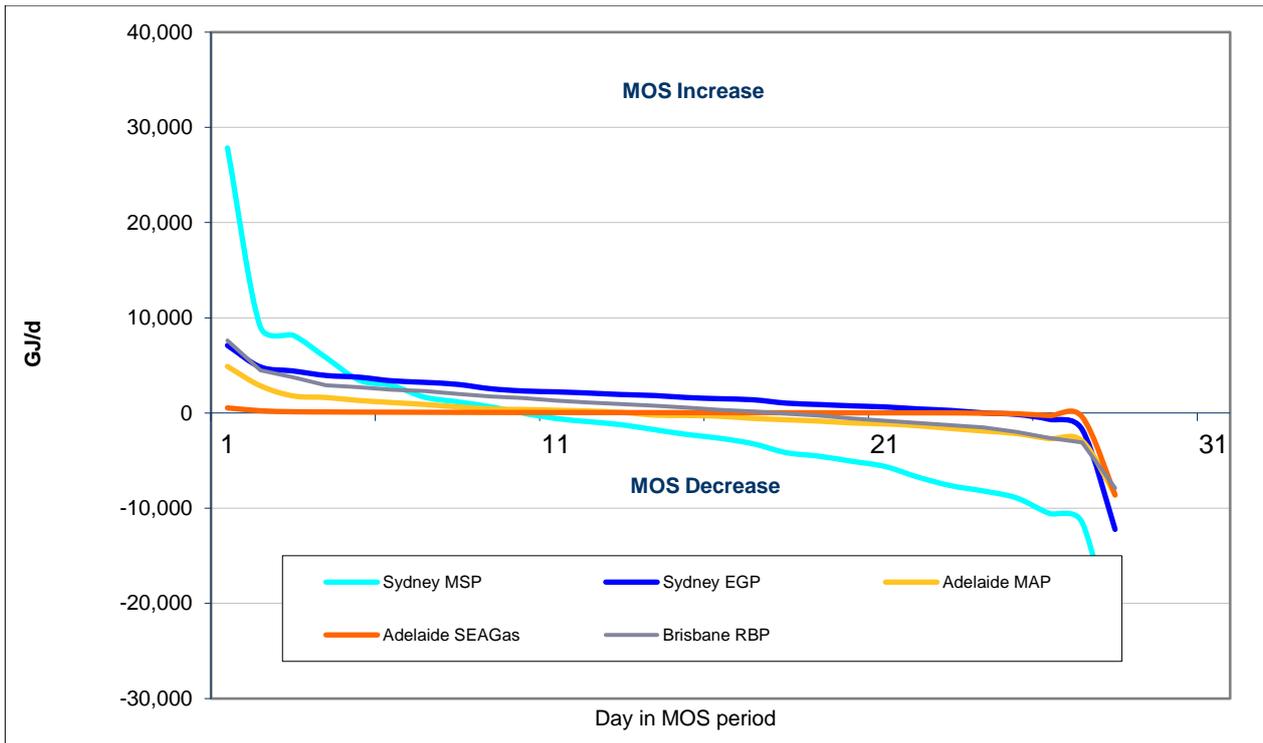


Table 8 Summary statistics of daily MOS quantities

	Summary statistics GJ/d				
	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
Maximum	27,841	7,095	4,888	533	7,611
95%	8,745	4,690	2,483	198	4,217
75%	1,291	3,056	704	66	2,084
50%	-2,016	1,723	-246	39	663
25%	-5,897	581	-1,195	16	-870
5%	-11,173	-1,368	-2,849	-367	-2,945
Minimum	-24,902	-12,228	-8,621	-8,611	-7,879
Mean	-1,782	1,438	-357	-272	551
Std deviation	8,885	3,259	2,326	1,641	2,812
% days positive	32%	86%	46%	82%	61%
% days negative	68%	14%	54%	18%	39%

Figure 6 Distribution of daily MOS quantities

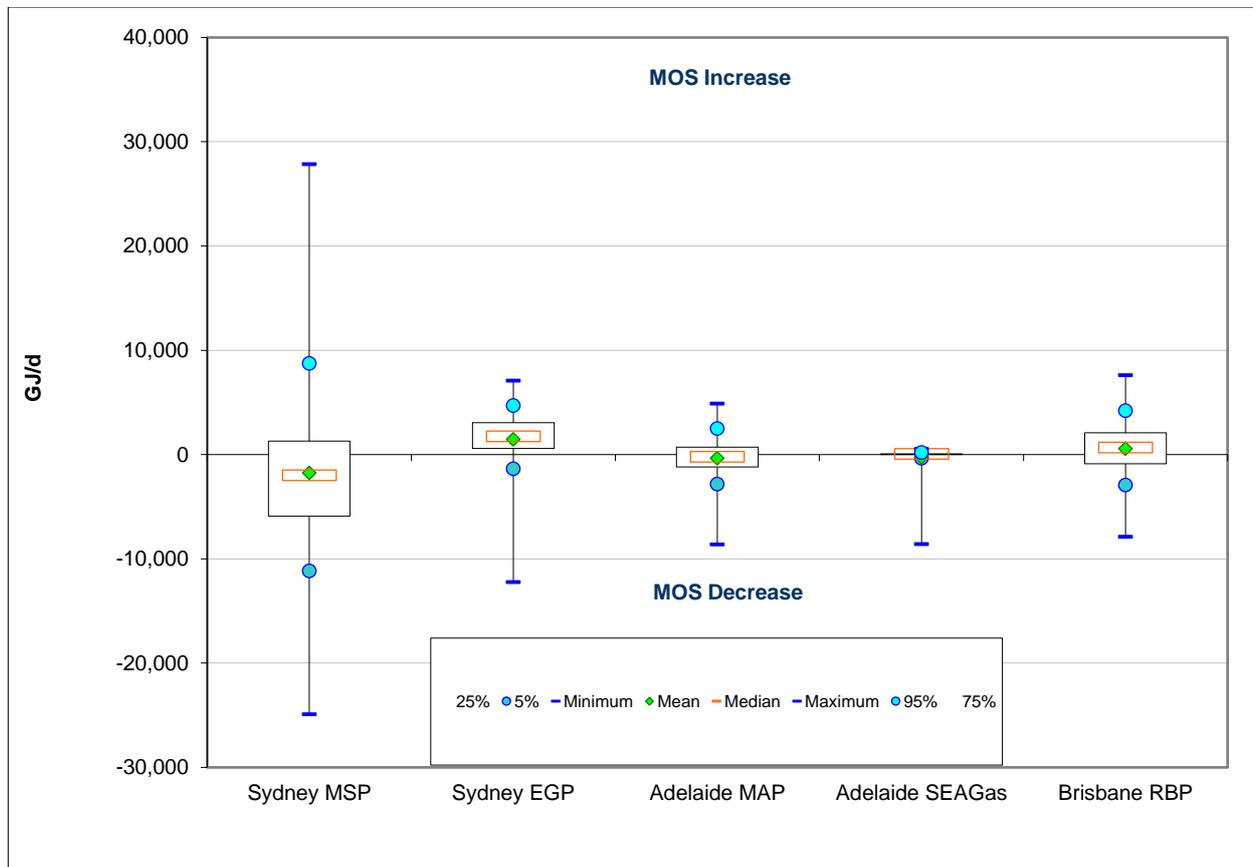


Table 9 Daily MOS quantities (GJ/d) for February 2021

No of days	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
1	27,841	7,095	4,888	533	7,611
1	9,061	4,840	2,857	235	4,469
1	8,158	4,411	1,789	129	3,750
1	5,807	3,937	1,629	105	2,893
1	3,456	3,760	1,311	90	2,696
1	2,886	3,378	1,099	84	2,455
1	1,656	3,216	893	74	2,312
1	1,169	3,003	641	63	2,008
1	649	2,547	420	55	1,730
1	-22	2,310	366	52	1,564
1	-583	2,218	290	47	1,282
1	-919	2,089	199	44	1,105
1	-1,248	1,935	59	40	945
1	-1,762	1,830	-225	39	771
1	-2,269	1,617	-267	38	554
1	-2,666	1,493	-350	35	336
1	-3,244	1,383	-572	29	167
1	-4,170	1,033	-714	27	-88
1	-4,542	888	-853	21	-276
1	-5,078	745	-1,048	19	-573
1	-5,618	632	-1,146	17	-810
1	-6,733	427	-1,340	14	-1,050
1	-7,636	266	-1,628	8	-1,290
1	-8,200	4	-1,895	-29	-1,534
1	-8,918	-151	-2,163	-86	-1,974
1	-10,550	-666	-2,693	-271	-2,639
1	-11,508	-1,746	-2,933	-418	-3,109
1	-24,902	-12,228	-8,621	-8,611	-7,879