



MOS ESTIMATES REPORT

MOS PERIODS: SEPTEMBER 2020,
OCTOBER 2020 & NOVEMBER 2020

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: September 2020, October 2020 and November 2020.

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 2014 to 2018; January from 2015 to 2019; and February from 2015 to 2019; 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 September 2020

Table 1 Maximum MOS quantities (GJ)

	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
MOS increase	23,911	14,725	12,849	106	5,604
MOS decrease	23,922	14,402	11,397	17,311	5,092

Figure 1 Curves of daily MOS quantities

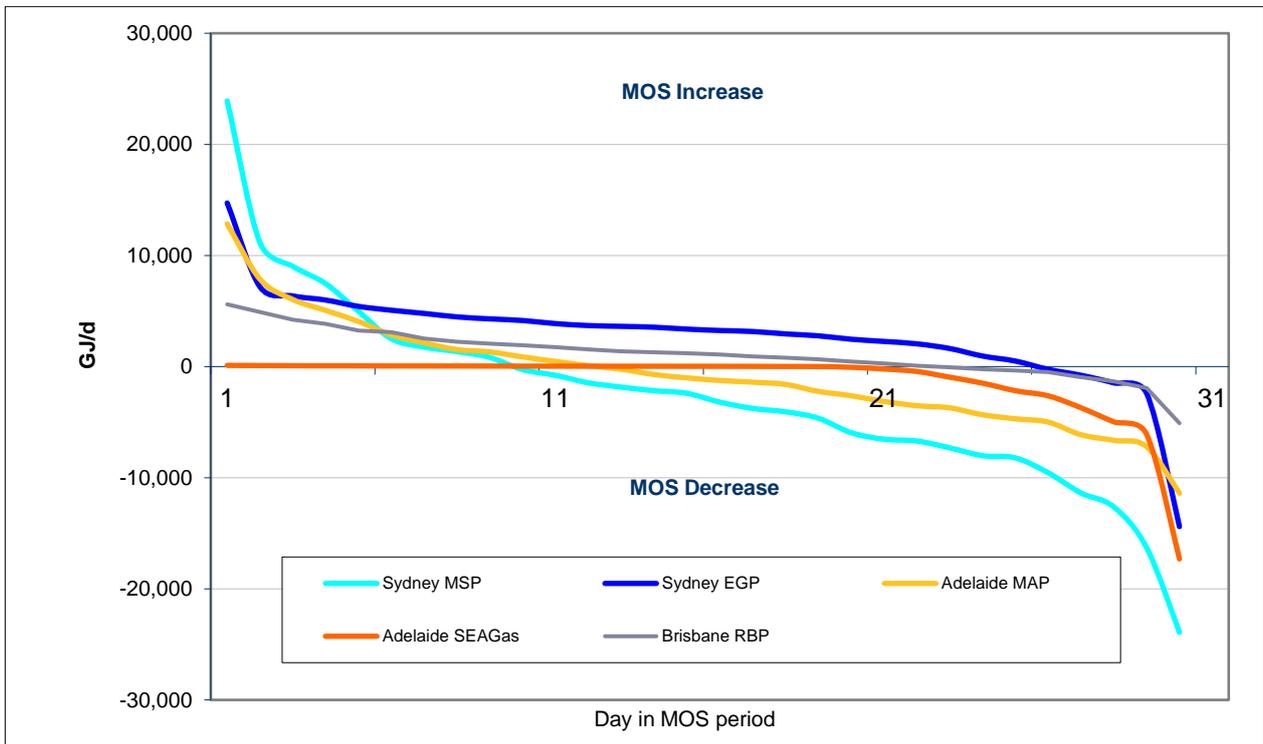


Table 2 Summary statistics of daily MOS quantities

	Summary statistics GJ/d				
	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
Maximum	23,911	14,725	12,849	106	5,604
95%	10,185	6,807	7,039	85	4,599
75%	1,210	4,427	1,482	49	2,182
50%	-2,802	3,309	-1,132	26	1,143
25%	-7,157	1,733	-3,664	-823	-29
5%	-14,645	-1,983	-6,948	-5,590	-1,662
Minimum	-23,922	-14,402	-11,397	-17,311	-5,092
Mean	-2,608	2,773	-725	-1,306	1,154
Std deviation	8,849	4,492	4,885	3,420	2,149
% days positive	30%	83%	40%	63%	73%
% days negative	70%	17%	60%	37%	27%

Figure 2 Distribution of daily MOS quantities

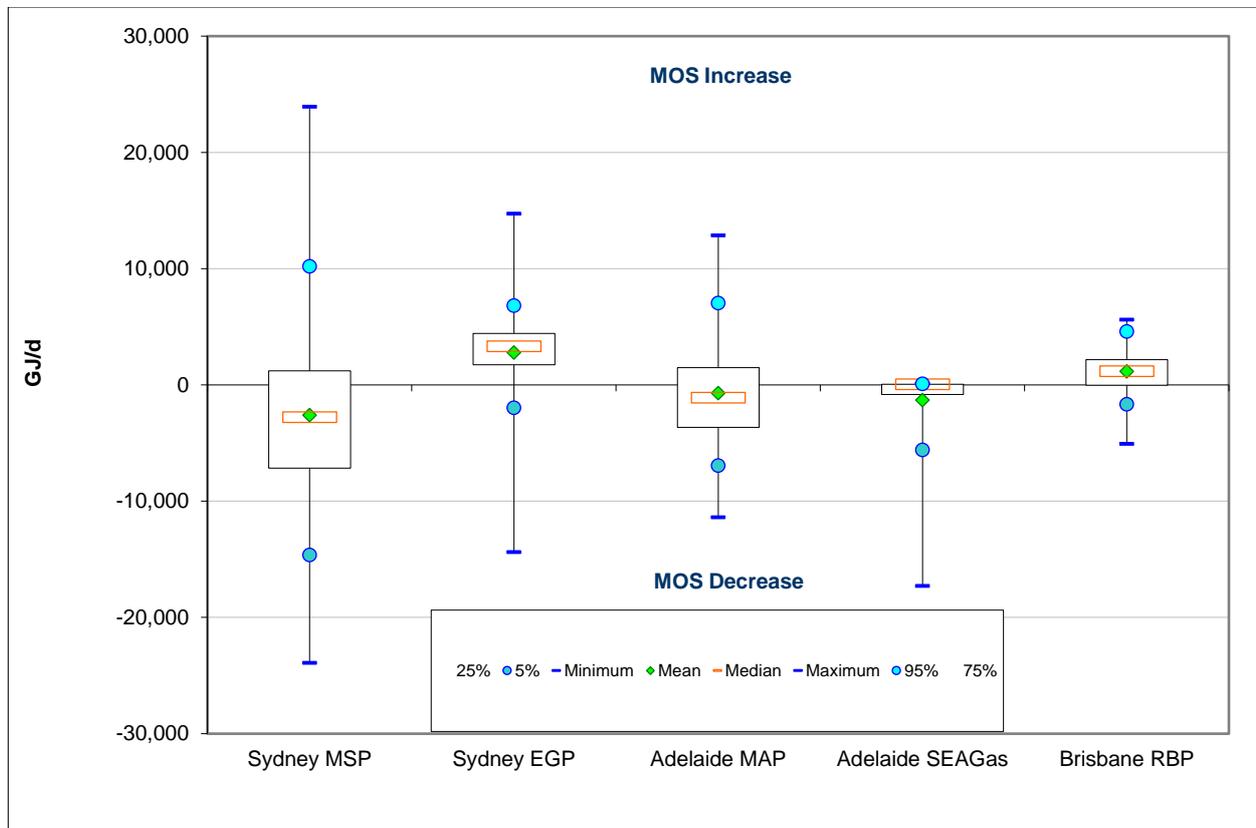


Table 3 Daily MOS quantities (GJ/d) for September 2020

No of days	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
1	23,911	14,725	12,849	106	5,604
1	11,142	7,173	7,859	91	4,911
1	9,016	6,360	6,037	77	4,218
1	7,459	5,988	5,052	67	3,833
1	4,967	5,417	4,060	61	3,233
1	2,499	5,069	2,845	56	3,086
1	1,748	4,783	2,134	53	2,532
1	1,340	4,471	1,535	50	2,223
1	819	4,293	1,322	47	2,059
1	-278	4,145	869	40	1,921
1	-788	3,869	465	38	1,745
1	-1,463	3,692	82	35	1,552
1	-1,847	3,621	-239	33	1,386
1	-2,173	3,542	-714	29	1,279
1	-2,407	3,372	-1,013	28	1,213
1	-3,196	3,247	-1,250	24	1,073
1	-3,764	3,158	-1,403	19	923
1	-4,071	2,941	-1,603	10	795
1	-4,645	2,769	-2,230	3	665
1	-5,948	2,462	-2,624	-63	446
1	-6,536	2,264	-3,139	-216	281
1	-6,698	2,049	-3,521	-437	78
1	-7,310	1,628	-3,711	-952	-65
1	-8,022	949	-4,334	-1,490	-225
1	-8,214	499	-4,697	-2,172	-337
1	-9,552	-246	-4,994	-2,632	-490
1	-11,374	-780	-6,136	-3,705	-962
1	-12,629	-1,467	-6,635	-4,973	-1,335
1	-16,294	-2,406	-7,204	-6,095	-1,930
1	-23,922	-14,402	-11,397	-17,311	-5,092

3.2 MOS Period October 2020

Table 4 Maximum MOS quantities (GJ)

	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
MOS increase	23,404	8,423	10,410	564	6,281
MOS decrease	27,473	10,263	6,180	14,708	11,027

Figure 3 Curves of daily MOS quantities

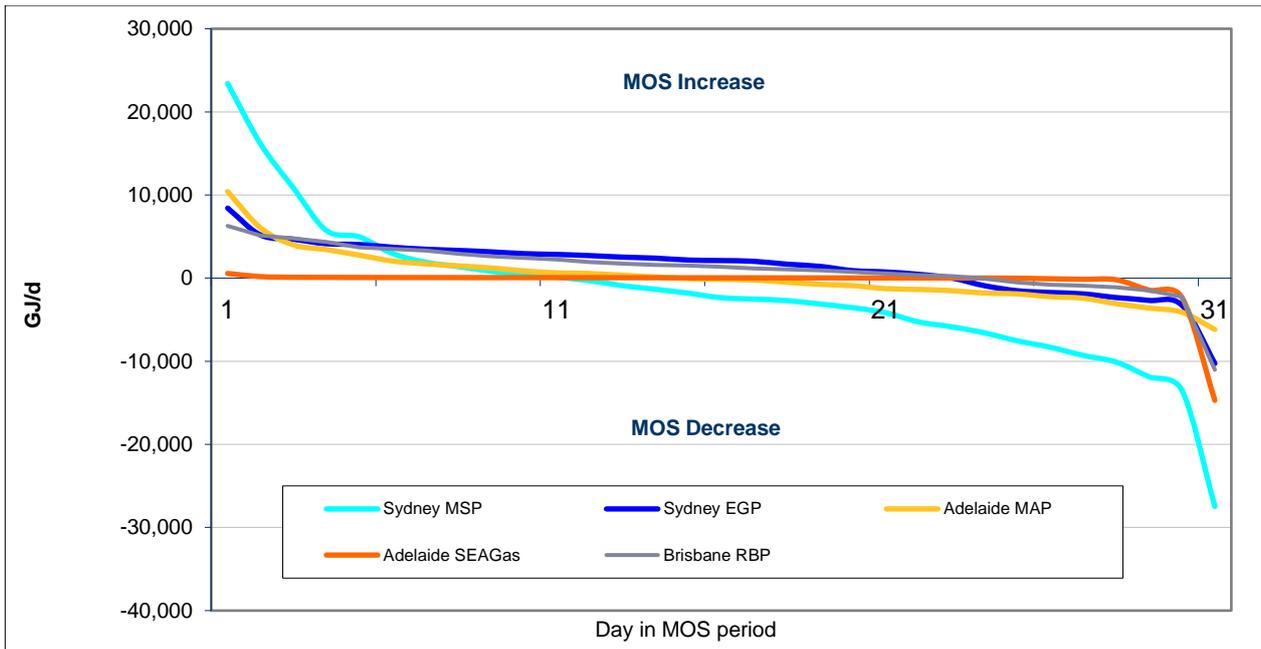


Table 5 Summary statistics of daily MOS quantities

	Summary statistics GJ/d				
	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
Maximum	23,404	8,423	10,410	564	6,281
95%	13,498	4,932	5,020	142	4,952
75%	1,111	3,249	1,356	67	2,764
50%	-2,353	2,115	-133	38	1,368
25%	-6,219	-450	-1,650	10	83
5%	-12,688	-2,972	-3,851	-1,887	-1,858
Minimum	-27,473	-10,263	-6,180	-14,708	-11,027
Mean	-1,930	1,307	119	-550	1,170
Std deviation	9,031	3,375	3,135	2,677	3,043
% days positive	35%	74%	45%	77%	74%
% days negative	65%	26%	55%	23%	26%

Figure 4 Distribution of daily MOS quantities

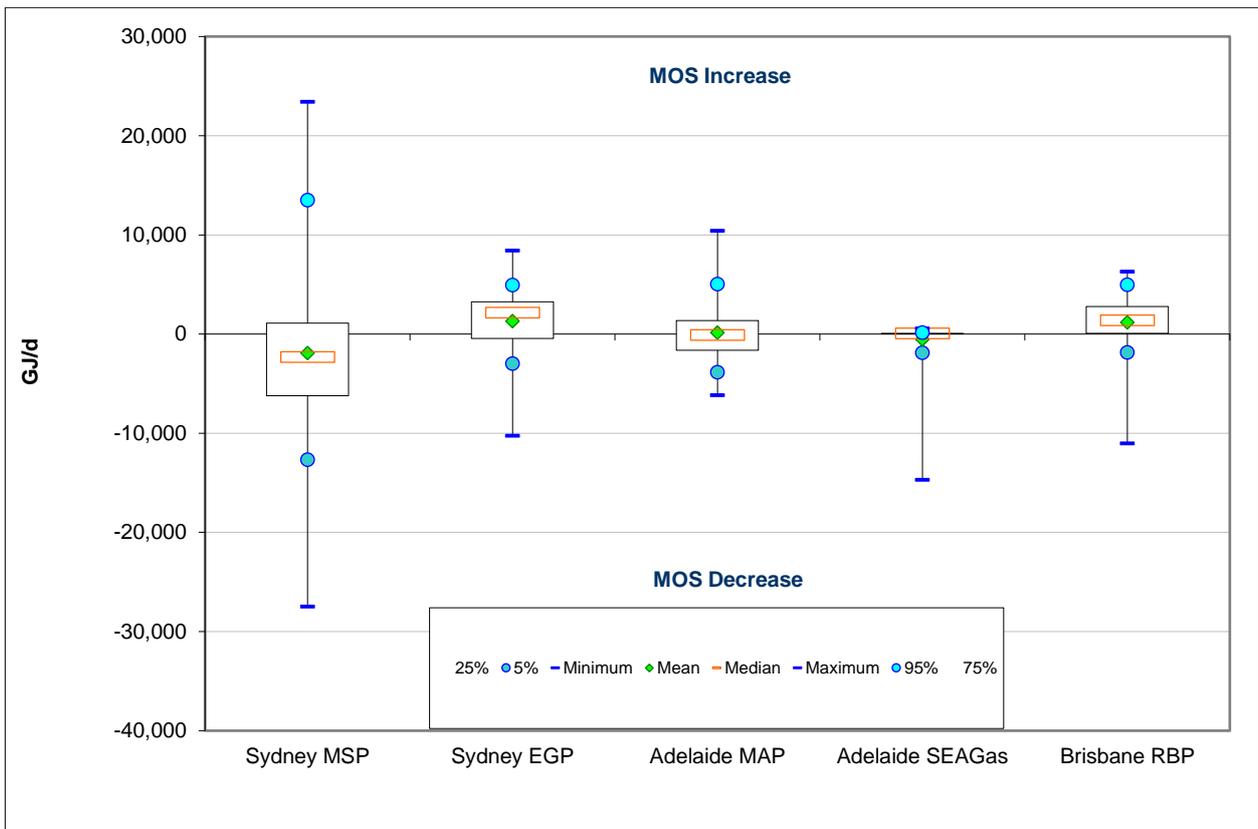


Table 6 Daily MOS quantities (GJ/d) for October 2020

No of days	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
1	23,404	8,423	10,410	564	6,281
1	16,154	5,186	6,044	179	5,130
1	10,841	4,677	3,996	104	4,773
1	5,735	4,135	3,430	94	4,360
1	4,964	4,043	2,761	81	3,716
1	2,982	3,719	2,063	77	3,499
1	1,928	3,478	1,716	74	3,316
1	1,392	3,335	1,484	68	2,916
1	830	3,164	1,228	65	2,612
1	436	2,945	872	65	2,419
1	122	2,851	637	62	2,237
1	-315	2,710	554	54	1,929
1	-904	2,527	346	50	1,753
1	-1,339	2,404	138	47	1,579
1	-1,811	2,173	-52	43	1,495
1	-2,353	2,115	-133	38	1,368
1	-2,524	2,021	-222	37	1,166
1	-2,703	1,677	-493	29	1,044
1	-3,118	1,413	-751	28	940
1	-3,558	900	-905	24	725
1	-4,168	740	-1,259	20	565
1	-5,270	457	-1,359	18	364
1	-5,853	12	-1,507	13	230
1	-6,584	-912	-1,793	7	-65
1	-7,547	-1,519	-1,901	-10	-525
1	-8,313	-1,727	-2,235	-79	-799
1	-9,298	-1,898	-2,419	-140	-914
1	-10,097	-2,339	-3,073	-194	-1,093
1	-11,875	-2,678	-3,598	-1,443	-1,472
1	-13,500	-3,266	-4,103	-2,331	-2,244
1	-27,473	-10,263	-6,180	-14,708	-11,027

3.3 MOS Period November 2020

Table 7 Maximum MOS quantities (GJ)

	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
MOS increase	12,206	9,148	21,336	584	5,113
MOS decrease	32,304	9,823	5,446	22,311	6,363

Figure 5 Curves of daily MOS quantities

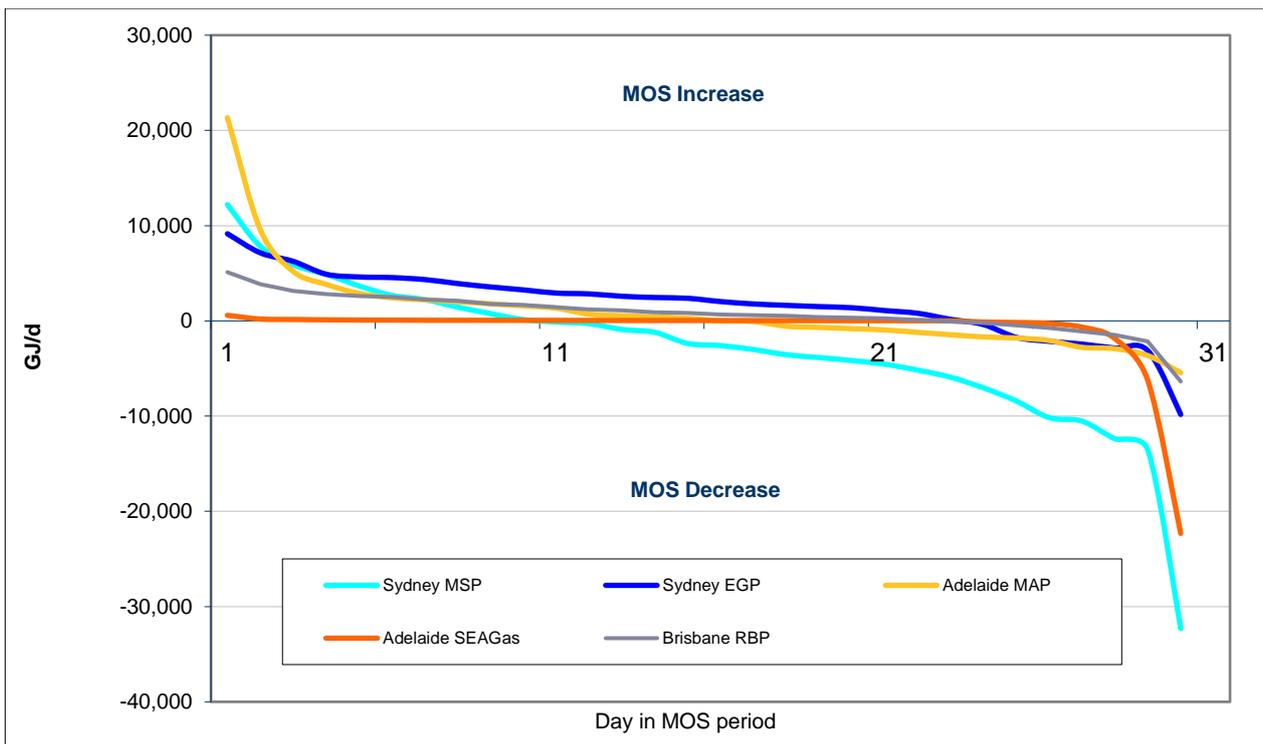


Table 8 Summary statistics of daily MOS quantities

	Summary statistics GJ/d				
	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
Maximum	12,206	9,148	21,336	584	5,113
95%	6,964	6,747	7,612	171	3,525
75%	1,279	3,835	1,962	62	2,032
50%	-2,483	2,201	143	38	749
25%	-5,729	321	-1,390	4	-26
5%	-13,029	-3,005	-3,319	-4,279	-1,851
Minimum	-32,304	-9,823	-5,446	-22,311	-6,363
Mean	-3,010	1,757	1,003	-993	786
Std deviation	8,077	3,638	4,792	4,201	2,082
% days positive	33%	77%	53%	77%	73%
% days negative	67%	23%	47%	23%	27%

Figure 6 Distribution of daily MOS quantities

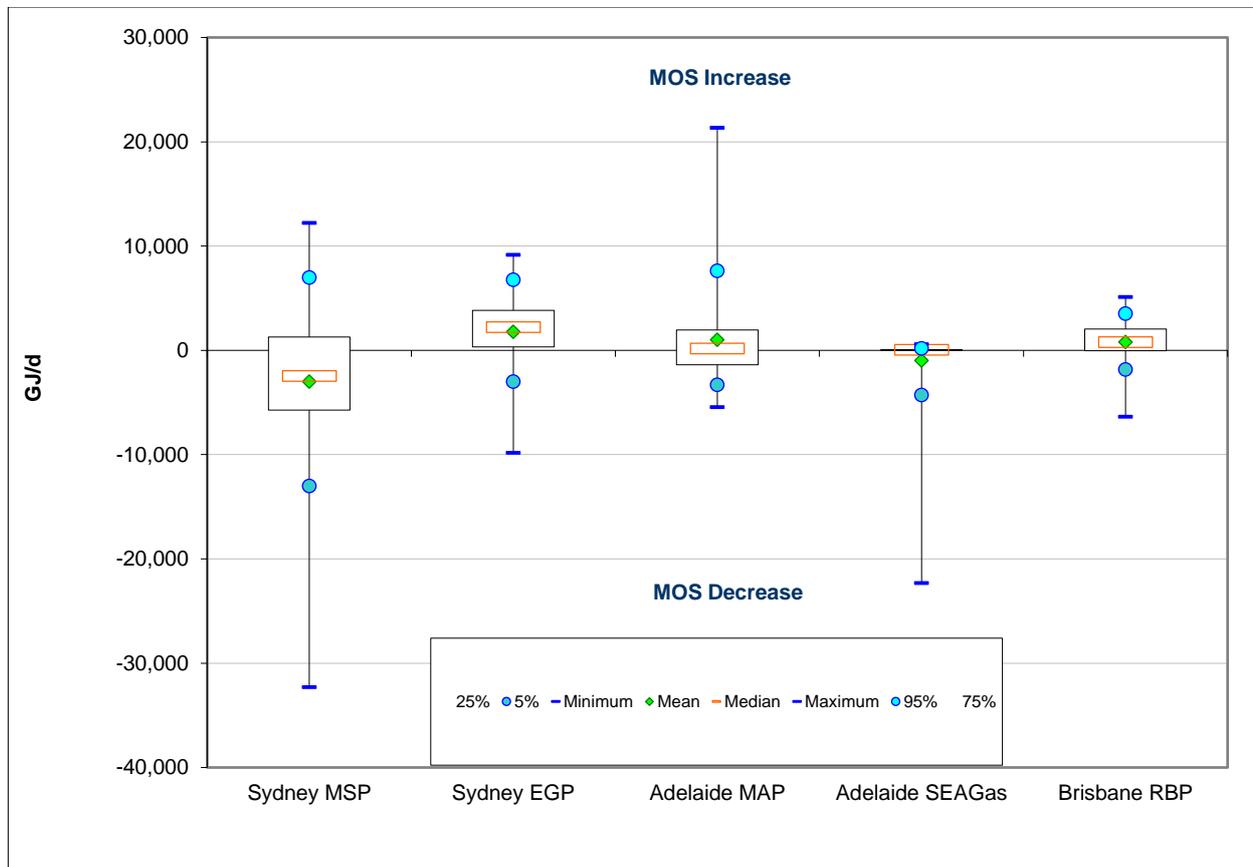


Table 9 Daily MOS quantities (GJ/d) for November 2020

No of days	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
1	12,206	9,148	21,336	584	5,113
1	7,845	7,147	9,585	191	3,847
1	5,888	6,257	5,200	146	3,132
1	4,895	4,904	3,843	110	2,810
1	3,679	4,613	2,891	91	2,596
1	2,679	4,546	2,423	82	2,509
1	2,235	4,341	2,211	67	2,235
1	1,448	3,925	2,017	63	2,113
1	771	3,564	1,796	60	1,787
1	129	3,257	1,575	56	1,679
1	-110	2,920	1,338	52	1,453
1	-292	2,835	706	48	1,195
1	-902	2,585	539	44	1,097
1	-1,200	2,453	423	41	904
1	-2,371	2,373	277	40	829
1	-2,595	2,030	9	36	669
1	-3,009	1,779	-64	33	590
1	-3,550	1,630	-561	32	532
1	-3,852	1,500	-684	27	398
1	-4,163	1,379	-816	23	328
1	-4,553	1,084	-948	20	267
1	-5,172	799	-1,208	14	104
1	-5,914	162	-1,450	0	-69
1	-7,035	-390	-1,687	-121	-214
1	-8,414	-1,730	-1,798	-177	-484
1	-10,165	-2,148	-2,061	-277	-746
1	-10,531	-2,436	-2,781	-658	-1,097
1	-12,384	-2,857	-2,922	-1,862	-1,475
1	-13,556	-3,126	-3,643	-6,256	-2,159
1	-32,304	-9,823	-5,446	-22,311	-6,363