



MOS ESTIMATES REPORT

MOS PERIODS: DECEMBER 2019,
JANUARY 2020 & FEBRUARY 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).

DISCLAIMER

AEMO has made every reasonable effort to ensure the quality of the information in this publication but cannot guarantee that information, forecasts and assumptions are accurate, complete or appropriate for your circumstances. This publication does not include all of the information that an investor, participant or potential participant in the STTM might require, and does not amount to a recommendation of any investment.

Anyone proposing to use the information in this publication (which includes information and forecasts from third parties) should independently verify its accuracy, completeness and suitability for purpose, and obtain independent and specific advice from appropriate experts.

Accordingly, to the maximum extent permitted by law, AEMO and its officers, employees and consultants involved in the preparation of this publication:

- make no representation or warranty, express or implied, as to the currency, accuracy, reliability or completeness of the information in this publication; and
- are not liable (whether by reason of negligence or otherwise) for any statements, opinions, information or other matters contained in or derived from this publication, or any omissions from it, or in respect of a person's use of the information in this publication.

Acknowledgement

AEMO acknowledges the support, co-operation and contribution of all participants in providing data and information used in this publication.

Copyright

© 2019 Australian Energy Market Operator Limited. The material in this publication may be used in accordance with the [copyright permissions](#) on AEMO's website.

VERSION CONTROL

Version	Release date	Changes
1.0	01/04/2019	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 2019, January 2020 and February 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 December 2019

Table 1 Maximum MOS quantities (GJ)

	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
MOS increase	14,542	8,946	6,068	242	10,460
MOS decrease	28,638	16,031	9,639	4,974	5,597

Figure 1 Curves of daily MOS quantities

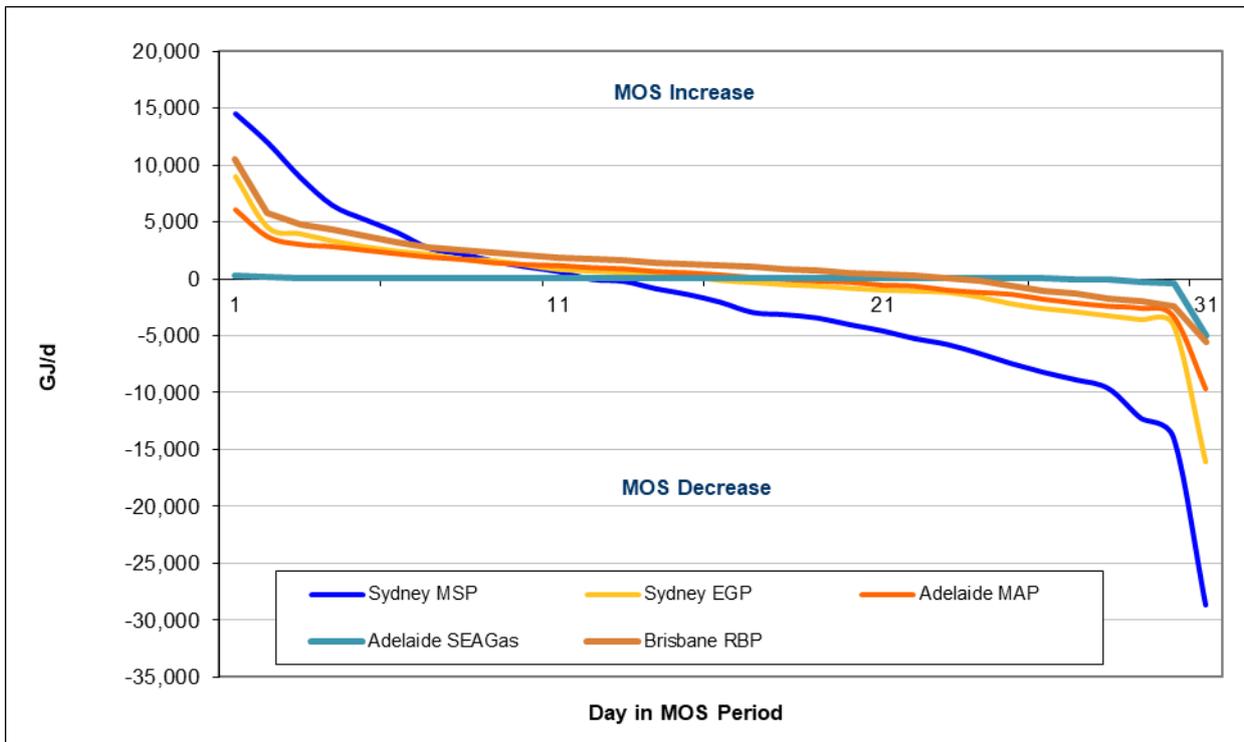


Table 2 Summary statistics of daily MOS quantities

	Summary statistics GJ/d				
	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
Maximum	14,542	8,946	6,068	242	10,460
95%	10,475	4,209	3,364	112	5,262
75%	1,900	1,636	1,568	61	2,435
50%	-2,027	-153	363	45	1,201
25%	-6,120	-1,401	-1,077	21	-77
5%	-13,055	-3,818	-2,919	-312	-2,208
Minimum	-28,638	-16,031	-9,639	-4,974	-5,597
Mean	-2,226	-226	142	-135	1,296
Std deviation	8,196	3,984	2,714	904	2,857
% days positive	39%	48%	55%	87%	74%
% days negative	61%	52%	45%	13%	26%

Figure 2 Distribution of daily MOS quantities

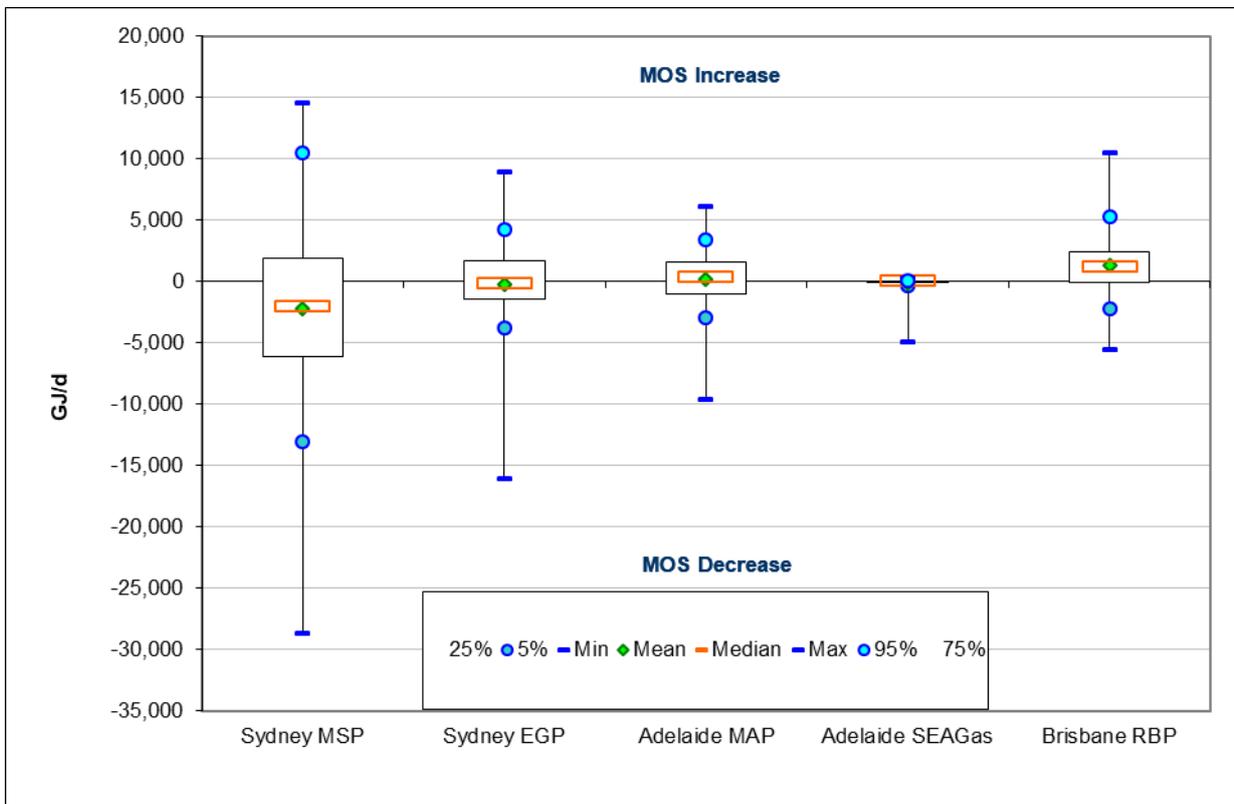


Table 3 Daily MOS quantities (GJ/d) for December 2019

No of days	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
1	14,542	8,946	6,068	242	10,460
1	11,991	4,488	3,696	118	5,738
1	8,958	3,930	3,032	105	4,786
1	6,489	3,301	2,835	86	4,336
1	5,247	2,799	2,515	72	3,715
1	4,110	2,405	2,205	65	3,231
1	2,714	2,137	1,908	64	2,798
1	2,226	1,700	1,717	61	2,579
1	1,574	1,572	1,418	60	2,290
1	1,089	1,185	1,248	57	2,118
1	669	809	1,169	55	1,857
1	0	668	997	54	1,745
1	-182	535	879	53	1,612
1	-829	358	655	50	1,421
1	-1,344	205	541	48	1,288
1	-2,027	-153	363	45	1,201
1	-2,924	-331	129	41	1,024
1	-3,113	-528	-44	39	891
1	-3,405	-648	-187	35	723
1	-3,993	-843	-286	34	505
1	-4,529	-999	-539	33	448
1	-5,217	-1,089	-630	32	264
1	-5,723	-1,194	-975	25	9
1	-6,517	-1,608	-1,178	16	-162
1	-7,418	-2,203	-1,350	12	-566
1	-8,190	-2,621	-1,781	4	-1,050
1	-8,841	-2,901	-2,116	0	-1,346
1	-9,617	-3,250	-2,395	-81	-1,726
1	-12,221	-3,591	-2,568	-247	-1,970
1	-13,889	-4,044	-3,270	-377	-2,446
1	-28,638	-16,031	-9,639	-4,974	-5,597

3.2 MOS Period January 2020

Table 4 Maximum MOS quantities (GJ)

	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
MOS increase	15,919	5,346	9,176	1,517	9,163
MOS decrease	40,396	18,655	5,893	19,723	9,637

Figure 3 Curves of daily MOS quantities

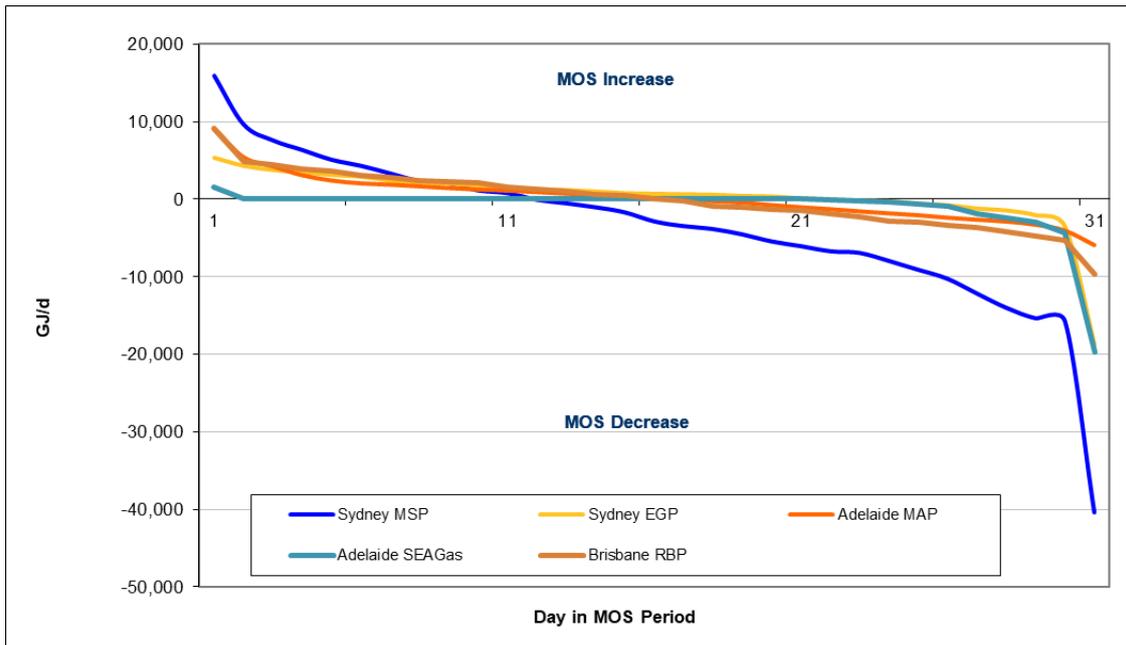


Table 5 Summary statistics of daily MOS quantities

	Summary statistics GJ/d				
	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
Maximum	15,919	5,346	9,176	1,517	9,163
95%	8,619	4,052	4,830	110	4,712
75%	2,189	2,091	1,560	61	2,295
50%	-2,863	711	144	30	39
25%	-7,441	-210	-1,677	-230	-2,514
5%	-15,564	-2,781	-3,647	-3,658	-4,993
Minimum	-40,396	-18,655	-5,893	-19,723	-9,637
Mean	-3,538	366	207	-994	-53
Std deviation	10,091	4,014	2,936	3,647	3,700
% days positive	35%	68%	52%	68%	52%
% days negative	65%	32%	48%	32%	48%

Figure 4 Distribution of daily MOS quantities

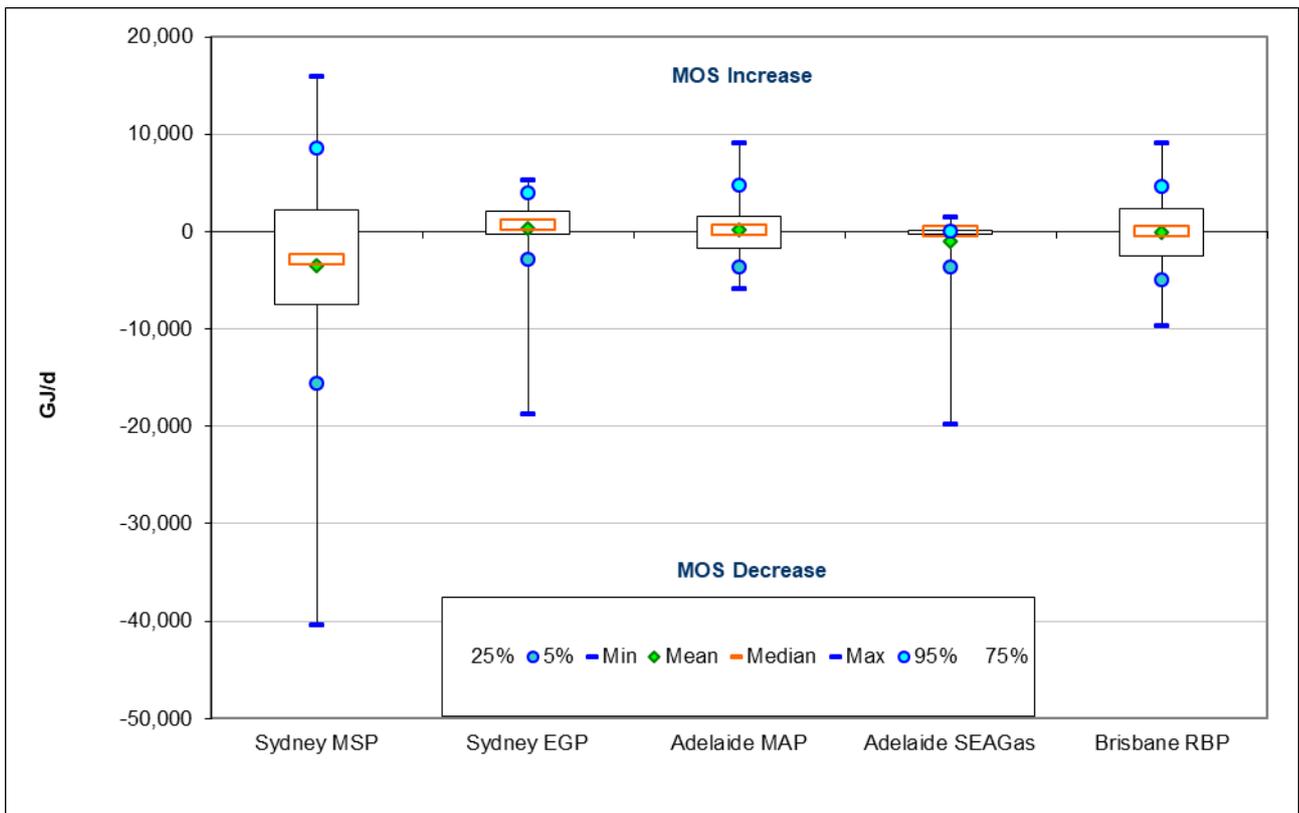


Table 6 Daily MOS quantities (GJ/d) for January 2020

No of days	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
1	15,919	5,346	9,176	1,517	9,163
1	9,649	4,324	5,424	117	4,892
1	7,588	3,781	4,235	103	4,532
1	6,354	3,503	3,091	90	3,948
1	5,093	3,134	2,419	86	3,575
1	4,308	2,926	2,055	75	3,066
1	3,319	2,422	1,888	66	2,786
1	2,336	2,165	1,668	64	2,376
1	2,042	2,017	1,452	58	2,214
1	1,140	1,744	1,264	56	2,066
1	784	1,479	1,114	55	1,591
1	-67	1,311	930	50	1,351
1	-527	1,192	742	43	1,029
1	-1,036	1,006	592	39	662
1	-1,698	790	371	35	531
1	-2,863	711	144	30	39
1	-3,468	642	-37	27	-152
1	-3,849	580	-240	22	-834
1	-4,535	431	-417	20	-1,094
1	-5,446	357	-747	12	-1,293
1	-6,056	125	-1,014	5	-1,446
1	-6,706	-36	-1,262	-43	-1,799
1	-6,923	-181	-1,546	-176	-2,219
1	-7,958	-240	-1,807	-283	-2,808
1	-9,103	-584	-2,046	-660	-3,015
1	-10,265	-759	-2,358	-889	-3,337
1	-12,170	-1,193	-2,615	-1,911	-3,596
1	-14,006	-1,440	-2,863	-2,375	-4,256
1	-15,361	-2,051	-3,266	-2,984	-4,721
1	-15,766	-3,512	-4,027	-4,331	-5,264
1	-40,396	-18,655	-5,893	-19,723	-9,637

3.3 MOS Period February 2020

Table 7 Maximum MOS quantities (GJ)

	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
MOS increase	17,286	7,095	5,476	423	6,487
MOS decrease	24,902	12,228	8,621	11,552	6,527

Figure 5 Curves of daily MOS quantities

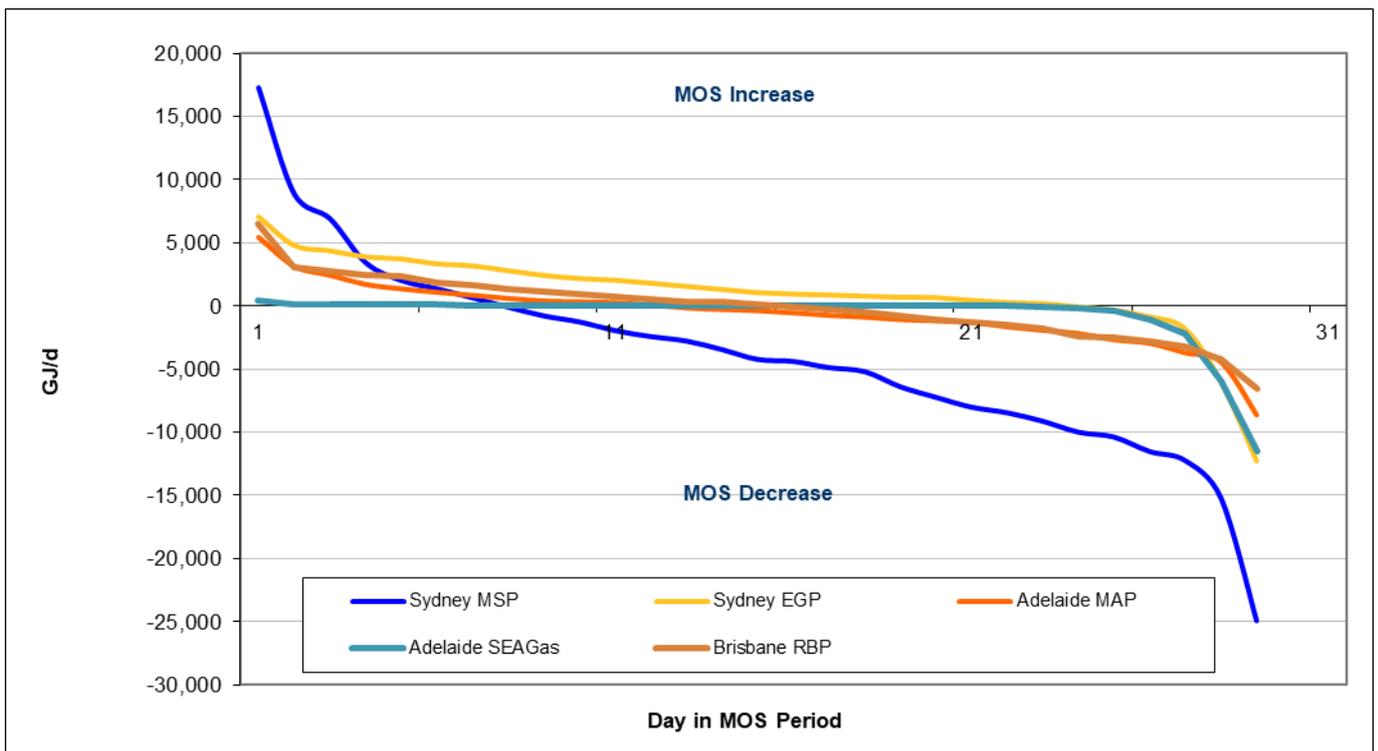


Table 8 Summary statistics of daily MOS quantities

	Summary statistics GJ/d				
	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
Maximum	17,286	7,095	5,476	423	6,487
95%	8,107	4,668	2,898	123	2,946
75%	-83	2,838	631	56	1,297
50%	-4,215	1,105	-348	31	109
25%	-8,439	319	-1,628	8	-1,520
5%	-14,012	-4,298	-4,127	-4,424	-3,792
Minimum	-24,902	-12,228	-8,621	-11,552	-6,527
Mean	-3,929	1,040	-559	-687	-103
Std deviation	7,942	3,477	2,568	2,399	2,546
% days positive	24%	79%	41%	76%	52%
% days negative	76%	21%	59%	24%	48%

Figure 6 Distribution of daily MOS quantities

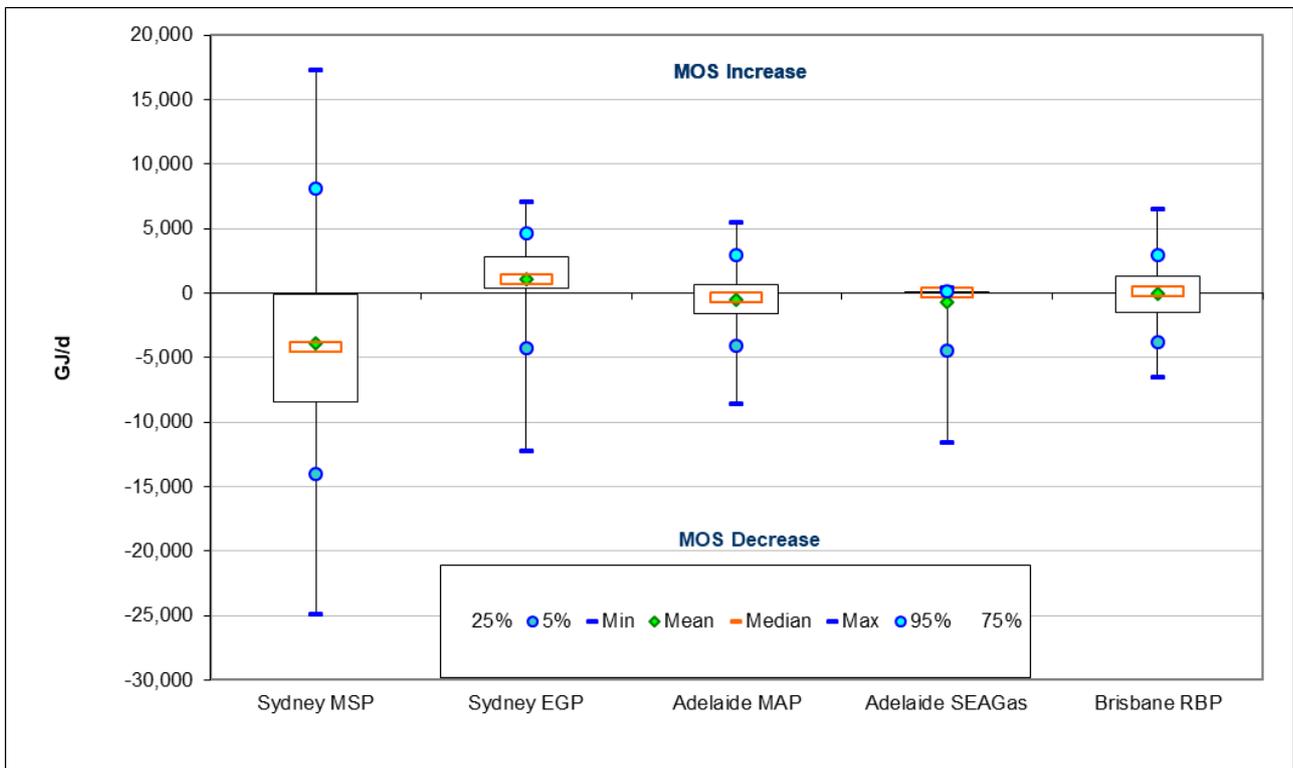


Table 9 Daily MOS quantities (GJ/d) for February 2020

No of days	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
1	17,286	7,095	5,476	423	6,487
1	8,891	4,840	3,178	135	3,060
1	6,931	4,411	2,477	105	2,776
1	3,456	3,937	1,743	90	2,492
1	2,040	3,760	1,389	83	2,312
1	1,377	3,378	1,118	71	1,879
1	667	3,216	874	63	1,661
1	-83	2,838	631	56	1,297
1	-771	2,462	420	52	1,122
1	-1,248	2,218	366	47	887
1	-1,932	2,077	290	44	771
1	-2,408	1,853	109	40	554
1	-2,760	1,592	-126	39	364
1	-3,436	1,350	-250	37	277
1	-4,215	1,105	-348	31	109
1	-4,373	984	-519	27	-88
1	-4,869	907	-714	25	-276
1	-5,181	814	-853	21	-536
1	-6,378	733	-1,052	19	-740
1	-7,212	698	-1,146	17	-1,090
1	-7,998	484	-1,266	14	-1,290
1	-8,439	319	-1,628	8	-1,520
1	-9,109	225	-1,905	-40	-1,813
1	-9,974	-24	-2,150	-169	-2,402
1	-10,364	-285	-2,656	-418	-2,525
1	-11,508	-827	-2,933	-1,085	-2,855
1	-12,233	-1,793	-3,694	-2,186	-3,179
1	-15,198	-5,967	-4,415	-5,916	-4,201
1	-24,902	-12,228	-8,621	-11,552	-6,527