

MOS ESTIMATES REPORT: MOS PERIODS; SEPTEMBER 2014, OCTOBER 2014 & NOVEMBER 2014

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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 2014, October 2014 and November 2014

The MOS quantities for each STTM pipeline and each gas day are as determined in accordance with the published methodology for determining MOS estimates.¹

Sydney and Adelaide hubs

The MOS quantities for these periods are based on 'Method 2' for year 3 to year 6 of an STTM hub.² This means they are derived using the actual daily MOS allocation quantities for the periods September 2010, 2011, 2012, 2013; October 2010, 2011, 2012, 2013; and November 2010, 2011, 2012, 2013; for the following STTM pipelines:

- Moomba to Sydney Pipeline (MSP) and Eastern Gas Pipeline (EGP) – these supply gas to the Sydney STTM hub; and
- Moomba to Adelaide Pipeline (MAP) and SEA Gas pipeline (SEA) – these supply gas to the Adelaide STTM hub.

The input data collected from the previous four years was combined to create a larger and more representative sample of MOS allocations, as stated under Method 2 in the methodology.

Brisbane hub

The Brisbane STTM hub commenced operations on 1 December 2011. Therefore The MOS quantities for this period are based on 'Method 2' for year 3 to year 6 of an STTM hub.³ This

¹ Available at: <http://www.aemo.com.au/en/Gas/Wholesale-Gas-Markets/Short-Term-Trading-Market/Market-Operator-Service-MOS>.

² *Methodology for determining MOS estimates v2.0*, 2011; p.18.

³ *Methodology for determining MOS estimates v2.0*, 2011; p.18.

means MOS estimates for the upcoming MOS period for the Roma to Brisbane Pipeline (RBP), the sole pipeline that supplies gas to the Brisbane STTM hub are derived using the actual daily MOS allocation quantities for the periods September 2012, 2013; October 2012, 2013; and November 2012, 2013.

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.⁴

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 in the following tables and charts:

- Table 2 shows summary statistics of MOS quantity distributions, including the means, standard deviations, 5 and 95 percentile of the distributions, range and inter-quartile range,⁵ and the proportions of days in the MOS period with positive and negative MOS quantities.
- Table 3 shows the daily MOS quantities sorted in descending order and the number of day(s) associated with each estimated- quantity.
- Figure 1 displays the curves of daily MOS quantities sorted in descending order from the highest to the lowest values.
- Figure 2 shows the Box plots which provide a graphical summary of the data and are useful tools for comparing the MOS increase and decrease quantities of the different STTM pipelines.

⁴ Note MOS increase and decrease offers must comply with the requirements in section 5.4(b)(ii) and section 5.4(c)(ii) of the STTM Procedures, and should be greater than zero for the purpose of creating the MOS stacks.

⁵ The inter-quartile range is the range of values between the first (25%) and third quartiles (75%) of the distributions.

MOS Period September 2014

Table 1 – Maximum MOS quantities (GJ)

	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
MOS increase	24,220	5,465	12,028	108	6,739
MOS decrease	22,495	4,649	7,757	17,616	10,035

Figure 1 – Curves of daily MOS quantities

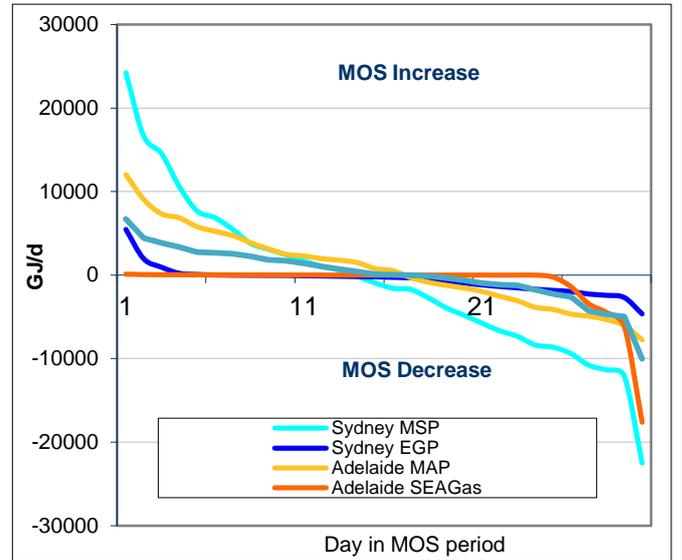


Table 2 – Summary statistics of daily MOS quantities

	Summary statistics GJ/d				
	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
Maximum	24,220	5,465	12,028	108	6,739
95%	15,699	1,501	8,286	56	4,166
75%	3,624	-27	3,697	7	2,136
50%	-1,261	-237	652	-1	80
25%	-7,174	-1,488	-2,952	-6	-1,197
5%	11,754	-2,572	-5,721	-5,407	-4,865
Minimum	22,495	-4,649	-7,757	-17,616	-10,035
Mean	-670	-550	705	-1,102	25
Std deviation	9,576	1,693	4,807	3,453	3,283
% days positive	43%	20%	53%	43%	57%
% days negative	57%	80%	47%	57%	43%

Figure 2 – Distribution of daily MOS quantities

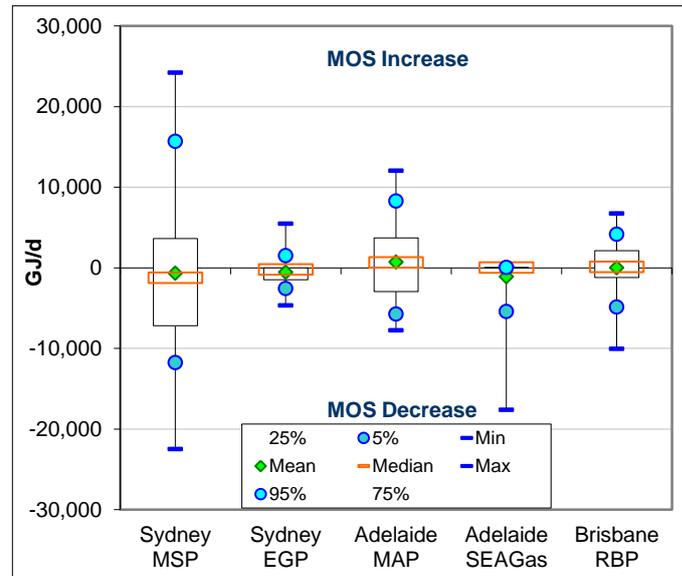


Table 3 – Daily MOS quantities (GJ/d) for September 2014

No of days	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
1	24,220	5,465	12,028	108	6,739
1	16,637	1,958	9,067	67	4,416
1	14,552	943	7,331	43	3,860
1	10,603	212	6,849	41	3,357
1	7,678	75	5,794	28	2,736
1	6,871	21	5,235	10	2,654
1	5,483	-8	4,737	8	2,567
1	3,804	-24	3,881	7	2,243
1	3,083	-36	3,144	5	1,813
1	2,428	-47	2,486	3	1,711
1	1,680	-84	2,287	1	1,394
1	1,040	-107	1,966	1	1,026
1	600	-143	1,777	0	711
1	-131	-176	1,490	0	411
1	-944	-208	776	-1	114
1	-1,578	-265	527	-1	46
1	-1,728	-332	-305	-2	9
1	-2,735	-477	-859	-2	-109
1	-3,933	-715	-1,226	-3	-333
1	-4,812	-948	-1,554	-3	-624
1	-5,759	-1,175	-1,966	-4	-970
1	-6,671	-1,361	-2,540	-5	-1,150
1	-7,342	-1,530	-3,089	-6	-1,213
1	-8,385	-1,690	-3,865	-10	-1,779
1	-8,638	-1,838	-4,111	-245	-2,244
1	-9,399	-1,967	-4,666	-1,398	-2,623
1	-10,792	-2,272	-4,929	-3,443	-4,282
1	-11,348	-2,424	-5,336	-4,479	-4,723
1	-12,087	-2,694	-6,036	-6,166	-4,982
1	-22,495	-4,649	-7,757	-17,616	-10,035

MOS Period October 2014

Table 1 – Maximum MOS quantities (GJ)

	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
MOS increase	26,139	4,277	9,965	104	7,373
MOS decrease	31,169	4,299	9,182	17,065	14,142

Figure 1 – Curves of daily MOS quantities

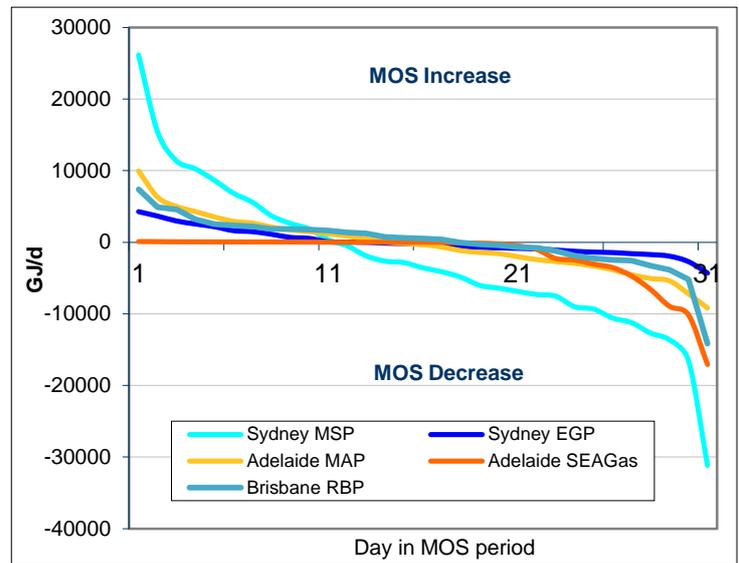


Table 2 – Summary statistics of daily MOS quantities

	Summary statistics GJ/d				
	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
Maximum	26,139	4,277	9,965	104	7,373
95%	13,399	3,319	5,658	76	4,723
75%	3,174	903	1,928	44	1,866
50%	-3,575	-266	-327	-3	543
25%	-8,270	-1,171	-2,821	-2,371	-1,540
5%	-15,072	-2,323	-6,289	-9,550	-4,516
Minimum	-31,169	-4,299	-9,182	-17,065	-14,142
Mean	-2,447	-31	-363	-1,940	3
Std deviation	10,727	1,859	4,033	3,906	3,740
% days positive	35%	39%	45%	45%	55%
% days negative	65%	61%	55%	55%	45%

Figure 2 – Distribution of daily MOS quantities

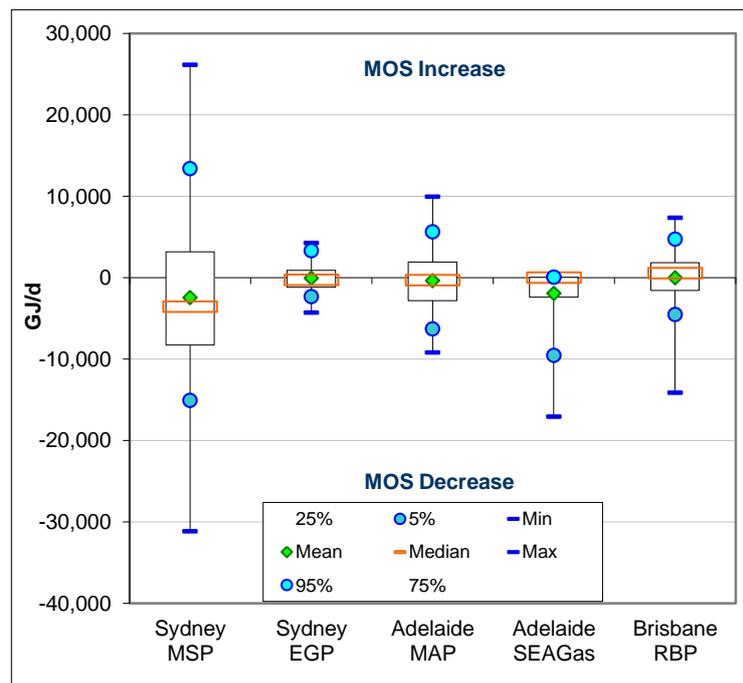


Table 3 – Daily MOS quantities (GJ/d) for October 2014

No of days	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
1	26,139	4,277	9,965	104	7,373
1	15,429	3,662	6,316	87	4,879
1	11,369	2,976	5,000	66	4,567
1	10,259	2,553	4,285	61	3,180
1	8,657	2,173	3,542	53	2,510
1	6,853	1,628	2,926	52	2,368
1	5,607	1,486	2,667	48	2,213
1	3,709	1,124	2,130	46	1,876
1	2,639	683	1,726	42	1,855
1	1,863	547	1,489	30	1,775
1	347	75	1,183	9	1,645
1	-492	34	874	8	1,348
1	-1,899	-4	467	6	1,242
1	-2,631	-119	70	1	740
1	-2,846	-180	-163	-1	625
1	-3,575	-266	-327	-3	543
1	-4,124	-368	-660	-7	370
1	-4,875	-592	-1,163	-81	-72
1	-6,027	-703	-1,413	-124	-281
1	-6,410	-777	-1,584	-222	-422
1	-6,864	-849	-2,013	-497	-680
1	-7,301	-926	-2,418	-1,006	-759
1	-7,530	-1,084	-2,690	-2,271	-1,213
1	-9,010	-1,257	-2,951	-2,470	-1,867
1	-9,326	-1,373	-3,324	-3,052	-2,244
1	-10,585	-1,440	-3,834	-3,533	-2,478
1	-11,228	-1,590	-4,527	-4,719	-2,569
1	-12,689	-1,713	-5,060	-6,589	-3,247
1	-13,630	-1,941	-5,386	-8,949	-3,868
1	-16,514	-2,706	-7,192	-10,150	-5,164
1	-31,169	-4,299	-9,182	-17,065	-14,142

MOS Period November 2014

Table 1 – Maximum MOS quantities (GJ)

	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
MOS increase	18,367	4,625	9,170	124	13,575
MOS decrease	35,148	5,977	5,965	11,001	5,095

Figure 1 – Curves of daily MOS quantities

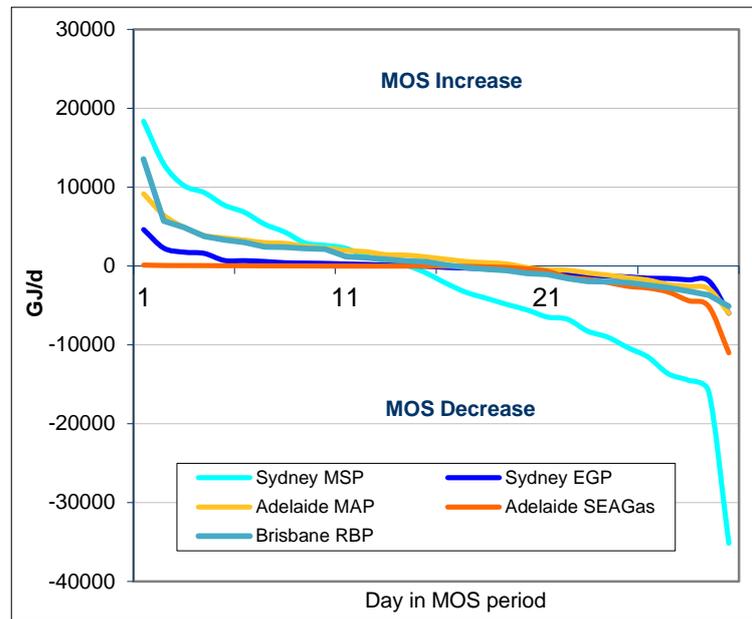


Table 2 – Summary statistics of daily MOS quantities

	Summary statistics GJ/d				
	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
Maximum	18,367	4,625	9,170	124	13,575
95%	11,708	2,047	5,759	71	5,350
75%	3,966	410	2,781	25	2,360
50%	-1,541	-97	1,011	-4	352
25%	-7,871	-1,063	-779	-1,609	-1,832
5%	-15,257	-1,816	-2,749	-4,784	-3,449
Minimum	-35,148	-5,977	-5,965	-11,001	-5,095
Mean	-2,254	-198	1,055	-1,171	677
Std deviation	10,452	1,732	3,005	2,350	3,558
% days positive	47%	47%	63%	37%	53%
% days negative	53%	53%	37%	63%	47%

Figure 2 – Distribution of daily MOS quantities

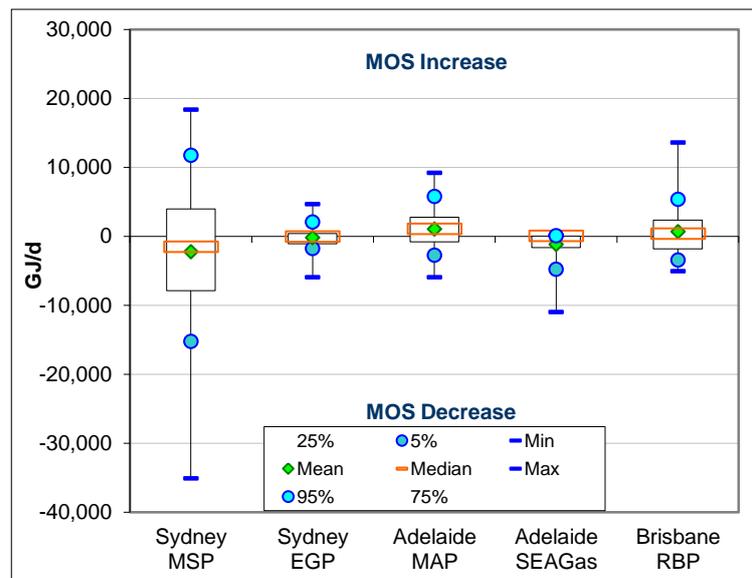


Table 3 – Daily MOS quantities (GJ/d) for November 2014

No of days	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
1	18,367	4,625	9,170	124	13,575
1	12,934	2,279	6,452	77	5,724
1	10,210	1,764	4,912	64	4,893
1	9,323	1,613	3,895	60	3,775
1	7,729	713	3,562	48	3,339
1	6,818	684	3,294	40	3,026
1	5,304	579	2,972	32	2,441
1	4,310	421	2,875	28	2,403
1	2,935	377	2,498	16	2,231
1	2,640	340	2,296	4	2,160
1	2,270	268	1,989	1	1,233
1	1,265	212	1,829	-1	1,066
1	652	120	1,449	-1	864
1	116	58	1,391	-2	671
1	-882	-22	1,156	-3	555
1	-2,199	-171	865	-4	148
1	-3,345	-248	577	-24	-201
1	-4,095	-367	429	-103	-390
1	-4,864	-510	274	-170	-566
1	-5,560	-606	-195	-361	-916
1	-6,464	-710	-487	-656	-1,052
1	-6,735	-921	-524	-1,410	-1,552
1	-8,249	-1,110	-864	-1,675	-1,925
1	-9,013	-1,264	-1,140	-2,072	-1,969
1	-10,349	-1,369	-1,474	-2,562	-2,103
1	-11,540	-1,540	-1,773	-2,780	-2,429
1	-13,663	-1,573	-2,359	-3,291	-2,739
1	-14,491	-1,749	-2,577	-4,386	-3,175
1	-15,884	-1,870	-2,889	-5,109	-3,673
1	-35,148	-5,977	-5,965	-11,001	-5,095