

MOS ESTIMATES REPORT: MOS PERIODS; DECEMBER 2014, JANUARY 2015 & FEBRUARY 2015

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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 December 2014, January 2015 and February 2015.

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 December 2010, 2011, 2012, 2013; January 2011, 2012, 2013, 2014; and February 2011, 2012, 2013, 2014; 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 means MOS estimates for the upcoming MOS period for the Roma to Brisbane Pipeline (RBP), the sole

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.

pipeline that supplies gas to the Brisbane STTM hub are derived using the actual daily MOS allocation quantities for the periods December 2011, 2012, 2013; January 2012, 2013, 2014; and February 2012, 2013, 2014.

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.

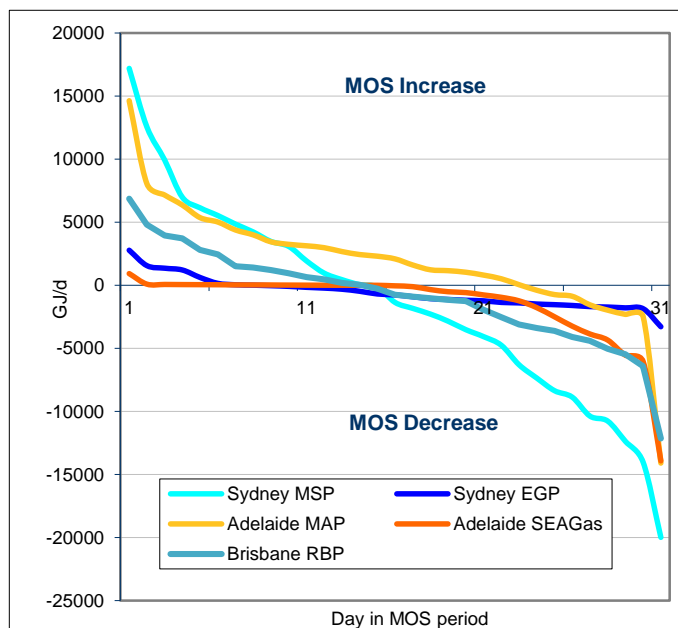
⁴ Note MOS increase and decrease offers must comply with the requirements in section 5.4(b)(ii) and section 5.4(c)(ii) of the STTM Procedures, and should be greater than zero for the purpose of creating the MOS stacks.

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

MOS Period December 2014

Table 1 – Maximum MOS quantities (GJ)

	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
MOS increase	17,180	2,784	14,623	924	6,868
MOS decrease	19,972	3,292	14,106	13,914	12,138

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	17,180	2,784	14,623	924	6,868
95%	11,233	1,458	7,594	76	4,371
75%	3,847	-14	3,712	24	1,298
50%	-1,357	-764	2,083	-46	-758
25%	-6,827	-1,445	-183	-1,506	-3,256
5%	-13,195	-1,827	-2,406	-5,796	-5,936
Minimum	-19,972	-3,292	-14,106	-13,914	-12,138
Mean	-1,351	-590	1,902	-1,434	-858
Std deviation	8,088	1,226	4,603	2,918	3,776
% days positive	45%	26%	74%	39%	45%
% days negative	55%	74%	26%	61%	55%

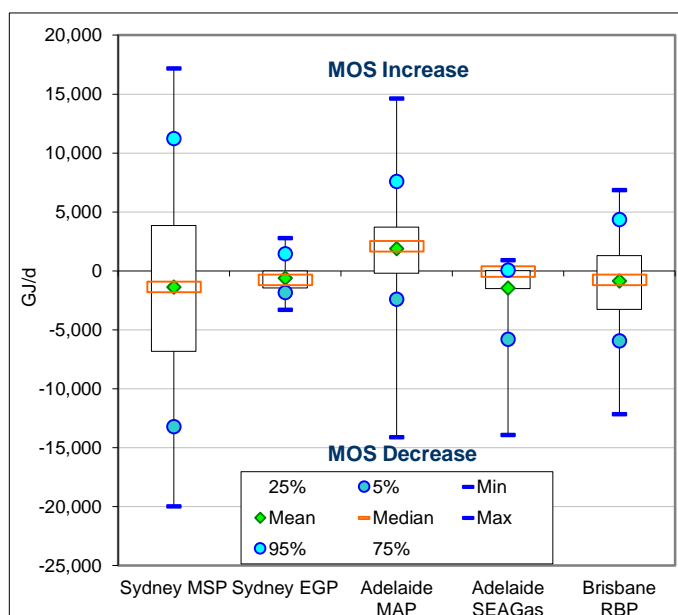
Figure 2 – Distribution of daily MOS quantities


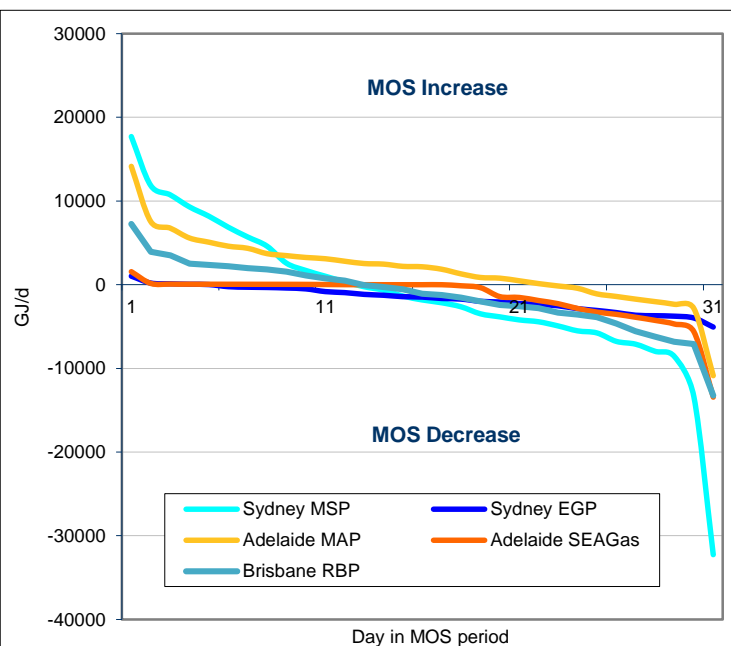
Table 3 – Daily MOS quantities (GJ/d) for December 2014

No of days	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
1	17,180	2,784	14,623	924	6,868
1	12,541	1,560	8,041	87	4,799
1	9,924	1,355	7,147	65	3,942
1	6,971	1,214	6,350	54	3,709
1	6,134	619	5,354	47	2,807
1	5,526	154	5,007	41	2,452
1	4,841	41	4,374	31	1,521
1	4,222	6	3,988	27	1,399
1	3,471	-34	3,435	21	1,197
1	3,081	-87	3,236	13	941
1	1,934	-164	3,122	8	638
1	961	-225	2,972	2	462
1	444	-313	2,666	0	194
1	46	-473	2,428	-2	35
1	-132	-691	2,297	-4	-277
1	-1,357	-764	2,083	-46	-758
1	-1,832	-908	1,599	-112	-904
1	-2,285	-1,062	1,218	-344	-1,035
1	-2,849	-1,128	1,148	-512	-1,163
1	-3,522	-1,190	1,024	-583	-1,255
1	-4,071	-1,235	798	-768	-1,952
1	-4,756	-1,362	507	-954	-2,526
1	-6,301	-1,401	37	-1,235	-3,120
1	-7,353	-1,490	-403	-1,776	-3,391
1	-8,354	-1,541	-746	-2,499	-3,607
1	-8,865	-1,603	-882	-3,241	-4,107
1	-10,365	-1,693	-1,560	-3,864	-4,402
1	-10,760	-1,729	-1,982	-4,344	-5,046
1	-12,365	-1,794	-2,315	-5,545	-5,471
1	-14,024	-1,859	-2,497	-6,047	-6,400
1	-19,972	-3,292	-14,106	-13,914	-12,138

MOS Period January 2015

Table 1 – Maximum MOS quantities (GJ)

	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
MOS increase	17,694	1,012	14,130	1,558	7,245
MOS decrease	32,270	5,072	10,895	13,437	13,247

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	17,694	1,012	14,130	1,558	7,245
95%	11,295	144	7,144	115	3,716
75%	3,576	-375	3,576	46	1,694
50%	-1,829	-1,492	2,125	-1	-1,097
25%	-5,228	-2,702	-304	-2,554	-3,446
5%	-10,992	-3,883	-2,609	-5,155	-6,956
Minimum	-32,270	-5,072	-10,895	-13,437	-13,247
Mean	-1,186	-1,670	1,798	-1,515	-1,275
Std deviation	8,970	1,499	4,175	2,847	4,044
% days positive	39%	16%	71%	48%	39%
% days negative	61%	84%	29%	52%	61%

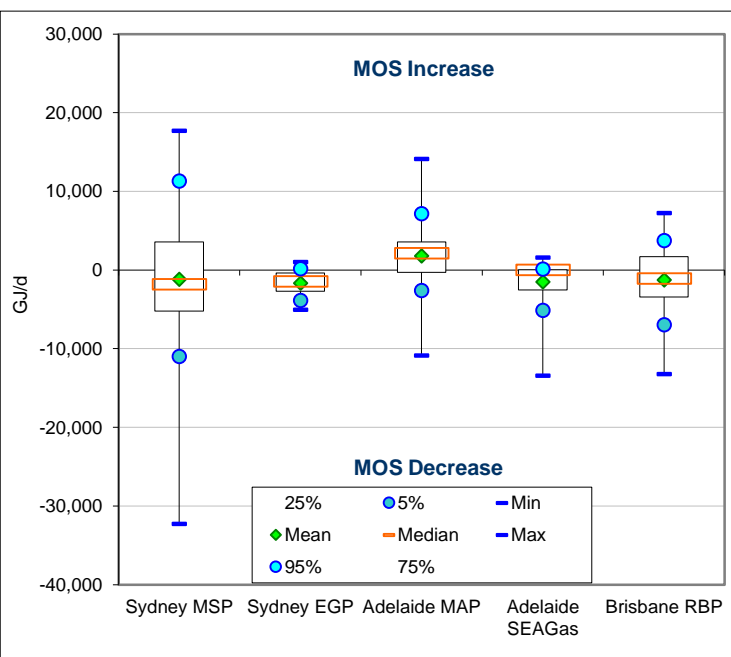
Figure 2 – Distribution of daily MOS quantities


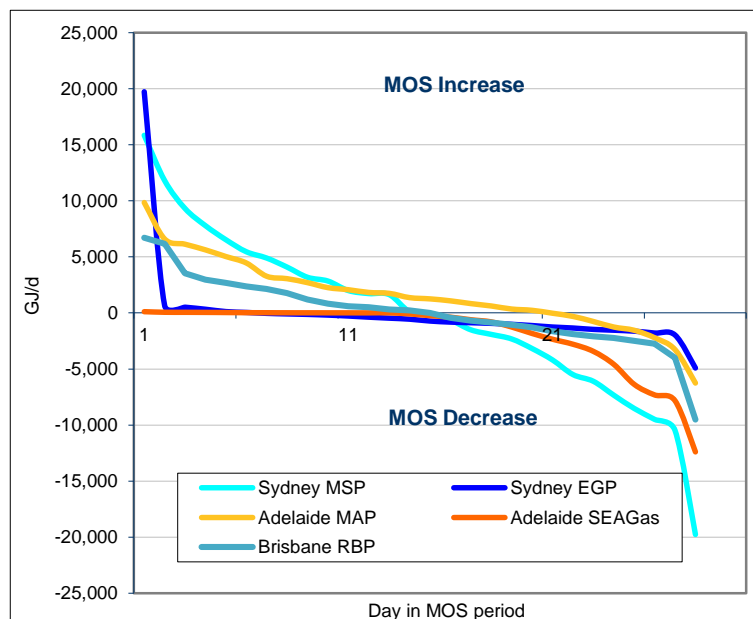
Table 3 – Daily MOS quantities (GJ/d) for January 2015

No of days	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
1	17,694	1,012	14,130	1,558	7,245
1	11,852	190	7,538	156	3,914
1	10,737	99	6,750	73	3,517
1	9,289	44	5,563	63	2,504
1	8,174	6	5,066	58	2,353
1	6,858	-247	4,585	55	2,215
1	5,693	-313	4,334	51	1,963
1	4,591	-343	3,694	47	1,823
1	2,560	-406	3,457	44	1,565
1	1,691	-511	3,237	37	1,098
1	1,003	-834	3,089	22	756
1	338	-956	2,789	4	494
1	-251	-1,165	2,515	2	-55
1	-661	-1,271	2,442	1	-271
1	-1,361	-1,440	2,176	0	-548
1	-1,829	-1,492	2,125	-1	-1,097
1	-2,166	-1,655	1,832	-2	-1,257
1	-2,648	-1,730	1,277	-129	-1,558
1	-3,487	-1,998	847	-350	-2,020
1	-3,850	-2,081	763	-1,426	-2,425
1	-4,216	-2,263	452	-1,524	-2,561
1	-4,442	-2,372	113	-1,894	-2,820
1	-4,934	-2,532	-167	-2,268	-3,329
1	-5,522	-2,872	-441	-2,839	-3,563
1	-5,770	-3,088	-1,116	-3,275	-3,893
1	-6,780	-3,342	-1,421	-3,535	-4,639
1	-7,118	-3,659	-1,745	-3,889	-5,574
1	-7,968	-3,717	-2,040	-4,262	-6,209
1	-8,597	-3,775	-2,361	-4,698	-6,832
1	-13,386	-3,990	-2,856	-5,612	-7,079
1	-32,270	-5,072	-10,895	-13,437	-13,247

MOS Period February 2015

Table 1 – Maximum MOS quantities (GJ)

	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
MOS increase	15,842	19,717	9,854	102	6,718
MOS decrease	19,760	4,922	6,256	12,396	9,517

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	15,842	19,717	9,854	102	6,718
95%	10,931	602	6,438	48	5,249
75%	4,287	-85	3,112	5	1,854
50%	40	-650	1,313	-174	106
25%	-4,521	-1,287	-96	-2,466	-1,700
5%	-10,134	-1,917	-2,902	-7,652	-3,565
Minimum	-19,760	-4,922	-6,256	-12,396	-9,517
Mean	-135	-85	1,599	-1,860	37
Std deviation	7,457	4,025	3,289	3,132	3,149
% days positive	50%	21%	71%	36%	50%
% days negative	50%	79%	29%	64%	50%

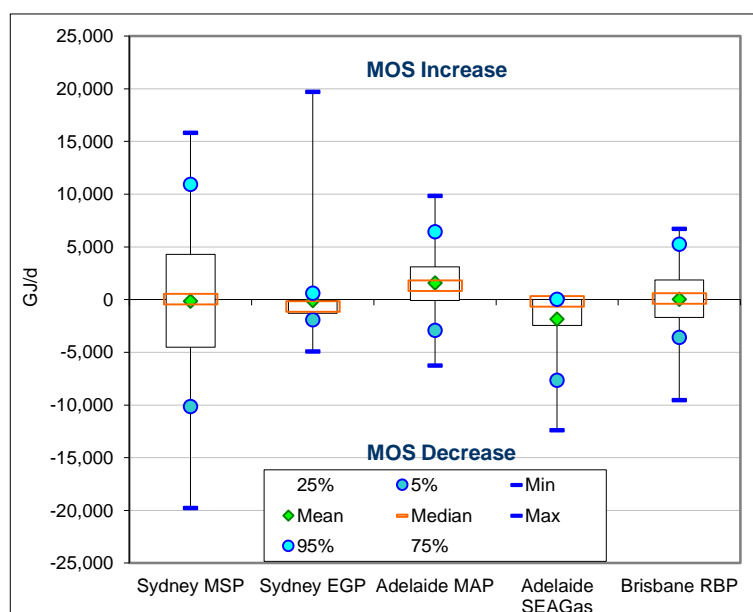
Figure 2 – Distribution of daily MOS quantities


Table 3 – Daily MOS quantities (GJ/d) for February 2015

No of days	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
1	15,842	19,717	9,854	102	6,718
1	11,805	655	6,602	50	6,166
1	9,309	503	6,133	45	3,546
1	7,779	320	5,629	38	2,960
1	6,528	112	5,035	26	2,684
1	5,456	35	4,460	14	2,373
1	4,894	-47	3,272	9	2,125
1	4,084	-98	3,058	4	1,764
1	3,178	-141	2,703	3	1,183
1	2,842	-202	2,258	1	828
1	1,994	-284	2,073	-1	589
1	1,726	-388	1,830	-2	505
1	1,632	-475	1,749	-3	319
1	118	-567	1,368	-97	214
1	-39	-732	1,257	-251	-3
1	-626	-827	1,081	-387	-441
1	-1,508	-883	834	-617	-694
1	-1,915	-940	622	-805	-859
1	-2,322	-1,026	350	-1,266	-1,054
1	-3,176	-1,134	236	-1,840	-1,279
1	-4,195	-1,264	-25	-2,355	-1,641
1	-5,497	-1,354	-307	-2,798	-1,877
1	-6,097	-1,478	-762	-3,433	-2,101
1	-7,337	-1,550	-1,255	-4,590	-2,223
1	-8,519	-1,635	-1,545	-6,375	-2,482
1	-9,494	-1,804	-2,212	-7,317	-2,757
1	-10,478	-1,978	-3,274	-7,832	-4,000
1	-19,760	-4,922	-6,256	-12,396	-9,517