



MOS ESTIMATES REPORT

MOS PERIODS: SEPTEMBER 2019,
OCTOBER 2019 & NOVEMBER 2019

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	12/12/2018	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 2019, October 2019 and November 2019.

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 June from 2014 to 2018; July from 2014 to 2018; and August from 2014 to 2018; 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 2019

Table 1 Maximum MOS quantities (GJ)

	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
MOS increase	25,212	10,121	12,849	196	5,362
MOS decrease	23,922	14,402	11,397	17,311	6,612

Figure 1 Curves of daily MOS quantities

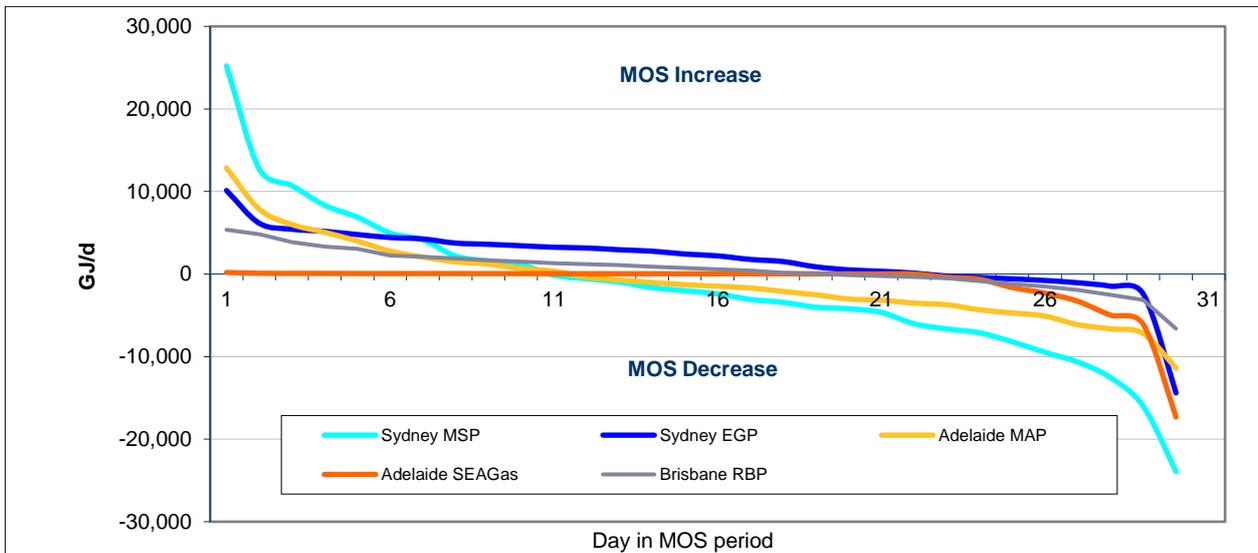


Table 2 Summary statistics of daily MOS quantities

	Summary statistics GJ/d				
	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
Maximum	25,212	10,121	12,849	196	5,362
95%	11,822	5,828	7,021	86	4,397
75%	2,023	3,713	1,410	55	1,831
50%	-2,209	2,314	-1,383	33	662
25%	-6,492	-155	-3,670	-293	-452
5%	-14,450	-1,985	-6,948	-5,590	-2,851
Minimum	-23,922	-14,402	-11,397	-17,311	-6,612
Mean	-1,663	1,721	-862	-1,185	577
Std deviation	9,238	4,063	4,889	3,419	2,422
% days positive	33%	73%	37%	73%	63%
% days negative	67%	27%	63%	27%	37%

Figure 2 Distribution of daily MOS quantities

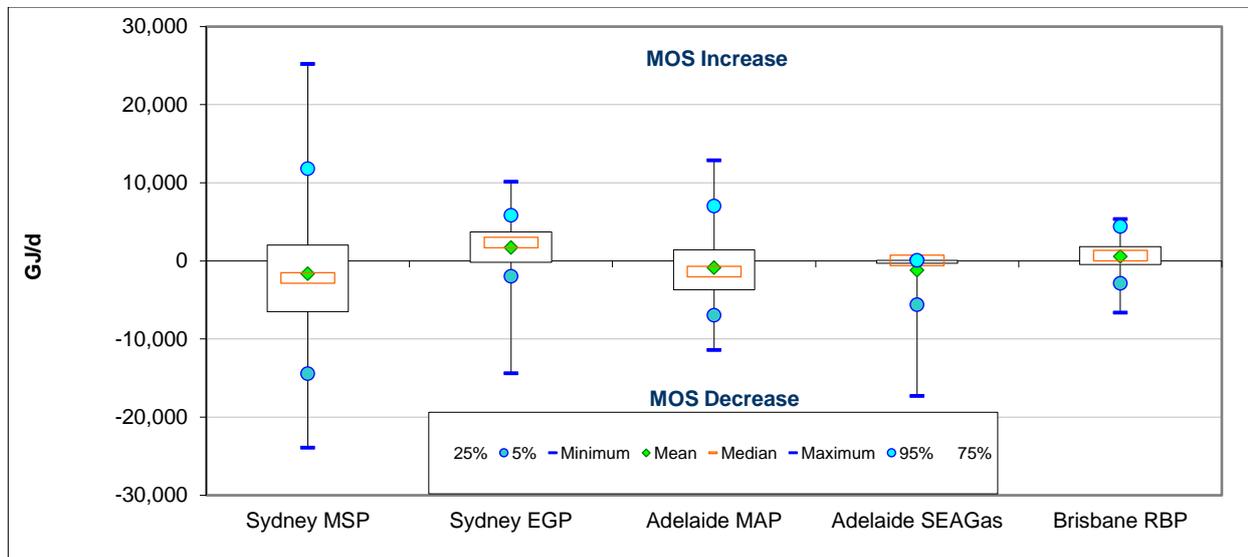


Table 3 Daily MOS quantities (GJ/d) for September 2019

No of days	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
1	25,212	10,121	12,849	196	5,362
1	12,733	6,155	7,859	91	4,836
1	10,708	5,428	5,996	80	3,860
1	8,328	5,170	5,052	77	3,320
1	6,887	4,783	3,997	61	3,045
1	4,967	4,427	2,776	60	2,241
1	4,138	4,249	2,054	57	2,103
1	2,171	3,749	1,481	56	1,885
1	1,579	3,602	1,198	53	1,669
1	1,137	3,428	667	50	1,524
1	-140	3,247	347	47	1,305
1	-571	3,158	-373	42	1,213
1	-991	2,941	-727	38	1,073
1	-1,647	2,769	-1,022	36	874
1	-2,022	2,426	-1,287	33	735
1	-2,396	2,201	-1,478	32	588
1	-3,076	1,770	-1,675	28	422
1	-3,437	1,514	-2,116	25	161
1	-4,017	873	-2,511	22	61
1	-4,205	511	-3,019	14	-121
1	-4,645	337	-3,171	8	-237
1	-6,023	116	-3,521	0	-337
1	-6,648	-246	-3,719	-390	-490
1	-7,119	-413	-4,334	-643	-857
1	-8,200	-585	-4,710	-1,635	-1,218
1	-9,484	-780	-5,090	-2,311	-1,526
1	-10,659	-1,057	-6,136	-3,297	-1,930
1	-12,544	-1,471	-6,635	-4,973	-2,502
1	-16,010	-2,406	-7,204	-6,095	-3,137
1	-23,922	-14,402	-11,397	-17,311	-6,612

3.2 MOS Period October 2019

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	8,538
MOS decrease	27,473	10,263	6,180	14,708	11,027

Figure 3 Curves of daily MOS quantities

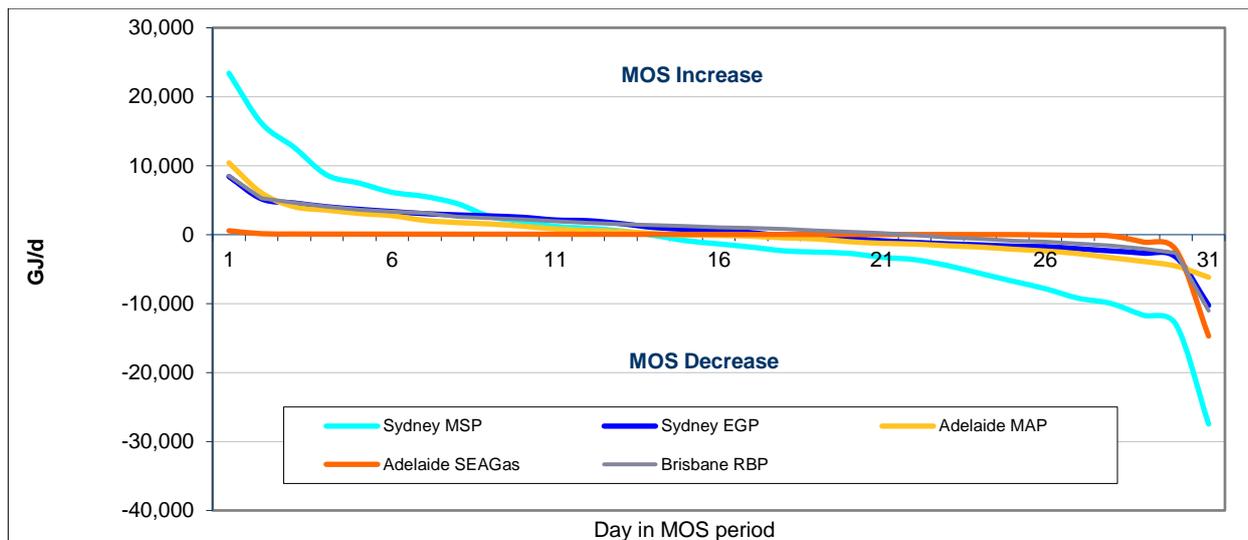


Table 5 Summary statistics of daily MOS quantities

	Summary statistics GJ/d				
	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
Maximum	23,404	8,423	10,410	564	8,538
95%	14,398	4,889	5,047	117	4,937
75%	3,553	2,786	1,647	67	2,491
50%	-1,339	598	-112	40	1,051
25%	-5,053	-1,411	-1,709	16	-512
5%	-12,362	-2,972	-4,225	-1,648	-2,330
Minimum	-27,473	-10,263	-6,180	-14,708	-11,027
Mean	-744	610	153	-532	965
Std deviation	9,375	3,357	3,248	2,671	3,243
% days positive	42%	55%	45%	81%	68%
% days negative	58%	45%	55%	19%	32%

Figure 4 Distribution of daily MOS quantities

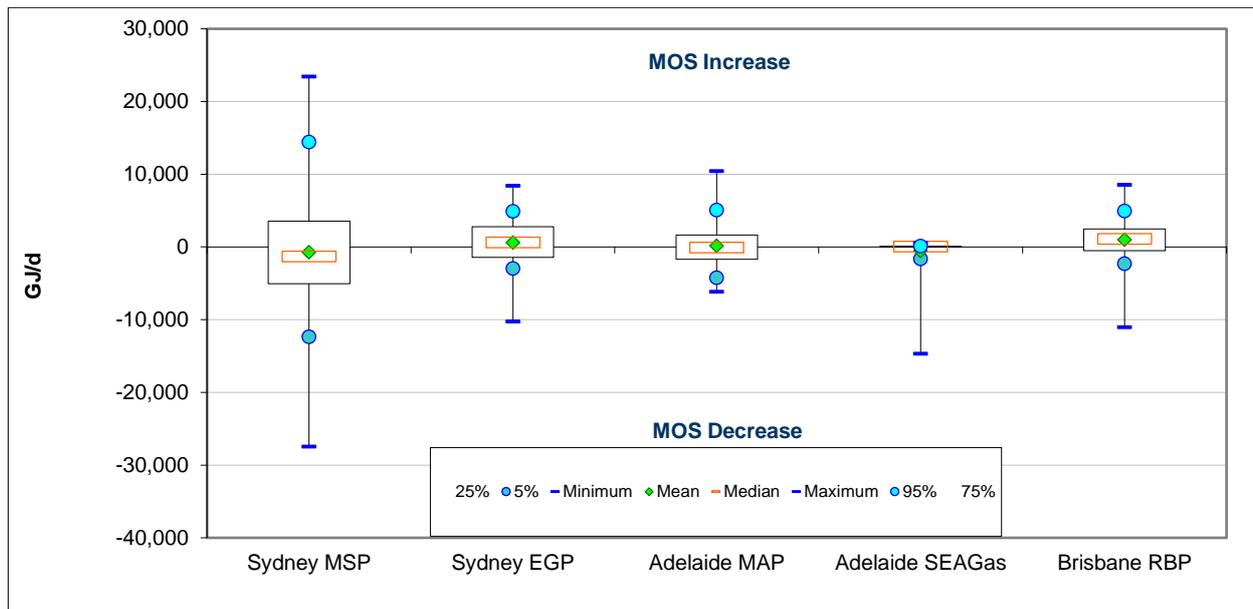


Table 6 Daily MOS quantities (GJ/d) for October 2019

No of days	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
1	23,404	8,423	10,410	564	8,538
1	16,154	5,186	6,044	137	5,258
1	12,642	4,592	4,049	97	4,616
1	8,643	4,043	3,551	85	4,085
1	7,460	3,662	3,071	80	3,599
1	6,132	3,347	2,741	77	3,335
1	5,533	3,047	2,063	73	3,129
1	4,485	2,863	1,750	69	2,569
1	2,620	2,710	1,544	65	2,412
1	1,928	2,513	1,230	65	2,213
1	1,185	2,123	824	63	1,929
1	918	2,021	606	56	1,702
1	533	1,601	450	52	1,499
1	-102	1,039	166	48	1,368
1	-882	778	-52	44	1,218
1	-1,339	598	-112	40	1,051
1	-1,811	287	-227	38	940
1	-2,353	-166	-465	37	818

No of days	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
1	-2,524	-338	-626	32	584
1	-2,720	-576	-1,021	28	390
1	-3,286	-891	-1,259	21	230
1	-3,629	-1,121	-1,368	20	-65
1	-4,482	-1,338	-1,610	18	-415
1	-5,623	-1,484	-1,808	13	-609
1	-6,745	-1,674	-2,112	7	-870
1	-7,840	-1,746	-2,378	-36	-1,042
1	-9,210	-2,040	-2,752	-115	-1,308
1	-9,970	-2,357	-3,336	-178	-1,562
1	-11,683	-2,678	-3,887	-1,070	-2,024
1	-13,040	-3,266	-4,562	-2,226	-2,635
1	-27,473	-10,263	-6,180	-14,708	-11,027

3.3 MOS Period November 2019

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	10,666
MOS decrease	32,304	9,823	5,446	22,311	6,363

Figure 5 Curves of daily MOS quantities

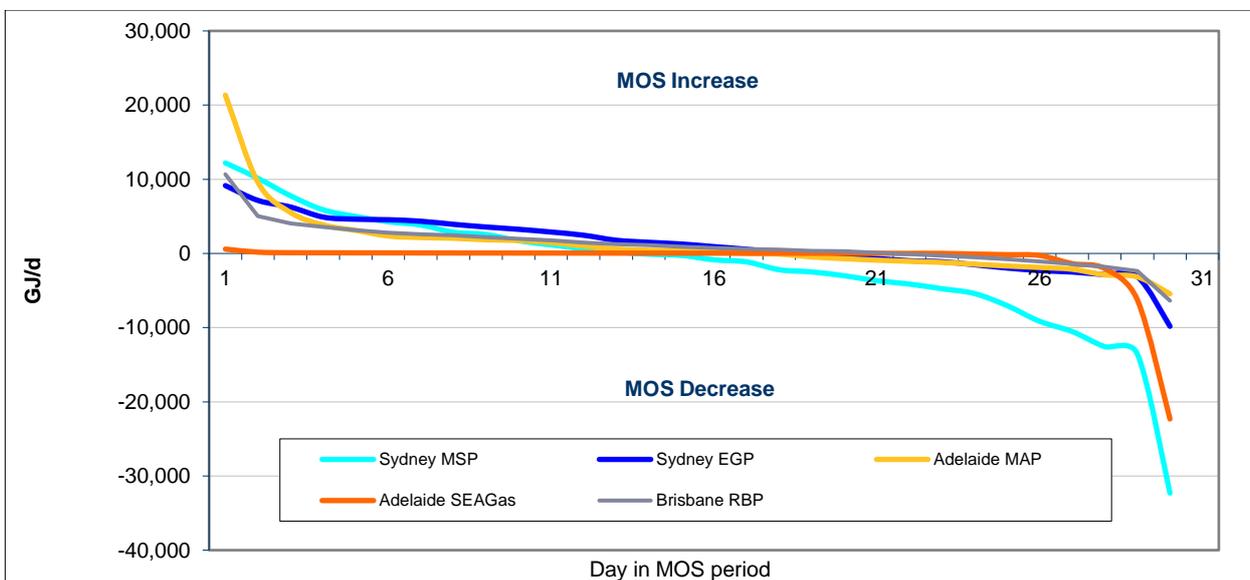


Table 8 Summary statistics of daily MOS quantities

	Summary statistics GJ/d				
	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
Maximum	12,206	9,148	21,336	584	10,666
95%	9,072	6,747	7,756	138	4,582
75%	2,787	3,835	1,997	59	2,383
50%	-563	1,095	250	35	825
25%	-4,603	-1,083	-1,171	6	-251
5%	-13,114	-3,005	-3,035	-4,359	-2,122
Minimum	-32,304	-9,823	-5,446	-22,311	-6,363
Mean	-1,833	1,197	1,148	-1,027	1,094
Std deviation	8,423	3,770	4,742	4,201	2,847
% days positive	43%	60%	57%	77%	70%
% days negative	57%	40%	43%	23%	30%

Figure 6 Distribution of daily MOS quantities

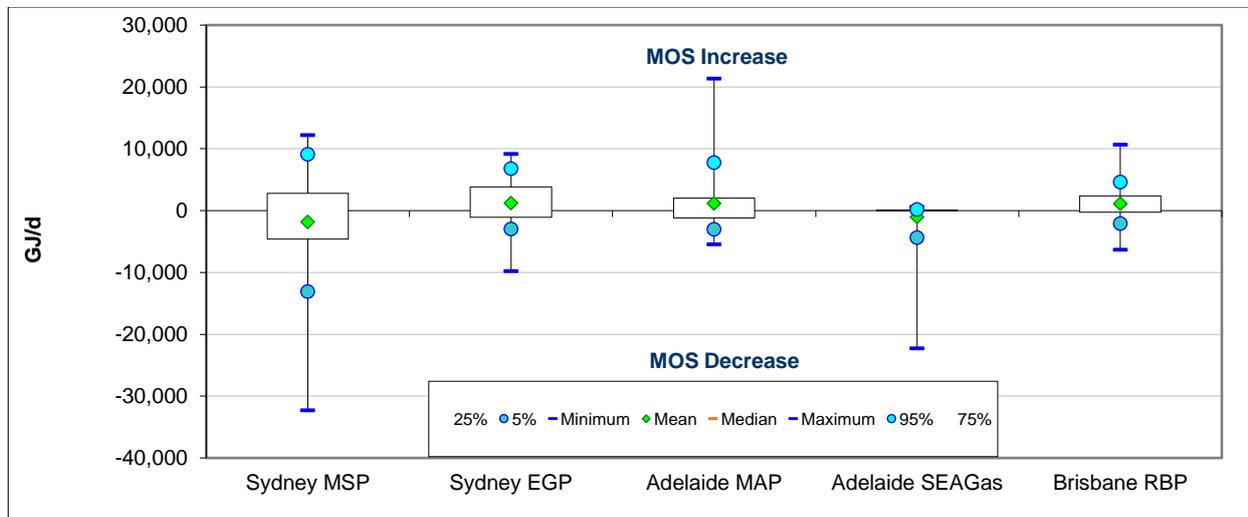


Table 9 Daily MOS quantities (GJ/d) for November 2019

No of days	Sydney MSP	Sydney EGP	Adelaide MAP	Adelaide SEAGas	Brisbane RBP
1	12,206	9,148	21,336	584	10,666
1	10,133	7,147	9,585	169	5,037
1	7,775	6,257	5,521	100	4,026
1	5,888	4,904	3,843	90	3,583
1	4,983	4,613	3,104	80	3,130
1	4,281	4,546	2,353	76	2,810
1	3,828	4,341	2,142	66	2,585
1	2,868	3,925	2,049	60	2,446
1	2,544	3,564	1,840	56	2,194
1	1,717	3,257	1,747	51	1,966
1	1,152	2,886	1,462	48	1,766
1	645	2,453	994	44	1,464
1	175	1,779	584	41	1,232
1	-97	1,500	433	40	1,097
1	-266	1,271	345	36	904
1	-860	918	155	33	746
1	-1,138	566	14	32	583
1	-2,194	171	-91	27	525
1	-2,495	-62	-466	23	364
1	-3,009	-390	-705	21	301
1	-3,675	-681	-904	16	103
1	-4,130	-980	-1,060	10	-77
1	-4,760	-1,117	-1,208	4	-309
1	-5,410	-1,524	-1,450	-85	-531
1	-7,035	-1,967	-1,687	-168	-785
1	-9,153	-2,306	-1,884	-276	-1,057
1	-10,531	-2,507	-2,132	-1,377	-1,407
1	-12,574	-2,857	-2,881	-2,041	-1,803
1	-13,556	-3,126	-3,161	-6,256	-2,383
1	-32,304	-9,823	-5,446	-22,311	-6,363