

Daily System Generation Summary on Tuesday

Tuesday, May 25, 2021

Availability at Daily Maximum Demand Hour

ST-Coal	0 MW
ST-Gas	0 MW
ST-Oil	0 MW
Hydro	2,347 MW
Distillate	0 MW
Total TNB	2,347 MW
Total IPP	17,039 MW
Total Co-Gen	0 MW
Total System	23,210 MW

Generation Mix

Type	MWh	Percentage
Hydro	16,614	4.32 %
Gas	66,893	17.40 %
Total TNB	83,507	21.72 %
ST-Coal	215,502	56.04 %
LSS	3,537	0.92 %
Gas	81,443	21.18 %
Total IPP	300,482	78.14 %
Co-Gen	157	0.04 %
Total Co-Gen	157	0.04 %
Total Generation	384,146	99.90 %
PLTG	308	0.08 %
HVDC	-701	-0.18 %
Interconnection	-393	-0.10 %
Net Energy	384,539	100.00 %

Maximum Demand Record

Date: 3/10/2020	18,808 MW
Date: 3/10/2020	394,238 MWH

Set On Bus, TNB, IPP And MD

Daily Maximum Demand Hour at:	16:00:00 Hour
Total Set On Bus	19,582 MW
TNB Generation	4,645 MW
IPP Generation	13,574 MW
Spinning Reserve	1,356 MW
Maximum Demand	18,186 MW
Net Energy	384,539 MWH
Load Factor	88.10 %

Fuel Cost

Total Cost:	57,268,187.21 RM
Cost per Unit	14.91 cents/kWH

Average Spinning Reserve During Peak Hour

Type	MW
GT	475
Hydro	385
Syncon	309
Thermal	144
Total	1,313

Time Weather Temperature

Afternoon	Hot	32
Morning	Sunny	28

Gas Usage

Station	(mmscfd)
GLGR	38
SRDG	6
TJGS	190
Total TNB	234
CBPS	54
NPRI	160
PGLA	73
PLPS	79
SKSP	24
Total IPP	392
Total Gas	626

Total Gas Required 626

Alternate Fuel Usage

Station	(mmscfd)
Total	0

Hourly System MW Generation

	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
System Total	16023	15263	14615	14315	13962	13679	13553	13558	13944	15667	16523	17087	17199	17168	17720	18126	18186	17646	16557	16268	16946	16953	16837	16591

Prepared By: -Select Name-

Checked By: -Select Name-

Printed on: Friday, June 4, 2021 10:02:29 AM

(Ir. Shanmugam Thoppalan)
Head
Grid System Operator

Daily MW Generation on Tuesday

Station	Unit	0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300																									
JMAH	U001	694	601	501	502	500	501	477	364	297	300	301	300	300	301	300	344	494	604	694	692	698	692	693	691	692	689	691	692	689	693	692	692	693	691	692	690	692	693	692										
JMAH	U002	696	600	504	504	501	504	465	387	296	305	304	304	304	302	306	304	372	556	605	694	697	693	693	691	694	699	697	695	696	696	695	696	697	696	695	695	697	696	696	695	696	697	698	695	698				
JMHE	U001	981	978	981	799	749	752	750	750	752	748	748	752	750	756	747	752	750	749	749	751	748	749	750	749	751	749	750	749	750	746	748	750	750	753	748	753	747	751	750	750	747	749	748	750	749				
JMHE	U002	982	979	983	981	877	851	852	851	848	848	851	854	849	852	848	852	853	850	979	980	981	978	979	981	979	980	980	978	982	981	978	980	980	981	986	978	982	979	979	981	980	974	978	985	979	977			
JMJG	U001	645	645	645	645	645	643	642	642	642	642	642	642	642	642	642	642	642	642	642	642	642	642	642	642	642	642	642	642	648	649	640	645	651	650	650	649	656	649	645	651	647	650	647	643	653				
JMJG	U002	674	674	674	674	674	675	669	669	669	669	669	669	669	669	669	669	669	669	669	669	669	669	669	669	669	669	669	669	669	669	669	669	669	669	669	669	669	669	669	669	669	669	669	669	669	669			
JMJG	U003	665	665	665	665	665	661	665	665	665	665	665	665	665	665	665	665	665	665	665	665	665	665	665	665	665	665	665	665	665	665	665	665	665	665	665	665	665	665	665	665	665	665	665	665	665	665			
JMJG	U005	887	887	887	887	887	890	850	850	850	850	850	850	850	850	850	850	850	850	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890	890			
PKLG	U004	165	158	155	156	156	156	157	156	158	159	158	157	154	157	165	156	156	157	156	248	274	276	272	272	275	269	271	265	268	272	269	273	273	273	271	270	270	274	273	268	273	277	274	274	272	276	277	276	
PKLG	U006	370	280	269	267	270	269	268	269	268	269	268	270	270	267	270	269	269	269	267	327	406	445	448	446	449	446	449	446	446	450	448	450	449	450	446	447	446	449	450	450	449	450	449	448	449	451	451	450	
TBIN	U001	689	684	687	688	685	688	690	689	690	649	650	619	597	597	602	599	637	692	688	685	689	687	689	690	690	691	689	690	689	686	691	689	688	688	688	691	691	690	690	702	689	690	690	691	688	691	690	690	
TBIN	U002	696	693	689	694	693	692	696	692	693	654	651	626	596	601	604	605	638	694	690	691	682	694	689	694	694	692	691	696	690	694	695	688	693	695	692	692	690	692	692	692	694	691	698	691	695	692	691	691	
TBIN	U003	691	692	692	693	690	692	696	691	694	650	652	627	601	603	605	605	608	693	693	691	696	690	694	693	693	690	692	693	694	692	693	691	691	690	692	693	693	692	691	694	694	693	693	692	695	692	689	692	
TBIN	U004	984	983	983	982	920	853	854	855	853	854	854	852	854	854	854	855	929	983	982	985	983	982	982	982	982	983	983	983	981	984	983	982	984	983	983	983	981	983	985	984	984	984	983	985	982	983	983	984	
Total ST-Coal		9819	9519	9315	9137	8912	8827	8731	8530	8375	8262	8263	8187	8101	8115	8128	8120	8307	8835	9186	9610	9716	9760	9754	9089	9093	9092	9086	9086	9082	9087	9096	9101	9096	9097	9095	9096	9111	9101	9120	9119	9110	9118	9110	9089	9108	9115	9094	9108	
Total ST-Oil		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total ST-Gas		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CBPS	BLK2	354	354	358	351	349	363	357	358	359	359	352	352	357	351	357	349	361	361	360	360	361	362	362	356	363	362	364	358	363	362	362	362	355	362	355	362	363	356	360	358	361	365	357	364	356	360	361	362	
EMPP	BLK1	738	736	737	730	723	744	750	739	750	737	720	725	719	715	726	717	752	747	745	726	726	747	746	740	745	742	747	744	742	744	742	738	727	739	732	741	736	724	732	744	740	748	747	738	736	85	0	0	
EMPP	BLK2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GLGR	GT01	107	107	107	106	107	108	108	107	95	96	95	96	96	95	95	94	95	97	96	95	96	95	96	94	95	96	109	109	109	107	106	98	91	109	70	69	68	67	67	97	97	82	67	102	104	103	103		
GLGR	GT02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	45	70	92	105	66	67	67	67	97	96	81	67	102	104	103	104			
GLGR	ST1C	44	44	44	44	44	44	44	44	41	41	40	41	41	40	40	40	40	40	40	40	40	41	40	41	40	41	42	46	46	46	46	45	41	78	97	78	73	73	73	73	88	89	85	73	89	94	94	94	
NPRI	BLK1	503	499	505	496	491	509	511	503	509	508	497	502	499	497	500	493	511	511	510	513	526	523	526	521	523	523	520	521	524	520	520	518	515	520	515	518	520	515	520	522	524	523	526	518	517	525	525	527	
NPRI	BLK2	520	503	507	493	481	529	528	507	524	526	494	507	512	491	496	485	529	529	526	504	524	525	525	520	521	519	518	519	522	518	518	516	518	518	518	518	517	517	520	521	521	523	524	522	521	524	524	526	
PCGP	PGRG	392	386	260	261	261	261	261	261	262	260	261	262	262	262	261	261	261	357	350	389	401	398	402	397	398	401	401	402	400	408	401	403	388	397	388	402	401	389	393	401	401	399	403	397	390	399	400	401	
PGLA	GT11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	12	23	135	111	130	130	214	218	221	203	168	166	168	224	225	227	227	224	170	218	203	208		
PGLA	GT12	163	163	163	162	223	166	171	161	165	160	154	158	155	156	157	154	161	180	180	157	200	161	210	214	216	218	219	217	220	218	218	226	233	230	206	174	169	172	226	229	230	228	174	221	208	212			
PGLA	ST10	92	93	93	93	103	92	92	91	96	92	92	90	90	91	90	92	93	92	91	95	104	105	110	109	109	107	107	108	118	117	235	246	248	244	203	201	204	247	249	250	249	250	243	240	229	232			
PLPS	GT11	109	107	126	129	129	128	129	129	129	129	128	129	128	128	128	128	129	127	127	127	116	134	116	139	142	131	132	132	136	139	137	138	135	137	135	116	115	111	111	137	136	135	115	112	128	132	132	130	
PLPS	GT12	115	115	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
PLPS	GT13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	113	129	111	135	135	127	127	127	133	132	1																			

Daily MW Generation on Tuesday

Station	Unit	0000		0100		0200		0300		0400		0500		0600		0700		0800		0900		1000		1100		1200		1300		1400		1500		1600		1700		1800		1900		2000		2100		2200		2300		
BSIA	HY02	11	11	11	11	11	12	12	12	12	12	11	11	11	11	11	11	23	24	23	24	24	24	23	23	23	12	12	23	23	23	23	23	23	23	23	13	12	13	13	13	13	13	13	13	13	12	13	23	23
BSIA	HY03	11	11	11	11	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	23	10	11	24	23	24	23	24	23	23	23	23	12	11	11	12	12	12	12	11	11	11	22	22	
CEND	HY01	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10		
CEND	HY02	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9		
CEND	HY03	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10		
CEND	HY04	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7			
HTRG	HY01	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	63	62	63	-1	62	63	62	63	63	-1	64	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	62	62	62
HTRG	HY02	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	63	63	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
KNRG	HY01	24	24	24	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36	36	21	22	36	36	36	36	36	36	36	36	36	36	21	21	21	21	21	21	21	21	21	21	36	36
KNRG	HY02	24	24	24	24	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37	37	21	22	37	37	37	37	37	37	37	37	37	37	37	37	23	23	23	23	23	23	23	23	37	37	
KNRG	HY03	24	24	24	23	24	25	25	25	25	25	24	25	24	25	24	25	24	25	25	25	25	25	25	25	24	24	21	22	36	36	36	36	36	36	36	36	21	21	21	21	21	21	21	21	21	21	21	36	36
KNYR	HY01	63	63	61	61	59	77	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	60	58	-1	100	100	98	100	100	100	100	100	100	100	100	99	98	99	57	-1	-1	-1	59	59	59	99	99	98	100	100	99	
KNYR	HY02	98	98	96	97	95	56	60	57	73	60	59	58	58	58	58	58	66	84	74	60	92	68	96	58	62	61	99	100	62	101	72	101	59	59	59	58	58	56	60	96	60	60	99	99	98	100	100	99	
KNYR	HY03	97	97	96	96	94	55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	99	97	99	99	99	101	100	100	100	101	98	97	98	57	0	0	0	0	0	0	0	0	0	0	0	0	
KNYR	HY04	99	98	97	97	95	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	100	59	98	100	100	100	101	101	101	101	99	98	99	58	57	55	59	59	59	59	99	99	98	100	101	100		
LPIA	HY01	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19			
LPIA	HY02	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19		
MNOR	HY01	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3			
PGAU	HY01	-1	-1	-1	-1	19	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0	0	0	0	19	109	21	21	21	21	21	21	21	111	21	21	21	21	0	0	0	0	0	0	0	0	0	0	0	0	
PGAU	HY03	0	0	0	0	0	0	0	0	0	0	18	18	18	18	0	0	0	0	0	0	0	0	150	81	21	21	21	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PGAU	HY04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	111	21	0	0	0	0	0	0	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
SIHY	HY01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48	31	0	0	48	47	47	47	47	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
SIHY	HY02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	50	30	0	0	50	50	50	50	50	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
SIHY	HY03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	50	30	30	50	50	50	50	50	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
SYPS	HY01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	25	17	17	25	25	25	25	25	25	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
SYPS	HY02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																													

Daily MW Generation on Tuesday

Station	Unit	0000		0100		0200		0300		0400		0500		0600		0700		0800		0900		1000		1100		1200		1300		1400		1500		1600		1700		1800		1900		2000		2100		2200		2300		
MCLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	7	13	20	25	31	36	40	42	47	38	41	12	44	45	18	32	33	27	21	6	4	2	0	0	0	0	0	0	0	0	0	0	
SPLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6	13	20	28	18	21	30	52	20	52	46	50	44	49	49	46	33	29	9	8	4	2	0	0	0	0	0	0	0	0	0	0	0
SSLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4	10	16	21	26	30	35	35	31	38	31	18	26	38	21	25	30	21	18	8	12	5	1	0	0	0	0	0	0	0	0	0	0
STLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4	7	12	15	17	17	26	22	24	29	9	20	10	18	8	8	10	6	3	1	2	1	0	0	0	0	0	0	0	0	0	0	0
TBLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	14	11	27	29	30	30	30	30	30	30	30	30	30	30	30	4	22	21	14	3	1	0	0	0	0	0	0	0	0	0	0	
Total LSS		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	72	144	227	302	354	353	451	462	410	483	484	450	475	477	457	390	341	265	205	130	84	36	9	0	0	0	0	0	0	0	0	0	0
PCUF	CUFG	3	4	4	3	4	3	5	4	3	4	4	3	4	3	4	3	5	4	3	4	4	2	4	3	3	6	4	4	4	4	3	3	4	4	3	3	5	5	4	5	3	3	3	4	2	2	2	3	
PCUF	CUFK	3	3	3	2	3	3	4	3	3	3	3	4	2	4	4	3	2	3	2	3	2	3	2	3	3	2	3	2	4	3	3	3	3	2	3	2	4	4	4	3	3	4	2	1	3	3	3	3	
Total Co-Gen		6	7	7	5	7	6	9	7	6	7	7	7	6	7	8	6	7	7	5	8	7	4	7	5	6	9	6	7	6	7	6	7	7	5	6	6	8	7	9	8	7	9	5	4	6	7	5	5	
Total Gen		16060	15674	15267	14920	14644	14464	14238	13972	13895	13714	13640	13604	13508	13465	13511	13452	13895	15001	15626	16122	16461	16798	17008	17306	17188	17110	17114	17494	17723	18048	18091	18108	18226	18112	17676	17102	16551	16152	16246	16943	16945	16935	16930	16776	16832	16684	16611	16297	
TIE-EGAT		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TIE-HVDC		-30	-30	-30	-29	-29	-29	-29	-29	-29	-29	-29	-29	-29	-29	-29	-28	-28	-29	-29	-30	-30	-30	-30	-29	-29	-29	-29	-29	-29	-28	-28	-30	-30	-29	-29	-29	-29	-29	-28	-28	-29	-30	-30	-29	-29	-29	-29		
TIE-PLTG		74	46	41	50	65	-17	-41	-1	-31	-36	-4	-12	-9	-30	-12	-38	-15	22	-6	17	-27	9	-43	0	24	6	-20	-10	39	-48	0	2	76	57	65	54	31	33	14	4	35	13	12	41	30	16	55	84	
Interconnection		44	16	11	20	36	-46	-70	-30	-60	-65	-33	-41	-39	-59	-41	-66	-43	-7	-35	-13	-56	-22	-73	-29	-5	-22	-48	-39	9	-77	-28	-28	46	28	36	26	2	4	-14	-25	5	-18	-17	12	1	-14	26	55	
System Total		16023	15665	15263	14907	14615	14517	14315	14009	13962	13786	13679	13651	13553	13530	13558	13524	13944	15014	15667	16141	16523	16826	17087	17341	17199	17138	17168	17539	17720	18131	18126	18142	18186	18090	17646	17084	16557	16156	16268	16974	16946	16959	16953	16770	16837	16704	16591	16248	
SRev ST-Coal		208	352	346	325	479	495	530	539	532	661	661	718	722	716	724	719	706	533	433	213	188	144	150	125	121	122	128	128	132	127	118	113	118	117	119	118	103	113	94	95	104	96	104	125	106	99	120	106	
SRev CCGT-Gas		1046	1092	1295	1200	1164	1106	1102	1153	1117	1142	1212	1178	1180	1230	1197	1253	1245	650	490	591	567	493	413	376	430	440	451	421	384	399	405	395	451	401	407	546	691	1011	928	462	461	495	530	632	588	410	444	481	
SRev LSS		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SRev ST-Gas		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SRev OCGT-Gas		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58	7	1	6	2	44	0	0	0	0	0	0	0	0	0	0	0	0	0	
SRev Co-Gen		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Syncon		403	490	490	490	426	678	779	779	779	779	779	779	779	779	779	628	628	628	527	527	628	339	339	0	0	313	439	126	126	126	126	252	126	252	252	339	814	814	814	526	339	339	526	526	126	126	126	313	
Hydro		352	304	305	257	339	196	138	140	107	139	147	145	147	150	142	147	117	72	138	170	58	165	279	384	599	775	571	558	642	427	464	273	661	547	537	627	297	306	296	356	527	523	292	314	320	403	334	295	
S.Reserve Total		2009	2238	2436	2272	2408	2475	2549	2611	2535	2721	2799	2820	2828	2875	2842	2747	2696	1883	1588	1501	1441	1141	1181	885	1150	1650	1589	1233	1284	1137	1120	1034	1362	1319	1359	1630	1905	2244	2132	1439	1431	1453	1452	1597	1540	1038	1024	1195	