

Daily System Generation Summary on Friday

Friday, April 15, 2022

Availability at Daily Maximum Demand Hour

ST-Coal	0 MW
ST-Gas	0 MW
ST-Oil	0 MW
Hydro	2,027 MW
Distillate	0 MW
Total TNB	2,027 MW
Total IPP	18,665 MW
Total Co-Gen	0 MW
Total System	24,617 MW

Generation Mix

Type	MWh	Percentage
Hydro	13,068	3.45 %
Gas	61,220	16.14 %
Total TNB	74,288	19.59 %
ST-Coal	203,365	53.62 %
LSS	3,820	1.01 %
Gas	95,866	25.27 %
Total IPP	303,051	79.90 %
Co-Gen	1,185	0.31 %
Total Co-Gen	1,185	0.31 %
Total Generation	378,524	99.80 %
PLTG	-70	-0.02 %
HVDC	-704	-0.19 %
Interconnection	-774	-0.20 %
Net Energy	379,298	100.00 %

Maximum Demand Record

Date: 3/29/2022	18,840 MW
Date: 3/10/2020	394,238 MWH

Set On Bus, TNB, IPP And MD

Daily Maximum Demand Hour at:	15:30:00 Hour
Total Set On Bus	18,920 MW
TNB Generation	3,317 MW
IPP Generation	14,219 MW
Spinning Reserve	1,337 MW
Maximum Demand	17,674 MW
Net Energy	379,298 MWH
Load Factor	89.42 %

Fuel Cost

Total Cost:	100,844,956.53 RM
Cost per Unit	26.64 cents/kWH

Average Spinning Reserve During Peak Hour

Type	MW
GT	250
Hydro	651
Syncon	238
Thermal	374
Total	1,513

Time	Weather	Temperature
Afternoon	Cloudy	34
Morning	Rainy	27

Gas Usage

Station	(mmscfd)
GLGR	42
TJGS	148
Total TNB	190
CBPS	53
EMPP	207
NPRI	160
PCGP	89
PGLA	54
PLPS	61
SPGP	211
Total IPP	835
Total Gas	1,026
Total Gas Required	1,026

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	15898	15154	14610	14019	13740	13722	13814	13561	13971	15411	16227	16762	16608	16492	16855	17550	17554	17122	16421	16287	16884	17122	16761	16400

Prepared By: -Select Name-

Checked By: -Select Name-

Printed on: Monday, May 9, 2022 8:29:57 AM

(Ir. Shanmugam Thoppalan)
Head
Grid System Operator

Daily MW Generation on Friday

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	504	406	384	308	308	307	305	304	304	304	305	304	304	305	304	405	486	556	555	653	695	695	658	660	659	657	695	698	694	695	696	694	556	558	505	556	556	603	696	696	698	605	557	556	555			
JMAH	U002	500	404	363	309	306	305	305	304	304	305	304	304	304	305	304	405	481	556	555	655	695	696	660	658	659	653	694	695	697	693	694	694	556	557	504	558	554	585	697	697	695	610	554	555	557			
JMHE	U002	977	896	901	900	899	900	847	852	850	852	845	848	850	849	848	850	981	982	978	974	977	976	978	976	982	981	981	979	979	979	976	981	980	979	980	980	978	979	982	979	979	978	973	975				
JMJG	U001	671	641	651	645	596	596	598	602	598	599	597	598	596	594	597	590	596	626	667	667	667	677	675	670	660	670	663	660	667	668	669	666	675	669	671	636	627	632	632	665	666	665	668	669	664	666	666	
JMJG	U002	670	643	656	648	601	598	601	599	598	598	607	599	601	601	599	607	600	634	676	668	667	669	665	665	671	666	668	667	669	668	668	673	665	669	667	637	640	640	635	667	666	671	669	671	668	667	671	
JMJG	U003	673	645	634	649	593	590	598	593	601	587	598	589	598	590	594	592	595	636	669	666	661	667	662	674	672	673	666	679	672	635	671	668	671	664	667	629	634	634	635	675	674	657	660	660	665	664	666	
JMJG	U004	975	931	904	900	898	871	855	853	854	855	854	854	854	854	855	855	853	891	946	975	975	978	976	976	977	977	975	973	977	980	977	977	983	974	977	976	973	972	977	977	977	977	977	977	977			
JMJG	U005	968	900	899	895	900	852	849	850	850	850	851	850	848	851	847	850	851	919	979	971	974	974	972	972	969	971	968	965	969	972	971	972	972	968	976	972	976	973	968	976	969	972	969	971	972	969		
PKLG	U003	151	105	56	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				
PKLG	U004	154	152	151	153	150	151	150	152	148	149	154	152	151	153	153	152	152	152	152	152	151	151	152	147	147	153	148	204	211	208	209	173	151	154	158	153	153	151	152	156	152	152	159	154	155			
PKLG	U005	261	307	391	431	470	468	390	314	272	269	261	272	273	275	273	274	273	275	274	273	275	273	277	276	273	274	273	273	319	358	358	358	324	251	248	267	269	265	269	268	269	269	268	269	268			
PKLG	U006	269	269	269	268	268	269	268	269	269	247	265	266	267	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269	269				
TBIN	U002	498	502	502	451	400	340	302	301	302	302	302	302	303	303	304	411	379	518	585	619	694	691	693	650	654	653	654	697	690	692	693	693	692	582	550	538	503	553	669	694	690	690	689	650	604			
TBIN	U003	497	503	503	441	402	372	300	301	302	302	301	301	302	302	301	302	401	521	599	620	692	691	690	656	654	651	651	691	691	692	690	690	576	553	540	504	553	663	691	689	692	691	649	603				
TBIN	U004	937	928	856	851	852	851	851	854	853	853	854	854	851	853	855	854	910	937	937	939	937	937	937	939	942	940	937	937	941	936	940	939	935	939	935	937	939	936	940	937	938	936	937	939	937			
Total ST-Coal		8705	8232	8120	7849	7643	7470	7219	7148	7105	7071	7097	7093	7104	7101	7102	7107	7111	7869	8139	8563	8855	8929	9252	9336	9335	9193	9176	9170	9179	9353	9531	9645	9653	9649	9563	8808	8701	8591	8615	8822	9115	9325	9330	9328	9141	8912	8742	8636
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	
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
CBPS	BLK2	350	360	353	352	359	355	362	361	337	360	352	344	324	348	247	222	352	352	357	362	357	365	344	331	301	369	294	294	301	304	362	333	362	364	356	362	359	359	366	355	361	370	364	361	362	364	370	363
EMPP	BLK2	695	704	701	699	708	702	705	711	705	710	700	687	709	707	703	709	708	701	710	709	711	719	712	705	699	708	704	709	711	704	711	710	710	713	696	714	706	705	710	699	707	710	710	704	707	706	712	710
EMPP	BLK3	695	704	701	699	708	702	705	709	707	710	700	687	709	707	703	710	709	701	710	709	711	718	712	705	699	708	705	706	711	705	712	709	710	713	695	714	705	705	710	698	707	710	710	705	706	706	712	709
GLGR	GT01	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	26	55	77	104	103	104	102	104	103	105	103	103	103	103	103	103	102	103	102	103	102	103	
GLGR	GT02	107	108	108	108	108	107	107	94	93	93	93	92	92	93	93	93	93	93	93	93	94	93	92	92	93	92	93	105	95	103	104	103	103	104	103	104	103	104	103	104	104	104	104	104	103	104	102	
GLGR	ST1C	46	46	47	46	47	46	46	40	40	40	40	39	40	40	40	40	40	40	40	40	41	40	39	41	40	41	41	37	95	94	94	95	95	94	94	94	94	94	94	94	94	94	93	93	94	93	93	
NPRI	BLK1	502	511	506	506	515	509	511	515	511	515	505	495	516	511	508	512	515	506	511	520	520	527	521	513	511	521	515	516	515	520	518	517	517	511	517	512	513	518	510	514	520	521	514	517	518	523	520	
NPRI	BLK2	488	499	493	490	523	501	518	525	512	505	494	467	502	500	393	332	487	502	525	528	530	535	531	521	505	526	509	517	522	502	529	529	529	529	500	524	506	507	528	503	523	528	527	520	526	525	529	527
PCGP	PGRG	585	597	591	589	604	595	595	605	597	604	587	580	603	596	592	600	600	591	597	602	603	613	606	596	590	602	596	599	600	598	602	601	599	606	589	610	593	595	602	589	598	604	602	596	597	601	607	603
PGLA	GT12	156	160	158	157	162	159	160	162	161	162	158	154	162	159	158	162	161	225	227	229	225	224	223	221	221	228	228	221	224	222	221	222	223	220	223	222	226	224	220	227	226	213	215	216	218	215		
PGLA	ST10	90	92	90	90	92	91	92	92	92	91	91	89	91	91	91	91	115	115	115	115	116	114	116	115	115	115	115	115	114	115	114	115	115	115	114	112	115	111	114	113	114	109	109	109	111	110		
PLPS	GT11	140	144	145	142	143	144	143	128	128	129	129	128	129	128	127	129	129	129	128	128	128	128	129	128	128	122	127	130	131	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130
PLPS	GT12	146	151	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	
PLPS	GT13	139	144	145	140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60	138	135	138	138	139	139</															

Daily MW Generation on Friday

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												
HTRG	HY01	63	63	62	62	62	62	62	62	62	63	63	63	63	63	63	63	63	62	62	63	63	63	63	63	63	63	63	63	63	-1	-1	-1	-1	-1	-1	
HTRG	HY02	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	62	62	63	63	63	63	63	63	63	63	63	63	0	0	0	0	0	0	
HTRG	HY03	4	4	4	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
HTRG	HY04	3	3	4	3	3	3	3	3	3	3	3	3	4	4	4	4	3	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3		
KNRG	HY01	35	35	35	35	35	35	35	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	34	34	34	22	23	34	23	23	23	34	34	22	22
KNRG	HY02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	37	37	37	12	0	0	0	0	0	0	0	0	0	
KNRG	HY03	36	36	36	36	36	36	36	36	37	37	37	37	37	37	37	37	37	37	37	37	37	37	36	36	36	36	21	23	36	22	22	22	22	36	36	
LPIA	HY01	17	17	17	17	15	15	15	15	15	15	15	15	15	15	18	18	18	18	18	18	18	18	18	19	19	19	19	19	20	20	20	20	20	20	20	
LPIA	HY02	16	16	16	16	16	16	16	16	16	16	16	16	16	18	18	18	18	18	18	18	18	18	18	18	19	19	19	19	20	20	20	20	20	20	20	
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		
PGAU	HY03	21	21	21	21	21	21	21	21	21	21	21	21	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	21	21	21	21	21	20	20	20	
PGAU	HY04	21	21	21	21	21	21	21	21	21	21	21	21	22	22	22	22	22	22	22	22	22	22	21	21	21	21	21	21	21	20	21	21	20	20	20	
SIHY	HY02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	50	50	50	50	50	50	50	50	50	50	30	30	30	
SIHY	HY03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	30	30	30	30	30	50	50	50	50	50	50	50	50	50	
SYPS	HY01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	17	17	17	17	17	17	17	17	17	25	25	25	25	25	25	25	25	
SYPS	HY03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	25	25	25	25	25	25	25	25	25	25	25	25	
SYPS	HY04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	17	17	17	17	17	17	17	24	25	25	25	25	25	25	25	25		
TMGR	HY01	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34	34	34	34	32	0	0	0	0	0	33	33	0	
TMGR	HY02	32	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1		
TMGR	HY03	38	41	40	39	58	43	41	41	41	43	39	37	84	41	39	40	41	39	41	41	41	84	56	40	39	72	40	40	40	41	54	41	41	44	40	
TMGR	HY04	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1		
UJLI	HY01	-1	0	0	0	0	0	0	0	0	0	-1	-1	-1	-1	-1	-1	-1	-1	150	147	140	84	93	93	95	95	94	116	97	108	181	89	141	113	113	
UJLI	HY02	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	89	91	90	89	95	95	93	94	84	-1	-1	-1	-1	86	90	94		
UPIA	HY01	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5		
UPIA	HY02	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5		
Total Hydro		468	398	397	394	412	396	394	394	338	340	337	334	382	340	338	328	330	368	369	371	370	680	648	572	516	526	583	587	586	739	823	877	887	964	747	
Total Distillate		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		
BDLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	3	11	7	17	19	23	25	25	22	29	7	22	29	22	7	18	2	4	1		
BKLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	5	8	14	18	22	25	29	31	28	21	19	32	29	30	25	25	23	11	15		
BSLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	6	12	17	21	25	28	29	28	32	27	26	16	24	32	31	22	18	19	12		
CHLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	9	13	21	18	18	25	32	46	34	41	23	15	44	37	3	1	1	1	0			
GNLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5	11	19	23	22	33	38	40	36	38	47	46	49	48	43	41	37	33	27			
JELS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	6	10	14	19	22	13	24	17	25	21	27	28	16	26	23	22	19	18			
JSLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6	11	13	15	13	18	21	21	29	33	38	24	33	29	21	27	5	2	1			
KDLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	6	15	20	35	49	59	69	76	70	86	63	67	33	95	60	62	81	68	66	48	34	17		
KKLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	2	5	10	16	22	27	31	33	28	31	25	40	44	42	10	26	37	29	16	15	17			
KMLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	1	2	6	10	12	16	17	16	17	11	28	7	19	12	19	9	23	18	20	16	9			
KRLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	1	3	8	9	19	24	27	27	8	30	28	10	24	24	30	22	30	12	9	9	10			
MCLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	2	6	11	18	24	31	36	44	47	48	50	50	50	49	47	44	40	34	27	21	11			
SPLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	2	5	8	20	24	26	33	40	28	24	31	46	52	16	41	26	40	8	4	2	1			
SSLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	1	6	11	18	23	29	26	23	31	41	43	24	37	22	48	2	4	5	7	14	16			
STLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	1	4	7	11	15	19	22	16	25	7	11	8	29	28	28	5	4	25	18	8	4			
TBLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	3	5	9	30	17	30	14	30	30	22	29	30	19	25	16	12	14	12	14	11	3			
Total LSS		0	0	0	0	0	0	0	0	0	0	0	0	21	75	137	232	329	376	448	462	484	520	513	505	490	502	527	423	428	343	277	228	175			
PCUF	CUFG	22	22	23	22	23	23	22	24	24	24	24	23	24	23	23	23	21	21	25	26	26	28	28	29	25	22	20	21	20	21	20	21	22			
PCUF	CUFK	26	26	27	25	26	27	25	26	27	25	26	28	27	26	27	27	28	26	27	26	27	28	26	26	26	26	27	26	27	25	20	21	23			
Total Co-Gen		48	48	50	47	49	50	47	50	51	49	50	52	50	52	48	50	50	49	50	48	49	51	53	52	55	54	55	51	48	47	47	47	46			

Daily MW Generation on Friday

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																									
Total Gen		15954	15497	15150	14835	14563	14277	14054	13910	13756	13812	13769	13664	13789	13774	13518	13485	13905	14906	15341	15834	16172	16373	16651	16625	16541	16536	16478	16581	16781	17186	17446	17583	17537	17590	17166	16685	16426	16244	16282	16462	16856	17186	17077	16978	16710	16485	16393	16127	
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	0
TIE-HVDC		-31	-30	-30	-28	-30	-28	-28	-31	-28	-29	-29	-29	-29	-29	-30	-30	-29	-28	-30	-30	-30	-29	-29	-29	-29	-28	-28	-29	-29	-30	-30	-30	-29	-29	-29	-28	-28	-29	-29	-30	-30	-30	-30	-29	-29	-30	-30	-29	
TIE-PLTG		87	11	26	32	-17	2	63	-7	44	26	76	66	4	17	-14	-46	-36	-1	-42	-16	-25	-44	-81	-61	-39	-25	15	-27	-44	-66	-76	-61	12	-24	73	-23	34	21	24	7	2	-44	-15	1	-22	8	22	41	
Interconnection		56	-19	-4	4	-47	-26	35	-37	16	-4	47	37	-25	-12	-43	-76	-66	-30	-70	-46	-55	-73	-111	-90	-67	-54	-14	-57	-74	-96	-104	-91	-17	-53	44	-51	5	-9	-5	-24	-28	-74	-45	-28	-51	-22	-7	12	
System Total		15898	15516	15154	14831	14610	14303	14019	13947	13740	13816	13722	13627	13814	13786	13561	13561	13971	14936	15411	15880	16227	16446	16762	16715	16608	16590	16492	16638	16855	17282	17550	17674	17554	17643	17122	16736	16421	16253	16287	16486	16884	17260	17122	17006	16761	16507	16400	16115	
SRev ST-Coal		530	977	974	910	950	948	998	994	993	994	993	991	999	998	993	990	997	858	569	558	562	539	381	300	302	442	455	460	457	282	290	263	252	258	274	649	652	652	657	544	480	306	307	304	439	523	560	567	
SRev CCGT-Gas		490	404	426	464	407	435	402	478	534	444	511	611	543	515	766	817	457	313	245	273	274	253	214	269	335	192	389	408	292	287	185	221	199	254	495	171	243	244	187	273	206	166	171	219	205	213	175	203	
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	0	0	0	0	0	0	0	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		462	363	363	363	363	363	363	363	363	363	363	550	550	550	550	550	550	550	550	550	550	275	275	275	275	363	176	176	176	176	176	88	88	88	176	363	363	363	363	176	88	88	126	214	302	302	302	489	
Hydro		585	481	482	485	467	483	485	485	477	475	478	480	432	474	476	486	484	496	495	493	494	509	541	617	673	575	705	701	702	735	731	765	755	678	807	567	570	572	586	699	751	675	707	668	587	576	536	482	
S.Reserve Total		2067	2225	2245	2222	2187	2229	2248	2320	2367	2276	2345	2632	2524	2537	2785	2843	2488	2217	1859	1874	1880	1576	1411	1461	1585	1572	1725	1745	1627	1480	1382	1337	1294	1278	1752	1750	1828	1831	1793	1692	1525	1235	1311	1405	1533	1614	1573	1741	