

Daily System Generation Summary on Saturday

Saturday, March 26, 2022

Availability at Daily Maximum Demand Hour

ST-Coal	0 MW
ST-Gas	0 MW
ST-Oil	0 MW
Hydro	1,931 MW
Distillate	0 MW
Total TNB	1,931 MW
Total IPP	17,954 MW
Total Co-Gen	0 MW
Total System	23,204 MW

Generation Mix

Type	MWh	Percentage
Hydro	9,495	2.63 %
Gas	40,992	11.37 %
Total TNB	50,487	14.00 %
ST-Coal	220,634	61.20 %
ST-Oil	4,988	1.38 %
LSS	4,359	1.21 %
Distillate	3,862	1.07 %
Gas	75,927	21.06 %
Total IPP	309,770	85.92 %
Co-Gen	1,189	0.33 %
Total Co-Gen	1,189	0.33 %
Total Generation	361,446	100.25 %
PLTG	184	0.05 %
HVDC	722	0.20 %
Interconnection	906	0.25 %
Net Energy	360,540	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:	20:30:00 Hour
Total Set On Bus	18,341 MW
TNB Generation	3,239 MW
IPP Generation	13,471 MW
Spinning Reserve	1,582 MW
Maximum Demand	16,706 MW
Net Energy	360,540 MWH
Load Factor	89.92 %

Fuel Cost

Total Cost:	88,101,956.00 RM
Cost per Unit	24.37 cents/kWH

Average Spinning Reserve During Peak Hour

Type	MW
GT	1,410
Hydro	422
Syncon	424
Thermal	288
Total	2,544

Time	Weather	Temperature
Afternoon	Hot	35
Morning	Sunny	26

Gas Usage

Station	(mmscfd)
GLGR	32
Total TNB	32
CBPS	48
EMPP	171
NPRI	139
PCGP	47
PGLA	31
SGB3	69
Total IPP	503
Total Gas	535

Total Gas Required 655

Alternate Fuel Usage

Station	(mmscfd)
PGLA	25
PGLA	25
SGB3	20
PKLG	49
Total	119

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	15666	15090	14503	14022	13607	13338	13288	13214	13063	14105	14825	15409	15385	15243	15833	16008	15992	15829	15433	15498	16698	16614	16149	15903

Prepared By: -Select Name-

Checked By: -Select Name-

Printed on: Tuesday, April 5, 2022 10:45:48 AM

(Ir. Shanmugam Thoppalan)
Head
Grid System Operator

Daily MW Generation on Saturday

		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	707	704	707	706	704	707	706	707	706	707	704	706	705	655	696	695	697	605	606	694	700	696	696	694	696	695	696	696	695	693	695	695	696	696	695	696	695	695	695	698	696	697	694	694	696	695	695	695	695	690		
JMAH	U002	705	706	707	706	702	707	705	704	705	705	706	655	696	694	695	602	606	696	699	699	698	694	695	694	696	694	695	693	695	696	694	694	694	694	694	698	698	696	693	695	694	696	695	694	696	694	696	695	690			
JMHE	U002	977	974	980	925	897	899	903	904	880	850	845	852	852	850	849	846	851	849	915	953	986	977	981	979	980	976	981	981	981	980	978	982	981	980	981	978	982	977	974	980	979	976	979	977	976	980	980	981				
JMJG	U001	682	669	640	675	677	679	678	655	628	609	602	581	588	589	609	574	579	593	634	626	604	619	625	628	628	624	621	630	632	664	667	668	664	661	648	646	593	596	599	598	592	597	626	576	578	579	590	599				
JMJG	U002	679	682	682	683	677	690	685	651	636	609	601	581	593	590	621	616	574	600	623	629	618	626	632	628	635	629	632	629	634	612	607	612	611	608	580	580	580	581	585	579	548	557	550	545	548	568	671					
JMJG	U003	148	239	237	238	266	318	385	408	458	464	492	524	535	554	442	548	543	553	542	546	551	541	580	562	563	598	590	607	596	587	602	582	611	590	581	579	597	634	600	599	599	601	596	666	629	643	637	634				
JMJG	U004	898	898	899	899	897	899	894	849	851	851	850	852	852	851	849	850	850	852	878	897	895	899	898	899	897	897	897	896	899	903	932	931	931	932	933	932	930	932	931	931	932	930	931	928	928	925	925	930				
JMJG	U005	971	970	971	928	898	895	885	848	848	852	848	849	852	851	849	848	849	848	848	892	979	976	975	974	969	971	975	972	972	972	970	969	970	975	972	972	978	967	974	957	951	949	951	949	959	974	983	976				
PKLG	U003	277	279	276	279	278	281	280	276	276	277	276	211	148	149	149	150	149	230	273	278	279	272	278	279	279	279	279	279	278	278	277	278	277	278	277	278	277	278	277	273	274	272	273	274	272	273	268	271	273	277	277	
PKLG	U004	275	276	277	277	274	275	274	276	278	277	235	168	149	152	153	154	217	272	278	276	272	272	274	273	270	271	270	272	274	274	273	272	274	276	272	276	280	272	275	274	267	272	275	272	276	276						
PKLG	U006	448	448	445	450	449	447	447	450	445	448	442	445	446	448	447	449	447	450	446	448	446	449	449	449	449	449	445	441	445	445	444	445	442	443	445	446	448	444	445	442	443	446	446	450	445	445						
TBIN	U001	695	695	695	695	695	695	695	695	695	695	695	695	695	695	695	695	695	695	689	687	687	687	687	687	687	687	687	687	687	687	687	687	687	687	689	685	692	686	686	688	689	687	690	685	689	687	689	687	690			
TBIN	U003	698	698	698	698	698	698	698	698	698	698	698	698	698	698	698	698	698	698	698	692	691	691	691	691	691	691	691	691	691	691	691	691	691	691	690	690	690	688	698	693	690	690	689	692	689	691	694	692	691			
TBIN	U004	938	940	939	908	903	904	901	904	896	853	853	851	854	853	854	853	853	853	853	898	939	937	938	938	938	936	934	942	937	934	938	939	935	938	936	935	937	937	938	937	936	934	940	935	937	936	935	939	937			
Total ST-Coal		9098	9178	9153	9067	9015	9094	9136	9025	8998	8896	8899	8681	8672	8664	8707	8485	8456	8813	9110	9257	9345	9337	9397	9374	9379	9396	9400	9410	9408	9420	9458	9442	9470	9439	9409	9389	9374	9390	9366	9355	9327	9294	9328	9332	9311	9350	9392	9492				
PKLG	U001	221	221	221	220	221	221	221	221	221	180	143	144	144	144	144	143	143	196	221	220	221	221	221	221	220	220	220	220	221	221	221	221	221	221	221	221	221	221	221	221	221	221	221	217	217	218	218	218				
Total ST-Oil		221	221	221	220	221	221	221	221	221	180	143	144	144	144	143	143	196	221	220	221	221	221	221	221	220	220	220	220	221	221	221	221	221	221	221	221	221	221	221	221	221	221	221	221	221	217	217	218	218	218		
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					
CBPS	BLK2	354	216	225	225	229	225	222	226	223	223	229	235	227	226	219	225	223	355	359	363	364	364	362	360	359	357	357	356	370	367	365	360	358	357	362	245	212	257	360	355	356	352	357	352	359	360	303					
EMPP	BLK1	703	543	450	450	534	601	374	383	374	379	375	381	390	377	373	374	386	373	369	375	451	550	552	619	501	496	451	605	701	728	716	715	710	711	709	709	713	692	707	705	701	696	696	708	694	709	706	679				
EMPP	BLK2	703	593	450	422	538	601	430	383	374	379	375	381	390	377	373	374	386	373	368	375	452	550	553	618	501	496	451	605	701	727	717	715	710	711	709	709	711	693	706	704	701	697	697	707	694	709	703	679				
GLGR	GT01	68	98	44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	GT02	68	98	96	96	96	96	96	96	96	96	95	96	96	96	96	96	96	96	97	96	97	96	96	96	97	96	97	96	97	107	107	105	105	107	107	107	108	108	108	108	108	108	108	108	108							
GLGR	ST1C	71	89	78	44	41	40	41	40	41	40	40	40	41	40	40	40	40	40	41	40	41	41	41	41	41	41	41	40	45	47	46	47	46	46	46	47	46	46	46	47	46	46	46	46	46	46						
NPRI	BLK1	301	300	349	376	344	341	398	334	311	314	309	311	321	311	311	305	320	346	343	347	401	514	518	514	517	511	517	517	516	518	514	516	513	509	510	515	517	459	502	499	499	493	495	500	495	505	501	509				
NPRI	BLK2	301	300	352	377	345	342	399	333	309	314	308	311	323	311	311	307	319	345	344	349	401	517	521	517	520	514	519	519	518	527	523	523	518	514	513	519	523	466	473	500	502	497	497	504	499	506	505	512				
PCGP	PGRG	260	260	263	261	270	264	260	268	261	270	258	264	269	261	263	258	267	259	255	251	261	260	262	262	264	258	261	262	262	271	266	264	263	259	258	263	263	254	261	257	257	254	255	259	256	261	261	264				
PGLA	GT11	218	219	224	178	39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
PGLA	GT12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	167	158	155	157	159	158	163	160	159	157	157	155	157	152	156	223	222	222	224	226	226	161	159	161
PGLA	ST10	227	226	227	198	91	91	100	100	100	100	100	101	101	101	100	101	101	101	101	101	100	100	100	86	89	91	91	89	91	92	92	92	91	91	90	89	90	90	89	91	110	114	114	114	116	116	91	91	91			
SGB3	GT31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
SGB3	GT32	115	115	118	122	122																																															

Daily MW Generation on Saturday

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	
CEND	HY01	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	HY02	9	9	9	9	9	9	9	9	9	8	9	9	9	9	9	9	9	9	9	8	8	9	9	9	
CEND	HY03	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	8	8	8	8	7	0	0	0	0	
CEND	HY04	7	8	7	7	7	8	7	7	7	7	7	8	8	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	-1	
HTRG	HY04	3	3	3	3	3	0	0	0	0	0	0	0	0	0	0	3	3	3	7	7	7	7	7	7	
KNRG	HY01	33	33	33	33	33	23	23	23	24	0	0	0	0	0	0	0	22	22	22	21	21	21	21	21	
KNRG	HY02	36	36	36	36	36	36	36	24	24	25	25	37	37	0	0	0	22	21	22	22	36	36	36	36	
KNRG	HY03	35	35	35	35	35	35	35	22	22	22	23	36	36	22	23	22	22	22	22	35	35	35	35	35	
LPIA	HY01	17	17	17	17	17	17	17	17	17	17	17	17	19	19	19	20	20	19	19	22	15	17	15	14	
LPIA	HY02	17	17	17	17	17	18	17	17	17	18	17	17	19	19	19	19	19	19	20	22	15	16	15	14	
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	
PGAU	HY03	20	20	20	20	21	20	20	20	20	20	20	21	20	21	21	21	22	21	22	22	21	21	21	21	
PGAU	HY04	20	20	20	21	20	20	20	20	20	21	21	20	20	21	21	21	21	21	22	21	21	21	21	21	
SIHY	HY01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	48	47	
SIHY	HY02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	50	50	
SIHY	HY03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	50	50	30	30	30	30	50	50	
SYPS	HY01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	25	17	17	17	17	17	17	
SYPS	HY04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	25	25	17	17	17	17	17	17	
TMGR	HY01	82	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	63	34	34	52	32	32	33	31	
TMGR	HY02	34	33	34	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	34	35	35	34	35	35	
TMGR	HY03	39	42	76	84	85	63	40	74	40	60	43	69	85	40	81	41	53	40	78	41	41	46	43	83	
TMGR	HY04	29	29	31	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	86	62	33	33	51	32	32	33	
UJLI	HY01	-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	HY02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	94	-1	-1	-1	-1	
UPIA	HY01	3	3	3	3	3	3	3	3	3	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	
UPIA	HY02	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5	6	6	7	7	7	7	7	7	
Total Hydro		453	373	408	351	352	328	293	327	292	288	246	276	292	294	335	191	225	191	187	191	191	191	236	205	230
PGLA	GT12	210	212	210	177	178	204	204	205	206	206	207	206	207	207	214	208	209	206	203	202	203	143	0	0	0
SGB3	GT31	123	125	125	125	122	122	121	121	110	110	109	109	109	109	35	124	112	109	122	121	121	53	0	0	0
SGB3	GT33	128	128	128	128	128	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Distillate		461	465	463	430	431	326	326	326	327	316	317	315	315	316	242	338	320	318	328	324	323	256	143	0	0
BDLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	6	10	13	17	20	22	24	25	25	
BKLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	6	11	15	21	25	28	31	31	32	
BSLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	7	12	17	22	25	29	31	32	32	
CHLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	8	14	21	26	27	37	27	31	36	
GELS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	8	13	17	21	17	24	29	30	25	
GNLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	9	17	23	0	0	0	0	49	49	
JELS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	6	9	13	19	24	26	30	30	30	
JSLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	12	18	24	30	31	31	16	47	
KDLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	5	11	21	35	48	60	72	80	87	
KKLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	9	15	22	26	32	35	39	34	43	
KMLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	6	9	11	15	21	23	29	29	
KRLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	7	12	17	22	26	24	30	30	30	
MCLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	22	28	23	43	43	46	48	51	
SPLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	10	17	22	35	38	44	41	48	
SSLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	9	12	19	27	32	35	40	42	44	

Daily MW Generation on Saturday

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		
STLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	4	8	17	18	10	10	23	29	29	29	26	26	29	24	6	19	4	15	10	3	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	7	12	24	24	30	28	30	30	24	30	30	22	30	28	30	30	30	30	29	21	13	2	0	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	3	9	59	146	255	349	408	465	519	547	604	632	625	644	603	561	499	439	364	324	333	191	153	55	19	6	0	0	0	0	0	0	0	0	0
PCUF	CUFG	25	24	24	26	23	24	25	26	25	24	24	24	24	24	24	26	26	24	22	22	22	20	21	21	21	20	21	22	23	21	23	20	20	22	22	21	23	23	22	23	23	22	23	22	22	23	22	24	
PCUF	CUFK	27	26	26	27	26	27	28	27	27	26	27	26	27	27	27	26	28	27	28	27	27	27	28	27	26	26	29	27	28	27	25	28	26	28	26	26	28	26	26	26	25	26	27	26	23	26	26	26	27
Total Co-Gen		52	50	50	53	49	51	53	53	52	50	51	50	51	51	51	52	54	51	50	49	49	47	49	48	47	48	50	49	51	48	48	48	46	50	48	47	51	49	48	48	49	49	45	48	49	48	51		
Total Gen		15733	15358	15088	14783	14533	14340	14031	13797	13652	13521	13410	13251	13313	13237	13228	12958	13076	13540	14128	14388	14808	15188	15411	15528	15374	15362	15288	15629	15877	16066	16092	16041	16124	16081	15942	15635	15456	15277	15535	16389	16736	16759	16664	16436	16179	15920	15935	15677	
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		
TIE-HVDC		31	31	32	29	31	29	29	31	29	31	29	29	29	31	31	29	31	29	29	29	31	31	30	30	31	31	31	29	31	29	31	31	30	32	29	29	29	32	29	29	29	32	31	29	29	29	29		
TIE-PLTG		36	63	-34	16	-2	19	-20	-61	16	10	43	-9	-4	24	-17	37	-17	-10	-6	-50	-48	13	-28	23	-41	43	14	-17	13	-22	53	8	101	57	83	27	-7	13	8	29	8	23	21	31	-1	-41	3	-35	
Interconnection		67	94	-2	45	30	48	9	-29	45	42	72	20	25	56	14	66	13	19	23	-21	-17	43	2	54	-11	73	45	14	44	7	84	37	132	88	113	59	23	42	37	60	38	53	50	63	30	-12	32	-6	
System Total		15666	15264	15090	14738	14503	14292	14022	13826	13607	13479	13338	13231	13288	13181	13214	12892	13063	13521	14105	14409	14825	15145	15409	15474	15385	15289	15243	15615	15833	16059	16008	16004	15992	15993	15829	15576	15433	15235	15498	16329	16698	16706	16614	16373	16149	15932	15903	15683	
SRev ST-Coal		98	168	193	279	325	295	294	519	526	578	558	737	634	621	631	756	757	630	499	396	296	322	264	287	282	265	261	251	253	267	224	245	216	212	224	234	256	241	276	290	306	313	287	256	274	260	253	122	
SRev ST-Oil		0	0	0	0	0	0	0	0	0	33	31	31	31	31	31	30	30	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	2	2	2	
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		
SRev CCGT-Gas		2446	2767	2665	2675	2847	2355	2602	2759	2842	2813	2850	2489	2435	2506	2528	2534	2455	2449	2297	2276	2003	1603	1586	1530	1769	1787	1864	1558	1367	1258	1223	1229	1231	1117	1232	1378	1604	1691	1476	622	430	437	628	770	1006	1276	1287	1672	
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	
SRev Distillate		56	52	54	87	86	48	48	48	47	58	57	59	59	58	132	36	54	56	46	50	51	118	88	0	0	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 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	
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	
Syncon		313	401	401	489	489	489	489	489	489	489	489	489	489	401	401	489	489	489	489	489	489	489	489	489	489	489	489	401	313	313	313	313	500	500	500	588	588	500	500	313	313	313	500	500	313	313	313		
Hydro		476	468	433	315	314	330	365	336	371	375	377	347	331	417	376	368	329	363	367	363	363	363	368	399	324	362	360	353	344	505	595	567	619	582	583	570	529	537	521	497	496	519	457	359	362	398	413	389	
S.Reserve Total		3389	3856	3746	3845	4061	3525	3806	4159	4283	4354	4370	4160	3987	4042	4107	4221	4127	4019	3698	3574	3202	2895	2795	2705	2864	2903	2974	2651	2365	2343	2355	2354	2379	2411	2539	2682	2977	3057	2773	1909	1545	1582	1685	1888	2145	2249	2268	2498	