

Availability at Daily Maximum Demand Hour

ST-Coal	0 MW
ST-Gas	0 MW
ST-Oil	0 MW
Hydro	2,153 MW
Distillate	0 MW
Total TNB	2,153 MW
Total IPP	18,802 MW
Total Co-Gen	0 MW
Total System	24,356 MW

Generation Mix

Type	MWh	Percentage
Hydro	21,710	5.83 %
Gas	44,769	12.02 %
Total TNB	66,479	17.85 %
ST-Coal	210,246	56.46 %
LSS	6,093	1.64 %
Gas	88,825	23.85 %
Total IPP	305,164	81.95 %
Co-Gen	467	0.13 %
Total Co-Gen	467	0.13 %
Total Generation	372,110	99.93 %
PLTG	1,358	0.36 %
HVDC	-1,605	-0.43 %
Interconnection	-247	-0.07 %
Net Energy	372,357	100.00 %

Maximum Demand Record

Date: 5/24/2022	19,183 MW
Date: 5/24/2022	398,523 MWH

Set On Bus, TNB, IPP And MD

Daily Maximum Demand Hour at:	16:30:00 Hour
Total Set On Bus	18,674 MW
TNB Generation	3,265 MW
IPP Generation	14,197 MW
Spinning Reserve	1,194 MW
Maximum Demand	17,481 MW
Net Energy	372,357 MWH
Load Factor	88.75 %

Fuel Cost

Total Cost:	122,056,001.17 RM
Cost per Unit	32.80 cents/kWH

Average Spinning Reserve During Peak Hour

Type	MW
GT	992
Hydro	425
Syncon	237
Thermal	103
Total	1,757

Time Weather Temperature

Afternoon	Hot	32
Morning	Sunny	28

Gas Usage

Station	(mmscfd)
GLGR	29
SRDG	1
TJGS	78
Total TNB	108
CBPS	36
EMPP	257
NPRI	69
PCGP	80
PGLA	83
PLPS	79
SKSP	2
SPGP	189
Total IPP	794
Total Gas	902

Alternate Fuel Usage

Station	(mmscfd)
Total	0

Total Gas Required 902

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	15205	14427	13934	13462	13073	13050	13238	13245	13663	15130	15953	16561	16529	16328	17003	17457	17474	17036	16151	16280	17152	17067	16538	15945

Prepared By: -Select Name-

Checked By: -Select Name-

Printed on: Tuesday, October 4, 2022 4:12:06 PM

 (Ir. Shanmugam Thoppalan)
 Head
 Grid System Operator

Daily MW Generation on Wednesday

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	706	708	706	701	706	705	709	705	707	707	703	708	704	707	707	703	705	704	681	555	555	556	507	504	504	681	705	708	705	707	708	705	707	706	705	705	707	705	706	705	703	707	704	654						
JMHE	U001	979	975	973	901	902	845	850	848	848	847	850	850	850	846	852	848	850	928	977	980	977	978	978	976	979	981	977	980	977	977	979	980	978	978	979	980	980	980	977	979	978	979	980	981	980					
JMHE	U002	983	979	975	902	903	847	847	852	851	852	850	848	852	850	850	851	853	849	904	982	978	979	981	979	980	981	980	978	978	976	978	977	979	976	979	982	982	977	979	981	978	976	975	979	983					
JMJG	U001	0	0	0	0	0	0	0	0	0	0	0	17	164	217	305	375	432	525	519	517	574	626	630	687	682	682	682	682	685	685	682	680	685	681	685	686	678	682	678	682	680	680	676	687	679	682	681	683		
JMJG	U002	658	662	662	659	660	662	660	658	662	659	660	651	656	661	660	666	662	666	668	670	670	666	671	671	671	671	672	666	673	669	671	676	665	672	671	669	667	669	671	666	669	667	672	668	667					
JMJG	U004	904	903	905	906	905	892	853	853	853	850	852	851	854	853	855	853	849	852	868	898	898	899	901	900	899	899	899	901	902	900	900	901	900	899	903	899	897	902	899	900	902	900	900	900	898	898	900			
JMJG	U005	975	977	977	897	899	854	850	848	851	851	850	848	852	849	846	850	845	849	850	848	850	848	848	850	847	848	856	847	850	852	846	849	848	838	838	840	843	840	843	840	841	842	843	843	844	845	848			
PKLG	U006	445	449	445	446	449	447	447	421	350	269	267	268	268	269	269	293	381	434	449	450	456	454	451	445	448	450	446	446	449	448	446	448	448	448	449	447	445	450	448	448	449	448	449	448	449	448	448			
TBIN	U001	700	697	698	698	699	697	695	697	697	699	701	694	694	696	691	697	697	698	697	698	695	698	696	697	700	698	696	700	698	696	700	698	696	699	692	699	699	696	697	700	701	698	700	698	700					
TBIN	U002	703	704	702	702	700	702	703	703	702	702	703	702	703	703	701	701	701	701	693	701	704	701	700	700	701	706	699	701	705	700	702	699	700	703	703	700	702	700	701	700	701	703	701	699	709	700	701			
TBIN	U003	697	697	698	697	698	697	697	699	697	698	698	697	697	698	701	697	699	694	695	698	699	695	697	698	697	697	696	698	698	697	696	699	702	700	698	699	699	699	696	698	701	699	697	697	698	697	676			
TBIN	U004	852	853	853	852	855	855	854	852	853	852	855	853	852	853	853	853	853	853	839	806	803	804	803	803	803	801	803	804	803	803	804	806	801	803	805	805	803	804	804	802	803	804	803	804	803	803	805	805	804	
Total ST-Coal		8602	8604	8594	8361	8376	8203	8165	8138	8068	7990	7985	7996	8143	8200	8286	8362	8442	8607	8763	8944	9008	9033	8908	8970	8953	8917	8920	8905	9091	9117	9113	9104	9124	9103	9109	9113	9100	9097	9107	9097	9105	9107	9100	9107	9094	9120	9104	9044		
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		
CBPS	BLK2	199	197	193	201	201	201	201	198	202	201	201	203	202	203	197	199	201	201	201	201	200	201	201	198	193	189	195	201	197	199	198	249	296	288	197	200	201	200	201	207	197	196	199	201	186	199	200	202		
EMPP	BLK1	410	408	403	418	420	413	425	408	443	455	476	431	452	516	409	415	497	450	472	424	505	614	614	594	591	575	587	683	705	706	696	690	705	704	695	700	490	502	616	716	689	686	691	708	672	595	546	467		
EMPP	BLK2	410	407	404	413	427	413	422	409	444	456	477	433	451	513	409	413	498	450	473	425	509	614	711	707	691	596	622	708	708	708	707	704	709	709	708	709	513	509	605	716	705	702	708	708	687	596	548	472		
EMPP	BLK3	410	408	404	446	439	436	450	409	454	479	501	458	473	546	409	414	505	490	518	466	558	680	693	692	677	656	661	709	703	703	698	688	704	704	693	704	558	555	657	717	689	682	691	706	672	647	596	511		
GLGR	GT02	92	91	91	91	92	91	91	92	92	91	92	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	91	92	92	91	92	92	106	106	92	92	91	91				
GLGR	ST1C	41	41	40	40	40	40	40	40	40	41	41	41	40	40	40	40	40	40	40	40	40	40	40	41	40	41	40	41	40	40	40	40	40	40	40	41	40	46	46	41	41	40	46	40	40	40				
NPRI	BLK2	458	305	299	311	310	309	309	302	310	310	308	310	309	311	304	307	310	311	310	309	310	364	523	520	511	508	512	524	518	521	520	518	523	518	519	522	523	521	524	531	518	515	520	523	503	519	519	524		
PCGP	PGRG	600	500	500	500	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	500	500	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600			
PGLA	GT11	135	136	136	136	134	134	134	134	135	134	134	134	134	134	134	134	134	134	134	135	134	134	134	134	134	134	134	134	133	133	134	134	134	134	134	134	134	133	134	133	134	134	134	135	134	134	134			
PGLA	GT12	137	138	138	138	137	137	137	137	137	137	137	136	137	137	137	137	137	138	137	136	137	138	137	137	137	137	137	136	137	137	137	137	137	137	136	137	137	136	136	136	137	137	137	137	137	137	137			
PGLA	ST10	178	178	179	179	179	179	178	179	179	179	179	178	179	179	179	178	179	179	179	179	180	180	180	180	180	180	180	180	180	180	180	180	180	180	179	180	179	179	179	179	179	179	180	180	179	179	179			
PLPS	GT11	112	112	113	115	103	65	65	65	65	65	66	65	66	65	66	65	66	65	65	66	65	66	64	66	65	65	63	65	136	132	132	134	135	131	115	115	115	115	144	138	136	137	140	135	142	114	115			
PLPS	GT12	116	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	68	145	137	135	139	139	137	118	119	120	120	148	142	142	141	143	140	146	120	119		
PLPS	GT13	108	108	110	111	111	63	63	63	63	63	64	64	63	63	63	63	63	63	63	64	63	63	64	63	64	63	63	63	63	131	129	127	130	131	129	111	112	112	111	139	135	133	134	136	131	137	111	111		
PLPS	ST18	194	172	133	132	133	91	91	90	91	91	89	90	90	90	89	91	90	90	90	91	90	91	91	91	91	91	91	92	91	92	110	203	208	207	207	208	207	196	197	197	197	213	209	210	209	211	210	210	199	197
SKSP	BLK1	219	148	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
SPGP	BLK1	715	710	706	629	629	628																																												

Daily MW Generation on Wednesday

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																												
KNRG	HY02	23	23	23	23	23	23	23	23	24	24	24	23	23	23	23	23	38	38	38	38	38	38	38	24	24	24																										
KNRG	HY03	22	22	22	22	22	22	22	22	22	23	23	22	22	22	22	22	36	36	36	36	36	36	36	22	22	23																										
KNYR	HY01	100	100	100	100	100	100	100	100	100	100	100	100	100	100	101	101	100	100	100	100	100	100	100	100	100	100																										
KNYR	HY02	104	104	103	104	104	103	104	103	104	104	104	103	103	103	103	104	103	103	103	103	103	103	104	103	104	104																										
KNYR	HY03	101	101	101	101	101	101	100	100	100	101	101	101	101	101	101	101	101	101	101	101	100	100	99	100	101	101																										
KNYR	HY04	97	97	97	98	98	98	98	98	98	98	98	98	98	98	98	98	99	99	99	99	99	99	99	61	61	62																										
LPIA	HY01	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17																										
LPIA	HY02	16	16	16	16	16	16	16	16	16	16	16	16	17	17	17	18	16	16	16	16	16	16	14	14	15	15																										
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																										
PGAU	HY01	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	21	22	21	21																										
PGAU	HY02	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	0	0	0	0																										
SIHY	HY01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51	51	51	51	30	30	30	30	31	31																										
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	30	30	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	15																										
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	0																										
SYPS	HY03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	25	25	25	17	17	25	25	17	0																										
SYPS	HY04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	25	25	25	17	17	25	25	17	0																										
TMGR	HY01	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	82	82	81	81	81	81	81	81	29	34																										
TMGR	HY02	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	87	87	87	87	36	36	36	36	36	36	36																										
TMGR	HY03	44	42	39	42	47	41	56	42	63	47	62	72	59	48	41	45	42	40	39	41	41	43	40	40	40	43																										
TMGR	HY04	33	32	31	33	33	33	33	-1	-1	-1	-1	-1	-1	-1	-1	-1	33	33	30	-1	-1	33	82	81	81	81																										
UJLI	HY02	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	90	90	89	92	88	64	-1	-1	-1																										
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																										
UPIA	HY02	4	4	4	4	5	5	5	5	5	5	4	4	4	4	5	5	5	5	5	5	5	4	4	4	4	4																										
Total Hydro		846	808	804	810	816	809	824	808	734	719	738	746	704	692	682	686	693	801	796	874	857	766	841	840	784	673	681	842	968	1056	1155	1183	1187	1244	974	911	910	907	926	1379	1371	1359	1327	1263	1071	897	796	760				
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	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	0	2	8	12	15	19	22	24	24	24	18	30	23	26	19	17	23	13	10	5	4	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0			
BKLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	6	16	19	20	18	11	10	18	23	22	25	22	13	17	13	11	27	19	13	10	5	2	0	0	0	0	0	0	0	0	0	0	0	0			
BSLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	6	3	10	22	26	28	29	32	28	32	32	26	29	29	28	25	25	9	8	12	6	0	0	0	0	0	0	0	0	0	0	0	0	0			
CHLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4	6	26	21	26	35	39	37	31	34	41	31	31	29	39	43	25	28	18	7	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0		
GBLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	12	15	23	32	38	41	34	27	42	33	27	16	26	37	12	7	7	9	5	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0		
GELS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	4	7	9	11	13	17	15	18	17	13	11	10	8	11	7	7	8	5	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
GNLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	2	5	15	28	36	40	2	31	50	50	50	45	47	25	25	35	24	19	13	5	2	0	0	0	0	0	0	0	0	0	0	0	0	0		
JELS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	11	5	24	27	30	30	2	27	30	30	28	28	15	17	16	14	18	15	7	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0		
JSLs	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	7	23	25	18	29	22	35	32	35	37	32	24	22	21	23	22	23	12	7	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
KDLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	27	13	50	64	67	72	82	43	91	73	74	86	86	88	63	74	61	51	17	31	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
KKLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	13	10	21	25	30	28	33	40	42	42	38	25	28	23	33	20	25	8	10	14	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
KMLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	8	15	20	25	25	27	12	29	29	29	28	25	29	23	22	25	25	6	13	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
KNLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	13	36	52	73	54	51	94	98	100	96	100	100	70	100	90	49	72	62	26	6	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KRLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	10	15	25	19	15	24	30	30	25	30	30	29	30	17	17	25	26	10	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
MCLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	6	8	11	32	29	40	21	32	47	44	31	18	14	12	11	14	14	18	16	10	12	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MNLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	24	36	47	88	90	97	61	80	73	91	57	41	27	1	19	24	25	35	33	20	29	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PKLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	30	25	62	80	61	103	108	112	111	58	48	33	27	27	27	55	11	27	6	12	12	1	1	0	0	0	0	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	1	3	6	14	33	27	47	52	42	41	49	37	51	46	34	33	30	35	26	36	17	4	1	0	0	0	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	1	3	6	8	28	30	34	37	41	37	35	42	30	43	35	37	41	28	22	21	12	11	1	0	0	0	0	0	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	1	2	7	13	17	19	25	18	23	18	13	12	16	13	12	13	12	9	19	14	11	12	8	4	2	0	0	0	0	0	0	0	0	0	0	0	0	0

Daily MW Generation on Wednesday

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 LSS		0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	117	249	335	608	687	766	817	840	789	924	821	749	686	589	650	582	513	508	437	225	196	77	13	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0