

Availability at Daily Maximum Demand Hour

ST-Coal	0 MW
ST-Gas	0 MW
ST-Oil	0 MW
Hydro	2,522 MW
Distillate	0 MW
Total TNB	2,522 MW
Total IPP	15,783 MW
Total Co-Gen	0 MW
Total System	21,128 MW

Generation Mix

Type	MWh	Percentage
Hydro	22,405	6.20 %
Gas	38,995	10.79 %
Total TNB	61,400	16.98 %
ST-Coal	200,209	55.37 %
LSS	3,158	0.87 %
Gas	97,829	27.06 %
Total IPP	301,196	83.30 %
Co-Gen	174	0.05 %
Total Co-Gen	174	0.05 %
Total Generation	362,770	100.33 %
PLTG	487	0.13 %
HVDC	723	0.20 %
Interconnection	1,210	0.33 %
Net Energy	361,560	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	18,087 MW
TNB Generation	3,645 MW
IPP Generation	13,409 MW
Spinning Reserve	1,025 MW
Maximum Demand	17,030 MW
Net Energy	361,560 MWH
Load Factor	88.46 %

Fuel Cost

Total Cost:	43,982,393.14 RM
Cost per Unit	12.12 cents/kWH

Average Spinning Reserve During Peak Hour

Type	MW
GT	178
Hydro	585
Syncon	310
Thermal	136
Total	1,209

Time	Weather	Temperature
Afternoon	Hot	33
Morning	Sunny	28

Gas Usage

Station	(mmscfd)
GLGR	53
SRDG	18
TJGS	209
Total TNB	280
CBPS	54
NPRI	157
PGLA	111
PLPS	104
SGB3	90
SKSP	0
YPKA	69
Total IPP	586
Total Gas	866
Total Gas Required	866

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	14524	13854	13409	13000	12767	12457	12705	12820	13238	14987	15702	16376	16283	16111	16559	16909	17030	16702	15742	15734	16559	16360	15832	15457

Prepared By: -Select Name-

Checked By: -Select Name-

Printed on: Tuesday, January 5, 2021 10:24:25 AM Head
Grid System Operator
(Ir. Shanmugam Thoppalan)

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	693	693	691	698	693	693	692	693	694	694	693	693	693	693	692	692	694	694	693	693	694	692	691	694	691	694	691	694	691	693	694	692	694	693	690	694												
JMAH	U002	695	699	694	691	695	693	694	694	700	694	695	696	697	694	695	693	697	694	698	693	696	693	689	693	694	695	693	680	704	693	694	692	696	695	694	694	694	695	685	689	695	693	694	695				
JMHE	U001	976	977	982	974	796	801	802	798	799	800	801	801	800	798	800	801	803	903	953	976	977	980	981	975	982	981	981	977	981	978	982	983	977	982	979	982	978	977	979	979	982	976	979	980	980	978	976	
JMJG	U002	671	672	672	672	673	672	671	673	673	673	675	673	672	674	673	673	675	671	675	672	673	672	672	672	671	673	679	671	677	671	672	674	666	682	668	673	672	672	617	620	542	548	551	548	546	551	549	548
JMJG	U004	955	900	839	809	808	808	809	807	806	807	810	810	807	808	809	805	810	830	887	947	977	977	977	980	978	978	977	979	977	977	977	977	979	979	978	977	979	979	980	977	977	981	981	980	977	976	977	978
PKLG	U003	280	280	282	282	283	282	283	283	280	282	282	284	282	281	283	283	282	281	280	281	280	279	282	279	278	279	278	274	278	278	278	277	277	277	278	279	278	278	279	277	277	273	274	276	275	278	278	
PKLG	U004	280	280	281	278	280	279	279	279	278	278	280	277	277	279	277	277	278	283	286	281	279	279	280	280	281	280	281	279	280	282	280	281	281	281	279	282	280	280	280	279	277	272	275	171	194	187	196	
PKLG	U005	466	468	467	467	467	466	467	468	466	465	467	467	467	466	468	468	468	470	469	466	467	468	470	468	466	466	467	466	465	469	467	467	468	468	468	468	468	468	468	468	469	480	468	467	468	468	466	467
PKLG	U006	451	445	445	444	447	449	448	451	451	448	448	449	448	449	448	449	448	449	449	449	448	448	447	448	449	449	447	447	449	448	447	447	449	449	446	449	451	451	449	447	447	449	451	449	446	448		
TBIN	U001	692	693	689	694	685	690	691	688	694	691	687	697	693	690	691	693	689	690	693	693	689	689	690	690	689	691	690	688	689	693	692	691	692	690	691	690	691	635	683	688	691	684	694	687	689	690	684	
TBIN	U002	690	696	698	691	693	692	697	697	693	692	695	694	692	694	694	695	694	692	692	693	693	694	692	694	693	692	695	691	696	691	694	693	690	694	693	694	693	690	694	692	692	694	693	693	691	694	692	692
TBIN	U003	686	688	689	689	687	689	688	689	690	688	688	688	690	694	690	690	686	687	688	689	692	690	691	687	686	689	689	690	687	689	689	689	688	690	689	688	687	691	690	687	687	688	693	689	689	688	690	681
TBIN	U004	982	915	827	805	802	802	804	803	802	803	803	803	803	803	802	803	804	841	929	982	982	983	982	984	983	982	983	982	983	983	982	983	982	982	983	983	984	985	982	984	982	982	980	983	983	982	984	982
Total ST-Coal		8517	8406	8256	8194	8009	8016	8025	8023	8026	8015	8024	8032	8021	8024	8024	8024	8026	8183	8393	8515	8545	8547	8547	8546	8541	8541	8550	8539	8540	8540	8552	8537	8549	8555	8546	8543	8549	8550	8437	8488	8406	8435	8397	8412	8308	8332	8321	8319
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		
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		
CBPS	BLK2	365	362	364	364	364	355	362	360	362	303	306	303	305	320	356	365	360	359	362	362	362	362	362	363	361	364	362	362	362	362	362	365	365	356	362	362	365	362	357	360	362	361	359	359	362	365		
GLGR	GT01	100	101	101	87	68	67	67	69	68	68	68	69	67	67	68	69	86	84	85	85	86	86	83	84	84	85	105	103	103	103	103	104	104	103	103	104	105	104	105	103	104	104	103	104	105	103	104	
GLGR	GT02	101	101	101	87	67	68	68	68	68	68	68	68	68	68	68	68	67	84	85	85	85	87	85	85	84	85	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	104	103	
GLGR	ST1C	91	91	91	87	72	72	72	72	72	72	72	72	72	72	72	72	83	83	83	83	83	83	82	83	83	93	93	93	93	93	93	93	93	93	93	93	94	93	93	93	93	93	93	93	93	93		
NPRI	BLK1	514	516	523	515	515	511	515	517	517	515	513	515	514	508	509	514	516	515	514	515	515	515	519	515	514	509	515	515	512	515	517	516	517	516	517	516	517	511	514	515	515	515	515	515	515	517		
NPRI	BLK2	517	517	525	517	518	514	517	519	518	517	516	517	517	510	509	516	518	518	518	517	518	518	521	518	517	517	517	515	514	517	519	518	515	511	519	518	518	521	513	514	517	516	517	518	516	520		
PCGP	PGRG	602	601	616	604	606	596	602	602	602	602	603	603	593	593	603	602	603	602	604	604	608	603	602	598	602	601	603	600	599	604	612	607	600	596	605	607	602	607	596	598	600	600	600	603	603	606		
PGLA	GT11	219	219	222	219	220	216	189	171	171	171	168	171	169	167	167	170	187	219	219	219	219	219	219	217	217	217	217	218	218	217	214	217	219	217	215	215	217	217	218	219	217	216	218	218	217	218	218	219
PGLA	GT12	222	222	225	222	222	222	193	174	174	174	173	174	171	172	173	191	222	222	222	222	222	222	221	221	222	221	221	221	218	220	220	222	220	219	219	220	221	221	222	221	221	222	222	222	221	222		
PGLA	ST10	239	241	243	240	240	240	217	206	206	207	207	207	208	206	206	206	218	242	242	241	243	242	241	241	241	242	242	244	244	244	244	246	246	247	247	244	244	244	246	243	241	242	242	241	241	242	242	244
PLPS	GT11	145	145	149	149	150	149	115	115	115	115	114	115	115	112	114	112	145	149	148	147	146	146	145	145	143	143	144	142	143	142	142	143	143	141	144	145	146	146	147	144	147	147	148	148	147	148		
PLPS	GT12	119	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73	151	149	150	149	149	149	149	149	149	148	148	148	148	147	148	149	147	150	150	151	151	152	147	152	152	153	153	152	153			
PLPS	GT13	127	127	147	148	148	148	113	112	112	112	112	112	112	110	112	112	134	148	147	147	146	145	145	144	145	143	143	144	143	144	143	144	144	144	145	146	148	145	145	145	145	145	145	145	148			
PLPS	ST18	206	141	146	146	145	146	132	132	133	132	132	132	132	132	132	132	133	133	145	216	215	215	214	214	213	215	215	215	214	214	213	214	214	214	215	214	216	214	215	215	215	215	216	215	215	216	215	
SGB3	GT31	136	134	138	110	112	110	109	111	111	111	112	110	110	110	108	113	115	117	116	116	142	141	144	144	144	144	141	139	139	139	139	139	139	139	139	138	140	141	141	141	140	140	141	140	140	137		
SGB3	GT32	112	102</																																														

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				
SRDG	GT04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	123	122	122	125	126	126	0	0	0	0	126	126	128	128	41	0	0	0			
SRDG	GT05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	123	123	125	123	125	126	112	0	0	0	127	127	127	127	127	0	0	0	0			
Total 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	90	198	246	247	245	250	252	238	0	0	0	127	253	253	255	255	41	0	0	0				
BSIA	HY01	21	21	21	21	21	21	12	12	12	12	12	12	12	12	12	12	11	12	12	12	12	12	12	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	7	0				
BSIA	HY02	23	24	23	23	23	23	12	12	12	12	12	12	12	11	12	12	12	12	12	12	12	12	11	12	11	12	12	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23			
BSIA	HY03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	23	23	24	23	24	23	23	23	23	24	24	24	23	24	24	23	23	23	23	24	23	23	23	24	24				
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	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9					
CEND	HY02	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	9	8	8	8	8	8	9	8	8	8	8	9	8	8	8	8	8	8	8	8	8	8	9	9	8	8	8	8	9			
CEND	HY03	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	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						
HTRG	HY01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	125	125	125	125	63	63	0	0		
HTRG	HY02	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	70	63	63	63	63	63	63	63	63	63	63	63	63	63	63	63	-1	124	125	125	125	125	125	125	124	63	63			
KNRG	HY01	34	34	34	34	34	34	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	21	21	21	21	21	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34		
KNRG	HY02	35	35	35	35	35	35	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	35	36	35	36	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35			
KNRG	HY03	34	34	34	34	34	34	34	35	35	35	35	35	35	35	35	35	35	35	35	35	35	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34			
KNYR	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	-1	-1	-1	-1	-1	100	100	60	63	61	58	-1	-1	-1	101	99	99	100	99	99	100	61	85	61	73	60	-1
KNYR	HY02	60	68	100	88	99	60	62	76	60	60	60	60	60	83	59	59	59	63	74	62	76	93	102	76	60	59	96	88	69	65	61	61	76	101	78	62	60	63	96	76	98	60	60	100	100	100	101	101	101		
KNYR	HY03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	99	98	60	59	60	101	100	100	100	100	55	53	56	56	56	102	99	100	100	100	100	100	101	101	101	101		
KNYR	HY04	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	63	63	101	101	99	-1	-1	102	102	102	102	102	102	103	62	-1	-1	-1	-1	103	101	101	61	60	60	62	61	62			
LPIA	HY01	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22				
LPIA	HY02	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22				
MNOR	HY01	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4	4	4	7	7	7	7	7	7	7	7	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	3				
PGAU	HY01	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	21	-1	-1	-1	-1	-1	-1	-1	-1	21	21	22	22	22	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	80	111	81	21	21	21	-1	-1	-1		
PGAU	HY02	-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	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1					
PGAU	HY03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0	0	0	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	51	51	51	51	51	49	49	48	51	30	30	30	49	49	48	31	31	31	31	31	31	31	31	31	31	31	31	31	0		
SIHY	HY02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	30	50	50	50	0	0	0	30	50	50	50	30	30	30	0	0	0	0	30	30	30	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	30	30	50	50	50	0	0	0	30	50	50	50	30	30	30	0	0	0	0	30	30	30	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	17	17	25	25	25	0	0	17	17	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	17	17	17	17	0	
SYPS	HY02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	17	25	25	25	25	17	17	17	25	25	25	25	25	25	25	25	25	25	25	25	25	25	17	17	17	17	0		
SYPS	HY03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	25	17	25	0	0	14	17	25	25	25	25	25	25	0	0	0	0	17	17	17	17	0	0	0	0	0			
SYPS	HY04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	17	25	25	25	17	17	17	25	25	25	25	25	0	0	0	0	17	17	17	17	0	0	0	0	0				
TMGR	HY01	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	84	-1	86	86	86	86	86	86	86	86	31			
TMGR	HY02	44	51	80	74	81	44	63	44	44	44	45	67	44	43	44	49	60	44	63	77	88	62	44	46	82	77	56	51	48	46	58	86	61	44	44	44	44	44	80	60	83	44	43	76	44	54	44	86			
TMGR	HY03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60	60			
TMGR	HY04	42	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	83	83																													

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																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
GBLS	LSS1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	9	16	16	34	35	38	41	34	41	35	38	48	16	28	14	21	31	28	6	9	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	