

Availability at Daily Maximum Demand Hour

ST-Coal	0 MW
ST-Gas	0 MW
ST-Oil	0 MW
Hydro	2,327 MW
Distillate	0 MW
Total TNB	2,327 MW
Total IPP	16,004 MW
Total Co-Gen	0 MW
Total System	21,273 MW

Generation Mix

Type	MWh	Percentage
Hydro	7,179	1.95 %
Gas	46,403	12.62 %
Total TNB	53,582	14.58 %
ST-Coal	198,695	54.06 %
LSS	1,300	0.35 %
Gas	111,821	30.42 %
Total IPP	311,816	84.83 %
Co-Gen	1,479	0.40 %
Total Co-Gen	1,479	0.40 %
Total Generation	366,877	99.81 %
PLTG	-6	0.00 %
HVDC	-692	-0.19 %
Interconnection	-698	-0.19 %
Net Energy	367,575	100.00 %

Maximum Demand Record

Date: 8/15/2018	18,338 MW
Date: 8/15/2018	388,524 MWH

Set On Bus, TNB, IPP And MD

Daily Maximum Demand Hour at:	16:00:00 Hour
Total Set On Bus	19,126 MW
TNB Generation	3,069 MW
IPP Generation	14,313 MW
Spinning Reserve	1,667 MW
Maximum Demand	17,485 MW
Net Energy	367,575 MWH
Load Factor	87.59 %

Fuel Cost

Total Cost:	75,882,518.09 RM
Cost per Unit	21.09 cents/kWH

Average Spinning Reserve During Peak Hour

Type	MW
GT	558
Hydro	327
Syncon	988
Thermal	148
Total	2,021

Time	Weather	Temperature
Afternoon	Hot	32
Morning	Sunny	28

Gas Usage

Station	(mmscfd)
GLGR	49
PAKA	49
PGPS	37
SRDG	9
TJGS	203
Total TNB	347
CBPS	52
KLPP	94
MPSS	45
NPRI	143
PGLA	109
PLPS	88
PTEK	9
SGRI	77
SKSP	35
YPKA	75
Total IPP	727
Total Gas	1,074
Total Gas Required	1,074

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	14631	13968	13532	13172	12846	12686	13042	13036	13510	15237	16082	16713	16707	16290	17044	17357	17485	17187	15895	15611	16587	16563	16054	15804

Prepared By: -Select Name-

Checked By: -Select Name-

Printed on: Friday, March 01, 2019 9:59:43 AM

(Ir. Shanmugam Thoppalan)
Pengurus Besar Kanan
Jabatan Sistem Operasi

Daily MW Generation on Wednesday

		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	U002		697	693	694	695	693	697	694	694	695	694	692	695	694	695	693	692	696	694	695	693	693	696	694	695	693	694	694	695	693	694	694	695	694	694	695	694	694	693	694	694	695	694							
JMJG	U001		669	670	671	669	674	669	666	678	665	675	667	676	667	678	671	668	674	667	674	662	673	669	676	671	682	668	668	672	671	671	667	678	668	669	670	673	675	671	677	669	670	645							
JMJG	U002		679	677	678	676	677	675	677	677	678	675	681	679	672	689	672	681	681	673	673	678	679	684	676	678	672	674	675	673	683	679	674	682	679	676	682	678	670	677	665	666	667	673	667	672	667	669	667	671	
JMJG	U003		672	673	671	673	673	680	673	671	672	673	672	671	674	671	674	670	666	684	669	671	669	666	671	670	662	669	668	671	662	667	663	670	668	667	676	669	667	668	668	665	659	672	665	667	666	668	670	668	
JMJG	U004		977	977	971	886	798	783	782	782	783	785	782	783	785	783	823	909	979	979	979	979	979	979	979	979	982	981	983	983	979	982	981	978	980	978	980	977	983	982	981	978	980	979	981	977	982	981			
JMJG	U005		801	801	800	803	800	800	798	798	801	803	798	799	798	801	798	801	798	799	800	799	798	850	848	901	979	979	973	976	974	977	973	977	973	972	969	974	978	972	972	975	974	974	939	958	971	977	991	975	
PKLG	U003		279	286	283	286	281	282	283	283	284	285	282	283	284	281	283	282	283	280	283	281	281	282	279	279	278	280	281	279	282	283	283	282	283	282	281	282	281	284	284	282	283	279	278	280	283	282	283	284	
PKLG	U004		282	281	282	282	280	279	280	279	278	278	281	282	284	281	280	280	284	283	279	280	280	280	279	279	281	279	278	278	279	288	281	279	280	278	278	281	280	281	280	282	279	281	278	276	279	277	278	279	
PKLG	U005		440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	440	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
TBIN	U001		688	690	689	690	690	691	690	691	690	689	687	690	690	689	688	688	688	687	687	690	689	689	686	687	683	690	681	688	689	689	690	681	688	689	690	689	689	690	689	689	689	689	689	685	683	689			
TBIN	U002		689	692	693	689	689	691	691	690	690	692	690	693	695	693	690	689	690	691	689	691	692	692	690	692	687	691	693	689	690	690	691	689	690	691	689	691	691	691	690	690	692	692	691	690	690	687	689	691	690
TBIN	U003		693	688	690	691	693	687	691	689	689	691	691	693	693	693	691	691	692	691	692	689	693	692	693	687	690	692	690	690	690	691	692	690	689	694	690	692	691	689	692	691	689	689	691	689	688	690	689		
TBIN	U004		952	952	941	856	802	801	802	803	803	805	802	803	802	802	802	803	802	844	932	952	951	952	950	951	950	951	952	953	955	952	955	953	952	951	952	952	953	951	953	952	951	951	951	954	952	953	953	954	
Total ST-Coal			8518	8520	8503	8336	8190	8175	8167	8178	8170	8180	8166	8185	8179	8196	8172	8174	8174	8255	8425	8503	8517	8565	8566	8616	8243	8236	8241	8245	8244	8262	8237	8267	8249	8245	8252	8250	8244	8251	8239	8239	8229	8241	8196	8221	8235	8229	8253	8219	
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		
CBPS	BLK2		361	364	362	365	361	345	217	202	215	217	214	221	223	218	362	362	369	364	353	354	357	355	355	355	346	354	356	357	358	357	355	356	357	355	356	357	360	354	354	357	353	355	355	357	355	354	354	362	355
GLGR	GT01		104	68	68	70	69	69	69	67	69	69	67	69	69	68	67	70	69	69	68	68	101	101	102	100	70	86	87	97	97	97	101	101	100	101	89	68	69	69	69	69	69	68	69	70	69	69	68		
GLGR	GT02		104	68	68	69	68	69	69	68	69	68	69	68	69	69	68	68	68	69	69	68	68	102	103	100	101	70	87	85	97	98	97	101	101	101	100	89	68	69	69	69	69	69	69	69	69	69	69	68	
GLGR	ST1C		92	77	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	70	88	89	90	89	77	79	81	87	87	87	87	89	89	89	92	87	71	70	70	70	70	70	70	69	70	70	70	70	
KLPP	GT13		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	91	141	115	134	130	142	143	113	147	147	148	148	148	145	147	145	145	146	143	114	118	129	140	148	147	147	147	137	143	144	136	
KLPP	GT14		153	128	117	79	75	76	77	73	76	75	76	77	79	76	75	77	81	121	141	125	142	140	149	149	126	154	153	153	153	152	153	153	151	153	151	152	151	124	127	139	154	154	154	155	147	154	154	145	
KLPP	GT15		143	132	115	70	70	73	68	72	73	73	73	73	73	73	71	72	102	136	120	139	135	145	145	123	147	149	149	150	150	150	148	153	152	149	121	125	134	148	154	152	152	153	144	147	149	141			
KLPP	ST17		130	126	117	84	81	81	81	81	81	81	81	81	79	84	81	84	87	174	195	187	195	195	199	199	191	199	201	201	200	200	200	199	207	206	195	183	187	191	199	200	207	207	194	199	199	193			
MPSS	GT01		95	97	95	97	96	96	95	95	97	98	97	98	100	99	98	97	99	97	96	98	98	90	104	103	101	101	101	103	103	103	102	101	101	101	101	83	68	69	90	106	104	104	103	103	99	100	98		
MPSS	GT02		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	51	85	99	101	101	100	99	102	99	100	100	101	101	101	99	82	69	70	90	105	104	104	104	6	0	0	0	
MPSS	ST01		42	40	42	41	40	42	40	41	42	42	43	43	43	42	42	41	44	44	42	44	47	41	107	108	107	108	108	109	108	108	108	108	108	109	108	108	94	67	67	78	106	107	107	107	43	47	46	45	
NPRI	BLK1		426	339	330	399	413	381	331	309	322	331	322	331	432	436	330	323	499	493	481	491	503	497	506	505	493	502	499	504	504	502	504	503	503	501	496	503	503	503	505	503	499	503	505	508	505				
NPRI	BLK2		425	331	329	398	415	383	332	312	317	326	317	330	431	437	329	320	485	478	512	523	506	497	506	509	494	504	501	505	511	508	507	506	507	505	503	499	505	506	506	506	506	506	506	506	506	511	507		
PAKA	GT4A		85	85	85	84	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	85	95	95	95	94	94	94	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95	85			
PAKA	GT4B		75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	83	83	83	82	82	82	82	82	82	82	82	82	82	75	75	75	83	83	83	84	84	85	75	75	
PAKA	ST4C		80	80	79	79	79	79	78	78	78	78	78	78	78	78	78	78	78	78	78	78	79	79	79	79	80	89	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	90	86	80		
PCGP	PGRG		599																																																

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																										
SKSP	BLK1	218	155	0	0	0	0	0	0	0	0	0	0	0	0	13	318	233	315	303	320	336	219	236	249	285	336	335	278	324	337	332	308	270	219	216	227	337	338	329	337	219	253	338	336	276					
TJGS	GT1A	216	219	210	223	140	148	150	132	147	148	142	149	147	146	148	147	147	220	159	223	223	223	217	215	219	222	220	223	221	220	221	232	233	230	234	233	223	227	226	226	227	226	228	228	228	229				
TJGS	GT1B	206	208	199	209	131	138	138	125	135	140	135	138	138	137	134	134	139	203	147	211	208	212	207	207	204	209	207	208	207	205	208	207	212	220	220	220	212	210	210	210	213	213	212	213	213	212				
TJGS	ST1C	233	236	223	239	199	184	184	180	180	184	184	184	184	184	184	184	184	236	196	239	239	239	242	242	242	242	242	242	242	242	242	256	256	256	256	246	246	246	246	246	246	242	242	246	246					
TJGS	GT2A	225	225	225	121	222	222	222	222	195	145	145	145	145	145	145	145	145	207	207	207	207	206	206	206	207	207	207	207	214	213	213	222	220	220	220	220	212	212	212	212	212	212	212	212	212	214				
TJGS	GT2B	0	41	41	118	222	219	219	219	192	143	143	143	143	145	145	145	148	205	205	205	205	205	205	205	205	205	205	212	211	212	222	219	219	216	219	211	211	209	209	209	209	209	211	211	211	211				
TJGS	ST2C	127	126	115	182	264	264	264	264	258	211	211	211	211	211	211	211	253	253	255	255	255	255	255	255	255	255	255	258	258	258	261	264	266	266	266	266	260	260	260	260	260	260	260	260	260					
YPKA	GT11	124	65	65	65	65	65	65	65	64	65	65	65	65	65	65	64	65	64	65	67	129	128	130	131	127	129	128	130	129	130	130	129	130	129	128	129	67	67	127	128	127	127	125	126	127	128	126			
YPKA	GT12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23	101	71	131	130	132	131	129	128	128	128	128	127	126	126	126	126	127	127	128	67	66	128	128	128	128	128	128	129	122				
YPKA	ST10	55	35	34	34	34	34	34	34	35	34	34	34	34	34	34	34	33	89	85	123	123	124	126	124	125	125	126	126	126	126	126	127	126	126	126	125	84	82	122	123	123	123	122	122	122	122	76			
YPKA	GT21	124	124	119	65	65	65	65	65	65	65	65	65	65	65	65	65	65	127	67	66	67	125	125	125	124	125	125	125	125	125	125	126	125	125	125	125	125	67	67	125	125	125	125	125	125	125	126	125		
YPKA	ST20	59	59	59	36	36	36	36	36	36	36	36	36	36	35	35	35	35	58	39	38	38	59	59	59	59	60	59	60	60	60	60	60	60	59	60	60	61	40	40	60	61	60	61	60	60	60	60	60		
Total CCGT-Gas		5822	5418	5171	5094	5053	4976	4713	4560	4405	4327	4257	4328	4533	4721	4628	4609	5026	6027	6416	6790	7173	7475	7715	7732	7371	7508	7584	7695	7890	7855	7801	7889	7946	7967	7911	7764	7340	6968	7055	7668	7835	7818	7858	7642	7500	7470	7228	6936		
PTEK	GT1A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	108	107	105	107	107	108	108	0	0	0	0	0	0	0	0	0	0	0	0	
PTEK	GT2B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	98	100	99	93	99	99	80	97	0	0	0	0	0	0	0	0	0	0	0	
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	0	121	125	125	125	126	126	125	0	0	0	0	0	0	0	0	0	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	0	0	0	121	122	123	124	125	0	0	0	0	0	0	0	0	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	0	0	0	219	333	452	445	455	456	438	205	0	0	0	0	0	0	0	0	0	0	0	
BSIA	HY02	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11		
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	9	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	9	9		
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	-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	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	-1	-1		
KNRG	HY03	24	24	24	24	24	24	24	23	23	24	23	24	24	24	23	23	24	38	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	23	22	
KNYR	HY03	-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	100	57	59	59	59	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
KNYR	HY04	59	60	60	59	60	60	58	55	55	60	59	59	59	59	60	60	59	58	60	55	56	59	59	59	60	56	56	60	59	62	101	59	61	61	61	60	59	59	60	60	63	62	61	59	59	61	61	61	61	
LPIA	HY01	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	11	10	11	10	11	10	12	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	9	9	10	10	10	10	10	10	10	11		
LPIA	HY02	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11		
MNOR	HY01	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	1	1	1	1	1	1	3	2	2	5	5	5	5	5	5	5	5	5	5	1	1	1	1	5	5	4	4	4	4	0	0
PGAU	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	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
PGAU	HY02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	20	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	-1	
PGAU	HY04	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	22		
SIHY	HY01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	HY02	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	HY03	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 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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0