

DAILY OPERATION REVIEW



BAHAGIAN PENGHANTARAN

Prepared By	Hamizah Farhah bt Muhammad Anuar
Date & Time of reporting	18-Aug-17 7:02
Date & Day of operation	17-Aug-17 Thursday

Demand	Time	Forecast	Actual	Difference	SR	TOTAL PRODUCTION KERTIH, JDA & RGT	
						Yesterday	Today
	0400	12,378	12,396	0.15%	3458	1580	1870
	1100	16,199	16,124	-0.47%	1181	45.9	43.8
	1600	16,477	16,480	0.02%	1284	38.4	31.2
	2000	16,038	16,020	-0.11%	1104	38.3	33.5
Energy		352.6	348.2	-1.26%			
						Planned (0000-2359)	1042
						NORMS (0000-2359)	967
						NORMS (0600-0559)	968
						Petronas (0600-0559)	935

Hydro	Lake level		
	Yesterday	Today	Difference
KNYR(m)	141.12	141.07	-0.05
TMGR	240.77	240.65	-0.12
PGAU	630.23	629.52	-0.71
JOR(ft)	3495.70	3496.50	0.80
HTRG(m)	288.7	288.6	-0.10

Hydro	Planned	Actual	Difference
Cumulative (Daily)			
KNYR	7,200	8,916	1,716
TMGR	3,300	6,744	3,444
PGAU	0,600	3,897	3,297
HTRG	0,400	2,323	1,923
Cumulative (Weekly)			
			20%
KNYR	27,600	28,364	2,77%
TMGR	11,600	17,591	51.65%
Cumulative (Monthly)			
			10%
KNYR	147,200	130,614	-11.27%
TMGR	47,200	65,223	38.18%

Generator Tripping (from 0700 to 0700)

Station	Unit	Time Out	Time In	Available	Cause (Gen Loss)
CEND	U3	12:43	13:52	15:55	Excitation card problem. (9MW)

Forced Outage / Unit Derated / Available (from 0700 to 0700)

Station	Unit	Time Out	Time In	Available	Cause (Gen Loss)
GLGR	GT01	-	07:28	11:25	Declared available.
PKLG	U6	09:03	-	-	Derated to 260MW due to circulating water pump gland leaking excessively.(202MW)
PGAU	U4	09:28	10:50	13:17	Forced outage due to turbine top cover flooded.
JMJG	U1	13:48	-	15:24	Derated to 600MW due to mill 40 tripped. (90MW)
KNYR	U1	-	14:31	21:00	Declared available after planned outage.
PGAU	U1	22:00	04:11	04:28	Declared available after STSO.

Unscheduled Despatch/Testing (from 0700 to 0700)

Station	Unit	Time Out	Time Start	Time Comp.	Fuel	Remark
KNYR	U1	-	-	12:06	Hydro	Test energy
PCGP	BLK	-	12:44	-	Gas	Test energy
KNYR	U1	-	13:25	13:38	Hydro	Test energy
KNYR	U1	-	13:52	14:01	Hydro	Test energy
KNYR	U1	-	14:17	14:22	Hydro	Test energy
JMJG	U5	-	-	17:34	Coal	Test energy
JMJG	U5	-	22:41	-	Coal	Test energy

Fuel Change Over (from 0700 to 0700)

Station	Unit	Time In	Time Out	Fuel	Remark

No of distillate	No of Oil
0700-0700	0700-0700
0	0

Actual Load & Allocation

Time	0200hrs	0300hrs	0400hrs	0500hrs
M/D	12920	12486	12214	11952
			935	

Verified By:

Daily System Generation Summary on Thursday

Thursday, August 17, 2017

Availability at Daily Maximum Demand Hour

ST-Coal	0 MW
ST-Gas	0 MW
ST-Oil	0 MW
Gas	3,043 MW
Hydro	2,398 MW
Distillate	0 MW
Total TNB	5,441 MW
Total IPP	14,058 MW
Total Co-Gen	0 MW
Total System	20,063 MW

Generation Mix

Type	MWh	Percentage
Gas	37,016	10.63 %
Hydro	29,941	8.60 %
Total TNB	66,957	19.22 %
ST-Coal	187,224	53.76 %
Gas	93,203	26.76 %
Total IPP	280,427	80.52 %
Co-Gen	1,455	0.42 %
Total Co-Gen	1,455	0.42 %
Total Generation	348,839	100.16 %

PLTG	-169	-0.05 %
HVDC	726	0.21 %
Interconnection	557	0.16 %
Net Energy	348,282	100.00 %

Maximum Demand Record

Date: 4/20/2016 17,788 MW
Date: 4/20/2016 372,457 MWH

Set On Bus, TNB, IPP And MD

Daily Maximum Demand Hour at: 14:30 H:30:00 Hour
Total Set On Bus 17,482 MW
TNB Generation 3,496 MW
IPP Generation 12,665 MW
Spinning Reserve 1,261 MW
Maximum Demand 16,541 MW
Net Energy 348,282 MWH
Load Factor 89.43 %

Fuel Cost

Total Cost: 3,055,307.95 RM
Cost per Unit 16.63 cents/kWH

Average Spinning Reserve During Peak Hour

Type	MW
GT	349
Hydro	471
Syncon	290
Thermal	203
Total	1,313

Gas Usage

Station	(mmscfd)
GLGR	50
SRDG	13
TJGS	204
Total TNB	267
CBPS	52
KLPP	97
NPRI	146
PGLA	108
PLPS	69
PTEK	27
SGB3	88
SGRI	113
Total IPP	700
Total Gas	967

Total Gas Required 967

Alternate Fuel Usage

Station	(mmscfd)
Total	0

Hourly System MW Generation

System Total	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
	14147	13531	12860	12571	12396	12162	12498	12539	12896	14671	15532	16124	16035	15448	15897	16205	16120	15831	14818	14515	15659	15600	15158	14813

Prepared By: -Select Name-

Checked By: -Select Name-

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(Gurcharan Singh)
Pengurus Besar Kanan
Jabatan Sistem Operasi



Daily MW Generation on Thursday

Table with columns for Station, Unit, and 24 hourly generation values (0000 to 2300). Rows include various power generation units like JMAH, PKLG, KLPP, etc.

Daily MW Generation on Thursday

Thursday, August 17, 2017

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 Co-Gen		59	59	60	60	61	60	60	62	61	60	58	59	59	61	60	60	61	63	62	61	63	64	63	65	65	61	60	60	60	58	59																					
Total Gen		14180	13871	13531	13106	12936	12729	12571	12395	12313	12201	12317	12505	12760	12603	12419	12949	13094	13694	14684	15108	15516	15810	16151	16221	16062	15889	15503	15787	15919	16237	16222	16171	16118	16200	15830	15337	14846	14581	14572	15295	15652	15719	15617	15437	15139	14990	14788	14377				
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	0	0	
TIE-HVDC		31	31	30	30	29	29	30	30	30	30	30	31	31	30	30	31	31	30	30	30	30	30	30	31	31	30	30	31	30	30	31	31	30	30	30	30	30	30	30	31	30	30	30	31	31	31	31	31	31	31	31	
TIE-PLTC		-18	13	-31	-14	46	-28	-30	13	10	72	8	9	-23	22	34	4	22	-24	-7	4	-46	17	-4	-36	-3	22	24	31	-8	0	-14	-5	-31	-16	-31	-28	-2	6	27	-36	-23	-14	-8	-50	-46	-56	-58					
Interconnection		13	44	0	16	76	2	0	43	39	103	39	39	7	52	64	35	53	6	23	34	-16	48	27	-6	27	53	55	60	22	31	17	25	-2	14	-1	2	28	35	57	-5	-7	8	17	23	-19	-16	-25	-28				
System Total		14147	13827	13531	13090	12860	12727	12571	12352	12396	12210	12162	12278	12498	12384	12886	13948	14671	15074	15532	15762	16124	16227	16035	15846	15448	15727	15897	16206	16205	16146	16120	16186	15831	15335	14818	14546	14515	15390	15659	15711	15600	15414	15158	15006	14813	14405						
SRev ST-Coal		117	168	240	280	267	262	264	272	269	277	253	262	257	270	263	261	259	268	269	184	276	273	176	419	305	548	151	160	160	205	174	153	158	155	167	181	152	156	153	145	160	154	162	153	171	156	168	153				
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	0	0	0
SRev CCCT-Gas		679	888	1166	1501	1556	1647	1819	1964	1950	2022	2195	2086	1931	1638	1808	2105	1636	716	666	942	402	348	385	181	224	410	531	460	422	177	165	220	178	177	185	187	442	516	471	164	152	141	212	239	378	388	506	773				
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	0	0	
SRev Co-Gen		11	11	10	10	10	9	11	9	10	10	12	11	11	11	10	9	11	9	10	10	9	10	9	7	8	8	9	7	8	8	9	10	9	7	8	8	9	7	6	7	5	5	9	10	10	10	10	12	11			
Syncon		1079	1079	1079	1079	928	1079	1079	928	1079	1079	892	892	741	489	489	676	302	151	302	404	187	187	187	187	187	187	187	187	187	187	187	187	187	187	187	187	187	187	187	187	187	187	187	187	187	187	187	187	187	374	374	
Hydro		260	139	130	74	282	172	150	173	302	191	152	140	264	137	128	128	128	181	398	378	273	366	458	349	478	599	890	906	457	440	502	516	429	427	446	416	505	693	757	666	580	579	590	592	597	601	484	696				
S.Reserve Total		2146	2285	2625	2944	3043	3169	3321	3499	3458	3579	3689	3577	3389	3133	3288	3394	2924	1916	1832	2005	1638	1300	1181	1261	1430	1822	1822	1716	1294	1125	1090	1231	1284	1262	1322	1348	1710	1975	1984	1286	1104	1087	1189	1261	1343	1342	1544	2007				