

No.CEA/OPM/PPA/6/1/2010
Central Electricity Authority
 Operation Performance Monitoring Division

Dated 05.08 .2010

**Subject: Electrical Energy Generation during the month of July'10
 and during the period April-July,2010**

Electricity generation during the month of July, 2010 has been 65,633 MU as under against the generation of 63,222 MU during the same month last year representing a growth rate of 3.81 %.

A July, 2010

Category	Programme (MU)	Actual * Generation (MU)	% of Program	Actual Generation (July'09)	Growth (%)
Thermal	54,283	52,169	96.10	49,932	4.48
Nuclear	1,759	1,680	95.53	1,440	16.73
Hydro	11,901	10,781	90.59	10,966	(-)1.69
Bhutan Import	1,118	1,003	89.72	884	13.5
Total	69,061	65,633	95.04	63,222 **	3.81

The cumulative electricity generation during the period April'10-July'10 has been 266,140 MU against generation of 252,946 MU during the same period last year representing a growth rate of 5.22% and achievement of 99.13% of the target set for the period as under.

B Cumulative period April' 2010 - July 2010

Category	Program (MU)	Actual * Generation (MU)	% of Program	Actual Generation same period Last year (MU)	Growth (%)
Thermal	221,261	218,647	98.82	209,175	4.53
Nuclear	6,841	6,932	101.33	5,635	23.03
Hydro	37,881	38,504	101.64	36,207	6.34
Bhutan Import	2,501	2,057	82.25	1,929	6.65
Total	268,484	266,140	99.13	252,946 **	5.22

* Provisional based an actual-cum-assessment

** Excludes generation from hydro stations of less than 25 MW capacity

While the thermal, nuclear and hydro generation during April'10- July'10 registered a growth rate of 4.53%, 23.03% and 6.34% respectively but the overall growth rate during the period has been 5.22%.

Thermal Generation

The fuel-wise components of thermal generation for the month of July'10 are given below :-
July,2010

Particulars	Programme July'10 (MU)	Actual* Generation July'10 (MU)	Generation Last Year July'09 (MU)	Growth (%)	PLF (%) July'10	PLF (%) July'09
Coal	43,321	41,800	40,027	4.43	70.56	72.24
Lignite	2,204	2,078	1,890	9.95	70.23	70.69
Gas Turbine	7,976	7,932	7,371	5.6	62.77	63.76
Gas Turbine (Liquid)	397	146	297			
Multifuel	50	0	35	0	0	17.03
Diesel	335	213	313	(-)32.04		
Total (Thermal)	54,283	52169	49,933	4.48	70.30	71.97

* Provisional based an actual-cum-assessment.

Growth in thermal generation was constrained due to about 4.43% growth in coal based generation which is mainly due to 95% materialization of the requirement. As on 31.7.2010, 24 power stations had critical stock of which 14 stations had supercritical stock i.e. stock for less than 4 days.

The fuel-wise components of the cumulative thermal generation for the period from April'10 to July'10 are given below.

April' 2010 - July 2010

Particulars	Programme April'10- July'10 (MU)	Actual* Generation April'10- July'10 (MU)	Generation Last Year Apr'09- July'09 (MU)	Growth (%)	PLF (%) April'10- July'10	PLF (%) April- 09 July'09
Coal	177,656	173,268	168,452	2.86	75.05	77.86
Lignite	8,995	9,040	8,582	5.34	78.04	80.83
Gas Turbine	31,384	34,221	28941	15.46	70.36	65.86
Gas Turbine (Liquid)	1,566	962	1,532			
Multifuel	260	0	211	0	0	25.68
Diesel	1,400	1156	1,457	(-) 20.65		
Total (Thermal)	221,261	218,647	209,175	4.53	74.93	77.81

• Provisional based an actual-cum-tentative

Though thermal generation during the period April'09 -July'10 achieved a growth rate of 4.53% mainly due to 15.46% growth in gas based generation, it fell short of target by 2,614 MU. Coal based thermal generation alone suffered a shortfall of about 4,388 MU mainly due to shortage of coal supply, long duration forced outages & unscheduled/extended planned

maintenance of some of the existing thermal power stations and non/ under performance of some of the new thermal units. While the thermal stations located in Northern, Western, Southern & Northern Eastern Regions performed as per their respective targets, thermal stations located in Eastern Regions (West Bengal, Jharkhand, DVC etc.) suffered a shortfall of targets by about 3500 MU during the period April-July'10. Loss of generation of about 2,498MU during the period April-July'10 (so far) due to shortage of coal has been reported including 1,733 MU loss at NTPC's stations mainly at Kahalgaon STPS (2,340 MW) which operated at a PLF of 60.03 %. A statement indicating the thermal stations suffering shortfall in generation exceeding 100 MU along with reasons thereof is attached at Annex I.

Import of Coal: The anticipated gap between the requirement and domestic availability of the coal estimated at 52 MT has been planned to be met through import of 35 MT of coal for which all the utilities have been advised to take necessary action. The status of import of coal by various utilities is given at Annex-IA. In addition projects designed on imported coal are expected to import 12 MT coal in the current year 2010-2011.

Best Performing Thermal Power Plants : During the month of July'10, a total of 20 thermal power stations aggregating to 18,215 MW achieved PLF higher than 90% (out of these 3 power stations achieved PLF more than 100 %) as per the list enclosed at Annex-II.

Gas based Generation: The availability of gas from KG basin (D-6) as also utilization of surplus gas available on fall back basis has resulted in better utilization of capacity at higher plant load factors of 70.36 % during April'10-July'10 against 65.86 % during the same period last year. The load factor of gas based station during the month of July'10 was 62.77% against 63.76% during same period last year. The region wise average PLFs of gas based power plants are given in Annex- III.

14 gas power stations of total installed capacity of 4227.64 MW which operated at above 80% PLF during the month of July'10 are listed in Annex - IV.

Nuclear Generation

The energy generation from nuclear power stations during the month of July'10 was 1,680 MU against the target of 1,759 MU representing an achievement of 95.53% and a growth rate of 16.73%. During the period April-July'10 energy generation from nuclear power stations is as per target and it registered a growth rate of 23.03% over the nuclear generation during the corresponding period last year. The average PLF of all nuclear plants was 49.53 % against the target of 53.01% during July'10. The average PLF of all nuclear plants was 51.92% against the target of 52.39% during the period April-July'10. The plant wise performance was as under:-

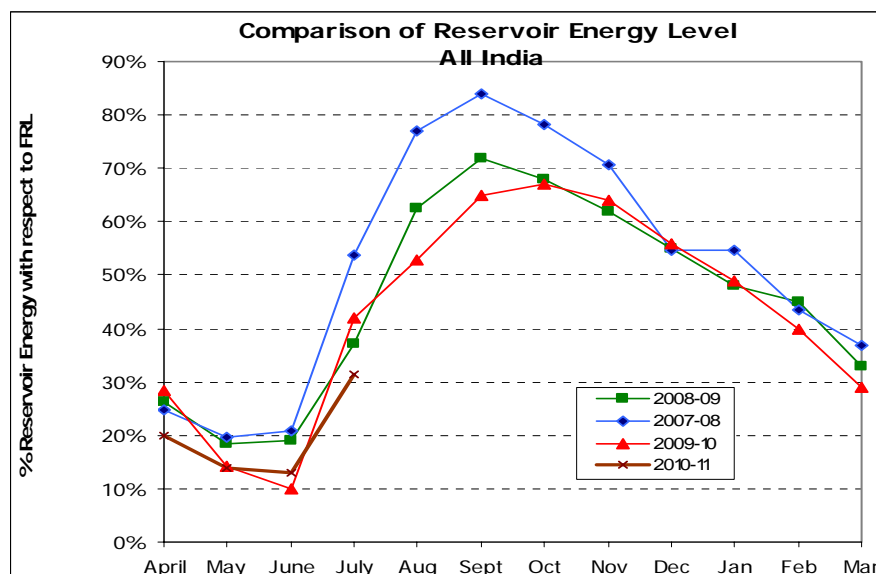
Stations	Capacity (MW)	Nuclear Generation performance in Apr'10 - July'10		PLF % April'10 - July'10	PLF % April'09 - July'09
		% of programme	% of actual last year		
Kaiga	660	92.79	81.52	46.39	56.90
Kakrapara	440	104.80	94.17	26.19	27.81
Madras	440	110.65	95.33	55.31	58.02
Narora	440	105.47	113.81	26.35	23.15
Rajasthan	1180	87.85	284.97	61.33	34.32
Tarapur	1400	116.20	105.87	61.65	58.23
Total	4560	101.33	123.03	51.92	46.71

Hydro Generation

The energy generation from the hydro electric stations during the month of July'10 was 10,781 MU against the target of 11,901 MU representing a achievement of 90.59% and a growth rate of (-)1.69. Region wise details are as follows:-

Region	Hydro Generation performance in July'10		Hydro Generation performance during April'10-July'10	
	% of Programme	% of last year's actual	% of Programme	% of last year's actual
Northern	98.15	96.15	99.59	99.60
Western	110.17	119.22	139.04	116.26
Southern	72.68	92.06	89.22	115.58
Eastern	72.60	90.42	115.16	112.78
North Eastern	100.05	145.59	96.53	125.84
Total (All India)	90.59	98.31	101.64	106.34

The storage position of the 31 major reservoirs in the country is monitored in CEA. These reservoirs feed hydroelectric stations having total installed generating capacity of 18,273 MW which constitutes about 48 % of the hydro capacity and 45 % in terms of their share in annual hydroelectric energy generation in the country. The storage position of these reservoirs as compared to that obtaining during the previous years is shown graphically below.

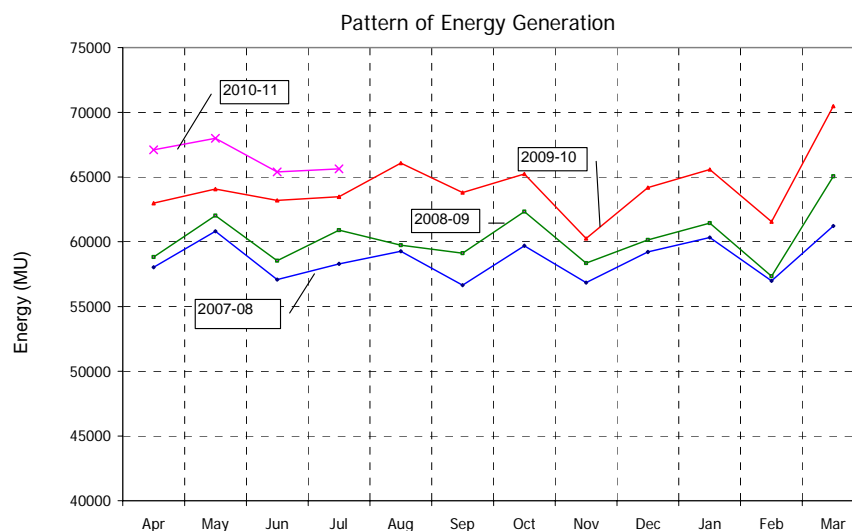


The storage position of each of 31 reservoirs in the country and corresponding energy content as on 31.07.2010 along with the comparison of the same with the last year is given at Annex-V. The reservoirs position in the five regions of the country is summarized below.

Region	No. of schemes	Installed Capacity (MW)	Design Energy (MU)	Energy Content at FRL (MU)	Energy Content on 31.07.2010		Energy Content Last Year on same day		Comparison of Energy Content as on 31.07.2010 with last year on same day
					(MU)	% of Energy at FRL	(MU)	% of Energy at FRL	
Northern	7	3991	12545	6012	1935	32%	1180	20%	64%
Western	6	4980	13910	8417	2761	33%	4329	51%	-36%
Southern	12	7203	20432	15814	5175	33%	8274	52%	-37%
Eastern	5	2012	5676	3298	496	15%	384	12%	29%
North Eastern	1	90	450	250	250	100%	48	19%	425%
Total (All India)	31	18,273	53,007	33,790	10,617	31%	14,215	42%	-25%

Though, the total energy content of 31 reservoirs at 10,617 MU on 31st July, 2010 is about 25% lower than the energy content of 14,215 MU obtaining on the same day last year, the energy content in the reservoirs in the Western and Southern regions is below the last year's level by about 36% and 37% respectively.

The pattern of monthly energy generation in the country during the last 3 years and during the period April' 10-July 2010 is shown below.



APRIL'10-JULY'10

UTILITY/STATION	CAPACITY	TARGET 2010-11	APRIL-JULY'10			REASONS
			TARGET	ACTUAL	SHORTFALL	
	MW	MU	MU	MU	MU	
NTPC						
Badarpur TPS	705	5400	1869	1561	308	Unscheduled PM of unit-3&4,forced outage of unit-1
Farakka STPS	1600	11930	3734	3588	146	Extended PM of unit-3,unscheduled PM of unit-4
Kahalgaon TPS	2340	16348	5371	4113	1259	Coal shortage,extended PM of unit-5,forced outage of unit-7
NLC						
Neyveli (Ext) TPS	420	2944	1120	951	169	Unscheduled planned maintenance of unit-1,forced outage of unit-2
DVC						
Bokaro B TPS	630	3863	1328	1211	117	Forced outages
Chandrapura TPS	1250	21761	1275	800	475	Gnerator rotor damage of unit-7 and Unstabilised unit-8,Unscheduled planned maintenance of unit 2
Mejia	1340	10293	2862	2756	106	Forced outages of units 3,5&6.
HPGCL						
Panipat TPS	1360	9675	3123	2842	281	Unscheduled PM of unit-7,forced outages of unit 1&4
Yamunanagar TPS	600	4342	1581	1305	276	Forced outages
RRVUNL						
Chabra TPP	500	2245	532	397	135	Forced outages and unstabilised unit-2
Giral TPS	250	1425	477	198	279	Forced outages
Jalipa Kapardi TPP	135	1720	237	133	104	Forced outages
UPRVUNL						
Parichha TPS	640	4584	1306	1084	222	Coal shortage,forced outages
GSECL						
Dhuvran TPS	220	800	260	0	260	Reserve shutdown
MPPGCL						
Amar Katak EXT TPS	450	2450	683	546	137	Forced outages of unit 1, Delay in restoration of unit 2 after R&M.
Sanjay Gandhi TPS	1340	8810	2975	2338	637	Unscheduled PM of units 4 & 5.
Satpura TPS	1142.5	7580	2449	2013	436	Coal shortage,forced outages of unit5, unscheduled CM of unit 9
MAHAGENCO						
Bhusawal TPS	470	3240	1154	902	252	Forced outages. Unit 1 retired.
Chandrapur TPS	2340	16000	5347	1664	3683	Unscheduled mtc. of unit 1,6,7, FO due to water shortage.
New Parli TPS	500	3069	1069	962	107	Forced outages of unit-1
Parli TPS	670	4706	1718	1144	574	Forced outages of unit 1&2,unscheduled PM of unit-3&4
APGENCO						
Kothagudem TPS	500	3865	1273	1079	194	Unscheduled mtc. of unit-2
KPCL						
Raichur TPS	1720	11161	3602	2382	1220	Forced outages,unscheduled PM of unit 4.
TNEB						
Ennore TPS	450	2003	734	512	222	Forced outages of units 2,3&5.
Mettur TPS	840	6550	2360	2112	248	Forced outages of unit 4.
North Chennai TPS	630	4550	1598	1379	219	Forced outages of unit 2, unscheduled PM of unit 1.
Tuticorin TPS	1050	8280	2980	2643	337	Unscheduled PM of unit 2
JSEB						
Patratu TPS	770	2292	629	261	368	Forced outages, delay in restoration of unit 10 after R&M.
TVNL						
Tenugahat TPS	420	2755	920	700	220	Extended PM of unit 2.
DPL						
DPL TPS	690	4314	1460	660	800	Forced outages, unscheduled PM of unit 5.
WBPDC						
Kolaghat TPS	1260	8065	2665	2530	135	Forced outages of units 1&4.
Sagardighi TPS	600	4200	1450	1186	264	Forced outages
Santhaldih TPS	730	2882	940	415	525	Forced outages of units 1 to 4.
Total			61082	46366	14717	

STATUS OF IMPORT OF COAL DURING THE YEAR 2010-11 (APRIL-JULY'10)

Fig in MT

Sl.No.	Board/Utility	Annual Target of Imported Coal	Receipt at TPSs during April-June 10	Receipt at TPSs during July - 2010	Available at Port	Total	Prorata Receipt %
	1	2	3	4	5	6=(3+4+5)	7
1	HPGCL	1.450	0.021	0.046	0.000	0.067	14
2	PSEB	0.300	0.000	0.000	0.000	0.000	0
3	RVUNL	1.460	0.030	0.000	0.000	0.030	6
4	UPRVUNL	1.080	0.000	0.000	0.000	0.000	0
5	MPGCL	0.800	0.019	0.027	0.000	0.046	17
6	Torrent AEC	0.500	0.162	0.146	0.000	0.308	184
7	GSECL	1.480	0.349	0.060	0.141	0.550	111
8	MAHA GENCO	3.350	0.177	0.000	0.000	0.177	16
9	Reliance	0.600	0.200	0.080	0.010	0.290	145
10	AP GENCO	1.600	0.094	0.000	0.000	0.094	18
11	TNEB	1.800	0.675	0.126	0.073	0.874	145
12	KPCL	0.900	0.094	0.000	0.000	0.094	31
13	OPGCL	0.100	0.000	0.000	0.000	0.000	0
14	DVC	1.730	0.147	0.038	0.000	0.185	32
15	CESC	0.630	0.085	0.000	0.000	0.085	40
16	WBPDCL	1.180	0.125	0.010	0.000	0.135	34
17	NTPC	13.900	3.241	0.996	1.643	5.880	127
18	PATHADI	0.300	0.000	0.000	0.000	0.000	0
19	NTPC(JV) Muzaffarpur	0.060	0.000	0.000	0.000	0.000	0
20	NTPC(JV) IndGandhi	0.100	0.000	0.000	0.000	0.000	0
21	Reliance ROSA	0.300	0.000	0.000	0.000	0.000	0
22	STERLITE	0.720	0.000	0.000	0.000	0.000	0
23	NTPC SAIL POWER Co	0.300	0.000	0.000	0.000	0.000	0
24	TATA (MAITHONRB)	0.030	0.000	0.000	0.000	0.000	0
25	LANCO ANPARA	0.030	0.000	0.000	0.000	0.000	0
26	DPL	0.100	0.000	0.000	0.000	0.000	0
27	CSEB	0.200	0.000	0.000	0.000	0.000	0
	TOTAL	35.000	5.419	1.529	1.867	8.815	75

List of Thermal Stations with PLF more than 90%
during July 2010

Sl.No	Station	Sector	Installed Cap. (MW)	PLF (%)
1	Southern Repl TPS	Private	135	104.82
2	Simhadri TPS	Central	1000	103.07
3	Dahanu TPS	Private	500	101.15
4	Bhilai TPS	Central	500	99.59
5	Rihand STPS	Central	2000	99.33
6	Dadri (NCTPP) TPS	Central	1330	98.13
7	Korba East V TPS	State	500	97.76
8	Unchachar TPS	Central	1050	97.15
9	Sipat STPS	Central	1000	96.45
10	Titagarh TPS	Private	240	96.27
11	Sabarmati (D F station)	Private	340	96.19
12	Torangunllu TPS	Private	860	95.93
13	Ramagundem STPS	Central	2600	94.41
14	Singrauli STPS	Central	2000	94.13
15	I B Valley TPS	State	420	92.62
16	Mundra TPS	Private	660	91.5
17	Korba STPS	Central	2100	91.47
18	GHTPS II (LEH MOH)	State	500	91.4
19	Sabarmati (C station) TPS	Private	60	91.29
20	GHTPS(LEH MOH)	State	420	90.22
Total			18215	

Gas based Power Stations Generation and PLF

July'10

Region	July'10		July'09	
	Generation (MU) *	PLF (%)	Generation (MU)	PLF (%)
Northern	1847.32	69.68	1913.78	72.84
Western	3664.84	60.49	2940.85	53.66
Southern	2225.75	63.91	2363.3	76.54
Eastern	0	0	0	0
North Eastern	340.5	61.72	373	65.48
All India	8078.41	62.77	7591	63.76

* Provisional based an actual-cum-assessment

April_July'10

Region	April_July'10		April_July'09	
	Generation (MU) *	PLF (%)	Generation (MU)	PLF (%)
Northern	7710	73.9	7589	73.4
Western	17080	71.63	12565	59.02
Southern	9046	69.29	8560	75.04
Eastern	0	0	0	0
North Eastern	1348	62.09	1477	65.86
All India	35184	70.36	30191	65.86

* Provisional based an actual-cum-assessment

List of Gas Based Power Stations with PLF more than 80%
during July'10

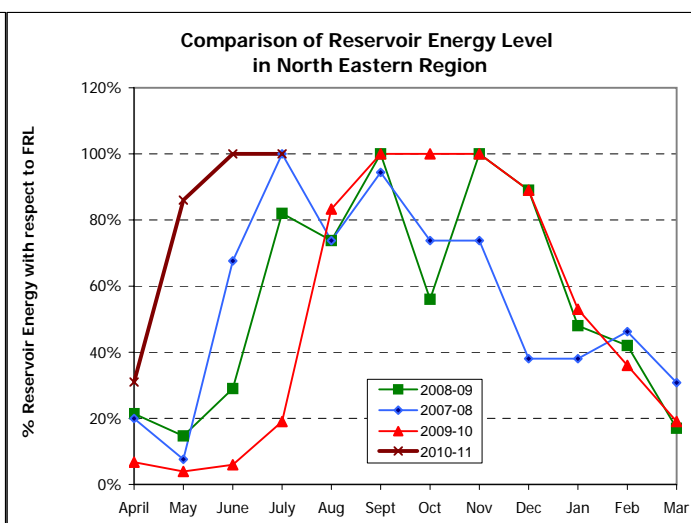
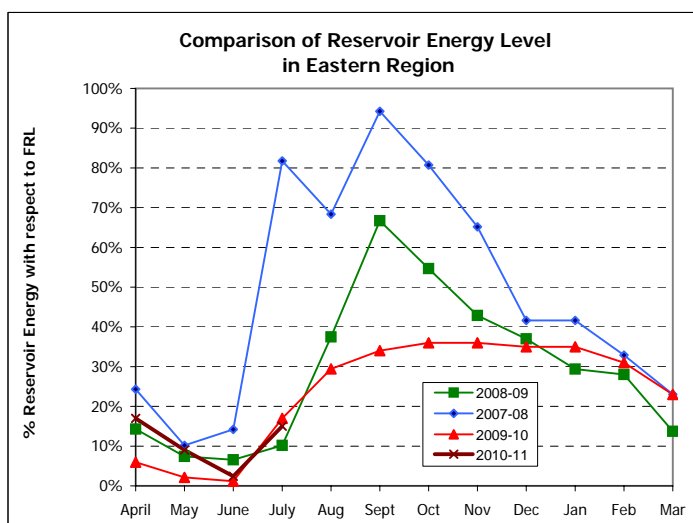
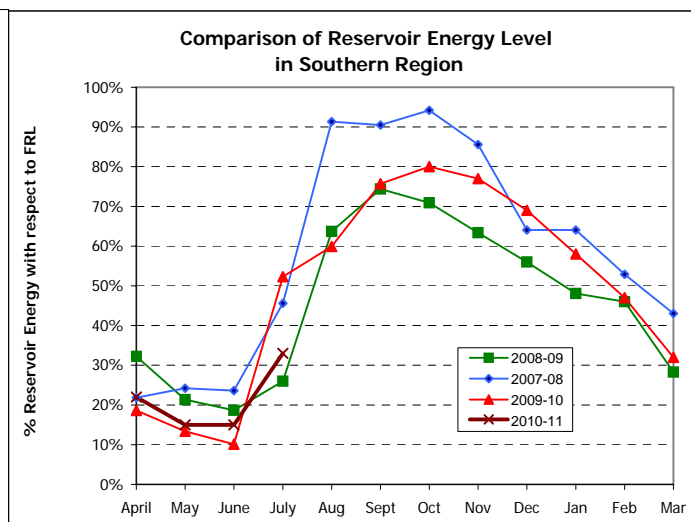
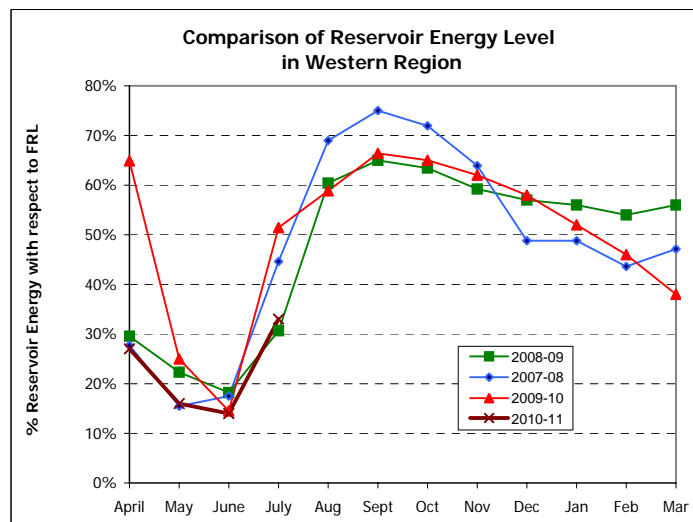
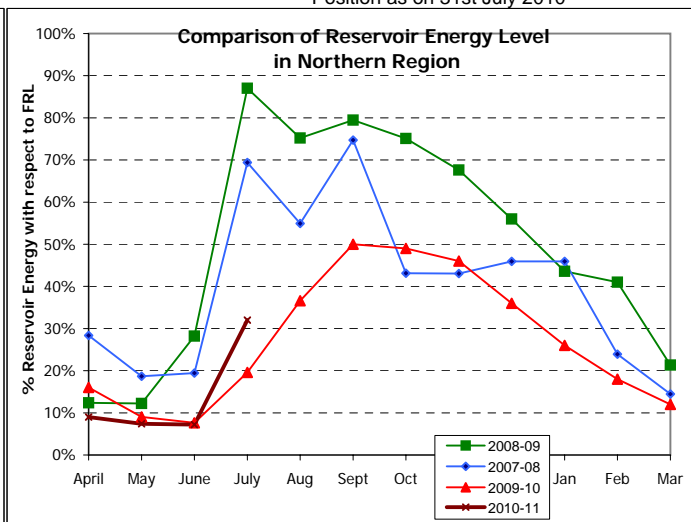
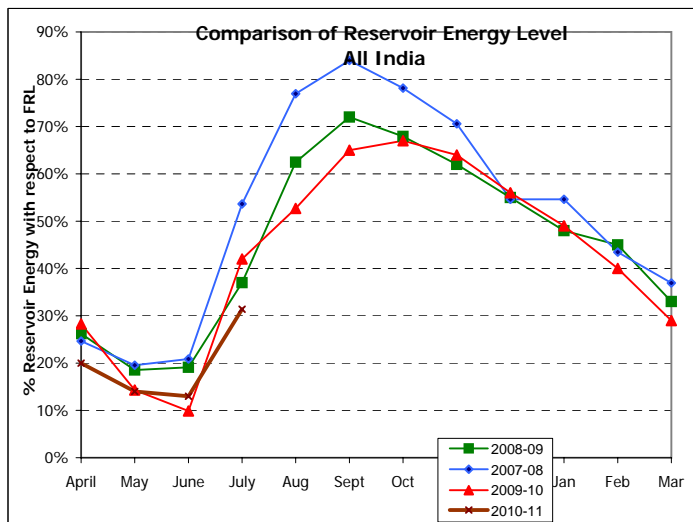
Sl.No	Station	Sector	Cap.(MW)	PLF
1	Verma giri	Private	370	98.04
2	Vatwa CCPP	Private	100	96.72
3	Peddapuram CCPP	Private	220	92.37
4	Godavri CCPP	Private	208	91.20
5	Karaikal CCPP	State	32.5	91.11
6	Faridabad CCPP	Central	431.59	88.37
7	Pragati CCPP	State	330.4	87.47
8	Valantharvi CCPP	Private	52.8	87.11
9	Sugen CCPP	Private	1147.5	86.10
10	Gautami CCPP	Private	464	85.24
11	Agartala GT	Central	84	83.09
12	Gandhar CCPP	Central	657.39	81.99
13	Hazira CCPP	State	156.1	81.61
14	Auraiya CCPP	Central	663.36	80.49
	Total		4227.64	

Storage Position of Major Reservoirs based Hydroelectric Projects in the Country (July 31, 2010)

Sl No.	Reservoir	Installed Capacity	Full Reservoir Level	Minimum Draw Down Level	Effective Capacity	Annual Design Energy Potential	Energy Content At F.R.L.	Present Reservoir Level	Reservoir Level On The Same Day Last Year	Energy Content at Present Level	Energy Content on The Same Day Last Year	% Energy Content w.r.t. Content at FRL (31.07.2010)	% Energy Content w.r.t. Content at FRL (31.07.2009)
		MW	M	M	MCM	MU	MU	M	M	MU		(%)	(%)
Northern Region													
1	Bhakra	1325	513.59	445.62	4604.97	5282	1728.8	492.20	478.84	829.22	454.05	47.97%	26.26%
2	Pong	396	426.72	384.05	3974.43	1123	1084	401.75	395.03	232.43	113.71	21.44%	10.49%
3	Ranjit Sagar	600	527.91	487.91	1196.16	1507	390.3	511.65	500.26	236.7	103.79	60.65%	26.59%
4	R.P. Sagar	172	352.81	343.81	1326.7	459	175.66	346.92	347.55	53.08	63.71	30.22%	36.27%
5	Rihand	300	268.22	252.98	1740.66	920	860.5	255.91	256.37	112.6	131.25	13.09%	15.25%
6	Ram Ganga	198	366	323	757.09	164	480.8	332.14	323	38.06	0.01	7.92%	0.00%
7	Tehri	1000	829.79	740.04	1287.37	3090	1291.49	784.85	775.65	433.37	313.42	33.56%	24.27%
Total (N Region)		3991				12545	6011.55			1935.46	1179.94	32.20%	19.63%
Western Region													
8	Sardar Sarovar	1450	138.68	110.84	519.57	5469	1817.55	115.73	117.95	149.72	229.21	8.24%	12.61%
9	Ukai	305	105.16	82.3	1063.08	1080	813.08	93.24	95.18	240.22	300.27	29.54%	36.93%
10	Gandhi Sagar	115	399.9	381	925.11	420.48	725	381.02	381.30	2.1	5	0.29%	0.69%
11	Indira Sagar	1000	262.14	243.24	281.34	2628	1316.12	244.00	255.50	22.32	607.22	1.70%	46.14%
12	Bhira	150	606.03	590.09	429.43	790	618.8	597.43	603.79	247.46	513.7	39.99%	83.02%
13	Koyna	1960	657.91	609.6	1511.6	3523	3126.1	649.10	654.62	2098.8	2673.75	67.14%	85.53%
Total (W Region)		4980				13910.48	8416.65			2760.62	4329.15	32.80%	51.44%
Southern Region													
14	Machkund	114.75	838.2	813.39	346.2	670	551.6	825.58	831.22	102.95	250.76	18.66%	45.46%
15	Nagarjuna Sagar	810	179.83	150.88	2287.43	2237	1398.13	158.56	153.07	257.25	67.2	18.40%	4.81%
16	Srisaillam	1670	269.75	243.84	265.99	4300	1391.84	256.46	259.29	367.81	507.57	26.43%	36.47%
17	Almatti	290	519.62	505.97	1442.58	483	175.35	513.13	505.97	33.62	0.46	19.17%	0.26%
18	Kalinadi Supa	1220	563.88	513.52	19168.68	542	2885	532.34	541.34	674.1	1152.21	23.37%	39.94%
19	Sharavathy	1006.2	554.43	522.73	1329.83	5564	4557.03	543.43	550.71	1792.99	3423.05	39.35%	75.12%
20	Idamalayar	75	169	114.99	308.85	380	254.45	144.76	150.88	100.58	134	39.53%	52.66%
21	Idukki	780	732.35	694.94	283.18	2398	2146.32	715.57	714.48	940.53	882.6	43.82%	41.12%
22	Sabrigiri	300	981.46	908.3	265.07	1338	764	965.73	972.78	390.57	524.02	51.12%	68.59%
23	Kundah Group	555				1315	1270			393	1171	30.94%	92.20%
24	Metture	240	240.79	211.23	410.53	790	204	229.01	232.9	72.56	105.32	35.57%	51.63%
25	Periyar	140	46.33	33.53	80.27	409	216	37.25	37.8	48.84	56.06		
Total (S Region)		7200.95				20426	15813.72			5174.80	8274.25	32.72%	52.32%
Eastern Region													
26	Balimela	510	462.08	438.91	149.23	1183	897.75	447.02	444.03	216.3	128.25	24.09%	14.29%
27	Hirakud	331.5	192.02	179.83	1316.28	1174	372.28	187.50	184.96	155.34	81.48	41.73%	21.89%
28	Indravati	600	641.84	625	130.67	1962	1213.13	629.20	635.5	0	0	0.00%	0.00%
29	Rengali	250	123.44	109.72	1565.1	525	275	110.88	115.18	5.56	68.1	2.02%	24.76%
30	Upper Kolab	320	857.78	843.78	84.09	832	540	849.17	848.48	119.01	105.73	22.04%	19.58%
Total (E Region)		2011.5				5676	3298.16			496.21	383.56	15.05%	11.63%
North Eastern													
31	Loktak	90	768.5	766.01		450	250	768.50	767.28	250.02	47.61	100.01%	19.04%
Total (NE Region)		90				450	250			250.02	47.61	100.01%	19.04%
Total (All India)		18273.45				53007.48	33790.08			10617.11	14214.51	31.42%	42.07%

Energy Content in major Hydro Reservoirs as percent of Energy Content at Full Reservoir Level (FRL)

Position as on 31st July 2010



Based on the water storage position of 31 major reservoirs in the country as monitored in CEA.