

CENTRAL ELECTRICITY AUTHORITY



OPERATION PERFORMANCE OF GENERATING STATIONS IN THE COUNTRY DURING THE YEAR 2010-11

An Overview



GRID OPERATION & DISTRIBUTION WING

OPERATION PERFORMANCE MONITORING DIVISION

NEW DELHI

APRIL, 2011

**OPERATION PERFORMANCE OF GENERATING STATIONS
IN THE COUNTRY DURING THE YEAR 2010-11**

An Overview

Table of Contents

Highlights	i
1. Generation Targets for the year 2010-11	1
2. Actual Generation during the Year 2010-11 (Provisional)	1
3. Growth Rate	4
4. Operation Performance of Power Stations - Highlights	5
5. Performance of Thermal Units	6
5.1. Fuel wise Break up	6
5.2. National average PLF	6
5.3. Number of stations operating above 90% PLF	7
5.4. Operating Availability of thermal stations	8
5.5. Maximum PLF	8
6. Gas Based Generation	8
7. Performance of Nuclear Units	9
8. Performance of Hydro Stations	9
9. Performance of Central Sector utilities	11
10. Analysis of the shortfall	12

ANNEXES

Annex - I	Region Wise and Category Wise Targets & Actual Generation in the Country During the Year 2010-11
Annex -II	Region Wise and Category Wise Growth in Power Generation during the Year 2010-11
Annex -III	List of Thermal Power Stations (Coal / Lignite) which achieved PLF above national average PLF of 77.5 % during the year 2010-11
Annex -IV	List of Coal based Thermal Power Stations which achieved PLF above 90% during the year 2010-11
Annex -V	Generation at gas based power plants
Annex -VI	Variations in the energy content of reservoirs during 2010-11
Annex -VII	Generation performance of various sectors during the year 2010-11
Annex -VIII	Shortfall in generation due to delay in commissioning during 2010-11
Annex -IX	Shortfall in energy generation vis-à-vis targets from existing thermal station (exceeding 100 MU) during the year 2010-11

**OPERATION PERFORMANCE OF GENERATING PLANTS
IN THE COUNTRY DURING THE YEAR 2010-11**

HIGHLIGHTS

**OPERATION PERFORMANCE OF GENERATING STATIONS
IN THE COUNTRY DURING THE YEAR 2010-11**

Highlights

Electric Energy Generation Target for the year 2010-11	830.8 BU
Actual Electric Energy Generation during the year	811.1 BU
Growth in generation during 2010-11	5.55 %

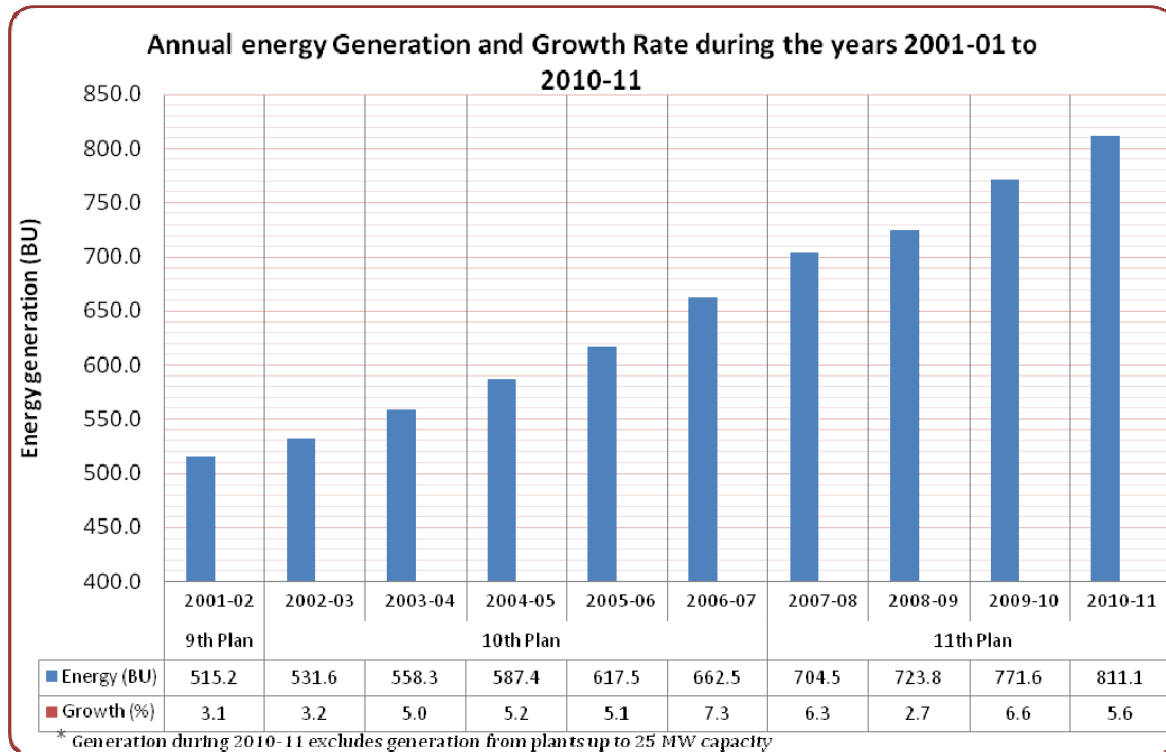
The details of generation and growth rates are given are given below.

Table 1: Annual Electric Energy Generation Targets and Achievement

Category	Target 2010-11 (BU)	Actual 2010-11* (BU)	% of Target	Actual Last Year 2009-10 (BU)	Growth (%)
Thermal	690.9	664.9	96.24	640.5	3.81
Nuclear	22.0	26.3	119.48	18.6	41.04
Hydro	111.4	114.3	102.64	103.9	10.01
Bhutan Import	6.5	5.6	85.68	5.4	4.69
Total	830.8	811.1	97.63	768.4	5.55

* Generation excludes generation from plants up to 25 MW Capacity.

The annual growth in the energy generation during the year has been 5.55% against the CAGR of 5.17% during the period 2001-02 to 2010-11. The year wise energy generation and annual growth rates during the period are presented below.

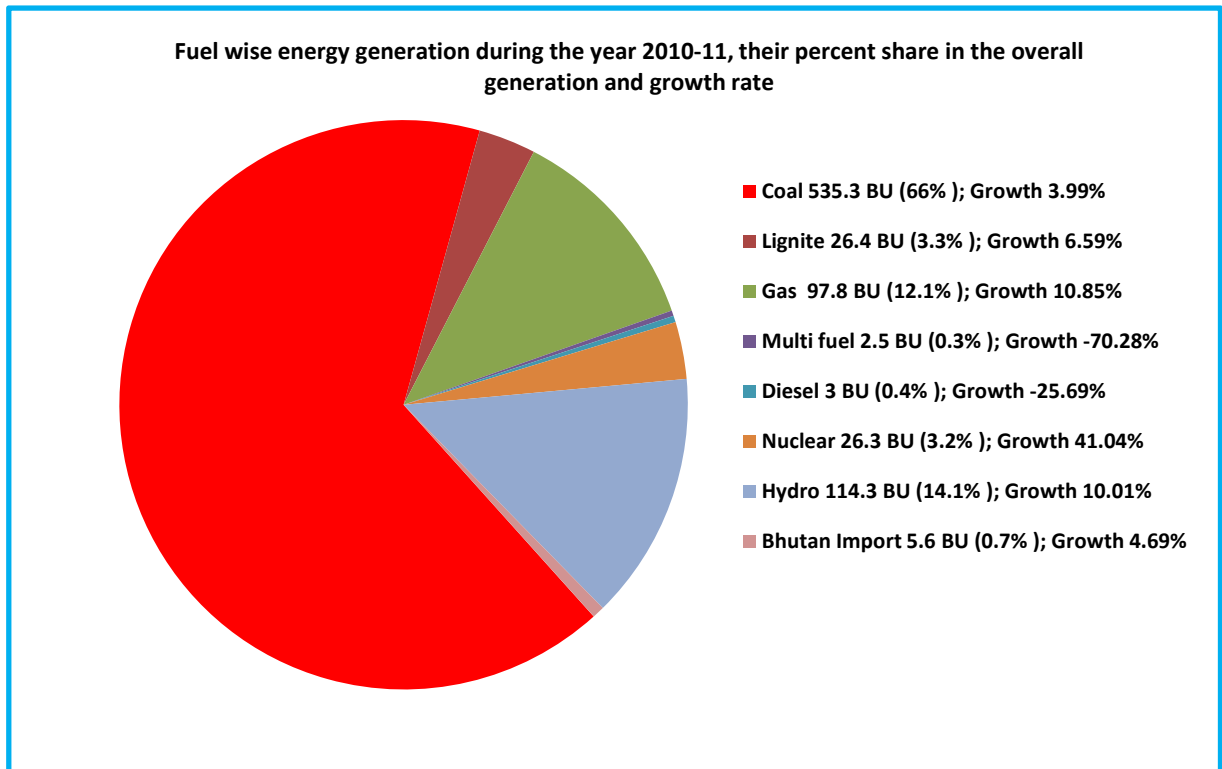


The highlights of operation performance of generating stations in the country during the year 2010-11 are as under.

- Gross annual generation of the country has crossed the 800 BU mark (811.1 BU).

- The nuclear generation achieved a remarkable growth rate of 41.04% due to improved availability of nuclear fuel to the nuclear plants.
- The generation from hydro based plants also improved with a growth rate of 10.01% due to revival of good monsoon after two successive years of deficient/scanty rain fall conditions.
- The total thermal generation has achieved a growth rate of 3.81%. Coal based generation recorded a growth rate of 3.99 %.
- The average PLF of thermal power projects (Coal/Lignite) achieved during the year was 75.10%, as compared to 77.68% in the previous year.
- 19 numbers of thermal power stations with an aggregate installed capacity of 21995 MW operated above 90% PLF.
- Operational availability of thermal stations has marginally reduced to 84.24% from 85.10% achieved during the previous year.
- Growth of thermal generation was mainly restricted due to coal shortages, receipt of poor quality/ wet coal, closure of some units in the Western Region due to acute raw water shortage in these areas during pre-monsoon season, closure of some vintage and less efficient units and low schedule from beneficiaries after increased hydro generation on revival of monsoon & increased nuclear generation due to better availability of nuclear fuel. Coal based generation was constrained due to 92.6% materialization of the requirement of coal.
- The growth rate in respect of Liquid fuel based GTs, Multi-fuel Stations as well as DG sets had a negative growth rate.

The fuel wise annual energy generation during the year 2010-11, their percent share in total generation and growth rates achieved are presented in the figure below.



Reasons for Shortfall with respect to Targets

Sl. No.	Category	Energy (BU)
Shortfall in Generation - Reasons		
1	Loss of generation due to shortage of coal (information received so far)	7.0
2	Loss of generation due to poor quality coal (information received so far)	7.7
3	Loss of generation due to delay in commissioning/ Stabilization of new units during the year 2010-11	13.7
4	Loss of generation due to forced Shutdown of some units in the western Region due to acute water shortage in the area during pre Monsoon season.	2.7
5	Loss of generation due to backing down/shut down of units on account of low schedule from beneficiary states	9.7
6	Loss of generation due to backing down/shut down of units on account of transmission constraints	1.2
7	Shortfall in import from Hydro stations in Bhutan	1.3
Total shortfall due to above reasons (a)		43.2
Generation where targets were exceeded		
1	Excess generation with respect to targets by some newly commissioned units	5.3
2	Generation above target by the nuclear, Hydro based plants and existing thermal Plants	7.2
3	Generation above target by the existing thermal Plants	11.0
Total Excess Generation due to above reasons (b)		23.5
Net shortfall in generation (a) - (b)		19.7

**OPERATION PERFORMANCE OF GENERATING PLANTS
IN THE COUNTRY DURING THE YEAR 2010-11**

AN OVERVIEW

**OPERATION PERFORMANCE OF GENERATING PLANTS
IN THE COUNTRY DURING THE YEAR 2010-11**

An Overview

1. Electric Energy Generation Targets

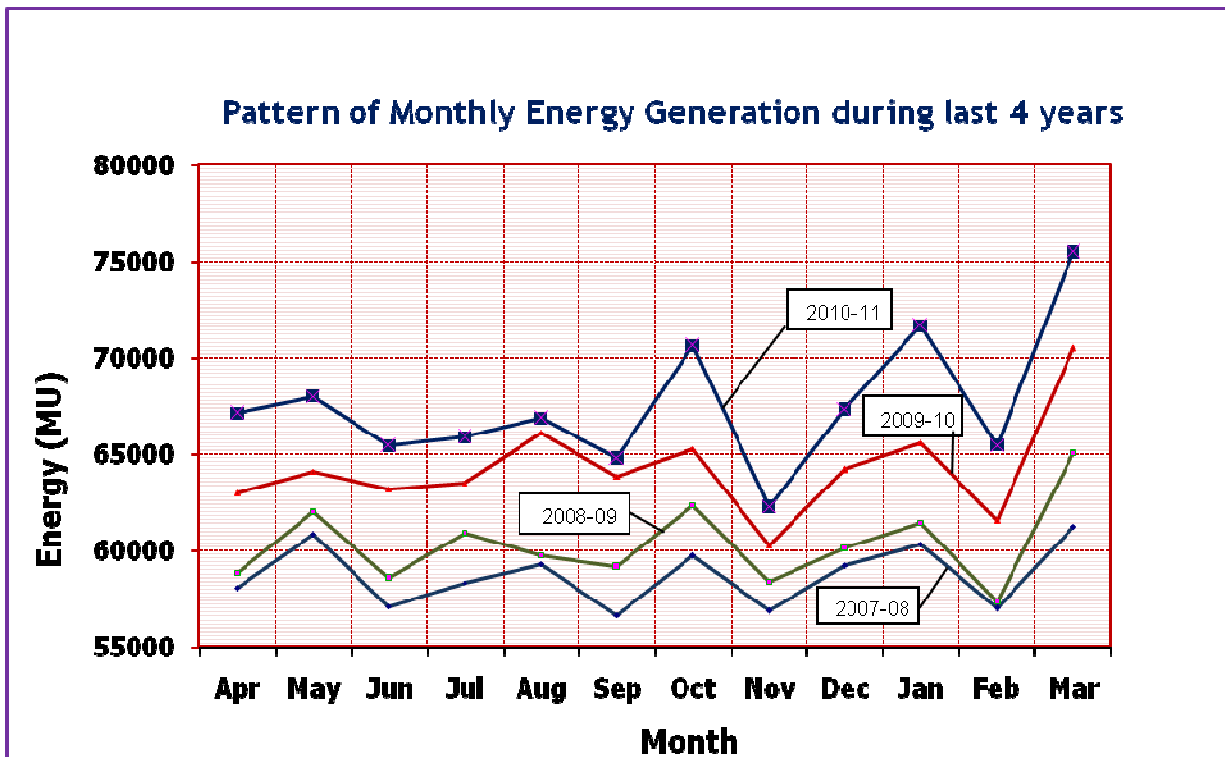
The target for annual electric energy generation in the country for the year 2010-11 was fixed at 830.8 BU comprising as under.

Category	Target	
	BU	%
Thermal	690.9	83.16%
Nuclear	22.0	2.65%
Hydro	111.3	13.40%
Bhutan Import	6.5	0.79%
Total	830.8	100.00%

Capacity addition programme of 15683 MW was considered for the year 2010-11 at the time of finalization of the above energy generation targets.

2. Actual Generation during the Year 2010-11 (Provisional)

The annual energy generation achieved during the year 2010-11 has been 811.1 BU (provisional) representing 97.5% of the target generation of 830.8 BU. The pattern of monthly energy generation in the country during the last 4 years is shown below:



A comparison of the generation with reference to targets is given in the table below:

Category	Target (BU)	Actual (BU)	% of Target
Thermal	690.9	664.9	96.24
Nuclear	22.0	26.3	119.48
Hydro	111.3	114.3	102.64
Bhutan Import	6.5	5.6	85.68
Total	830.8	811.1	97.63

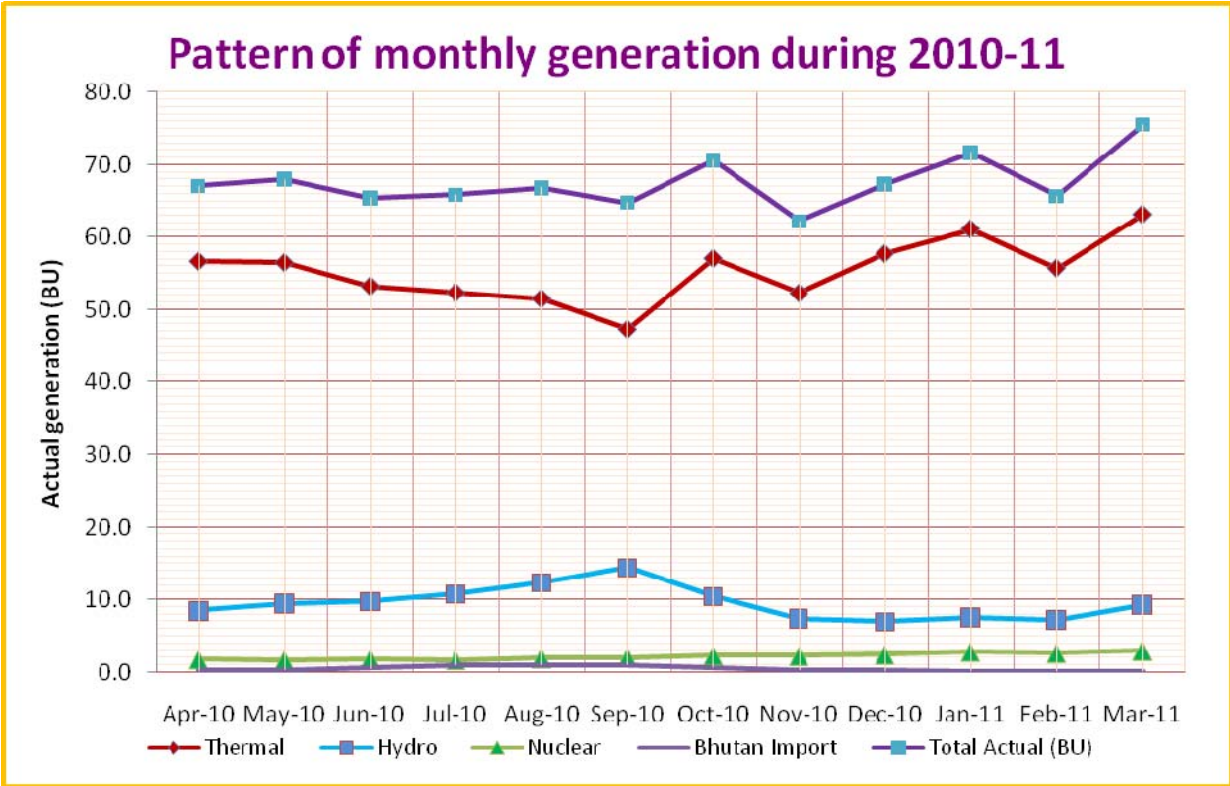
While the nuclear and hydro generation exceeded their respective targets, the thermal generation was lower than its target. Reasons for the lower thermal generation are discussed in the following paragraphs.

The month wise energy generation targets vis-à-vis actual generation from Thermal, Nuclear & hydro stations and imports from Bhutan were as shown below:

Month	Target (BU)	Thermal (BU)	Hydro (BU)	Nuclear (BU)	Bhutan Import (BU)	Total Actual (BU)	Actual as % of target
Apr-10	65.1	56.7	8.5	1.8	0.2	67.1	103.08
May-10	68.6	56.5	9.5	1.7	0.3	68.0	99.12
Jun-10	65.8	53.3	9.8	1.8	0.6	65.4	99.41
Jul-10	69.1	52.4	10.8	1.7	1.0	65.9	95.33
Aug-10	70.5	51.5	12.4	1.9	1.0	66.8	94.82
Sep-10	70.0	47.3	14.5	2.0	1.0	64.8	92.56
Oct-10	71.2	57.1	10.5	2.3	0.7	70.6	99.18
Nov-10	66.9	52.3	7.4	2.3	0.3	62.3	93.08
Dec-10	70.4	57.7	7.0	2.4	0.2	67.3	95.63
Jan-11	72.4	61.1	7.6	2.8	0.1	71.7	98.97
Feb-11	66.7	55.7	7.2	2.7	0.1	65.7	98.51
Mar-11	74.1	63.2	9.3	3.0	0.1	75.5	101.82
Total	830.8	664.9	114.3	26.3	5.6	811.1	97.63

The total monthly generation varied in the range of 62.3 BU (during the month of November'10) to the maximum value of 75.5 BU (achieved during the month of March'11). Reasons for lower generation during the month of November'10 were mainly due to reduced domestic and agriculture loads due to pleasant season leading to low demand during the month. The thermal generation had a lower peak during the month of September'10 due to higher hydro generation on account of increased inflows.

The month wise pattern of energy generation from Thermal, Nuclear & hydro stations and imports from Bhutan are shown graphically below :



The actual generation achieved in various regions of the country with reference to targets is given in the table below:

Region	Target (BU)	Actual (BU)	% of Target
Northern	231.30	230.49	99.65
Western	260.90	261.97	100.41
Southern	184.89	183.84	99.43
Eastern	138.58	120.84	87.20
North -Eastern	8.53	8.35	97.85
Bhutan Import	6.55	5.61	85.68
Total (All India)	830.76	811.10	97.63

The generations in all the regions except Western Region were below their respective targets. As may be observed there from, the shortfall has been largest in case of Eastern Region. Main reasons for lower generation in the Eastern Region was on account of shortfall in respect of generation of some thermal power stations of DVC (5.4 BU), NTPC (3.57 BU), DPL (2.71 BU) , WBPDCL (1.77 BU) & Sterlite Energy Ltd (1.05 BU) with respect to their respective generation targets. The region wise and category wise targets and actual generation is given in Annex-I.

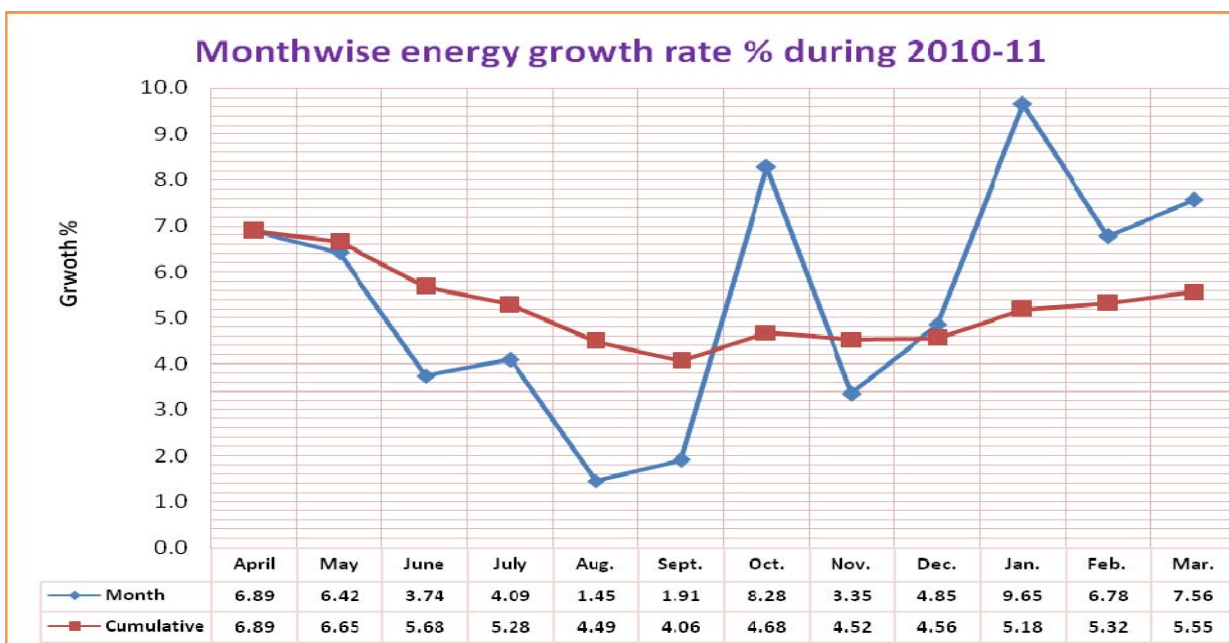
3. Growth Rate

The growth rate of energy generation in the country since 2000-01 is given below:

Plan	Year	Generation (BU)	Annual Growth (%)	CAGR (%)
IX Plan	2001-02	515.3	3.1	5.17
X Plan	2002-03	531.6	3.2	
	2003-04	558.3	5.0	
	2004-05	587.4	5.2	
	2005-06	617.5	5.1	
	2006-07	662.5	7.3	
XI Plan	2007-08	704.5	6.3	
	2008-09	723.8	2.7	
	2009-10	771.2	6.6	
	2010-11*	811.1	5.55	

* Generation during 2010-11 excludes generation from plants up to 25 MW Capacity.

The annual growth in the energy generation during the year has been 5.55% against the CAGR of 5.17 % during the period 2001-02 to 2010-11. It was restricted to 5.55% only on account of lower growth rates achieved during the months of June, July, August, September, November & December. The variations in the monthly and cumulative growth rates achieved in energy generation during the year 2010-11 are presented in the figure below.



Region wise and category wise growth in power generation during the Year 2010-11 is given at Annex-II. The Region-wise growth rate was as under:

Region	Actual 2010-11 (BU)	Last Year 2009-10 (BU)	Growth Rate (%)
Northern	230.49	213.95	7.74
Western	261.97	248.70	5.33
Southern	183.84	179.10	2.65
Eastern	120.84	113.58	6.39
North -Eastern	8.35	7.75	7.75
Bhutan Import	5.61	5.36	4.69
Total (All India)	811.10	768.43	5.55

Main reasons of lower growth rate were as under:

- During the months of May, June, July & August some of the power plants in the Western Region including Chandrapur TPS in Maharashtra were kept closed on account of acute shortage of water in these areas due to deficient rainfalls received in the catchment area during the years 2008-09 and 2009-10.
- After arrival of good Monsoon in the country, there was sudden drop in agriculture and domestic loads resulting in to lower monthly growth rate. During the months of August & September it fell below 2.0% against 10.6% & 7.9% monthly growth rate achieved during the corresponding months in the year 2009-10.
- Generation in some of the thermal power plants was restricted / plants were closed on account of receipt of inferior/wet quality of coal.

4. Operation Performance of Power Stations - Salient features

Some of the important salient features of operation performance of generating stations in the country during the year 2010-11 are enumerated below:

- Gross annual generation of the country has crossed the 800 BU mark (811.1 BU).
- Gross monthly generation figure has crossed the 75 BU mark (75.5 BU achieved during March'11).
- Gross daily generation figure has crossed the 2.5 BU mark (2.503 BU achieved on 17th March, 2011).
- Gross daily generation of 2.508 BU figure was maximum on 18th March, 2011.
- The nuclear generation achieved a remarkable growth rate of 41.04% due to improved availability of nuclear fuel to the nuclear plants.
- The generation from hydro based plants also improved with a growth rate of 10.01% due to revival of good monsoon after two successive years of deficient/scanty rain fall conditions.

- The total thermal generation has achieved a growth rate of 3.81%. Coal based generation recorded a growth rate of 3.99 %.
- Growth in coal based generation is constrained due to 92.6% materialization of the requirement of coal. As on 31.03.2011, 29 power stations had critical stock including 13 stations with super critical stock i.e. stock for less than 4 days.
- The average PLF of thermal power projects (Coal/Lignite) achieved during the year was 75.1%, as compared to 77.68% in the previous year.
- 53 numbers of stations with an aggregate installed capacity of 53827.5 MW achieved PLF more than national average PLF of 75.07%.
- 19 numbers of thermal power stations with an aggregate installed capacity of 21995 MW operated above 90% PLF.
- Operational availability of thermal stations has marginally reduced to 84.24% from 85.10% achieved during the previous year.
- The growth rate in respect of Liquid fuel based GTs, Multi-fuel Stations as well as DG sets had a negative growth rate.

5. Performance of Thermal Units

5.1. Fuel wise Break up

The details of fuel-wise break-up of thermal generating units during the year 2010-11 are given below:

Particulars	Targets (BU)	Actual Generation (BU)	Actual Generation last year (BU)	Growth	PLF (%)	
					2010-11	2009-10
Coal	556.134	535.271	514.732	3.99	75.37	77.98
Lignite	27.778	26.402	24.769	6.59	73.77	76.16
Gas Turbine (gas)	98.713	97.773	88.201	10.85	66.15	67.49
Gas Turbine (liquid fuel)	3.380	2.488	8.370	-70.28		
Multi-fuel	0.800	0.0	0.457	-100.00	0.00	18.62
Diesel	4.052	2.979	4.010	-25.69		
Total (Thermal)	690.857	664.914	640.537	3.81	75.07	77.68

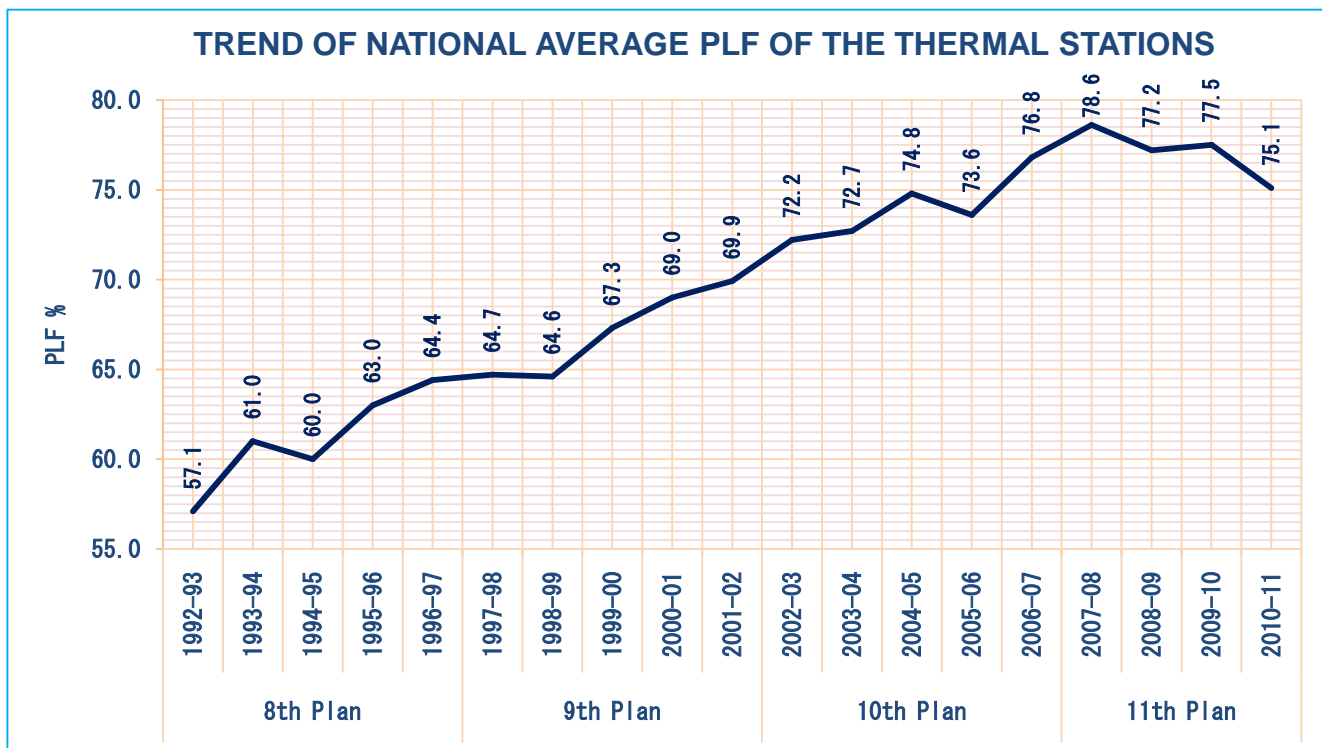
The shortfall in the thermal generation has been 19.652 BU (2.37%). The growth rate in respect of Liquid fuel based GTs; Multi-fuel Stations as well as DG sets had a negative growth rate. The analysis of the shortfall has been presented in Para 10.

5.2. National average PLF

The average Plant Load Factor (PLF) achieved during the year was 75.07% as compared to 77.68% in the previous year.

Further, 53 numbers of Plants with an aggregate installed capacity of 53827.5 MW achieved PLF greater than the national average PLF. List of these stations is given at Annex-III.

The trend of national average PLF of the thermal stations since 1997-98 onwards is represented in the graph below:



Main reasons of low PLF, as compared to the previous year were mainly increased forced outage of thermal units, unscheduled/ extended planned maintenance of some of the thermal units and forced shut down/ backing down of some thermal units due to raw water problems, coal shortages and receipt of poor quality / wet coal and also due to receipt of lower schedule from the beneficiary states.

5.3. Number of stations operating above 90% PLF

During the year 16 number of thermal power stations with an aggregate installed capacity of 17735 MW operated above 90% PLF as compared to 21 numbers of stations during previous year. List of the coal based stations operated above 90% PLF is given at Annex-IV. Number of coal/lignite based thermal power stations operated above 90% PLF during last 5 years is given below:

Year	No. of Station	Corresponding Installed Capacity (MW)
2006-07	16	14370
2007-08	22	24013
2008-09	18	20590

Year	No. of Station	Corresponding Installed Capacity (MW)
2009-10	21	25238
2010-11	19	21995

5.4. Operating Availability of thermal stations

During the year 2010-11, operational availability of thermal stations has marginally reduced to 84.24 % as compared to 85.10 % during the previous year. It was mainly due to increased forced outages of thermal units. The operating availability of thermal plants during the last five years is given below:

Year	Planned Maintenance (%)	Forced Outage (%)	Operational Availability (%)
2006-07	8.43	7.85	83.72
2007-08	7.54	7.71	84.76
2008-09	5.66	9.29	85.05
2009-10	6.05	8.85	85.10
2010-11*	6.18	9.58	84.24

*tentative

5.5. Maximum PLF

During the year 2010-11, only one thermal power station achieved PLF greater than 100%. Dahanu TPS (500 MW) of M/s Reliance Energy Limited recorded a PLF of 101.00%.

6. Gas Based Generation

During the period April - July'2010 (till arrival of Monsoon) the gas based generation had a positive growth due to better availability of the gas from the KG-D6. However, immediately after arrival of good monsoon, the gas & liquid fuel based energy generation suffered from the problem of lower system demand mainly on account of sudden drop in the domestic & agricultural demands due to better availability of water, better weather conditions & increased hydro and nuclear generations. As a result, the growth rate of gas based generation became negative in the months of August, September, November, January, February & March.

The PLF of gas based plants fell considerably from 77.29% (achieved in April'2010) to merely 58.70% during the month of November'10. The PLF of gas based plants improved from December'10 onward due to increased generation and retirement some of the less efficient vintage units which were earlier operating in open cycle mode.

Comparison of month wise energy generation of gas based plants in the country and their average PLF during the year 2010-11 with the energy generation and PLF% during the corresponding months in the year 2009-10 and month wise growth rate has been given in the table on the next page:

Month	2010-11			2009-10			Growth (%)
	IC (MW)	Generation* (BU)	PLF (%)	IC (MW)	Generation* (BU)	PLF (%)	
Apr	17001	9.46	77.29	14822	7.02	65.85	34.76
May	17001	9.17	72.52	15669	7.65	65.66	19.87
Jun	17001	8.48	69.29	15949	7.90	68.76	7.34
Jul	17299	8.17	63.50	15949	7.58	63.91	7.78
Aug	17320	8.15	63.24	15949	8.49	71.55	-4.00
Sep	17320	7.66	61.43	16390	7.73	65.52	-0.91
Oct	17320	9.06	70.33	16768	8.19	65.67	10.62
Nov	17570	7.43	58.70	16768	7.59	62.84	-2.11
Dec	17330	8.38	65.00	16768	8.25	66.12	1.58
Jan	17402	8.49	65.55	17001	8.85	69.99	-4.07
Feb	17402	7.42	63.45	17001	7.94	69.48	-6.55
Mar	17652	8.38	63.84	17001	9.37	74.06	-10.57
Annual		100.26	66.15		96.57	67.49	3.82

* Generation excludes generation from plants up to 25 MW Capacity.

The generation from gas based power Plants which have been allocated gas from the KG D-6 basin as also other gas/liquid fuel based plants (not serviced by KG D6 basin) has separately been given at Annex - V.

7. Performance of Nuclear Units

Nuclear generation registered a remarkable growth during the year 2010-11 mainly due to improved nuclear fuel conditions and additional generation from the newly commissioned nuclear unit at Kaiga in January'11 & re-commissioning of some of the units after R&M works. Average PLF of 65.45% in the year 2010-11 achieved by the nuclear plants is highest among last 5 years due to the improved fuel availability as detailed below:

Year	Targets (BU)	Actual Generation (BU)	Achievement %	Growth	PLF (%)
2005-06	16.80	17.24	102.62	4.78	63.2
2006-07	18.41	18.61	101.09	7.95	57.5
2007-08	22.71	16.78	73.89	-9.83	46.4
2008-09	19.00	14.71	77.42	-12.34	40.8
2009-10	19.00	18.64	98.11	26.72	51.1
2010-11	22.00	26.28	119.48	41.04	65.45

8. Performance of Hydro Stations

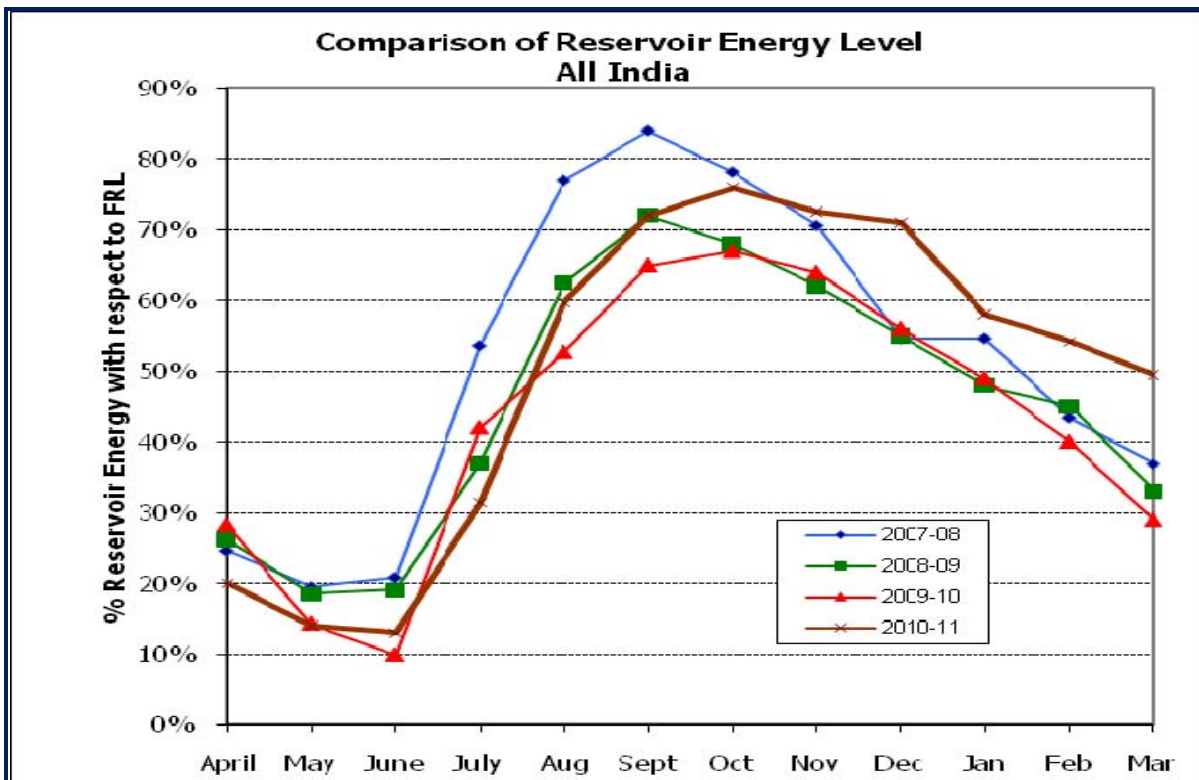
During the year 2010-11, the hydroelectric energy generation in the country also improved considerably on account of good monsoon leading to improved inflows. The energy generation from the hydro electric stations during the year 2010-11 was 114.296

BU against the target of 111.352 BU which is 102.64 % of the programme, registering a growth of 10.01% over previous year.

Region wise details are given below:-

Region	Hydro generation performance during 2010-11	
	% of Programme	% of last year's actual
Northern	109.40	114.06
Western	105.98	113.08
Southern	95.72	101.74
Eastern	90.02	109.27
North Eastern	92.00	114.41
Total (All India)	102.64	110.01

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 18,273MW which constitute about 48.6% of the hydro capacity and 44.22% in terms of their share in annual hydroelectric energy generation in the country. The month wise (on the last day of the month) storage position of these reservoirs during 2010 -11 as compared to that obtained during the previous three years is shown graphically below.



The region-wise storage positions of energy content as on 31.03.2011 along with the comparison of the same with the last three years is given at Annex-VI. The total energy

content of 31 reservoirs at 16717 MU on 31st March'11 is about 69% higher than the energy content of 9878 MU on the same day last year.

The reservoirs positions in the five Regions of the country are summarized below:

Region	No. of schemes	Installed Capacity (MW)	Design Energy (MU)	Energy Content at FRL (MU)	Energy Content on 31.03.2011		Energy Content Last Year on same day		% variation with reference to last year on same day
					(MU)	% of Energy at FRL	(MU)	% of Energy at FRL	
Northern	7	3,991	12,545	6,012	3872	64%	715	12%	442%
Western	6	4,980	13,910	8,417	3826	45%	3245	39%	18%
Southern	12	7,203	20,432	15,814	6796	43%	5126	32%	33%
Eastern	5	2,012	5,676	3,298	2162	66%	745	23%	190%
North Eastern	1	90	450	250	61	25%	48	19%	29%
Total (All India)	31	18,273	53,007	33,790	16717	49%	9878	29%	69%

9. Performance of Central Sector utilities

The Central Sector Utilities have generated 273.7 BU from their thermal stations against the target of 270.0 BU representing achievement of 101.36%. The performance of the various Central Sector Utilities in the thermal power generation is given below:

Organization	Target (BU)	Actual Generation (BU)	Achievement (%)
APCPL	0.4	0.1	27.72
DVC	21.8	16.5	75.94
K.B.U.N.L	0.6	0.3	54.73
NEEPCO.	2.3	2.5	107.24
NLC	17.1	17.9	104.51
NSPCL	1.3	4.0	305.78
NTPC Ltd.	217.0	220.5	101.64
RGPPL	9.6	11.8	123.32
Total (Central Sector- thermal)	270.0	273.7	101.36

In case of hydro, the total Central Sector Utilities generation is 46.0 BU against the target of 41.6 BU representing an achievement of 110.54 %. The performance of the various Central Sector Utilities in hydro power generation is given below:

Organization	Target (BU)	Actual Generation (BU)	Achievement (%)
BBMB	9.3	11.3	121.55

Organization	Target (BU)	Actual Generation (BU)	Achievement (%)
DVC	0.3	0.1	36.51
NEEPCO.	2.8	2.6	93.33
NHDC	3.2	3.2	99.89
NHPC	16.7	18.6	111.55
SJVNL	6.5	7.1	109.77
THDC	2.9	3.1	107.59
Total (Central Sector- hydro)	41.6	46.0	110.54

The generation performance of utilities in the central sector, private sector and state sector is given in **Annex-VII**.

10. Analysis of the shortfall

Though the total generation during the year 2010-11 has achieved a growth rate of 5.55%, it fell short of target by 19.652 BU (2.37%). Although the thermal generation fell short by 26.942 BU (3.76%), the nuclear and hydro generation exceeded their targets by 4.28 BU (19.48%) and 2.94 BU (2.64%) respectively. Coal/lignite based thermal generation alone suffered a shortfall of about 22.238 BU. Growth in thermal generation was constrained mainly due to the following:

- Growth in coal based generation is constrained due to 92.6% materialization of the requirement of coal. As on 31.03.2011, 29 power stations had critical stock including 13 stations with super critical stock i.e. stock for less than 4 days.
- Loss of generation of about 7.0 BU during the year 2010-11 (as per the information received so far) due to shortage of coal has been reported.
- Loss of generation of about 7.7 BU during the year 2010-11 (as per the information received so far) due to poor quality/ wet coal.
- Loss of generation due to delay in commissioning/stabilization of some new thermal units during the year 2010-11 was 13.7 BU (details given at **Annex-VIII**). However this loss was offset up to some extent (5.3 BU) by some of the newly commissioned units which achieved higher generation with respect to targets set for them (details given at **Annex-VIII**). Overall loss of generation with respect to the targets for the new units during the current year is 8.4 BU.
- Loss of generation of about 2.7 BU during the year 2010-11 (as per the information received so far) due to Reserve Shut Down of units on account of low/ no schedule from beneficiary states and discontinuing the operation of some vintage units in the Western Region.
- Loss of generation due to backing down of units due to Low schedule from beneficiary states during the year 2010-11 has been reported as 7.0 BU by the generating utilities.

- Loss of generation due to backing down/ shutdown of units during the year 2010-11 due to transmission constraints have been reported as 1.2 BU by the generating utilities.
- Loss of generation of about 2.7 BU during the year 2010-11 due to forced shutdown of some units in Maharashtra due to acute water shortages in that area has been reported for the period April'10 to July/ August'10.

A statement indicating the thermal generating stations suffering shortfall in generation exceeding 100 MU along with the reasons thereof is attached at **Annex-IX**.

ANNEXES

Targets & Actual Generation in the Country during the Year 2010-11
Region Wise and Category Wise

Region/ Category	Target (MU)	Actual (MU)	% of Target
NORTHERN REGION			
Thermal	171704.41	165063.33	96.13
Nuclear	8553.00	9591.19	112.14
Hydro	51044.00	55839.79	109.4
Total	231301.41	230494.31	99.65
WESTERN REGION			
Thermal	238109.18	236354.08	99.26
Nuclear	8601.00	10569.63	122.89
Hydro	14193.00	15041.53	105.98
Total	260903.18	261965.24	100.41
SOUTHERN REGION			
Thermal	148159.93	147200.08	99.35
Nuclear	4846.00	6123.97	126.37
Hydro	31882.00	30518.04	95.72
Total	184887.93	183842.09	99.43
EASTERN REGION			
Thermal	128594.90	111851.75	86.98
Hydro	9988.00	8991.10	90.02
Total	138582.90	120842.85	87.2
NORTH EASTERN REGION			
Thermal	4288.08	4444.59	103.65
Hydro	4245.00	3905.33	92
Total	8533.08	8349.92	97.85
BHUTAN IMPORT	6548.00	5610.05	85.68
ALL INDIA REGION			
Thermal	690856.50	664913.83	96.24
Nuclear	22000.00	26284.79	119.48
Hydro	111352.00	114295.79	102.64
Bhutan Import	6548.00	5610.05	85.68
Total	830756.50	811104.46	97.63

* Generation during 2010-11 excludes generation from plants up to 25 MW Capacity.

**Growth in Power Generation during the Year 2010-11
Region Wise and Category Wise**

Region/ Category	Generation 2010-11 (MU)	Generation Last Year	Growth (%)
NORTHERN REGION			
Thermal	165063.33	160683.20	2.73
Nuclear	9591.19	4305.80	122.75
Hydro	55839.79	48956.52	14.06
Total	230494.31	213945.52	7.74
WESTERN REGION			
Thermal	236354.08	226339.74	4.42
Nuclear	10569.63	9058.96	16.68
Hydro	15041.53	13301.45	13.08
Total	261965.24	248700.15	5.33
SOUTHERN REGION			
Thermal	147200.08	143826.95	2.35
Nuclear	6123.97	5271.68	16.17
Hydro	30518.04	29996.37	1.74
Total	183842.09	179095.00	2.65
EASTERN REGION			
Thermal	111851.75	105351.89	6.17
Hydro	8991.10	8228.35	9.27
Total	120842.85	113580.24	6.39
NORTH EASTERN REGION			
Thermal	4444.59	4335.65	2.51
Hydro	3905.33	3413.58	14.41
Total	8349.92	7749.23	7.75
BHUTAN IMPORT	5610.05	5358.57	4.69
ALL INDIA REGION			
Thermal	664913.83	640537.43	3.81
Nuclear	26284.79	18636.44	41.04
Hydro	114295.79	103896.27	10.01
Bhutan Import	5610.05	5358.57	4.69
All India (Total)	811104.46	768428.71	5.55

* Generation during 2010-11 excludes generation from plants up to 25 MW Capacity.

List of Thermal Power Stations (Coal / Lignite based) which achieved PLF above National average PLF of 75.07 % during the year 2010-11

S No.	Station	Capacity (MW)	Sector	Organisation	PLF%
1	DAHANU TPS	500	PVT	RIL (DAHANU)	101.00
2	OP JINDAL TPS	1000	PVT	JPL	98.04
3	TORANGALLU TPS(SBU-I)	260	PVT	JSWEL	97.78
4	DSPM TPS	500	STATE	CSPGCL	96.81
5	SINGRAULI STPS	2000	CENTRAL	NTPC Ltd.	96.54
6	SIPAT STPS	1000	CENTRAL	NTPC Ltd.	96.53
7	SIMHADRI	1000	CENTRAL	NTPC Ltd.	96.08
8	TORANGALLU TPS(SBU-II)	600	PVT	JSWEL	95.53
9	VINDHYACHAL STPS	3260	CENTRAL	NTPC Ltd.	94.58
10	KORBA STPS	2600	CENTRAL	NTPC Ltd.	93.29
11	UNCHAHAHAR TPS	1050	CENTRAL	NTPC Ltd.	93.26
12	RIHAND STPS	2000	CENTRAL	NTPC Ltd.	93.15
13	TANDA TPS	440	CENTRAL	NTPC Ltd.	92.61
14	TALCHER (OLD) TPS	470	CENTRAL	NTPC Ltd.	92.21
15	SOUTHERN REPL. TPS	135	PVT	CESC	92.08
16	BHILAI TPS	500	CENTRAL	NSPCL	91.73
17	KORBA-WEST TPS	840	STATE	CSPGCL	91.04
18	KOTA TPS	1240	STATE	RRVUNL	91.04
19	RAMAGUNDEM STPS	2600	CENTRAL	NTPC Ltd.	90.27
20	TITAGARH TPS	240	PVT	CESC	88.82
21	ROPAR TPS	1260	STATE	PSEB	88.07
22	SABARMATI (D-F STATIONS)	340	PVT	TOR. POW. (AECO)	87.73
23	GH TPS (LEH.MOH.)	420	STATE	PSEB	86.82
24	IB VALLEY TPS	420	STATE	OPGC	86.56
25	MUNDRA TPS	1980	PVT	APL	86.23
26	TALCHER STPS	3000	CENTRAL	NTPC Ltd.	85.78
27	RAMAGUNDEM - B TPS	62.5	STATE	APGENCO	85.76
28	JSW RATNAGIRI TPP	600	PVT	JSWEL	84.66
29	BAKRESWAR TPS	1050	STATE	WBPDCL	84.02
30	ANPARA TPS	1630	STATE	UPRVUNL	83.96
31	NEYVELI TPS-II	1470	CENTRAL	NLC	83.40
32	GH TPS II (LEH.MOH)	500	STATE	PSEB	83.04
33	DADRI (NCTPP)	1820	CENTRAL	NTPC Ltd.	82.98
34	BUDGE BUDGE TPS	750	PVT	CESC	82.75
35	METTUR TPS	840	STATE	TNEB	82.42

List of Thermal Power Stations (Coal / Lignite based) which achieved PLF above National average PLF of 75.07 % during the year 2010-11

S No.	Station	Capacity (MW)	Sector	Organisation	PLF%
36	NEYVELI TPS(Z)	250	PVT	ST-CMSECP	82.22
37	RAYALASEEMA TPS	1050	STATE	APGENCO	82.20
38	NORTH CHENNAI TPS	630	STATE	TNEB	81.74
39	NEYVELI (EXT) TPS	420	CENTRAL	NLC	81.42
40	JOJOBERA TPS	360	PVT	TATA PCL	81.39
41	Dr. N.TATA RAO TPS	1760	STATE	APGENCO	80.41
42	KOTHAGUDEM TPS	720	STATE	APGENCO	80.02
43	SURAT LIG. TPS	500	PVT	GIPCL	79.37
44	FARAKKA STPS	2100	CENTRAL	NTPC Ltd.	79.12
45	KOTHAGUDEM TPS (NEW)	500	STATE	APGENCO	78.01
46	PANIPAT TPS	1360	STATE	HPGCL	77.85
47	KHAPARKHEDA TPS- II	840	STATE	MAHAGENCO	77.68
48	WANAKBORI TPS	1470	STATE	GSECL	77.65
49	TUTICORIN TPS	1050	STATE	TNEB	77.29
50	KORBA-III	240	STATE	CSPGCL	76.74
51	SURATGARH TPS	1500	STATE	RRVUNL	76.71
52	KAKATIYA TPS	500	STATE	APGENCO	76.47
53	KORBA-II	200	STATE	CSPGCL	75.68
	Total	53827.5			

**List of Coal based Thermal Power Stations which achieved
PLF above 90% during the year 2010-11**

S No.	Station	Capacity (MW)	Sector	Organisation	PLF%
1	DAHANU TPS	500	PVT	RIL (DAHANU)	101.00
2	OP JINDAL TPS	1000	PVT	JPL	98.04
3	TORANGALLU TPS(SBU-I)	260	PVT	JSWEL	97.78
4	DSPM TPS	500	STATE	CSPGCL	96.81
5	SINGRAULI STPS	2000	CENTRAL	NTPC Ltd.	96.54
6	SIPAT STPS	1000	CENTRAL	NTPC Ltd.	96.53
7	SIMHADRI	1000	CENTRAL	NTPC Ltd.	96.08
8	TORANGALLU TPS (SBU-II)	600	PVT	JSWEL	95.53
9	VINDHYACHAL STPS	3260	CENTRAL	NTPC Ltd.	94.58
10	KORBA STPS	2600	CENTRAL	NTPC Ltd.	93.29
11	UNCHAHAR TPS	1050	CENTRAL	NTPC Ltd.	93.26
12	RIHAND STPS	2000	CENTRAL	NTPC Ltd.	93.15
13	TANDA TPS	440	CENTRAL	NTPC Ltd.	92.61
14	TALCHER (OLD) TPS	470	CENTRAL	NTPC Ltd.	92.21
15	SOUTHERN REPL. TPS	135	PVT	CESC	92.08
16	BHILAI TPS	500	CENTRAL	NSPCL	91.73
17	KORBA-WEST TPS	840	STATE	CSPGCL	91.04
18	KOTA TPS	1240	STATE	RRVUNL	91.04
19	RAMAGUNDEM STPS	2600	CENTRAL	NTPC Ltd.	90.27
	Total	21995			

Generation from Gas based Plants

GT Plant	Monitored Capacity (MW)	Sector	March 2010			April 2009 - March 2010			March 2011			April 2010 - March 2011		
			Target (BU)	Generation (BU)	PLF	Target (BU)	Generation (BU)	PLF	Target (BU)	Generation (BU)	PLF	Target (BU)	Generation (BU)	PLF
<u>Plants having Gas allocation from KG D6 Block</u>														
ANTA CCPP	419.33	CS	260	281	90.08	2800	3002	82.23	266	224	72	2800	2487.04	67.71
AURAIYA CCPP	663.36	CS	372	385	78.08	4200	4528	78.49	280	371	75	4400	4366.31	75.14
DADRI CCPP	829.78	CS	472	564	91.36	5300	5606	77.62	485	464	75	5500	5397.64	74.26
FARIDABAD CCPP	431.59	CS	131	291	90.67	2800	3212	85.00	263	285	89	2900	3154.97	83.45
GANDHAR CCPP	657.39	CS	357	399	81.49	4000	4489	78.41	397	291	60	4400	4057.62	70.46
KAWAS CCPP	656.2	CS	353	450	92.11	4000	4327	75.87	392	304	62	4400	3881.62	67.53
RATNAGIRI CCPP I	740	CS	260	345	62.63	3186	2499	38.55	267	318	58	3200	4153.09	64.07
RATNAGIRI CCPP II	740	CS	261	351	63.78	3206	3246	50.08	266	317	58	3200	3087.93	47.64
RATNAGIRI CCPP III	740	CS	261	302	54.82	3208	2540	39.18	267	317	58	3200	4597.52	70.92
DHUVARAN CCPP	218.62	SS	137	135	82.83	1586	1359	70.98	134	116	71	1531	892.77	46.62
UTRAN CCPP	518	SS	249	319	82.81	1599	1933	66.77	252.96	248	64	2958.79	2933.55	64.65
HAZIRA CCPP	156.1	SS	103	101	43.53	1149	1114	81.43	104.53	82	70	1180.36	1023.22	74.83
I.P.CCPP	270	SS	156	122	60.73	1736	1503	63.56	133	114	57	1500	1367.75	57.83
PRAGATI CCPP	330.4	SS	214	230	93.69	2400	2453	84.76	144	61	25	2400	2336.74	80.74
URAN CCPP	672	SS	330	409	60.26	3881	5105	63.90	410	444	89	4800	5589.93	76.66
DHOLPUR CCPP	330	SS	196	227	92.45	2247	2428	83.98	189	210.6	85.78	2247	1995.67	69.04
PEDDAPURAM CCPP	220	PS	132	152	92.81	1583	1527	79.26	121	117.92	72.04	1445	1429.12	74.16
ESSAR CCPP	515	PS	167	180	47.05	2000	1711	37.93	170	74.49	19.44	2000	1442.18	31.97
GAUTAMI CCPP	464	PS	200	286	82.88	1804	3080	82.56	207.13	274.63	79.55	2438.8	3337.82	82.12
BARODA CCPP	160	PS	58	106	89.32	1258	1065	76.00	110.54	26.33	22.12	1257.51	843.58	60.19

Generation from Gas based Plants

GT Plant	Monitored Capacity (MW)	Sector	March 2010			April 2009 - March 2010			March 2011			April 2010 - March 2011		
			Target (BU)	Generation (BU)	PLF	Target (BU)	Generation (BU)	PLF	Target (BU)	Generation (BU)	PLF	Target (BU)	Generation (BU)	PLF
Plants having Gas allocation from KG D6 Block (contd.)														
GMR Energy Ltd - Kakinada*	220	PS	0	0	0	0	364	18.91	115	163	99.58	1350	1009.48	52.38
PEGUTHAN CCPP	655	PS	431	369	75.63	5152	4591	80.01	447.28	246.07	50.49	4889.47	3665.72	63.89
JEGURUPADU CCPP	455.4	PS	270	215	63.56	3215	3294	82.58	260	242	71.42	3000	3083.18	77.29
KONASEEMA CCPP	280	PS	192	107	51.49	1730	864	42.27	198.66	197.32	59.6	1941.4	2349.09	66.4
KONDAPALLI EXTN CCPP	336	PS	136	147	84.71	136	390	77.43	163.38	198.99	73.08	1545.5	2044.27	70.11
KONDAPALLI CCPP	350	PS	215	242	46.44	2568	2743	89.47	210	162.4	31.18	2500	2139.03	69.77
GODAVARI CCPP	208	PS	125	101	65.39	1495	1547	84.90	115	108.94	70.4	1367	1462.39	80.26
TROMBAY CCPP	180	PS	118	141	104.99	1384	1415	89.72	129	139.67	104.29	1509	1568.73	99.49
VATWA CCPP	100	PS	69	69	92.27	772	798	91.08	68.82	37.62	50.56	780.05	670.3	76.52
SUGEN CCPP	1147.5	PS	495	742	86.91	4166	6611	78.96	512.5	699	82	6030.86	8223.04	81.8
PRAGATI CCGT-III	500.00	SS	0	0		0	0		502	0	0	1920	2	0.23
RITHALA CCPP	71.50	PS	0	0		0	0		48	19	35.25	244	87	56.53
VEMAGIRI CCPP	370	PS	192	276	100.26	2300	2994	92.37	205	234	85	2430	2821.34	87.05
Sub-Total	14800.17		6914	8044		7686 1	8197 2		7834	7108		87265	87502	
Plants - Gas/Liquid Fuel - not located on HBJ Pipeline														
R. GANDHI CCPP (Liq.)	359.58	CS	148	230	85.94	2100	2418	78	96	211	79	2100	1902.8	60.41
MAITHON GT (Liq.)	90.00	CS	0	0	0	0	0	0	0	0	0	0	0	0
AGARTALA GT	84.00	CS	55	56	89.11	611	663	90	55	56	89	611	644.09	87.53
KATHALGURI CCPP	291.00	CS	153	128	59.28	1675	1744	68	149	186	86	1700	1834.15	71.95
LAKWA GT	120.00	SS	62	69	76.85	747	763	73	88.01	67	75	877.08	766.47	72.91

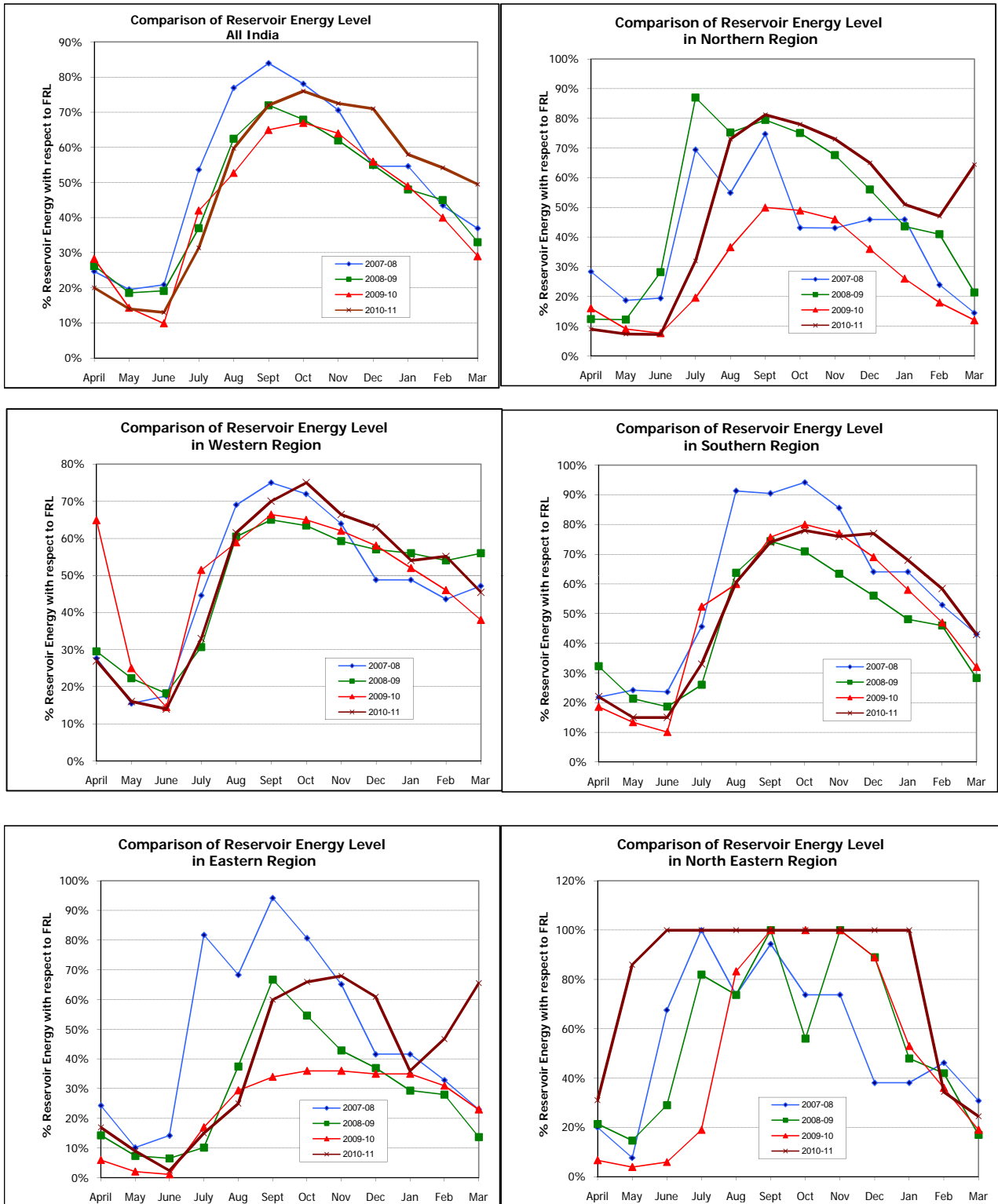
Generation from Gas based Plants

GT Plant	Monitored Capacity (MW)	Sector	March 2010			April 2009 - March 2010			March 2011			April 2010 - March 2011		
			Target (BU)	Generation (BU)	PLF	Target (BU)	Generation (BU)	PLF	Target (BU)	Generation (BU)	PLF	Target (BU)	Generation (BU)	PLF
Plants - Gas/Liquid Fuel - not located on HBJ Pipeline (contd.)														
NAMRUP CCPP	95.00	SS	44	44	61.74	427	420	60	43.1	52	74	490.6	508.74	61.13
NAMRUP ST	24.00	SS	8	1	8.06	91	36	17	7.7	0	0	85.4	21.08	10.03
PAMPORE GPS (Liq.)	175.00	SS	0	0	0	0	13	1	0	3	2	0	16.56	1.08
KARAIKAL CCPP	32.50	SS	22	15	61.54	258	225	79.2	23	8.84	36.56	255	191.52	67.27
RAMGARH CCPP	113.80	SS	46	33	38.47	433	353	35.4	63	29.68	35.05	710	300.52	30.15
BASIN BRIDGE GT (Liq.)	120.00	SS	21	2	2.61	243	82	7.78	13	29.85	33.43	150	48.61	4.62
KOVIKALPAL CCPP	107.00	SS	66	51	63.5	788	534	56.98	57	63.31	79.53	644	663.74	70.81
KUTTALAM CCPP	100.00	SS	58	52	69.72	658	646	73.72	60	0	0	682	172.58	19.7
VALUTHUR CCPP	186.20	SS	97	64	45.96	978	1065	65.27	99	65.15	47.03	1229	547.69	33.58
BARAMURA GT	58.50	SS	25	14	51.72	188	177	53.86	17	29.26	67.23	188	224.91	49.87
ROKHIA GT	90.00	SS	28	38	57.21	336	439	55.64	29.8	39.17	58.5	336	445.14	56.46
HALDIA GT (Liq.)	40.00	SS	0	0	0	0.00	0	0	0	0	0	0.00	0	0
KASBA GT (Liq.)	40.00	SS	0	0	0	0	0	0.00	0	0	0	0	0	0.00
KARUPPUR CCPP	119.80	PS	80	43	48.65	865	681	64.9	61	55.15	61.88	735	823.7	78.49
COCHIN CCPP (Liq.)	174.00	PS	66	58	22.25	800	564	36.98	75	81.66	63.08	800.00	226.72	14.87
VALANTARVY CCPP	52.80	PS	31	33	85.18	403	340	73.47	26	32.83	83.57	325	371.92	80.41
P.NALLUR CCPP	330.50	PS	212	209	85.18	2259	2252	77.78	213	219.97	89.46	2259	2498.3	86.29
GOA CCPP (Liq.)	48.00	PS	27	27	76.61	331	321	76.37	27.15	27.81	77.87	330.21	292.99	69.68
Sub-Total	2851.68		1010	931		11601	11163		962.61	1009.24		11918.1	9710.94	
Total	17651.85		7924	8975		88462	93135		8797	8118		99184	97213	

* Barge mounted plant which was earlier operated as a liquid fuel based station named Tanir Bavi at Karnataka

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

Position as on 31.03. 2011



Based on the water storage position of 31 major reservoirs in the country as monitored in CEA.
March data for the Year 2009-10 refers to position on 31st March 2010

Generation Performance of various Sectors during the Year 2010-11

Category / Sectors	Monitored Capacity (MW)	April 2010 - March 2011		Actual Generation 2009-10	% OF Programme	Growth (%)
		Programme	Actual *			
THERMAL						
CENTRAL SECTOR						
APCPL	500.00	354.00	98.14	0.00	27.72	-
DVC	3790.00	21761.00	16526.32	14690.60	75.94	112.50
K.B.U.N.L	220.00	578.00	316.36	460.58	54.73	68.69
NEEPCO.	375.00	2311.00	2478.24	2406.85	107.24	102.97
NLC	2740.00	17113.70	17884.98	17657.41	104.51	101.29
NSPCL	500.00	1314.00	4017.92	2418.38	305.78	166.14
NTPC Ltd.	30402.23	216967.41	220518.92	218836.33	101.64	100.77
RGPPL	2220.00	9600.00	11838.54	8290.55	123.32	142.80
TOTAL CENTRAL SEC.	40747.23	269999.11	273679.42	264760.70	101.36	103.37
TOTAL STATE SEC.	50732.69	317092.64	280359.55	287930.92	88.42	97.37
TOTAL IPP SEC.	16182.50	76520.57	84547.17	61269.32	110.49	137.99
TOTAL PVT. UTL. SEC.	3865.00	27244.18	26327.69	26576.49	96.64	99.06
TOTAL THERMAL	111527.40	690856.50	664913.83	640537.43	96.24	103.81
NUCLEAR						
CENTRAL SECTOR						
NPC	4780.00	22000.00	26284.79	18636.44	119.48	141.04
TOTAL NUCLEAR	4780.00	22000.00	26284.79	18636.44	119.48	141.04
HYDRO						
CENTRAL SECTOR						
BBMB	2866.30	9275.00	11274.14	9371.32	121.55	120.30
DVC	3790.00	21761.00	16526.32	14690.60	75.94	112.50
NEEPCO.	375.00	2311.00	2478.24	2406.85	107.24	102.97
NHDC	1520.00	3200.00	3196.59	3071.23	99.89	104.08
NHPC	3767.20	16668.00	18593.24	16960.47	111.55	109.63
SJVNL	1500.00	6500.00	7135.05	7018.86	109.77	101.66
THDC	1100.00	2897.00	3116.90	2116.78	107.59	147.25
TOTAL CENTRAL SEC.	11651.70	41642.00	46032.01	40877.50	110.54	112.61
TOTAL STATE SEC.	24356.70	63990.00	62924.15	57926.55	98.33	108.63
TOTAL IPP SEC.	978.00	4092.00	3973.87	3582.57	97.11	110.92
TOTAL PVT. UTL. SEC.	481.00	1628.00	1365.76	1509.65	83.89	90.47
TOTAL HYDRO	37467.40	111352.00	114295.79	103896.27	102.64	110.01
BHUTAN IMP		6548.00	5610.05	5359.00	85.68	104.68
TOTAL ALL INDIA	153774.80	830756.50	811104.46	768429.14	97.63	105.55

* PROVISIONAL BASED ON ACTUAL-CUM-ASSESSMENT

STATEMENT OF SHORTFALL IN GENERATION DUE TO DELAY IN COMMISSIONING/ STABILIZATION OF NEW
THERMAL UNITS DURING 2010-11

Sl. No.	NAME OF THE STATION	UNIT NO.	CAPACITY (MW)	Commissioning date		Date of stabilization	Generation (MUS)		
				Planned	Actual		Target	Actual	Shortfall
1	CHANDRAPURA (DVC) TPS	7	250	1-Dec-09	4-Nov-09	\$\$	1314.00	24.81	-1289.19
2	RAJIV GANDHI TPS	2	600	1-May-10	1-Oct-10	\$\$	1707.84	615.98	-1091.86
3	MEJIA TPS	7	500	1-Jul-10	30-Sep-10	\$\$	982.80	58.75	-924.05
4	CHHABRA TPP	2	250	1-Apr-10	4-May-10	\$\$	931.20	14.32	-916.88
5	CHANDRAPURA(DVC) TPS	8	250	1-Apr-10	31-Mar-10	\$\$	931.20	181.15	-750.05
6	STERLITE TPP	2	600	1-Jun-10	14-Oct-10	\$\$	1447.20	710.88	-736.32
7	PRAGATI CCGT-III	1	250	30-Apr-10	24-Oct-10	\$\$	711.60	2.49	-709.11
8	SURATGARH TPS	6	250	1-Sep-09	29-Aug-09	1-Oct-10	1314.00	773.18	-540.82
9	MEJIA TPS	8	500	1-Sep-10	26-Mar-11	\$\$	540.00	0.00	-540.00
10	PRAGATI CCGT-III	2	250	30-Jun-10	17-Feb-11	\$\$	491.40	0.00	-491.40
11	RAJIV GANDHI TPS	1	600	1-Apr-10	31-Mar-10	\$\$	2234.88	1801.28	-433.60
12	PARICHA TPS	5	250	1-Aug-10	#	\$\$	381.60	0.00	-381.60
13	BARSINGSAR LIGNITE	1	125	1-Apr-10	28-Jun-10	\$\$	482.00	118.98	-363.02
14	KODARMA TPP	1	500	1-Oct-10	#	\$\$	354.00	0.00	-354.00
15	DURGAPUR STEEL TPS	1	500	1-Oct-10	#	\$\$	354.00	0.00	-354.00
16	KHAPARKHEDA TPS- II	5	500	1-Oct-10	#	\$\$	354.00	0.00	-354.00
17	GIRAL TPS	2	125	1-Dec-09	6-Nov-09	\$\$	657.00	305.33	-351.67
18	JALIPA KAPURDI TPP	3	135	1-Jun-10	#	\$\$	325.43	0.00	-325.43
19	STERLITE TPP	1	600	1-Sep-10	29-Dec-10	\$\$	648.00	326.01	-321.99
20	PRAGATI CCGT-III	3	250	31-Aug-10	#	\$\$	270.00	0.00	-270.00
21	PRAGATI CCGT-III	5	250	31-Aug-10	#	\$\$	270.00	0.00	-270.00
22	INDIRA GANDHI STPP	1	500	1-Oct-10	31-Oct-10	1-Apr-11	354.00	98.14	-255.86
23	RAICHUR TPS	8	250	1-Jun-10	26-Jun-10	1-Feb-11	603.00	384.83	-218.17
24	JSW RATNAGIRI TPP	3	300	1-Oct-10	#	\$\$	212.40	0.00	-212.40
25	JALIPA KAPURDI TPP	4	135	1-Aug-10	#	\$\$	206.06	0.00	-206.06
26	PRAGATI CCGT-III	4	250	30-Sep-10	#	\$\$	177.00	0.00	-177.00
27	SANTALDIH TPS	6	250	1-Oct-10	#	\$\$	177.00	0.63	-176.37
28	NEW PARLI TPS	2	250	1-Mar-10	10-Feb-10	1-Aug-10	1314.00	1184.59	-129.41
29	KORBA STPS	7	500	1-Nov-10	26-Dec-10	1-Apr-11	316.00	212.87	-103.13
30	JALIPA KAPURDI TPP	5	135	1-Oct-10	#	\$\$	95.58	0.00	-95.58
31	BARSINGSAR LIGNITE	2	125	1-Jul-10	25-Jan-11	\$\$	245.70	153.27	-92.43
32	CHHABRA TPP	1	250	1-Nov-09	30-Oct-09	1-Jul-10	1314.00	1228.02	-85.98
33	SURAT LIG. TPS	4	125	1-Apr-10	23-Apr-10	\$\$	465.60	396.01	-69.59
34	RITHALA CCPP	3	37	31-Jul-10	#	\$\$	55.71	0.00	-55.71
35	RITHALA CCPP	2	36	31-May-10	4-Oct-10	\$\$	86.23	50.66	-35.57
	Total		10678				22324.43	8642.18	-13682.25

#- Unit yet to be commissioned

\$\$- Unit yet to stabilize

STATEMENT OF NEW THERMAL UNITS WHICH HAS EXCEEDED THE GENERATION TARGETS
DURING 2010-11

Sl. No.	NAME OF THE STATION	UNIT NO.	CAPACITY (MW)	Commissioning date		Date of stabilization	Generation (MUs)		
				Planned	Actual		Target	Actual	Excess gen.
1	DADRI (NCTPP)	6	490	1-Aug-10	30-Jul-10	1-Aug-10	747.94	1833.72	1085.78
2	KAKATIYA TPS	1	500	1-Jul-10	27-May-10	1-Feb-11	982.80	1832.79	849.99
3	UDUPI TPP	1	508	1-Aug-10	23-Jul-10	\$	774.65	1610.25	835.60
4	MUNDRA TPS	3	330	1-Jun-10	2-Aug-10	1-Sep-10	795.96	1583.43	787.47
5	PATHADI TPP	2	300	1-Apr-10	25-Mar-10	1-Aug-10	1117.44	1650.65	533.21
6	JSW RATNAGIRI TPP	1	300	1-May-10	24-Aug-10	1-Jan-11	853.62	1267.63	414.01
7	PARAS EXP.	2	250	1-Apr-10	27-Mar-10	1-Sep-10	931.20	1234.35	303.15
8	RAYALASEEMA TPS	5	210	1-Dec-10	31-Dec-10	\$	0.00	201.20	201.20
9	ROSA TPP Ph-I	2	300	1-Mar-10	26-Jun-10	1-Jul-10	1117.44	1245.82	128.38
10	MUNDRA TPS	4	330	1-Jul-10	20-Dec-10	1-Feb-11	648.65	725.00	76.35
11	JALIPA KAPURDI TPP	2	135	1-May-10	8-Jul-10	1-Nov-10	383.85	425.45	41.60
12	SURAT LIG. TPS	3	125	1-Apr-10	12-Apr-10	1-Jan-11	465.60	494.03	28.43
13	JSW RATNAGIRI TPP	2	300	1-Jul-10	9-Dec-10	\$	589.68	609.87	20.19
	Total		4078				9408.83	14714.19	5305.36

\$- Unit yet to stabilize

Net loss of generation due to slippage in commissioning/ stabilization of new units	8376.89	MU
--	----------------	-----------

Statement of shortfall in generation (more than 100 MU) vis -a-vis targets of existing thermal stations during 2010-11						
Organisation	Station Name	Capacity (MW)	Target (MU)	Actual (MU)	Shortfall (MU)	Major Reasons
APCPL	INDIRA GANDHI STPP	500.00	354.00	98.14	-255.86	New Unit yet to stabilize
APCPL Total		500.00	354.00	98.14	-255.86	
BSES(C)	COCHIN CCPP (Liq.)	174.00	800.00	226.72	-573.28	No Schedule from beneficiaries
BSES(C) Total		174.00	800.00	226.72	-573.28	
DPL	D.P.L. TPS	690.00	4314.00	1612.28	-2701.72	Stator earth fault of Unit#3 till Dec'10, turbine bearing problem of Unit #7 in May'10 & other Misc. forced outages.
DPL Total		690.00	4314.00	1612.28	-2701.72	
DVC	BOKARO `B` TPS	630.00	3863.00	3435.65	-427.35	Misc. Forced outages of units
	CHANDRAPURA(DVC) TPS	1250.00	4684.20	2770.19	-1914.01	Delay in stabilization of new Units 7 & 8.
	DURGAPUR STEEL TPS	0.00	354.00	0.00	-354.00	Delay in commissioning of new unit
	DURGAPUR TPS	340.00	2213.00	1504.56	-708.44	Misc. Forced outages of units
DVC Total		2220.00	11114.20	7710.40	-3403.80	
ESSAR	ESSAR CCPP	515.00	2000.00	1442.18	-557.82	Low schedule from beneficiaries
ESSAR Total		515.00	2000.00	1442.18	-557.82	
GIPCL	BARODA CCPP	160.00	1257.51	843.58	-413.93	Low schedule from beneficiaries
GIPCL Total		160.00	1257.51	843.58	-413.93	
GMDCL	AKRIMOTA LIG TPS	250.00	1568.00	1171.41	-396.59	Misc. forced outage and extended Planned maintenance of unit#1
GMDCL Total		250.00	1568.00	1171.41	-396.59	
GMR ENERG	GMR Energy Ltd - Kakinada	220.00	1350.00	1009.48	-340.52	Low schedules from beneficiaries
GMR ENERG Total		220.00	1350.00	1009.48	-340.52	
GSECL	DHUVARAN CCPP	218.62	1531.00	892.77	-638.23	Low schedules from beneficiaries
	DHUVARAN TPS	220.00	800.00	0.00	-800.00	Units under retirement process
	GANDHI NAGAR TPS	870.00	5663.00	5397.08	-265.92	Misc. Forced outages of units/ Reserve shut down
GSECL Total		1308.62	7994.00	6289.85	-1704.15	
GSEGL	HAZIRA CCPP	156.10	1180.36	1023.22	-157.14	Low Demand/ costly power
GSEGL Total		156.10	1180.36	1023.22	-157.14	
IPGPCL	I.P.CCPP	270.00	1500.00	1367.75	-132.25	Low system demand/ costly power

Statement of shortfall in generation (more than 100 MU) vis -a-vis targets of existing thermal stations during 2010-11						
Organisation	Station Name	Capacity (MW)	Target (MU)	Actual (MU)	Shortfall (MU)	Major Reasons
IPGPCL Total		270.00	1500.00	1367.75	-132.25	
KPCL	BELLARY TPS	500.00	3430.00	2636.55	-793.45	Extended planned maintenance & Turbine vibration high of the unit
KPCL Total		500.00	3430.00	2636.55	-793.45	
MAHAGENCO	BHUSAWAL TPS	470.00	3240.00	2501.04	-738.96	Unit 1 running on merchant basis, Misc forced outages
	CHANDRAPUR(MAHARASHTRA) STPS	2340.00	16000.00	10840.78	-5159.22	Shut down of Units due to acute water shortage till July & thereafter poor quality coal/ wet coal problems
MAHAGENCO Total		2810.00	19240.00	13341.82	-5898.18	
MPPGCL	AMARKANTAK EXT TPS	450.00	2450.00	1917.21	-532.79	Forced outages of unit 1, Delay in restoration of unit 2 after R&M.
MPPGCL Total		450.00	2450.00	1917.21	-532.79	
NLC	BARSINGSAR LIGNITE	250.00	727.70	272.25	-455.45	Delay in stabilisation of new units
NLC Total		250.00	727.70	272.25	-455.45	
NTPC Ltd.	ANTA CCPP	419.33	2800.00	2487.04	-312.96	Low schedule from beneficiaries
	BADARPUR TPS	705.00	5400.00	4550.80	-849.20	Low schedule from beneficiaries & Misc. Forced outages.
	DADRI CCPP	829.78	5500.00	5397.64	-102.36	Low schedule from beneficiaries
	FARAKKA STPS	2100.00	11930.00	11088.85	-841.15	Extended PM of unit-3, coal shortage
	GANDHAR CCPP	657.39	4400.00	4057.62	-342.38	Low schedule from beneficiaries
NTPC Ltd. Total		4711.50	30030.00	27581.95	-2448.05	
PSEB	GND TPS(BHATINDA)	440.00	2280.00	1774.65	-505.35	Forced outage of unit 1,2 & 3 & RSD of unit 4 in September
PSEB Total		440.00	2280.00	1774.65	-505.35	
RRVUNL	CHHABRA TPP	500.00	2245.20	1242.34	-1002.86	Forced outages and Delay in stabilization of unit-2
	DHOLPUR CCPP	330.00	2247.00	1995.67	-251.33	Low system demand/ costly power
	GIRAL TPS	250.00	1424.50	593.66	-830.84	Forced outages and Delay in stabilization of unit-2
RRVUNL Total		1080.00	5916.70	3831.67	-2085.03	

Statement of shortfall in generation (more than 100 MU) vis -a-vis targets of existing thermal stations during 2010-11						
Organisation	Station Name	Capacity (MW)	Target (MU)	Actual (MU)	Shortfall (MU)	Major Reasons
RWPL (JSW)	JALIPA KAPURDI TPP	270.00	1720.05	938.07	-781.98	Misc. forced outages & Delay in stabilization of unit-2
RWPL (JSW) Total		270.00	1720.05	938.07	-781.98	
TNEB	BASIN BRIDGE GT (Liq.)	120.00	150.00	48.61	-101.39	Unit running in synchronous condenser mode.
	ENNORE TPS	450.00	2003.00	1397.95	-605.05	Forced outages of units 2,3 & 5.
TNEB Total		570.00	2153.00	1446.56	-706.44	
UPRVUNL	HARDUAGANJ TPS	220.00	740.00	583.89	-156.11	Misc. forced outages
UPRVUNL Total		220.00	740.00	583.89	-156.11	
VASAVI	B. BRIDGE D.G	200.00	1092.00	873.79	-218.21	Low system demand/ costly power
VASAVI Total		200.00	1092.00	873.79	-218.21	
WBPDC	BANDEL TPS	450.00	2490.00	1817.84	-672.16	Misc. forced outages
WBPDC Total		450.00	2490.00	1817.84	-672.16	
Grand Total		18415.22	105701.52	79811.26	-25890.26	