

HIGHLIGHTS

- The review covers the performance analysis of 506 coal / lignite based thermal units above 25 MW capacity of 140 thermal power stations aggregating 118024.5 MW.
- During the financial year 2012-13, the capacity addition of 20623 MW (Thermal, Nuclear and Hydro) was achieved.
- In order to include the performance analysis of above units, a new capacity group the capacity group 250-270 MW has been added in the review.
- All India electricity generation in the country during 2012-13 has been 912.06 BU representing a growth rate of 4.01% as compared to the generation of 876.89 BU during 2011-12.
- Thermal Generation stood at 760.68 BU representing a share of 83.4 % of total electricity generation in the country.
- Coal/ Lignite based plants continued to have major contribution towards electricity generation with a major share of 90.13% of the total thermal generation,
- During 2012-13, the total thermal generation achieved a growth rate of 7.32%. Coal based generation recorded a remarkable growth rate of 12.73%.
- The thermal generation in the country during 2012-13 was 99.14% of its target fixed for the year.
- Operating Availability of 80.7% was achieved during 2012-13 as against 82.5% achieved during 2011-12.
- 33 thermal stations achieved the Operating Availability more than 90% during 2012-13.
- Plant load factor (PLF) of thermal power stations at the national level, during 2012-13, reduced to 69.93% from 73.32% achieved during previous year. The Lower PLF was due to increased generation loss due to coal supply problem and transmission constraints and Reserve Shut down/Low system demand.
- Plant load factor (PLF) of Central Sector units was highest at 79.86%. However the PLF of IPP was reduced from 67.27% during 2011-12 to 62.16% during 2012-13.
- Plant load factor (PLF) of BHEL/BHEL make units (299 units aggregating to 72883 MW) registered the PLF of 74.58% among units of different makes. However, the PLF % of China / China make units reduced from 62.48% during 2011-12 to 55.39% during 2012-13 due to increased forced outages of China/China make units.
- Energy loss on account of planned maintenance was 5.71% as compared to 5.93% during 2011-12. The % decrease in Planned maintenance was due to decrease in unscheduled Capital maintenance and in unscheduled R&M activity of some units.
- The average duration of boiler overhaul and capital maintenance was achieved as 52 days and 30 days respectively.

- The loss of generation due to non-availability of thermal units due to forced outages during 2012-13 increased to 13.59% as compared to 11.46% during 2011-12. The increased forced outages was due to increased forced shutdown of units due to coal supply problem and transmission constraints and equipment problems of some new units. The details are given in Section 4.
- 47.69% of outage were of more than 25 days.
- Following loss of generation due to various constraints were reported by the utilities:

Sl. No.	Category	Energy (BU) (2011-12)	Energy (BU) (2012-13)
1	Shortage of coal	11.6	15.84
2	Wet/poor coal quality	17.9	16.41
3	Backing down/Reserve shut down	15.3	21.79
4	Transmission constraints	3.92	4.10
5	Gas shortage	36.71	73.09

- The generation from gas based plants had negative growth rate on account of low schedules from the beneficiaries coupled with shortage of gas. During the year, the generation from gas based plants (including liquid fuel, Diesel etc) were 66.84 BU in comparison to 93.46 BU. As such the % PLF was also reduced from 59.94% during 2011-12 to 40.33% during 2012-13.
- Energy loss due to partial unavailability of the thermal generating units operating in the country during 2012-13 had increased to 10.68% of the maximum possible generation during the year in comparison to the 9.43% in 2011-12. The increase was mainly attributed to partial unavailability of the thermal generating units on account of backing down of units due to poor quality coal/lignite, coal/Lignite shortage and low system demand.
- BHILAI TPS # 1 (250 MW) of NSPCL had operated continuously for 288 days.
- The All India average auxiliary power consumption by the thermal stations during 2012-13 reduced to 8.15% from 8.44% during 2011-12.