

HIGHLIGHTS

- The review covers the performance analysis of 539 coal / lignite based thermal units (above 25 MW capacity) of 143 thermal power stations aggregating 132624.5 MW.
- During the financial year 2013-14, the capacity addition of 17825.01 MW (Thermal, Nuclear and Hydro) was achieved.
- All India electricity generation in the country during 2013-14 has been 967.15 BU representing a growth rate of 6.04 % as compared to the generation of 912.06 BU during 2012-13.
- Thermal Generation stood at 792.48 BU representing a share of 81.9 % of total electricity generation in the country.
- Coal/ Lignite based plants continued to have major contribution towards electricity generation with a major share of 77.14 % of the total thermal generation,
- During 2013-14, the total thermal generation achieved a growth rate of 4.18%. Coal based generation recorded a remarkable growth rate of 8.28%.
- The thermal generation in the country during 2013-14 was 97.51% of its target fixed for the year.
- Operating Availability of 77.35% was achieved during the year 2013-14 as against 80.7% achieved during 2012-13.
- 32 thermal stations achieved the Operating Availability more than 90% during 2013-14.
- Plant load factor (PLF) of thermal power stations at the national level, during 2013-14, reduced to 65.57% from 69.93% achieved during previous year. The Lower PLF was due to increased generation loss due to coal supply problem, transmission constraints and Reserve Shut down/Low system demand.
- Plant load factor (PLF) of Central Sector units was highest at 76.11%. However the PLF of IPP was reduced from 62.16% during 2012-13 to 61.4% during 2013-14.
- Plant load factor (PLF) of BHEL/BHEL make units (307 units aggregating to 75903 MW) registered the PLF of 68.82% among units of different makes. However, the PLF % of China / China make units reduced from 52.59% during 2012-13 to 41.67% during 2013-14 due to increased forced outages of CHINA/CHINA make units.
- Energy loss on account of planned maintenance was 5.01% as compared to 5.71% during 2012-13. 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 33 days and 43 days respectively.

- The loss of generation due to non-availability of thermal units due to forced outages during 2013-14 increased to 17.65% as compared to 13.59% during 2012-13. The increased forced outages were 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.
- Following loss of generation due to various external constraints were reported by the utilities:

Sl. No.	Category	Energy (BU) (2012-13)	Energy (BU) (2013-14)
1	Shortage of coal	15.84	8.10
2	Wet/poor coal quality	16.41	27.21
3	Backing down/Reserve shut down	23.39	96.01
4	Transmission constraints	4.10	5.38
5	Gas shortage	73.09	51.78
6.	Total	132.83	188.48

- 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) was 44.51 BU in 2013-14 in comparison to 66.84 BU in 2012-13. As such the % PLF was also reduced from 40.33% during 2012-13 to 24.85% during 2013-14.
- Energy loss due to partial unavailability of the thermal generating units operating in the country during 2013-14 had increased to 12.13% of the maximum possible generation during the year in comparison to the 10.68% in 2012-13. 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.
- The All India average auxiliary power consumption by the thermal stations during 2013-14 increased to 8.16% from 8.15% during 2012-13.