HIGHLIGHTS

- Covers the performance analysis of 413 coal / lignite based thermal units above 25 MW capacity of 104 thermal power stations aggregating 80439.5 MW.

- Considering increased role of private sector projects in the power generation, 11 units of 5 thermal power stations of Independent Power Producers (IPPs) aggregating to 1870 MW covered in the review for the first time.

- All India electricity generation in the country during 2009-10 has been 771.6 BU representing a growth rate of 6.6%.

- Thermal Generation stood at 640.9 BU representing a growth rate of 8.6%.

- Achievement in thermal generation in the country during 2009-10 was 98.83% of the target of 648.5 BU.

- Major reasons for shortfall in thermal generation vis-à-vis targets were inadequate availability of coal; delay in commissioning / commercial operation of new generating units & long duration of forced outage of some of the existing thermal units.

- Thermal power Stations achieved PLF of 77.68% at the National level which was higher than 77.22% achieved during previous year. Had there been no loss of generation due to coal shortages, the PLF would have been 80.09%.

- Thermal stations of Central, State and Private sector Utilities and Private Sector IPPs achieved the PLF of 85.64%, 71.13%, 82.41% and 85.68% respectively.

- 490-500 MW unit capacity group achieved the highest PLF of 87.21% among different capacity groups.

- BHEL/BHEL make units (277 units aggregating to 62147.0 MW) registered the highest PLF of 80.39% among units of different make.

- Dahanu Thermal Power Station (2X250 MW) of M/s Reliance Infrastructure Ltd. in Maharashtra achieved the highest ever PLF of 102.33 %.

- PLF of 21 thermal power Stations aggregating to 25247.5 MW was above 90%. Among these 11 were from Central Sector Utility (NTPC), 5 were from Pvt. Utilities (Two from Torr. Power and one each from Reliance Infra, CESC and JSPL) and 5 were from State Sector Utilities (PSEB- 3, APGENCO-2)

- PLF of 19 Thermal units aggregating to 6005 MW was 100% or more. Further, PLF of 70 thermal power units aggregating to 19255 MW was 90% or more.

- An all time high overall Operating Availability of 85.10% was achieved as against 85.05% achieved during 2008-09.
• 36 Thermal stations achieved the Operating Availability more than 90% during 2009-10.

• 15 thermal generating units had achieved plant operating availability more than 99% during 2009-10.

• Energy loss on account of planned maintenance was 6.05% as compared to 5.66% during 2008-09.

• The average duration of boiler overhaul and capital maintenance was achieved as 28 days and 62 days respectively.

• Average duration of boiler overhaul in private sector was lowest (21 days).

• The loss of generation due to non-availability of thermal units due to forced outages during 2009-10 reduced to 8.85% as compared to 9.29% during 2008-09.

• Main cause of forced outage was due to various boiler problems.

• 63.78% of the total forced shut down were of duration up to 24 hours. 35.03% outages were of duration varying from 1 to 25 days and only 1.19% of shut downs were for more than 25 days.

• Generation loss of 14.5 BU was reported due to coal shortage by the power utilities during 2009-10.

• The gas based generation registered a remarkable improvement during the year 2009-10 mainly on account of availability of gas from KG Basin and recorded a growth rate 32.56%.

• Energy loss due to Partial availability of the generating units during 2009-10 was 8.03% as compared with 8.48% during 2008-09.

• Energy losses due to partial unavailability was above national average in the Western & Eastern Regions mainly due to shortage of coal, coal handling problems & poor quality / wet coal & other miscellaneous problems and was minimum in the Southern Region.

• Energy loss due to Low system demand & grid constraints during 2009-10 increased from 0.50% during 2008-09 to 0.88%.

• Loss of generation due to planned maintenance of units was maximum (6105.93 MU) during August'09 while loss of generation due to forced outages of units was maximum (6036.88 MU) during October'09.
• 7 Nos. coal/lignite based thermal generating units (5 of NTPC, and one each of Tata PCL & TNEB) continuously operated for more than 300 days while 17 coal/lignite based thermal generating units (13 of NTPC and one each of GSECL, MAHAGENCO, Tata PCL & TNEB) operated continuously for more than 250 days.

• Kahalgaon TPS # 2 (210 MW) of NTPC operated continuously for 406 days.

• Among 500 capacity group, Trombay TPS #5 of TATA PCL had continuously operated for more than 300 days.

• All India Specific coal consumption of thermal units at National level reduced from 0.74 kg/kWh to 0.72 kg/kWh.

• Auxiliary power consumption of thermal units at National level marginally increased from 8.33% to 8.34% mainly due to high auxiliary consumption by newly commissioned lignite based unit at Giral TPS, Jalippa Kapurdi & Surat Lignite.

• Additional new features covered in the review include:

  ✓ Sector-wise, State-wise details of number of coal/lignite based stations with number of units and installed capacity as on 31st March, 2010- Annexure 1.4

  ✓ Utility/ Organisation/ Sector wise Planned Maintenance - Para 3.5.5

  ✓ Utility/ Organisation/ Sector wise Forced Outage - Para 4.11

  ✓ Utility/ Organisation/ Sector wise Operating Availability- Para 5.9

  ✓ Region wise/Month wise Energy loss due to Forced outages – Para 8.4.1

  ✓ Sector-wise, State-wise details of number of Gas Turbine (GTs) Stations with number of units and installed capacity as on 31st March, 2010- Annexure 10.1.