

WATER AVAILABILITY AND ISSUES IN DEVELOPMENT OF HYDRO POWER/THERMAL POWER

A fast growing power sector is crucial to sustain India's economic growth. India has an assessed hydropower potential to the tune of 84,000 MW at 60% load factor; out of this only about 20% has been developed so far. In the past various factors such as the dearth of adequately investigated projects, environmental concerns, land acquisition problems, regulatory issues, time consuming clearance and approval procedures, power evacuation problems, the dearth of good contractors, and in some cases inter-state issues and law and order problems have contributed to the slow pace of hydropower development. There have been large time and cost overruns in case of some projects due to geological surprises, resettlement and rehabilitation issues etc. However, considering the large potential and the intrinsic characteristics of hydro/thermal power in promoting the country's energy security and flexibility in system operation, the Government is keen to accelerate hydro/thermal power development.

In general, there are basically three issues in development of hydro/thermal power, namely, technical, administrative and financial. Technical issues are related to optimized planning & designing, sediment management and countering geological surprises. These issues have to be tackled through innovative designing of various components of hydro/thermal power projects. Administrative issues such as land acquisition, project management or contractual management etc. are to be handled by using best practices. Financial issues also require proper attention for timely completion of projects.

Water availability and hydrology

Optimized planning and designing of Hydropower/Thermal Power Projects

Sediment management

Countering geological surprises in underground works,

Machine designing to counter abrasion caused due to sediments

Optimum operation of projects in cascade development

Development of pumped storage projects are proposed to be discussed during the seminar with a view to arrive at conclusion to ensure efficient planning and faster growing of hydro power development.

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