

## POWER FAMINE IN INDIA

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Synopsis: India is passing through severe power crisis. Power-production, transmission and distribution need to be streamlined. The wide gap between production of power and its demand is shocking and the whole system is under severe stress. India has failed miserably in achieving targeted power generation. The massive shortfall in power-production shows power projects could not be implemented because of various reasons closely connected with wrong policies and decisions. Thermal power generation is the prime source of our energy but to our great concern expenditure on this sector has been drastically curtailed. Coal is the most popular fuel used in power generation but coal-production has failed to keep pace with the demand. There should be big addition to our power distribution losses should be minimized. Fast and genuine power potential in India is huge and should be properly exploited and mini and micro hydel power projects be given encouragement. Non-conventional and renewable sources of energy also need to be tapped on a larger and wider scale. Nuclear power is another area which holds great promise in power generation.

Power is basic infrastructure essential for industries, agriculture and domestic sectors. There are frequent power-failures, load sheddings, blackouts and tripping in national power grids. And it creates a situation of a chaos and the whole of the industry comes to a grinding halt. It is a very sad comment on the power sector after 50 years of independence. There is something fundamentally wrong in our power policy, power generation and distribution. There are over 20 per cent losses in transmission and distribution of power which is very high compared to 8 per cent in the developed countries. It seems the Power Grid Corporation of India and the other agencies connected with the transmission and distribution of electricity are not well geared and there is mismanagement and faulty planning. It is nothing short of a crisis.

There are massive power-shortages. The supply is not keeping pace with demand. Moreover, the quality and reliability of power supply is in a very poor shape. There are frequent power failures interruption and low voltages which adversely affect the economy, industrial production, agricultural activities, domestic life and movement of the trains. The regional grid system often operates at frequencies as low as 48 Hz. Which reflects that there is no reserve power and the whole system is under great stress?

We have failed miserably in the targeted generating capacities. As in March, 1997, our total generating capacity stood at 85,864 MW. During the Eighth Five-Year Plan only 17,375 MW could be added against the targeted 30,538 MW. This massive shortfall in power production shows how defective is our planning, both short-term and long-term. The private sector power policy failed because of complicated procedures in establishing power plants, delayed completion of the projects, interference of vested interests in policy decisions and bureaucratic hindrances. Many Independent power projects got caught in the maze of politics, negative and wrong publicity and litigations. Of the eight fast track private projects only two. GVK's Jegurupadu and Spectrum in Andhra have seen the light of the day. Thus, the private sector power policy has failed to take off. The projects in the public sector have also performed poorly.

The sixteenth report of Parliaments Standing Committee on Energy was very critical on cutting down expenditure on generation of thermal power, the nation's prime source of power production. The plant availability factor (PAF) of Indian thermal units can achieve higher and better PAF but cannot because of non-availability of fuel, frequent drippings in transmissions and unplanned outages because of equipment failures at the plant. Of all the fuels used in power production, coal is the most popular and coal-production in the country has not kept pace with its demand. During 1976 the coal offtake by the power units was 31.6% and it increased to 68.3% in 1996. Besides poor coal-production, the non-availability of railway wagons and inability of many of the State Electricity Boards to pay their dues in time to the Coal India Limited have added to the woes of the power generation. Despite the shortage of coal, the government is not ready to import coal in required quantity because it means more forex outgo.

To accelerate the power generation in the country an outlay of Rs 51,935.15 crore has been proposed for the Ninth Plan against the outlay of Rs. 25,920 crore in the Eighth Plan. The Power Ministry envisages mopping up of nearly Rs. 41,259.82 crore through internal and extra budgetary resources. The rest is projected as non-plan expenditure. The Power Ministry has set a target of 424.5 billion units during the 1997-98 as against 394 billion units achieved in 1996-97. How these targets are met is yet to be seen.

To improve the power situation there should be massive addition in power generation and also better grid management to prevent losses in transmission and distribution of the electricity. There should be proper voltage management and immediate steps be taken to bring our grid operation to internationally accepted standards. Besides adding to the capacity of power generation by

setting up new mega plants, capacity utilization of the existing units should also be undertaken. Even one per cent of improvement in the plant load factor (PLF) would mean availability of 800 MW additional powers. There should be genuine and fast liberalization of the power sector and all our efforts should be made to remove the hindrances in the path of more and more private participation.

The development of power infrastructure is of vital importance to the country's rapid and sustained growth. Therefore, projects in this sector should be on turnkey basis to avoid cost and time over-runs and also to take care of many problems including those of pre-erection and post erection phases. Mini and micro hydel power projects need to be given priority because there is vast scope for such projects in our North-east and North-west regions of the country. Such hydel power projects do not cause uprooting of population and inundation of forest, habited and agricultural land etc It is estimated that India has a potential of 100,00 MW of hydro power but so far only about 15 per cent of it has been used and another 5 per cent is under various stages of completion.

Non-conventional sources of power generation should also be tapped on a bigger and wider scale. Renewable and non-conventional power sources include solar and wind power and biomass based power. The total capacity for renewable power capacity as for 1996 stood at about 800 MW of which wind power constituted about 70 per cent. The use of wind power has received a tremendous boost on account of 100 per cent depreciation, subsidies and other sops. These concessions and incentives should be extended to other renewable sources of power. More stress should be laid on renewable power sources, particularly in the rural and hilly areas. India being an agricultural country, the biomass energy has a vast potential which can be utilized to a great advantage. Such biomass waste can be solid-waste, cane, wheat and paddy residue and animal wastes can be used to generate more power. The sugar mills and factories are scattered all over the country except the hilly and mountainous areas. The biogases produced in huge amount in these factories can be utilized for power production without much additional investment and cost.

Nuclear energy is another area, which holds great promise in power production segment. There are at present 9 atomic power plants which generate only 1740 MW energy. It reflects that we have failed to exploit the potentials of this source of energy. According to the data available as of October 1996, of the 441 power projects only 2 were nuclear-based. As far as safety point of view is concerned there is Atomic Energy Regulatory Body (AERB) which effectively monitors and reviews the safety of nuclear installations. It sees that the

radioactive level is well below the permissible limit. As such, all nuclear power plants are safe and under constant watch. The proposal of the Department of Atomic Energy (DAE) to set up a prototype fast breeder, 500 MW reactor at an estimated cost of RS. 2,500 crore in the Ninth Five Year Plan is a step in the right direction.