



Power Sector Reforms: A Study on The Reports and Recommendations of Various National Committees on Power Since 1970

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ABSTRACT

The reforms process in power sector initiated in 1990s can be traced back to the 1970s when the fuel policy committee was setup to undertake a survey of fuel resources and pattern of distribution, to frame a national fuel policy for the next 15 years and to devise measures to promote the optimum efficiency in the use of fuel. The committee submitted its report in 1974. It studied the electricity generation and estimated the generation from 1960-61 to 1990-91. Similarly other committees like Working Group on Energy Policy 1977, Rajyadhkshya Committee Report 1980 and Committee on Power 1993 were setup to study the sector. Based on the reports submitted by these committees and their recommendations we can assume that extensive measures were undertaken in the power sector to reform the sector. The paper will focus a light on these measures.

KEYWORDS

Introduction: The Fuel Policy Committee, 1970

The Fuel Policy Committee was appointed by the Government of India in 1970 by the Ministry of Petroleum and Chemicals and Mines and Metals. The committee submitted its report in 1974. The committee estimated that during the 5th (1978-79) and 6th (1980-85) plan period the average annual growth rate of electricity generation would be 10.7 percent. It also estimated that by 1990-91 all urban households and 70 percent of rural households in the country will be provided with electricity for lighting purposes. It estimated that the number of agricultural pump sets operated by electricity will increase from 2.5 million in 1973-74 to about 12 million by 1990-91.

The Committee opined that the per-capita consumption would increase on an annual average rate of 9.0 percent during the period 1973-74 to 1990-91 and reach a level of 447 Kwh in 1990-91. It estimated that additionally 13000MW of Hydel Power, 10020 MW of Nuclear Power and 20000MW of Thermal power has to be generated by the year 1978-79. For the year 1990-91 the estimations increased to 28040MW of Hydel Power, 8062MW of Nuclear Power and 50030 MW of Thermal Power, to satisfy the demand of 1990-91 (Planning Commission, 1974:75).

To achieve these projections the committee recommended (Ibid:81) that during the 5th plan period efforts should be made to develop a more optional load structures and suggested that national measures should be initiated in planning and operating the power systems so as to ensure gradual improvement in the plant factor. To achieve these objectives it recommended that during the 5th and 6th plan new generating capacity should be derived from hydro stations by hastening the completion of hydel stations under constructions. The committee urged that a detailed investigation of the specific hydro electric projects should be drawn up to satisfy the future power generation demand.

The Committee also recommended that a review of nuclear programme should be made by 1978-79 by keeping the view of the pace of construction of nuclear power stations in the 5th plan period, the efficiency of Department of Atomic Energy in respect of design for 500MW nuclear power plants and the progress made towards the commercialisation of Fast Breeder Technology (FBT). It also observed that the correct approach to rural electrification should be through the formulation of an integrated rural development programme for cluster of villages, in which the supply of electricity would be one of the inputs that could be arranged by the government.

Based on the recommendations, the Central Water and Power Corporation (CWPC) was bifurcated into Central Electricity Authority (CEA) and Central Water Commission (CWC). The Ministry of Irrigation and Power also divided into Ministry of Irrigation and Ministry of Power. National Thermal Power Corporation (NTPC) and National Hydro Power Corporation (NHPC) were created as central Generating Companies and in 1975 and power plants being constructed by CWPC were given to NTPC and NHPC.

Working Group on Energy Policy 1977

In December, 1977 the Government of India set up a Working Group on Energy Policy to estimate the prospective energy demand in the different sectors of the country by 1982-83 and a decade there after, to recommend measures for optimum use of available energy resources and to outline the national energy policy for the the long term conservation policy (Planning Commission, 1979:60).

The Working Group studied the targets and achievements of previous Committee recommendations. It observed that in the first plan period the percentage short fall between target and achievement was 15.4 which substantially increased to 50.5 during the fourth plan (1969-74).

To achieve the targeted power generation during the next five year plans the Working Group

emphasised on the hydro power development. It felt that a time bound programme for completing quickly the reassessment of hydel potential and investigation to formulate projects, speedy resolution of inter-state disputes and evolving procedures for taking up large river valley projects jointly by the state and the centre and developing appropriate organisational structure to manage large hydel projects located in small states and remote areas, expenditure on transmission and distribution should be about 66 to 100 percent on the expenditure on power generation, would be beneficial in achieving the targets.

Despite recommendations of various measures to curtail the losses and to increase power availability; various governments in subsequent years could not perform satisfactorily (CEA, 2006:22). The transmission and distribution losses stood as the biggest hurdle in achieving the targeted power generation or at least achieving the power generation in full capacity of the power plant. According to the report (Power and Energy Division, 1984:3) published by the Planning Commission

in 1984, it can be observed that the plant load factor stood at an average nearly 50 percent of the total capacity and the T&D losses were around 20 percent. The targeted power generation stood at the shortage of nearly on an average of 13 percent per annum.

The losses at the Plant Load are due to various reasons. One of the reasons is dependence upon the coal as a major source of power generation. The report published by the Ministry of Energy says that the 'the energy policy of the country envisages that to the extent practicable and economic, coal will be the principal source of commercial energy (Ministry of Energy, 1978:82). As a result the share of hydel power capacity has declined from 43% in 1970-71 to about 25% in 2000. The share of Thermal Power Plants (TPPs) increased to 73% (TERI, 2000:4). Apart from government policy the increase in reliance on TPPs for power generation is because they have relatively shorter gestation period and are favoured to meet increasing electricity demand. Coal production has increased rapidly to meet the increasing reliance on TPPs from 78 million tonnes in 1973 to 205 million tonnes in 1997-98 (Saha, 1999:492-494). The poor quality of coal has resulted in greater consumption of coal per unit of electricity generated and higher emission per unit of generation (World Bank, 1998:11).

The Tenth Annual Electric Power Survey of India in 1977 emphasised on the closure of the old and un-delivering power plants as soon as possible so that to save the maintenance costs to divert into other generating companies (CEA, 1977:13). It also estimated the energy requirements for the future. It estimated about 111796 MKwh of power requirements for 1978-79, 185064 MKwh for 1983-84, 473588 MKwh for 1993-94 and 563715MKwh for 1995-96 (Ibid:65).

Rajyadhkshya Committee Report 1980

In 1980, committee on power headed by V.G. Rajyadhksha submitted its report to Government of India. The committee was constituted to examine all aspects of functioning of state electricity boards and central organisations engaged in electricity generation, transmission and distribution, including organisational structure, management practices, planning systems, efficiency of operations, financial performance, tariff structure and legislative frame work and make recommendations for improving them (Department of Power, 1980).

The committee analysed the entire sector and came up with recommendations to improve the power generation, T&D losses and to increase the investment in the sector. It recommended that (Ibid):

i) plans for the development of the power industry should have a 15-20 year time frame and the 5year plans should be built into this plan so as to optimise the mix of generating sources i.e. thermal, hydel and nuclear.

ii) for the industrial load, all States should adopt measures as staggering off days, high peak hour tariffs, timing of annual shut-downs for overhaul of major consuming industries so as to reduce seasonal and daily peak demand and flatten the load curve. The Central government role in power generation will need to enlarge so as to achieve ownership of at least 45% of all generation capacity by 2000AD.

iii) the nuclear power generation should be accelerated to attain an installed capacity of 5000 MW by 2000 AD.

iv) investment in T&D will need to be stepped up to take care of the backlog of the past and to restore the balance between generation and T&D capacities.

v) micro hydels should be developed for meeting the power requirements of sparsely populated areas far away from major power projects.

Committee on Power 1993

In 1993, the Committee on Power also emphasised on the

maintenance of the power utilities and opined for the optimum use of the assets and facilities already created in the power sector. It also emphasised on the efficient use of the physical resources available in the country like hydel and coal. It observed that there should be energy conservation for adequate demand management and integrated operation of the regional and the national power systems (Committee on Power, 1993:10).

The recommendations of the committee were not accepted by the Government of India. The only measure taken was that public Transmission Networks of NTPC and NHPC established in 1975 were transferred to Power Grid Corporation of India created in 1992-93.

Mean while the period between 1984 and 1994 marked a huge increase in installed capacity and generation capacity from 42618 MW in 1984 to 81164 MW in 1994 about doubled. The generation capacity more than doubled from 156859 GWh of power in 1984 to 368063 GWh in 1994. However the recommendations by various committees' adequate steps were not taken by the government on reducing T&D losses. It actually increased from 17.5 and in 1970-71 to 20.02 % in 1994.

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