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Research Paper Economics



An Analysis of the Impact of Power Sector Reforms in Haryana on the Generation, Transmission and Distribution

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ABSTRACT

The objective of the power sector reforms in Haryana was to restore and ensure the sustainable creditworthiness of the power industry and to create an environment which would attract investments needed to meet the growing power demand, promote competition, efficiency and economy, and facilitate development of power sector. The paper discusses the restructuring programme aimed at restoring financial viability of power utilities so that the State Government is relieved of the burden of providing subsidies to cover their losses and to make the power sector a generator of net resources for the State and capable of arranging its investment requirements on its own strength. To achieve these objectives, the 'Haryana Electricity Reform Act, 1997' was enacted. This Act provided for the constitution of an Electricity Regulatory Commission, restructuring of the electricity sector and the creation of avenues for consumer participation with a view to aid the regulatory and reform process.

Keywords : Power sector reforms , efficiency, regulatory authorities.

INTRODUCTION

'Sustainable development' has been defined best by the Brundtland Commission as development that meets the needs of the present without compromising the ability of future generations to eet their own needs'. Adequate and affordable energy supplies have been key to economic development and the transition from subsistence agricultural economies to modern industrial and service-oriented societies. Energy is central to improved social and economic well-being, and is indispensable to most industrial and commercial wealth generation. It is key for relieving poverty, improving human welfare and raising living standards. But however essential it may be for development, energy is only a means to an end. The end is good health, high living standards, a sustainable economy and a clean environment. No form of energy — coal, solar, nuclear, wind or any other — is good or bad in itself, and each is only valuable in as far as it can deliver this end.

Energy is also needed in India for economic growth, for improving the quality of life and for increasing opportunities for development. Some 600 million Indians do not have access to electricity and about 700 million Indians use biomass as their primary energy resource for cooking. Ensuring life line supply of clean energy to all is essential for nurturing inclusive growth, meeting the millennium development goals and raising India's human development index that compares poorly with several countries that are currently below India's level of development. The broad vision behind India's integrated energy policy is to reliably meet the demand for energy services of all sectors including the lifeline energy needs of vulnerable households in all parts of the country with safe, clean and convenient energy at the least-cost. This must be done in a technically efficient, economically viable and environmentally sustainable manner using different fuels and forms of energy, both conventional and non-conventional, as well as new and emerging energy sources to ensure supply at all times with a prescribed confidence level considering that shocks and disruption can be reasonably expected. In other words, the goal of the energy policy is to provide energy security to all.

Energy security is defined in terms of reasonable assurance of access to energy and relevant technologies at all times with an ability to cope with sudden shocks. Energy security does not mean complete energy independence, it only means an ability to meet reasonable requirements with reasonable assurance of stable supply or an ability to pay for import needs.

Power Sector Performance in India

The Indian Power Industry is one of the largest and most important industries in India as it fulfils the energy requirements of various other industries. It is one of the most critical components of infrastructure that affects economic growth and the well-being of our nation.

India has the world's 5th largest electricity generation capacity and it is the 6th largest energy consumer accounting for 3.4% of global energy consumption. Due to the fast-paced growth of the Indian economy, the country's energy demand has grown at an average of 3.6% p.a. over the past 30years. In India, power is generated by State utilities, Central utilities and Private players As per the latest Report of CEA (Central Electricity Authority) i.e. as on 31-03-2011, the Total Installed Capacity of Power in India is 173626.40 MW. Of this, more than 75% of the installed capacity is with the public sector (state and central), the state sector having the largest share of 48%.

Rapid growth of the economy places a heavy demand on electric power. Reforms in the power sector, for making it efficient and more competitive, have been under way for several years and while there has been some progress, shortage of power and lack of access continues to be a major constraint on economic growth. Average peak shortages excluding scheduled load shedding was estimated at 12% and average energy shortages at 11 % in 2009-10.

Statement of the Problem

The power sector activities like generation, transmission and distribution of electricity in India are being carried out by the public sector organisations namely State Electricity Boards (SEBs) in India (barring a few metropolitan areas and in states like Orissa where the distribution business has been privati sed) and these organisations are financially non-viable. During 19805 the SEBs started facing problems of poor technical, commercial and managerial efficiency (Report on India's Power Sector

2003, Rao et al, 1998, Morries, 1996). Problems relating to SEBs were their poor financial health, huge Transmission & Distribution (T&D) loses, political interference, inadequate billing, poor collection, huge theft, lack of proper manage-

ment, lack of commercial orientation on the part of the SEB employees (Reports on India's Power Sector 2003). The consumers of electricity also faced a lot of problems in terms of high frequency of power cuts, low & fluctuating voltage, lack of responsiveness of service providers, inadequate grievance redressal mechanism, and speed money (Paul 1995; Balakrishnan et al 1998). The SEBs failed to pay the bills for the electricity they purcha~ed from the power generators. According to Expert Group 2003, the dues of SEB accumulated to Rs. 4 I ,473 crore of credit consisting of Rs. 25,727 crore of principal and Rs. 15,746 crore of interest (Reports on India's Power Sector 2003). There was a huge gap between availability and demand of electricity. The total energy shortage during 200 1-02 was 39,816 million units amounting to 7.8 per cent and peak shortage was 10, I 57 MW translating to 13 per cent of peak demand (Reports on India's Power Sector 2003). In Utter Pradesh the deficit is 19.9, Jammu & Kashmir it is 5.1 per cent, Punjab 8.3 per cent, Haryana 5.4 per cent. Gujrat 1/.7 per cent, M.P, 8.8 per cent, Maharashtra 9.5 per cent, Tripura 7.7 per cent, Meghalaya 9.9 per cent, Assam 5.1 per cent and Karnataka 4.3 per cent deficit and if region-wise it is seen the figures are: North Eastern Region 5.8 per cent, Eastern Region is /.3 Western Region 9.3, the Northern Region of India has a power deficit of 8.6 per cent and all India power deficit is 6.3 per cent (www.indiastat.com).

The capacity utilization of hydro potential in the countries like Norway, Canada and Brazil is 58,41 and 31, respectively, whereas that of India it is only 17 per cent so far as the hydro potential is concerned (Rejikumar 2004). The annual losses of the SEBs have reached a level of 26,000 crore. SEBs are the defaulters in paying the dues to the Central Power Sector Utilities (CPSUs) and the dues have accumulated to Rs. 40,000 crore and every year an amount of Rs. 20,000 crore is lost due to theft with technical and commercial losses being 15-20 per cent and 20-25 per cent, respectively, in India (Report on India's Power Sector 2003).

So far as the rural electrification is concerned a lot has to be done. Forty two per cent in Utter Pradesh, 53 per cent in Bihar, 78 per cent in Jharkhand, 50 per cent in Meghalaya and 23 per cent in Assam has to be electrified. The household electrification is dismal. Only 43.5 per cent of households in India have got electricity connections. Thus a substantial percentage i.e. 56.5 of the households in India have no access to electricity (www.indiastat.com).

POWER SECTOR REFORMS IN HARYANA

Haryana is the second state in India after Orissa to undertake power sector reforms. The objectives of the power sector reform were to restore reliability of the power industry and to create an enabling environment to attract private investment, promote competition and to ensure active consumer participation in the power sector. In order to achieve the objectives of the reforms, the State Assembly enacted, "The Haryana Electricity Reform Act, 1997". The Act provided for the constitution of an Electricity Regulatory Commission, restructuring of the electricity sector, and the creation of avenues for consumer participation. The Act also provided for other measures conducive to the development and management of the electricity industry in an efficient, economical and competitive manner and for matters connected therewith or incidental thereto. To overcome bottlenecks, the State Government restructured the Board – the responsibility for generation was transferred to Haryana Power Generation Corporation Limited (HPGCL) while that for transmission and distribution was assumed by the Haryana Vidyut Prasaran Nigam Limited (HVPNL). Later on, distribution became the responsibility of Uttar Haryana Bijli Vitran Nigam Limited (UHBVNL) and Dakshin Haryana Bijli Vitran Nigam Limited (DHBVNL) with separate jurisdictions for each while transmission remained the responsibility of HVPNL.

Given that the reform process was initiated more than a decade ago, an evaluation of the status of reforms process and the consumer participation in the regulatory is due. This involves the analysis of the impact of power reforms on the generation,transmission and distribution.This also involves ascertaining the extent to which consumers are aware of their rights and responsibilities, the role of the regulatory agency and platforms for interacting with stakeholders; and the linkages between regulatory decisions pertaining to tariff setting etc and improvement in quality and reliability of service. These are the determinants which shape constructive participation of consumers towards ensuring sustainable enhancement of consumer welfare.

Implementation of reforms programme

Creation of Power Regulatory Commission

Haryana State Electricity Reform Act, 1997 notified by the State Government on 10 March 1998 and made effective from 14 August 1998, inter alia, provided for constitution of an Electricity Regulatory Commission. Accordingly, the Haryana Electricity Regulatory Commission (HERC) was constituted in August 1998. The main functions of the HERC are as under:

(i) To regulate purchase, distribution and supply of electricity, quality of service, the tariff charges.
(ii) To issue licences for power transmission, and distribution in the State.
(iii) To regulate the working of licences and to promote their working in an efficient, economical and equitable manner.
(iv) To act as an arbitrator or adjudicator to settle disputes arising between the licencees.

The HERC granted (February 1999) two licences to the HVPNL viz. Transmission and Bulk Supply Licence to carry on transmission and bulk supply business in the State and another licence for Distribution and Retail Supply of electricity in the State. The HERC permitted (April 1999) the HVPNL to carry on the Distribution and Retail Supply of electricity through its two subsidiary distribution companies.

Reform and restructuring programme

Consultants appointed (1993) by the State Government for Power Sector Restructuring Project Study and for Power Sector Development and Investment Planning Study submitted (July 1995) their reports on the basis of which the State Government declared (January 1996) its restructuring policy. The main components of the reform programme as outlined in the policy statement are:

(i) creation of an independent power regulatory body;
(ii) segregation of power generation, transmission and distribution functions to be discharged by different companies;
(iii) private sector participation in power generation, transmission and distribution;
(iv) financial restructuring and tariff rationalization; and
(v) reduction in transmission and distribution losses.

The erstwhile Board approved (November 1997) power sector reform investment programme for Rs 8023 crore over the next 10 years from 1997-98 onwards.

Reorganisation of the State Electricity Board

The erstwhile Haryana State Electricity Board was reorganised by framing two transfer schemes notified on 14 August 1998 and 1 July 1999. In the first transfer scheme, the generation function was transferred to HPGCL (incorporated in March 1997) and transmission and distribution functions were transferred to HVPNL (incorporated in August 1997). Both the companies, wholly owned by State Government, commenced their activities from 14 August 1998. In the second transfer scheme, the distribution function was transferred from HVPNL to UHBVNL and DHBVNL (both incorporated in March 1999) dividing distribution business in the State into two regions. The distribution companies (wholly owned subsidiaries of the HVPNL) commenced their business from 1 July 1999.

As per reforms and restructuring plan, one distribution company was to be divested (51 per cent) to form a joint venture company by December 1998 and other distribution company was to be divested by March 2001. None of the companies were divested as of March 2001.

For implementation of reform and development programme, the World Bank provided loan of US $ 600 million through a series of 5 Adaptable Programme Loans (APLs) comprising APL-1 (US $ 60 million); APL-2 (US $ 150 million); APL-3 (US $ 200 million); APL-4 (US $ 100 million); and APL-5 (US $ 90 million) to be sanctioned during 1997-98; 1998-99; 2000-01; 2002-03 and 2004-05 respectively. More over World bank sanctioned loan of Rs 410 crore for improvement in the power sector.

The Comptroller and Auditor General (CAG)in its latest report found Haryana adding just 970.71 MW of power from all sources, including thermal, hydro, non-conventional against planned addition of 3,720.71 MW during 2005-10, resulting into "massive" shortfall of 2,750 MW. The new power capacity accounted for just 26 per cent of planned capacities in the power-starved State. Pointing out that the state failed in maintaining pace in energy capacity addition with growing demand, CAG said the huge deficit between demand and power supply forced both States to resort to short-term purchase, which was costlier than own generation cost and more than the actual realisation of revenue. Haryana alone in 2009-10 had planned to add new capacity of 2,775 MW but faltered on the same by adding just 59 MW, the report said.

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