

## STATUS OF POWER TRANSMISSION NETWORK IN RAJASTHAN

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### Abstract

Extensive, efficient and quality infrastructure network, mainly including electricity, transportation and communication is the prime requirement for sustainable and inclusive growth of almost all sectors of the economy. High class infrastructure certainly accelerates the pace of development. Power sector of India as also of Rajasthan is one of the most diversified system in the world. Sources of power generation range from conventional sources such as coal, lignite, natural gas, oil, hydro and nuclear power to viable non-conventional sources, such as wind, solar and agriculture & domestic waste. The first demonstration of electric light in Calcutta was conducted on 24<sup>th</sup> July 1879 by P.W. Fleury & Co. Mumbai had seen electric lighting for the first time in 1882 at Crawford Market. First hydro-electric installation in India was setup by Crompton & Co. for the Darjeeling Municipality in 1896. The Bombay Electric Supply and Tramways Company (B.E.S.T.) set up a generating station in 1905 to provide electricity for the tramway. In 1910 Indian Electricity Act 1910 was enacted to regulate supply by the licensees to the consumers. After independence in 1947, Indian Electricity (Supply) Act 1948 (ES Act) was enacted to form State Electricity Boards with full powers to control generation, distribution and utilization of electricity within their respective states and Central Electricity Authority for planning and development of power system. There arose the need for Central Generating Companies for development of super thermal power stations at coal pit heads and large hydroelectric stations. Therefore, in 1976, NTPC, NHPC, NPC, NLC & NEEPCO were created. In 1991, ES Act 1948 was amended to pave the way for the formation of private Generating companies.

**Keywords:** RVPN, RSEB, STU, GIS, Discom, EHV, Power Transmission, Transmission Losses.

### Introduction

The Electricity Act 2003 was enacted to repeal all previous Acts and bring a paradigm shift in Indian power market. No license was required for setting up generation capacity. Distribution was made license free for notified rural areas. Development of power market was envisioned. Trading of electricity was recognized as a distinct activity. Open access was granted for bulk producers and consumers. It was amended further in 2007 to bring in modifications. The prominent ones are regarding subsidy and combined responsibility of state and central regulators. Power sector reforms are being pursued since then and continue till date. The power sector in India has the fifth largest electricity generation capacity in the world, and it is among the core sectors of the country with an installed capacity of 253.39 Gigawatt (GW) as of Aug 2014. It facilitates development in various other sectors like agriculture, manufacturing, construction and services among others. Between April 2000 and January 2014, it has attracted • 404 billion worth of Foreign Direct Investment (FDI) inflows. India's fast paced economic growth and its increasing rate of industrialization has fuelled the demand for energy. During the Eleventh Five Year Plan (2007-12), about 55 GW of generation capacity was added, which was around two times the capacity addition during the Tenth Five Year Plan (2002-07) and a target of 88537 MW has been set for the Twelfth

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