LEGAL FRAMEWORK FOR TRANSMISSION OF ELECTRICITY IN UNDER ELECTRICITY ACT, 2003

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CERTIFICATE

This is to certify that the Dissertation titled "***Open Access as provided Electricity in under Electricity Act, 2003***" submitted by ***Mr. Ajeet Singh Verma*** to **College of Legal Studies, University of Petroleum & Energy Studies, Dehradun** for the partial fulfillment of the degree of B.A., LL.B. (Hons.) and is a record of bonafide work carried out by him under my supervision and guidance.

The work reported in the Dissertation/Project has not been submitted elsewhere to the best of my knowledge.

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DECLARATION

I declare that the dissertation entitled ***"Legal Framework for Transmission of Electricity in under Electricity Act, 2003"*** is the outcome of my own work conducted under the supervision of **professor Sujata Bali**, at College of Legal Studies, University of Petroleum and Energy Studies, Dehradun.

I declare that the dissertation comprises only of my original work and due acknowledgement has been made in the text to all other material used.

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LIST OF ABERRATIONS

- CERC: Central Electricity Regulatory Commission
- SERC: State Electricity Regulatory Commission
- SLDC : State load dispatch center
- E.A : Electricity Act
- STU : State transmission utility
- MoP : Ministry of Power
- APTEL : Appellate tribunal for Electricity
- ISTSI: interstate Transmission System
- NTP: National Tariff Policy
- RLDC: Regional Load Dispatch Centre
- CTU: Central Transmission Unit

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1. INTRODUCTION

India being one of the fastest growing economies in the world is suffering from the supply demand mismatch and which is often increasing day by day. The energy sector and more specifically the power sector are facing many challenges in its Endeavour to bridge the ever increasing demand supply gap. And as energy plays a very important role in manufacturing sector and also in common man life, it has become very essential to accelerate the growth in energy segment for the growth of the nation. With the increasing demand of energy consumption the annual per capita energy consumption has grown significantly. The lower per capita use of electricity in India compared to the global average presents a vast potential for sustainable growth in the demand for electricity in India. Producing power is costly hence efficient utilization of the generated power is need of the hour. Therefore, attempts are made to adopt latest technological innovation in the power sector to reduce the losses associated with operation in-efficacy and energy theft is driving the modernization in the domain. An overview of the Indian power industry, with everyday changing industry scenario is very demanding in nature and it calls for solid reforms. In due to all these concerns the NDA-1 government opted to address this concern took up bold steps to reform of the power sector through a piece of legislation called electricity Act, 2003.

India today stands as one of the major generator and consumer of electricity in world[1]. Electricity has been the main catalyst to the overall economic and industrial growth and development of India. The role of electricity gets even more sanctity in a country like India, where the energy generated decides the economic growth of the country[2]. The chapter of electricity in India started with the era of British controlled India[3].

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[1] India is fifth 5th Highest Producer of Electricity World Wide, Index Mundi, Comparison of Country by Production, Accessed at http://www.indexmundi.com/g/r.aspx?v=79&t=100, Accessed on 19th Feb, 2015

[2] Ramya.L.N, M.A.Femina, Energy Auditing – A Walk-Through Survey, International Journal of Advanced Research in Electrical,Electronics and Instrumentation Engineering, Vol. 3, Special Issue 2, April 2014

[3] The first test for electricity was done in Calcutta on 24th July, 1979 by a British Company named P W Fleury & Co.

Indian power sector has made a remarkable progress over the years. The graph of installed generating capacity has grown from 1361MW in the year 1947 to 158.6 GW in January, 2010. However, even after the blasting growth, the shortage of power sector continues to persist till date. Even after many innovative steps the gap between the demand and supply could not be vanished and the power shortage remained an important issue in India[4]. There have been many factors which have contributed to his gap between the demand and supply. Also, this has led to India being the home for the largest number of people without access to electricity[5]. Also, this has led to India being the home for the largest number of people without access to electricity[6].

The open access being one of the key components of this Act stands there to ensure the cut throat competition in the power sector and thereby to ensure the steady supply of electricity, especially in states where the demand surpasses the local supply of electricity. Electricity is a main expense in every house and is one of the biggest commoditsies of expenditure in a company's income statement. Increased market competition will ensure more choices for the consumer, while lowering the cost of goods or services. Therefore emerging and innovative solutions and there implementation to overcome challenges in

[4] Subodh Garg, Light at the end of the Tunnel: Indian Power Sector Challenges and Opportunity, NPTI, Accessed at www.npti.in/pdf/Article%20on%Power% Sector%20DG,%20NPTI.pdf Last accessed on 19th Feb, 2015.

[5] The total count of people in the world who do not have access to electricity is around 1.4 Billion out of which around 300 Million accounts from India. Ramya.L.N, M.A.Femina, Energy Auditing – A Walk-Through Survey, International Journal of Advanced Research in Electrical,Electronics and Instrumentation Engineering, Vol. 3, Special Issue 2, April 2014; Deepak Jhalani, Dr Himanshu Chaudhary, **Inclusion of Human Power (HP) In Micro Grids Portfolio: A Solution for Indian Rural Electrification,** *IOSR Journal of Mechanical and Civil Engineering Volume 2, Issue 5 (Sep-Oct. 2012), PP 39-47* Available at http://iosrjournals.org/iosr-jmce/papers/vol2-issue5/H0253947.pdf, Last accessed on 19th Feb, 2015.

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power utilities in India are highlighted. And these innovations are required at both the fronts, namely at the technological front and the legislative/regulatory front and moreover the completion among the various participating player in the sector is the key to reviving power sector as completion among participating corporation always brings implied benefits for the consumers.

> *"If open access would have been allowed, it would have created competition amongst the discoms and it would have made them more responsible."*
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> HD Khunteta, Dir – Fin,REC

Under the British regime, the power infrastructure sector was developed by private participation7. The history and evolution of Indian electricity sector dates back to 1880s when a small power generating station with local distribution was established in the hills of Darjeeling in the eastern part of India. The legislations of 1887 and 1903 that provided for private power and minimal regulation, evolved into a more comprehensive Indian Electricity Act of 19108. However, post-independence the objective of extending electrification took precedence and nationalization became hijacked the private electricity licenses.

The Indian power sector has made significant progress over the years. The sector has also undergone substantial structural changes. Regulatory policies have played a predominant role in changing the landscape of the Indian power sector9. The Electricity Act, 2003 enshrined various provisions indicating efficiency10, unbundling11, open

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[7] Supply of electricity commenced in India in the 188o's with the commissioning of a small 130KW hydro- electric plant in Darjeeling, now in the state of West Bengal. A thermal Power plant based on coal was established in Calcutta in 1897. (**See.** The India Infrastructure Report, Department of Economic Affairs, Government of India, New Delhi, 1996).

[8] CCI Order, Neeraj Malhotra v. NDPL and Ors., Case no. 06 of 2009.

[9] An Excerpt from –Regulatory and Policy Environment‖, India's Energy Sector available at http://www.dnb.co.in/ IndiasEnergySector/Regu_Power.asp# Last Accessed on 2th March,2014.

[10] Preamble, Sec 29, 33, 61, 63, 79(2), 86(2), 134(5) of the of Electricity Act, 2003.

[11] Sec 26, 27, 31, 38, 41 of the Electricity Act, 2003

access12, competition neutrality13, consumer choice14 etc. However, in spite of such obvious expression of the legislature's intention, the objectives are far from achievable even after 10 years of the Acts enforcement.

Power sector introduced the unique concept of –Open Access15 under the India Electricity Act, 2003. It is one the most powerful tools provided by the Electricity Act of 2003 to induce competition in the Power Sector. Essentially, Open Access implies that a buyer can choose his own supplier and vice versa. Buyers and suppliers would be entitled to the non-discriminatory use of transmission lines or distribution system for transferring power from generation to consumption points. It has been widely accepted that the introduction of market forces through open access would be an effective means of wiping out the inefficiencies of the sector16.The Act mandated restructuring the vertically integrated segments into unbundled and independent activities17. The Electricity Act and various policies (NEP and NTP) recognize Open Access as a viable tool to allow consumer choice. However, **Open Access, which is considered a cornerstone in the design of competitive market in the power sector have not been implemented very effectively so far**. **This route to competition has failed to provide accessibility to the consumers. The difficulties in enabling OA have been identified in various analyses,** such as—

i) Multiple charges (transmission charge, wheeling charge, cross subsidy surcharge etc.);

ii) Non-transparency regarding Available Transmission Capacity (ATC);

[12] Sec 2(47), 38(2), 39(2), 40(c), 42(2), 42(3) of Electricity Act, 2003
[13]Sec 38(2), 39(2), 40(c), 42(3), 60, 134 of Electricity Act, 2003
[14] Sec 38(2), 39(2), 40(c), 42(3), 60, 134 of Electricity Act, 2003
[15] An Excerpt from Conference event on –Open Access- Competitive Environment for Power Sector‖ by ASSOCHAM,New Delhi dated March 27,2012.
[16] An Excerpt from Conference event on –Open Access- Competitive Environment for Power Sector‖ by ASSOCHAM,New Delhi dated March 27,2012.
[17] Research Report on Electricity Sector prepared by Ms. Bhawna Gulati And Shri V.S. Ailawadi, –Ensuring Electricity To All‖, Meetings And Consultations With Officials At Competition Commission Of India, Ministry Of Power And Other Stakeholders,2010

iii) Use of Sec 11 orders[18] by States;

iv) Procedural difficulties i.e. consumers have to approach the network operator to apply for the Open Access. Besides, there are other technical and socio-political issues which have stifled the hopes of this much relied upon solution for ensuring competition in the electricity sector.

Open Access refers to access to use of both transmission facilities as well as distribution facilities by[19]:

i) Any Licensee

ii) Any Consumer, or

iii) A Person engaged in electricity generation.

Open Access has to be undertaken in accordance with the regulations specified by the relevant electricity regulatory commission[20], Section 11 (1) of the Electricity Act,2003 : Appropriate Government may specify that a generating company shall, in extraordinary circumstances operate and maintain any generating station in accordance with the directions of that Government. Explanation - For the purposes of this section, the expression —extraordinary circumstances‖ means circumstances arising out of threat to security of the State, public order or a natural calamity or such other circumstances arising in the public interest.

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[19] Piyush Joshi,‖ Law Relating to Infrastructure Projects‖,2nd Edn.2012,LexisNexisButterworths Wadhwa, Nagpur at p.314

[20] Id p.314

The key feature of the Electricity Act 2003 is the introduction of competition electricity supply and distribution. This is achieved through proper industry restructuring and open access to natural monopoly elements.

Open access and multiple licensees in the distribution are the two important provisions in the Electricity Act 2003 for introducing competition in the power industry. However, open access is conditional and it is subject to a cross-subsidy surcharge to compensate the respective distribution licensee for loss of cross-subsidy. Same way, new distribution licensees may be required to have a mix of cross-subsidizing and subsidized consumers to prevent 'cream skimming'. These restrictions will diminish the competitive impact of these provisions since cross-subsidy is probably to be difficult to reduce, especially for agriculture and rural consumers. Two steps are, therefore, mandatory for introducing competition in the power industry. First, there should be a physical and organizational segregation of agriculture and rural supply. Secondly, cross-subsidy in tariffs should be removed for urban domestic consumers and replaced with 'lifeline' rates for low income consumers and subsidized extension of the network to high cost areas.

Open access permits large consumers of power — typically with ***connected load of 1 megawatt (Mw) and above*** — to buy cheaper power from the open market. The idea is that the users should be able to choose from a large number of competing powers companies–rather than being forced to purchase electricity from the existing electric utility monopoly. It helps large users particularly the sick textile, cement and steel industries by ensuring continuous supply of electricity at competitive prices and boost business of power bourses.

Open Access in Transmission and Distribution on payment of price to the Utility will facilitate number of players utilizing such capacities and transmit power from generation to the load dispatch centre. This will mean utilization of present infrastructure and easing of power shortage. Trading, which is now a licensed activity and regulation will also help in reducing pricing which will encourage to competition resulting in reduction of tariffs.

1.1 THE ELECTRICITY Act 2003 is a remarkable legislation in a sense it opens the power industry to a number of players by listing down provisions for a power industry and competition. As per Electricity Act 2003 Open Access is

"Non-discriminatory provision for the use of transmission lines or distribution system or associated facilities with such lines or system by any licensee or consumer or a person engaged in generation in accordance with the regulations specified by the Appropriate Commission"21.

1.1.2 Categorization

On the basis of location of purchasing and selling entity, the open access is categorized as follows:

a) Inter State Open Access: When purchasing and selling entity belongs to different state. In this instance CERC regulations are followed. And further categorized as:

a) Short Term Open Access: open access allowed for the period of less than 1 month.

b) Medium Term Open Access (MTOA): open access allowed for a period of three months to three years.

c) Long Term Open Access: open access allowed for a period of twelve years to twenty five years.

Let's presume you require open access for 2 months, and then you should reapply for STOA before the expiry of 1 month.

[21] Section 2(47) of the Electricity Act, 2003.

b) **Intra State Open Access**: When purchasing and selling entity belongs to same state. In this case State electricity regulatory commission regulations are followed. It is then also further categorized as STOA, MTOA, and LTOA and the duration of which depends highly on the respective state open access regulation.

Kinds of Transactions:

Generally the purchaser and seller of electricity can go for **bilateral or collective transactions**. In bilateral transactions a PPA is signed between the buyer and seller, which is generally facilitated by a trader for a little margin. In case of collective transactions the electricity is traded through exchanges, by exchange members for a very small margin fixed by commission. Currently India has two exchanges PXIL and IEX.

Open Access Charges:

There are several charges to be paid by open access consumers to distribution licensee, transmission licensees and other related entities, other than the power purchase cost paid to the generator or supplying entity. These charges include:

(i) PoC Charges

(ii) Transmission Charges

(iii) Connectivity Charges

(iv) Wheeling Losses

(v) Wheeling Charges

(vi) Transmission Losses

(vii) Cross Subsidy Surcharge

(viii) SLDC Charges

(ix.) RLDC Charges

In addition to these charges the open access users has also to fulfill the renewable purchase obligation, in which they have to purchase part of their consumption through electricity generated via renewable energy.

2. INDIAN POWER SECTOR: LEGISLATIVE HISTORY

The electricity has been put in the concurrent list[22], so that both central and state have the power to make legislation concerning it. The first regulation was enacted in the British era to regulate the electricity sector was the Electricity Act, 2010[23], which now stand repealed. Thereafter, the government after independence to set further reforms enacted the Electricity (Supply) Act, 1947. The act was based on a stringent socialistic policy and could not perform well as per the needs of the nation. Finally, the Electricity Act, 2003 was enacted as to satisfy the contemporary demand and encouraging the private participation in the power sector. Thus, the whole story of the Indian electricity could be divided into three phases, i.e. the pre-independence phase, the post-independence and post reform phase.

2.1.1 Pre-Independence Era

The pre-independence era existed till the year 1947, i.e. the year of independence in India. The commercial production of electricity in India was way back to 1879 in Kolkata. In 1897, a 21-year license was granted by the then government of Bengal to the Calcutta Electricity Supply Corporation to supply electricity to Calcutta. After Calcutta, Mumbai was the second city to have electricity and after Mumbai, the private companies concentrated on developing the power supply systems in major city. The growth in the electricity during that phase was basically driven by demand from commercial and industrial requirements. Apart from commercial and industrial use, domestic use also triggered the growth to a certain extend. Almost all private companies operating at that period cease to exist today as they were brought into state-owned enterprises. However, a few of them continue to exist as private players.

[22] Entry 38, Concurrent List, 7th Schedule, Constitution of India.

[23] The Indian Electricity Bill was passed by the Legislative Council on 18th March, 1910 and it became the Indian Electricity Act, 1910 (9 of 1910) and it came into force with effect from 1st January, 1911.

The Electricity Act 1910 was the first legislation in the power industry, which was introduced in the year 1910. The Act provided for the basic framework for supply of electricity. The sector at that point of time at a nascent stage required huge investment requirement for setting up the basic infrastructure. The Act buoyant the growth of the industry by making the provision of granting licenses to private companies. Thus, during this phase, the generation was mainly concentrated in the hands of the private sector and coal and hydropower were the prominent source for generation. Tata Power, which today strands as the country's largest private sector utility, commissioned its first hydroelectric generating plant with a capacity of 72 MW at Khopoli.

The best aspect about the pre-independence era was firstly, the marking of electricity in India and secondly, it promoted private players in electricity sector. Also, the Act materialized in 1910 gave the importance to the structural framework for the electric supply and encourage private participation. However, the supply of energy was restricted to the urban areas as private players were reluctant to invest in the rural areas.

2.1.2 Post Independence

As discussed earlier, before independence the electricity generation and supply was concentrated in hands of private players, due to which there was an uneven growth which concentrated only in urban areas. The second phase existed between the years 1947 to 1990. The government realized the importance of supply of electricity across all parts of the country[24]. To cope up with this issue, the legislators come up with the Electricity (Supply) Act, 1948. The legislation was based on the UK Electricity Act, 1926. Under the Electricity (supply) Act, 1948, the Central Electricity Authority (CEA) was established at the central level and State Electricity Boards (SEBs) were constituted in each state. The creation of SEBs was mandatory in each state[25]. Where CEA had to ensure development of a sound, adequate, and uniform national power policy to coordinate development of the power sector in India[26] and SEBs role was to generate, transmit and distribute the

[24]

[25] Section 5, The Electricity (Supply) Act, 1948

[26] Section 3, The Electricity (Supply) Act, 1948

electricity in their respective states[27]. The planning and development was done by the SEBs where the overall supervision was given by the CEA. The CEA also provide planning at the national level and it provided the SEBs with broad guidance, planning, and development.

The development of Indian Electricity grids has been started from 1964 when it was planned to develop the electricity grids in whole country on the basis of regions were developed on the concept of Regional self sufficiency[28]. The regional grids came into their own in mid 1980s with minimum power exchanges at interregional level in radial mode. The first asynchronous HVDC back to back station connecting the Northern and the Western grids was commissioned in Vindhyachal in 1990. The Eastern and North Eastern synchronization took place through initial radial operation on 132 kV Alipurdwar – Gosaigaon and 220kV Birpara – Salakati, this line was commissioned as early as 1986 as a part of the Chukha (Bhutan) Transmission System but synchronous operation had to wait till 1991.At that time (1991) NER system size was 600 MW while Eastern Region was 6000 MW.

The SEBs acquired the private companies operating within their respective states and the state electricity boards were interconnected as to enhance system reliability and to ensure wider geographical coverage[29]. The electricity sector was brought into public domain.

The SEBs performance was adequate in the initial year and they started an overall development of the sector. As per the Electricity (Supply) Act 1948, the SEBs was required to generate a minimum return of 3% on their net fixed assets in service after

[27] Section 18, The Electricity (Supply) Act, 1948

[28] S. R. Narasimhan Hemlata Vyas P.C.Pankaj Umesh Chandra, Empowering India through integrated grid operation A case study, FICCI Technical Paper,Available at http://www.nrldc.in/docs/Documents/Papers/EmpoweringIndiathroughIntegratedGridOperation-SRN.pdf Last Assessed on 20th Feb, 2015

[29] Section 7, The Electricity (Supply) Act, 1948

meeting the financial charges and depreciation[30]. The SEBs were able to somehow to generate the said returns for many years, but, later on their performance faltered and they had to seek financial aid from the state government in different forms. The 1970s were marked by incidents of power blackouts and grid collapses. As hydropower generation were dependent on the water resources which in turn was dependent on monsoon season, which become uneven therefore their capacity was compromised. Moreover, the public characteristics elevated the issues for the board further. There were delays in supply of equipment, delays in the civil works supply, and the infrastructure additions in proportion to the transmission and distribution were also not adequate. In its attempt to cater these issued the states and the Central government established a some private companies, who could escalate the overall development.

Amendment was made in the Electricity (Supply) Act 1948 and the National Hydropower Corporation (NHPC) was established in the year 1975 to build and operate hydropower plants and the National Thermal Power Corporation (NTPC) to set up thermal power plants to supplement the capacities of the SEBs and private companies.

NTPC developed its own transmission network to transmit electricity to different SEBs. In 1981, the government integrated the operations of the central and state transmission systems to by forming a national power grid to smoothen the progress of transmission of power generated by non-SEB generators. These efforts led to the emergence of the National Power Transmission Corporation in 1981. The company initially was engaged in managing the transmission assets of the three companies i.e. NTPC, NHPC and North-Eastern Electric Power Corporation however but in 1992, the company was renamed as Power Grid Corporation of India Ltd and the transmission assets of the three companies were transferred to it under by way of an ordinance[31]. Also, the government formed the Power Finance Corporation (PFC) in 1986 as a priciple financial institution dedicated to

[30] Research Report on Electricity Sector prepared by Ms. Bhawna Gulati And Shri V.S. Ailawadi, —Ensuring Electricity To All‖, Meetings And Consultations With Officials At Competition Commission Of India, Ministry Of Power And Other Stakeholders,2010 at ¶ 5.5.15

[31] R. V. Shahi , Towards Powering India: Policy Initiatives and Implementation Strategy, Excel Books, First Edition, Pg. 83

the sector financing to supplement planned expenditure on generating plants, specifically new generating plants.

A lot of stress was laid on establishing hydropower plants during this stage as the government wanted to develop the power and irrigation simultaneously. The capacity in the hydropower sector witnessed a significant rise in 1970[32]. However, the rise was lesser-than-expected growth rate and longer gestation period decreased its share in total power generation capacity. In the meanwhile coal-based power plants continued to grow and the graph of thermal power capacity kept on increasing[33].

While the SEBs aided the growth in the Indian electricity sector, by the end of the phase under review, they suffered huge financial crisis and technical losses[34], as a result of these losses, they tend to provide poor service to consumers. Also the state-owned corporation power plants were running at low plant load factor (PLF) and the SEBs did not have enough funds for renovation and modernisation of their plants which resulted in huge gap between demand and supply leading to an electricity crisis.

All these issue accumulated and created a huge pressure on the government to think about the restructuring the sector. The government responded to this situation by restricting the whole sector in 1991.

2.1.3 Post Reform Period

The third phase started in the year 1991, when the government started reforming the power sector. The State Governments were not able to further help the ill-health SEBs

[32] The installed capacity from hydro in year 1969 was 5907 MW which reached upto 10,833 in 1979. Growth of Electricity Sector in India, CERC, Government of India, July, 2013, Accessed at http://www.cea.nic.in/reports/planning/dmlf/growth.pdf Last accessed on 19th Feb, 2015.

[33] Poor revenue collection and billing, poor metering and energy accounting, electricity theft, cross subsidies and SEB staff's inefficiencies were the main reasons for their losses.

[34] Research Report on Electricity Sector prepared by Ms. Bhawna Gulati And Shri V.S. Ailawadi, —Ensuring Electricity To All‖, Meetings And Consultations With Officials At Competition Commission Of India, Ministry Of Power And Other Stakeholders,2010 at ¶ 5.5.15

financially; therefore the much needed reform was brought into force in 1991. For the convince of the study, this third phase is further divided into three parts or period.

2.1.3.1 First Part (1991-1996)

In this first part the government introduced the concept of Independent Power Producers (IPP). The main reason was to draw investment from the private players. The government open the sector for investment from both foreign and domestic players[35]. The step was affected by way of an amendment in both Electricity Act, 1910 as wells as the Electricity (Supply) Act, 1948[36]. The government took a unprecedented effort and brought 100% ownership to the foreign players.

Apart from that in 1995, government introduced the Mega Power Policy to increase private investments in over 1,000-MW generation projects that would supply electricity to more than one state. The selection was to be made on the criteria of competitive bidding and the project was to get support from the CEA, NTPC and PGCI.

The initiative taken by government can be called revolutionary, however the result was not satisfying. The experiences of the first phase were not great and the Enron created a very bad picture of the unstable investment scenario. So overall, the first part of the reform failed to attract the investors, as it could not create a viable and attractive option for the private players to invest in this sector. The picture of unhealthy SEBs was in front of the private players, which further restricted them from investment.

2.1.3.2 Second Part (1996 to 2003)

The government learnt from their mistakes made in the first part with further reforms. The Government in 1998 come with a revised Mega Power Policy, with better enrolment and opportunity for the investors. The Power Trading Corporation (PTC) was also established to purchase power from identified projects and to sell to identified-SEBs. Establishing regulatory commissions and privatizing distribution in cities having

[35] Reforms In The Power Sector, Press Information Bureau, Government of India, Accessed at http://pib.nic.in/feature/feyr2000/fapr2000/f060420001.html, Last accessed on 19th Feb, 2014

[36] Both the legislation were simultaneously amended by way of Electricity Laws (Amendment) Act of 1991

population of more than one million were the pre-conditions included in the revised policy.

The sector's performance improved as compared with the first period as the PLF reached around 70% but still the commercial losses posed a major issue in the sector's progress. During this period private players were already being made for capacity addition in generation but the need was felt for private investment in transmission as well therefore, the Electricity Laws (Amendment) Act, 1998 was passed to enable private investment in the power transmission sector[37]. The Central Transmission Utility (CTU) and the State Transmission Utility (STU) were set up under this Act. The maintenance and construction activity of transmission network was supervised by CTU at the inter-state level and by the state transmission utility (STU) at the intra-state level.

The CERC issued the first Indian Electricity Grid Code (IEGC) in January 2000 to guarantee grid discipline and to set operation and governance parameters for players in the transmission and distribution sectors.

2.1.3.3 Third Phase (2003 onwards)

In last two parts, we could observe that there were lot of changes brought into the sector. Both the Electricity Act, 1910 and Electricity (Supply) Act, 1948 were amended twice[38] to suit the reforms brought in the sector. Apart from that to set up regulatory commission the Electricity Regulatory Commission Act, 1998 was enacted. Finally, the Electricity Act, 2003 was enacted which repealed Electricity Act, 1910, the Electricity Regulatory Commission Act, 1998 and Electricity Supply Act, 1948[39]. The Act of 2003 aimed at providing a a legal framework for enabling reforms and restructuring the power sector. The Act created a liberal framework for development of the power industry, promoting competition, protecting interests of consumers and supply of electricity to all areas,

[37] The *Electricity Laws (Amendment) Act, 1998* (22 of 1998)

[38] By way of Electricity Laws (Amendment) Act of 1991 & the *Electricity Laws (Amendment) Act, 1998*

[39] The Electricity Bill was passed by the Parliament in 2003; this Bill sought to provide a legal framework for enabling reforms and restructuring of the power sector. The Bill became an Act with effect from June 10, 2003 and replaced the earlier laws governing the power sector, namely, the Indian Electricity Act 1910, the Electricity (Supply) Act 1948, and the Electricity Regulatory Commission Act 1998.

rationalization of electricity tariff and ensuring transparent policies and promotion of efficiency, among others[40]. The Act came out with the National Electricity Policy[41], mandatory creation of SERCs[42], emphasis on rural electrification[43], open access in transmission and distribution[44] and some other provisions. It mandated the regulatory commissions to regulate the tariff and issues of license. This Act focused on laws relating to generation[45], transmission[46], distribution[47], trading, and uses of electricity[48]. The Act was further amended on May 28, 2007 and the Electricity Act 2003 was enacted with stronger power and clarity and with greater emphasis on assessment, fines, and legal framework to check the commercial losses due to theft and unauthorised use of electricity[49].

One of the most essential feature of the Act of 2003 is the concept of Open Access[50]. The open access crated a big room for private players in the areas of transmission and

[40] Regulatory and Policy Environment: Indian Power Sector. D&B, Accessed at https://www.dnb.co.in/IndiasEnergySector/Regu_Power.asp, Accessed on 19th Feb, 2015.

[41] Section 3, Electricity Act, 2003

[42] Research Report on Electricity Sector prepared by Ms. Bhawna Gulati And Shri V.S. Ailawadi, ―Ensuring Electricity To All‖, Meetings And Consultations With Officials At Competition Commission Of India, Ministry Of Power And Other Stakeholders,2010 at ¶ 5.5.15

[43] Hiranmoy Roy,Anil Kumar,‖Present Status of power in India‖Vol. LI No.11,Mainstream Weekly dated:2rd March,2013

[44] A.A.Khan, former CMD, Power Trading Corporation ‖Make open access in power a reality‖ available at http://www.thehindubusinessline.com/opinion/make-open-access-in-power-a-reality/article3408885ece dated:11th May,2012

[45] Part III, Electricity Act, 2003

[46] Sankar, T L (2004): 'Electricity Act 2003; Dark Shadows over a Bright Vision', Economic and Political Weekly, February 21.

[47] Piyush Joshi,‖ Law Relating to Infrastructure Projects‖,2nd Edn.2012,LexisNexisButterworths Wadhwa, Nagpur at p.314

[48]Central Electricity Regulatory Commission, [Online]. Available: http://www.cercind.gov.in/

[49] The Electricity (Amendment) Act, 2007 (No. 26 Of 2007)

[50] As per Section 2(47) of Electricity Act, 2003 " open access" means the non-discriminatory provision for the use of transmission lines or distribution system or associated facilities with such lines or system by any licensee or consumer or a person engaged in generation in accordance with the regulations specified by the Appropriate Commission.

distribution. Also, the deregulation of the generating sector gives added advantage to the prospective investors. The Act also removed obstacles for the captive power generation[51] and made the procedures simple. Open access was allowed in transmission, which helped the private producers or any other generating utility to sell their power to any entity, as per their wish using transmission network. Due to these liberalizations, industries could now set up captive power generation units and by virtue of openaccess they were allowed them to sell electricity to using transmission network. Captive units could thus sell their surplus power to the customers of their choice therefore add value to the overall production.

3. PROVISION FOR OPEN ACCESS IN ELECTRICITY ACT, 2003

Open Access‖ implies the non-prejudicial procurement for the utilization of transmission lines or appropriation framework or related offices with such lines or framework by any licensee or shopper or an individual occupied with era as per the regulations determined by the Appropriate Commission52 Sec.2 (47)

The capacities of the Central Transmission Utility might be - to give non-unfair open access to its transmission framework for utilization by-

(i) any licensee or producing organization on installment of the transmission charges; or

(ii) any shopper as and when such open access is given by the State Commission under sub-area (2) of segment 42, on installment of the transmission charges and an extra charge consequently, as may be indicated by the Central Commission. (Sec.38 (2) (d))

3.1 Illustration

[51] Section 9, The Electricity Act, 2003

[52] Sec.2(47) of the Electricity Act, 2003

In spite of the fact that this area stipulates open access to licensees and to customers who pick exchange suppliers of power, such open access is twofold charged if there should arise an occurrence of shoppers. The customer needs to pay the wheeling transmission charge in addition to an additional charge in addition to cross sponsorships (aside from power duty)53. This makes the choice of picking a substitute supplier less appealing accordingly disheartening rivalry in the power supply area.

The capacities of the State Transmission Utility should be to give non-unfair open access to its transmission framework for utilization by-

i) Any licensee or creating organization on installment of the transmission charges; or

ii) Any shopper as and when such open access is given by the State Commission under sub-segment (2) of area 42, on installment of the transmission charges and an extra charge consequently as may be determined by the State Commission. (Sec.39 (2)) It shall be the obligation of a transmission licensee to give non-prejudicial open access to its transmission framework for utilization by-

(i) Any licensee or producing organization on installment of the transmission charges; or

(ii) Any purchaser as and when such open access is given by the State Commission under sub-segment (2) of area 42, on installment of the transmission charges and an extra charge consequently, as may be determined by the State Commission.Sec.40(c).

(2) The State Commission might present open access in such stages and subject to such conditions, (counting the cross appropriations, and other operational imperatives) as may be determined inside one year of the selected date by it and in indicating the degree of open access in progressive stages and in deciding the charges for wheeling, it should have due respect to all significant elements including such cross sponsorships, and other operational limitations:

[53] Research Report on Electricity Sector prepared by Ms. Bhawna Gulati And Shri V.S. Ailawadi, –Ensuring Electricity To All‖, Meetings And Consultations With Officials At Competition Commission Of India, Ministry Of Power And Other Stakeholders,2010`

Given that 1[such open access should be permitted on installment of a surcharge] notwithstanding the charges for wheeling as may be dictated by the State Commission.

Given further that such extra charge might be used to meet the necessities of current level of cross endowment inside the zone of supply of the distribution licensee.

Given likewise that such extra charge and cross sponsorships should be continuously lessened in the way as may be determined by the State Commission.

[Provided also that the State Commission shall, not later than five years from the date of commencement of the Electricity (Amendment) Act, 2003, by regulations, provide such open access to all consumers who require a supply of electricity where the maximum power to be made available at any time exceeds one megawatt.] (**Sec.42(2))**

3.2 Illustration

Open access is to be acquainted in stages however subject with extra charge, cross-endowment and other operational requirements.

It is disillusioning that Open Access procurement has not been utilized to encourage presentation of rivalry in the appropriation fragment as imagined in the Act. With impact from Jan 09, Open Access was legitimately to be made accessible to a 1mw or more mass shopper of circulation licensee if such purchaser pulls out thereof. The dispersion licensee regarding such supply is obliged to go about as normal transporter & give non-unfair Open Access. What's more, this right is accessible to any merchant, licensee and generator for supply of power to any individual or client requesting or obliging supply of power. **The intention of the legislature is totally to pass the legal right of every customer with a certain demand of electricity must get open access.** This has now turned into a lawful ideal for the mass purchaser from 2009 onwards. The proposition of incorporating this procurement in Sec 42 was to guarantee rivalry and open access in any event for the mass purchaser. Sec 42 read with Sec 49 gives full flexibility to guarantee aggressive duty structure. This has now been sponsored with strategy clarity so there is no extent of distinctive understanding by diverse controllers. A reference in this respect

can be made to the late opinion54 from Ministry of Law and Justice on the operationalization of open access in force division. The Ministry completely firmly opined that since the fifth stipulation is presented in the Electricity Act in January 2004, the five years terminate in January 2009. Subsequently, 1 MW or more buyers are esteemed to be open access shoppers and the controller has no locale over settling the vitality charges for them55.This would pass the way for the presentation of retail rivalry in any event for mass customers and in the end may lead different purchasers also. That privilege must be guaranteed through empowering regulations and not prohibitive. Existing OA State Regulations are Ineffective & Half Hearted. Administration level commitments for utilities are not institutionalized. A significant part of the Transition period not used for inclining or realignments in the regulations. In this way, for all intents and purposes utility imposing business model continues56. In any case the significant issue is that, the choice of Open access is permitted just to customers in whose case the power interest surpasses one megawatt. This is unrealistic to test utilities without genuine rivalry. This may additionally have all the earmarks of being biased condition on the grounds that it sorts shoppers in 2 classes those having request up to one megawatt and those having interest surpassing one megawatt—the previous must choose between limited options of supplier however the recent can pick a private supplier for power. This provision is exclusionary and doesn't give meet chance to all purchasers and void some purchaser of reasonable decisions, even following 8 years of the EA, 03. Additionally take note of that cross appropriation of previous class of purchaser by charging extra charge and cross-endowment charge from the last classification of customers can have rivalry concerns. The UK power part likewise began with staging procurement for permitting buyer decisions yet in 5 years time they have permitted free choice to all

[54] Report No. 23/1/2008-R&R (Vol-IV),Government of India, Ministry of powerOpinion from M/o Law and Justice on the operationalization of Open Access in power sector available at http://www.powermin.nic.in/whats_new/pdf/Opinion_from_Mo_Law_&_Justice_on_The_Operationalizaton_in_Power_Sector_Nov_2011.pdf Last accessed on 1st April,2014.

[55] Id at ¶ 8

[56] **Pradip Baijal & V.S. Ailawadi,** Presentation on **Inter State Open Access Implementation,** IDFC Energy Group. Also See. Research Report on Electricity Sector prepared by Ms. Bhawna Gulati And Shri V.S. Ailawadi,–Ensuring Electricity To All‖, Meetings And Consultations With Officials At Competition Commission Of India, Ministry Of Power And Other Stakeholders,2010

shoppers regardless of their power Where any person, whose premises are situated within the area of supply of a distribution licensee, (not being a local authority engaged in the business of distribution of electricity before the appointed date) requires a supply of electricity from a generating company or any licensee other than such distribution licensee, such person may, by notice, require the distribution licensee for wheeling such electricity in accordance with regulations made by the State Commission and the duties of the distribution licensee with respect to such supply shall be of a common carrier providing non-discriminatory open access. (**Sec.42 (3)).**

4. OPEN ACCESS IN TRANSMISSION SEGMENT

The Electricity Act, 2003 introduced a non-discriminatory open access in the transmission segment, which empowered the generators to sell power to any user and gave the purchaser the alternative to choose the generator using the transmission network. The transmission utility was not allowed to reject use of its transmission network except in case of capacity limitation. At the national level, Power Grid, which was the central transmission utility, could provide open access, and at the state level, the state transmission utilities could provide open access. The open access users are categorized as short-term users (up to one year) and long-term users (for 5 years). The opening up of the transmission network is likely to induce competition among generators as well as purchasers.

There has been a robust increase in the generating capacity of the India after the liberalization of the sector in the year 1991. Whereas the installed capacity was 69065 MW in the year 1990, the same has increased to almost four times to 258701 MW in 2015[57] which shows the rate of development of generating unit of the Indian Power Sector.

But if we look into the figures of the installed capacity of transmission we could observe that growth has not as significant as compared to the growth of generation. If we talk about the transmission lines below 66Kw, the installed capacity was around 4,20,000 kms and increased only to 8,50,000 Kms in 2013[58]. So, the generating capacity has grown upto four time after the liberalization where as the transmission facility has only reached twice its capacity. The inadequate transmission lines have very huge impact on the overall economy and statistics of the power sector. Many a times apart from making huge

[57] The figures of installed capacity represent the total installed capacity till January, 2015. CEA, Installed Capacity, Accessed at http://www.cea.nic.in/reports/monthly/inst_capacity/jan15.pdf, Accessed on 29th Feb, 2015.

[58] *Supra at 36.*

investment in generating station, the players again have to invest on transmission so that they can optimize their production[59].

Therefore, the increase in the generating capacity has added an additional pressure on the development of transmission lines. The relevance of the transmission lines is equivalent to that of generation, as without adequate transmission lines the whole process would be futile.

4.1.1 The uneven location for generation and demand

A lot of factor influence the establishment of site of a power plant. The factor differs even on the type of power plant, the fuel used, or even on the prospective consumers.

In the past, transmission infrastructure was created with respect to generation and was focused on setting the adequate transmission systems which could evacuate power sufficiently, however, with the contemporary needs are different. Transmission sector has started to move towards integrated system planning due generation capacities being distributed unevenly in respect to their location. While thermal capacity is concentrated in the eastern region due to the presence of the coal fields which are the chief raw materials, hydro capacity is concentrated in the Northern and North-Eastern regions which have natural river system and dams. The capacity is used to evacuate power according to the demand in other regions like the Western region; thus, the integrated system planning has turned out to be a good option.

4.2 Relevance of Transmission

The power transmission system of India is one of the important arteries of the power value chain. For a proper and efficient development of power sector, it goes without

[59] For instance, the Adani's Mundra-Mohindergarh high voltage-direct current is an Interstate Transmission System (ISTS) developed by Adani Power for the adequate utilization of power generated. Basically the duties lies with the Power Grid Corporation of India to provide with the adequate infrastructure facility. This added burden of the players represent that PGCIL has failed in providing services for the transmission line.

saying that robust and non-collapsible transmission is inevitable. The increase in the graph of the generation of power has created a pressure on the transmission system, so that the surplus electricity could be transmitted to the region in need. In last five years the generation capacity has been increased by 50%, however the transmission capacity has been increased however only restricted to 30%.[60] This unparallel growth of generation capacity and transmission capacity has been resulting in inadequate utilization of electricity and loss of resources.

Even after having 225 GW of installed generating capacity in 2012-13[61], India still comes under power deficit country. One of most relevant short coming leading to such situation is the inadequate transmission capacity, which does not match the generation capacities and load requirements. Unlike infrastructure sectors like the road network, where substitutes like rail, ship, waterways, airways, etc. are available, no such alternative to the transmission lines exist in the power sector[62]. With the sole exception of captive power, cross country transmission lines ferry every unit of the power generated in the country.

Power evacuation is turning out to be a bigger problem than power generation for the country[63]. Plants supplying electricity to SEB under long term agreements lost 1.93 billion units of generation due to transmission capacity bottlenecks[64]. Based on the current supply position, Northern-North Eastern-Eastern-Western of the National Grid region is surplus to the extent of 2.3% of total regional demand during peak hours, while, the Southern region is anticipated to face a peak-time shortage of 26% of regional

[60] Growth of Electricity Sector in India, CERC, Government of India, July, 2013, Accessed at http://www.cea.nic.in/reports/planning/dmlf/growth.pdf Last accessed on 19th Feb, 2015

[61] Ibid

[62] FICCI, Power Transmission: The Real Bottleneck, Sept 2013. Accessed at http://www.ficci.com/spdocument/20311/power-transmission-report_270913.pdf Accessed on 20th Feb, 2015.

[63] Ibid.

[64] Noor Mohamad, Infra woes trip transmission despite power-surplus oases, The Financial Express, Jul 09, 2013 Accessed at http://archive.financialexpress.com/news/infra-woes-trip-transmission-despite-powersurplus-oases/1139647, Last accessed on 20th Feb, 2013.

demand in 2013- 14. However, the power transmission constraints do not allow for the Southern grid's shortfall to be met by the surplus in the National grid.

Further the states like Chhattisgarh which are rich on resources are also not able to evacuate the excess generated power. With an expected power generation capacity in excess of 30,000 MW by end of 12th plan, against the state's peak demand requirement of about 3,300 MW, currently there is only 7000 MW of transmission capacity available to evacuate power from the state. With a typical transmission project requiring around four to five years to get commissioned and inordinate delays expected in securing forest clearance in the region, it seems that the number of projects running below capacity, owing to transmission bottlenecks, will only increase in the near future[65].

The importance of transmission of electricity was ignored before the post reform period, and the same is evident that the no emphasis was paid on transmission in both Electricity Act, 1910 and Electricity (Supply) Act, 1947. However, the legislator identified the importance of transmission and made a very detailed and sound layout for the regulation of transmission.

As discussed above, the Indian Power Sector was closed for the private investment till the year 1991. It was only in 1991, when the sector was opened for investment. Initially in the year 1991, the government on concentrated in increasing the generating capacity, thereafter only allowed for the private investment in the generation sector. Then after the gradual increase in the power generation, when the government has to face the issue related to unparallel transmission capacity, the private players were allowed to investment in power transmission by way of an amendment in the Electricity (Supply) Act, 1948[66]. The amendment first of all segregated the transmission and gave it status of a separate activity. Further, provision was made for the establishment of Central Transmission Utility and State Transmission Utility.

Further, under the Electricity Act, 2003, a very vivid framework for the transmission was made. This shows the commitment and need towards the transmission sector. Also, the

[65] Supra at 38.

[66] The Electricity (Amendment) Act, 1998

other important factor that counts for the relevance given to the transmission is the uneven geographical location of generating station. The location of generating station is influenced by different factors like availability of fuel, level of clearance, proximity of market, water availability, climatic and atmospheric condition, labour etc. Therefore one cannot expect the a power generating plant nearby or just adjacent to their consumers.

The following aspects depict the importance of transmission in power sector value chain:

4.2.1 Open Access in Inter-State Transmission Network

Open Access to the Interstate transmission network has become vital land mark reform. CERC has created a stable regime through Interstate Connectivity and Open Access regulations. Electricity exchanges, undoubtedly, have enabled utilities to benefit from competition in the inter-state market in generation by procuring power from multiple generators. Yet, the main aim of the electricity Act, i.e. to serve the users by this whole architecture is still away from being achievable because of absence of competition in the distribution segment of the industry. It is through protracted consultations & efforts that the **Open Access to bulk user which was to be introduced in the phased time bound manner has now become a legal right for those users but amidst the regulatory and policy barriers, the access to networks is as inaccessible as before**. In a recent opinion67 from Ministry of Law and Justice on the operationalization of open access in power sector, it is strongly opined that since the fifth proviso is introduced in the Electricity Act in January 2004, the five years expired in January 2009. Therefore, 1 MW and above consumers have choice as they will be deemed to be open access consumers and the regulator has no jurisdiction over fixing the energy charges for them68.It is expected that the state regulators may not create barrier and instead make such changes in existing rules /regulations as are necessary in facilitating this choice to

[67] Report No. 23/1/2008-R&R (Vol-IV),Government of India, Ministry of power ,Opinion from M/o Law and Justice on the operationalization of Open Access in power sector available at http://www.powermin.nic.in/whatsnew/pdf/Opinion_from_Mo_Law_&_Justice_on_The_Operationalization_in_Power_Sector_Nov_2011.pdf Last accessed on 28th April,2013

[68] Id. at ¶ 6

bulk consumers69. Nonetheless, The Electricity Act, 2003, gives in the Section 36 that charges or rates‖ for utilizing interceding transmission offices of Open Access ought to be reasonable, sensible and in proportionate to the utilization of such offices. CERC could have utilized its powers under Section 2(36)(ii) & 36 stipulation for practicing its full power to guarantee end to end network for OA interstate clients and defending Open Access charges relevant over all interceding offices. The CERC has controls under Section 61(1) read with section 2(36), EA, 03 to set down rules as for determination of evaluating, which incorporates transmission surcharge etc. for between State and Open Access reason at the intrastate level. CERC has not utilized these forces under the EA, 03 to set down uniform transmission surcharge‖ for between State use as opposed to leaving the extra charge to be recommended by the State Commissions70. This has brought about distinctive standards prompting subjective charges and obstruction in advancing Open Access.

CERC ought to additionally practice its powers under Section 61 to guide the State Commissions by endorsing standards and approaches for deciding duties relevant to producing organizations and transmission lines71. With a specific end goal to anticipate pancaking of transmission charges, the charges for middle and interceding, transmission frameworks ought to be recommended by the CERC. In light of a legitimate concern for uniform and sensible charges/ expenses, the CERC ought to indicate the expenses and charges payable for the mediating transmission/ between association offices in the State or Regional transmission organizes inside one year72. All these steps will guarantee fitting and smooth working of the strategy for award of Open Access. The CERC site ought to make accessible different charges being required and authorizations needed for

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[69] Research Report on Electricity Sector prepared by Ms. Bhawna Gulati And Shri V.S. Ailawadi, —Ensuring
Electricity To All‖, Meetings And Consultations With Officials At Competition Commission Of India, Ministry Of Power And Other Stakeholders,2010

[70] Petition for removal of barriers to Open Access in Inter-State Transmission Network and promote competition in Power Market, 2009, clause 4.3 (iii). Also See .Research Report on Electricity Sector prepared by Ms. Bhawna Gulati And Shri V.S. Ailawadi, —Ensuring Electricity To All‖, Meetings And Consultations With Officials At Competition Commission Of India, Ministry Of Power And Other Stakeholders,2010 at ¶5.5.13

[71] Petition for removal of barriers to Open Access in Inter-State Transmission Network and promote competition in Power Market, 2009, clause 8.5

[72] petition for removal of barriers to Open Access in Inter-State Transmission Network and promote competition in Power Market, 2009, clause 8.6

acquiring Open Access in diverse States in its site. The information may be overhauled each fortnight in the site of the CERC. The site might likewise make accessible the status of Open Access applications got in the States, the choice taken and the pendency, headings issued on the applications for stipend of Open Access to LDCs73. Regulations ought to further recommend diverse pendencies/periods for open access. The CERC ought to additionally recommend the technique for on-line **information on transmission capacities available in the Central and State transmission corridors, under execution and those planned in different time-slices, so that both generators and consumers can avail open access in a non-discriminatory transparent manner. The Regulations should also prescribe margins for security/UA in the use of transmission corridors74.**

Regular monitoring of decisions by the CERC on the applications for Open Access by the LDCs and order given by the State Government under Sec 11 would have facilitated better assessment of the operational practices and unnecessary blockages in the implementation of Open Access provisions. Therefore, there is a need to put a check on the flagrant exercise of discretionary powers by State Government and LDCs for ulterior purposes75.

4.3 Transmission under Electricity Act, 2003

The Electricity Act, 2003 swiped away all the existing legislation governing transmission, generation and supply of electricity. Electricity Act 2003 was enacted to consolidate the laws relating to Generation, Transmission, Distribution, Trading and use

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[73] Petition for removal of barriers to Open Access in Inter-State Transmission Network and promote competition in Power Market, 2009, clause 8.10

[74] Research Report on Electricity Sector prepared by Ms. Bhawna Gulati And Shri V.S. Ailawadi, —Ensuring
Electricity To All‖, Meetings And Consultations With Officials At Competition Commission Of India, Ministry Of Power And Other Stakeholders,2010 at ¶ 5.5.15

[75] Research Report on Electricity Sector prepared by Ms. Bhawna Gulati And Shri V.S. Ailawadi, –EnsuringElectricity To All‖, Meetings And Consultations With Officials At Competition Commission Of India, Ministry OfPower And Other Stakeholders,2010 at ¶ 5.5.15

of Electricity and for measuring which would be helpful for development of electricity sector, promoting competition, restructuring of the State Electricity Boards, establishment of the regulatory committee both in Centre & State, establishment of Appellate Tribunal for all tariff related issues of the sector. The act replaced the earlier Acts of 1910, Supply act 1948, Regulatory Commission Act of 1998 etc.

As per the Act of 2003, the Central Government has been vested with the power for demarcating of the regions in the country for the efficient, economical and integrated transmission[76]. The country has been demarcated into five transmission regions viz. Northern, Eastern, Western, Southern and North Eastern. The Northern, Eastern, Western and North Eastern regions have been synchronously interconnected and operate as a single grid National Grid from a very long period of time[77]. Recently, the southern regions have also been brought into the National Grid[78].

The Electricity Act, 2003 has also contained the provision for establishment for National Load Dispatch Centre[79], and Regional Load Dispatch Centre[80]. Apart from that it also contains the provision for the interstate[81] and intrastate transmission.

4.4 National Tariff Policy 2006

National Tariff Policy 2006 brought the mandatory Tariff Based Competitive Bidding (TBCB) for all transmission projects with the objective of promoting competitive procurement of transmission services, encouraging greater investment by private players in the transmission sector and increasing transparency & fairness in the process. In addition, the policy further pushed to make the power sector not only financially viable but investment worthy. It restructured the tariffs and guaranteed a 16% rate of return on

[76] Section 25, Electricity Act, 2003

[77] Inter Regional Energy Exchanges, CEA, Accessed at http://www.cea.nic.in/reports/monthly/gm_div_rep/inter_reg_energy_exchange.pdf Accessed on 21st Feb, 2015

[78] Southern grid to be integrated with national grid by January 2014, The Economic Times, Sept 14, 2014

[79] Section 26, Electricity Act, 2003

[80] Section 27, the Electricity Act, 2003

[81] Section 31-33, the Electricity Act, 2003

investments made between 2001 and 2004, and 14% return 15 on investments made after 2004. The NTP deals with the general approach to tariffs, wherein it talks about issues such as return on investment and equity norms to be abided by project developers.

4.5 LEGAL FRAMEWORK FOR TRANSMISSION UNDER ELECTRICITY ACT, 2003

The present governance of transmission is regulated by the Electricity Act, 2003. As already discussed the Electricity Act, 2003 scrapped the legislation that existed before 2003 and regulated the supply of electricity in any manner[82]. The Act of 2003 was kind of proper arrangement to the restructuring that started way back from 1991 after the reforms were enforced in sector. To sum up, we can say that the Electricity Act, 2003 in a very sophisticated manner consolidated all the legal development as to suit the contemporary issues in the generation, transmission, trading and supply of electricity.

The Act of 2003 has been divided into XVIII parts and a very exhaustive piece of legislation that deals with each and every aspects of electricity. The Act has been very innovative and promising in dealing with the issues arising out of different operation. One of the example of such provision is setting up of Special Courts, which shall try for the certain offences under the Act[83].

The Act also put forth a complete structure and regulation of transmission system, which consist of following aspects:

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[82] The Electricity Act, 2003 repealed the following legislations:

- Electricity Act, 1910
- Electricity (Supply) Act, 1948
- Electricity Regulatory Commission Act, 1998

[83] Section 153, Electricity Act, 2003 provides for the Constitution of Special Court. The Special Court shall be set up by the State Government by notification in official gazette, which shall conduct speedy trail for the offence referred in Section 135 to Section 140 and Section 150.

a) Procedure for obtaining Licenses for the transmission.

b) Provision for demarcating the geographical location.

c) Provisions related to the establishment of CTU & STU.

d) Provision related to the establishment of RLDC and SLDC.

e) Duties and function of the transmission licensee.

f) Inter State and Intra State transmission.

g) Grid Standards.

h) Authority for regulation of grid standards.

i) Open Access.

j) Tariff Determination.

k) Dispute Resolution

4.6 Legal Framework of transmission of electricity

Ministry of Power, Government of India is the nodal agency that looks after the issues of electricity including transmission. The Ministry plays the role in the perspective planning, policy formulation, monitoring of the implementation of power projects, processing of projects for investment decision, training and development of manpower including the administration and formulation of legislation in regard to power generation, supply, transmission and distribution.

Next to the Ministry comes Central Electricity Authority of India[84]. The Central Electricity Authority in a statutory body formed under the Electricity Act, 2003. The duties of Central Electricity Authority includes advising the Central Government on the matters National Electricity Plan, formulating short term and long terms plans for developing the electricity system, providing technical standards for the power plants, electric lines, grids etc., specify the safety requirements, including other. It is basically an advisory body, which advises and make plans both *suo moto* as well as on the demand by the government.

Then comes the regulating bodies, i.e. Central Electricity Regulatory Commission[85] (CERC) and State Electricity Regulatory Commission[86] (SERC). The duty of CERC is basically to regulate the tariff of those companies who are engaged in the generation of electricity[87] who are either:

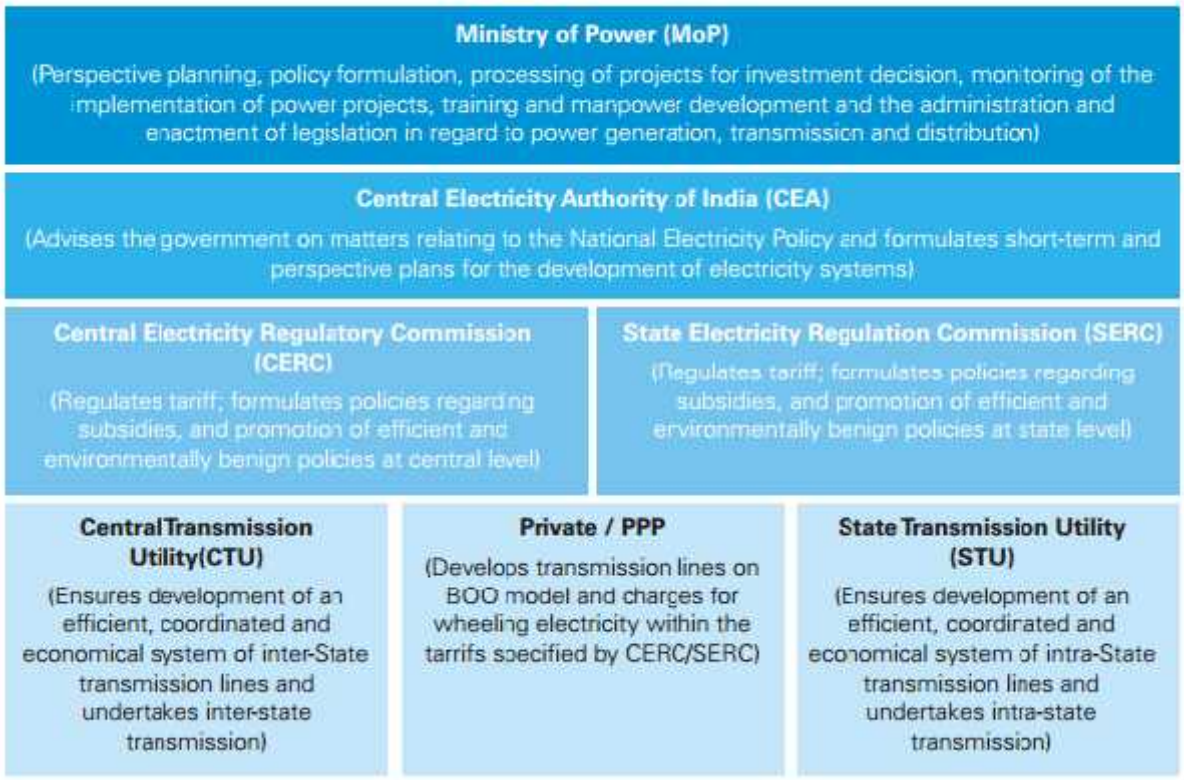
- Central Government controlled companies
- Are operating in more than one state.

[84] Section 70, Electricity Act, 2003

[85] Section 76, Electricity Act, 2003

[86] Section 82, Electricity Act, 2003

[87] Section 79, Electricity Act, 2003



[88]

The role CERC come in transmission n respect to the interstate transmission and regulation of the tariff for the in the interstate transmission.

Whereas the role of SERC emerges with respect to the state owned generating companies and the operations that are carried with respect to the electricity within its jurisdiction. The SERC also determines the wheeling charges for the transmission of electricity within its jurisdiction[89].

Transmission being a natural monopoly has been recognized as a licensed activity[90]. Transmission utility has been envisaged at the centre and in the states with the responsibility *inter alia* for the planning and co-ordination of inter-state and intra-state transmission respectively. Also, the Act contains provision for the private licenses for the

[88] FICCI

[89] Section 86, Electricity Act, 2003

[90] S. K. Chaterjee, Commentary on the Electricity Act, 2003, 2nd Edition, Delhi Law House, Pg. 75

transmission of electricity for both inter-state and intra-state. For management of day to day function of dispatch and scheduling, there has been load dispatch centre each at the Central, Regional and state level. The function of the load dispatch centre being very critical, the law provides these function should be performed by the government companies or organization only.

The other important aspect of transmission under Act is open access[91]. The law mandated that it shall be the duty of the transmission utility or licensee to provide non-dicriminatory open access to its transmission system to every licensee and generating company[92] and also to the consumer[93]. Open access in transmission thus enables the licensee and the generating companies to use the transmission system without any discrimination.

In order to ensure that the transmission does not become a bottleneck, the law prohibits the transmission licensee form trading of electricity, i.e. engaging in the business of sale and purchase of electricity[94]. The rationale behind such prohibition is to secure the interest of transmission licensee in transmission and completely segregate it from the commercial interest from the commercial sale and purchase of electricity. The only role which the transmission licensee has to play is to construct and maintain their transmission lines and get paid by the person using their transmission lines[95]. This concept has been different from the earlier practice where the electricity traders were the owners of the transmission lines and used to buy the electricity from the generating companies and trade them.

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[91] As per Section 2(47) of Electricity Act, 2003 Open Access is defined as "*the non-discriminatory provision for the use of transmission lines or distribution system or associated facilities with such lines or system by any licensee or consumer or a person engaged in generation in accordance with the regulations specified by the Appropriate Commission*;"

[92] Even the captive power have right to open access to transmission of electricity. Section 9(2) of Electricity Act, 2003

[93] Section 42, Electricity Act, 2003

[94] *Proviso* to Section 41, Electricity Act, 2003

[95] Section 41, The Electricity Act, 2003

Since under the new regime the distribution licensee would be at liberty to procure power from any of the source, which has generated competition amongst the seller and therefore helped in reducing the cost of generation or procurement. It is also pertinent to note that, unlike the open access in the distribution, the open access in transmission was allowed from the very beginning without the payment of any surcharge[96].

4.7 Licensing

As per the Act, license is required for the activities of transmission, distribution and trading of electricity. However, no license is required for the generation of electricity[97]. Under the previous legislation, the power to grant license and consequently to amend , and revoke were with the State Government, however under the new regime of Electricity Act, 2003, the powers are with the Central and State regulatory commission in their respective jurisdiction.

As per Section 12 of the Act, no person shall:

- Transmit electricity
- Distribute electricity
- Undertake trading in electricity

unless he is authorized to do by way of a license granted under Section 14. So as per the provision, the transmission, distribution and trading of electricity are licensed activity and a license under the Act is required for carrying on such activities.

Section 13 stands as an exception to the Section 12. The provision empowers the Appropriate commission to grant exemption from the requirement of licensing to certain organization like local authority, panchayat, user's association, co-operative society, NGOs, etc. The Appropriate Commission has t o grant such exemption on the recommendation from the appropriate government and while granting exemption the

[96] S. K. Chaterjee, Commentary on the Electricity Act, 2003, 2nd Edition, Delhi Law House, Pg. 76

[97] Section 7, The Electricity Act, 2003

Appropriate Commission can impose condition and restriction and specify the period for which such exemption will be valid.

This provision stands parallel to the execution of the National Policy[98] for achieving the electrification and total coverage. The existing provision corresponds to the Section 28 of the repealed Electricity Act, 1910, which provided the concept of non-licensee who were the person other than the licensee, authorized by sanction by the State Government, to undertake the business of supplying energy.

The grant of license in covered under Section 14. As per Section 14, on an application made under Section 15, the Appropriate Commission can grant a license to any person :

- To transmit electricity as transmission licensee
- To distribute electricity as distribution licensee
- To undertake trading of electricity as electricity trader in the area specifies in the license.

The provision also specifies that any person engaged in the business of transmission or supply of electricity under the provision of repealed law or appointed date shall also come within the meaning of the licensee under the Act. The provision also grants the CTU and STU and the appropriate government which transmit, distribute or trade in electricity as the status of licensee under the Act.

The people who are deemed to be licensee are:

- Persons engaged in the transmission and supply of electricity under the repealed law or the state reform laws
- CTU and STU

[98] Section 5, Electricity Act, 2003

- Appropriate government undertaking transmission, distribution , or trading of electricity whether before or after the Act.

- Damodar Valley Corporation

- The government companies or the companies created after the reorganization of SEBs

One of the most pertinent factors to be noted in Section 15 is that, it allows multiple licenses for the same area of supply of supply[99]. It empowers the appropriate commission to grant more than one license in the same area of supply and each such licensee is allowed to build his own distribution system.

Also, the provision allows a person who is intending to generate and distribute electricity in a rural area are to be notified by the State Government shall not require a license. However, he shall have to comply with the safety requirement[100]. The provision also provide that the distribution licensee does not require a licensee to trade in electricity.

Section 15 deals with the procedure for grant of license. Each application which is made under Section 14 shall be in such form and manner as specified by the Appropriate commission and on payment of appropriate fees. The manner and form of the application has to be specified by the Appropriate Commission, however the fees to be paid along with the application has to be determined by the Appropriate Government.

The Central Government has already notified the rules prescribing the grant of license[101]. The following are the procedure for the grant of license:

[99] This feature corresponds to the Section 3(2)(e) of the Electricity Act, 1910, which enabled license to more than one person in the same area of supply. The provision in Electricity Act, 2003 is however more comprehensive.

[100] Specified in Section 53, The Electricity Act, 2003

[101] The Fees for Making Application for Grant of License Rules, 2004, Gazette of India Extraordinary, 23rd March, 2004

- The applicant shall, within 7 days of the making an application, publish his application in such manner and such particular as prescribed by the appropriate government.

- The intention of publication is to invite objection for the same. The public shall have the liberty to raise their objection within 30 days of the publication

- The application shall also be forwarded to the different parties like STU, CTU, CERC, concerned SERC etc

- Before the granting of the license, the appropriate authority shall publish the notice in two daily newspapers. The notice shall state the name and address of the person proposed to be issued the license.

- The Commission shall consider all the suggestions or objections received and the recommendations, if any of the CTU/STU.

- The Appropriate Commission shall take decision on the application within 90 days of the receipt of the application and shall support its decision with the reasons.

- The Appropriated Commission shall forward a copy of the license issued to

    - Appropriate government
    - CEA
    - Local Authority
    - Such Other person as it consider Necessary

- The Validity period of the license shall be of 25 years unless it is revoked

The Appropriate Commission can also specify any general or specific condition which shall either apply to the license or a class of license[102]. The condition as specified by the appropriate government shall be deemed to be condition of such license[103].

The Act also laid down certain prohibition on the conduct of license[104]. It stipulates that the license is forbidden to

- Undertake any transaction to acquire by purchase or takeover or otherwise, the utility of any other licensee

- Merge his utility with the utility of any other licensee

Unless, it has obtained the approval of the appropriate commission. However, this provision will not be applicable if, utility to be acquire or merged lies in the state other than the state where utility of licensee is situated.

Also, a licensee intending to undertake the said transaction within the state shall before obtaining the approval from the said transaction shall give one month prior notice to every other licensee within that area[105]. Also, if any such transaction made without the prior approval of the Appropriate Government shall be void[106].

The Act also specifies the provision for making alteration of the licenses[107]. Where in the opinion of the Appropriate Commission, the public interest so permits, it may either on application of licensee or suo moto, can make amendments and alteration in the terms and condition of license, as it thinks fit.

The license can also be revoked by the Appropriate Commission on the following grounds:

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[102] Section 16, The Electricity Act, 2003

[103] The Provision corresponds to Section 3 of the Electricity Act, 1910

[104] Section 17, The Electricity Act, 2003

[105] Section 17(3), The Electricity Act, 2003

[106] Section 17(4), The Electricity Act, 2003

[107] Section 18, The Electricity Act, 2003

- where the licensee, in the opinion of the Appropriate Commission, makes willful and prolonged default in doing anything required of him by or under this Act or the rules or regulations made there under;

- where the licensee breaks any of the terms or conditions of his license the breach of which is expressly declared by such license to render it liable to revocation;

- where the licensee fails, within the period fixed in this behalf by his license, or any longer period which the Appropriate Commission may have granted therefore–
    - to show, to the satisfaction of the Appropriate Commission, that he is in a position fully and efficiently to discharge the duties and obligations imposed on him by his license; or and obligations imposed on him by his license; or
    - to make the deposit or furnish the security, or pay the fees or other charges required by his license;
- Where in the opinion of the Appropriate Commission the financial position of the licensee is such that he is unable fully and efficiently to discharge the duties and obligations imposed on him by his license.

The License can also be revoked for a certain area in the public interest on the application of the license or suo moto[108]. However, a notice of three month period in writing has to be given before the revocation of license[109].

[108] Section 18(2), The Electricity Act, 2003

[109] Section 18(3), The Electricity Act, 2003

5. OPEN ACCESS IN DISTRIBUTION SEGMENT

The distribution fragment was not given more thought in the prior regulations, which lay more accentuation on the power generation. It was viewed as that by expanding power generation, the interest for power could be met to some degree, however the business endured enormous misfortunes (T&D and budgetary) on the circulation side. SEBs, the primary bodies included in power dissemination section, were fit as a fiddle, which made it troublesome for them to pay the generator for the power supply. The danger of defaults from the SEBs stressed generators and ruined new players from entering the business. The Electricity Act 2003 thought of measures that could enhance the execution of the dispersion division on all fronts.

The measures included more than one conveyance licenses allowed in the same region, which expanded rivalry among the dissemination licensees, and guaranteed better administrations for the end buyer. The best instance of numerous licenses was perceived in Delhi after privatization in 2002, which brought about enhanced operational execution, lessening in AT&C misfortunes, and decrease in frequencies of burden shedding. NDPL, BSES, and BRPL, the three appropriation organizations, started to be and assumed responsibility of force circulation in diverse regions of Delhi.

The idea of appropriation franchisees was presented under the Electricity Act 2003, under which a distribution licensee could appropriate power through another player inside the circulation territory. The Bhiwandi circle (close Mumbai) reported the first example of circulation establishment that was conceded to Torrent Power by Mahavitaran (dispersion permit in Maharashtra).

The opposition to burglary procurements under the Act brought down the business misfortunes of utilities as power misfortunes emerging from theft diminished consistently and speculators began to show reestablished investment.

In the conveyance portion, open access was presented, which opened up another period of decision for shoppers to pick their supplier. Numerous SERCs like Jharkhand, Madhya Pradesh, and Punjab have issued rules for open get to and permitted it up to 1 MW limit or more.

5.1 Consumers within the area of Supply Distribution Licensee

Each State Electricity Regional commission has been mandated under the Electricity Act, 2003 to introduce open access in various phases and subject to such conditions (including the cross subsidies & other operational constraints) as may provided by it within 1 year from the date of the effectiveness of the act of Electricity Act, 2003110.

A SERC may permit open access before cross subsidies are wiped out by obliging an installment of an additional charge notwithstanding the wheeling charges as may be controlled by such SERC. Any extra charges so demanded should be utilized with the end goal of meeting the necessities of the then common levels of cross sponsorship inside the territory of supply of the dispersion licensee inside which the applicable customers fall. Any such extra charge so controlled by a SERC is commanded to be continuously lessened and at last wiped out alongside the cross sponsorship in the way as may be controlled by the SERC111. The surcharge that may be demanded in connection to permitting open **access to a buyer can be exacted as for an individual who has made and is working and keep up a hostage power station for empowering transmission of power from its hostage force station to the spot of utilization of such electricity.**

SERC has permitted open access to purchasers or certain class of such shoppers who may go into understanding with any individual for supply or buy of power on such terms and conditions (counting duty) as may settled upon by them.

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[110] Sec.42(2) of the Electricity Act,2003

[111] Piyush Joshi,‖ Law Relating to Infrastructure Projects‖,2nd Edn.2012,LexisNexisButterworths Wadhwa, Nagpur at p.314

5.2 Impact of "open access system" on distribution companies

Electricity Act, 2003 has commanded that with prompt effect open access ought to be executed. While everybody acknowledges that it may serve the customer interests, there are two negating perspectives in regards to the ramifications of the open access framework on the power substances particularly the DISCOMs. The primary perspective is that competitive power generation will cut down definitive expenses to the purchasers. Taken a cost reduction is conceivable just by lessening the T&D loses, keeping the additional power purchase cost low. Given the truths that power purchase cost continue expanding and the HT tax has been ordered to be cut down closer to the normal expenses (in this manner decreasing the cross-subsidy) according to fixed time schedule to be set by the controller, the first group contends that taking up additional liability through HT consumers at such high marginal cost of power purchase will be financially lame for the electricity entities.

In view of the over-dependence, it is difficult for state to give open access to bulk industrial consumers because that may result in financial problems for utilities. So it has led to various glitches to deny open access or high charges being imposed as open access. Therefore, purchasing electricity through open access becomes unviable for any consumer. Also, there has been slow progress on the open access policy. Many State Electricity Regulatory Commissions have notified open access regulations apart from fixing surcharge, transmission and wheeling charges. But this has hardly helped consumers to go forward to use the open access facility. Further, the state load dispatch centers have failed to act as independent system operators and open access is often being denied by state load dispatch centres to cast protection for state electricity boards from any kind of competition. It is difficult to persuade or force a monopolist/incumbent to give up its monopoly privileges and influence. An oft-repeated concern by distribution companies has been that if large consumers shift, the distribution companies (or utility) may suffer losses. Though housing societies in urban centers, due to their heavy consumption above 1 megawatt, also qualify for open access, distribution companies are reluctant to give them open access. Distribution companies claim that such housing

societies 'distribute' electricity without being 'licensees' within the meaning of Electricity Act, 2003. There are however many states which have permitted open access to industrial consumers and we hope that some more states will follow suit to ensure that key constituents enshrined in the Electricity Act 2003, including competitiveness, are included.

On other side their different view that the electricity entities borne heavy responsibility to meet the requirement of agricultural consumers and small domestic consumers at a lower tariff than the average cost. Consumers who at present are the HT consumers and commercial consumers paying a higher cost are providing the means to do this. If such consumers walk away from the Grid supply subsidy from Government will have to be hiked. The correct position would be dependent on the state wise condition regarding relative tariff of the different consumers, the possible rates of growth of category wise consumption & the potential for buying additional power at low rates in the future.

5. GENERATION

The Act provides that there is no requirement of license for generation. The only requirement for generating company is to establish, operate and maintain a generating station is to comply with the technical standards relating to grid connecting. The liberal provision could be better appreciated by contrasting it with the corresponding provision (of section 29) of the electricity Act, 1948 which required techno-economic clearance (TEC) of CEA for a thermal generation project improving capital expenditure exceeding a specified limit. TEC meant a detailed scrutiny of cost and technology for a project by CEA. This requirement of TEC by CEA has been dispensed. This change seems to have been necessitated by the fact that the institution of independent regulatory commission has been created with powers to fix tariff and capital cost of the project being the most important determinant evaluated in the process of tariff fixation by the regulatory commission.

Pertinently under the provision of section 62(2)[112] the Regulatory commission has powers to require inter-alia a generating company to furnish details in respect of generation, for determination of tariff based bidding, And the policy of the government incorporated in electricity Act, 2003 encourages procurement of power through competitive bidding, the issue relating to detailed cost analysis of the project loses relevance.

5.1 Increase in Generating Capacity

There has been a robust increase in the generating capacity of the India after the liberalization of the sector in the year 1991. Whereas the installed capacity was 69065 MW in the year 1990, the same has increased to almost four times to 258701 MW in

[112] The Indian Electricity Act, 2003

2015[113] which shows the rate of development of generating unit of the Indian Power Sector.

But if we look into the figures of the installed capacity of transmission we could observe that growth has not as significant as compared to the growth of generation. If we talk about the transmission lines below 66Kw, the installed capacity was around 4,20,000 kms and increased only to 8,50,000 Kms in 2013[114]. So, the generating capacity has grown upto four time after the liberalization where as the transmission facility has only reached twice its capacity. The inadequate transmission lines have very huge impact on the overall economy and statistics of the power sector. Many a times apart from making huge investment in generating station, the players again have to invest on transmission so that they can optimize their production[115].

Therefore, the increase in the generating capacity has added an additional pressure on the development of transmission lines. The relevance of the transmission lines is equivalent to that of generation, as without adequate transmission lines the whole process would be futile.

5.1.1 The uneven location for generation and demand

A lot of factor influence the establishment of site of a power plant. The factor differs even on the type of power plant, the fuel used, or even on the prospective consumers.

In the past, transmission infrastructure was created with respect to generation and was focused on setting the adequate transmission systems which could evacuate power

[113] The figures of installed capacity represent the total installed capacity till January, 2015. CEA, Installed Capacity, Accessed at http://www.cea.nic.in/reports/monthly/inst_capacity/jan15.pdf, Accessed on 29th Feb, 2015.

[114] *Supra at 36.*

[115] For instance, the Adani's Mundra-Mohindergarh high voltage-direct current is an Interstate Transmission System (ISTS) developed by Adani Power for the adequate utilization of power generated. Basically the duties lies with the Power Grid Corporation of India to provide with the adequate infrastructure facility. This added burden of the players represent that PGCIL has failed in providing services for the transmission line.

sufficiently, however, with the contemporary needs are different. Transmission sector has started to move towards integrated system planning due generation capacities being distributed unevenly in respect to their location. While thermal capacity is concentrated in the eastern region due to the presence of the coal fields which are the chief raw materials, hydro capacity is concentrated in the Northern and North-Eastern regions which have natural river system and dams. The capacity is used to evacuate power according to the demand in other regions like the Western region; thus, the integrated system planning has turned out to be a good option.

5.2 Captive Generation

The Electricity Act 2003 catalyzed captive power generation in the country and further provisions in the Electricity Act, 2003 took captive power to competitive market by opening up the market for individual units to invest in captive power generation. Open access permits the captive generators to sell power to any buyer no matter what the location of buyer is.116 Each Person who has developed a hostage producing plant and keeps up and works such plants has been allowed a statutory right to have open access with the end goal of conveying power from the hostage creating plant to the destination of it use117.

The privilege to open access for transmission of power from a hostage creating arrangement is subject just to accessibility of sufficient transmission office. The topic of whether there really exists such satisfactory transmission office might be controlled by the Central Transmission Utility or state transmission utility, as the case may be. In the event that there is a debate on the issue of accessibility of sufficient transmission limit, such question must be mediated upon by the applicable power administrative commission118.

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[116] An Excerpt from –Power Generation, India‘s Energy Sector available at http://www.dnb.co.in/IndiasEnergySector/PowerGen.asp LAst Accessed on 27th April,2013

[117] Sec. 9(2) of the Electricity Act, 2003

[118] Piyush Joshi,‖ Law Relating to Infrastructure Projects‖,2nd Edn.2012,LexisNexisButterworths Wadhwa, Nagpur at p.315

Prior to the Act was passed, any captive generation by the client for their own particular reason had likewise to get regard from the SEB. This was on the assumption that captive generation would frequently involve lower limits which give up economies of scale and would accordingly force a national level-cost on society, however the client substance itself may think that it less expensive than the cross-sponsorship it needs to pay the SEB or may think that it unavoidable amid the times of 'power cuts' by the SEB. Practically speaking, the vast majority of the current captive generation has higher expenses than the matrix power despite the cross-sponsorship and is utilized just as a standby amid times of power cuts. Notwithstanding, what has made this procurement greatly alluring to the client (and by the same token perilous to the SEBs) is the liberal meaning of 'captive', which incorporates bunch captive that is, a 'power plant set-up by an agreeable society or relationship of persons for producing power basically for their utilization'. This procurement empowers economies of scale to be misused and also having the plant at its ideal area. As such, any creating organization or IPP can qualify as a captive power plant, if the clients take in that producing organization or I PP. There has been a proposal that every shareholders ought not be permitted to draw more than its portion of shareholding, to avoid' ill-use'.

The potential "misuse" has not yet been tried in courts, however the reaction from industry has been greatly positive, as prove by a surge of uses for advances from improvement financing institutions119. What makes the captive generation procurement appealing and unique in relation to the ordinary open access procurement is that it is not subject to "additional charge" to repay the loss of endowment to the SEB or dispersion licensee's here as that the client is not setting off from the SEB to a less expensive supplier - queering a level-playing field between the SEB and the supplier - yet itself delivering the force.

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[119] **The parallel experience of the states and the centre pursuing on tradictory policies is in respect of the pricing of certain petroleum pro-ducts. The objective underlying the abolition of the administered price mechanism by the centre was to bring the prices of these products in line with international prices' this objective has, however, been frustrated with the states calibrating the rate of sales tax to compensate for fall in revenues when reduction in the prices of such products is announced by oil companies.**

Yet, the loss of cross-appropriation main Karnataka, the playing point of captive generation has been quieted by the state imposing an obligation on it hence making it less appealing for commercial ventures to seek after the choice. Open get to: The demonstration accommodates non-biased open access to generators and licensees (and without an extra charge) inside one year (of the named date), on installment on transmission charge, either concurred respectively or set by the controller if reciprocal understanding troubles. However the timing of presenting looking office and open access to purchasers is left to the appropriator regulators120,and they are likewise subject to paying an extra charge to make up for the loss of cross-sponsorship to the conveyance licensee. By leaving the timing of open access gift to the con-summers in the hands of the state power administrative commissions (SERCs), the rate of acquiring changes through energetic rivalry is kept down, to be politically put off.

The method of reasoning for the extra charge is taking into account the way that the appropriation licensee is accused of a commitment to supply all shoppers inside his region and a few customers at a sponsored rate. The cross-appropriation he gets by unfair valuing of industry and business shoppers is a part pay of this sponsorship constrained on the licensee. The extra charge is to make up for the loss of this cross-subsidy. Then again, the demonstration does not recognize the financing and the financed customer and obliges them two to pay the extra charge when they request open access. It accept that the financed shopper has no motivation to leave the current licensee, yet this assumption is not justified on the grounds that sponsored purchasers may leave for reasons of value, aside from cost.

5.2.1 Effect of extra charge

The effect of extra charge is to kill the power of rivalry provided by the open access. Focuses out examples where additional charge will execute com-appeal to by valuing out the lower-cost alternatives looked for by the customer. He likewise brings up that the

[120] **Prayas Energy Group, India Power Sector ReformsU pdate,P une,I ssueV , February2 003, p 5.**

ambiguity in the meaning of cross-endowment whether it is the distinction in the middle of tax and normal expense or the contrast in the middle of tax and peripheral expense of the most astounding expense power- opens the entryway for legitimate difficulties. The force unleashed by open access can likewise be blunted by the controllers by arbitrarily estimating transmission charges a thigh levels.

5.2.2 Current scenario

At present, the controllers have two parts in transmission charge: a trans-mission line use part and a trans-mission misfortune segment. Should the trans-mission line use part be in light of normal expenses, negligible expenses, or blockage expenses relying upon the stacking of the transmission line and be in view of agreement system and not contract way, on the lines of Hogan (1998)? These issues have not been touched. On the transmission misfortune side, for Andhra Pradesh, the controller, in light of studies by CEA, has acknowledged a 7 percent transmission misfortune figure against worldwide seat signs of about4 to 5 percent. Different states like Karnataka have presented a much higher misfortune figure to the controller. There are not kidding issues in measuring transmission and prompts arrangement and intervention in choosing this figure. At the point when the open access power is obliged to be wheeled through the appropriation lines of the circulation licensee, the issue is irritated. The circulation misfortune figures are much higher than the standard, since these figures incorporate Business losses also, in the same way as pilferage and theft of power.

6. SCOPE OF OPEN ACCESS

Open access framework permits generating organizations to offer power straight forwardly to distribution companies and mass purchasers of 1MW or more will be implemented soon. The ministry of power has told states to execute the open-access arrangement of Electricity Act, 2003.

Now the question is that whether it will stay open or not. There are bunch of issues that need to be considered before open access framework makes its way to an open market in the power industry. Issues like accessibility of power on demand and arrangement of costs are significant attentiveness toward the framework to be actualized easily. It took eight years to really begin when the ministry of power sent its November 30 letter titled" Opinion from Ministry of Law and Justice on the operationalisation of open access in force segment", to all power regulatory commissions, state governments and the state power utilities.

The two noteworthy points mentioned in the letter are as follows:

1. That customers with demand surpassing 1 megawatt (Mw) are perforce needed to draw supplies from sources other than their neighborhood distribution company.

2. Even though these consumers continue to take electricity from the local distribution companies, the rates must be negotiated between the two and hence, the SERC must cease to determine only the wheeling charges and cross subsidy surcharges.

Open Access is the standard transformation realized by the Electricity Act of 2003 to build competition in the power industry and open parkways for less expensive and more dependable wellsprings of power.

6.1 Increasing availability of electricity by implementing open access in rural electrification areas

Open Access is the ideal model transformation achieved by the Electricity Act of 2003 to build competition in the power division and open parkways for less expensive and more solid sources of power.

Establishing Open Access of transmission and distribution related infrastructure would decrease hindrances to entry and expand the quantity of players, bringing about more prominent competition among business sector members.

In India, rural electrification, which is the procedure of conveying power to remote and rustic territories, has been viewed as a key piece of all plans went for the improvement of the provincial regions. Prior a town was thought to be electrified in the event that it could utilize power for irrigational purposes. On the other hand, this definition was altered in 1997 to hold a more exhaustive and reasonable significance. According to this new definition, a town will be viewed as charged if power is utilized as a part of the area for any reason. Demonstrates the state-wise status of provincial zaps in India according to March 2011 data[121] can be seen from the figure, around 92 percent of the aggregate towns in India were zapped as of March 2011. Further, around 7 states were 100 percent charged. The administration has assumed an uncommon part in this respect, as demonstrated from the different government conspires on provincial charge, for example, Pradhan Mantri GramodyayaYojna (PMGY), Accelerated Rural Electrification Program (AREP) and Rajiv Gandhi Grameen Vidyutikaran Yojna (RGGVY).

6.2 Open access bridging gap between power supply and demand by increasing generation capacities

[121] Source/Available at: India Stat www.indiastat.com/default.aspx

The measure of power utilized as a part of family units is influenced by numerous social and auxiliary elements, for example, pay, period of householders, size of home, populace, time of home and hardware. Also, climate, machine vitality gauges, and vitality sparing projects impact the utilization of electricity[122]. Being the second most crowded nation of the world, the interest for power in India is certain to be expanding.

The aggregate power era in the nation expanded from 531.6 billion units amid 2002-03 to 580.5 billion units in November 2011.81 However, relating to this, the interest for power likewise expanded from 546.0 billion units in 2002-03 to 613.9 billion units in November 2011.

6.3 Benefits to the Economy, Consumers and Producers of Competition

While advancement has been made as of late, the power segment in India still has approaches to go until it can be considered completely open and successful competition is presented. For example, in the circulation fragment, ninety percent of the business is still controlled by state-run utilities. Just when the division is really open will the profits of rivalry be completely quantifiable. An endeavor, nonetheless, has been made in this study to focus the evident profits of opening up the division to rivalry through a contextual analysis of dispersion organizations in four states.

In this area, the monetary additions that would emerge because of changes in government regulations bringing about high competition in the business sector.

6.4 Market Development

In the legal system before institution of the electricity Act, 2003 the advancement of market in power exceedingly constrained as the business structure was horizontally and vertically incorporated. The power supply to a client is through a chain of restraining

[122] Hojjati, B. & Battles, S. J., The Growth in Electricity Demand in U.S. Households, 1981-2001, Energy Information Administration www.eia.gov/emeu/efficiency/2005_usaee.pdf

infrastructures prior controlled by the Government and now by the Regulatory commission.

With the open access, a changed business structure is looked to be given. A client has various decisions to purchase power. The generators can likewise contend among themselves for conveyance organizations/singular clients. There is procurement for additional charge to meet current level of cross endowment, if a shopper selects to get power specifically from generator or any source other than his own dissemination permit and has been permitted open access by the Regulator. In any case, there is no additional charge when appropriation organization purchases power from a generator straightforwardly. There is likewise procurement for respective contract for supply of force through a focused process between a generator and wholesaler. With the procurement of non-oppressive open access to transmission, the opposition for mass supply to appropriation organizations could turn into a reality sooner rather than later. The business sector structure will, maybe, require to be changed.

The commission is focused on the improvement of a completely competitive power sector. Notwithstanding, the current substances of the area (deficiencies, cross subsidies, long haul PPAs, limit distribution from CGS to state and so forth), the business improvement needs to experience various middle stages. It might be noticed that the retail competition has yielded recognizable profits to customers in the nations having surplus power generation capcities. There are various complex issues, for example, move dangers, settlement of irregular characteristics in power generation and drawls, compullsory metering, productive valuing of transmission, administration of clogging and so on which the Commission is committed to develop a highly competitive power sector.

According to an appraisal, Captive Power limit in the nation is around 20,000 MW of which around 14,000 MW is lattice joined. Surplus is accessible with numerous Captive Power plants furthermore with IPPs and Licenses of a percentage of the States. They require consent from the State Govt. and additionally assent for use of SEB's

transmission system, which other than being hard to secure, is likewise normally nonsensically evaluated. Numerous Captive plants are quick to exchange their energy at a gainful duty; however there is no statutory procurement quickly for direct offer of surplus power by them to outside States. Procurement for this be that as it may, exists in the Electricity Act, 2003.

7. OPEN ACCESS A CHALLENGE

The Electricity Act and the concept of open access under it was planned to empower a major rebuilding of the power framework in India. It has experienced more than 10 drafts also, has been broadly examined and bantered about everywhere throughout the nation. It has numerous shortcomings, the primary one being the absence of impulse on states to progress their frameworks. At the same time the local government has through the Accelerated Power Advancement Program (APDP) additionally presented measures to utilize its monetary clout, capacity to contribute through local government-claimed force endeavors and an arrangement of impetuses to entice states to take vital and attractive activities. It would have been exceptional if government had revised the current three Acts identifying with power three years prior and presented vital changes, leaving an omnibus enactment like the present Bill to develop after some time. In the occasion, the progressions have not happened and the Bill has yet to be passed. It needs to be cleared rapidly. This is regardless of its numerous deficiencies. Those can be tended to through later alterations after the Bill is passed.

The execution of Open Access even today poses a big challenge for the power sector. The industrial customers even today face problems related to accessing their choice of suppliers because of the restrictions (like invoking Section 11/108 of the Electricity Act 2003) imposed by many State governments. There has been high dependence on the made in china equipments by private players due to low costs even there is a question on its quality. Hydro-power ventures are still incurring risks on account of many factors like political and environmental causes, delay/cancellation of environmental clearances and permits, delays in acquisition of land, lack of quality infrastructure, tunneling delays, geological surprises and impediments, contractual and procurement issues, lack of skilled workers, hurdles in evacuation of power etc[123].

[123] Hiranmoy Roy,Anil Kumar,‖Present Status of power in India‖Vol. LI No.11,Mainstream Weekly dated:2rd March,2013

The power industry is sliding towards a competitive and open market structure. Mainly there are three basic policies in this regard. First, the setting up a Power Exchange which works as an electricity market & an unofficial force behind rate settlements for many projects. Secondly, tariff based international bidding systems are trend in all areas of generation, transmission and distribution where projects are awarded on the origin of best financial and fiscal parameters like tariff etc. Third, there is open access in transmission and distribution which is there in theory but basically not important. A lot of PSUs akin to the NTPC have signed MOUs just prior to the tariff based bidding; they are not forcing market-driven price[124].

At present the power industry is actually moving from production-oriented power Sector towards market-driven power sector. On the basis of its current status, the power industry expects a main shift in reform, policies and incentive that encourage funds in power generation and transmission for its fast growth from the forthcoming central Budget[125].

7.2 Central Government

Lack of accord between political parties and lack of consistency in approach: Electricity is not a topic to which po-litical parties in India have compensated much attention with the exception of to create public belief when out of office that it should be priced so that farmers and the poor people benefit at the money of industry and commerce. State governments have made a scheme of subsidies and cross-subsidies. It has brought state government finances to the edge of disaster. Subsidies are not completely reimbursed by most states. Electricity distribution corporations (mainly state electricity boards/SEBs or corporations) therefore have soaring outstanding amounts lingering unpaid to providers of fuels, electricity, and equipment, etc. Provident Fund monies remain unfunded and are a hindrance to any prospective purchaser of these state government owned corporations. Cross-subsidies have made electricity highly costly for railways, industries and commercial organizations. Illogical pricing has lead to the irregularity that the biggest and paramount paying consumers are charged the highest tariffs.

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[124] Id.

[125] A.A.Khan, former CMD, Power Trading Corporation ‖Make open access in power a reality‖ available at http://www.thehindubusinessline.com/opinion/make-open-access-in-power-a-reality/article3408885ece dated: 11th May, 2012.

7.2.1 Large unpaid dues of central government owned undertakings:

There have been recently addressed by efforts at securitizing the dues of central government owned undertakings. Not all states have signed up. And those states which have done so they have committed to improve viability of their electricity corporations within specified periods. If they do not materialize on it now, then they stand to lose many incentives from the central government. But this will lead to further accumulation of such arrears.

7.2.2 Nature of subjects under the Constitution has made it hard to execute agreed policies:

Till 1998, tariffs of central government owned electricity corporations were determined by the central government. And it has worked to the disadvantage of their purchasers, the state owned electricity companies. State governments have pursued populist agenda in electricity tariffs. State ownership has lead to commercial and industrial indiscipline in these enterprises. Theft with conspiracy of their employees is out of control. Investment in maintenance and equipment is negligible. A considerable part of use is not metered, not billed and payments is not collected. Quality and accessibility are abysmal in moat of the country.

7.2.3 Electricity shortages and tariffs coming in the way of manufacturing growth and economic competitiveness:

Energy intensive industries like Ferro-alloys and arc altars are shutting down over the country because of the high cost of electricity. A large customer, the railways, is entering into arrangements to generate power for its own use. The captive generation capacity with industry is what counting commercial organizations, small enterprises and houses, are estimated to be around 25% per cent of the official installed capacity for generating electricity. The stepchild handling given by state governments to such investment in captive generation capacity has led to lofty wheeling charges for them, difficulties in

taking permission to set up such capacities and incapability to sell excess capacity except at very low prices to state electricity corporations.

7.3 State Governments

Electricity sector financial deficits are the biggest and increasing component of state government deficits:

A lump-sum estimate shows that in 2001-2002, 55% per cent of the revenue deficits of state governments are made up of deficits on account of electricity power. The estimate increases every year. State governments are lacking resources to advance subsidies, to make investments on preservation, upgrading and capacity extension in power.

7.4 Lack of funds in SEBs affects quality and quality of power:

Capacitors are not installed, adversely affecting the voltage. Meters are not installed or are non-functioning, Permitting high quantities of electricity to be consumed without price. Low voltage lines carry excessive loads over long distances to meet populist promises by political parties of rural electrification, leading to recurrent and extended blackouts particularly in rural areas. Poor private interest in investment in electricity generation and distribution is a result of large accumulated losses, liabili-ties and poor performance of state enter-prises in power. SEBs purchase electricity from CPSUs on cost-plus basis. But efficiency gains remain with the suppliers despite all costs being passed through to the buyers.

7.4.1 **Subsidies: neither measurement, nor limits**

Farmers do not have a monetary or amount limit placed on their subsidized supply of electricity.

7.4.2 Very less money for maintenance:

Every day breakdowns are the consequence. Immense cannibalization of equipment is general. Equipments are worked untill it breaks down and is then replaced with new or jury-rugged equipment.

7.4.3 Overstaffing and rowdiness:

Thefts, under billing and non billing, and other such deficiencies in the system are, it is settled, in collusion with electricity employees, many times in involvement with administration and other party in governments.

7.4.4 Investors SEBs incur huge deficits that resist prospective investors.

Accounts and leadger of SEBs are not updated, there are no asset registers, liabilities are not exactly known, and there are very huge outstanding debts and high receivables, where as subsidies are not reimbursed by state governments. Efficacy data on distribution are not well available. And due to this, regulators set tariffs for every year with resulting uncertainty to potential investors. In addition, performance-based ratemaking is not achievable, since enhancement targets are not based on dependable past performance data. Erratic technical and financial data leads to tariff changes being postponed with unfavorable impact on finances. Limitations on captive generation are irregular in a circumstance where new capacity additions are constrained by short age of finances. Access to transmission for private generators is uncertain and deters many investors.

7.4.5 Load dispatch centers

Load dispatch centers are not a impartial at its part and is left with SEBs for intrastate transmission in spite of their clash of interest as purchasers from other electricity generators.

7.4.6 Mindsets (in SEBs)

No profit-making culture or account-ability, No proficient managers, only engineers & administrators, process and documents rule above results.

7.4.7 Independent Regulation

Recruitment of members: The Electricity Regulatory Commissions Act, 1998 provides a timeframe for search, selection, engagement and taking office of chairmen and members. Neither the central nor state governments follow the provisions in practice. For Example, the engagement of chairman, TNERC was overdue by over 3 years.

7.4.8 Membership and staff

Subjugated by governments and ex-government career officers due to the government limits on salary. As a result, staff from government undertaking and departments typically staffs regulatory commissions, bringing in the similar culture of management and procedure rather than ground-breaking and creative ways of tackling the issues[126].
Together central and state levels governments own over ninety five per cent of electricity facility and approximately whole of distribution, and the enterprises have the fear of the governments, they are at times forced to defy, habitually appeal to the courts, and often instructed not to obey with regulatory orders.

[126] See: 462 Economic and Political Weekly February 1, 2003

7.4.9 **Judicial decisions**

They are delayed and manipulated in plea on the technical grounds of many of the issues.

7.4.10 Low salaries in government enterprises

Low salaries in government enterprises discourage qualified professionals from joining regulatory commissions which necessitate to develop interdisciplinary-nary approaches and should be staffed by qualified managers, economists, lawyers, CA's, cost accountants and power engineers etc.

7.4.11 Answerability of Regulators

At present, all orders are subject to revision by commissions and plea to the high court Orders of regulatory commissions are placed on the tables of legislatures for their information and in any case they wish for amendment, though legislatures have not so extreme, whether at the centre or states, demon-strated interest.

7.4.12 Governments can also issue Tariff Policy and Policy orders to regulatory commissions

Such a free government right leaves much scope for extreme limitations by bureaucrats and the prospect that their aversion to change might stall necessary changes. In any case government strategy is spelt out in the laws. Any policy track would weaken the autonomy of the commissions that in any case are mandated to work in a very transparent and consultative manner.

8. Accessibility of open Access

The main focus in the scheme of competitive, open and liberal market in the power industry is the provisions enriched in the Electricity Act, 2003, are the provisions to Open Access, which introduces a concept choice[127]. The choice embraces generator, traders, distribution companies and consumers[128]. If there is no a choice & without the dependable information of the accessibility of such choice, consumer judgment is barely welfare valuable.

The proviso of choice is engrained not only in the electricity Act but also in National Electricity Policy, 2005, and it grant for creating competition & alternative to Consumers via Open Access. National Tariff Policy highlights this very objective to encourage competition and make availability of electricity to consumers at rational rates. Competition is predicated by private sector entry in generation, trading in electricity and competitive markets with electricity exchanges. And most significantly by bringing unambiguousness in policies and enabling & efficacious regulation that encourages various conditions for Open Access to bring desired competition.

As per the testimony of the Task Force on Measures for Operation Open Access in the Power industry, notwithstanding most states having advised Open Access Regulations, additional charge and different charges, none of the States gave Open Access to shoppers under Sec 42(2) as on 30th May, 2008[129]. Sec 42(2) interpret with Sec 49 makes it abundantly pass that such open access buyer can go into contract with private merchant and state government no more has the privilege to settle price for those shoppers. It is fascinating to note that Open Access to Captive Power Plants (CPP) have been given in most states. One noteworthy contrast between the Open Access to customers and CPPs is the utilization of Cross Subsidy Surcharge (CSS) which is not there in the event of CPP. The two reasons, consequently, for purchasers not getting Open Access may be i) use of cross sponsorship additional charge; and ii) the procedural custom of requesting open access and afterward paying diverse charges. The charges are high as well as truly

[127] IDFC Petition for Removal of Barriers to Open Access in Inter-State Transmission Network and Promote competition in Power Market, 2009, clause 2.1
[128] Ibid.
[129] Report of the Task Force on _Measures for Operationalizing Open Access in the Power Sector, 2008.

nonsensical as well. The National Tariff approach, 2006, sets down procurements for cross-endowment straightforwardly to a penniless purchaser instead of cross-sponsoring the tax no matter how you look at it. It says that the appropriations ought to be focused on successfully and in a straightforward way and, by the year 2011-12, ought to be inside +/ - 20% of the normal expense of supply. Nonetheless, this has not been trailed by the state governments and the controllers. Another course in the Policy expresses that the CSS ought to be eliminated by cutting down the rate consistently. In any case, the rate of CSS is altered every year on the premise of force buy cost. In a few expresses the CSS was presented at a zero level and afterward brought upwards. There is no sureness in the obsession of CSS level by the States which make the expense of Open Access alternative exceptionally questionable.

Open Access procurement is given in the Act to be presented in stages. The main stage (began in 2003) imagined for giving Open Access to mass buyer (having power interest of 1 megawatt or more) in five years time. Nonetheless, even following 8 years, the dedication is not yet a reality. The essential necessities of a successful decision are data with respect to the highlights of diverse decisions accessible and data in regards to the cost of distinctive decisions available. Without a doubt, the Electricity Act and the National Electricity Policy gives to a decision accessible to the shopper to pick an option wellspring of supply for his power request however the specialized troubles joined to Open Access framework settles on that decision unviable

8.2 Factors, probably, made the Open Access almost inaccessible:

- **Absence autonomy of SLDCs/system operators;**
- **Existence of multiple charges (transmission charge, wheeling charge, cross subsidy surcharge etc.);**
- **Non-transparency regarding Available Transmission capacity (ATC);**

- **Sec 11 orders[130] given by States;**

- **Procedural difficulties i.e. consumers have to approach the network operator to apply for the Open Access.**

[130] Section 11 (1) of the Electricity Act : Appropriate Government may specify that a generating company shall, in extraordinary circumstances operate and maintain any generating station in accordance with the directions of that Government. Explanation - For the purposes of this section, the expression—extraordinary circumstances‖ means circumstances arising out of threat to security of the State, public order or a natural calamity or such other circumstances arising in the public interest.

9. CASE STUDY

In an order dated 22.1.2009 in Petition No. 147/2008 (**Reliance Energy Trading Company Ltd v. Karnataka Power Transmission Corporation Ltd and Ors.**) the Commission held as under: —Section 11 enables the Government to give heading to producing organizations. Such bearings would just tie the producing organizations. In no way would it be able to be said that such bearings that the Government could provide for the creating organizations would likewise tie others. As it were, the STU/ Transmission Licensee who are statutorily commanded under Sections 39 and 40 to give non-separating open access to the transmission framework can't be bound by the bearings given by the Government to the creating organizations under Section 11.

The obligations of creating organizations are unique in relation to the obligations of the STU/Transmission Licensees. Areas 39 and 40 don't subject the obligatory capacities of the STU/Transmission Licensee to the headings given by the State Government to creating organizations under Section 11.Sections 39 and 40 don't state so. It is decently settled that new words can't be foreign into a statutory procurement where such words don't exist in any case. It is likewise decently settled that statutory procurements are obliged to be given significance as indicated by the plain perusing. Be that as it may, the procurement of open access is to be actualized as per the regulations determined by the Commission.

In such manner, the Commission has officially determined the Open Access Regulations. The statutory source and energy to determine and to make these regulations, exude from Section 178 of the Act. These regulations are a piece of the administrative capacities of the Commission though the aforementioned Government’s Order is a piece of the Government’s regulatory capacities. The regulatory capacities under Section 11 can't encroach on the enactment made by the Commission which just will choose a game plan in the gift of open access in wording and as per the open access regulations. In that perspective of the matter and in light of the position under law expressed in the previous passages, the foreswearing of open access by the Respondents making the previously stated Government's Order as the premise for such disavowal, would not be lawfully reasonable, and is in this manner held to be completely In the matter of gift of open get

to, the Open Access Regulations characterize and encompass the Respondent's circle of action. The demonstration of dissent of open access making the Government's Order its premise, in this manner, would be past the extent of the forces of the Respondents as characterized in the open access regulations and the Electricity Act, 2003.

The respondents are compelled by a sense of honor to consider the applications made for simultaneousness for open get to entirely on the rule of accessibility of surplus transmission limit. In the present case, there is no averment that there is any blockage on the transmission passageway because of which it is not possible in fact to transmit power on the first respondent's transmission system.

Hence, it is passing that STUs and CTUs are compelled by a sense of honor to consider the utilization of the producing organization or customer and to permit Open Access if the transmission limit is accessible. This raises another concern —how would it be able to be guaranteed that the foreswearing is a direct result of non- accessibility of transmission limit and not for some other ulterior reason which can have the opposition contorting impacts? This issue alongside the estimating issue for charges or rate for utilizing Open Access is the greatest test that needs to be passed.

10. **CONCLUSION**

Providing the open access in the power industry is efficient and it stands as the key to success of power sector reforms to the extent. Though the Electricity Act, 2003 has mandated that with immediate effect open access should be implemented but the introduction of prohibitive open access has been a key to the criticism of the electricity. Though the Intent of the Act to promote competition by "freeing" all possible avenues of procurement and sale of power is laudable and praiseworthy, it will not be easy to go with current regime of regulations and riders over open access as assumed by the policy makers.

The real problem lies in promoting and mitigating two competing interest, first to promote the consumer interest via market driven forces like competition, privatization and liberalization of the sector, and secondly to keep the substantial control over the sector due to concerns like, national security, achieving nationwide power infrastructure and low electricity tariffs via sate intervention.

That though the Open Access as provided under the electricity has proved as a proficient catalyst in the revival of the Indian electricity sector yet it has failed to break the ice on almost some major fronts as required under the present set of circumstances and scenario in the power sector.

10.1 Subsidies and cross-subsidies

Changing the scheme of the subsidies and cross subsidies and cross subsidies to make them fully neutral is very important for introducing competition in the Indian power industrty. Unluckily, the Indian Electricity Act, 2003 do not provide sufficient guidelines in this respect for state electricity regulators. Even these will be contained in the National Tariff Policy to be notified by the central government. Several provisions in the Philippines Republic Act 9136 are relevant to India for changing the system of subsidies and cross-subsidies.

This includes the levy of a homogeneous charge for revolutionary electrification' and era out of cross-subsidies; a sustenance tariff; and a separate organization for extending the network to isolated places at the same time as these are typical features their appropriate implementation is significant to the rollout of competition.

Large share of the subsidy and cross subsidy in the India power industry go to agriculture and rural clients. Amid agricultural consumption unmetered it is complicated to calculate approximately the quantity and destination of subsidies. Unmetered agricultural consumption furthermore makes it impractical to accurately calculate approximately the Transmission and Distribution losses, an indispensable gauge of the operational and commercial effectiveness of distribution companies.

Farmers are probable to oppose metering of agricultural supply and decrease in financial support. Consequently, any proposal to reorganize subsidy must set in motion by a material and organizational division of agricultural and perhaps rural, power distribution.

Physically separating the farming and rural supply network will allow better monitoring of power supplied for agricultural purpose and target of subsidy. At the same time it will also make better estimation of Transmission and Distribution losses for the rest of the distribution network. Whereas the early pro-reform states governments have not followed this methodology, Maharashtra is reportedly to be taking into consideration the alternative of an urban-rural separation

10.2 Inefficacies

The electricity Act, 2003 do not go way beyond in catalyzing the electricity trading because of stringent supervision and control of regulators. Though it is a solution to the power shortages in the country, because the shortage is not the constant one and over time or space, the shortage at one moment or place may be matched by demand any other place. Neither the electricity Act, 2003 facilitate a change in management to professional from administrative management. The autonomous regulator might wisely interpret his jurisdiction to carry about a quantity of the changes essential in information and operating system, administration methods and mindsets. The open access must make it way to enhance the accountability of regulators and catalytic change in opening up power sector via different means.

The concept of open access as provided under electricity Act, 2003 brings in very significant changes from the prior legislations in the history of Indian power sector. But somewhere in reality it does not go far enough either as desired legislature or as demanded by industry and consumer both.

Indian government lacks a holistic approach and it stands with the fragmented approach to energy crisis by making many incoherent attempts wash prevailing sins in the Indian power industry the ghost of subsidies haunt the sector even today. Consequently, India does not even today do not have enough capacity in generation to bridge the supply demand gaps in power sector.

10.3 Beautiful change

The very success and the efficacy of concept of open access as provided under electricity Act, 2003 very much depends not only the its strength as a provisions in law but it is as much dependent on the true spirit of its implementation. The uncertainties in the power industry could be properly checked by the proper functioning of state and central government & private bodies. Restructuring of law and regulation on time in a lucid and transparent manner is the need of the hour, the synchronization among various commissions is required.

The electricity Act, 2003 is expected to bring Indian consumer and industry the benefits of deregulated regime and competitive at its behest. It is also estimated to create atmosphere that fosters and caters huge investment in Indian power industry for the capacity addition & increased efficiency of the system.

India is among the largest power-generating countries in the world. The Electricity Act 2003 was expected to introduce wide-ranging reforms in the power industry and attract much-needed private investment in a sector which had become moribund due to poor attention from policy makers. While reforms have been quite successful in

generation and transmission, the distribution sector still remains an area of concern for policy makers.

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