

# POWER SECTOR OF INDIA: AN ANALYSIS OF ELECTRICITY LAWS IN INDIA

By *Adv. Himanjali Gautam*

## INTRODUCTION

The energy and power sector of India has been highly affected by the economic growth of India. The Indian Government has always emphasized on having an efficient, resource-conserving, and a sturdy power sector as it is a way to curb poverty and raise standard of living. Power is a basic need for humans. However, in India 200 million people are yet to avail of the facility of electricity. Even in the households that do receive electricity, the supply is not uninterrupted or reliable. Power cuts are very common in the households of India. In India, an electrified town is defined as a town where 10% of the households are electrified.

According to Prime Minister Modi, 600,000 villages in India have been electrified under his guidance. To achieve this goal, Mr. Modi had launched a \$2.5 billion scheme in the first term of his government. It was his goal to electrify all Indian households by December of 2018. And as of April 28, 2018, 600,000 villages and five million other households were connected to the electricity grid. The Government has focused on holistic and long-term structural improvements in the sector, with a focus on achieving 24X7 power for all. The health of the power sector is borne out by the growth numbers. Some villages however are still left out. It is a major problem to supply electricity to the very remote and somewhat inaccessible parts of the country. Another issue that the government faces in order to electrify such remote areas is the expense. Recently, the financial condition of SEB's is really deteriorating. India is at number four in the list of power index among 25 countries in the Asia Pacific region. As of February 2019, India's total installed generation capacity was 350,162 MW<sup>1</sup>.

---

<sup>1</sup> See, [https://uk.practicallaw.thomsonreuters.com/w-012-2860?transitionType=Default&contextData=\(sc.Default\)&firstPage=true&bhcp=1](https://uk.practicallaw.thomsonreuters.com/w-012-2860?transitionType=Default&contextData=(sc.Default)&firstPage=true&bhcp=1) (Jul. 16, 2020, 1:20 PM)

The Indian Government keeps updating the National Tariff Policy and National Electricity Policy regularly. These policies aim to ensure that electricity is available to consumers at a reasonable yet competitive price and to make sure that the electricity is generated from renewable resources. This is another very important aspect of India's power sector. The Government has always stressed on generated electricity from renewable resources and aim to achieve the generation through 100% energy conserving and renewable resources in the near future. The introduction of the Electricity Act, 2003 was one of the most radical changes that were made to the norms and laws of the power sector. This new Act introduced many major reforms which has ensured the growth of the Power Sector in the past 17 years.

## ORIGIN OF ELECTRICITY LAWS IN INDIA

The power or electricity sector is one of the most crucial resources of a country's infrastructure and also the most consumed resource. It is one of the primary and basal resources required in any growth industry. The ramifications of the power sector going south affects everyone be it household or industries. The Indian power sector has always been at a crucial juncture of evolution, being prioritized as the key policy area and an essential sector that affects development and economic growth as well as the welfare of the country. The Indian power sector was regulated for more than a century, the Electricity Act, 1910<sup>2</sup> was the first act that was introduced to govern the Indian power sector. It provided the basic framework for the supply of power and electricity in India and also provided a license to supply the electricity in specific areas.

After independence, the legislation introduced the Electricity (Supply) Act, 1948<sup>3</sup> which mandated the creation of SEBs<sup>4</sup> (State electricity boards) but it did not achieve the desired result as the performance started to deteriorate and the need to restructure the sector was felt by the government. Hence, the act was amended in the year 1964 and included five regional Electricity Boards formed by the GOI with the unanimity from the state government to ensure integrated grid operation and regional cooperation on power. Furthermore, in the year 1975,

---

<sup>2</sup> See, <http://www.cercind.gov.in/IEA1910.pdf> (Jul. 16, 2020, 1:29 PM)

<sup>3</sup> See, <http://www.cercind.gov.in/ElectSupplyAct1948.pdf> (Jul. 16, 2020, 1:31 PM)

<sup>4</sup> See, <http://www.cercind.gov.in/sebs.html> (Jul. 16, 2020, 1:32 PM)

another amendment was made to create Central generating companies for the development of super thermal power stations at coal pitheads and large hydroelectric stations leading to the creation of NTPC, NHPC, & NEEPCO.

Even after more than two decades of enactment of the act the power sector was still suffering and saw a substantial decline in the industry, which led to various changes from 1990-2000. The poor regulation by the government in the 1980s led to energy shortage and poor financial conditions of SEBs had a tumbling effect on agriculture subsidies, as they amounted to a large portion of the government's revenue and they still do. For the government, this slowly started to be a vicious crisis. To minimize the harm the government felt the need for the hour by paving way for the private sector by forming private generating companies or private Independent Power Producers (IPPs). One could also say that there were other prominent reasons as well like the gulf war, market conditions, etc. that led the government to take such steps to secure their position. After the 1991 reform of letting private companies enter the power sector, the government did not want to make the public angry as private participation is seen in a negative sense. The government vested the power of fixing the tariff in its own hands and not via negotiations between the power generating companies and SEBs.



BURNISHED LAW JOURNAL

The government then to subsidize the problems occurring in the mid 1990s decided to separate them into three categories generalization, transmission, and distribution so that the aspect of each problem could be focused properly and a sustainable solution be found. In 1998 the electricity regulation commission act was enacted and formed the Central Electricity Regulatory Commission (CERC) and State Electricity Regulatory Commissions (SERC).<sup>5</sup> Under this commission, the tariff was decided by the commission and not by the government. The government brought this change to make it look that there on the right side of the consumers and also to show it as a part of the reform strategy.

The year 2003 is considered as an important period because it changed the face of the electricity and power sector; it embarked on new beginnings for the electricity sector in India by replacing the legal framework of the Electricity Supply Act, 1948, and Electricity

---

<sup>5</sup> NITI Ayog Final Report, Diagnostic Study of the Power Distribution Sector (April, 2019)



Regulation Commission act of 1998. Under the new act, the generation was de-licensed and captive generation was freely permitted i.e. Any generating company may establish, operate, and maintain a generating station to meet energy needs. It removed the biggest obstacle from the paths of private generating companies-the obligatory power sales to SEBs were disallowed. Companies were more formally structured and reorganized, directors were appointed for the proper functioning of the companies. Appellate tribunals were formed for disposal of appeals against the orders of the regulatory commission. This transformation led to the gushing of investment through new private producers in the sector.

In 2005 the government again amended the act and the prime focus was on the offenses related to the theft of electricity, electric lines, and hindering with meters as a cognizable offence. It emphasized on electricity safety. The amendment also talked about setting redressal and grievances cells. Then amendments in 2014 are considered as important in respect to the future, it included renewable energy under its ambit and compelled the companies to procure electricity from renewable energy sources. Furthermore, it even allowed more than one supplier to enter an area and gave consumers the option to choose among the suppliers.

## I. EVOLUTION OF ELECTRICITY LAWS IN INDIA

### PRE-INDEPENDENCE ERA:

In 1903, the first attempt was made to regulate the electricity sector by the Indian Electricity Act 1903. Later **the Electricity Act, 1910** provided the basic framework for the electric supply industry in India. It primarily set up licensing rules for generating electricity for private as well as public operators and a provision to obtain a license for the supply of electricity in a specified area. The Act mostly dealt with the safety concerns and the technical functionality of electricity, and laid down the legal framework for laying down of wires and other works, and contained provisions mentioning the relationship between the licensee and the consumer.

### POST INDEPENDENCE ERA:

After India gained Independence from the British in 1947, the Government of India made electricity as a concurrent subject in which laws can be made both by the Union and the State

governments and decided to entrust the development of the electricity sector to respective states through the creation of State Electricity Boards (SEBs) under **the Electricity Act, 1948**. The states were given full powers to control the generation, distribution, and utilization of electricity within their respective states and also to constitute Central Electricity Authority (CEA). But SEBs failed miserably and by the 1970s, many of the SEBs started incurring losses because of many factors including direct political interference in SEBs operation by their respective governments, mismanagement, poor industrial relations, etc. Given the deteriorating financial performance and poor operating performance of SEBs, the central government set up two central public sector utilities: NTPC (National Thermal Power Corporation Limited) for thermal generation and NHPC (National Hydro Power Corporation Limited) for hydropower for making the integrated policy for the power sector and free union government for framing laws. The main reason for integrating policy is because of the imbalance and lack of interconnection between the states. Later many amendments took place in this act which are: Amendment in 1975 to enable generation in the central sector, amendment to bring in commercial viability in the functioning SEBs, Section 59<sup>6</sup> of the Act was amended to make the earning of a minimum return of 3% on fixed assets a statutory requirement, amendment in 1991 to open generation to the private sector an establishment to RLDCs websites and amendment in 1988 to provide for private sector participation transmission, and also relating to transmission Utilities.

Later **the Electricity Regulatory Commission Act, 1998** came into force which provides for the establishment of CERC (Central Electricity Regulatory Commission) and SERCs (State Electricity Regulatory Commission) with the objectives of rationalization of tariff of electricity, to promote competition, efficiency, and economy in the electricity industry, to regulate the operation of the power system, to sets standards, regulate the working of licensees, etc., with an overall objective of improving the financial health of SEBs/ Electricity Utilities but keeping into consideration, the interest of the consumers.

## **THE ELECTRICITY ACT, 2003**

---

<sup>6</sup> It shall not, as far as possible, carry on its operations under this Act at a loss and shall adjust its rates accordingly from time to time

The Electricity Act of 2003 was a compilation of the power reforms that started in the early 1900s. The Bill to this Act was issued by the Vajpayee government in 2001 as '**The Electricity Bill 2001**'. It was debated upon and passed by both the houses in 2003 and was finally enacted on June 10, 2003. This Bill was first introduced by M. Kumaramangalam, the then Central Minister for Power. The NCAER was delegated the task to draft the Electricity Bill. The Bill was finally passed as Electricity Bill 2003 by the Lok Sabha in 2003 without requiring any amendments. However, the Rajya Sabha suggested various Amendments. However, the Bill was passed by Rajya Sabha while the Amendments were still pending.

The Act consists of 185 sections in total which are covered under 18 different parts. As mentioned before, this new act is a compilation of all the previous acts with major reforms. The Act aimed to grow the power sector through private licensees and provided that the licensees could supply to a specific area as well. The salient features of this Act were:

- 1) By the Electricity Act, 2003, generation was de-licensed. This means that any company can establish, operate, and maintain a generation station without obtaining a license under the Act provided that they comply with the technical standards w.r.t. connectivity with the grid, as has been mentioned under Section 73(b) of the Act<sup>7</sup>.
- 2) This Act made ensures that no person shall transmit, distribute, or undertake to trade in electricity except if he is authorized to do so by the acquirement of a license.
- 3) This Act ensures that there is open access to transmission.
- 4) This Act repealed the concept of SEB and brought forward the law for mandatory establishment of the State Electricity Regulatory Commission (SERC).
- 5) This Act ensures that metering the electricity supplied is made mandatory.
- 6) The punishment regarding the theft of electricity became more stringent as under this Act.
- 7) As per this Act, the Central Government is to make and update the National Tariff Policy and National Electricity Policy regularly.
- 8) According to the Act, the Central Electricity Authority is to prepare the National Electricity Plan.
- 9) This Act establishes appellate tribunals to hear the appeals against the decisions of SERC's.

---

<sup>7</sup> See, <http://www.cercind.gov.in/Act-with-amendment.pdf>, (Jul. 16 2020, 6:20 PM)



10) This Act provides that no license is required to generate and provide electricity in rural areas.

11) According to the Act, the Tariff should be reasonable yet competitive.

The impact of the Electricity Act has been such that it has led to the rapid growth of the power sector for the past 17 years. This has mostly been due to the de-licensing of generation, which has led to more private companies entering the market. It has also affected the general public greatly, as the Tariffs have become reasonable and cross-subsidy has almost ceased to exist. It has also affected the government as now, the role of the Central Government in making policies relating to the power sector of India has dramatically increased. It is due to the major reforms made in the Electricity Act, 2003, that the rural and less accessible areas are now being able to avail of electricity services.

### **THE ELECTRICITY (AMENDMENT) ACT 2005**

The Amendment Bill to the Electricity Act 2003 was introduced in the Lok Sabha on the 23<sup>rd</sup> of December 2005<sup>8</sup>. This Bill was first referred to the Parliamentary Standing Committee of Energy of which Mr. Gurdas Kamat was the chairperson. In contrast to the Act of 2003, the newer Act aimed to eliminate cross-subsidies completely. However, this provision was not considered as it is an impossible task to eliminate cross-subsidies all across the country.

The newer Act of 2005 looked forward towards the joining of hands between the Central and State governments in order to provide electricity across India. This Act clarified the fact that a *“person cannot be prosecuted for any offense punishable under the Act without the permission of the Central Government or Appropriate Commission or a Chief Electrical Inspector or an Electrical Inspector or licensee or the generating company. An Appropriate Commission could be the Central Regulatory Commission or State Regulatory Commission or Joint Commission.”*<sup>9</sup> The Act also aimed toward ensuring that this does not act as a barrier to the power of the police to investigate cognizable offenses like theft of electricity, interference with meters, etc.

---

<sup>8</sup> See, <http://indianpowersector.com/home/electricity-regulation/>, (Jul. 17 2020, 8:35 AM)

<sup>9</sup> Id.

The Financial Memorandum of this newer Act estimated that the Rajiv Gandhi Grameen Vidyutikaran Yojna would have a subsidy of Rs. 14,750 crores which were to be funded by the Consolidated Fund of India in two phases.

## **ELECTRICITY AMENDMENT BILL 2020**

Ever since the formulation of the Electricity Act, 2003, the Government of India has been facing many obstacles in the area development regarding the power sector. So, the Ministry of Power, the Government of India, released the draft of the Electricity Amendment Bill, 2020 on the 17<sup>th</sup> of April 2020. Major amendments have been proposed through this Bill. The most noticeable of these amendments is the establishment of the Electricity Contract Enforcement Authority. This has been proposed because provisions regarding sale and purchase have been mentioned under the previous Act, however, the previous Act does not contain any provision regarding the contractual issues faced in this transaction or power purchase agreement (PPA). This institution will ensure the enforceability of the PPA and shall adjudicate the matters arising out of specific performance issues arising out of PPAs. The ECEA would have original jurisdiction over such matters as per the Amendment Bill of 2020. The Amendment Bill also aims to place stringent norms regarding the payment security mechanism which has posed a huge issue in front of the Government in the previous years. It has also been stated under the Amendment Bill that in case the parties are not satisfied by the judgment delivered by the ECEA, they can appeal against such judgment in the APTEL, i.e. Appellate Tribunal for Electricity. The Amendment Bill also requires the Government to create and update a National Renewable Energy Policy (NRE) regularly. This aims to promote the generation of electricity from renewable sources of energy in order to promote energy conservation. The Amendment Bill of 2020 has provisions in place for the Tariff to be imposed as the fair or actual cost of the power which is to be supplied for consumption. This will further ensure the eradication of cross-subsidies. The Amendment Bill also proposes that a person be authorized as a distribution sub-licensee under the Act. This is not different from the concept of franchise. This will ensure that the more remote areas receive electricity properly. This Amendment Bill has been made to enhance the regulatory framework and to put in place stringent compliance policies.

## **II. TRENDS IN THE POWER SECTOR**



## GENERATION

Coal has been the most reliable source of fuel for the generation of electricity in India. However, the past few years have seen a rise in coal prices, poor financial conditions of distribution companies, etc. This has been a huge issue for the Power Sector as it has affected fuel availability for the generation of Electricity. Fuel security is the most critical bottleneck for the power sector as it accounts for three-fourths of the total cost of generation<sup>10</sup>.

The Ministry of Power has prepared a plan for adding 88,357 MW for the power sector which is almost 61% higher in the comparison to the 54,964 MW they generated in the 10<sup>th</sup> and 11<sup>th</sup> Plan. According to the Planning Committee, in the 12<sup>th</sup> Plan, the investment required would be of around Rs. 15.02 billion. This amount of money will come in two phases from the private sector and the state sector. In 2019, NTPC announced an investment of Rs. 50,000 crores in order to generate 10GW solar energy to be used in producing electricity. Similarly, Brookfield invested \$800 million in the ReNew Power campaign. FDI has played a huge role in the funding and investment in the Power Sector of India. The Union Budget of India has allocated Rs. 15,875 crore to the Ministry of Power in the year 2020-2021. It has also allocated Rs. 5,500 crores to the Deen Dayal Upadhyay Gram Jyoti Yojna. By the end of 2030, the Government of India plans on generating a renewable energy capacity of 500 GW<sup>11</sup>. NTPC is one of the biggest generators of electricity in India. Its Vindhyachal branch has become the largest power plant in the country. Finally, as previously mentioned, as of April 28, 100% electrification of all villages of India was achieved by the Modi led government. The Government of India has announced the plan to achieve 175GW in renewable energy capacity.

## TRANSMISSION

One of the supportive pillars of the growth of the power sector is the transmission network. India's transmission network is run by a lot of private players and hence the network has now become vast and complex. The entry of new players has led to the diversification in the kind of fuel that is used and has also led to the establishment of a lot of generation pockets away

---

<sup>10</sup> GEORGE VARGHESE AND LEENA MARY EAPEN, Power Sector In India- Recent Challenges and Measures Undertaken, [https://www.researchgate.net/publication/289571114\\_Power\\_Sector\\_in\\_India\\_-\\_Recent\\_Challenges\\_and\\_Measures\\_Undertaken](https://www.researchgate.net/publication/289571114_Power_Sector_in_India_-_Recent_Challenges_and_Measures_Undertaken) (Jul. 17, 2020, 9:12 AM)

<sup>11</sup> See, <https://www.ibef.org/industry/power-sector-india.aspx>, (Jul. 17, 2020, 9:24 AM)

from the load center, which also is a problem as it leads to the shortage of availability of land. However, this has also affected other markets. As the transmission network grows even further, the demand for the equipment required also grows. Due to this, the equipment manufacturing company also has to up their supplies in order to meet the demands. This is one of the main reasons why the power sector is directly proportional to the growth of the Indian Economy. The Indian Power sector has also taken to the use of advanced technology, AI, and automated bots which help in resolving issues regarding transmission. There was a huge grid collapse in 2012 which posed a huge issue in the transmission of electricity. The Ministry of Power, CERC, and the Power Grid Corporation of India worked jointly and tirelessly to restore the power grids. This system failure made the MoP more careful towards developing a robust transmission network across India.

### III. CONCLUSION

The main issues that the power sector of India faces are the revenue generation and the factors that generally affect the generation of power. The most critical issue in the revenue generation is the cross and agricultural connection subsidies. The amount of subsidy paid by the government in this is obscenely large and deeply affects the financial condition of the sector. However, this issue has been resolved through the Electricity Amendment Act of 2005 and more stringent laws will be in place if the Electricity Amendment Bill of 2020 is passed. The power purchase costs have been rapidly increasing at an alarming rate in India. This is a huge sword hanging over the fate of the power sector of India. This is due to the shortage of coal for generation purposes. A huge amount of coal has to be imported to India which further leads to financial troubles. The only solution to this is to develop a more renewable source of energy. Gaining information on the market is also a huge issue in the power sector, as many areas in India are very remotely accessible and so it is tough to gather information from these areas. The author is of the opinion that there should be major changes in the regulatory framework for the generation, transmission, and distribution of electricity across India. Stringent laws need to be placed in order to hold the right people accountable for their particular role in the power industry, therefore ensuring proper compliance of the rules and regulations and thereby leading to the rapid and unprecedented growth in the Indian Power Sector and in consequence, the betterment of Indian Economy.

**The Author, Adv. Ms. Himanjali Gautam is an advocate at the Supreme Court of India, Founding partner at Chambers of Himanjali Gautam, Ex-President – Law Centre 2, Faculty of Law DU, Columnist, Public Speaker and TV Personality. You may reach out at [himanjaligautam@gmail.com](mailto:himanjaligautam@gmail.com) , Twitter- @himanjaligautam**



BURNISHED LAW JOURNAL