

# POWER SECTOR



**THE INSTITUTE OF  
Company Secretaries of India**

**भारतीय कम्पनी सचिव संस्थान**

**IN PURSUIT OF PROFESSIONAL EXCELLENCE**

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## PREFACE

In the liberalized economic policy regime, the corporate sector has been assigned a major role as the driver of growth and development of the Indian economy. This has resulted in a number of changes, especially in the regulatory framework applicable to specific industry sectors. As an economy is consist of different industries like agriculture, service, engineering, manufacturing etc., it provides impetus to the economy i.e. employment generation, production of goods and services, income distribution in the whole economy.

With the intent to further enhance the competitiveness of India's services sector and to boost productivity with the creation of new employment opportunities, the Central Government has focused attention on 12 sectors in the economy as 'Champion Sectors' i.e., IT & ITeS, Tourism and Hospitality, Financial, Accounting and Finance, Transport and Logistics, Construction and Related Engineering, Communication, Education, Medical Value Travel, Audio Visual, Legal and Environmental.

As part of its support to government's policy initiatives, the Institute has started an initiative by projecting Company Secretary as 'Corporate Saviour'- a person who can be relied upon by stakeholders i.e., Corporates, Promoters, Shareholders, Government and Regulators.

With this basic objective, the institute has initiated the process of developing industry specific knowledge through research, creating awareness among the members about the contribution the Company Secretary can make in specific industry, capacity building of members in the specific industry, securing recognitions for members in specific industry sector, and sensitisation of regulatory authorities about the contribution the Company Secretaries can make in specific industry.

For conducting the detailed analysis in a structured manner, a format is designed with four sections, Section-I covering the industry profile, Section-II Business Scenario, Section-III legal framework and Section-IV Contribution of Company Secretary in employment and in practice. The research publications in all the industry sector are based on exploratory research.

I wish to express my sincere thanks and gratitude to CS Ahalada Rao V, Vice-President, the ICSI for his efforts in guiding and finalizing industry specific publications.

I also appreciate Dr. Prasant Sarangi, Director (Research), the ICSI-Research Cell for doing in-depth study of Power Sector and bringing out this research publication, under the guidance of CS Sonia Baijal, Director, Professional Development, Prospective Planning and Studies and Dr. S.K. Dixit, Mentor, Research Cell.

I am sure this research publication will prove to be of immense value to professionals, corporates and researchers. The research is an ongoing process, and I welcome the readers to give suggestions to make this research publication more comprehensive.

I wish all the readers a happy reading

New Delhi

Date: August 23, 2018

**CS Makarand Lele**

*President*

The Institute of Company Secretaries of India

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# SECTION 1

## INTRODUCTION

### 1.1 INTRODUCTION

Energy is an essential input for economic development and improving the quality of life. Power being one of the most critical components of infrastructure is crucial for the economic growth and welfare of nations.

India's power sector is one of the most diversified in the world. Sources of power generation range from conventional such as coal, lignite, natural gas, oil, hydro and nuclear power to viable non-conventional sources, such as wind, solar, and agricultural and domestic waste. Electricity demand in the country has increased rapidly and is expected to rise further in the years to come. In order to meet the increasing demand, massive addition to the installed generating capacity is required. Power systems across the world are witnessing significant changes on account of various external factors. Climate change is leading to increased power demand, which is putting pressure on generators as well as grid operators.

India ranks third among 40 countries in EY's Renewable Energy Country Attractiveness Index. This has been made possible by the government that had been very focused. Moreover, it has implemented the projects in a line bound period.

India has moved up 73 spots to rank 26th in the World Bank's list of electricity accessibility in 2017, as was declared in a conference by the Government of India. In September 2017, the Government of India launched the Saubhagya scheme to provide electricity connections to over 40 million families in rural and urban areas by December 2018 at a cost of US\$ 2.5 billion.

### 1.2 THE ENERGY SECTOR BIRD'S EYEVIEW

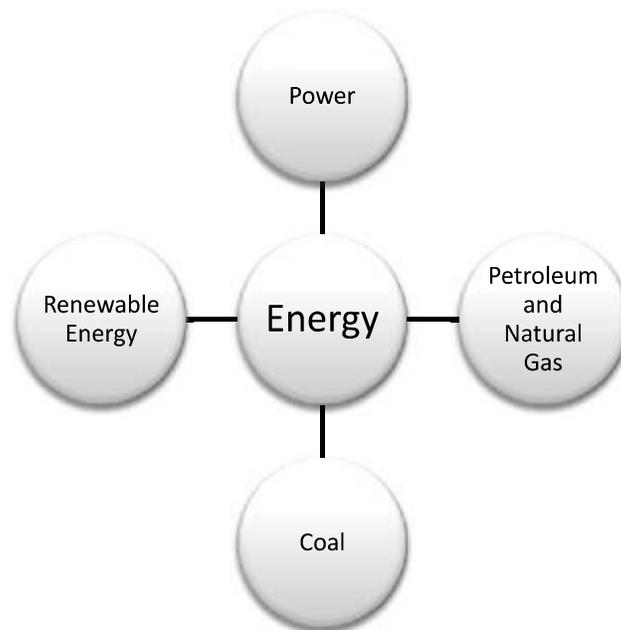
Energy is a key driver of economic growth. Efficient, reliable and affordable energy is essential for a sustainable development and inclusive growth of the overall economy. Due to the rapid economic expansion, India has become world's fastest growing energy market. She has surpassed Russia to become the 3rd largest energy consumer in the world after China and the USA during the year 2015.

India's energy security is primarily about ensuring continuous availability of commercial energy at competitive prices to support its economic growth, and meet the energy requirements of households with safe, clean and affordable energy. Keeping in view the vast and ever-increasing energy requirements of the economy, several initiatives have been taken to increase production and expand of all domestic resources.

### 1.3 CLASSIFICATION OF ENERGY SECTOR

The energy sector consists of Power sector, Petroleum and Natural Gas, Coal and Renewable Energy sector in India. There is some or the other inter-linkage among all these sectors. A brief outline of each sector is as follows:

- Petroleum and Natural Gas
- Coal
- Renewable Energy
- Power



**Figure-1: Classification of Energy Sector**

- Petroleum and Natural Gas:

The Ministry of Petroleum and Natural Gas is concerned with the expansion and production of oil and natural gas (including import of liquefied natural gas), refining, distribution and

marketing, import, export and conservation of petroleum products. The production of petroleum products is targeted at 238.075 MMT in 2016-17 as against 231.924 MMT achieved in 2015-16.

In order to attract FDI in the sector, the policy has been liberalized. FDI for petroleum refining by CPSEs has been allowed with 49 per cent foreign equity under the automatic route. It is observed that the inflow of FDI has improved considerably over the years which could be attributed to the Government's initiatives.

Oil and Natural Gas Corporation Ltd., engaged in expansion and production of crude oil, natural gas and value added products was incorporated in 1993 under the Companies Act, 1956, pursuant to government's decision to transform the statutory commission into Public Limited Company, through the Act of the Parliament [Oil and Natural Gas Commission (Transfer of Undertaking and Repeal, Act, 1993)]. There are other players like ONGC Videsh Limited (for production and expansion outside India), Oil India Limited (for business expansion), Gas Authority of India Limited (for natural gas), Indian Oil Corporation (India's first flagship national oil Company), Hindustan Petroleum Corporation Limited (with navratna status), Bharat Petroleum Corporation Limited (integrated oil company) for the sector's expansion.

#### ● Coal

The Ministry of Coal (MoC) has the overall responsibility of determining policies and strategies regarding the expansion and development of coal and lignite reserves, sanctioning of important projects of high value and for deciding all related issues. These key functions are exercised through its public sector undertakings, namely Coal India Limited (CIL) and Neyveli Lignite Corporation Limited (NCL) and Singareni Collieries Company Limited (SCCL), a joint sector undertaking of Government of Telangana and Government of India with equity capital ratio of 51: 49. The overall production of coal for 2016-17 was projected at 724.71 MT.

The Geological Survey of India has estimated 308.802 billion tonnes of coal reserves in India. The reserves have been identified mainly in Jharkhand, Odisha, Chhattishgarh, West Bengal, Madhya Pradesh, Telangana and Maharashtra. Whereas, the lignite reserves in the country have been estimated at around 44.59 billion tones. The major deposits are located in Tamil Nadu, Rajasthan, Gujarat, Kerala, West Bengal, Jammu and Kashmir and in the union territory of Pudducherry.

#### ● Renewable Energy

Ministry of New and Renewable Energy (MNRE) is the nodal ministry at the central level for all matters relating to new and renewable energy. The ministry has been facilitating the implementation of broad spectrum programmes including harnessing renewable

power, and renewable energy to rural areas for lighting, cooking and movie power, use of renewable energy in urban, industrial and commercial areas and development of alternate fuels and applications.

India has an estimated renewable energy potential of about 900 GW from commercially exploitable sources viz. Wind – 102 GW (at 80 meter mast heights), small hydro- 20 GW, bio-energy- 25GW and solar power-750 GW, assuming 3% wasteland. Under National Solar Mission, 26 SPV projects of aggregate 330 MW capacity have been commissioned. Thus, 523 MW Solar PV project and 202.5 MW Solar Thermal Power projects have been commissioned under the scheme. Under the 100 SPV power plants, 78 projects were selected to set up 98 MW capacity projects from 12 states. Against this, 71 projects of total capacity 90.80 MW have been connected to grid. A payment security mechanism involving a revolving fund of Rs. 486 crore has been put in place to ensure timely payment to developers in the event of delay/default in payments by the purchasing state utilities.

India has taken a voluntary commitment of reducing emission intensity of its GDP by 33-35 per cent levels from between 2005-2030. In the recent concluded 21st Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) held at Paris, India committed to achieve about 40 per cent cumulative electric power installed capacity from non-fossil fuel based energy resources by 2030 with the help of transfer of technology and low-cost international finance including from Green Climate Fund (GCF).

## SECTION 2

# BUSINESS SCENARIO

### 2.1 HISTORY

Pre-independence India had a power generating capacity of 1,362 MW. Generation and distribution of electrical power was carried out primarily by private utility companies. Notable amongst them and still in existence is Calcutta Electric. Power was available only in a few urban centers to persons of repute. The then villages and rural areas were completely deprived of power supply.

The independent India i.e., after 1947, all new power generation, transmission and distribution in the rural sector and the urban centers (which was not served by private utilities) came under the purview of State and Central Government agencies. State Electricity Boards (SEBs) were formed in all the states.

National Thermal Power Corporation (NTPC), National Hydro-electric Power Corporation (NHPC) and Power Grid Corporation Limited (PGCL) were set up by the government to assist in meeting the increasing demand for electricity throughout the country. The electricity sector is in the 'concurrent list', meaning that both, State and Central Governments participate in the sector's development. The Ministry of Power in the Central Government formulates the policies for the power sector.

The Central Electricity Authority (CEA) was established as a statutory authority to develop a 2nd National Power Policy and also to function as a regulatory authority. As per government guidelines, all power projects above a certain capacity have to obtain techno-economic clearance from CEA before they can be implemented. A new Ministry of Non-Conventional Energy Sources has also been set up to focus on renewable energy sources to augment the generation capacity of electrical power.

The policy of liberalization announced by the Government of India in 1991 and consequent amendments in Electricity (Supply) Act have opened new vistas to involve private efforts and investments in electricity industry. Considerable emphasis has been placed on attracting private investment and the major policy changes have been announced by the Government in this regard.

Table-1 derived below shows growth of Power Installed Capacity since the 6th five year plans in India.

**Table-1: Growth of Installed Capacity During Various Plan Periods (in MW)**

End of Plan Periods	Thermal				Nu-clear	Hydro	RES (MNRE)	Total
	Coal	Gas	Diesel	Total				
6th Plan	26310.83	541.50	177.37	27029.7	1095	14460.02	00	42584.72
7th Plan	41237.48	2343.00	165.09	43745.6	1565	18307.63	18.14	63636.34
8th Plan	54154.48	6561.90	293.9	61010.3	2225	21658.08	902.01	85795.37
9th Plan	62130.88	11163.1	1134.8	74428.8	2720	26268.8	1628.39	105045.9
10th Plan	71121.38	13691.7	1201.8	86014.8	3900	34653.8	7760.6	132329.2
11th Plan	112022.4	18381.1	1199.8	131603.2	4780	38990.4	24503.5	199877.0
12th Plan	193821.50	25150.38	837.629	219809.5	6780	44963.42	62846.90	334399.83

Source: Annual Report 2015-16, Central Electricity Regulatory Commission.

## 2.2 BUSINESS SCENARIO

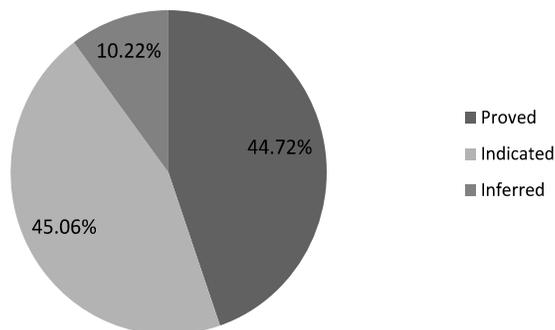
### (A) SOURCES OF POWER GENERATION:

Some important sources of energy from where power is generated in India includes:

#### 1. Coal

Coal is one of the important sources of energy in India. Coal deposits are mainly confined to eastern and south-central parts of the country. Figure-2 derives the estimated coal reserves in the country available by 2016:

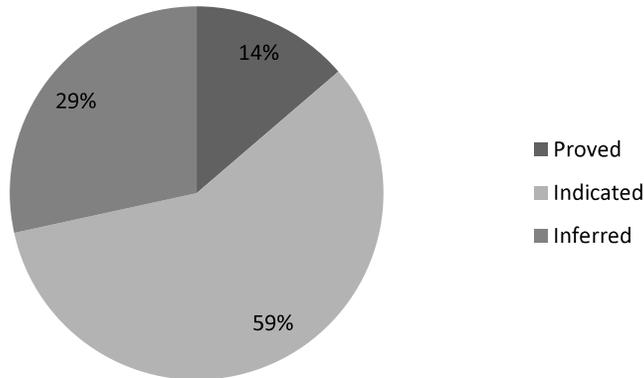
**Figure-2: Estimated Coal Reserves in India**



Source - Energy Statistics-2017, CSO, Government of India

The estimated total reserves of lignite as on 2016 was 44.59 billion Tonnes against 44.12 billion tones by the year 2015.

**Figure-3 : Estimated Lignite Reserves in India**

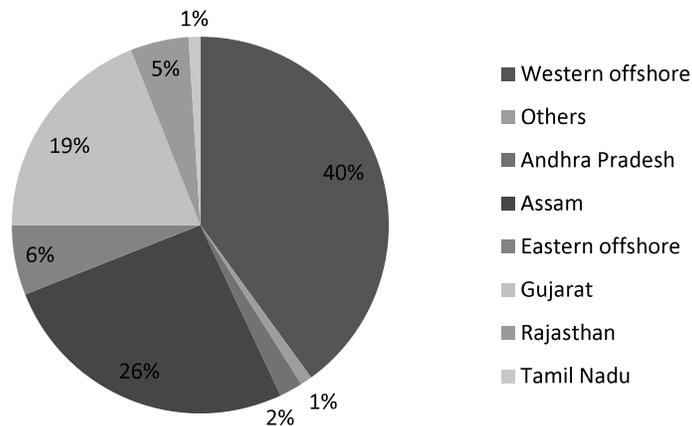


Source - Energy Statistics-2017, CSO, Government of India

## 2. Petroleum

India has a large proportion of tertiary rocks and alluvial deposits particularly in the extra-peninsular India. Such potential oil bearing area is estimated to be over a million square km, one third of total area. Statewise estimated reserves of crude oil in India by the year 2016 are:

**Figure-4 : Estimated Crude oil Reserves in India**

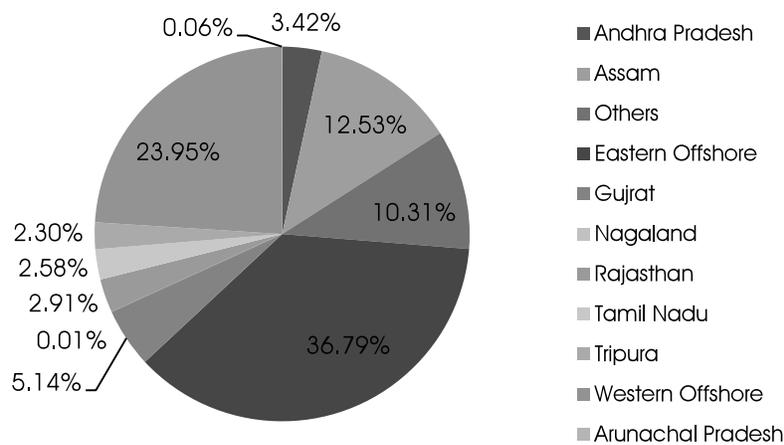


Source- Energy Statistics-2017, CSO, Government of India

### 3. Natural Gas

The gas reserves are generally found in association with oil fields. The estimated reserves of natural gas in India across different states as on 2016 stood at 1227.23 Billion Cubic Meters (BCM) as against 1251.90 BCM on 2015. Percent-wise availability of natural gas in various Indian states are:

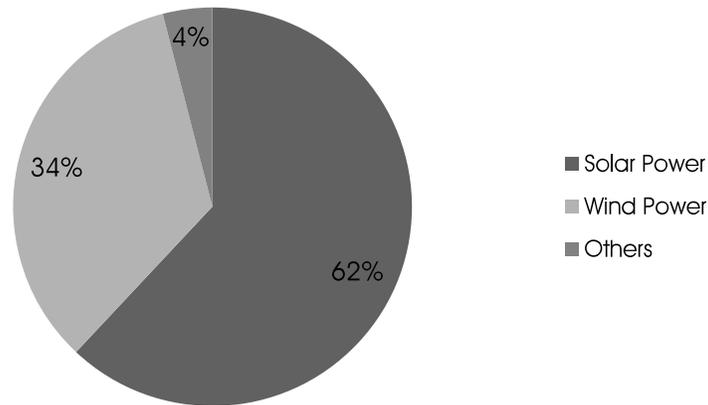
**Figure- 5: Estimated Natural Gas Reserves in India**



Source- Energy Statistics-2017, CSO, Government of India

### 4. Renewable Energy Sources

There is high potential for generation of renewable energy from various sources- wind, solar, biomass, small hydro and cogeneration biogases. The figure derived below shows source-wise estimated potential of renewable power in India by the year 2016. From the figure it can be seen that solar power constitutes 62% followed by Wind Power at 34 % and others at 4 % (Small Hydro Power-44%, Biomass Power-39%, bagasse-11% and waste to energy-6%).

**Figure-6 : Estimated Renewable Energy Sources Reserves in India**

Source- Energy Statistics-2017, CSO, Government of India

#### **5. Thermal Power**

Thermal power plants use coal, petroleum and natural gas to produce the electricity. These sources are of mineral origin and also called fossil fuels. Both big and small thermal power stations are scattered all over the country. Electricity produced by them is fed into regional grids.

#### **6. Hydro Power**

Water-energy is most conventional renewable energy source and obtained from water flow and water falling from a height. Hilly and highland areas are used for this purpose as there is continuous flow of water.

#### **7. Nuclear Power**

This is of course a main source of energy, when the fossil fuel reserves are depleting very fast. A small quantity of radioactive material can produce an enormous amount of energy. It has been calculated that one tonne of Uranium would provide as much energy as by three million tonnes of coal or 12 million barrels of oil is produced.

### **(B) POWER SUPPLY GAP:**

Table-2 derived below represents energy supply and demand figures from 1997-98 in India. In the table energy requirement is interpreted as demand for energy over the years. Whereas, energy availability is interpreted as supply of energy over the years.

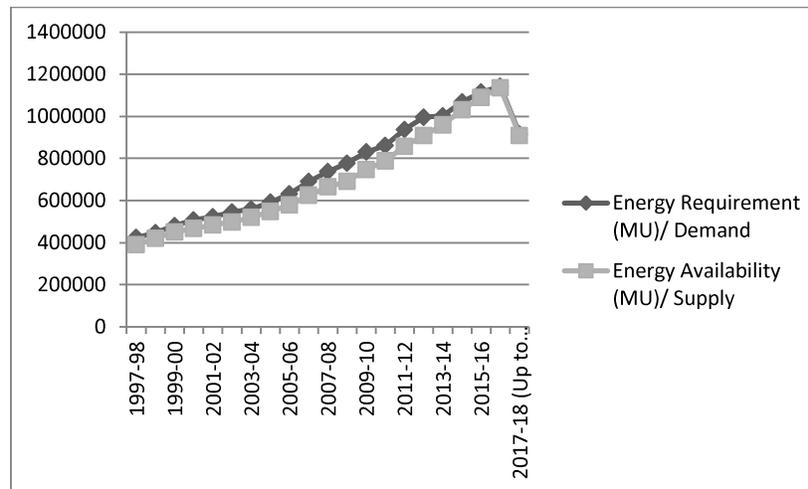
**Table-2: Demand and Supply of Energy over the Years in India**

Year	Energy Requirement (MU)/ Demand	Energy Availability (MU)/ Supply
1997-98	424505	390330
1998-99	446584	420235
1999-00	480430	450594
2000-01	507216	467400
2001-02	522537	483350
2002-03	545983	497890
2003-04	559264	519398
2004-05	591373	548115
2005-06	631554	578819
2006-07	690587	624495
2007-08	737052	664660
2008-09	777039	691038
2009-10	830594	746644
2010-11	861591	788355
2011-12	937199	857886
2012-13	995557	908652
2013-14	1002257	959829
2014-15	1068923	1030785
2015-16	1114408	1090850
2016-17	1142929	1135334
2017-18 (Up to December)	915123	908650

Source: Annual Report 2017-18, Ministry of Power, Government of India.

The figure-7 derived below shows the supply gap in comparison to demand. The blue line in the figure represents demand and red line represents supply. There is very narrow gap between how much power is demanded and how much is available.

Excess demand on one hand, may lead to increase in price, consumer dis-satisfaction and poor quality of product or services. On the other hands, since there demand, is in excess there is scope of increase in investment in the sector. More and more companies are expected to enter into the sector through investments or existing companies may increase investment to grab the opportunity. Increase in investment in the sector may create better options in the sector.

**Figure-7: Demand-Supply Gap of Power in India**

Source: Annual Report 2017-18, Ministry of Power, Government of India.

Table-3 derived below shows the gap between peak demand and supply in India. From this table, the shortage of power in India could easily be analysed.

**Table-3: Demand and Supply gap of Power During Pick Hours in India**

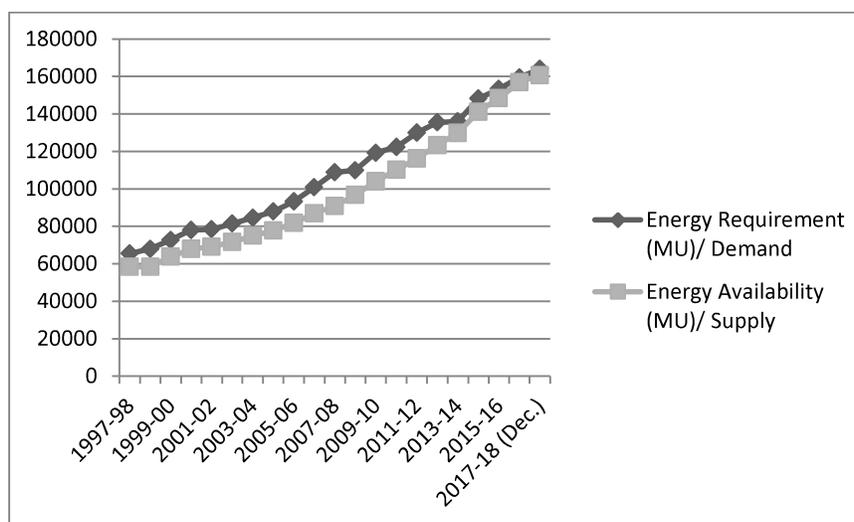
Year	Energy Requirement (MU)/ Demand	Energy Availability (MU)/ Supply
1997-98	65435	58402
1998-99	67905	58445
1999-00	72669	63691
2000-01	78037	67880
2001-02	78441	69189
2002-03	81492	71547
2003-04	84574	75066
2004-05	87906	77652
2005-06	93255	81792
2006-07	100715	86818
2007-08	108866	90793
2008-09	109809	96785

2009-10	119166	104009
2010-11	122287	110256
2011-12	130006	116191
2012-13	135453	123294
2013-14	135918	129815
2014-15	148166	141160
2015-16	153366	148463
2016-17	159542	156934
2017-18 (Up to December)	164066	160752

Source: Annual Report 2017-18, Ministry of Power, Government of India.

Figure derives the gap between peak demand and supply of power over the years in India. It can be seen from the figure that the gap between demand and supply is wide during the peak time than what we have been in the figure derived in case of power supply during normal requirement.

**Figure-8: Demand and supply Gap during Pick hours in India**



Source: Annual Report 2017-18, Ministry of Power, Government of India.

### 2.3 THE WAY FORWARD:

The future demand of power depends on various socio-economic factors of the country.

Following are some indicators which point out that increase in the demand of the power in future will be more.

**(a) GDP:**

With Gross Domestic Product (GDP) growth averaging 7.5 per cent in 2014-15 and 7.1 in 2016-17, India can be rated as among the best performing economies in the world according to this parameter. Although growth is expected to decline to 6.5 per cent in 2017-18, bringing the 4-year average to 7.3 per cent, the broad story of India's GDP growth is going to be significantly higher than most economies of the world does not alter. The growth is around 4 percentage points higher than global growth average of last 3 years and nearly 3 percentage points more than the average growth achieved by Emerging Market and Developing Economies (EMDE). Table-4 derived below highlights Gross Value Added and GDP growth trends from 2014 to 2017-18.

**Table-4: Annual Real GVA and GDP Growth (%)**

<b>GVA at Basic prices from</b>	<b>2014-15</b>	<b>2015-16</b>	<b>2016-17</b>	<b>2017-18</b>
<b>Agricultural, forestry and Fishing</b>	<b>-0.2</b>	<b>0.7</b>	<b>4.9</b>	<b>2.1</b>
<b>Industry</b>	<b>7.5</b>	<b>8.8</b>	<b>5.6</b>	<b>4.4</b>
(a) Mining & quarrying	11.7	10.5	1.8	2.9
(b) Manufacturing	8.3	10.8	7.9	4.6
<b>(c) Electricity, gas, water supply &amp; Other utility services</b>	<b>7.1</b>	<b>5.0</b>	<b>7.2</b>	<b>7.5</b>
(c ) Construction	4.7	5.0	1.7	3.6
<b>Services</b>	<b>9.7</b>	<b>9.7</b>	<b>7.7</b>	<b>8.3</b>
(a) Hotel, Trade, Transport, Storage, Communication & services related to broadcasting	9.0	10.5	7.8	8.7
(b) Financial, Real Estate and professional services	11.1	10.8	5.7	7.3
(c ) Public administration, defense and other services	8.1	6.9	11.3	9.4
<b>GVA at basic Prices</b>	<b>7.2</b>	<b>7.9</b>	<b>6.6</b>	<b>6.1</b>
<b>GDP at Market Prices</b>	<b>7.5</b>	<b>8.0</b>	<b>7.1</b>	<b>6.5</b>

Source: Compiled from Economic Survey, 2017-18

The estimated growth in GVA for this sector during 2017-18 is placed at 7.3 percent as compared to the growth of 5.7 percent in 2016-17. The key indicators of this sector are the growth of corporate sector for real estate sector and computer related activities which are estimated using latest available information on listed companies for the first half of financial year 2017-18. The combined growth in aggregate bank deposits and credits as on 10 November 2017 was 8.4 per cent. The table -5 and 6 derived below shows the contribution of financial, real estate and professional services estimated by first advance estimates of Gross value added by economic activities at basic price at 2011-12 and current price respectively.

**Table-5: First Advance Estimates of GVA at Basic Price by Economic Activity  
(At 2011-12 prices) (Rs. Crore)**

Industry	2015-16	2016-17 (PE)	2017-18 (1st AE)	Percentage change over previous year	
				2016-17	2017-18
1. Agriculture, forestry & fishing	1,617,208	1,696,175	1,732,371	4.9	2.1
2. Mining & quarrying	324,740	330,485	339,972	1.8	2.9
3. Manufacturing	1,872,115	2,019,227	2,112,345	7.9	4.6
<b>4. Electricity, gas, water supply &amp; other utility services</b>	<b>224,447</b>	<b>240,590</b>	<b>258,672</b>	<b>7.2</b>	<b>7.5</b>
5. Construction	879,782	894,668	927,085	1.7	3.6
6. Trade, hotels, transport, communication and services related to broadcasting	1,989,161	2,143,956	2,329,801	7.8	8.7
7. Financial, real estate & professional services	2,298,798	2,429,638	2,606,602	5.7	7.3
8. Public administration, defence and Other Services	1,284,263	1,430,002	1,564,473	11.3	9.4
<b>GVA at Basic Price</b>	<b>10,490,514</b>	<b>11,185,440</b>	<b>11,871,320</b>	<b>6.6</b>	<b>6.1</b>

Source: Compiled from Economic Survey, 2017-18

All these demographic and economic indicators are sufficient to prove that the power sector appears to be very promising in the coming years as it is showing ample scope for growth.

**Table-6: First Advance Estimates of GVA at Basic Price by Economic Activity (At current prices)**

Industry	2015-16	2016-17	2017-18	Percentage change over previous year	
				2016-17	2017-18
1. Agriculture, forestry & fishing	2,175,547	2,372,085	2,438,546	9.0	2.8
2. Mining & quarrying	296,253	301,921	341,843	1.9	13.2
3. Manufacturing	2,064,820	2,257,413	2,422,101	9.3	7.3
<b>4. Electricity, gas, water supply &amp; other utility services</b>	<b>321,651</b>	<b>342,422</b>	<b>368,269</b>	<b>6.5</b>	<b>7.5</b>
5. Construction	1,006,403	1,041,343	1,109,608	3.5	6.6
6. Trade, hotels, transport, communication and services related to broadcasting	2,294,364	2,519,999	2,825,708	9.8	12.1
7. Financial, real estate & professional services	2,631,120	2,889,048	3,186,115	9.8	10.3
8. Public administration, defence and Other Services	1,668,486	1,945,683	2,205,463	16.6	13.4
<b>GVA at Basic Price</b>	<b>12,458,642</b>	<b>13,669,914</b>	<b>14,897,653</b>	<b>9.7</b>	<b>9.0</b>

Source: Compiled from Economic Survey, 2017-18 and other publications.

Real GDP or Gross Domestic Product (GDP) at constant (2011-12) prices in the year 2017-18 is likely to attain a level of Rs.129.85 lakh crore, as against the Provisional Estimate of GDP for the year 2016-17 of Rs. 121.90 lakh crore, released on 31st May 2017. The growth in GDP during 2017-18 is estimated at 6.5 per cent. With GDP at current prices in the year 2017-18 is likely to attain a level of Rs. 166.28 lakh crore, as against Rs. 151.84 lakh crore in 2016-17 showing a growth rate of 9.5 per cent.

**(a) Per Capita Income**

The real per capita income (measured in terms of per capita net national income at constant (2011-12) prices shown in table-1 derived above is one of the important indicators representing the welfare of people of a country. It is expected to increase from Rs. 77,803 in 2015-16 to Rs. 86,660 in 2017-18, growing at an annual average rate of 5.5 per cent. In nominal terms it increased by an average of 9.0 per cent per annum from Rs. 94,130 in 2015-16 to Rs. 111,782 in 2017-18.

The per capita net national income during 2017-18 is estimated to be Rs 111,782 showing a rise of 8.3 per cent as compared to Rs. 103,219 during 2016-17 with the growth rate of 9.7 percent.

The per capita income in real terms (at 2011-12 prices) during 2017-18 is likely to attain a level of Rs. 86660/- as compared to Rs. 82269/- for the year 2016-17. The growth rate in per capita income is estimated at 5.3 per cent during 2017-18, as against 5.7 per cent in the previous year.

**(a) Population and Urbanization:**

The Census of India, 2011 provides the population and urbanization projections by March 2026. If same trend could continue, then by the year 2031 India's population will reach by 1,444,110000 and urbanization is projected to increase around 34.6 % to the total population.

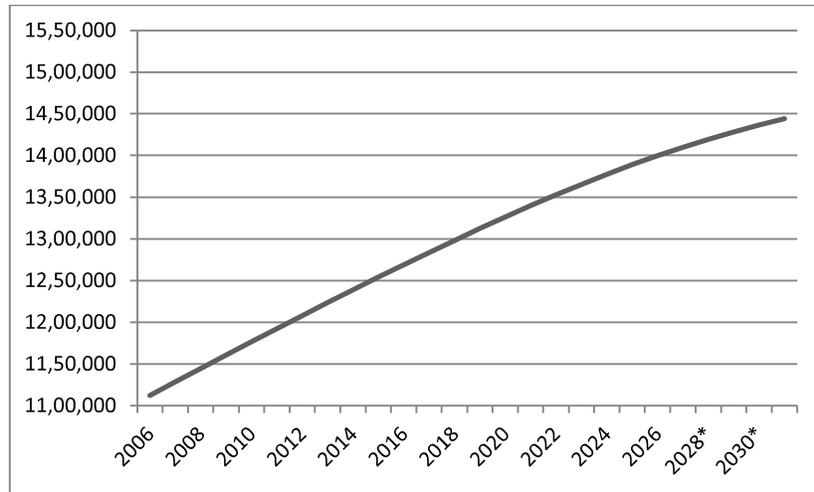
**Table-7: Population and Urbanization Projection by the Year 2031**

Year	Population (‘000 persons)	Urbanization (% to total)
2006	1,112,186	28.9
2007	1,128,521	29.1
2008	1,144,734	29.3
2009	1,160,813	29.6
2010	1,176,742	29.8
2011	1,192,506	30.0
2012	1,208,116	30.2
2013	1,223,581	30.5
2014	1,238,887	30.7

2015	1,254,019	30.9
2016	1,268,961	31.1
2017	1,283,600	31.4
2018	1,298,041	31.6
2019	1,312,240	31.8
2020	1,326,155	32.1
2021	1,339,741	32.3
2022	1,352,695	32.5
2023	1,365,302	32.8
2024	1,377,442	33.0
2025	1,388,994	33.2
2026	1,399,838	33.4
2027*	1,409,991	33.7
2028*	1,419,472	33.9
2029*	1,428,303	34.1
2030*	1,436,507	34.4
2031*	1,444,110	34.6

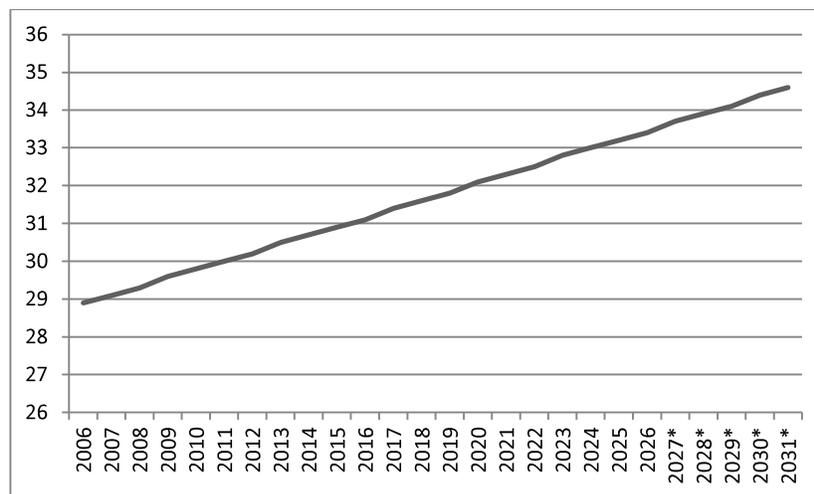
Source: Data for 2006-2026 are obtained from Census of India, Population projections for India and States 2001-2026, December 2006, and all projections are effective by 1st March of each year. \* Projections calculated based upon the above trend.

Figure-9 shows an increasing trend of projected population by the year 2031. However, it can be observed that the rate of growth will be little smoother in comparison to the rate of growth observed by the year 2024.

**Figure-9: Population Projections by the Year 2031 (in '000 numbers)**

Source: The World Bank, 2008, Link- <file:///C:/Users/e0786/Desktop/Solar%20Energy/Residentialpowerconsumption.pdf>

Figure-10 shows the projected urbanization by the year 2031. It can be seen from the graph that the projected line is steeper with increasing slope. This indicates that urbanization will increase over the years.

**Figure-10: Urbanization by the Year 2031 (in '000 numbers)**

Source: The World Bank, 2008, Link- <file:///C:/Users/e0786/Desktop/Solar%20Energy/Residentialpowerconsumption.pdf>

**(b) Household Size Projections**

Combining the rural/urban household number and size projections allows the number of households and of people inhabiting these households in urban and rural areas separately to be computed to 2031. The projections as calculated by World Bank are presented in the table-8 derived below:

**Table-8: Household Size and Urbanization by the Year 2031**

Year	Person Per household		% of Urban Households to Total	Year	Person per household		% of Urban Household to Total
	Urban	Rural			Urban	Rural	
2006	4.3	4.8	27.5	2019	3.9	4.4	30.4
2007	4.2	4.8	27.7	2020	3.9	4.4	30.6
2008	4.2	4.7	27.9	2021	3.9	4.4	30.8
2009	4.2	4.7	28.1	2022	3.9	4.4	31.0
2010	4.1	4.6	28.4	2023	3.9	4.4	31.2
2011	4.1	4.6	28.6	2024	3.9	4.3	31.5
2012	4.1	4.6	28.8	2025	3.9	4.3	31.7
2013	4.0	4.5	29.0	2026	3.9	4.3	31.9
2014	4.0	4.5	29.2	2027	3.8	4.3	32.1
2015	4.0	4.5	29.5	2028	3.8	4.2	32.4
2016	4.0	4.5	29.7	2029	3.7	4.2	32.6
2017	4.0	4.4	29.9	2030	3.7	4.2	32.8
2018	3.9	4.4	30.1	2031	3.7	4.1	33.0

Source: Residential Consumption of electricity in India, The World Bank. Link: file:///C:/Users/e0786/Desktop/Solar%20Energy/Residentialpowerconsumption.pdf

**(c) FDI Inflow:**

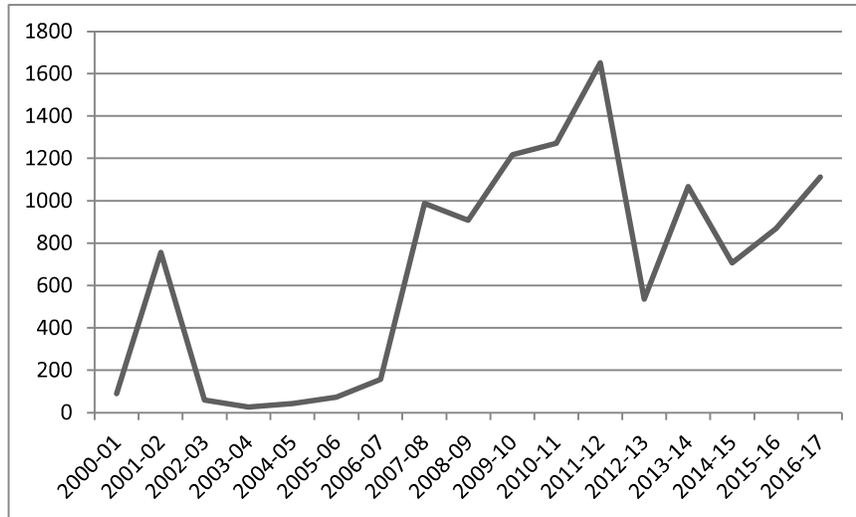
Details of FDI inflow into the power sector over the years are derived in the table -9 below followed by the figure-11. The table shows an irregular trend of FDI inflow into the sector. FDI inflow was highest in the year 2011-12 amounting 1652.38 US Million \$.

**Table-9: FDI Inflow Into the Power Sector (in US \$ Million)**

Year	FDI Inflow	Year	FDI Inflow
2000-01	89.42	2009-10	1217.79
2001-02	757.44	2010-11	1271.77
2002-03	59.11	2011-12	1652.38
2003-04	27.09	2012-13	535.68
2004-05	43.37	2013-14	1066.08
2005-06	72.69	2014-15	707.04
2006-07	157.15	2015-16	868.8
2007-08	988.68	2016-17	1112.98
2008-09	907.66		

Source: <https://data.gov.in/catalog/foreign-direct-investment-fdi-equity-inflows>

Figure-11 shows a non-linear trend of FDI inflow into the power sector in the country between the years 2000-01 to 2016-17.

**Figure-11: FDI Inflow Over the Years in Power Sector**

Source: <https://data.gov.in/catalog/foreign-direct-investment-fdi-equity-inflows>

## 2.4 INTERNATIONAL LINKAGES

India is connected with all neighboring countries electrically through transmission lines. The extents of inter-relationship between various countries are briefly outlined below:

- (a) **Nepal** - India is connected with Nepal over 11KV, 33KV and 132 KV lines. For transfer of bulk powers, there is 400 KV Dhalkebar (in Nepal) – Muzaffarpur (in India) D/C transmission line. Further, kataiya-Kusaha and Raxaul-Parwanipur 132 KV S/C on D/C lines with Panther conductors have been commissioned in August 2017.

A bilateral MoU for cooperation on electric power trade, cross-border transmission interconnections and Grid connectivity for the period of twenty-five years has been signed by both the countries in the year 2014. A Long-Term Integrated Plan for transfer of power between both countries has been prepared by the Joint Technical Team (JTT) for four years time frame i.e., years 2018-19, 2021-22, 2025 and year 2035.

- (b) **Bhutan** - Both the countries have existing arrangements for about 1500 MW power from TalaHEP (1020 MW), Chukha HEP (336 MW) and Kurichu HEP (60 MW) in Bhutan to India through 400KV, 220KV and 132 KV lines. Some other agreements with Bhutan is already in operation for sharing electric power between the two countries.

The bilateral Indo-Bhutan energy cooperation signed in 2006 aims to strengthen energy security, promote stable energy markets and manage Green House Gas Emissions. About 1400 MW power from the existing hydro projects in Bhutan is being imported to India.

- (c) **Bangladesh** - Both the countries are linked through Baharampur (India) –Bheramara (Bangladesh) 400 kv D/C lines and 550 MW HVDC back-to-back terminal at Bheramara. In addition, projects like Baharampur-Bheramara 400 kv D/C 2nd line, Katihar (India)-Parbotipur (Bangladesh) – Bornagar (India) 765 kv D/C line, 500 MW HVDC back-to-back terminal at Parbotipur are under implementation.

Further, as a part of bilateral cooperation, a Memorandum of Understanding (MoU) on energy cooperation was signed between the governments of both the countries in January, 2010. So far 13 meetings of JSC/JWG on Indo-Bangladesh Cooperation in Power Sector have been concluded over implementation of various projects.

- (d) **Sri Lanka** - Interactions between the two countries took place for 2\*500 MW HVDC bipole line between Masurai (India)-New Anuradhapura (Sri Lanka) including submarine cable . A letter of Intent (LOI) was received from Government of Sri Lanka in June 2017 for developing 500 MW LNG based power project at Kerawalapitiya

in place of the coal based power plants at Sampur by a joint venture company between India and Sri Lanka.

- (e) **Germany** - As a bilateral cooperation, Indo-German Energy Forum (IGEF) has been established in 2006 for promoting energy security, energy efficiency including energy conservation, renewable energy, investment in energy projects and collaborative research and development projects.
- (f) **Japan** - A Government level India-Japan Energy Dialogue (IJED) has been set up between the two countries. It has been decided to set up five working groups to deal with power generation, energy efficiency, coal, renewable energy and petroleum and natural gas and identify areas of collaboration.
- (g) **The United Kingdom** - MoU between the two countries to strengthen coordination between both the countries was signed in November 2015. Two priority areas such as (i) utilities of the future, and (ii) energy efficiency have been prioritized. Issues like research and innovation, inward investment, green finance and utilities of the future in technology, etc., have been deliberately in discussion between both the countries.
- (h) **BRICS** - A Memorandum of Understanding in energy saving and energy efficiency among the ministries and governmental agencies of BRICS was signed in November, 2015. Several meetings were held where issues related to Clean Energy Ministerial (CEM), a proposal from the Russian Federation of BRICS, India's stand of achieving 40% of its cumulative electric power installed capacity from non-fossil based energy sources by 2030 etc., have been discussed.
- (i) **International Energy Agency (IEA)** - The IEA is an autonomous organization in which was set up in response to the 1973-74 oil crisis. India became a partner in November, 2013.
- (j) **World Energy Council India** - This programme encompasses engagements at national as well as global level.
- (k) **Russia** - An MoU has been signed between India-Russia on November, 2013 to exchange knowledge, information and best practices on topics like exchange of delegations, technical assistance and exchange of experiences.
- (l) **China** - The MoU between India and China in the field of energy efficiency was signed on 26th November, 2012, for a period of five years, to enhance energy efficiency in industries and implementation of energy efficiency projects through Energy Service Companies, Energy management system, increasing energy efficiency in thermal plants, jointly developing test protocols and standards for LED, etc.

- (m) **Switzerland** - Bilateral agreements has been signed with Switzerland to enhance the development of integrated design of power sector machineries, technical assistance in developing building materials-testing infrastructure, design guidelines and tools for the design of energy efficient residential and public buildings, etc.
- (n) **The European Union** - Bilateral agreement has been signed with the European Union to enhance the security of energy, its renewable, smart integration and clean coal and many more.

## 2.5 POWER SECTOR REFORMS

Some major reforms in the power sector include:

- Twenty-four states viz. Odisha, Haryana, Andhra Pradesh, Uttar Pradesh, Karnataka, West Bengal, Tamil Nadu, Punjab, Delhi, Gujarat, Madhya Pradesh, Maharashtra, Rajasthan, Himachal Pradesh, Assam, Chhatisgarh, Uttaranchal, Bihar, Jharkhand, Kerala, Tripura, Sikkim, Jammu & Kashmir and Meghalaya have either constituted or notified the constitution of State Electricity Regulatory Commission.
- Joint Electricity Regulatory Commission has been notified for Mizoram and Manipur.
- Joint Electricity Regulatory Commission has also been notified for Union Territories (except Delhi).
- Review of the Electricity Act, 2003. In pursuance of provisions of the National Common Minimum Programme (NCMP) that a review of the Act would be undertaken, the Electricity (Amendment) Bill, 2005 has been introduced in the Lok Sabha on 23.12.2005. The provisions of the Electricity Act, 2003 which are to be amended are as under:
  - The concerned State Governments and the Central Government shall jointly endeavour to provide access to electricity to all areas including villages and hamlets through rural electricity infrastructure and electrification of households.
  - To delete 'elimination' of cross subsidies as elimination of cross subsidies is not intended in the near future. The provision for reduction of cross subsidies would continue.
  - The police would be able to investigate the cognizable offences under the Act and that no prosecution shall be instituted for any offence under the Act except at the instance of the appropriate Government or appropriate Commission or authorized persons. Special Courts constituted under the Act will be able to take cognizance of offences without the accused being committed to them for trial. Appellate Tribunal for Electricity

- The Central Government has made the Appellate Tribunal for Electricity operational w.e.f. 21st July, 2005.
- The Appellate Tribunal has started hearing appeals against orders of the Regulatory Commissions/ Adjudicating Officers.
- Forum of Regulators Forum of Regulators have been constituted under section 166(2) of the Electricity Act, 2003 on 16th February, 2005.
- Ministry of Power launched reform-oriented programme, namely, Accelerate Power Development and Reforms Programme (APDRP) during 2002-2003.
- Ministry of Power signed the Memorandum of Understanding with the states to undertake distribution reforms in a time bound manner, which includes setting up of State Electricity Regulatory Commission (SERC), unbundling of State Power Utilities, metering of feeders & consumers, starting energy accounting & auditing, securitization of outstanding dues of CPSUs, grid discipline, etc., subsequently, 24 states have constituted SERCs and 20 have issued tariff orders in the direction of rationalizing the tariffs.

## 2.6 NATIONAL ELECTRIC PLAN

The National Electricity Plan includes a review of the 12th Plan, detailed capacity addition requirement during the years 2017-22 and perspective plan projections for the years 2022- 27. A brief summery is outlined below:

- In the 12th Plan, likely capacity addition from conventional sources as per review carried out as on 31.3.2016 will be 1,01,645 MW against a target of 88,537 MW. This is about 115% of the target.
- Private players have started playing dominant role in capacity addition in power sector with 56 % of total capacity addition during 12th plan coming from private sector.
- There is likely to be considerable slippage in capacity addition in respect of Hydro and Nuclear (Hydro – 5,601MW and Nuclear -2,800 MW) in the 12th Plan period. The factors affecting capacity addition in Hydro and Nuclear sectors need to be addressed urgently to arrest the further decline in generation mix.
- During the 12th plan, capacity addition from supercritical technology-based coal power plants is likely to contribute around 39% of the total capacity addition from coal-based plants.
- A capacity addition of 17,930 MW from Renewable Energy Sources has been achieved during the first four years of the 12th Plan.

- Largest ever wind power capacity addition of 3,300 MW has been achieved in 2015- 16. This has exceeded the target by 38%. Also India has registered highest ever yearly solar power capacity addition of 3,019 MW in 2015-16 exceeding target by 116%.
- The plan also targeted the issues on reducing demands in various states by 2022, improve in power efficiency, transmission improvement, proper distribution of power and improvement in renewable energy sources towards power.
- Policy on Human resource development and enhancing Research and Development activities are also targeted.

## **2.7 NATIONAL OFFSHORE WIND ENERGY POLICY, 2015**

The Ministry of New & Renewable Energy (MNRE) has been authorized as the Nodal Ministry for the use of offshore area within the Exclusive Economic Zone (EEZ) of the country and the National Institute of Wind Energy (NIWE) has been authorized as the Nodal agency for the development of offshore wind energy in the country and to carry out allocation of offshore wind energy blocks, coordination and allied functions with related ministries and agencies. It would pave the way for offshore wind energy development including, setting up of offshore wind power projects and research and development activities in waters, in or adjacent to the country, up to the seaward distance of 200 Nautical Miles (EEZ of the country) from the base line.

Preliminary assessments along the 7600 km long Indian coastline have indicated prospects of development of offshore wind power. With the introduction of the National Offshore Wind Energy Policy, the Government replicates the success of the onshore wind power development in the offshore wind power development. The scheme would be applicable throughout the country depending upon offshore wind potential availability.

## SECTION 3

# LEGAL FRAMEWORK

### 3.1 INDUSTRY TYPE

Power sector is an integral part of Energy Industry. This sector is inter-related with other sectors in the industry.

- Public Limited Company
- Private Limited Company
- State Electricity Board

### 3.2 APPLICABLE LAWS

#### *General Laws*

- **The Indian Electricity Act, 1910**
  - Provided basic framework for electric supply industry in India.
  - Growth of the sector through licensees.
  - License by State Government
  - Provision for license for supply of electricity in a specified area.
  - Legal framework for laying down of wires and other works.
  - Provisions laying down relationship between licensee and consumer
- **The Electricity (Supply) Act, 1948**
  - Mandated creation of SEBs.
  - Need for the State to step in (through SEBs) to extend electrification (so far limited to cities) across the country.
  - Main amendments to the Indian Electricity Supply Act
  - Amendment in 1975 to enable generation in Central sector.

- Amendment to bring in commercial viability in the functioning SEBs – Section 59 amended to make the earning of a minimum return of 3% on fixed assets a statutory requirement (w.e.f 1.4.1985) .
- Amendment in 1991 to open generation to private sector establishment of RLDCs.
- Amendment in 1998 to provide for private sector participation in transmission, and also provision relating to Transmission Utilities.

➤ **The Electricity Regulatory Commission Act, 1998**

- Provision for setting up of Central / State Electricity Regulatory Commission with powers to determine tariffs.
- Constitution of SERC optional for States.
- Distancing of the Government from tariff determination.

➤ **The Electricity Act, 2003**

The Electricity Bill, 2001 was introduced in Lok Sabha on 30th August, 2001 and was subsequently referred to the Standing Committee on Energy for examination and report. The Standing Committee submitted its report on 19th December, 2002. Based on the recommendations of the Standing Committee on Energy, the Government of India moved certain amendments. The Electricity Bill, 2001 along with these amendments, was passed by Lok Sabha on 9th April, 2003.

The Bill as passed by Lok Sabha was considered and passed by Rajya Sabha on 5th May, 2003. The Electricity Bill, 2003 as passed by both Houses of the Parliament received President's assent on 26th May, 2003 and was notified in the Gazette of India on 2nd June, 2003. The provisions of the Act except section 121 were brought into force with effect from 10th June 2003. Some of the important objectives of the act are:

- Developing the electricity industry.
- Promoting competition.
- Protecting consumer interests.
- Supplying electricity to all areas.
- Rationalising tariffs.
- Ensuring transparent policies regarding subsidies.

### 3.3 SPECIFIC ACTS APPLICABLE

- The Companies Act, 2013
- Atomic Energy Act, 1962
- Civil liability for Nuclear Damage Act, 2010
- Consumer Protection Act, 1986 and rules there under
- Electricity (Supply) Act, 1948
- Electricity Act, 2003
- The SEZ Rules
- Electricity Regulatory Commission Act, 1998
- Energy Conservation Act, 2001
- National Electricity Policy
- National Tariff Policy
- National Thermal Power Corporation Limited, The National Hydroelectric Power Corporation Limited and The North-Eastern Electric Power Corporation Limited (Acquisition and Transfer Of Power Transmission Systems) Act, 1993
- Neyveli Lignite Corporation Limited (Acquisition And Transfer Of Power Transmission System) Act, 1994
- Semiconductor Integrated Circuits Layout-Design Act, 2000
- The Income Tax Act, 1961
- Cost Audit (Report) Rules, 2001
- Cost Accounting Record Rules, 2001
- Payment of Bonus Act, 1962

### 3.4 RELEVANT REGULATIONS

- The JERC (Standards of Performance for Distribution Licensees) Regulations, 2015
- The JERC (Procurement of Renewable Energy) Second Amendment Regulations, 2015

- Central Electricity Regulatory Commission (Indian Electricity Grid Code) (Fourth Amendment) Regulations, 2016
- Central Electricity Regulatory Commission (Deviation Settlement Mechanism and Related Matters) (Third Amendment) Regulations, 2016
- Central Electricity Regulatory Commission (Terms and Conditions for Dealing in Energy Savings Certificates) Regulations, 2016
- Central Electricity Regulatory Commission (Open Access in Inter-State Transmission) (Fourth Amendment) Regulations, 2016
- Central Electricity Regulatory Commission (Appointment of Consultants) (Third Amendment) Regulations, 2017
- Central Electricity Regulatory Commission (Sharing of Inter State Transmission Charges and Losses) Regulation, 2010.

### **3.5 ADMINISTRATIVE FRAMEWORK**

There are a mix of executive and regulatory authorities (both at the central and state levels) that are responsible for regulating the Indian electricity sector.

#### **Ministry of Power, Government of India**

The Ministry of Power is primarily responsible for developing electrical energy in India, formulating policy, and administering legislation with regard to electricity.

#### **Ministry of New and Renewable Energy**

The ministry is responsible for formulating policy for the development and deployment of alternate sources of energy.

#### **Ministry of Environment, Forests and Climate Change**

The ministry is responsible for formulating environmental and forestry policies, and the prevention and abatement of pollution.

#### **Central Electricity Regulatory Commission (CERC)**

This authority is responsible for:

- Regulating tariffs of generating companies that are either:
  - owned or controlled by the Indian Government; or
  - generate and sell electricity in more than one state.
- Regulating inter-state transmission and determining the tariffs in this regard.

- Issuing licences for inter-state transmission and trading.
- Adjudicating disputes involving generating companies or transmission licensees with regard to the above matters.
- Specifying the grid code having regard to grid standards.
- Specifying and enforcing standards of service by licensees.
- Fixing the inter-state trading margin (if considered necessary).

### **State Electricity Regulatory Commissions (SERC)**

The commissions are responsible for:

- Determining tariffs for intra-state generation, supply, transmission, and wheeling.
- Regulating the purchase and procurement of electricity by distribution licensees.
- Facilitating intra-state transmission and wheeling of electricity.
- Issuing intra-state transmission, distribution and trading licences.
- Promoting co-generation and generation of electricity from renewable sources of energy.
- Adjudicating on disputes between the licensees and generating companies.
- Specifying the state grid code.
- Specifying or enforcing standards of service by licensees.
- Fixing the intra-state trading margin, if considered necessary.

### **Central Electricity Authority (CEA)**

The CEA is responsible for formulating short-term and perspective plans for developing the electricity system, and co-ordinates the activities of the planning agencies. The Central Electricity Authority also specifies:

- Technical standards for construction of electrical plants, electric lines and grid connectivity.
- Safety requirements for construction, operation and maintenance of electrical plants/ lines.
- Grid standards for operation and maintenance of transmission lines.
- Conditions for installing meters for transmission and supply of electricity.

### **Bureau of Energy Efficiency (BEE)**

To develop policy and strategies with trust on self regulation and market principles, within

the overall framework of the Energy Conservation Act, 2001 with the primary objective of reducing energy intensity of the Indian economy. This will be achieved with active participation of all stakeholders, resulting in accelerated and sustained adoption of energy efficiency in all sectors of the economy.

### **3.6 CONCERNED TRIBUNAL**

Appellate Tribunal under the Electricity Act, 2003

### **3.7 BUSINESS PLAYERS**

#### **Major Public Sectors**

- Power Finance Corporation
- Power grid Corporation of India Limited
- Central Electricity Regulatory Commission
- Damodar Valley Corporation by
- Neyveli Lignite Corporation Limited
- Nuclear Power Corporation of India Limited
- NHPC Limited
- NTPC Limited
- Gujarat Industries Power company Limited

#### **Major Private Companies**

- Adani Power
- Tata Power Company Ltd.
- Suzlon
- Reliance Power Limited
- Jaiprakash Power ventures Limited
- JSW Energy Limited
- SJVN Limited
- Torrent Power Limited

### **3.8 GOVERNANCE**

The power industry had been the most regulated infrastructural sector of the economy, resulting in the industry not keeping pace with economic growth of the country. Lack of reliable and quality power is a major bottleneck for the speedier growth of the economy. In no other industry is the need for sound corporate governance system and practices

felt as seriously as in the power industry. Poor governance practices have negatively impacted the performance of power utilities and resulted in the systemic weaknesses. It is in the management of this sector, of all sectors of the economy, that there is dire need to introduce good governance system. While the authorities concerned have rightly recognized such need and have taken far reaching measures, Company Secretaries can play significant role and make useful contribution in the following areas :

- The process of restructuring of SEBs by segregating of businesses such as generation, transmission and distribution of electricity.

- Incorporation of Companies under the Companies Act for taking up these business activities.
- Transfer and vesting of these businesses with the companies under respective Transfer Schemes.
- Disinvestment of distribution business through various methods. The most suitable method which has been implemented so far is the joint venture route, in which management control is given to the private investor through transfer of 51 % equity. The disinvestment/privatization process requires compliance of various formalities and extensive due diligence exercise.
- The utilities engaged in the business of transmission and distribution of power are regulated by the concerned SERC. The Company Secretary in employment can appear before the Commission. Company Secretaries in practice may also appear before the Commission if so authorized by the parties to the proceedings.

## SECTION 4

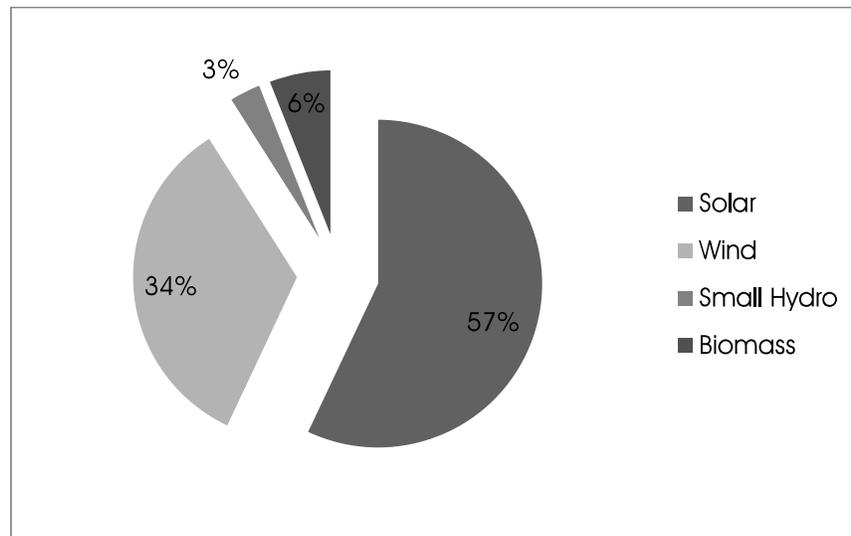
# CONTRIBUTION OF COMPANY SECRETARY

### 4.1 INTRODUCTION

There has been a significant increase in renewable energy capacity in the country during the last decade. The installed capacity of renewable in India was 10,252 MW as at the end of the 10th plan (i.e., on 31.03.2007) and the same had grown to 24,920 MW at the end of the 11th plan (i.e., on 31.03.2012). With a consistent growth, the installed capacity of renewable energy sources has reached 42,849.38 MW as on 31.03.2016.

The Renewable Energy (RE) potential in India is estimated as 896,602 MW comprising of 748,990 MW of Solar Power, 102,772 MW of Wind Power, 19,749 MW of Small Hydro Power and 25,090 MW of Bio-Energy. The Government of India, in pursuit of energy security and for minimizing impact on environment, has been prioritizing the development of RE sector through its policies and programmes. Wind, Solar and small Hydro are three emerging renewable energy sources.

The National Solar Mission (NSM) launched in January 2010 has given a great boost to the solar scenario in the country. As of 31st March 2016, the installed capacity of Solar power in India was 6,762.85 MW, which is 16% of total Renewable Installed Capacity in India. This Solar capacity is mainly spread across Rajasthan (1269.93 MW), Gujarat (1119.17 MW), Tamil Nadu (1061.82 MW), Madhya Pradesh (776.37 MW), Andhra Pradesh (572.96 MW), Telangana (527.84 MW), Punjab (405 MW) etc. The installed capacity of Biomass power in India as on March 2016, was 4,946.41 MW, which is 12% of total Renewable Installed Capacity in India. Small hydro power with capacity of 4,273.47 MW as on March 2016, represents 10% of total Renewable Installed Capacity in India. The figure Derived below shows targets to meet by the year 2022 in various sectors:

**Figure-12: Target By The Year 2022**

Source: Draft National Electricity Plan-2016, Central Electricity Authority

There is huge scope for the individuals to enter in this sector as an entrepreneur. The scope for consultancy is also high for the Company Secretaries who are in practice. With the increase in avenues, demand for Company Secretary as legal advisers could emerge.

### Research and Development

There are many problems in Indian power sector which are specific to Indian conditions. Through promotion of R&D, these specific problem areas need to be addressed. The ministry is giving stress for improvisation of power sector through extensive research. It is suggested that CEA may act as an interface between Industry, academics and professionals for this purpose. Experts from Government, dominant players in the field of generation, transmission and distribution sectors like NTPC, NHPC, BHEL, Power grid, CESC etc. Research institutions like CPRI, Academic Institutions like IISc/IITs/ NITs and professional bodies are to be involved.

Company Secretaries in practice could act as research consultants to these agencies. Those who are interested in research could opt for research-related jobs in the sector.

### Human Resource

It has been analysed in the National Electric Plan that power sector requires huge employment of human resources by 2022 in order to achieve all its targeted plans and actions. Some important observations are:

- Sufficient number of Engineers, Managers and Diploma holders are available in the country. However, there are gaps in respect of lower level skills like that of ITI.
- It is proposed that all Central Sector Utilities, all State Sector Utilities and all IPPs should create sufficient Training infrastructure and schedule for providing O&M training as per the norms stipulated in notification of September 2010 issued by CEA.
- CEA has recognized about 74 Training Institutes spread all across the country. These institutes may be strengthened for Distribution/Lineman training along with training in renewable sector such as solar, wind etc.
- As per National Training Policy each organization should allocate training budget between 1.5% to 5% of annual salary budget. Training infrastructure for distribution could be funded.
  - Company Secretary could act as a Human Resource expert by providing necessary guidelines required from time to time and also by helping the CEA in getting required talents.
  - Company Secretary could act as a trainer consultant to the sector by developing required talents to the sector.

## 4.2 COMPANY SECRETARY IN EMPLOYMENT

### Organizational governance

It is important that robust governance arrangements are in place, are clearly documented and communicated to the organization. The position of the Company Secretary enables them to have a holistic view of the governance framework and as a result they are generally tasked with the responsibility of ensuring that this framework and any supporting policies and procedures are clearly documented.

### Supporting the chairman

The Company Secretary has a duty to advise the Board, through the Chairman, on all governance matters. Together they should periodically review whether the Board and the company's other governance processes are fit for purpose, and consider any improvements or initiatives that could strengthen the governance of the company. The relationship between the Company Secretary and the chairman is central to creating an efficient Board.

### **Board and committee processes**

The Company Secretary plays a leading role in good governance by helping the Board and its committees function effectively and in accordance with their terms of reference and best practice. Providing support goes beyond scheduling meetings to proactively managing the agenda and ensuring the presentation of high quality up-to-date information in advance of meetings.

### **Board development**

All directors should have access to the advice and services of the Company Secretary. He/she should build effective working relationships with all board members, offering impartial advice and acting in the best interests of the company. In promoting board development the Company Secretary should assist the chairman with all development processes including board evaluation, induction and training. This should involve implementing a rigorous annual Board, committee and individual director assessment and ensuring actions arising from the reviews are completed. Further, the Company Secretary should take the lead in developing tailored induction plans for new directors and devising a training plan for individual directors and the Board. Although these tasks are ultimately the responsibility of the chairman, the Company Secretary can add value by fulfilling, or procuring the fulfillment of, these best practice governance requirements on behalf of the chairman.

### **Communication with stakeholders**

The Company Secretary is a unique interface between the Board and Management and as such they act as an important link between the Board and the business. Through effective communication they can coach management to understanding the expectations of, and value brought by the Board. The Company Secretary also has an important role in communicating with external stakeholders, such as investors, and is often the first point of contact for queries. He/she should work closely with the Chairman and the Board to ensure that effective shareholder relations are maintained.

### **Disclosure and reporting**

In recent years there has been increased emphasis in the quality of corporate governance reporting and calls for increased transparency. The Company Secretary usually has responsibility for drafting the governance section of the company's annual report and ensuring that all reports are made available to shareholders according to the relevant regulatory or listing requirements.

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### 4.3 COMPANY SECRETARY IN PRACTICE

- There is excess demand in the power sector. It may lead to increase in investment. Increase in investment may lead to expansion of the sector, hence, opening new opportunities. Company Secretaries are required to make themselves prepared to grab the opportunities while arising.
- Preparing case for Arbitration and representation before arbitrators
- Consultation on behalf of companies at NCLT
- Consultation as an expert in providing training to employees
- Consultation in Human Resource related issues
- Consultation in conducting new Research and Development as per requirement of the company
- Consultation in setting up and smooth functioning of new power sector companies more particularly in renewable energy sector
- Any other such consultancies that are required from time to time.

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