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NTPC: A Boon to India

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Abstract:

NTPC is a boon to India, it is a lamp of our country, it generates power and distributes to the country. Nowadays the power is a great requirement like breath. The power is need to every work directly or indirectly. The rapid and competitive industrialization of world, the power becomes utmost need to the country development. The country can't forward in development without power. The power is an important requirement in the present era. The India is the third rank in the power generation in the world. The NTPC Limited is the largest power producing company, and accelerating India's growth. The aim of present study is to identify the NTPC power generation and contribution to the country.

Keywords: NTPC Limited, Power Generation and Contribution in the country.

1. Introduction

NTPC is the India's largest power company, which was set up in 1975 to accelerate power development in India. NTPC was integrated on November 7, 1975 as national thermal power corporation private limited. The company name was changed to National Thermal Power Corporation Limited in 1976, and later on to NTPC Limited, A fresh certificate for the same was issued on October 28, 2005, The government of India conferred it with 'NAVRATNA' status in the year 1997; it achieved a milestone of the generation of 100 billion units of electricity in a year. NTPC Launched Initial Public Offering (IPO) consisting of 5.25 percent as fresh issue, NTPC has reduced 75 percent. The rest is held by institutional investors and public. NTPC becomes a "MAHARATNA" company in May 2010 one of the only four companies to be awarded this status. NTPC ranked 384th in the 2013, ranked 424th in the 2014, and ranked 431st in the 2015, 'Forbes Global 2000' ranking of the world's biggest companies. NTPC has reached 44.398 MW as on 31st march 2015. The present installed capacity is 45.548 MW (including 6,196 MW through JVs) Comprising of 41 NTPC Stations (18 Coal based stations and 7 Combined cycle gas/liquid fuel based stations and 1 Hydro based Station), 7 joint ventures stations (6 Coal based station and 1 Gas based station), and 8 Renewable energy projects. NPTC Plans to become a 128,000. MW, Company by 2032. The capacity will have a diversified fuel mix comprising 56 percent coal, 16 percent Gas, 11 percent Nuclear and 17 percent Renewable Energy Sources including hydro. By 2032, non fossil fuel based generation capacity shall make up nearly 28 percent of NTPC's portfolio. The NTPC has been operating its plants at high efficiency levels. Although the company has 17.73 percent of the total national capacity, it contributes to over 25.9 percent of total power generation due to its focus on high efficiency¹.

2. Review of Literature

Sharma P.S., et al. in their study in Indian power sector found that despite of the rapid reformation practices which was started in 1991 could not bring about the overall effectiveness in the power sector in India. Power sector is still missing technological competence, be short of appropriate funding, high wastage, lack of enhanced buyer contentment, etc. It has only ensured consistency, affordability and convenience to the public. Therefore, there is a need of reformation in terms of purpose and tactic to bring in development².

Dubey Pushkar, Surenthiran N. and Sharma Sudhir Kumar in their article explained about NTPC Limited power generation and consumption year wise in India. Thermal power production in India still exists to be the highest contributor in power sector. They also describes about NTPC power generation, consumption, demand and supply position and role of comparison of NTPC Ltd to rest of India. They explained power consumption in the different sectors in the country³.

3. Objectives of the Study

- To study the NTPC Power Generation across India
- To examine the growth of NTPC Power Generation capacity in the country
- To study the NTPC's Power contribution to the country

4. Methodology

The methodology of the present study is based on the collection of secondary data which is available on website of the organization and published and unpublished articles, organizations' annual reports from internet. Using percentages the data is analyzed and presented in a meaningful form.

5. Data Analysis

The data collected from different sources and later it has been analyzed and interpreted here as under below. The NTPC has different power generation stations all over the India like i.e. coal based power stations, coal based joint ventures, gas/ liquid fuel based power stations, gas based joint venture and renewable energy stations. These power plants generate the power and transmit to all over the country.

S. No.	POWER GENERATION	NO. OF PLANTS	CAPACITY (MW)
1	Coal	18	34,425
2	Gas/Liquid Fuel	07	04,017
3	Hydro	01	800
4	Renewable Energy	08	110
5	Coal & Gas (JVs)	07	06,196
TOTAL		41	45,548

*Table 1: NTPC Installed Capacity
Source: Compiled from www.ntpc.co.in*

The above table shows that at present the NTPC has installed power capacity is 45,548MW (Including 6,196 MW through JVs), comprising with different power generation of 41 NTPC Stations. Those are 18 Coal based stations, 7 combined cycle Gas/Liquid fuel based stations and 1 Hydro based station, 7 Joints Ventures stations (6 Coal based and one Gas based) and 8 Renewable energy projects. The 18 coal based stations generate power 34,425MW, the 7 gas/liquid fuel stations generate power 4,017MW, one hydro power station generates power 800MW and 8 renewable energy stations generate power 110MW.

The NTPC Limited is generating power in overall India. NTPC has power plants in all regions in the country. The given table shows the region wise power production of NTPC.

S. NO	REGION	COAL	GAS	RENEWABLE	TOTAL (MW)
1	Northern	09,015	2,344	035	11,394
2	Western	11,340	1,313	050	12,703
3	Southern	04,600	0,360	010	04,970
4	Eastern	09,470	- - - -	010	09,480
5	Islands	---	-----	005	005
6	Hydro	---	---	---	800
7	JVs	04,229	01,967	- - -	06,196
TOTAL	-----	38,654	05,984	110	45,548

*Table 2: Regional Wise Power Generation
Source: Compiled from www.ntpc.co.in*

The above table reveals that the region wise power generation in India. The 11,394 MW power is generated in the northern region. The 12,703 MW power is generated in the western region. The 4,970 MW power is generated in the southern region. The 9,480 MW power is generated in the eastern region.

YEARS	Gross Generation (BU) (Coal & Gas)	PLF (%) Coal Stations	Availability Factor (%) (Coal Stations)
2014-15	241.139	80.23	88.27
2013-14	233.269	81.50	90.32
2012-13	232.00	83.08	90.20
2011-12	222.07	85.00	89.73
2010-11	220.54	88.29	91.62
2009-10	218.84	90.81	91.76
2008-09	206.94	91.14	92.47
2007-08	200.86	92.24	92.12
2006-07	188.67	89.43	90.09
2005-06	170.88	87.52	89.91
2004-05	159.11	87.51	91.20
2003-04	149.16	84.40	88.79
2002-03	140.86	83.57	88.70
2001-02	133.20	81.11	89.09
2000-01	130.15	81.80	88.54
1999-2000	118.70	80.39	90.06
1998-99	109.50	76.60	89.36

Table 3: Operational Performance of Coal and Gas Based NTPC Station
Source: compiled from www.ntpc.co.in and NTPC Annual Reports

The above table shows the year wise power generation for the last several years. It shows the power generation in Billion Units. The power was generated 109.50 BU in the year 1998-99 and the power was generated 118.70 BU in 1999-2000. From that onwards the power generation gradually improved year by year in the organization. The last year power generation was 241.139 BU in the year 2014-15.

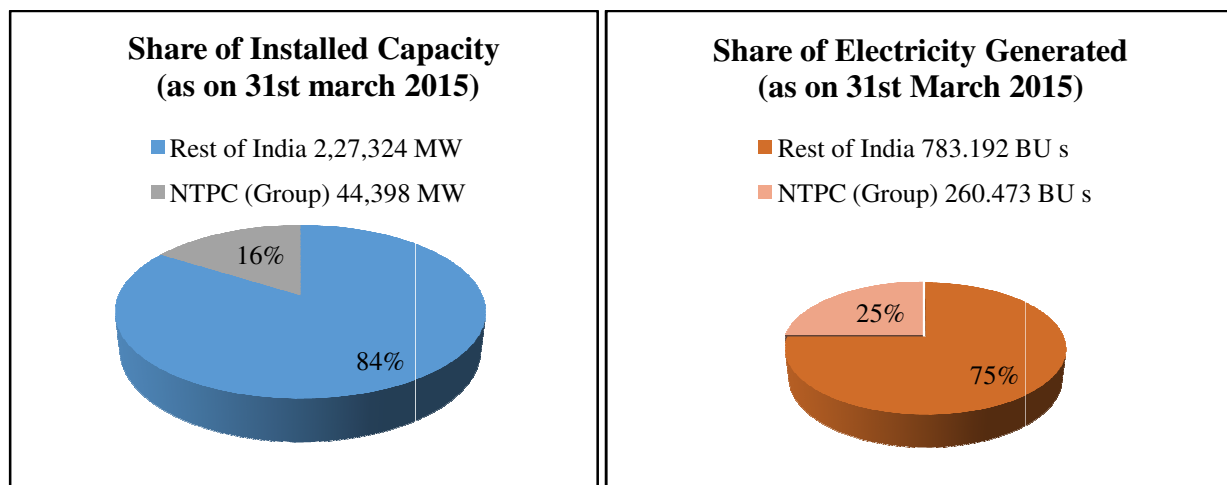


Figure 1

Figure 2

Source: Compiled from Annual Report 2014-15.

The above two graphs show about the NTPC power installed capacity and the share of the total power generation in the country. The NTPC has power installed 44,398 MW as on 31st March 2015. The rest of the companies, produce power 2, 27,324 MW as on 31st March 2015. The NTPC share of installed capacity is 16 percent and the rest of companies, power installed capacity is 84 percent in India. The NTPC share of electricity in generates 260.473 BUs that is 25 percent and rest of India 783.192 BUs that is 75 percent. The NTPC, at present, installed power capacity as on today 45.548MW. The power generates capacity increasing day by day in the country.

6. Conclusion

NTPC is the great power generation public sector in the country. It is the sixth best company to work for India. The NTPC installed capacity is 16 percent, and generates 25 percent in the country. The NTPC has power stations, which are generating power and distribution across of the country. So the NTPC is the boon to India to provide good power to develop of economy of the country as well as industry, agriculture and service sector in the country.

7. References

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- iv. NTPC Annual Reports 2009-15.