

# AN ANALYSIS OF NTPC LTD DEVELOPMENT AND PROSPECTS FOR THE FUTURE!

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## ABSTRACT

Power is an inevitable need/demand in the present era of humankind. Every work we perform is directly or indirectly linked with power. Electricity is one of the crucial things in today's world. It is one of the salient blessings that science has given to us. Electricity has become a part of human life and it is unimaginable to think world without it.

Since LPG policy implemented in India, an expeditious growth have been witnessed in Industrialization process due to which in recent time India has emerged as one of the fastest developing country in the world. Power has become the uttermost need to pump the process of growth, leading to overall growth of the nation. NTPC Ltd. is the India's largest energy conglomerate. NTPC Ltd. has emerged as the no.1 power producing company in India accelerating India's growth.

The present study aims in analytical study of growth of NTPC Ltd. and its future prospects for the overall growth of power sector of India. In this paper the profile of NTPC is studied well and through secondary information sources. A comparison has been fabricated from the past performance of NTPC Ltd. In the present study information were collected solely from the secondary sources. The data analysis for the study was done through comparison of past year wise collected information and data on power operate in India.

**Keywords:** Power, Electricity, NTPC Ltd

## 1. INTRODUCTION

NTPC Ltd. is the largest electricity producer of India. It is an undertaking of the Indian public sector under the Ministry of Energy, and is involved in electricity generation and related activities. NTPC was integrated on 7th November, 1975. It was incorporated as a private limited company under the Companies Act 1956 with the name "National Thermal Power Corporation Private Limited". On September 30, 1976 the word "Private" was deleted from its name and on 30th September 1985 it was converted to a Public Ltd. company. The purpose of changing the name of Company was to reflect the diversification of business operations beyond thermal power generation. This included, generation of power from hydro, nuclear and renewable energy sources and undertaking coal mining and oil exploration activities.

NTPC Limited is the largest power producing company in India. Its headquarters is situated in New Delhi. The core business of NTPC Limited is generation and sale of electricity to state-owned power distribution companies and State Electricity Boards in India. To invigorate its core business, the company has diversified itself into various fields as consultancy, rural electrification, training of power professionals, power trading, ash utilization and coal mining as well. The company is also involved in oil and gas exploration and coal mining activities and has various ventures in it. The company is also engaged in consultancy and turnkey project contracts that includes project management, construction management, engineering, and operation and management of power plants.

NTPC is India's largest energy coalesce rooted its plants way back to expedite power development in India. Since then, it has inveterate itself as the presiding major force with its presence in the entire value chain of the power producing business. This organization is the largest power generator capable of generating electrical power of 64,880 megawatts. As of March 31, 2020, the company owns 16.78% of the total national capacity and contributes to more than 20.96% of the total power generation due to its focus on operating its critical plants at higher efficiency levels (approx. 80.2% against the national PLF rate of 64.5 %). NTPC operates its plants at excellent efficiency levels. The company currently produces 25 million units of electricity per month.

NTPC Group presently comprises of 47 NTPC stations (which include 24 coal based stations, 7 gas based stations, 13 Solar PV, 1 Wind based Station, 1 Hydro station and 1 small hydro) and 25 Joint Venture stations (which include 9 coal based, 4 gas based, 1 Solar PV, 2 Wind, 8 hydro and 1 small hydro). NTPC operates in 70 locations in India, 2 locations in Bangladesh and one location in Sri Lanka.

NTPC Ltd. launched in October 2004 its Initial Public Offering (IPO), consisting of 5.25% as new issue and 5.25 % as offer for sale by the Government of India. Thus, NTPC Ltd. became a listed company from then with 89.5% Government holding of the equity share capital. NTPC Ltd. was established by Government of India which currently detains 54.14% of its equity shares on 30th June, 2016 after disinvestment of its stake in year 2004, 2010, 2013, 2014, 2016 & 2017.

In May 2010 NTPC was titled with the status Maharatna by the Union Government of India. NTPC is not only the leading power generator company but also a great place to work. NTPC isn't solely the foremost power generator; it's conjointly among the good places to work. The corporate is target-hunting by the "People before Plant Load Factor" mantra that is the example for all its human resource related policies. In 2019, NTPC is recognized as "Great Place to Work" for consistently ranking among "Top fifty Best companies to work for in India" for last eleven years by Economic Times survey. Besides, NTPC was conjointly recognized because the best among PSUs and in producing.

## 2. LITERATURE REVIEW

Numerous studies have been made in the past on NTPC. A review of some important research works have been outlined below –

- A research titled **Growth of National Thermal Power Corporation Limited (NTPC)** by **Dr. Rupesh Kumar** studied how NTPC has move ahead from a modest beginning in 1975 to becoming India's largest thermal power supplier. He studied the journey of NTPC Ltd. and its growth impacting the nation's power in a healthy way.
- A research study on **CONTRIBUTION OF NTPC LIMITED TO INDIA'S POWER GROWTH** by **Pushkar Dubey, Dr. N. Surenthiran** and **Dr. Sudhir Kumar Sharma** concluded that NTPC Ltd. has become the market leader in power production sector in India, and this is due to use of advanced tools and technologies.
- Another study by **Pushkar Dubey, N. Surenthiran** and **Sudhir Kumar Sharma** on **A study on Power Sector with role of NTPC Limited in India** concluded that there is shortage in India's Power sector. There is enormous challenge in front of power companies for integrating, regulating power system in India.
- A research study on **An Empirical Study on Financial Health of NTPC and NHPC** by Vishal Patidar & Nilesh P. Movalia concluded that y it can be concluded that the overall financial health of NTPC is very good . The study will be useful to all the stakeholders of power industry and researcher for carrying out further research on financial health of any business concern.

### 2.1. OBJECTIVES

- The aim of this paper is to study the overall growth of NTPC Ltd.
- To discuss detail about National Thermal Power Corporation (NTPC).
- To study the future prospect of NTPC on India's growth.

### 3. RESEARCH METHODOLOGY

This paper has been classified as descriptive in nature which presents an For achieving objectives the secondary data has been collected from numerous sources which range from official websites, reports, and research published in journals, websites, periodical, magazine, newspaper, annual financial reports.

For achieving the above-mentioned objectives, the difference set of techniques is used. That is a descriptive statistical technique and inferential statistical technique. The graphical and tabular mode also been used for the presentation of information.

### 4. FUTURE GROWTH AND PROSPECTS OF NTPC LTD.

Despite its deep historical connection to coal-fired electricity generation technology, NTPC is poised today to facilitate India's drive toward ambitious national renewable energy targets. NTPC, already at the forefront of building India's energy system, in fact now stands to be one of the country's key new energy enablers. As a state-owned utility in a developing country, NTPC must of course make providing power to citizens and support for India's rapidly developing economy at its top priorities. Whilst this responsibility has arguably required expansion of coal-fired power generation in the past, times have changed—and indeed 2017 has already seen several watershed moments that have signaled a new era in India's electricity sector. With the latest new solar tariff results in 2017 NTPC's coal-fired power tariff for its existing fleet, it is clear that renewable energy offers a cheaper way to provide power. Importantly, solar is now cheaper than coal-fired power even before taking into account the externalities of coal (pollution, emissions and water use) that hold back the nation's development. What NTPC does is of huge significance. The company provides 25% of India's electricity supply, and as such it plays a critical role in India's economic activity. Encouragingly, it appears that a growing proportion of NTPC's investment plan is being redirected into building modern generation capacity that has a much lower emissions profile and significantly reduced externalities. Such transformation is key to sustaining India's economic growth prospects.

NTPC has contrived a long term Corporate Plan to become a 130 GW company up to 2032 with diversified fuel mix and a 600 BU company in terms of generation. NTPC Limited is on an expansion spree to meet the power requirements of the country. NTPC is diversifying its capacity mix with much emphasis on renewable energy. As on 30 November 2015, NTPC has 110 MW Solar PV capacity under operation, 250 MW under construction, and 1260 MW under tendering. The company intends to add 10000 MW of Solar PV capacity in the next five years. On 18 July 2015, NTPC declared commercial its first Hydro Power plant at Koldam in the State of Himachal Pradesh. The company has a long-term plan to reduce its fossil fuel capacity mix to 56% by 2032.

NTPC also plans to go global. The Public Sector Corporation has signed a Memorandum of Agreement with the Government of Sri Lanka and the Ceylon Electricity Board for the construction of a coal thermal power plant of size 500 MW (2 x 250) in the island nation. A memorandum of understanding was also signed with Kyushu Electric Power Co., Ltd., Japan, to create an alliance to exchange information and experts from various fields of work. The Company is also finalizing a Memorandum of Understanding with Nigeria for the construction of power plants in return for allocating LNG on a long-term basis to NTPC plants in India. NTPC also developed a joint venture for a coal-based power plant 1320 MW (2x660) with the Bangladesh Energy Development Board known as the Bangladesh India Friendship Power Company in Rampal, Bangladesh which is facing massive opposition from the people of Bangladesh due to the plant being dangerously close to the Sundarbans.

#### 4.1. DIVERSIFIED GROWTH

NTPC to achieve its target and become a diversified fuel mix has aim to bifurcate its portfolio based on the sources of energy generation. Coal would continue to predominant fuel with 65% share of its share in the portfolio. The capacity of Non-fossil fuel would achieve a share of 30% and Thermal based generating capacity share would be 70%. Share of RE (including hydro) would be 28%.

| in GW | By 2032 | % Mix |
|-------|---------|-------|
| Coal  | 85      | 65.4  |
| Gas   | 6       | 4.6   |

|          |     |      |
|----------|-----|------|
| Hydro    | 5   | 3.8  |
| Solar    | 30  | 23.2 |
| Other RE | 2   | 1.5  |
| Nuclear  | 2   | 1.5  |
| Total    | 130 | 100  |

## 4.2. FUTURE CAPACITY ADDITION

NTPC aims to be world's leading power company. So, in order to accomplish its corporate plan of 130 GW Company up to 2032 NTPC has made plan for capacity addition which are under implementation presently:

| NTPC                                     |                         |               |       |
|--|-------------------------|---------------|-------|
| No.                                      | PROJECT                 | STATE         | MW    |
| 1  | Barh-I                  | Bihar         | 1980  |
| 2  | Tapovan Vishnugud-Hydro | Uttarakhand   | 520   |
| 3  | Lata Tapovan-Hydro      | Uttarakhand   | 171   |
| 4  | Darlipali               | Odisha        | 800   |
| 5  | North Karanpura         | Jharkhand     | 1980  |
| 6  | Rammam-Hydro            | West Bengal   | 120   |
| 7  | Tanda-II                | Uttar Pradesh | 660   |
| 8  | Telangana               | Telangana     | 1600  |
| 9  | Barauni                 | Bihar         | 1980  |
| Total                                    |                         |               | 9811  |
| JV & Sub. Companies                      |                         |               |       |
| 1  | Nabinagar-BRBCL         | Bihar         | 250   |
| 2  | Nabinagar-NPGC          | Bihar         | 1320  |
| 3  | Rourkela-NSPCL          | Odisha        | 250   |
| 4  | Durgapur-NSPCL          | West Bengal   | 40    |
| 5  | BIFPCL                  | Khulna        | 1320  |
| 6  | Patratu                 | Jharkhand     | 4000  |
| 7  | Khurja-THDC             | Uttar Pradesh | 1320  |
| 8  | Tehri PSP-THDC          | Uttarakhand   | 1000  |
| 9  | Pipalkoti-THDC          | Uttarakhand   | 444   |
| Total                                    |                         |               | 9944  |
| Grand Total (NTPC + JV & Sub. Companies) |                         |               | 19755 |

## Performance of NTPC

|   |               | 2023-24 | 2022-23 | 2021-22 | 2020-21 | 2019-20 |
|---|---------------|---------|---------|---------|---------|---------|
| Gross Generation                            | Million Units | 259618  | 274454  | 265798  | 250314  | 241975  |
| Commercial Generation                       | "             | 257829  | 273540  | 265003  | 250086  | 240778  |
| Energy sent out                             | "             | 240204  | 255715  | 247905  | 233617  | 224926  |
| Sale of energy (including electricity duty) | Crore         | 96841   | 89316   | 81113   | 77071   | 69932   |

|  |        |        |        |        |        |        |
|--|--------|--------|--------|--------|--------|--------|
| Profit before tax  | "      | 14466  | 12673  | 12339  | 12388  | 10059  |
| Profit for the year                                      | "      | 10113  | 11750  | 10343  | 9385   | 10243  |
| Dividend   | "      | 2968   | 4923   | 4040   | 3595   | 2762   |
| Dividend Tax   | "      | 608    | 1000   | 816    | 728    | 558    |
| Retained Profit  | "      | 6537   | 5827   | 5486   | 5062   | 6922   |
| Total fixed assets                                       | "      | 230171 | 21687  | 198836 | 180093 | 158063 |
| Net worth  | "      | 113569 | 107408 | 101778 | 96231  | 88782  |
| Total noncurrent borrowings including current maturities | "      | 152694 | 127430 | 115104 | 103840 | 91810  |
| Capital employed   | "      | 147014 | 131354 | 119711 | 100757 | 94544  |
| Net cash operations                                      | "      | 22014  | 16030  | 19248  | 20301  | 14504  |
| Value Added  | "      | 37587  | 33571  | 31164  | 29159  | 27921  |
| No. of employees   | Number | 17398  | 18359  | 19739  | 20593  | 21633  |
| Value added per employees                                | Crore  | 2.16   | 1.83   | 1.58   | 1.42   | 1.29   |
| Debt to equity   | Ratio  | 1.35   | 1.19   | 1.13   | 1.08   | 1.03   |
| Debt service coverage ratio (DSCR)                       | Times  | 2.07   | 2.21   | 2.14   | 1.55   | 1.72   |
| Interest service coverage ratio (ISCR)                   | Times  | 4.45   | 5.26   | 5.93   | 6.5    | 5.85   |
| Return on capital employed                               | %      | 10.48  | 12.51  | 11.52  | 13.39  | 14.18  |
| Face value per share                                     | Rupees | 10     | 10     | 10     | 10     | 10     |
| Dividend per share                                       | Rupees | 3      | 5.97   | 4.9    | 4.36   | 3.35   |
| Book value per share                                     | Rupees | 114.78 | 108.55 | 123.43 | 116.71 | 107.67 |
| Earnings per share                                       | Rupees | 10.22  | 11.88  | 12.54  | 11.38  | 12.42  |

The above table indicates a positive development in the power generation and performance of the NTPC Ltd. The above historical shows that there have been escalation in the demand of power in India which has led the biggest power generator to grow at high pace. NTPC Ltd. is the India's major power producing company.

## 5. CONCLUSION

NTPC Ltd. is the India's major power producing company. It has been consistently contributing in India's power production. NTPC Ltd. is not solely focusing on one source of energy generation but aiming to bifurcate its portfolio with diversified fuel mix. It has been observed that NTPC plants are significantly working in high efficiency due to use of advanced tools and technologies and increased plant load factors. With increasing efficiency of NTPC and its growth NTPC will be a major player in future years in enlightening India's growth.

NTPC is market leader in power generation. Every fourth bulb kindling in India is contribution of NTPC in power generation. NTPC day by day is working with its high efficiency and advance tools and technologies. It is also increasing its manpower effectiveness by lowering down men-megawatt ratio and also improving the quality of human resource professionals. This all factors are making NTPC Ltd. as a giant company in the field of power generation. This is not only making the company strong but also helping in the country's growth and development. By this way the company will play a major role a power sector of India in future coming years.

## CONFLICT OF INTERESTS

None.

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