

# NTPC: National Thermal Power Corporation

Committed to innovation and environmental responsibility, there are multiple corporations in India that are moving forward with cleaner energy solutions. One of them is NTPC, also known as National Thermal Power Corporation. NTPC isn't just a company that generates electricity through various means; it's much more than that. To understand everything about NTPC, in this blog, we will discuss its history and establishment, what exactly it does, how the latest inventions in tech come into use, and more.

## What is NTPC and its history?

The National Thermal Power Corporation, usually abbreviated and called NTPC, is an Indian government-owned electric power generation company. It stands tall as the country's largest power producer. The company was established on 7 November 1975 by former Prime Minister Indira Gandhi under the name National Thermal Power Corporation Private Limited. Since its inception, it started its first work in 1976 in Shaktinagar, Uttar Pradesh. This year itself, it changed its name to National Thermal Power Corporation Limited. 1985 marked the beginning of the company's commercial operations, as it earned a profit of approximately 4.5 Crore Rupees in the financial year.

Additionally, in 1989, NTPC started a new branch- the Consultancy Division. When 1994 came to an end, NTPC's installed capacity had already crossed 15,000 MW. Following these achievements, the Government of India awarded it the "Navratna" status. However, the company's accomplishments didn't slow down. In 2002, it gave birth to three companies- NTPC Electric Supply Company Limited, NTPC Vidyut Vyapar Nigam Limited, and NTPC Hydro Limited. These companies had diverse work. The NTPC Electric Supply Company Limited didn't just focus on the distribution of electricity, but its management too by managing a network of wires, transformers, and other infrastructure that were important to deliver electricity. The NTPC Vidyut Vyapar Nigam Limited became NTPC's branch to buy and sell electricity in order to maintain the supply and demand.

Last but not least, NTPC Hydro Limited specified its focus on comparatively smaller hydropower projects. Its task was to find the perfect locations, construct hydropower infrastructure such as dams, and maintain them properly. It finally got listed on the Bombay Stock Exchange and the National Stock Exchange on 5 November 2004, at the issue price of ₹62 per share. Finally, again, in October 2005, it changed its name to NTPC Limited. Now, let us discuss the company's primary operations.

## What are NTPC's Main Operations?

Although NTPC's work areas span many, the main ones are:

- **Power Generation:** As one of the main work domains of NPTC, the company uses coal to generate power through turbines and create electricity. NTPC leverages diverse power creation techniques, such as solar power and wind power, not just

through coal. Additionally, it is also gradually moving towards generating nuclear energy. Here, NTPC plays a key role in meeting the increasing demands of electricity in 2025.

- **Constructing and Operating Power Plants:** This part of the company isn't just a process but a proper journey. Initially, it creates the layout and design for a power plant, keeping the necessary details in mind. Then, NTPC takes care of the construction of the particular infrastructure. Finally, when the plant is built, NTPC is responsible for its day-to-day operations and maintenance.
- **Power Trading:** NTPC is not just a creator; it also plays the role of a buyer and seller of electricity in the wholesale market. During excess, it sells the extra power. Whereas during the shortage, it quickly buys power on a wholesale basis. This way, it keeps the supply and demand forces in check and equilibrium.

## **What Innovations and Tech Advancements are adopted by NTPC?**

NTPC is actively keeping up with the dynamic technology by adopting new advancements such as:

- **Artificial Intelligence (AI) and Machine Learning (ML):** NTPC uses Artificial Intelligence and Machine Learning in its operations domain. It helps them predict issues and monitor performance, among other critical operational tasks.
- **Enterprise Resource Planning (ERP):** ERP Systems help manage different sections of the company altogether. This saves essential resources such as time, effort, and money in managing different sectors.
- **Computational Fluid Dynamic Modelling (CFDM):** In order to ensure better design and operations, NTPC now uses computational fluid dynamic modeling, which increases efficiency and total performance at power plants.

## **What does NTPC do towards the Corporate Social Responsibility Initiative (CSR)?**

As an example of working not just for profitability but also for social welfare, NTPC stands out due to its focus on key social areas like:

- **Education:** NTPC encourages education, especially for children, women, and disabled persons, through various means such as scholarships, developing school infrastructure and training, and more. The Girl Empowerment Mission is an example of such programs that focus on imparting education.
- **Health:** The company promotes health by creating health centers, organizing health camps, and more.

In order for missions like these to be implemented honestly and efficiently, the company has set up its foundation- NTPC Foundation, to supervise and oversee all the CSR Initiatives.

# In Summary

The National Thermal Corporation Private Limited was set up on 7 November 1975 by former Prime Minister Indira Gandhi. In 1976, the company again changed its name to National Thermal Power Corporation. Due to its rapid achievements, such as a profit of 4.5 Crore Rupees in its first year of commercial operations, it was granted the Navratna status by the Government of India. In 2002, NTPC created three subsidiary companies- NTPC Electric Supply Company Limited, NTPC Vidyut Vyapar Nigam Limited, and NTPC Hydro Limited. In November 2004, the company was listed on the BSE and NSE. Again, it changed its name to NTPC Limited in 2005. With the growing age of tech, NTPC is also adding changes such as AI and ML, ERP Systems, and more. It also provides to society by empowering education and health. This way, NTPC has become one of the most important public sector undertakings.