

Barh Super Thermal Power Project (STPP)

July 8, 2023 • vajiramandravi.com



About Barh Super Thermal Power Project (STPP):

- STPP is a **3.3GW supercritical coal-fired power station** being developed by India's state-owned **National Thermal Power Corporation (NTPC) in Barh, Bihar.**
- The power plant will house a **total of five coal-fired power generating units of 660MW capacity each.**
- The mega power project is being **developed in two stages, with stage one comprising three units** for a total installed capacity of **1,980MW** and **stage two involving two units for a total capacity of 1,320MW.**
- The **plant utilizes supercritical pressure technology** to obtain improved thermal efficiency while **reducing greenhouse gas emissions.**

- **Source of water:** Barh town is **located closer to the River Ganga** which is the source of water for the coal-fired thermal power facility.
- **Source of Coal:**
- The **coal required for stage one** operation of the project will be procured **from the Central Coal Fields**, a subsidiary of India's state-owned Coal India Limited (CIL).
- **Coal for the stage two** operations **comes from the NTPC Chhatti-Bariatu coal mine** located in Jharkhand.

What is Supercritical pressure technology?

- Supercritical (SC) and ultra-supercritical (USC) **power plants operate at temperatures and pressures above the critical point of water, i.e. above the temperature and pressure at which the liquid and gas phases of water coexist in equilibrium**, at which point there is no difference between water gas and liquid water.
- This **results in higher efficiencies - above 45%.**
- SC and ultra -supercritical USC **power plants require less coal per megawatt-hour, leading to lower emissions** (including carbon dioxide and mercury), **higher efficiency and lower fuel costs per megawatt.**

Q1) What is the National Thermal Power Corporation (NTPC) Ltd?

NTPC Limited, formerly known as National Thermal Power Corporation, is an Indian central Public Sector Undertaking under the ownership of the Ministry of Power, Government of India which is engaged in generation of electricity and allied activities. It is India's largest power utility with an installed capacity of 72,304 MW (including JVs), plans to become a 130 GW company by 2032.

Source: [NTPC commissions 600 MW unit of Barh Super Thermal Power Project in Bihar](#)

Source: <https://vajiramandravi.com/current-affairs/barh-super-thermal-power-project-stpp/>

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