

# Coal Ministry Drives Initiatives to Boost Coal Gasification Projects Across the Nation

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India's vast coal reserves, estimated at 378 billion tonnes with about 199 billion tonnes classified as 'proven', present significant opportunities for energy production. Currently, around 80% of India's coal is utilized in thermal power plants. As the country embraces cleaner energy solutions and renewable sources gain momentum, the Ministry of Coal is proactively ensuring sustainable use of coal. In 2020, Coal Gasification Mission was launched, aiming to gasify 100 million tonnes of coal by 2030, thereby maximizing the value and utility of this vital resource. Aligning with the vision of the Prime Minister Shri Narendra Modi, this initiative supports the goal of achieving energy independence by 2027.

Coal gasification is a thermo-chemical process that convert coal into synthesis gas or "syngas", primarily consisting of carbon monoxide and hydrogen. With India importing approximately 83% of its oil, over 90% of its methanol, and 13-15% of its ammonia, coal gasification offers an opportunity to reduce reliance on imports and conserve foreign exchange, especially in the oil, gas, fertilizer, and petrochemical sectors. The gasification projects will lead to diversified use of coal partial import substitution for oil and gas and cleaner utilization of India's abundant coal reserves.

On January 24, 2024, the Cabinet Committee on Economic Affairs approved equity investments by Coal India Limited (CIL) to form joint venture companies with BHEL and GAIL, pushing beyond a 30% equity limit. This scheme aims to demonstrate the financial and technical viability of gasification projects, stimulate markets for downstream products, and establish new economic value chains.

Furthermore, to promote coal gasification, the Ministry offers a 50% rebate in revenue share in commercial auction policies for gasification coal, established a new sub-sector for syngas production, and provides long-term coal allotments to gasification plants.

Key Features of Coal Gasification Scheme:

1. Financial Outlay: ₹8,500 crores allocated across three categories:

- ₹4,050 crores for Government PSUs, with up to three projects eligible for a financial incentive of ₹1,350 crores per project, or 15% of Capex, whichever is lower.

- ₹3,850 crores for the private sector and PSUs, with a financial incentive of ₹1,000 crores per project, or 15% of Capex, whichever is lower.

- ₹600 crores for demonstration projects and small-scale plants, with a financial incentive of ₹100 crores per project, or 15% of Capex, whichever is lower.

2. Selection Process: Category I involves a transparent selection process for Government PSUs/JVs, while Categories II and III utilize a transparent bidding process.

3. Financial Incentives: Grants will be disbursed in two installments: the first after the bank loan disbursement and 30% equity contribution, and the second after achieving 50% production capacity and one year of continued production.

4. Ministry has published the Requests for Proposals (RFPs) for providing financial incentives to coal gasification projects on May 15, 2024, on the websites of the Ministry of Coal and MSTC. Interested private sector entities as well as Government PSUs can register themselves on the MSTC website for participating in the bid.

Some of the significant projects that are underway through joint ventures and collaborations are as under:

1. CIL-BHEL JV Project in Lakhanpur, Odisha, focuses on producing ammonium nitrate with a capacity of 0.66 MMTPA, costing ₹11,782 crores, and expected commissioning by FY'29.
2. CIL-GAIL JV Project in SonapurBazari, West Bengal, aims to convert coal into synthetic natural gas with a capacity of 1.83 MMSMD and a cost of ₹13,052.8 crores, expected to be operational by FY'29.
3. CIL-SAIL JV Project at Durgapur Steel Plant aims to produce syngas for direct reduced iron, enhancing steel manufacturing sustainability.
4. NLCIL Lignite to Methanol Project is developing clean energy products from lignite, including syngas, diesel, and green hydrogen.
5. WCL Coal-to-Ammonium Nitrate Project targets coal gasification into ammonium nitrate with a production capacity of 0.66 MTPA.

The Ministry of Coal has also initiated India's first pilot project for Underground Coal Gasification (UCG) at Kasta coal block in Jharkhand. This pilot initiative marks a major milestone for Coal India Limited (CIL) and its subsidiaries, positioning India at the forefront of adopting cutting-edge underground coal gasification technologies.

The Ministry of Coal has invited application for Coal/Lignite gasification projects from Government PSUs and Private sector entities across all categories, unlocking economic potential, boosting revenues and creating new job opportunities. Last date of bid submission is 11<sup>th</sup> November 2024.

Coal gasification is emerging as a highly promising initiative, drawing enthusiastic responses from various sectors. The project is not only showcasing a positive outlook for transforming coal into valuable products but is also generating significant interest from investors. With the potential to create numerous job opportunities and stimulate economic growth, coal gasification is set to revolutionize the industry paving the way for a more sustainable and prosperous future in energy security.

The Ministry of Coal remains committed to promote coal gasification projects, which hold immense potential for transforming coal into various valuable products. The scheme and incentives are designed to attract Government PSUs and the Private Sector, thereby encouraging innovation, investment, and sustainable development in the coal sector. The coal/lignite gasification scheme represent a significant leap forward in our quest to transform the coal sector by adopting clean coal technologies and the government is committed to ensuring the success of coal gasification projects.

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