

Strategies for Coal Sector Sustainability and Competitiveness

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India has the world's 5th largest coal reserves to contribute to the country's energy security and it accounts for 55% of the country's energy needs. India's energy mix is diverse, but dominated by coal, which fuels a significant portion of the country's electricity generation. While renewable energy sources like solar and wind are growing rapidly, they still constitute a smaller share of the overall energy mix compared to coal. The country is actively working to diversify its energy sources and increase its reliance on renewables to meet rising energy demands and address climate change concerns.

Considering the global shift towards cleaner energy sources and the need to reduce carbon emissions, Government has undertaken the following strategic initiatives to ensure the long-term sustainability and competitiveness of country's coal sector -

- **Greening Initiatives**— Bio-Reclamation/Plantation: The Coal/Lignite PSUs have been constantly making efforts to minimize the footprints of coal mining through sustained reclamation and afforestation of areas in and around their operating mines.
- **Energy Efficiency Measures:** Coal and Lignite PSUs have been taking various energy conservation and efficiency measures over the years to reduce carbon intensity such as replacement of conventional lights with LED lights, installation of energy-efficient air conditioners, super fans, deployment of Electric Vehicle (EVs) and installation of efficient water heaters, energy-efficient motors for pumps, auto timers in street lights etc.
- **Efficient utilization of mine water:** Mine water after the application of appropriate treatment methods is utilized for various purposes such as - community supply for domestic and irrigation purposes, industrial use for dust suppression, plantation, firefighting, machinery washing, sprinkling in underground workings, creation of recreational areas, fish farming, and groundwater recharge etc. Coal and Lignite PSUs have also entered into an MoU with the respective State Governments for community water supply.
- **Gainful Utilization of Overburden:** Extracting sand from Over Burden (OB) for construction and stowing material supports sustainable development by providing affordable sand and reducing the land required for OB dumps. As of March 2024, Coal and Lignite PSUs have commissioned 4 OB processing plants and 5 OB to M-Sand Plants. This initiative not only helps reduce environmental pollution, improve the riverine ecosystem, enhance water flow, and boost groundwater recharge, but also provides a cheaper alternative for construction sand.
- **Green Credit Programme:** Coal PSUs are also participating in extensive plantation under Green Credit Program launched by MoEF&CC.
- **First Mile Connectivity (FMC) projects:** The Coal PSUs have taken steps to upgrade the mechanized coal transportation and loading system under 'First Mile Connectivity' projects. Commissioning of FMC projects in coal mining areas reduces consumption of diesel significantly and therefore reduces carbon emissions.
- **Deployment of blast-free technology in coal mining:** Coal companies are deploying modern equipment having environment-friendly features, like Surface Miner, Continuous Miner in coal mining, which eliminates the drilling, blasting and crushing operations in coal and hence, in turn, obviates pollution caused due to these operations. Rippers are also being deployed for blast-less removal of overburden in some mines.
- **Renewable Energy and clean coal initiatives:** Coal PSUs have also started commissioning Renewable Energy power projects. Additionally, they are venturing into various clean coal technologies like Coal gasification, Coal Bed methane (CBM) etc.

As per the current import policy, coal is kept under Open General Licence (OGL) and consumers are free to import coal from the source of their choice as per their contractual prices on payment of applicable duties. Due to concerted efforts of the government, the import of coal has reduced from 264.5 MT in 2023-24 to 243.6 Mt in 2024-25.

For reducing dependence on imported coal and promoting domestic production, the Government has taken the following measures:-

- i. **Reducing the reliance on imported coal by boosting domestic production-** This was done by facilitating allocation of coal blocks, encouraging private sector participation and streamlining the process for obtaining necessary approvals for coal mining projects. Additionally, the thrust is on increasing coal production by government coal companies by introduction of modern technologies like First Mile connectivity (FMC) and digitalization.
- ii. **Encouraging the domestic coal consumption-** Towards this, an Inter-Ministerial Committee (IMC) was constituted for coal import substitution. IMC, through its various meetings, has identified Import Coal Based (ICB) plants where the supply of domestic coal may be examined. These plants have indicated their specific coal requirements and preferred CIL subsidiaries.
- iii. **Focusing on improving coal evacuation infrastructure/ coal supply chain-** In line with Government of India directives, Coal companies have undertaken improvement in coal transportation and supply chain efficiency through construction of new Railway lines and First Mile Connectivity (FMC) projects in a phased manner.

iv. As regards fiscal measures, under the Revised Shakti Policy, 2025, the Imported Coal Based (ICB) Plants are allowed to secure coal under Window-II of the Policy.

This information was given by Union Minister of Coal and Mines Shri G. Kishan Reddy in a written reply in Rajya Sabha today.

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