GOVERNMENT OF INDIA
MINISTRY OF COAL

LOK SABHA
UNSTARRED QUESTION NO. 6159
ANSWERED ON 01.04.2026

TECHNOLOGY FOR COAL DUST SEPARATION

†6159. DR. RAJESH MISHRA:

Will the Minister of COAL be pleased to state:

(a) whether the Government has proposed to implement modern technology for coal dust separation in the coal mining-affected areas of Singrauli and if so, the details thereof;

(b) whether mining activities and the associated pollution problems are likely to continue for a long period in view of the abundant coal reserves in Singrauli;

(c) if so, the measures being taken by the Government to mitigate environmental impacts including carbon emission reduction and waste management;

(d) whether these standards are also being implemented in all private mining and outsourcing companies and if so, the details thereof; and

(e) whether the Government proposes to the develop a dedicated coal transportation corridor in view of the heavy transportation pressure in mining area and if so, the details thereof?

ANSWER

MINISTER OF STATE FOR COAL AND MINES
(SHRI SATISH CHANDRA DUBEY)

(a) to (c): The Government has taken several measures to deploy modern technologies for minimizing and controlling coal dust in coal mining-affected areas, including Singrauli. Environmental safeguards are an integral part of coal mining operations and are addressed through the statutory framework of the Environment Impact Assessment (EIA) Notification, 2006 issued under the Environment (Protection) Act, 1986.

The Environmental Impact Assessment (EIA) for coal mining projects includes assessment of impacts on air, water, soil, forest cover and biodiversity, and provides for mitigation strategies such as dust suppression systems, water management, noise control and green belt development. Further, Environment Clearance (EC) is granted on basis of appraisal by the Expert Appraisal Committee (EAC), which ensures that scientific and sustainable mining practices are adopted.

Further, Northern Coalfields Limited (NCL), a subsidiary of Coal India Limited operating in the Singrauli region, has implemented a range of modern technologies aimed at reducing coal dust emissions and enhancing environmental performance, including:

i. Deployment of surface miners for coal extraction, eliminating the need for drilling and blasting and thereby reducing dust generation.

ii. Use of electric-driven draglines for overburden removal, minimizing dust from transportation of overburden by dumpers.

iii. Installation of enclosed conveyor systems with mist spray arrangements for coal transportation within mine premises.

iv. Adoption of silo loading systems for direct loading of coal into railway wagons, reducing handling and dust emission.

v. Development of First Mile Connectivity (FMC) projects with additional Coal Handling Plants (CHPs) and silos to streamline coal movement.

vi. Increased use of rail transport, Merry-Go-Round (MGR) systems, and Belt Pipe Conveyor (BPC) systems for coal evacuation, minimizing fugitive dust from road transport.

vii. Deployment of fog cannons (fixed and mobile types) for dust suppression at coal stockyards, haul roads and transportation routes.

viii. Backfilling of overburden in excavated areas followed by technical and biological reclamation.

ix. Extensive plantation drives on overburden dumps and other available areas in coordination with State Forest agencies.

x. Installation of Effluent Treatment Plants (ETPs) for treatment of mine water and wastewater from CHPs and workshops.

xi. Operationalization of a 50 MW ground-mounted solar power plant and installation of energy-efficient electrical systems.

xii. Development of permanent cement concrete roads within mine premises to reduce dust from transportation.

As per available estimates, the remaining mineable reserves in the coal blocks/ mines of Singrauli region are expected to last for more than 20 years. While mining activities are expected to continue, sustained efforts are made to minimize their environmental impact in the Singrauli region.

(d): Yes, environmental standards and mitigation measures prescribed under statutory provisions and regulatory frameworks are applicable to all mining operations, including those carried out through private mining and outsourcing agencies**.**

(e): The Government has taken steps to streamline coal transportation and reduce pressure on road infrastructure in mining areas, including through the development of dedicated corridors and increased reliance on mechanised and rail-based evacuation systems. In Northern Coalfields Limited (NCL) operating in Singrauli region, approximately 87% of coal is presently transported through rail mode or belt pipe conveyor system which is expected to reach more than 93% in two years once two approved First Mile Connectivity projects are commissioned. To facilitate safer and more efficient movement through road, NCL has constructed about 69 km of cement concrete (CC) roads, including a dedicated coal transportation corridor of 4.60 km which is segregated from public roads.

Further, efforts are being made in other coal mining areas to progressively shift coal transportation towards more efficient and environment-friendly modes by enhancing railway infrastructure and provision of first mile connectivity, thereby significantly reducing dependence on road transport and minimizing congestion as well as environmental concerns in mining areas.

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