

GOVERNMENT OF INDIA
MINISTRY OF COAL

RAJYA SABHA

**UNSTARRED QUESTION NO 681
TO BE ANSWERED ON 02.12.2024**

Methane emissions from coal mining

681 Shri S Niranjan Reddy:

Will the Minister of Coal be pleased to state:

- (a) whether it is a fact that coal mining is projected to significantly increase coal mine methane emissions, with high-emitting underground mining expected to triple by 2029;
- (b) if so, the latest estimates of methane emissions specifically attributed to coal mining activities in the country, details for the last five years, State/UT-wise;
- (c) the specific regulatory measures Government has implemented to control and reduce methane emissions from coal mining operations; and
- (d) the technological solutions that are being promoted to capture or reduce methane emissions from coal mines and manner in which Government is supporting their implementation?

**ANSWER
MINISTER OF COAL AND MINES
(SHRI G. KISHAN REDDY)**

(a) and (b): The coal mining does not have significant Greenhouse Gas (GHG) contribution, which includes Methane. As per report on “Carbon Footprint Analysis & Roadmap for Carbon Neutrality” prepared for Coal India Limited (2020-21), the contribution of coal mining in overall GHG emission of the country is approximately 1%. The underground mines having high GHG potential are few and therefore, emission from these mines will be insignificant.

As per the report, the overall carbon emissions is estimated at 45.95 kg CO₂e per tonne of coal production. Of which, approximately 35% emissions are attributed to fugitive / methane emissions. Thus, estimated methane emissions can be considered as 16.08 kg CO₂e per tonne of coal production, equivalent to 16.08 kilo tonnes CO₂e per million tonnes of coal production. However, specific data on State/UT-wise estimates of methane emissions specifically attributed to coal mining activities in the country is not maintained.

(c): The Coal Mines Regulations, 2017, wherein regulations are incorporated for extraction of methane from working coal mine or abandoned coal mine. Further, Ministry of Petroleum and Natural Gas (MoPNG), Govt. of India has issued partial modification of CBM Policy, 1997 vide notification dated 8th May 2018, which outline consolidated terms and conditions for the grant of exploration and exploitation rights for Coal Bed Methane (CBM) to Coal India Limited (CIL) and its Subsidiaries from its coal-bearing areas for which they possess mining lease for coal mining.

(d): Since methane is a potent greenhouse gas and a hazard in coal mining, capture and utilization of Coal Bed Methane (CBM) will not only make future mining safe but play a

significant role in mitigation of adverse impact on environment. It will also serve as an additional clean energy resource. Government has taken the following steps to minimize methane emissions during coal extraction:

- CIL and its subsidiaries have been allowed to extract coal bed methane from its coal mining leasehold areas.
- Exploitation of CBM has been permitted under commercial auction of coal mines.
- Attempts have been initiated to extract coal mine methane (CMM) from one of the mines of BCCL in Jharia Coalfield.
- Allocation of coal-bearing area for extraction of coal bed methane prior to coal extraction.
