

GOVERNMENT OF INDIA  
MINISTRY OF STEEL

**RAJYA SABHA  
STARRED QUESTION NO. \*126  
FOR ANSWER ON 06.12.2024**

**DECARBONIZATION OF STEEL MANUFACTURING PROCESS**

\*126. DR. SIKANDER KUMAR:

Will the Minister of STEEL be pleased to state:

- (a) whether Government has signed any Memorandum of Understanding (MoU) to accelerate decarbonization of steel manufacturing process, if so, the details thereof;
- (b) whether Government has made any assessment of the adverse effects of greenhouse gas emissions;
- (c) if so, the details thereof along with the extent to which it is likely to affect the steel sector; and
- (d) the corrective steps taken by Government to promote lower carbon steel technology for blast furnace in Himachal Pradesh?

**ANSWER**

THE MINISTER OF STEEL

(SHRI H.D.KUMARASWAMY)

(a)to(d): A statement is laid on the Table of the House.

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**STATEMENT REFERRED TO IN REPLY TO PARTS (A) TO (D) OF THE RAJYA SABHA STARRED (\*) QUESTION NO. \*126 FOR ANSWER ON 06/12/2024 TABLED BY DR. SIKANDER KUMAR, MEMBER OF PARLIAMENT REGARDING "DECARBONIZATION OF STEEL MANUFACTURING PROCESS"**

(a) Yes, Sir. Steel Authority of India Limited (SAIL), a Central Public Sector Enterprise under this Ministry, has signed Memorandum of Undertaking (MoU) with the following technology providers to accelerate decarbonization of steel manufacturing process:

- i. SAIL-RDCIS signed an MoU with M/s BHP to promote lower carbon steelmaking technology pathways for the BF-BOF route.
- ii. SAIL-Bhilai Steel Plant signed an MoU with M/s SMS, Germany's leading engineering company, for exploring innovative and sustainable solutions for the long-term transformation of steel production by injection of coke oven gas in BF.
- iii. SAIL-Rourkela Steel Plant signed an MoU with M/s Primetal Technologies for facilitating raw material quality improvement, hydrogen-based steel production, gas treatment, upscaling the level of digitalisation, energy efficiency, CCUS, and related technologies.
- iv. SAIL signed an MoU with M/s John Cockerill India Limited for collaboration, inter-alia, in the field of Green Hydrogen Injection into iron or steel making processes.
- v. SAIL-IISCO Steel Plant (ISP) signed a tripartite agreement with the National Centre of Excellence in Carbon Capture and Utilization (NCoE-CCU) of IIT, Bombay and Great Eastern Energy Corporation Ltd. (GEECL) with an aim to explore feasibility of Carbon Capture Utilisation and Storage (CCUS) as a significant contributor for decarbonisation.
- vi. Different integrated steel plants of SAIL entered into MoUs separately with M/s Ram Charan Company Pvt. Ltd. (RCPL), Chennai, to set up pilot project at the respective plant site to capture carbon from the industrial flue gases and convert the same into useful Value-Added Products such as Ethanol, Methanol, Isoamyl alcohols and Acetates etc.

(b)&(c): As a Party to the United Nations Framework Convention on Climate Change (UNFCCC), India submits its National Communications (NCs) and Biennial Update Reports (BURs) to UNFCCC on a periodic basis. As part of the Third National Communication (TNC), Ministry of Environment, Forest and Climate Change (MoEF&CC) conducted studies on impact of climate change in India, which are summarized in the 'Impacts, Vulnerability and Adaptation' chapter for various sectors such as biodiversity and forests, agriculture, water resources, coastal and marine ecosystems, urban ecosystem and infrastructure, gender, economic cost of impacts, and human health. The report is available at MoEF&CC website.

(d) Government is not operating any blast furnace in Himachal Pradesh for production of iron & steel.

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