

GOVERNMENT OF INDIA
MINISTRY OF COAL

LOK SABHA
UNSTARRED QUESTION NO 5657
ANSWERED ON 06.04.2022

Coal Gasification

5657. SHRI GAURAV GOGOI:

Will the Minister of Coal be pleased to state:

- (a) whether the Government has initiated steps to execute the four pilot coal gasification projects announced in Budget 2022-23;
- (b) if so, the details of the four projects, including location, budget allocation, source of coal, etc;
- (c) the purposes for which coal gas thus produced will be used;
- (d) whether the Government has undertaken any study to evaluate the CO₂ emissions per unit of electricity produced through coal gas and if so, whether this is lower than the range of 0.91 to 0.95 kg/kWh of CO₂ produced by coal-fired thermal power plants and if not, the reasons for promoting coal gasification;
- (e) whether the Government is aware of the Centre for Science and Environment's (CSE) study that one unit of electricity generated by burning gasified coal generates 2.5 times more CO₂ than direct burning of coal; and
- (f) if so, the effects of four new coal gasification projects on India's coal phase down pledges made in COP26?

ANSWER

MINISTER OF PARLIAMENTARY AFFAIRS, COAL AND MINES
(SHRI PRALHAD JOSHI)

(a) to (c): Government has initiated steps to execute the four pilot coal gasification projects announced in Budget 2022-23. Details of the four projects, including location, budget allocation, source of coal, etc, are as under-

Subsidiary	Location	Mines	Coal Requirement (MT)	Coal Grade	Product	Capacity	Approx. Cost as per PFR (in Cr)	Status
ECL	Bahadurpur	Sonepur Bazari Mine	1.35 MMTPA	(G4-G5)	Methanol	(0.66 MMTPA)	7421	Tenders invited
SECL	Bhatgaon Area	Mahamaya Mine	1.35 MMTPA	(G4)	Ammonia	(0.72 MMTPA)	7816	Tenders invited
WCL	Juna Kunad	Niljai Mine	0.8 MMTPA	(G9-G10)	Ammonium Nitrate	(0.66 MMTPA)	7893	Tender document under preparation

For execution of 4th pilot coal gasification projects, CIL & BHEL are jointly exploring a high ash coal (> 40%) based surface coal gasification project for production of ammonium nitrate using BHEL's indigenously developed technology. The location is under finalisation and the PFR is currently under preparation.

Gasification of coal in the above projects would result in production of Syngas which is further processed to produce different chemicals.

(d) & (e): As the above products, produced through coal gasification, will not be used for power generation, no such study has been undertaken. However, the scientific literature on coal gasification enumerate the following:

(i) The SO_x and NO_x emission is lower compared to regular combustion of in coal-fired boilers in thermal power plants;

(ii) It is technically amenable for CCUS (Carbon Capture, Utilisation and Storage) when gasification is done using pure oxygen compared to regular combustion using atmospheric air; and,

(iii) The CO₂ emission foot print is comparatively lower for some chemicals produced through coal gasification route.

(f): Coal gasification projects at CIL are being undertaken to promote an alternate and comparatively cleaner use of coal. These projects are envisaged as pilot projects and on achievement of techno-commercial viability, the projects would serve as foundation to further setting up of such plants and will thereby help in ensuring relevance of coal in view of the COP26 pledges.
