

**GOVERNMENT OF INDIA
PETROLEUM AND NATURAL GAS
LOK SABHA**

UNSTARRED QUESTION NO:4251

ANSWERED ON:20.04.2015

DEVELOPMENT OF COAL BED METHANE

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Will the Minister of PETROLEUM AND NATURAL GAS be pleased to state:

- (a) whether the Government proposes to exploit Coal Bed Methane and its sub-sets like Coal Mine Methane, Abandoned Mine Methane and Ventilation Air Methane, Underground Coal Gasification, Shale Gas, Gas Hydrates and utilised in a scientific way;
- (b) if so, the details thereof along with the reasons for not utilising the natural and clean energy resources available from coal mines;
- (c) whether the Government has constituted a Multi Organisational Team (MOT) for the development of shale gas resources in different sedimentary basins of the country;
- (d) if so, the details and progress achieved so far by MOT along with number of public/private sector companies involved for the development of shale gas in India;
- (e) whether the Government is maintaining shale gas specific data at the time of routine exploration carried out by Oil and Natural Gas Corporation Limited and Oil India Limited and if so, the details thereof and if not the reasons therefor;
- (f) the measures taken by the Government to assess and harness the shale gas reserves in India and the contributions of Directorate General of Hydrocarbons in harnessing these natural resources; and
- (g) whether the Government proposes to announce shale oil and gas exploration policy and if so, the salient features and objectives of the same?

Answer

MINISTER OF STATE IN THE MINISTRY OF PETROLEUM & NATURAL GAS (INDEPENDENT CHARGE) (SHRI DHARMENDRA PRADHAN)

(a) & (b): The Government has taken steps to explore and exploit Coal Bed Methane (CBM), Shale Gas and Gas Hydrates. For Underground Coal Gasification (UCG), the policy has not been finalized by Ministry of Coal.

In order to harness CBM potential in the country, the Government of India has awarded 33 CBM blocks under 4 rounds of CBM bidding and on nomination basis. Total prognosticated CBM resources for 33 awarded blocks is about 63.3 TCF (1792.43 BCM) of which so far, 9.9 TCF (280.8 BCM) has been established as Gas In Place (GIP). As on date, 8 CBM blocks have entered the Development Phase, 5 blocks are in exploration phase and for 4 CBM blocks grant of PEL from the respective State Government is awaited. 16 CBM blocks have been relinquished or are under relinquishment.

The Government has, on 14.10.2013, notified the policy guidelines for exploration and exploitation of shale gas and oil by National Oil Companies (NOCs) in their onland PEL(Petroleum Exploration Lease) /PML (Petroleum Mining Lease) blocks awarded under the nomination regimes. Under the first phase of assessment (3 years) 55 PEL/PML blocks (ONGC 50, and OIL 5) have been awarded to NOCs. These blocks are located in the states of Assam (6 blocks), Arunachal Pradesh (1 block), Gujarat (28 blocks), Rajasthan (1 block), Andhra Pradesh (10 blocks) and Tamil Nadu (9 blocks). ONGC has drilled one well and spudded another well in Cambay Basin, Gujarat for assessment of shale gas/shale oil potential where coring has been completed. In addition, ONGC has collected cores from another 8 wells. The National Gas Hydrate Programme (NGHP) was formulated by MoP&NG in 2000. The first NGHP Expedition 01 was launched 2006, wherein coring was done at 21 sites in Western, Eastern and Andaman offshore areas to obtain information on presence of Gas Hydrates. The data so collected has established Gas Hydrates deposits in KG, Mahanadi and Andaman offshore areas.

NGHP Expedition 02 is in progress wherein 40 wells shall be drilled/cored in KG and Mahanadi offshore areas to obtain information on sand prone Gas Hydrates. As on 31.03.2015, Logging while drilling (LWD)/ Measuring while drilling (MWD) operations have been completed in 12 wells.

(c) & (d): A Multi Organizational Team (MOT) of DGH, ONGC, OIL, GAIL was formed by MoPNG to analyse the existing data set and suggest methodology for Shale Gas development in India.

Based on scrutiny of geo-scientific data, MOT has identified six prospective basins namely, Cambay, Krishna-Godavari onland, Cauvery onland, Assam-Arakan and Indo-Gangetic for assessment of Shale Gas potential. ONGC and OIL are presently permitted to carry out Shale Gas and Oil exploration and exploitation activities in the PEL/PML areas awarded under nomination regime.

(e): The Shale Gas/Oil data generated by ONGC and OIL is reviewed by DGH and maintained by the National Oil companies.

(f): Various agencies have estimated the shale gas and oil resource potential in selected sedimentary basins/ sub basins in India. The details are as under:

- i. M/s Schlumberger: 300 to 2100 tcf of shale gas in the country (as available in public domain);
- ii. Energy Information Administration (EIA), USA in 2011: 290 tcf of shale gas in four basins namely, Cambay, KG, Cauvery and Damodar;
- iii. United States Geological Survey (USGS) in Jan12: 6.1 tcf of technically recoverable shale gas in 3 basins, namely, Cambay, KG & Cauvery.
- iv. EIA, USA in 2013: 584 tcf of shale gas and 87 Billion barrel of shale oil in 4 basins namely, Cambay, KG, Cauvery and Damodar;
- v. ONGC in 2013: 187.5 tcf of shale gas in 5 basins namely, Cambay, KG, Cauvery, Ganga & Assam and Assam Arakan;
- vi. Central Mine Planning and Design Institute (CMPDI) in Jul13: 45 tcf of Shale Gas in Gondwana basin;

(g): The policy guidelines for exploration and exploitation of Shale Gas and Oil by National Oil Companies (ONGC and OIL) in their onland Petroleum Exploration License (PEL) / Petroleum Mining Lease (PML) areas awarded under the nomination regimes, was issued on 13th October, 2013. As per the policy, ONGC and OIL will undertake a mandatory minimum work programme in a fixed time frame for shale gas and oil exploration and exploitation. Under the first phase of assessment (3 years) 55 PEL/PML areas (ONGC 50, and OIL 5) have been awarded to NOCs.