

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

UNSTARRED QUESTION NO:2207

ANSWERED ON:03.08.2015

Shale Gas Reserves

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

- (a) whether the Government has made any long term strategy to meet the huge shortage of petroleum products including natural gas by the year 2050;
- (b) if so, the details thereof and the steps taken by the Government to reduce the dependence on the imported fossil fuel and to increase the production of alternative products like shale oil/gas, etc.;
- (c) whether the Government has signed a Memorandum of Understanding (MoU) with United States of America for explorations and production of shale gas and technology transfer and if so, the details thereof along with outcome of the said MoU;
- (d) whether the Government has notified policy guidelines and techniques for exploration and production of shale oil and gas by National Oil Companies in onland blocks and identified shale oil and gas reserves in the country ;
- (e) if so, the details thereof and investment made by various companies to discover the said shale blocks, oil blocks/ fields/company and state-wise including North-Eastern States; and
- (f) the quantum of oil and gas estimated to be available in the said reserves along with the estimated annual production thereof and the time by which the commercial production in said blocks is likely to be started, oil block/field-wise and State-wise including North-Eastern states?
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Answer

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

(a)&(b): The demand and supply of crude oil/petroleum products in the country for consumption of petro-products is an inter-play of several factors like success in new production of crude oil, successful acquisition of assets or equity oil abroad, success in conservation efforts, etc. On an overall basis petroleum products availability from refineries and fractionators exceeds domestic consumption of the country. The refining capacity available in the country is 215.07 MMTPA as on 01.04.2015 which exceeds current petroleum product requirement for domestic consumption of 165 MMTPA. Imports were resorted to, to meet domestic consumption and requirement of certain products like LPG etc.

In order to reduce import dependency on crude oil, Government has taken/is taking a number of initiatives to increase domestic production of crude oil and to promote conservation of petroleum products.

To accelerate the pace of exploration and production of oil and gas in the country, various steps have been/are being taken by the Government as under:-

i. Enhance production from the existing field by adopting Improved Oil Recovery (IOR)/Enhanced Oil Recovery (EOR) measures using latest technology.

ii. Bring into production new discoveries at the earliest. For this a policy framework for early monetization of hydrocarbon discoveries under PSC regime has been approved by the Government.

This policy has addressed rigidities in the timelines of the PSC and has allowed the contractors to start production at the earliest.

iii. Facilitate enhanced exploration activities through following measures:

? Appraisal of about 1.5 million sq km un-appraised area of the Indian Sedimentary Basins and acquisition of geo-scientific data under Multi client and non-exclusive policy.

? Re-assessment of Hydrocarbon Resources.

? Setting up of National Data Repository. Policy approved for exploration and exploitation of Shale Gas/Shale Oil resources by National oil Companies under the nomination regime.

Besides, Petroleum Conservation Research Association (PCRA), under the Ministry of Petroleum & Natural Gas, has been given the mandate to promote conservation of petroleum products in the major sectors of economy like transport, industry, households and agriculture through direct technical assistance, R&D educational and training programmes and mass awareness campaigns.

A Committee has been constituted in the Ministry of Petroleum and Natural Gas under the Chairmanship of Additional Secretary, Ministry of Petroleum & Natural Gas, to prepare a roadmap for reduction of import dependency in energy. The Committee will inter-alia forecast the demand, supply of crude oil and production of crude oil and ways to increase it during the next 7 years.

A Committee under Dr. Vijay Kelkar has submitted its report on Roadmap for Enhancing Domestic Oil & Gas Production and

Sustainable Reduction in Import Dependency by 2030.

(c): A Memorandum of Understanding (MOU) was signed between Department of State (DOS), United States of America and Ministry of Petroleum & Natural Gas on 6th November 2010 for "Exchange of knowledge and expertise in the areas concerning Shale Gas resource characterization and assessment in India". The details of cooperative activities are:

- I. Shale Gas Resource Assessment
- II. Technical studies
- III. Regulatory Framework Consultation
- IV. Investment promotion

As an outcome of the MOU, USGS in January, 2011 estimated Technical Recoverable Shale Gas of 6.1 TCF for three basins.

(d) & (e): Government has announced "Policy Guidelines for Exploration and Exploitation of Shale Gas and oil by National Oil Companies under Nomination regime" on 14th October, 2013 allowing ONGC to carry out Shale Gas exploration & exploitation in 50 blocks and Oil India Limited in 05 blocks in the first phase. Total investment made in Shale Gas by ONGC under this policy is Rs. 129.67 crore (as on 22nd June, 2015). In addition, prior to announcement of Shale Gas policy by the Government, ONGC executed its R&D project on Shale Gas at Raniganj and incurred an expenditure of Rs. 209.32 crore.

(f): Based on the geo-scientific data collected during the exploration of conventional oil and gas, assessments have been made regarding the likely potential of shale gas resources in the Indian sedimentary basins. Various agencies have estimated the shale gas resource potential in selected sedimentary basins/ sub-basins as indicated below:

- I. M/s Schlumberger : 300 to 2100 Trillion Cubic Feet (TCF) of shale gas resource for the country (as available in public domain)
- II. Energy Information Administration (EIA), USA in 2013: 584 TCF of shale gas and 87 billion Barrels of shale oil in 4 basins (Cambay Onland, Damodar, Krishna Godavari Onland & Cauvery Onland)
- III. ONGC: 187.5 TCF of shale gas in 5 basins (Cambay Onland, Ganga Valley, Assam & Assam Arakan , Krishna Godavari Onland & Cauvery Onland)
- IV. Central Mine Planning and Design Institute (CMPDI): 45 TCF of shale gas in 6 sub basins (Jharia, Bokaro, North Karanpura, South Karanpura, Raniganj & Sohagpur)
- V. United States Geological Survey (USGS) has also estimated technically recoverable shale gas resources of 6.1 TCF in 3 basins (Cambay Onland, Krishna Godavari Onland & Cauvery Onland).
