



Recommendations of the International Workshop on “Optimum of Utilization of CMM/CBM in India” on 24th - 25th April, 2019 at Ranchi, India.

1. The Roundtable Session was chaired by Sri Shekhar Saran, CMD, CMPDI and moderated by Sri Peeyush Kumar, Director (Technical), Ministry of Coal. The list of panel members for steering discussion, is given in Annexure-I.
2. The following important topics, amongst the presentations by different experts during the Workshop, were taken for discussions and recommendations.
 - a) Simultaneous extraction of coal and methane
 - b) Issues related to Ventilation Air Methane (VAM)
 - c) The exploration rights in the DGH allotted CBM blocks, by other parties for other minerals including coal
 - d) Way forward for development of CMM/ CBM blocks on fast track
3. The followings are the main proceeding/recommendations of the workshop:
 - a) The issue of steel casing pipe used for methane extraction, their presence in the coal seams and its possible adverse impact on coal mining especially on underground coal mining were flagged by CMD, CMPDI. Mr. Daniel J Brunner of REI, USA explained the current practices for tackling this problem. He suggested that similar to US practice, where steel casing in the coal seams are milled with special tools on completion of methane extraction, can be followed in India also. In such case no hindrance will be created by the remaining steel casing during future coal mining. Alternatively use of fiber pipes in coal seams in place of steel casing can also be practiced. CMPDI, ECL and BCCL delegates supported this idea that such practices should be made part of the each Field Development Plan (FDP). The technical solutions suggested by Mr. Daniel J Brunner were opposed by M/s ONGC on technical grounds. As both the technical solutions suggested by Mr. Daniel J Brunner involved additional cost components, the suggestions were opposed by delegates from Reliance Industries Limited.

DGH delegates opined that current practice using steel casing may continue as it is and during subsequent mine planning the area of steel casing may be excluded from the coal mining consideration. His views were opposed by delegates from CMPDI and Coal production companies as it will be technically not feasible to plan a mine in such conditions and considerable amount of coal will be sterilized.

As per Polish expert's view the issue of simultaneous extraction of coal and methane should be decided mainly on economic considerations and opined that technically it is feasible.

To resolve this sharply divided opinion, it is proposed that a team with members from DGH, ONGC, CIL/ BCCL/CCL/ECL and CMPDI with officials from MoC & MoP&NG should visit such sites where coal mining is being done after extraction of methane.



Thereafter a decision matrix for deciding simultaneous coal and CBM extraction or sequential coal and CBM extraction or only coal or only CBM extraction depending on geo mining condition, viability and overall energy value added to the nation, should be made. For each coal as well as CBM blocks decision to adopt a particular route will be dependent on such decision matrix.

- b) Dr Hua Guo of CSIRO, Australia highlighted the environmental concern arising out of releasing methane into atmosphere and emphasized that the technology to capture Ventilation Air Methane (VAM) is an effective way of checking the release of greenhouse gas into atmosphere and is relevant to Indian underground coal mines.

The general views on VAM was that although VAM may not be a viable solution as of now but it will be effective in reducing the methane emissions into the atmosphere. As emissions from underground mines also add to the greenhouse gas emissions, the technology for VAM utilization, which has been established by CSIRO, Australia may be tried in Indian geo mining conditions.

- c) The hindrance in exploration of other minerals including coal in the CBM blocks notification by DGH, was flagged by CMPDI and supported by GSI. Usually the CBM blocks are very large in size and approximately 16,000 sq km has already been notified under CBM and present interpretation of CBM notification is that other agency may not take up the exploration activities in CBM notified areas for other minerals including coal. In case such interpretation of the notification are correct it will hinder the prospecting of coal as well as other minerals seriously. A clear mechanism/notification are required so that exploration as well as mining of other minerals in CBM notified areas continues without any interruption.

It is recommended that prospecting and mining licenses for all minerals including CBM should be given to one entity who is given the prospecting and/or mining lease of the dominant mineral.

- d) The issue of fast track operationalization of CIL allotted CBM blocks was deliberated and it was proposed that similar to coal production agreement through CBM developer and operator route, with necessary modifications the same route may be followed for CBM extraction.

However, M/s Prabha Energy submitted that oil and gas industries has certain existing business models for outsourcing different activities to different expert operators and it advisable to follow similar model by CIL and its subsidiaries.



Annexure-I

1. Sri Shekhar Saran, CMD, CMPDI - in Chair
2. Sri Peeyush Kumar, Director (Technical), MoC - Moderator
3. Sri R K Sinha, Chief Technical Officer, DGH
4. Dr. Manas Roy Chowdhury, Director, GSI
5. Mr. Daniel J Brunner, REI Drilling, Inc., USA
6. Dr. Hua Guo, Research Director – Energy, CSIRO, Australia
7. Dr. Sebastian Napieraj, JSW, Poland
8. Mr. Prem S Sawhney, CEO, Prabha Energy Pvt. Ltd.
9. Sri Anil Kumar Rana, General Manager (Co-ordination/CBM), CMPDI