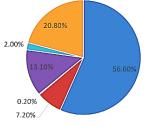


International Workshop on "Optimum Utilization of CMM/CBM in India" 24th – 25th April 2019 Ranchi (Jharkhand) India

Coal: A primary source of Indian Energy

- Coal is the most important and abundant fossil fuel in India spread over 66 Coalfields;
- The country's industrial heritage was built upon indigenous coal;
- India is the 3rd largest Coal Producer in the World. It accounts for around 55% of the country's energy need;
- Increasing population, expanding economy and a quest for improved quality of life leads to continuously rising energy usage in India;

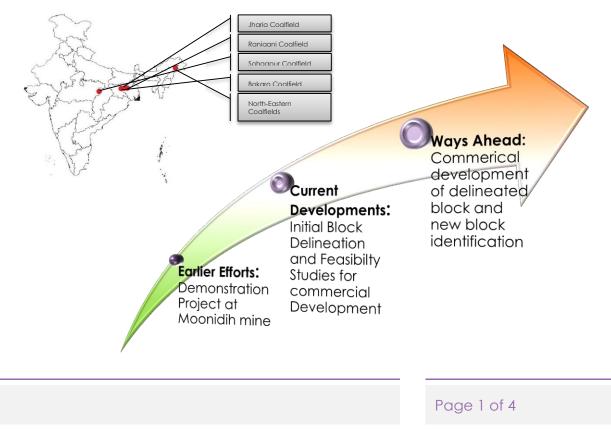




■ Coal ■ Gas ■ Oil ■ Hydro ■ Nuclear ■ RES* (MNRE)

 Limited reserve potentiality of petroleum & natural gas, eco-conservation restriction on hydel project and geo-political perception of nuclear power, coal to continue dominate India's energy basket

Initiatives of Coal India Ltd and It's Subsidiaries



Coal India Ltd – CMPDI Initiatives

- Government of India given permission to CIL in July, 2015 to explore and exploit CBM from its areas under coal mining lease allotted to CIL and its subsidiaries.
- MoP&NG has issued the revised Gazette notification in May, 2018 on consolidated terms & conditions for grant of exploration and exploitation rights to CIL and its subsidiaries from coal bearing areas for which they possess mining lease for coal in continuation of CBM Policy 1997.
- Project Feasibility Reports for three CBM Projects have been prepared for CBM/CMM extraction from CIL leasehold areas:
 - Jharia CBM Block I (BCCL), Jharia Coalfield;
 - Pre-drainage of Coal Mine Methane and Utilization from Moonidih UG Mine (BCCL), Jharia Coalfield;
 - Raniganj CBM Block I (ECL), Raniganj Coalfield.

Upcoming Projects:

- East Bokaro CBM Block (CCL), East Bokaro Coalfield
- Sohagpur CBM Block (SECL), Sohagpur Coalfield
- These will be the maiden project of its kind in the country under the active mining leasehold areas of Coal India Limited.

Earlier Efforts

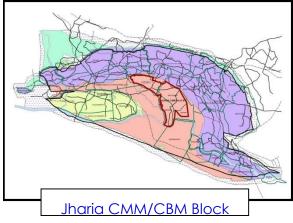
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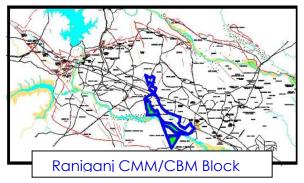
A demonstration project on "Coalbed Methane Recovery & Commercial Utilization Project" on behalf of Ministry of Coal, funded by GEF/UNDP-GoI successfully implemented in Jharia coalfield which proved the efficacy of the technology for extraction and utilization in Indian geo-mining condition.

Ways ahead

CMPDI-CIL is looking in prospects for future development of CMM/CBM/AMM and identified following areas:

- Jharia CBM Block II (BCCL), Jharia Coalfield;
- Jharia CBM Block III (BCCL), Jharia Coalfield;
- Sohagpur CBM Block (SECL), Sohagpur Coalfield
- Assam CBM Block (NECfs Area), Assam Coalfield





Global Methane Initiatives - India CBM/CBM Clearinghouse

Global Methane Initiatives (GMI) is the only international effort specifically target to methane abatement, recovery and use in association with partner member countries. GMI is a publicprivate initiative creates an international platform to build capacity, development methane abatement strategies, engage in technology transfer, and remove political and economic barriers towards project development for emissions reduction in partner countries through international cooperation.

In pursuant to a Govt. level understanding between Ministry of Coal (MoC) and United States Environmental Protection Agency (US EPA) a MoU which was signed in 2006 between the Govt. of USA and India for the establishment of "**India CBM/CMM Clearinghouse**" in India which is functional at CMPDI since November, 2008 with the objectives of:

- Promoting CBM/CMM industry in India;
- Being public face of CBM/CMM industry in India through its communication and outreach efforts;
- Being Initial point of contact for foreign & domestic investors.

About the Workshop

Coal India Ltd. and its subsidiaries are eagerly looking for extraction of their untapped methane resources from coal under their leasehold areas towards methane abatement and to reduce GHG emissions. This workshop will discuss the pressing issues related to challenges in optimum extraction and utilization of CMM/CBM from coal mines to mitigate methane, enhance safety & production from gassy mine and showcase the opportunities through development of CMM & CBM in coal mining areas.

A 2day International Workshop on "**Optimum Utilization of CMM/CBM in India**" has been scheduled on **24th – 25th April, 2019** at Hotel Radisson Blu, **Ranchi** (Jharkhand) India which is co-hosted by Central Mine Planning & Design Institute Ltd (**CMPDI**) - Coal India Limited (CIL) and United States Environmental Protection Agency (**US EPA**) - Global Methane Initiative (GMI) under aegis of Government of India - Ministry of Coal (Gol-MoC).

The Workshop will be attended by top government officials, technical experts, CBM project operators, scholars and academicians, research organizations in the related field and will feature deliberations on policy issues, emerging technologies, operational situation, research trends, opportunities and challenges.

The workshop will

- ✓ Show a path for technological and operational ways ahead;
- ✓ Promote development of CMM/CBM as a clean energy fuel under Global Methane Initiatives;
- ✓ Provide a platform for interaction between national/international experts, policy makers, project operators in the field of coal based unconventional energy resources.

Why to attend

The workshop will provide a platform to ponder over the issues and challenges with the development and optimum extract action and utilization of Coal Mine Methane (CMM)/ Coalbed Methane (CBM)/ Abandoned Mine Methane (AMM) and existing opportunities which can be optimally utilized for expeditious development of these resources under Indian mining condition through sharing of views/information from government, industry and academicians.

Participation: Prior Registration (no fee) Non Residential and Invitation.

Host City-Ranchi

A land blessed by queen nature with lovely, dark, green and deep woods, the azure blue sky, hills and bubbling streams that is the mineral rich State of Jharkhand in India. Ranchi the state capital of Jharkhand and known as a 'city of waterfalls'. It has an elevation of about 630 metres from the sea level and possesses a hilly topography complimented by dense tropical forests. Ranchi has a subtropical climate and generally experiences a pleasant climate throughout the year. The month of April will witness the transition from winters to sweet warm spring.

Birsa Munda Airport at Ranchi (IXR) is well connected by daily flights from India's metropolitan cities, i.e; Delhi (DEL), Kolkata (CCU), Mumbai (BOM), Bengaluru (BLR), Hyderabad (HYD). Ranchi is also well-connected with major Indian cities through a network of road and railways also.

Whom to Contact

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