

Coal Sector Update: India
20th Session of the
Global Methane Initiative (GMI)
Coal Sub-committee

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Coal Sector Update: India

- Any new trends in the coal sector
 - Increase in production: Coal production increased from 533 mt in 2010-11 to 566 mt in 2013-14
 - Major contribution from opencast mines
 - To meet anticipated targetted growth in coal production (**1 Billion Tonnes by 2019**), focus on underground mining is under consideration
 - Increase/decrease emissions: Quantification of resulting CMM emissions due to increase of production to be monitored
 - Degasification of mines would be required

Coal Sector Update: India

New trends in the energy sector

- In order to augment overall energy requirement ,utilization of all available forms of renewables and non-renewables energy are being considered
- Coal is/and likely to be the dominant source of primary energy supply in India
- Coal meets about 55% of the primary energy requirement of the country
- Clean coal technologies are being adopted to safeguard the environmental concerns

Coal Sector Update: India

New trends in the energy sector

- Development of coal based non-conventional energy resources is under focus both at the Govt and Industry level
- Coal based non conventional resources like CBM/CMM/AMM/VAM etc. and Shale Gas development is a priority area
- India CMM/CBM clearinghouse is promoting the cause of development of coal based non conventional resources
- As a step towards this, CBM/CMM development deliberated between high level functionaries of GoI,GMI officials, representatives of Indian coal industry and CBM stakeholders in an International Workshop on “**Development of Coal Based Non Conventional Resources in India**” in November 2013 at CMPDI

Coal Sector Update: India

- Regulatory Update
 - Govt of India has announced CBM Policy in 1997
 - The policy has several fiscal incentives and liberal terms
 - 33 CBM blocks awarded based on 4 rounds of global bidding by the Govt.
 - **For expediting CMM development by the coal companies a policy is under formulation.**

Coal Sector Update: India

- Implementation of national plans/directives

- Clean coal technology is a priority area for GoI/Coal Industry

- A. CBM development:**

- 33 CBM blocks allotted for commercial development
- Production continuing from few blocks (≈ 0.5 mmscmd)
- Production likely to pick-up as some blocks have entered into development phase

- A. CMM development:**

- MoC identified CMPDI as Nodal Agency for development of CMM
- CIL /CMPDI considering CMM exploitation from coal mine areas in order to reduce methane emission from coal mining operations

Coal Sector Update: India

- Specific project updates
 - 5 prospective CMM blocks identified within CIL mining lease hold areas
 - Efforts being made to take up harnessing and commercial utilization of the captured methane from these areas
 - **CIL/CMPDI contemplating to take up comprehensive study for CMM development in larger areas within CIL command areas for taking up commercial development of CMM on much larger scale**

CMM Project Outlook: India

- Challenges to emission reduction projects in India:
 - A. Technological challenges:** CMM exploitation different under Indian geo-mining conditions due to:
 - High vertical seam density
 - Target virgin seams lying below the worked out/goaved seams
 - Resource assessment in de-stressed condition
 - **Drilling/capture technology to be carefully designed in view of mine safety**

Transfer of technology from GMI partner countries to be encouraged

CMM Project Outlook: India ...

Challenges to emission reduction projects in India

B. Regulatory Challenges:

- A policy for CMM development is under consideration at the Govt. level

C. Other Challenges:

1. **Administrative Challenges:** Local issues, Statutory clearances viz : Environmental, PEL, etc.
2. **Technical challenges:** Service providers for taking up high tech drilling/hydrofracking operations
3. CMM operations will be cost intensive and its economic viability will depend on the gas price - present gas pricing policy is under review which may have some bearing on CMM project

D. Logistical challenges: Development of gas distribution network etc.

CMM Project Outlook: India

Approaches to overcoming challenges

- **Legislation and regulation:**
 - ✓ CBM policy in place
 - ✓ CMM policy: Formulation at GoI level
- **Policies and incentives:** In place for CBM. Under consideration for CMM
- **Energy pricing reform:** The current gas pricing structure is under review
- **Capacity building**
 - ✓ Technology transfer: Required
 - ✓ Training and workshops: Required

CMM Project Outlook: India

Approaches to overcoming challenges

- **Agreements and/or partnerships:** May be examined
- **Anticipated or planned projects:**
 - ✓ 5 CMM blocks identified within CIL mining lease hold areas for their development
 - ✓ CIL/CMPDI contemplating to take up a comprehensive study for CMM scope in CIL command areas
- **Infrastructure development:** To continue concurrent with CMM development

Coal Sector Methane Action Plan: India

- Status of Coal Sector Methane Action Plan development
- **Summary**
 - ✓ CMM policy under formulation at the Govt level
 - ✓ 5 CMM blocks identified for development by CIL/CMPDI
 - ✓ CMPDI contemplating a study for assessing scope of CMM potentiality in CIL command areas
- **Assistance Needed: Keeping in view the technical challenges likely to be faced in CMM development under Indian geo-mining conditions, transfer of technology from GMI partner countries to be encouraged**

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