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
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 mmcmd)
  - 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
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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