

# Methane to Markets (M2M) India Activities

*Jayne Somers, Ph.D., P.E.*

U.S. Environmental Protection Agency Climate Change Division

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# USEPA Coalbed Methane Outreach Program (CMOP)

- Voluntary climate change program
- Promote the profitable recovery and use of coal mine methane.
- Support Coal Mine Methane (CMM) project development
- International Methane to Markets Partnership



# Methane to Markets (M2M) Partnership Overview

- Advance recovery and use of methane as a valuable clean energy source
  - Encourage development of **cost-effective** methane recovery and use opportunities in:
    - coal mines
    - landfills
    - oil and gas systems and
    - agriculture (manure waste management)
  - Private companies, multilateral development banks and other relevant organizations participate by joining the **Project Network** – *over 500 organizations now participating*
  - M2M Partnership Expo 30 October – 1 November, 2007 in Beijing, China
  - 20 Partner Countries
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# U.S. Involvement in M2M

- **U.S. EPA is coordinating efforts across the USG and staffs the Partnerships Administrative Support Group**



- **U.S. commitment**
  - Pledge of \$53 million over five years
- **Key activities to advance project development**
  - Identify and assess project opportunities
    - Pre-feasibility and Feasibility studies
  - Support technology transfer, training, and capacity building
  - Address barriers to project development and increase access to information
    - Financial/market, regulatory, technical
  - Technology demonstration and deployment
- **Ongoing projects and activities are expected to achieve annual emission reductions of 5 MMTCO<sub>2</sub>E and leverage investment of over \$235 million**





# CMM and CBM in India

- **CMM emissions: 6<sup>th</sup> globally**
  - 14.3 MMTCO<sub>2</sub>e (estimated 2005), ~ 1 billion cubic meters
- **Ranks 3<sup>rd</sup> in global coal production**
- **About 15% of production is from underground mines**
  - ~24 underground mines classified as “Degree III” gassy mines
- **Estimated CBM resource base: 1.5 to 2 trillion cubic meters**
  - Leased CBM blocks; >30 core holes drilled; 2 pilot wells drilled
- **Challenges for CMM/CBM development include:**
  - Technology development due to cost and lack of investment capital
  - Lack of natural gas transportation infrastructure
  - Ambiguous policies regarding CMM development





# *India*

- **Currently no CMM projects operating, but some drainage in place**
- **Noteworthy projects / activities**
  - Global Environment Fund project: to demonstrate commercial feasibility of utilizing methane gas recovered before, during, and after coal extraction. CMM to be used for power generation and CNG for mine vehicles.
  - Methane to Markets (M2M) Grants





# CMOP Activities in India

- US EPA and Government of India to establish an India CBM / CMM Clearinghouse
  - Memorandum of Understanding signed in Washington, DC November 16, 2006
  - Ministry of Coal lead on CMM issues
  - Ministry of Petroleum & Natural Gas lead on CBM issues



# CMOP Activities in India

- EPA to provide multiple year funding through a cooperative agreement
- Clearinghouse to become in-country source of expertise for project developers, investors, and technology vendors through technical training, data collection, study tours, website
- US Trade & Development Agency to support a kickoff event (tentatively Fall 2007)





For more information, please  
contact us!

- *Jayne Somers*, [somers.jayne@epa.gov](mailto:somers.jayne@epa.gov)  
202-343-9896

[www.epa.gov/coalbed](http://www.epa.gov/coalbed)

