



# Methane to Markets

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## ***United States of America Country Strategy & Update***

Coal Subcommittee Meeting

5 March 2010

New Delhi, India

# Outline

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- US Domestic Strategy
- US Plan to Support International Activities through the Methane to Markets Partnership
  - Overarching activities
  - Country-specific activities:
    - China
    - India
    - Mexico
    - Mongolia
    - Nigeria
    - Poland
    - Russia
    - Ukraine

# *US Domestic Strategy for CMM*

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## ■ Focus

- Overcoming regulatory & institutional barriers to project development through technical exchange

## ■ Key agencies

- US EPA Coalbed Methane Outreach Program (nodal agency)
- US Agency for International Development
- US Department of Energy
- US Trade & Development Agency

# *US International Strategy: Support for M2M Partnership*

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- **M2M 2010 Expo**
  - 36 New Project Opportunities in Coal Sector
    - China: 7
    - India: 12
    - Kazakhstan: 1
    - Mexico: 2
    - Mongolia: 2
    - Poland: 7
    - Russia: 1
    - Ukraine: 4
  - 2 Success Stories in China
    - Chongqing Mine (VAM)
    - Songzao Coal Mining Area

# *US International Strategy: Support for M2M Partnership*

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- **EPA M2M Grant Solicitation**
  - Awarded 6 grants in coal sector in 2009
    - 4 in China, 1 in India, 1 in Poland
  - Award new grants in 2010
    - Extended deadline to 29 July 2010
  
- **New Technical Reports & Tools**
  - UNECE / M2M Best Practices Guidance on Effective Methane Drainage and Use in Coal Mines
  - CMM Degasification Primer
  - Capture and Use of Coal Mine VAM
  - VAM Utilization Technologies
  - CMM Finance Guide
  - CMM Financial Model

# *US Strategy and Activities in China*

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## ■ **Goals / objectives**

- Assist with project development and on-the-ground activities
- Continue capacity building and outreach
- Continue working with provinces to support local projects

## ■ **Ongoing / upcoming activities**

- U.S. EPA provided financial support for **five** full-scale feasibility studies:
  - Songzao Coal Mining area in Chongqing (completed)
  - Hebi coal mining area in Henan Province (completed)
  - Liuzhuang coal mine in Anhui Province (completed)
  - Lan Shan Mines in Inner Mongolia
  - Lin Hua Mine in Guizhou Province
- Continued support for China Coalbed Methane Clearinghouse, hosted by China Coal Information Institute (CCII)

# *US Strategy and Activities in India*

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## ■ **Goals / objectives**

- Provide assistance for:
  - VAM and CMM project development
  - Capacity building and technology transfer

## ■ **Recent activities**

- India CMM/CBM Clearinghouse on-going in Ranchi at the Central Mine Planning and Design Institute.
- CMPDI pursuing an R&D project for identification of prospective areas for CMM development within the command areas of Coal India Ltd.
- VAM project development and capacity building, with Coal India Ltd. under the Asia Pacific Partnership Coal Mining Task Force.

# *US Strategy and Activities in Mexico*

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- **Goals / objectives**
  - Assess CMM resources
  - Facilitate legal and regulatory development
  
- **Recent activities**
  - EPA funding a CMM to LNG demonstration project in the Sabinas coal basin with CleanMetFuel



# *US Strategy and Activities in Mongolia*

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- **Goals / objectives**

- Help to build in-country capacity for CMM analysis and implementation

- **Recent activities**

- Mongolia Nature and Environment Consortium completed a U.S. EPA M2M grant for a pre-feasibility study at the Nalaikh mine
  - Possible Global Environment Facility follow-on project

# *US Strategy and Activities in Nigeria*

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- **Goals / objectives**
  - Encourage greater country participation in M2M, especially coal owners and the Ministry of Solid Minerals
  - Build Capacity in CMM through support of government and private sector participation in M2M Coal Subcommittee meetings
  
- **Recent activities**
  - U.S. EPA completed grant for pre-feasibility studies at the Onyema and Owukpa mines in the Enugu coal field.

# *US Strategy and Activities in Poland*

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- **Goals / objectives**
  - Poland has considerable expertise and experience with CMM
  - As needed, assist in identifying and overcoming barriers to CMM that exist
  
- **Recent activities**
  - U.S. EPA funded assessment of VAM resources at 10 gassy Polish mines, with the Central Mining Institute in Katowice (on-going).
  - Feasibility study at the abandoned Zory mine, to convert CMM to LNG (complete).

# *US Strategy and Activities in Russia*

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- **Goals / objectives**

- Focus on addressing legislative and regulatory barriers to project development in Russia

- **Recent activities**

- EPA funding for IEA to work on CMM regulatory analysis and outreach in Russia
  - CMM Workshop in Moscow (May 2009)
  - IEA Report on Coal Mine Methane in Russia (Dec 2009)

# *US Strategy and Activities in Ukraine*

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## ■ **Goals / objectives**

- Focus on addressing legislative, regulatory and financial barriers to project development
- Update printed material on project opps. for developers and other interested parties

## ■ **Recent activities**

- EPA working with Battelle and ARENA-ECO on several initiatives
  - Round Table on Promoting Use of CMM with the Ukrainian Parliament Committee on Fuel held in April 2009
  - White paper: *Reducing Methane Emissions in the Coal Mining Sector*
  - Report: *Analysis of Intl Best Practices for CMM Recovery / Utilization*
  - Updating “Ukraine Handbook” with new introduction and profiles of coal mines
  - CMM Investment Promotion Forum in Donetsk (upcoming)

## US EPA Coalbed Methane Outreach Program contacts

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