



# Methane to Markets

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

Coal Subcommittee Meeting

29 – 30 April 2008

Cagliari, Italy

## *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
- Nodal agency: US EPA, Coalbed Methane Outreach Program
- Recent activities
  - Very successful 2007 US CMM Conference (St. Louis, MO)
  - Support for technology demonstration project (VAM mitigation)
  - Met with coal mining, other industry officials
  - Provided technical, analytic support to end-use project in western US
  - Provided technical analyses of opportunities at US abandoned, surface mines
- Upcoming activities
  - Continue to support VAM technology demonstration project
  - Host 2008 US CMM Conference (Pittsburgh PA): October 28-30
  - Developing financial model tool
  - Outreach to sister agencies in US government
  - Increase outreach efforts to US coal mines
  - Developing rule for reporting greenhouse gas emissions

## *US International Strategy: Support for M2M Partnership*

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- Efforts coalesce through M2M Partnership
  - Also participate in Asia Pacific Partnership on Clean Development & Climate – Coal Mining Task Force
- Recent activities
  - Main focus for past 2 years: preparing for 2007 Partnership Expo
    - Organized technical sessions
    - Provided travel support for delegates
    - Prepared opportunity templates (posters, flyers)
  - Support for CMM project development through EPA M2M grant solicitation
    - Awarded six grants in 2007 (China, India, Mexico, Nigeria)
    - In 2008, plan to award 6 grants for projects based in China, India, Mongolia, Poland

## *US Support for M2M Partnership: Upcoming Activities*

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- Global CMM Projects Database
  - Live on <http://www2.ergweb.com/cmm/index.aspx> with 220 projects
  - New function allows user to search database on seven categories
  - New function allows user to export search results to Excel
  - Function in development to allow any user to update or add project information - *Coming Soon.*
  - **Please review project information for your country.** Any help is appreciated to reach goal of 100% accuracy and completeness!
  - ***Please contact U.S. with any questions, comments, or suggestions***
- CMM Global Overview
  - 32 country profiles and an Introduction section developed in 2006
  - Most requested M2M document by CMM stakeholders
  - Update of profiles and introduction taking place now. **If you would like to review the profile for your country, please let U.S. know.**
- Would be happy to assist other countries in developing a robust country-specific strategy

# *US Strategy and Activities in China*

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## ■ **Goals / objectives**

- Assist in on-the-ground activities to help develop a pipeline of projects for developers and investors to implement
- Continue to support China Coalbed Methane Clearinghouse in building capacity and conducting outreach
- Continue to support local projects in coal-producing provinces as opportunities arise

## ■ **Recent activities**

- Helped develop ten (10) project opportunity posters displayed at the Expo (October 2007)
- Under the Strategic Energy Dialogue, the US and China agreed to work together to develop up to 15 large-scale CMM projects in China
  - CMOP is sponsoring three CMM feasibility studies
- US EPA awarded three grants for CMM work in China (2007)
  - CSIRO (demo of VAM destruction at a Teifa coal mine)
  - CCII (demo of medium quality gas destruction technology, site TBD)
  - GZCMM (outreach to small and medium mines in Guizhou Province)

## *US Strategy and Activities in China (2)*

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### ■ **Upcoming activities**

- EPA to support and attend “Coalbed Methane and Coal Mine Methane Power Generation”, a workshop funded by USTDA and organized by USEA for NDRC
  - Dalian City, 28 – 31 May 2008
  - [www.usea.org/natural-gas-training/index.htm](http://www.usea.org/natural-gas-training/index.htm)
- EPA to work with IEA to conduct outreach and to identify project opportunities in Sichuan Province, including local conference in March 2009 (more details TBA).
- GZCMM to hold local conference in Guizhou Province
  - Guiyang, 16 – 17 July 2008
- EPA continues work on 3 CMM feasibility studies
  - Hebi coal mining area (Henan Province)
  - Songzao Coal Mining and Electricity Company (Chongqing)
  - 3<sup>rd</sup> site to be determined
- EPA planning to award new grants, some consisting of CMM work in China

# *US Strategy and Activities in India*

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- **Goals / objectives**
  - Plan to provide assistance for:
    - VAM and CMM resource assessment
    - CMM policy, legal and regulatory development
    - Capacity building and technology transfer
- **Recent activities**
  - Successful M2M Workshop held in Delhi (February 2007)
  - US EPA awarded grant to quantify VAM emissions from two underground coal mines (Moonidih and Sudamdih)



## *US Strategy and Activities in India (2)*

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- **Upcoming activities**
  - India Coal Mine/Coalbed Methane Clearinghouse to be established at two locations (2008):
    - Central Mine Planning and Design Institute in Ranchi
    - Ministry of Petroleum and Natural Gas in New Delhi
  - CMM Clearinghouse kick-off event sponsored by USTDA planned for July 2008 in Ranchi

## *US Strategy and Activities in Mexico*

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- **Goals / objectives**
  - To assess CMM resources
  - To facilitate overcoming legal and regulatory barriers
- **Recent activities**
  - EPA funding a demonstration project in the Sabinas coal basin for a CMM to LNG plant
- **Upcoming activities**
  - EPA site visit and scoping mission in 2009

# *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 is a new Methane to Markets Partner country and US is just beginning cooperation
- Upcoming activities
  - US EPA selected one proposal for funding through 2008 M2M grants program.
    - Pre-feasibility study of CMM recovery at the Nalakh mine.
    - Potential GEF follow-on project
  - EPA offers to help Mongolia develop a country profile for the Global Overview document

# *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**

- Support for private sector participation in 2007 Expo
- EPA provided funding for a grant to conduct prefeasibility studies at the Onyeama and Owukpa mines (Enugu coal field), including assessment of CMM resources

## ■ **Upcoming activities / plans:**

- Continue to support technical work through grant
- Provide assistance in development of robust country-specific strategy

# *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 do exist
- **Recent activities**
  - EPA supported a CMM Workshop in Szczyrk February 27-29, 2008
- **Upcoming activities**
  - Assess CMM resources:
    - EPA plans to fund grants in 2008 to study VAM and CMM resources
  - Facilitate capacity building, particularly with VAM technology transfer

# *US Strategy and Activities in Russia*

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- **Goals / objectives**
  - Focus on addressing legislative and regulatory barriers to project development in Russia
- **Activities in the past year**
  - One poster was displayed at the Expo (Oct and Nov 2007)
  - CMOP invited Russian coal mines to workshop at Belozerskaya Mine in Ukraine (Oct 2007)
- **Upcoming activities**
  - EPA to work with IEA to develop CMM policy recommendations based on successes in other countries and to share them with government stakeholders at roundtable discussion
  - UNECE workshop planned for June 2008 under grant with EPA to address financial barrier

# *US Strategy and Activities in Ukraine*

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- **Goals / objectives**
  - Focus on addressing legislative and regulatory barriers to project development in Ukraine
  - Focus on updating printed material on project opportunities for project developers and other interested parties
- **Recent activities**
  - CMOP supported travel of four Ukrainians to the Expo and Subcommittee meeting in Beijing. Four templates were developed into posters. (Oct 2007)
  - CMOP held workshop at Belozerskaya Mine (Oct 2007)
  - USAID continues to support in-mine drilling project at Belozerskaya mine
- **Upcoming activities**
  - EPA to work with Battelle and ARENA-ECO to develop CMM policy recommendations based on successes in other countries and to share them with stakeholders at training session in December 2008
  - ARENA-ECO will update “Ukraine Handbook” with new introduction and profiles of coal mines

## *US collaboration to promote CMM project development*

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- **Australia**
  - US EPA Administrator recently visited BHP Billiton West Cliff Colliery Ventilation Air Methane project
  - US EPA is funding technology demonstration project of CSIRO in China
  - Have collaborated to co-sponsor Subcommittee meeting, workshops
- **Italy**
  - Mille grazie for hosting meeting and site visit!
- **Japan**
  - Have collaborated to co-sponsor workshops
- **European Commission**
  - Looking forward to possible future collaboration especially in Eastern Europe
- **International Energy Agency**
  - Work in China, Russia
- **United Nations Economic Commission for Europe**
  - Completing work to promote CMM project development in Russia, Ukraine, CIS



## *Grazie to our Italian hosts!*

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- US EPA Coalbed Methane Outreach Program contacts:
  - M2M Partnership / China  
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