The Global Methane Initiative

United States of America Country Strategy & Update

Coal Subcommittee Webinar June 20, 2011



Outline

- US Domestic Strategy
- ➤ US Plan to Support International Activities through the Global Methane Initiative
- Overarching activities
- Country-specific activities:
 - China
 - India
 - Mexico
 - Mongolia
 - Poland
 - Russia
 - Ukraine
 - Turkey, Kazakhstan, Vietnam, Colombia
- ➤US Plans to support 2011 Meeting in Poland

US Domestic Strategy for CMM

Focus:

- Overcoming regulatory & institutional barriers to project development through technical exchange
- >Key agencies:
- US EPA Coalbed Methane Outreach Program (nodal agency)
- US Trade & Development Agency
 - CMM/CBM Definitional Missions to Colombia, Mexico, Vietnam, Turkey
- US Agency for International Development
- US Department of Energy



US Domestic Strategy: Recent activities

- Very successful 2010 US CMM Conference (Birmingham, AL)
- > Reporting of greenhouse gas emissions from U.S. underground coal mines:
 - Data collection by mines in 2011
 - Mines begin reporting to USEPA in 2012



US International Strategy: Support for GMI Partnership

Recent GMI activities:

- Developed GMI Flaring paper
- Updating the CMM Technology Database
- Updated, revised "Country Profiles" with summaries of the coal sector and CMM in 37 countries
- Support for CMM project development through USEPA GMI grant solicitation
 - Awarded grants in 2009 and 2010 (China, India, Mongolia, Poland)
 - Awarding grants in 2011 (to be announced soon)
- Participated in Asia Pacific Partnership on Clean Development & Climate – Coal Mining Task Force.

APP ended Spring 2011.

China: US Strategy and Activities

Comprehensive feasibility studies

- Songzao Coal Mines, Chongqing
 - Based on results of this study CQEIG is moving forward with joint venture for CMM to LNG plant
- Liuzhuang Mine, Huainan, Anhui Province
- Hebi mines, Henan Province
- Linhua Mine, Guiyang, Guizhou Province
- Tai Xi Mines, Alashan, Inner Mongolia
- Pre-feasibility studies and project site identification
 - Huainan VAM pre-feasibility study
- 20 projects identified for Expos
- Technology demonstrations
- CSIRO mitigating and utilizing dilute methane with a monolithic catalytic combustor at Tiefa

China: US Strategy and Activities

Data collection and analyses

Abandoned mines in Shanxi and additional provinces

- Grant to University of Colorado
- Development of database on degasification in Shanxi Province
 - Grant to Virginia Polytechnic Institute and State University
- Coal Mine Gas Recovery and Utilization throughout China
 - Grant to China Coal Information Institute

Capacity building: national and regional efforts

- China Coal Information Institute (CCII)
 - Supports training, study tours, workshops, data collection, identification of opportunities, pre-feasibility studies
- Shanxi Province
 - Grant to Jackson Hole Center for Global Affairs
 - Grant to China University of Petroleum, Beijing
- Guizhou Province
 - Grant to Guizhou International Center for Environmental Protect



US Strategy and Activities in India

Goals / objectives

- Provide assistance for:
 - CMM policy, legal and regulatory development
 - India Coal Mine/Coalbed (CMM/CBM) Methane Clearinghouse start-up
 - VAM and CMM resource assessment
 - Capacity building and technology transfer

Recent activities

- CMM/CBM Clearinghouse established at Central Mine Planning and Design Institute (CMPDI)
- US EPA awarded grants



US Strategy and Activities in Mexico

Goals / objectives

- Assess CMM resources
- Facilitate legal and regulatory development

Recent activities

 EPA funding a CMM to LNG project in the Sabinas coal basin



US Strategy and Activities in Mongolia

Under a GMI grant, the Mongolia Nature and Environment Consortium completed a pre-feasibility study at the closed underground Nailakh mine.

- Based on the study findings, Korean-Mongolian governments are sponsoring core drilling, gas resource assessment underway to evaluate potential CBM or CMM project.
- Sponsored technical workshop on CMM in Mongolia (August 2010) in Ulaanbaatar for Mongolian government and coal industry officials.



Poland: US Strategy and Activities

- U.S. EPA awarded two grants (2008).
- Assessment of VAM resources at 10 gassy mines, with the Central Mining Institute (CMI) in Katowice (close to completion).
- Feasibility study at the abandoned Zory mine, to convert CMM to LNG (by IETU, work complete).
- U.S. EPA awarded one grant to CMI for a study with Composite Energy (2009)

US Strategy and Activities in Russia

Goals / objectives

- Focus on addressing legislative and regulatory barriers to project development in Russia
- Recent activities:
- International Energy Agency (IEA) working on CMM regulatory analysis and outreach in Russia (launched in 2008, funded by US EPA)
- CMM Best Practices Workshop in Kemerova with UNECE (June 2011)

US Strategy and Activities in Ukraine

ARENA-ECO collaborating with policymakers to encourage and facilitate CMM project development

- Work coordinated by Battelle PNNL (sponsored by U.S. EPA)
- CMM Investment Promotion Forum: May 2010, Donetsk
- CMM Seminar and Best Practices Workshop with UNECE (September 2011)



US Strategy and Activities: Turkey, Vietnam, Kazakhstan, Colombia

- Kazakhstan: USEPA supported the UNECE Best Practices Workshop in May 2011.
- Colombia: USEPA presented at CMM Workshop in Bogota February 2011. Possible scoping mission in 2011.
- Turkey: USEPA presenting at the World Mining Congress in Istanbul September 2011
- Vietnam: USEPA presented at the Advanced Mining Congress in HaLong Bay September 2010. Possible scoping mission in 2011.

US EPA Coalbed Methane Outreach Program www.epa.gov/cmop

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