



# Methane to Markets

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Coal Mine Technical Subcommittee Report to  
Steering Committee

**HUANG SHENGCHU**  
CHINA

**A.K. SINGH**  
INDIA

**JAYNE SOMERS**  
UNITED STATES

2 March 2010  
New Delhi, India

# Overview

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- **Activities since the 2009 Monterrey Meeting**
  - Geneva Subcommittee Meeting
  - Partnership Expo Planning
  - Selected Subcommittee Achievements
  - Activities by Country
  
- **Next Steps and Conclusions**

## Subcommittee Achievements since January 2009

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- **11<sup>th</sup> Session of the Coal Mine Subcommittee**
  - Held in conjunction with 5th Session of the UNECE Ad Hoc Group of Experts on Coal Mine Methane in Geneva
  - Over 40 attendees representing 11 countries
  - Focus on 2010 Expo planning

## Subcommittee Achievements since January 2009 (cont'd)

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- **M2M Expo**
  - 36 New Project Opportunities for Expo Display
    - China: 7
    - India: 12
    - Kazakhstan: 1
    - Mexico: 2
    - Mongolia: 2
    - Poland: 7
    - Russia: 1
    - Ukraine: 4
  - 2 Success stories from China project opportunities displayed at 2007 Expo
    - Chongqing Mine (VAM Project)
    - Songzao coal mining area

## Subcommittee Achievements since January 2009 (cont'd)

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- **New technical reports available**
  - UNECE / M2M Best Practices Guide for CMM Drainage and Recovery
  - CMM Degasification Primer
  - Capture and Use of Coal Mine VAM
  - VAM Utilization Technologies
  - CMM Finance Guide

## Subcommittee Achievements since January 2009 (cont'd)

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- **Support for VAM Projects**
  - Paper for 9<sup>th</sup> International Mine Ventilation Congress
  - Upcoming U.S. VAM shaft data summary
  - Upcoming paper for 13<sup>th</sup> North American Mine Ventilation Symposium
  
- **2009 M2M Grant Solicitation**
  - Awarded 6 grants in coal sector
    - 4 in China, 1 in Poland, 1 in India

# *Activities by Country*

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## ■ **Australia**

- Australian Government policies aimed at widespread deployment of low emission coal technology by 2020:
  - National Low Emission Coal Strategy
  - Global Carbon Capture and Storage Initiative
- Carbon Pollution Reduction Scheme
  - Emissions trading scheme to commence 1 July 2010, to cover fugitive emissions from coal mines.
  - Coal sector transitional adjustment measures:
    - \$750m package over the period 2010/11 to 2014/15, to assist coal mines with high fugitive emissions.
    - Includes \$250 million to support technology deployment.

## *Activities by Country (cont'd)*

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### ■ **China**

- China and U.S. agreement to work together to develop up to 15 large-scale CMM projects in China under the Strategic Economic Dialogue (SED).
  - US EPA provided financial support for **three** recently-completed full-scale feasibility studies:
    - Songzao Coal Mining area in Chongqing
    - Hebi coal mining area in Henan Province
    - Liuzhuang coal mine in Anhui Province
  - US EPA is providing on-going financial support for **two** full-scale feasibility studies:
    - Lan Shan Mines in Inner Mongolia
    - Lin Hua Mine in Guizhou Province

## *Activities by Country (cont'd)*

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### ■ **China (cont'd)**

- New projects funded through US EPA M2M grant solicitation in 2009:
  - Prefeasibility study for two coal mines in Guizhou Province
  - Inventory of abandoned mines in Shanxi and Hebei Provinces
  - Analysis of current coal mine gas recovery and utilization technologies used in China
  - Analyze efficiency of existing CBM/CMM recovery projects in Shanxi Province and develop recommendations to enhance recovery
- Continued US EPA support for China Coalbed Methane Clearinghouse, hosted by China Coal Information Institute (CCII)

## *Activities by Country (cont'd)*

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- **China (cont'd)**
  - Release of IEA report on CMM in China
  - Successful workshops in Jincheng, Chengdu, Beijing
  - 9 CMM projects to be showcased at 2010 M2M Expo
    - 7 new projects and 2 success stories

## *Activities by Country (cont'd)*

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### ■ **India**

- Strategy: Focus on VAM, new CMM project development and capacity building through India CMM/CBM Clearinghouse.
- India CMM/CBM Clearinghouse on-going in Ranchi at the Central Mine Planning and Design Institute.
- CMPDI is 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.
- CMM projects to be showcased at 2010 M2M Expo

## *Activities by Country (cont'd)*

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### ■ **Mexico**

- Government of Mexico recently released national climate action report, which includes focus on methane, M2M, and a CMM project in northern Mexico.
- U.S. EPA funding a demonstration project (CMM to LNG) in the Sabinas coal basin
- 2 CMM projects showcased at 2010 M2M Expo

## *Activities by Country (cont'd)*

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- **Mongolia**

- 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.

- **Nigeria**

- U.S. EPA completed grant for pre-feasibility studies at the Onyeama and Owukpa mines in the Enugu coal field.

## *Activities by Country (cont'd)*

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- **Poland**
  - U.S. EPA awarded two grants (2008).
    - 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).
  - U.S. EPA awarded one grant to CMI (2009)
  - CMM projects to be showcased at 2010 M2M Expo

## *Activities by Country (cont'd)*

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### ■ **Russia**

- IEA working on CMM regulatory analysis and outreach in Russia
  - Funded by U.S. EPA (launched in 2008)
  - CMM Workshop in Moscow (May 2009)
  - IEA Report on Coal Mine Methane in Russia (Dec 2009)
  
- 1 CMM project showcased at 2010 M2M Expo

## *Activities by Country (cont'd)*

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### ■ **Ukraine**

- **Inter-agency Working Group on Mine Degasification and CMM Collection and Use (Feb. 2009)**
- **Green Tariff Law (April 2009)**
- **Law on Coalbed Methane (Spring 2009)**
- **ARENA-ECO collaborating with policymakers to encourage and facilitate CMM project development**
  - Work coordinated by Battelle, sponsored by U.S. EPA
  - 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 in Ukraine*
  - Report: *Analysis of International Best Practices for CMM Recovery and Utilization*
  - CMM Investment Promotion Forum in Donetsk in May 2010
- **4 CMM Projects showcased at 2010 M2M Expo**

## *Activities by Country (cont'd)*

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- **United States**
  - Strategy focuses on promoting CMM development in the US and internationally:
    - Continued enhancement of financial model
    - Technical and analytic support for new projects in US and internationally.
  - US EPA currently soliciting grant proposals to support Partnership.

## *Activities by Country (cont'd)*

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- **United States (cont'd)**
  - Support for international projects
    - 12 new and ongoing projects in China, India, Poland, Mexico, Mongolia.
    - 2 full-scale feasibility studies underway in China.
    - Support for capacity building initiatives.
      - China and India Clearinghouses.
      - Russia and Ukraine in-country organizations.
  - 2009 U.S. CMM Conference
    - Boulder, CO September 30-October 1.
  - Outreach tools, documents, newsletters available on US EPA Coalbed Methane Outreach Web site, at:  
[www.epa.gov/cmop](http://www.epa.gov/cmop).

## Next Steps

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- **The Subcommittee will focus on responding to new charges from the Steering Committee.**
- **Next Subcommittee Meeting**
  - Location and date to be determined

# Summary and Conclusions

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- **The Subcommittee welcomes participation from new partner country Georgia**
- **The Subcommittee continues to focus on country-specific needs and opportunities to promote CMM projects.**
- **The Subcommittee continues to engage with the private sector and seek ways to be more useful to the Project Network.**

# Pamela and Alexandra

