U.S. EPA and Global Methane Initiative: Reducing GHG Emissions from Coal Mining Activities

Promoting Coal Mine Methane (CMM) for Energy, Safety and the Environment: Legislation and Project Development in Kazakhstan

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- **Our Mission**
  - To work with the private sector to cost-effectively reduce CMM emissions through recovery and use projects

- **Our Focus**
  - Greenhouse gas emission reduction opportunities: *coal mine methane (CMM)* rather than coalbed methane (CBM)

- **Our Activities**
  - Identify profitable opportunities for CMM recovery
  - Identify and help overcome market, regulatory, technical barriers
  - Offer technical and analytic support where appropriate
  - Conduct direct outreach to coal mines

- **Our Accomplishments**
  - The U.S. CMM industry is robust. Over 80% of methane from U.S. coal mine degasification systems is recovered and used today, compared to ~25% in 1993.
Global Methane Initiative: Overview

- GMI is a voluntary, multilateral partnership that aims to reduce methane emissions and to advance the abatement, recovery and use of methane as a clean energy source.
Global Methane Initiative (GMI)

- Started as Methane to Markets (M2M) Partnership in November 2004 with 14 countries
- USEPA serves as the secretariat for GMI and hosts the Administrative Support Group (ASG), by providing administrative and logistical support and serving as an information clearinghouse
- Focus on methane because emission reductions are cost-effective and are high impact due to a higher global warming potential than CO2
GMI Targets Five Key Methane Sectors

- These five sectors are expected to account for more than 5000 MMTCO$_2$E of total global manmade methane emissions by 2020.
GMI Achievements

Since 2004, GMI has...

Conducted more than 600 resource assessments, feasibility studies, site visits, and study tours

Trained more than 15,000 people in methane mitigation techniques

Grown from 14 to 42 Partner Countries (plus the European Commission), and from 100 to 1,300 Project Network members

Developed more than 50 tools and publications, and leveraged nearly $550 million for project development and training
GMI Reduces Global Methane Emissions

To date, GMI has reduced methane emissions by ~ 350 million metric tonnes CO$_2$ equivalent
GMI Strategies for Success

- Promote international cooperation on methane reduction
- Facilitate the availability of reliable methane emission data
- Support capacity building in partner countries
- Assist in the removal of barriers for methane project development
- Identify cost-effective opportunities for methane projects
- GMI activities support data collection and feasibility studies, etc. to build a “pipeline of projects” and other capacity building efforts – not direct project investment
Coal Mine Methane (CMM)

- Methane released as a result of coal mining activities
- Focus on recovery and utilization of coal mine methane from active underground and abandoned coal mines
- Methane is a greenhouse gas and coal mines are one of the largest anthropogenic sources of methane
- CMM emissions are growing with increased coal production in emerging economies and as mining moves to deeper, more geologically complex coal seams
- Benefits: increased revenue, improved worker safety, and greater mine productivity

Source: USEPA
GMI Coal Mines Subcommittee

- Engaging the leading CMM-emitters
  - Subcommittee Co-Chaired by China, India and the U.S.

- Forum for discussing technical, policy issues; showcasing project opportunities and technologies

- Support the development of online tools:
  - International coal mine methane (CMM) database of over 300 projects
  - CMM Country Profiles of 37 coal-producing countries
  - Technology (end use) database
  - Flaring position paper
  - Technical presentations and Fact Sheets

- In Kazakhstan, Coal Subcommittee members include the Ministry of Energy and KazTransGas
GMI Project Network

- Brings private sector, NGO, multilateral investment community together to implement reduction projects.
- More than 1,300 diverse organizations from six continents.

By joining the Project Network, you can:
- Reduce costs and generate profits through methane abatement, recovery, and use projects
- Participate in GMI activities & meetings
- Gain direct access to technical expertise and assistance
- Benefit from cutting-edge news and info
- Identify and secure funding for projects
- Submit project ideas and activities to the subcommittees

Get Involved!

http://www.globalmethane.org/project-network/index.aspx
UNECE - *Best Practices Guidance*

**Best Practices Guidance for Effective Methane Drainage and Use in Coal Mines**

- Drafted by international CMM technical experts; peer reviewed
- Collaborative project between GMI and UNECE Ad Hoc Group of Experts on Coal Mine Methane
- US EPA financially supported outreach workshops organized by UNECE in China (October 2010), Kazakhstan (May 2011), and Ukraine (September 2011)

- **Adoption of best practices will:**
  - Strive to achieve a goal of zero fatalities, injuries, and property losses from methane related accidents.
  - Demonstrate global coal industry’s commitment to mine safety, climate change mitigation, corporate social responsibility, and good citizenship.
  - Establish a global dialogue on CMM capture and use.
  - Create critical linkages among coal industry, government, and regulatory officials.
  - Incorporate effective CMM capture as a part of an effective risk management portfolio.
GMI Coal Sector Activities in Kazakhstan

- **Best Practice Guidance for Effective Methane Drainage and Use in Coal Mines** (UNECE) dissemination workshop (May 2011)
- **Pre-feasibility Study for ArcelorMittal Coal Mines, Karaganda Coal Basin** (April 2013)
- **CMM Policy Report and Workshop** (September 2015)
Upcoming Events: Get Involved

- **2015 U.S. CMM Conference in conjunction with the International Pittsburgh Coal Conference**
  - 5 – 8 October 2015, Pittsburgh, PA, USA

- **GMI Coal Subcommittee Meeting**
  - 27 October 2015, Geneva, Switzerland

- **10th Session of the UNECE Group of Experts on CMM**
  - 28 October 2015, Geneva, Switzerland

- **2015 International Symposium on CBM/CMM and Shale Gas**
  - 12-13 November 2015, Beijing, China

- **CMM Best Practices Workshop**
  - 8 – 9 December, Beijing, China
Global Methane Forum

28–30 March 2016 • Washington, DC, USA
Thank You

Global Methane Initiative
www.methanetomarkets.org/gmi

U.S. EPA Coalbed Methane Outreach Program
www.epa.gov/cmop

Get involved – join the Project Network!
http://www.globalmethane.org/project-network/index.aspx

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