



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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US EPA Coalbed Methane Outreach Program (CMOP)



■ 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.

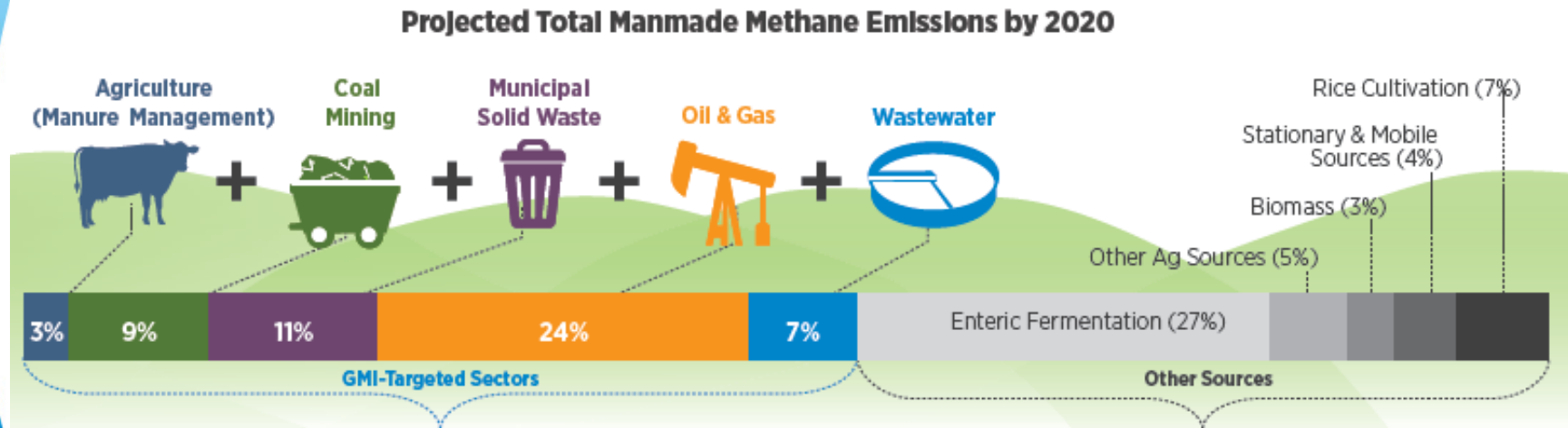


Global Methane Initiative (GMI)

- 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 MMTCO₂E of total global manmade methane emissions by 2020



GMI Achievements

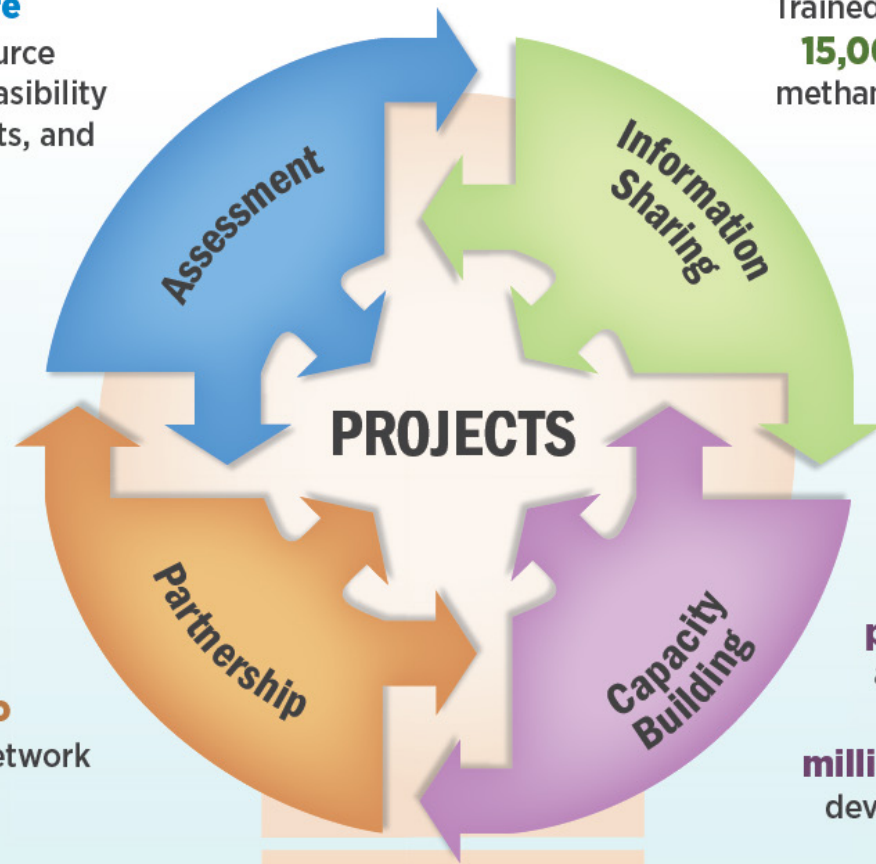
Since 2004, GMI has...

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

Trained **more than 15,000** people in methane mitigation techniques

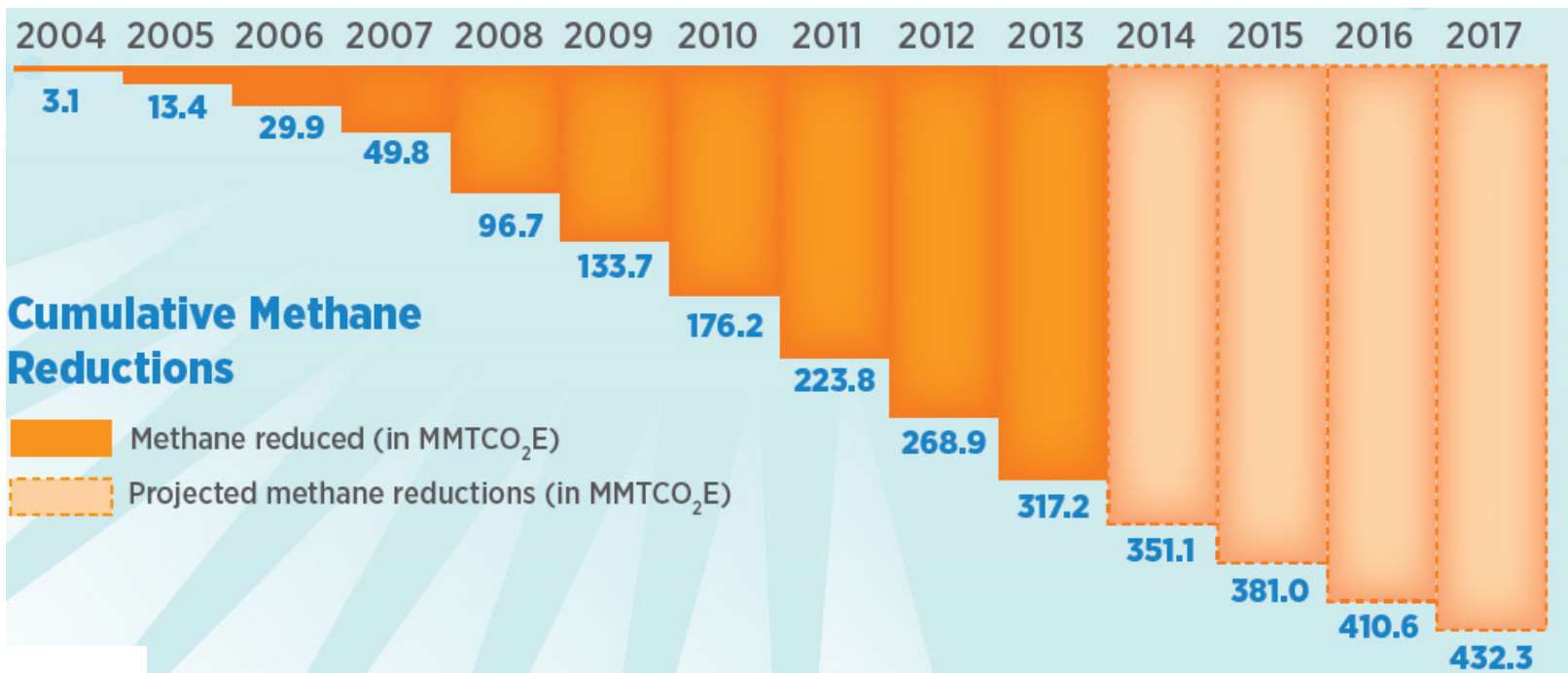
Grown **from 14 to 42** Partner Countries (plus the European Commission), and **from 100 to 1,300** Project Network members

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 CO₂ equivalent



GMI Strategies for Success

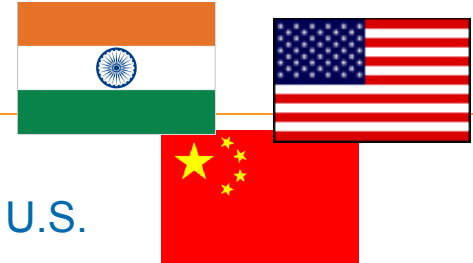
- Promote international cooperation on methane reduction
- Facilitate the availability of reliable methane emission data
- Support capacity building in partner countries
- Assist in the removal of barriers for methane project development
- Identify cost-effective opportunities for methane projects
- 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

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
 - Additional resources: <http://www.globalmethane.org/coal-mines/index.aspx>
- In Kazakhstan, Coal Subcommittee members include the Ministry of Energy and KazTransGas

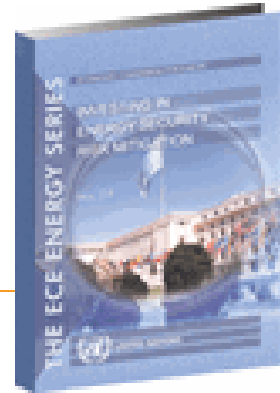
GMI Project Network

- 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)***

ЕВРОПЕЙСКАЯ ЭКОНОМИЧЕСКАЯ КОМИССИЯ

ПАРТНЕРСТВО "МЕТАН – НА РЫНКИ"

Руководство по наилучшей практике эффективной дегазации источников метановыделения и утилизации метана на угольных шахтах

СЕРИЯ ПУБЛИКАЦИЙ ЕЭК ПО ЭНЕРГЕТИКЕ, № 31



Организация Объединенных Наций
Нью-Йорк и Женева, 2010 год

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



**CLIMATE &
CLEAN AIR
COALITION**
TO REDUCE SHORT-LIVED
CLIMATE POLLUTANTS

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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