



United States Country Update

12 March 2013

Steering Committee Meeting
Vancouver, Canada

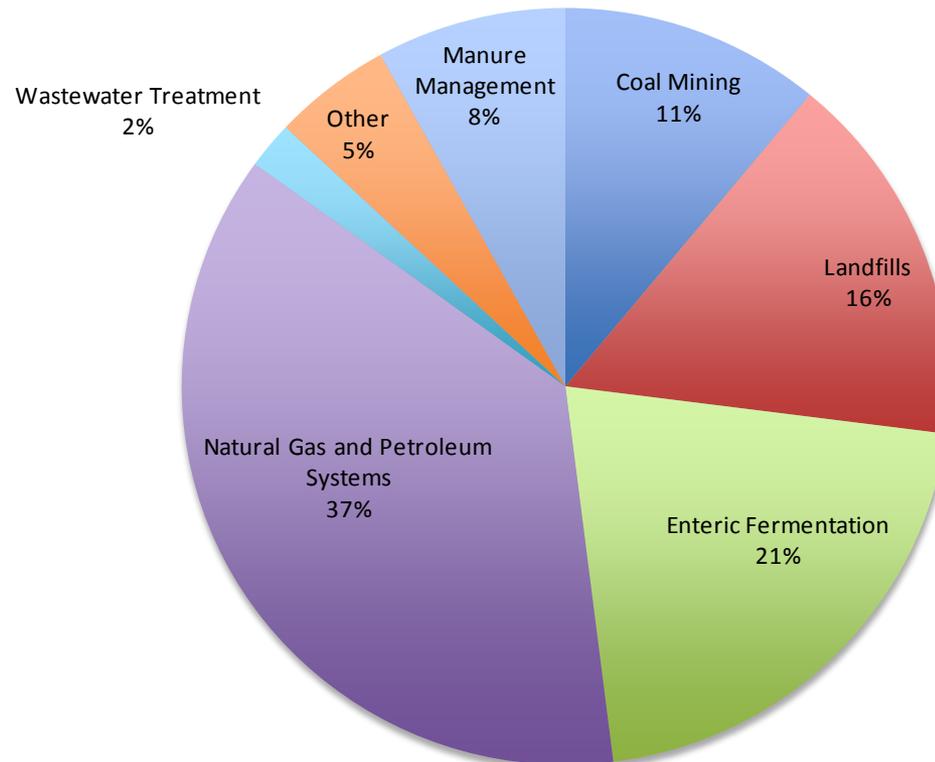
Pamela Franklin
Climate Change Division
USEPA Office of Atmospheric Programs



- U.S. Domestic Efforts
 - Methane Emission Reduction Activities
 - Policy Developments
- U.S. Commitment to Global Methane Initiative (GMI)
- U.S. GMI Methane Action Plan
- Looking Forward

Methane Emissions in the U.S.

Anthropogenic Methane accounts for about 8 percent of US GHG emissions
(Estimated 666.5 MMTCO₂E in 2010)



Source: EPA. *Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990 – 2010*. April, 2012.

Domestic Methane Partnerships

■ AgSTAR

- Since 1994, the number of biogas recovery systems has doubled.
- More than 170 projects, generate about 550 million kWh per year.



■ Coalbed Methane Outreach Program (CMOP)

- Promotes recovery & abatement of methane from coal mining.
- 124 MMTCO₂e in cumulative methane reductions since launch.



■ Landfill Methane Outreach Program (LMOP)

- More than 545 U.S. projects (tripled since 1994).
- Strong corporate interest in use of landfill gas (LFG).



■ Natural Gas STAR

- More than 130 companies (60% of industry) participate in program.
- Since 1993, companies have reported reductions of 438 MMTCO₂e.



U.S. Regulatory Efforts

- **The Oil and Gas New Source Performance Standards for Volatile Organic Compounds (VOCs), (finalized April 2012)**
 - Includes requirements for new or modified hydraulically fractured wells, compressors, storage vessels, pneumatic controller, and equipment leaks at processing plants.
 - EPA estimates the following combined annual emission reductions when the rules are fully implemented :
 - Methane 1.0 to 1.7 million short tons [about 19 to 33 million tonnes of CO₂ equivalent (CO₂e)]
- **Landfill New Source Performance Standard and Emissions Guidelines.**
 - Methane capture is required for municipal solid waste landfills that are greater than or equal to 2.5 million Mg and 2.5 million cubic meters in design capacity and have estimated emissions of non-methane organic compounds (NMOCs) of at least 50 Mg per year.

GHG Reporting Program (GHGRP)

- Reporting of GHGs from large emitters in all sectors of the U.S. economy.
- Provides accurate and timely data to inform future climate change policies and programs.
- Annual (electronic) reporting of GHG by:
 - 41 industrial categories
 - 25,000 MTCO₂E reporting threshold for most sources
 - There are 10,000 registered facilities. Approximately 8,000 reported 2011 data. (85-90% of U.S. emissions coverage).
- Data from 2010 and 2011 now publicly available on EPA website
 - <http://www.epa.gov/ghgreporting/index.html> - general program info
 - <http://ghgdata.epa.gov/ghgp/main.do> - FLIGHT

U.S. GMI Commitment

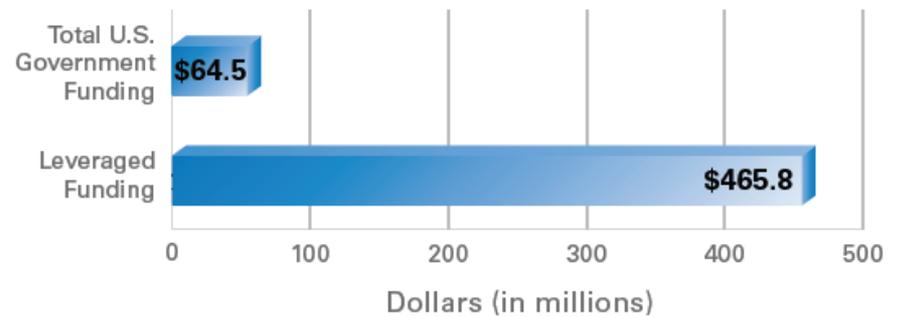


- **Provided \$64.5 million to support a wide range of projects and activities through 2011**
 - Leveraged over \$465 million in public and private sector contribution

- **Providing significant support to the Partnership through the ASG and technical support across all sectors in the following Partner Countries:**

- Argentina, Brazil, Bulgaria, Chile, China, Colombia, Dominican Republic, Ecuador, Ethiopia, India, Korea, Mexico, Mongolia, Nigeria, Pakistan, Peru, Poland, Philippines, Russia, Serbia, Thailand, Turkey, Ukraine, and Vietnam

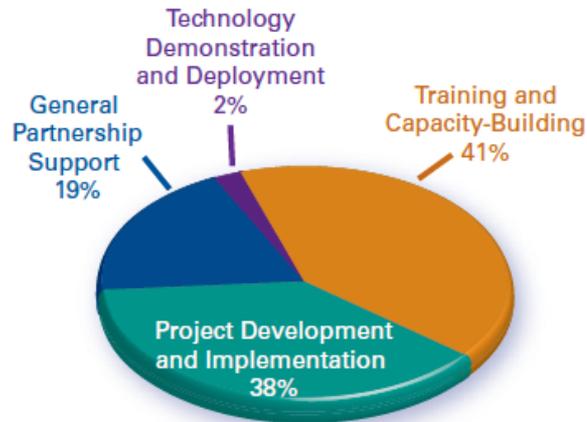
U.S. Government Funding and Leveraged Funding



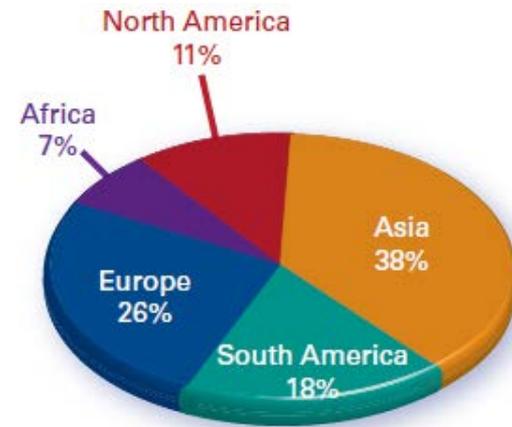
U.S. Activities

- U.S. activities directly support GMI action plans and focus on advancing project development in developing countries.
- US EPA provides technical expertise based on successful domestic methane programs.

**FY 2011 USG GMI
Expenditures by Type of
Activity**



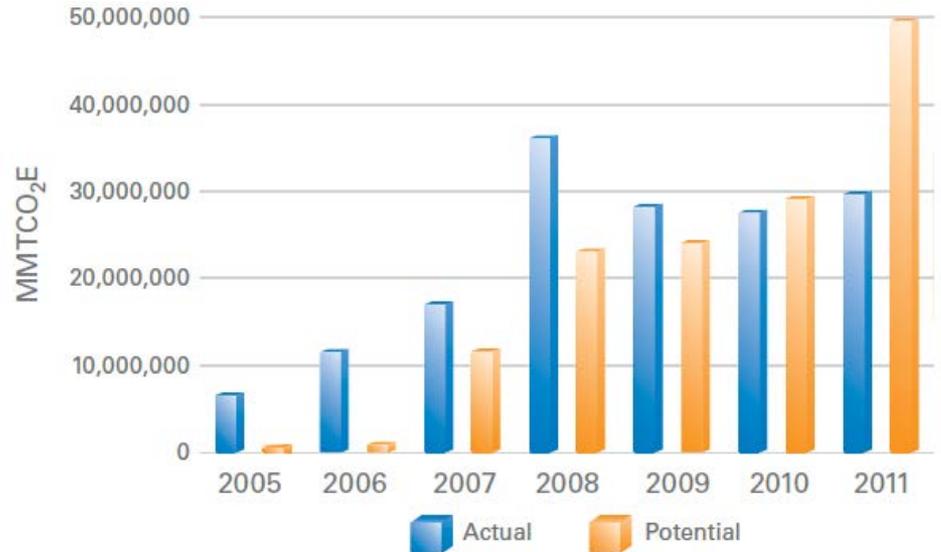
**FY 2011 USG GMI
Expenditures by Region**



U.S. Accomplishments

- U.S. has supported more than 500 sites around the world that have reduced cumulative methane emissions by 159 MMTCO₂E since 2005.

Annual Methane Emission Reductions from U.S.-Supported Projects, 2005-2011



Highlights of U.S. Activities

- **Coal:** Supported work through Virginia Tech University to study degasification in Shanxi province, China. EPA published an Energy Market report that focuses on CMM recovery.
- **Oil and Gas:** Conducted a two-week measurement study at the Gas Authority of India Limited's (GAIL) Vijaipur facility.
- **Agriculture:** Contributed to the development of an international anaerobic digester (AD) database that provides information on the types and scale of operating AD systems in GMI Partner Countries. This helps to identify the types of projects that are successful in certain countries or regions.
- **MSW:** EPA hosted Landfill Gas energy professionals from Mexico and Serbia for a study tour in Georgia, North Carolina, and South Carolina visiting a wide variety of industrial and commercial sectors, including auto manufacturers, chemical plants, greenhouses, and artisan kilns.

U.S. GMI Action Plan

- Developed a working draft of the U.S. GMI Methane Action Plan.
 - Following ASG guidance, provides a high-level overview of US domestic and international activities in support of GMI (~12 pages total).
- Updated four revised sector action plans (Agriculture (manure management), Coal Mines, MSW, and Oil & Gas).
- The GMI Action Plan is seen as a living document and will be updated periodically based on progress, new information, or initiation of new activities.

Support for CCAC Methane-related initiatives

- U.S. is supporting two methane related CCAC initiatives
 - MSW
 - Seeks to address methane and black carbon across the MSW sector by working directly with cities and national governments.
 - U.S. is supporting with technical assistance
 - Oil & Gas
 - Seeks to work with stakeholders to encourage implementation of new and existing measures to reduce methane emissions from natural gas venting, leakage, and flaring
 - U.S. provides technical support
- Both are complementary to and build upon work of GMI subcommittee

Looking Forward

- Through our continued commitment to GMI, the U.S. has significant opportunity to expand methane emission reduction opportunities

- U.S. looks forward to this meeting's discussions.
 - We encourage our colleagues to report their activities and accomplishments in support of GMI.
 - We hope that the U.S. GMI Methane Action Plan might provide a useful example.
 - We look forward to the discussion of opportunities for GMI and CCAC to collaboratively support their mutual goals of increase global reductions of methane.

Thank you!

- For more information:

 - www.epa.gov/methane

 - www.epa.gov/globalmethane

- Contact

 - Pamela Franklin, US EPA

 - Franklin.Pamela@epa.gov

 - Andrew Eil, US State Department

 - EilAG@state.gov