



Methane to Markets

Public-Private Partnership to Advance the Recovery and Use of Methane as a Clean Energy Source

Partnership Update for Landfill Subcommittee
Cologne, Germany, May 12, 2006

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Administrative Support Group (ASG)

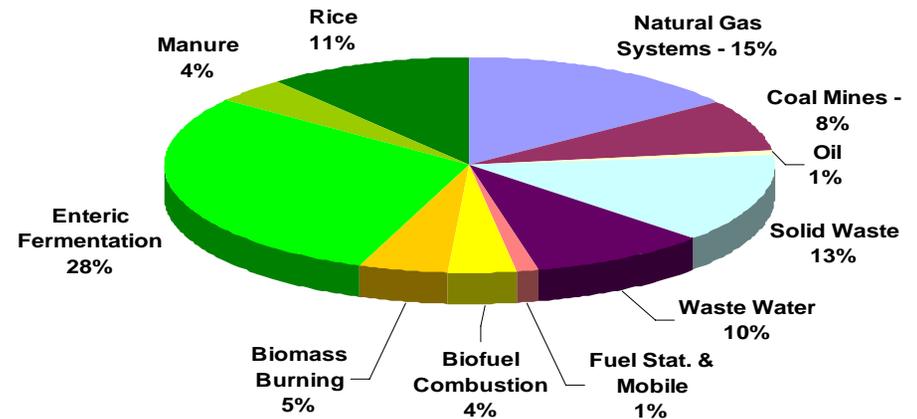
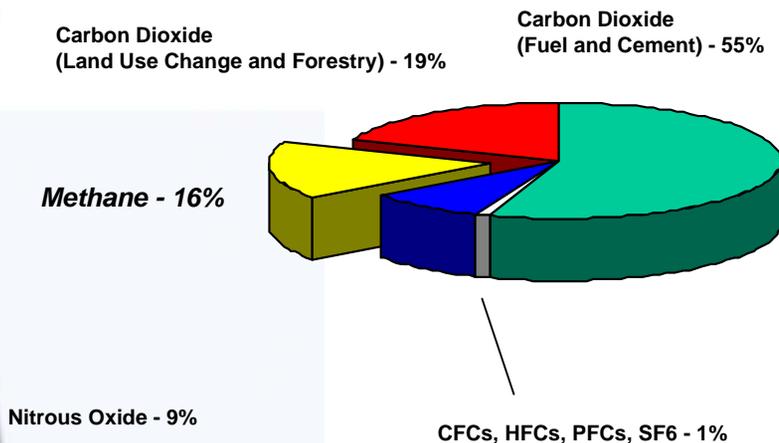
Overview

- Why Methane?
- The Methane to Markets Partnership
- Accomplishments and Current Priorities
- Methane to Markets Partnership EXPO
- Charge to Subcommittee and Goals for this meeting

Why focus on Methane?

- ✓ A potent GHG (100-year GWP of 23; atmospheric lifetime of ~12 years)
- ✓ The 2nd most important GHG accounting for ~18% of total climate forcing
- ✓ A primary constituent of natural gas and a valuable, clean-burning energy source

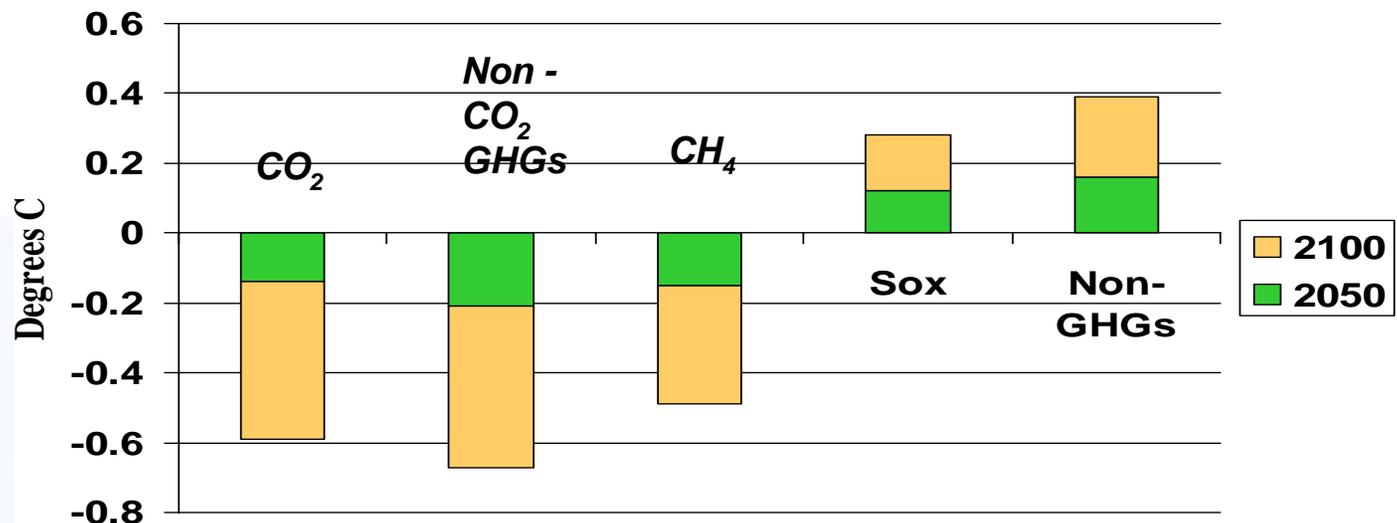
Global Greenhouse Gas (GHG) Emissions in 2000 = 40,702 MtCO₂e



CH₄ Reduction Offers Important Climate Benefits

- “Looking to likely emissions over the next half century, it is also the case that feasible reductions in emissions of methane and other non-CO₂ gases can make a contribution to slowing global warming that is as large or even larger than similar reductions in CO₂ emissions.” - MIT, 2003*

Impact of a 50% reduction from BAU in 2050, maintained to 2100



Cost-Effective Projects Recover and Use Methane

Coal Mines



Oil and Gas Systems



Landfills



Livestock Waste

Significant Co-benefits of Methane Recovery and Use Projects

- Important local energy source and reduced waste of a valuable fuel
- Improved industrial safety and productivity
- Improved local air quality, water quality and reduced odors
- Reduced greenhouse gas emissions
- Progress toward sustainable development goals
- Economic growth and energy security

Methane to Markets Partnership Overview

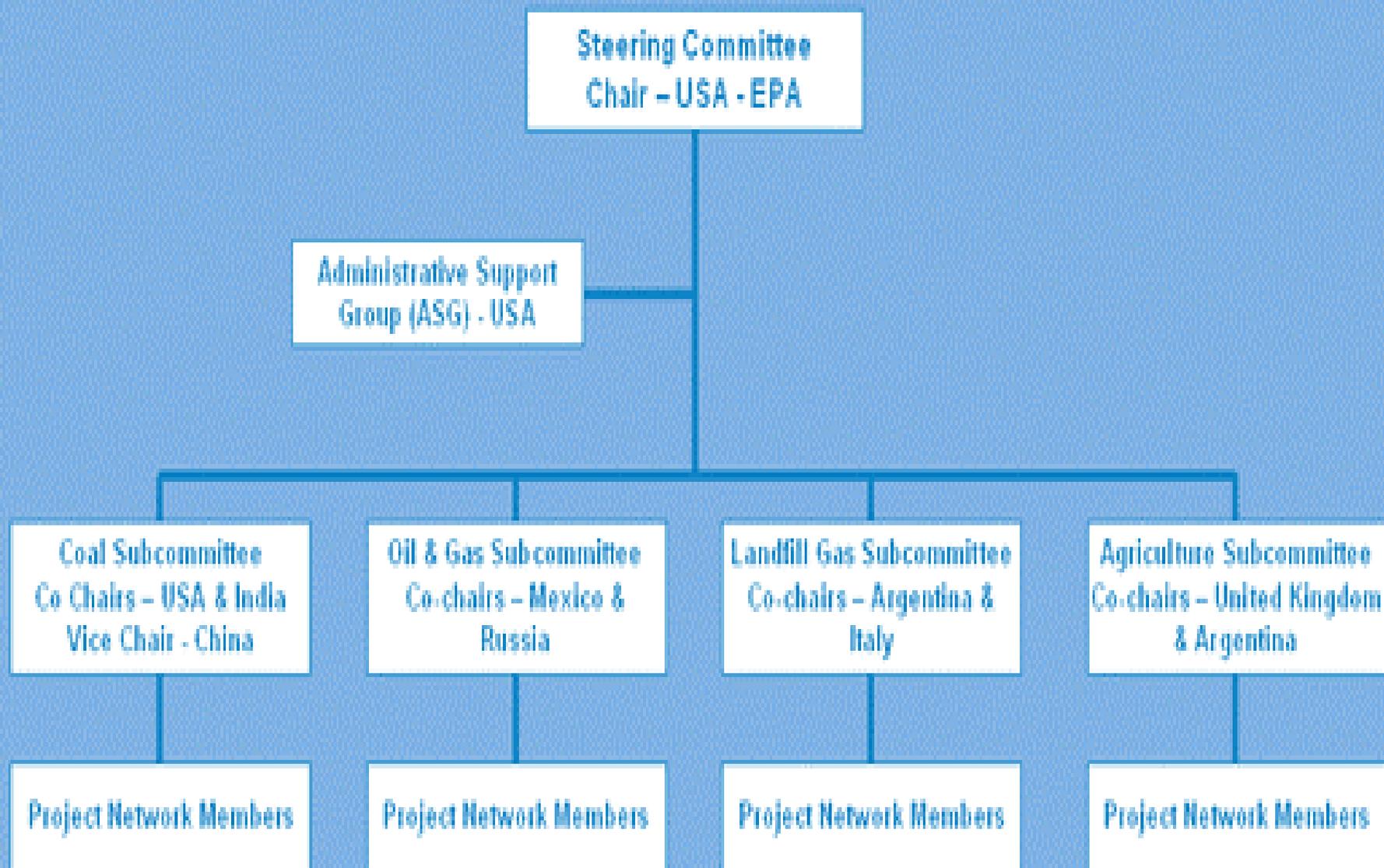
- Advances recovery and use of methane as a valuable clean energy source
- Encourages development of **cost-effective** methane recovery and use opportunities in
 - coal mines
 - landfills
 - oil and gas systems and
 - agriculture (manure waste management)
- Private companies, multilateral development banks and other relevant organizations participate by joining the **Project Network** – *over 250 organizations now participating*

- 17 Partner Countries

Argentina	Italy
Australia	Japan
Brazil	Korea
Canada	Mexico
Colombia	Nigeria
China	Russia
Ecuador	Ukraine
Germany	United Kingdom
India	United States



Partnership Organization



The Project Network

- Project network members are private firms, development banks, NGOs or other governmental and non-governmental entities with an interest in methane recovery and use projects
- Currently over 250 organizations including:
 - World Bank
 - UN Economic Commission for Europe
 - Consultants and Project Developers
- Private sector and broad stakeholder involvement is central to the success of the Partnership
 - Provide technical input and expertise
 - Participate in all activities and meetings
 - Identify and implement activities and projects
- Project Network Members can submit project ideas on-line at <http://www.methanetomarkets.org/projects/submit-ideas.htm>
- Organizations can join on-line at www.methanetomarkets.org

Methane to Markets: Accomplishments to Date

- Initiated international cooperation on methane recovery and use opportunities
- Developed sector action plans that provide the foundation for future accomplishments
- Initiated projects and other activities in target sectors to advance project development
- Expanded partnership to focus on opportunities in agriculture (manure management)



Steering Committee Decisions and Outcomes from Buenos Aires

- Subcommittees to further refine Action Plans
 - Living documents to be updated at each subcommittee meeting
 - Provides guidance for activities for Partners and PN members
 - Focus on developing actions and projects that respond to country specific circumstances (e.g. specific barriers to projects in Russia, Mexico etc...)

- Methane to Markets Project and Technology Expo in 2007
 - Goal is to help catalyze near-term project development
 - Taskforce convened and developed recommendations for the Steering Committee
 - **Francisco Ocampo, Argentina; Edgar Thornton, U.S. participated on behalf of the Landfill Subcommittee**

- Develop and implement a tracking system for project and activities under the Partnership
 - Results and outcomes must be tracked

2007 M2M Partnership EXPO

FALL 2007 – BEIJING, CHINA

- Key Objectives
 - Showcase methane project opportunities and identify project partners
 - Showcase methane recovery and use technologies and services
 - Discuss key technical, policy, financial, and other project development issues
 - Highlight key M2M projects to date

- Participants
 - All organizations interested in methane recovery and use project development
 - Project developers, financial institutions, equipment manufacturers/vendors, site and/or project managers, non-governmental organizations, national and international policy makers, etc.

Partnership Expo Taskforce

- New Title: *“Partnership Expo: A Forum for Projects, Technology, Financing, and Policy”*
 - reflects broader focus beyond a simple project expo

- The Expo will be 3-4 days and include a number of elements
 - Sector-specific conference tracks that highlight and explore key technical and policy issues for each of the four sources of methane, as well as cross-cutting themes which need to be addressed, and which could feature project case studies, regulatory approaches, financing mechanisms, and discussions of key barriers.
 - Exhibition booths for technology vendors, those with project opportunities they wish to highlight, financing organizations etc...
 - Opportunities (such as panels or short presentations) to showcase specific projects that need financing.
 - Subcommittee meetings and Steering Committee meetings

****** The Partnership Expo will be the premier M2M event over the next year and can act as an opportunity to move projects and activities forward***

Partnership Expo: Charge to Subcommittees

- **Identify, solicit, and promote projects to feature at the Expo**
 - Actively solicit and identify high quality projects and technologies for presentation.
 - Subcommittees should list specific action items that each Partner can take to support project development for the Expo. (e.g. providing funding for pre-feasibility studies, surveying countries for project opportunities, utilizing the project idea submission form to identify potential projects). These items can be incorporated into the Sector Action Plans.

Partnership Expo: Charge to Subcommittees (con't)

- **Utilize on-line submission form for projects to be featured at the Expo**
 - Utilize the project submissions form already approved by the Partnership for submitting projects to the Partnership Expo.

- **Develop Guidance for Project Submissions**
 - Subcommittees should develop guidance for the additional information necessary for financiers to seriously consider investing in a project.
 - The guidance should be extensive enough to ensure that projects are adequately characterized and ready for investment.
 - Subcommittees should plan to provide their final guidance document to the ASG by the end of July 1 2006 for posting on the methanetomarkets.org site. Critical information requested in the template could include the following:
 - Gas Recovery Projections
 - Options for Gas Collection and Utilization Systems and/or methane emissions reduction technologies
 - Evaluation of project costs
 - Economic evaluation
 - Environmental benefits
 - Conclusions and recommended next steps

Partnership Expo: Charge to Subcommittees (con't)

- **Continue Participation in Expo Taskforce**
- **Planning for Expo**
 - Subcommittees should plan to develop a thematic conference track for their sector. Subcommittees may wish to discuss key sectoral themes, issues, and barriers that they would like to address as a part of the Expo
 - Subcommittees will be asked to develop an agenda for approximately one and half days of sectoral forum discussions, as well as to input to any cross-cutting elements.

Project and Activity Tracking System

- Goals
 - Project Ideas matching with developers
 - Tracking Ongoing and Completed Methane to Markets Activities
 - Activities such as tech transfer workshops, reports etc...
 - Project implementation status
 - Tracking projects and activities to highlight in the Project Expo 2007
- ASG Developing on-line system now
 - Launch by Fall 2006
 - Encourage countries and PN members to include all methane project related activities
 - Will allow us to track the impact of the Partnership on project development, capacity building etc...

Key Items for Subcommittee Action

- Update Sector Action Plan
 - Move from global to country specific focus to encourage project collaboration amongst Partners and Project Network, targeting concrete activities.
- Identify Partnership Expo Activities and include in action plan
 - Optimal focus to create a valuable event for the oil and gas sector
 - Activities to promote the event
- Tracking Projects and Project Ideas On-line
 - Actively track projects in coordination with ASG
 - Encourage use of Project Submission Form
- Outreach and Communication or Other activities
 - Present to key groups and organizations to recruit Project Network members
 - Scheduling activities, workshops, etc., to ensure broad Project Network participation in Subcommittee meetings
 - Next Subcommittee Meeting

Methane to Markets Outreach Resources

- Methane to Markets Website (www.methanetomarkets.org)
 - Central point for all methane related information
 - Expand sector specific information and provide useful tools
 - Constantly updated input and suggestions are encouraged
 - Timely information on funding opportunities
 - On-line project submission form to showcase ideas for projects and activities and ongoing projects

- Methane International Newsletter
 - Looking to highlight success stories in the Oil and Gas sector
 - Next Issue due – July 2006

- Project Network members and Country Partners are encouraged to contact us to be included in our outreach activities

M2M Funding Opportunities

- USAID's Global Development Alliance (GDA)
 - Private sector eligible
 - http://www.usaid.gov/our_work/global_partnerships/gda/

- USAID's India Mission provides \$400,000 of funding through GDA grants
 - Private sector is eligible
 - RFP ends June 16, 2006
 - http://www.usaid.gov/in/working_with_us/grant_opportunity.htm

- U.S. EPA Grant for M2M Projects for up to \$2.5 M over 3 years
 - Request for proposals begin summer 2006 for funding in early FY07
 - Non-profits eligible

- International Utility Efficiency Partnership
 - Will fund 10-15 GHG reduction projects with a total value of \$2,000,000 including a 50/50 cost share requirement for FY06
 - Request for Proposals closed April 20

M2M Meetings/Events

- 2 May 2006 - Commission on Sustainable Development
 - Partnership Fair
- 23 May 2006 – Coal Subcommittee Meeting, Alabama, U.S.
 - Co-located with International Coal Mine Methane Symposium
- Agriculture Subcommittee Meeting – TBD
- Steering Committee Meeting – 4th Quarter 2006
 - Meeting of the Steering Committee only. Subcommittee co-chairs should also plan to attend to provide updates on their progress.
- Fall 2007– Beijing, China - Partnership Expo
 - Co-located with Steering Committee and all subcommittee meetings



Brian McLean, US EPA, Horacio Terraza, World Bank Landfill Gas to Energy Project, Sharon Lee Smith, EC (moderator), John Gehring, Caterpillar Inc., and Arden Berg, Alberta Energy and Utilities Board

For More Information

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