



Methane to Markets

Landfill Subcommittee Report to Steering Committee

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Overview

- Activities since March 2010
 - New Delhi Subcommittee Meeting Highlights
 - Selected Subcommittee Achievements
- Issues for Steering Committee Consideration
- Next Steps

Subcommittee Activities Since March 2010

- New Delhi Partnership Expo
 - Showcased 55 landfill sector project opportunities in 10 Partner Countries
 - Showcased 11 landfill project success stories in Brazil, China, India, Mexico, Thailand, and Ukraine
 - Reviewed abstracts and organized a technical seminar for landfill sector topics covering:
 - Advancing Landfill Biogas Projects
 - Site Operations for Improving Gas Recovery and Site Safety
 - Assessing Landfill Gas Project Potential
 - Methane to Markets Grants Supporting Innovative LFG Utilization Technologies
 - LFG Projects and the Clean Development Mechanism

Subcommittee Activities Since March 2010 *(continued)*

- Subcommittee Leadership
 - At 11th Subcommittee meeting Colombia and the United States were adopted as interim co-chairs with Argentina
 - Subcommittee leadership will be re-evaluated in 2011
- Outreach and Communications
 - Methane International Article Input
 - May 2010 Issue highlighted infrared heater project at Argentina's Escobar landfill (a 2007 Partnership grant recipient)
 - May 2010 Issue promoted June 2010 Argentina Workshop "Creating Viable LFG-to-Energy Project in Latin America"
 - Press and Media Outreach
 - Collaboration between Province of Buenos Aires, the Partnership, and ISWA <http://www.opds.gba.gov.ar/index.php/articulos/ver/351>
 - Project Tracking Database Updates
 - Uploaded completed reports, presentations, and project opportunity posters to 16 Methane to Markets grant records
 - Uploaded completed site reports and project opportunity posters to an additional 17 landfill project records

Subcommittee Activities Since March 2010 (*continued*)

- Outreach and Communications:
Landfill Sector Workshops
 - April 2010: Changsa, Jinan, and Wuhan, China – “Landfill Gas to Energy Workshops and Site Tours”
 - April 2010: Belo Horizonte, Brazil - Methane to Markets Landfill Gas to Energy Basics for Environmental Regulatory Officials in the State of Minas Gerais
 - April 2010: Neuquen, Argentina – “Landfill Operations Workshop”
 - April 2010: Mexico City, Mexico – “Opportunities for the Beneficial Use of Landfill Methane Generated in Municipal Sanitary Landfills”
 - May 2010: United States – “Study tour of Landfill Gas-to-Energy Facilities in Southeastern United States”
 - June 2010, Buenos Aires, Argentina - “Creating Viable LFG-to-Energy Project in Latin America”
 - August 2010: Cancun, Mexico – “LFG Workshop at 8th National ICLEI Congress”
 - August 2010: La Plata, Argentina – “LFG Methane a Clean Energy Source”
 - September 2010: United States – “Study tour of High Btu and Direct Use Gas-to-Energy Facilities in Texas and Louisiana”

Issues for Steering Committee Consideration

- Organization of Wastewater Sector
 - Temporary task force to identify experts within each interested Partner Country
 - Stand-alone subcommittee
 - Incorporated within either the Landfill or Agriculture Subcommittee

Next Steps

- Next Subcommittee Meeting
 - 11-12 November 2010
 - Venice, Italy
 - In conjunction with:
 - Third International Symposium on Energy from Biomass and Waste
 - Agriculture Subcommittee
 - Wastewater Task Force Meeting

Next Steps

- Future Work
 - Work within Landfill Subcommittee and cooperatively with the Steering Committee, wastewater task force, and Agriculture Subcommittee to identify how wastewater topics will interact with the scope of the landfill subcommittee
 - Discuss a detailed outline of the LFG project development best practices handbook and make suggestions for chapters.
 - Continue to improve tracking system for landfill sector projects and activities

Appendix: Example Activities by Country

■ **Argentina**

- Promoted 7 project opportunities at the New Delhi Expo
- Hosted regional workshop in June 2010 “Creating Viable LFG-to-Energy Project in Latin America” in conjunction with the International Solid Waste Association (ISWA) and Methane to Markets
- Presented on two Methane to Markets grant project successes at Escobar and Olavarria landfills during the New Delhi Expo
- Held workshops in Neuquen and La Plata

■ **Brazil**

- Promoted 10 project opportunities at the New Delhi Expo
- Showcased project successes at the New Delhi Expo for submitting CDM registration documents at Belo Horizonte and Uberlandia landfills
- State of Minas Gerais and US EPA hosted a workshop on “Landfill Gas to Energy Basics for Environmental Regulatory Officials”

■ **Bulgaria**

- Initiated data collection for Bulgaria landfills under a Methane to Markets grant

Appendix: Example Activities by Country (continued)

- **Chile**

- Initiated work on a landfill inventory under a grant from the Methane to Markets Partnership

- **China**

- Promoted 10 project opportunities at the New Delhi Expo
- Showcased project successes at New Delhi Expo:
 - Registering Chengdu landfill with the CDM
 - Energy project successes for a microturbine installation at Mentougou landfill and a second engine installation at Gaoantun landfill
- Assessment of Hubei-Hongshantou landfill is ongoing
- Hosted site visits to Changsa, Jinan and Wuhan landfills

- **Colombia**

- Promoted 5 project opportunities at the New Delhi Expo
- Completed assessments of El Tejar and Villa Karina landfills under a Methane to Markets grant
- Final assessment reports of El Guacal, Nuevo Mondenedo, and San Juan del Baro completed by US EPA

Appendix: Example Activities by Country (continued)

- **Ecuador**

- Promoted 4 project opportunities at the New Delhi Expo
- Pichacay landfill is developing a tender for design of a gas collection system

- **India**

- Promoted 7 project opportunities at the New Delhi Expo
- Showcased project success at New Delhi Expo for commissioning of the Gorai landfill CDM flare project
- Assessment reports of Lucknow, Agra, and Dhapa (Kolkata) landfills completed by US EPA
- FICCI completed a study tour of landfill gas energy projects in the Southeastern United States

Appendix: Example Activities by Country (continued)

■ **Mexico**

- Promoted 5 project opportunities at the New Delhi Expo
- Showcased a project success at New Delhi Expo for plans to issue a Request for Proposal in 2010 for construction of a gas collection system at Nuevo Laredo landfill
- Completed assessments of Nogales and Saltillo landfills under a Methane to Markets grant
- Border Environment Cooperation Commission (BECC) Hosted April 2010 Workshop “Opportunities for the Beneficial Use of Landfill Methane Generated in Municipal Sanitary Landfills” under a Methane to Markets Grant
- Completed study tour of direct use and high btu LFG projects in Texas and Louisiana
- Hosted a LFG workshop at the 8th National ICLEI Congress

■ **Poland**

- Promoted one project opportunity at the New Delhi Expo at the Mielec Landfill

Appendix: Example Activities by Country (continued)

- **Russia**
 - Promoted one project opportunity at the New Delhi Expo at the Kargashino Landfill

- **Serbia**
 - Collaborating with Methane to Markets to host a LFG workshop at the December 2011 International Solid Waste Association (ISWA) event
 - Translated International Landfill Database data collection forms and developed a preliminary database of Serbia landfills.

- **Thailand**
 - Showcased project success at New Delhi Expo for plans to generate power on-site at ESBEK landfill

Appendix: Example Activities by Country (continued)

■ **Ukraine**

- Promoted 4 project opportunities at the New Delhi Expo
- Showcased Methane to Markets grant project successes for an energy recovery project at Khelminstky landfill and a flare commissioning at L'viv landfill
- Showcased a project success at New Delhi Expo for the design of a gas collection system at Mariupol landfill
- Renewable Energy Agency is assessing the Rivne landfill under a Methane to Markets grant

■ **United States**

- Currently reviewing grant applications for 2010 grant awards
- Conducted assessment reports in China, Colombia, India and Vietnam
- Hosted study tours for Mexico and India delegates

Appendix: Example Activities by Country (continued)

- **United States (continued)**
 - Coordinated workshops and site visits in Argentina, Brazil, China, Mexico, and the Philippines
 - Continued management of International Landfill Database
 - Tool now contains over 700 landfills and over 150 flare or energy recovery project records

- **Vietnam**
 - Final assessment report of Phouc Hiep Landfill completed by US EPA