

**Methane to Markets Partnership
Oil & Gas Subcommittee
29 January 2009
Monterrey, Mexico**

FINAL MINUTES

Summary of Key Discussions and Conclusions

Thirty participants attended the Oil and Gas Subcommittee meeting, representing eight countries: Bolivia, Canada, Chile, India, Japan, Mexico, Poland, and the United States. During this meeting, the attendees largely focused on the Methane to Markets Partnership-wide Accomplishments Report and planning for the India Partnership Expo in 2010. The group also discussed various Subcommittee administrative activities.

The meeting attendees established these main action items:

Methane to Markets Partnership-wide Accomplishments Report Development and Feedback

- Provide the ASG with project and activity information. This will be due within 60 days of receipt of the template—mid-April 2009.
- Review text version of the report and provide comments. This will be due within 45 days of receipt of the report—early- to mid-July 2009.
- Review graphical version of the report and provide comments. This will be due 45 days from receipt of the report—early- to mid-October 2009.
- Approve final version of the report. This will be due 14 days from receipt of the final report—late-October 2009.

India Partnership Expo

- Each Subcommittee member should identify at least two potential oil and gas sector methane emission reduction activities to highlight at the India Partnership Expo. Present ideas at the next Subcommittee meeting.
- Each Subcommittee member should identify at least two potential oil and gas sector methane emission reduction activity contacts that they have chosen to highlight at the India Partnership Expo. Present ideas at the next Subcommittee meeting.

Oil and Gas Subcommittee—Administrative

- Prepare a list of target companies from various geographic regions/countries with which Subcommittee members should meet. The list should include key points of contact for each company. Additionally, the Subcommittee will develop a strategic plan to include outreach materials and an agenda for these meetings.
- Delegates from India will follow up with the U.S. Environmental Protection Agency (U.S. EPA) on any special arrangements for a side event for the next Subcommittee meeting.

The Subcommittee also considered possible options for hosting the next Subcommittee meeting. The meeting agenda and list of participants are included as Annex I and II, respectively. The complete meeting proceedings are available at the Methane to Markets Web site.

Welcome and Introductions

Co-Chair Mr. Javier Bocanegra with Mexico's Petróleos Mexicanos (PEMEX) opened the meeting by thanking everyone at the PEMEX —Burgos Gas Processing Complex for hosting the Oil and Gas Subcommittee and for their participation in the Technology Transfer Workshop and Subcommittee

meeting. He further recognized their efforts and overall willingness to discuss program successes. His sentiments were echoed by all Subcommittee chairs and members.

Mr. Bocanegra then led brief introductions of the meeting participants and a review of the meeting goals and adoption of the agenda.

Report from the Administrative Support Group

Ms. Ashley King of the Administrative Support Group (ASG) initiated meeting discussions by presenting a brief report out on the major initiatives of the Partnership:

Accomplishments Report—The ASG will charge the Subcommittees to provide report content and serve as the primary report reviewers.

Next Partnership Expo—The ASG resurrected its Expo Task Force. The next Expo will be held in New Delhi, India in early 2010. Currently, the ASG is identifying sponsors and/or in-kind services and beginning sector-specific session development.

Methane to Markets Partnership-wide Accomplishments Report

The Methane to Markets Partnership-wide Accomplishments Report will provide an overview of the Methane to Markets Partnership's history, international participation, and activities and achievements since the program's inception. The report is expected to be published by December 2009. To accomplish this, the ASG is looking for each Subcommittee to give suggested content for and review text versions of the report and provide comments. The ASG will distribute reporting templates to Subcommittee and Project Network members to solicit additional information for the report. In particular, the ASG is looking for information on activities in support of the Partnership objectives, including project and activity descriptions, potential or actual methane reductions, financial support (e.g., budget, leveraged funds), outcomes and results (including other environmental co-benefits), and photos or other associated graphics.

The ASG will incorporate input from Subcommittee and Project Network members into the report and provide members who submit information the opportunity to review relevant sections of the report. The ASG expects to have a final draft ready around late-October, with print versions ready in December.

Key deliverables and timeline for the Report are as follows:

Provide the ASG with project and activity information. This will be due within 60 days of receipt of the template—mid-April 2009.

Review text version of the report and provide comments. This will be due within 45 days of receipt of the report—early- to mid-July 2009.

Review graphical version of the report and provide comments. This will be due 45 days from receipt of the report—early- to mid-October 2009.

Approve final version of the report. This will be due 14 days from receipt of the final report—late-October 2009.

The upcoming issue of *Methane International* will include additional details regarding the report and the reporting template. All Subcommittee and Project Network members will receive the reporting template via e-mail. The e-mail will contain detailed instructions for completing the template.

The ASG distributed a sample report for attendees to review.

2010 Partnership Expo in India

The ASG is currently in the process of planning for the 2010 Partnership Expo to be held in New Delhi, India in early 2010. The ASG requests that each Oil and Gas Subcommittee member identify at least two potential oil and gas sector methane emission reduction activities to showcase at the India Partnership Expo. Activities might include but are not limited to:

Actual methane emission reduction projects and/or demonstration projects worldwide.
Technologies and practices to identify, measure, and/or reduce methane emissions in the sector.

Technical reports, feasibility studies, and training opportunities.

Environmental information management systems and other tools that aid in oil and gas sector methane emissions reduction project development.

Oil and gas sector methane emissions project development and financing mechanisms.

Activities to showcase might also highlight any ancillary or co-benefits from greenhouse gas (GHG) emissions reductions. Members are encouraged to showcase past methane emission reductions from any timeframe.

Vice Chair Mr. Michael Layer with Natural Resources Canada thought the showcase was an excellent platform for Project Network members to work with Subcommittee members to share project successes—from project inception to actual implementation.

Mr. Roger Fernandez with U.S. EPA reiterated the types of activities members should showcase at the Expo and called everyone's attention to the provided handouts, "Methane to Markets Oil & Gas Subcommittee Timeline for 2010 Partnership Expo—Checklist" and "Oil and Gas Subcommittee Timeline for 2010 Partnership Expo," as the handouts contain key information and dates leading up to the Expo. (See Annex III for the timeline.)

Regarding the types of activities to showcase, Messrs. Bocanegra, Fernandez, and Layer emphasized the need for activity descriptions to provide methane emissions reductions first, and then describe any related ancillary or co-beneficial GHG emissions reductions.

Mr. Larry Richards of Hy-Bon expressed concern about getting project host/sponsor approval to release project-specific data. Mr. Fernandez offered the Partnership's assistance in gaining approval to release data if requested. For project-specific activity data, Mr. Layer explained that members may either use aggregate or disaggregate data as appropriate.

This concluded Ms. King's presentation.

Update from Member Countries

Following the ASG report, Mr. Michael Layer led the update from member countries.

Australia

Although not in attendance, Australia updated their county-specific strategy in preparation for the Subcommittee meeting, to replace their previously submitted strategy. See the [Methane to Markets](#) Web

site for their updated strategy. The ASG received the updated strategy concurrently with holding the meeting, and therefore did not present the strategy at the meeting.

Canada

Mr. Layer reported that Canada secured funding (government and industry) to advance the development of continuous monitoring equipment/models. At the next meeting, Canada hopes to report to the Subcommittee on its progress developing these equipment/models. The Government of Canada's Methane to Markets administrators committed their support for methodology development related to the oil and gas activities.

Canada will continue to work collaboratively with the United States to enhance the *ON TIME Tool* and engage the China National Petroleum Company in ongoing projects in-country.

Chile

Mr. Bocanegra introduced Chile as the newest addition to the Methane to Markets Partnership. Mr. Ricardo Erazo with Enap Sipetrol reported that Chile is enthusiastic about their Partnership participation and looks to its peers in India and Mexico for motivation. Mr. Bocanegra volunteered to facilitate peer exchange discussions to assist Chile.

India

India's Delegates to the Methane to Markets Oil and Gas Subcommittee, Mr. V.K. Dewangan with the Ministry of Petroleum & Natural Gas Government of India and Mr. A.K. Hazarika, Director (Onshore) of the Oil and Natural Gas Corporation (ONGC) of India, provided the update on their country's efforts. Collectively, they reported on ONGC's organizational structure and global footprint. ONGC is a public sector company and contributes over 80 percent of India's oil and natural gas production. ONGC has an overall program mission to "continually strive to reduce CO2 emissions across its activity chain and work on the path of carbon neutrality." To accomplish this mission, ONGC developed short and long term plans to reduce methane emissions.

Their overall program goes beyond the technical elements of methane emissions reduction by considering aspects such as carbon disclosure in their balance sheets and business opportunities. ONGC has four registered clean development mechanism projects with an additional 10 projects in various stages of development.

Since joining the Partnership and Natural Gas STAR International, ONCG has collaborated with the U.S. EPA on four Technology Transfer Workshops throughout India, seven pre-feasibility studies to identify significant emissions sources, and four field measurement campaigns. Through these activities, ONGC has identified methane emission reduction projects that would save 16.3 million cubic meters of methane emissions that are currently being released to atmosphere. They will likely showcase their on-going activities at the Heera Platform and Uran Plant at the upcoming Partnership Expo. Moving forward, India would like to work with the Partnership and all its members to implement technologies and practices that reduce methane emissions.

Japan

Japan's Delegate to the Methane to Markets Oil and Gas Subcommittee, Dr. Kunihiro Shimada with the Ministry of the Environment, reported that Japan continues to support the objectives of the Partnership; however, Japan has not identified any methane reduction projects. Dr. Shimada did report that the Japan

Aerospace Exploration Agency (JAXA) launched the Greenhouse Gases Observing Satellite, also known as GOSAT, on January 23, 2009. This marks the launch of the first satellite dedicated to measuring GHGs, including carbon dioxide and methane, from space. The satellite is capable of monitoring GHGs at 56,000 observation points every three days and observing leakage points with a spatial resolution of 10 kilometers (km), compared to widely-used technologies that have a spatial resolution of about 100 km.

Japan will make data from GOSAT accessible to the public. Interested parties will be able to create an account to access the data through a dedicated Web site beginning in September of 2009. The Partnership invited Japan's GOSAT experts to present at a supportive workshop before the fall Subcommittee meeting and possibly again at the Partnership Expo.

Mexico

Mr. Bocanegra reported that since 2006, Mexico has collaborated with Methane to Markets to identify, measure, and mitigate methane emissions at PEMEX facilities. The work conducted as part of this collaboration has been very methodical, following detailed holistic work plans with target goals.

Through Methane to Markets, PEMEX has been able to build internal capacity, access external consultants not otherwise available and has achieved emission savings of approximately 30,000 Metric Tons Carbon Dioxide Equivalent (MTCO_{2e}), through directed inspection and maintenance and the replacement of wet seals on compressors. Moving forward, PEMEX will look for other opportunities to advance Methane to Markets objectives, apply lessons learned to all methane emission reduction activities, overcome barriers, and support governmental strategies. Mexico is honored to have had this opportunity and to share its experience with the Subcommittee and Project Network members during the Technology Transfer Workshop.

Mr. Erazo inquired about the barriers PEMEX faced implementing activities to reduce methane emission. Mr. Bocanegra remarked that they faced many barriers, including making emissions reduction a strategic goal, changing the authority's mindset from one of producing to one of reducing, capacity building, and ensuring that the company allocated resources (people and financial) to emission reduction activities.

Ms. Bylin asked what the Partnership could learn from PEMEX's experience in order to engage other companies. Mr. Layer replied that the Partnership should be solution oriented, showing the value added potential of emission reductions. He further commented that the Partnership can engage others by demonstrating project results. Mr. Donald Robinson of ICF International remarked that many companies are implementing technologies and practices that reduce emissions; however, these reductions are not being documented or captured.

Mr. Bocanegra wrapped up this discussion by suggesting that the Subcommittee prepare a list of target companies from various geographic regions/countries with which Subcommittee members should meet. The list should include key points of contact for each company. Additionally, the Subcommittee will develop a strategic plan to include outreach materials (that could include case studies) and an agenda for these meetings. The Subcommittee members agreed with Mr. Bocanegra's proposal.

Poland

Ms. Eliza Dyakowska with Gaz-System S.A provided the update on her country's efforts. Gaz-System S.A. recently joined the Natural Gas STAR International Program. Ms. Dyakowska reported that they

have conducted an emissions inventory and that Poland has the opportunity to reduce methane emissions much like its peers. Moving forward, Poland would like to work with the Partnership and Natural Gas STAR International to conduct a more robust emissions inventory.

United States

Mr. Fernandez updated participants on the United States' strategic plan activities. Mr. Fernandez reported that most U.S. activities are coordinated through the Natural Gas STAR and Natural Gas STAR International Programs. The U.S. EPA Program Managers for their international activities include Ms. Carey Bylin and Ms. Suzie Waltzer.

Mr. Fernandez reiterated key points from the Steering Committee report out, including encouraging members to prepare for the Partnership Expo and update and develop their Action Plans. Further, he offered U.S. government assistance if requested. He also reported on the key obstacles to project development—opportunity cost attractiveness, capacity building, regulatory barriers, and partner government commitment.

The U.S. EPA launched the *ON TIME Tool* (formally the Nodal Analysis Tool) on the Methane to Markets Web site. The Tool is capable of indentifying methane emission reduction technologies and practices at each step in the oil and gas industry. He recognized the Government of Canada for their initial project funding and further noted that the United States and Canada will continue to support and enhance the *ON TIME Tool*.

The United States has on-going, collaborative activities in Argentina, Brazil, Canada, China, Ecuador, India, Kyrgyz Republic, Mexico, Poland, Russia and Ukraine. These efforts will identify, analyze, promote, and track methane emission reductions from projects and engage new, perspective Partnership members. The United States is also beginning to work collaboratively with Romania.

The U.S. EPA has completed translations of technical documents into Chinese, Russian, and Spanish. Through Natural Gas STAR, the United States continues to engage domestic oil and gas companies in all sectors to promote methane emission identification, measurement, and reduction activities.

Mr. Hazarika expressed considerable interest in the success of the Natural Gas STAR Program and inquired about overall Program emissions reductions totals. Mr. Fernandez and Ms Bylin replied that since 1993, the oil and gas industry has reported the elimination of nearly 677 billion cubic feet (Bcf) of domestic methane emissions through the implementation of cost effective technologies and practices. Further, the representative from India expressed interest in replicating similar results in-country. To support these intentions, Mr. Robinson suggested that the U.S. EPA provide ONGC with a pie chart showing emissions breakdowns at sector- and component-specific levels. Ms. Bylin and Mr. Hazarika agreed to discuss this further at a later date.

Administrative Issues

Following the Partner country updates, Mr. Bocanegra led a discussion on administrative issues. The members agreed that Subcommittee communications are effective. Mr. Bocanegra noted one new addition to the Partnership roster, Chile. Canada offered to host the next meeting and a supportive workshop. The Subcommittee accepted Canada's offer. The next meeting will be held in Canada during the week of September 14th.

Mr. Hazarika indicated that India might be interested in additional meetings and/or training to coincide with the next meeting. The members agreed that delegates from India will follow up with the U.S. EPA on any special arrangements.

Mr. Robinson initiated a brief discussion of competition issues amongst Project Network members. He stated that Project Network members are in a unique position in the marketplace and have considerable insight as to what is going on in the oil and gas industry. Mr. Richards suggested that the Partnership needs greater participation from its Project Network members, and that members need to present more implemented projects at Subcommittee meetings. Mr. Layer acknowledged his remarks.

Summary of Action Items

Ms. Allison Berkowitz summarized the major action items decided upon at the meeting that related to the Methane to Markets Partnership-wide Accomplishments Report and planning for the India Partnership Expo in 2010. The main action items include the following:

- Methane to Markets Partnership-wide Accomplishments Report Development and Feedback
 - Provide the ASG with project and activity information. This will be due within 60 days of receipt of the template—mid-April 2009.
 - Review text version of the report and provide comments. This will be due within 45 days of receipt of the report—early- to mid-July 2009.
 - Review graphical version of the report and provide comments. This will be due 45 days from receipt of the report—early- to mid-October 2009.
 - Approve final version of the report. This will be due 14 days from receipt of the final report—late-October 2009.
- India Partnership Expo
 - Each Subcommittee member should identify at least two potential oil and gas sector methane emissions reduction activities to highlight at the India Partnership Expo. Present ideas at the next Subcommittee meeting.
 - Each Subcommittee member should identify at least two potential oil and gas sector methane emissions reduction activity contacts that they have chosen to highlight at the India Partnership Expo. Present ideas at the next Subcommittee meeting.
- Oil and Gas Subcommittee—Administrative
 - Prepare a list of target companies from various geographic regions/countries with which Subcommittee members should meet. The list should include key points of contact for each company. Additionally, the Subcommittee will develop a strategic plan to include outreach materials and an agenda for these meetings.
 - Delegates from India will follow up with the U.S. EPA on any special arrangements for a side event to the next Subcommittee meeting.

The ASG will work with the Subcommittee over the next few months to complete the action items in anticipation of their discussion at the next Subcommittee meeting.

Mr. Bocanegra thanked everyone for their participation and continued support. The meeting was adjourned.

Annex I

Oil & Gas Subcommittee Meeting AGENDA Thursday, 29 January 2009

09:00 – 10:30 Steering Committee Report Out and Charge to Subcommittees

10:30 - 10:45 ASG

Provide a general progress report/status update on the overall ASG activities
Discuss Methane to Markets Partnership-wide accomplishments report and need for Subcommittee involvement
Discuss proposed strategy for increased Project Network engagement and acknowledgement
Reinforce Steering Committee decision on plans for the 2010 Partnership Expo in India

10:45 – 11:00 Coffee Break and Breakout to Oil & Gas Subcommittee Meeting

11:00 – 11:30 Welcome, Brief Introduction of Meeting Participants/Review of Meeting Goals, and Adoption of Agenda – *Chairman Kaplan Basniev (Russia), Chairman Javier Bocanegra (Mexico), and Vice Chairman Michael Layer (Canada)*

11:30 – 13:00 Oil and Gas Subcommittee Delegate Updates. Each country delegate in attendance shall present on the following topics:

- Complete, in-process, and future (planned) oil and gas methane emission reduction project activities
 - o Projects may be in-country or in another location (ie. Developed-country capacity building in countries that are developing or with economies in transition)
 - o Status of projects presented at Beijing Expo (Mexico and Ukraine only)

13:00 – 13:45 Lunch: Midday meal will be served such that participants will bring lunch back into the meeting room for a working lunch.

13:00 – 13:45 Oil and Gas Sector Methane Emissions Reduction Project Case Studies
Mr. AK Hazarika, Oil and Natural Gas Company of India
PEMEX

13:45 – 14:00 Methane to Markets Partnership-wide Accomplishments Report
ASG

Background
Report Development Process and Status
Timeline

14:00 – 14:30 2010 Partnership Expo in India

ASG

- Goals of the 2010 Partnership Expo
- Discussion of Beijing Expo Lessons Learned
- Discussion of overall India Expo oil and gas program

14:30 – 15:00 Coffee Break

15:00 – 15:30 2010 Partnership Expo in India (continued)

ASG

- Targets for country-specific participation at 2010 Expo in India
 - o Based on project activities previously discussed, identify at least two oil and gas companies to attend and participate
 - If possible, also include emissions reduction technology manufacturers and service providers
 - o Identify at least two specific oil and gas sector methane emissions reduction projects to be showcased
- Proposed 2009 work plan for encouraging participation of targeted companies and highlighting targeted projects

15:30 – 16:00 Administrative Issues

Subcommittee Chairs

- Next meeting (when and where?)
- Communications mechanisms (i.e., what works best?)
- Updates to Subcommittee rosters

16:00 – 17:00 Summary of Action Items Discussed at this Meeting

ASG

- Meeting action items
- Specific India Expo tasks that delegates agree to accomplish and report on at the next meeting—Open discussion on how delegates will prepare for the Expo and what they will be doing between now and the next Subcommittee meeting (Fall 2009)
- Discussion of possible agenda topics for the next Subcommittee meeting

17:00 Adjourn

Annex II

Javier Bocanegra	Petróleos Mexicano/ jbocaneg@pemex.gob.mx
Michael Layer	Natural Resources Canada/ mlayer@nrca.gc.ca
Tito Hoover Nunez Wayar	Universidad del Valle/ energiacba@univalle.edu
Donald Robinson	ICF International/ drobinson@icfi.com
Jorge Plauchu	PA Consulting/ plauchu@alestra.net.mx
Edgar Martinez	Fluid Techicos/ emartinez@fluidostecnicos.com.mx
Jesus Antonio Sustaita Liradr	PEMEX Gas/ jsustaita@gas.pemex.com
Israel Martinez	PEMEX Gas/ imartinez@gas.pemex.com
Qamar Malik	Abbott Energy Canada/ qamar.malik@abbottenergy.ca
Gloria Herrea	PEMEX Petroquimica/ gcherrera@ptq.pemex.com
Jim Adams	Norriseal/ jadams@norriseal.com
Dave Schnaars	Solar Turbines/ dave.schnaars@solarturbines.com
Larry Richards	Hy-Bon/ lrichards@hy-bon.com ,
Mario Nunez	PEMEX. manunez@pemex.gob.mx ,
Carola Rodriguez	OneCarbon/ c.rodriguezgonzalez@onecarbon.com ,
Andrea Chisholm	Sealweld/ andrea@sealweld.com ,
Rad Arient	Sealweld/ r.ariant@sealweld.com
Hugh Chisholm	Sealweld/ houstondirect@swbell.net
Carey Bylin	U.S. EPA/ bylin.carey@epa.gov
Roger Fernandez	U.S. EPA/ fernandez.roger@epa.gov
Kuni Shimada	Ministry of the Environment Japan/ kunihiko_shimada@env.go.jp
V.K. Dewangan	Ministry of Petroleum & Natural Gas, Government of India/ vk.dewangan@nic.in
A.K. Hazarika	Oil & Natural Gas Corporation India/ dir_onshore@ongc.co.in
S. Dasgupta	ONGC, India/ gupta_sd@ongc.co.in
Gloria Salas	Instituto Nacional de Ecologia/ gsalas@ine.gob.mx
Socorro Butanda Gonzalez	Instituto Tecnologica de la Laguna/ quimsb@hotmail.com
Vladimir Hugo Garcia Quiroz	Flowserve/ vlgarcia@flowserve.com
Eliza Dyakowska	TSO Gaz-System SA/ eliza.dyakowska@gaz-system.pl
Ricardo Erazo	ENAP Sipetrol/ rerazo@sipetrol.cl

Please see the Methane to Markets Web site for full contact information

Annex III

