METHANE TO MARKETS PARTNERSHIP COAL SUBCOMMITTEE MEETING



11th Session of the Coal Subcommittee 5 March 2010 Taj Palace Hotel New Delhi, India

FINAL MINUTES

Coal Technical Sessions: 3 – 4 March 2010

A plenary session on 3 March welcomed participants from all sectors, with introductory addresses provided by: Y K Modi, past president of the Federation of Indian Chambers of Commerce and Industry (FICCI); Blair Hall, of the U.S. Embassy; and Dina Kruger, Director of U.S. EPA's Climate Change Division. Additionally, welcome addresses were delivered from representatives of five Indian ministries: Ministry of Environment and Forests, Ministry of New and Renewable Energy, Ministry of Urban Development, Ministry of Coal, and Ministry of Petroleum and Natural Gas. Following the plenary session was a roundtable discussion of policy framework affecting all four Methane to Markets sectors. Expo participants then split into sector-specific sessions for the remainder of the first day. Day 2 began with a second roundtable discussion, which covered financing mechanisms for methane mitigation projects. The roundtable was followed by four more technical breakout sessions for each sector.

Each of the six coal sessions featured a different panel of speakers from multiple countries and backgrounds. Topics covered included:

- Policies and regulations impacting coal mine methane (CMM) project development (Sessions 1 and 3)
- Status and trends in CMM project development (Session 2)
- Technology development in the CMM sector for both rich gas and ventilation air methane (VAM) (Sessions 4 and 5)
- Best practices guidance for CMM drainage and utilization (Session 6)

Presentations can be found on the Methane to Markets Web site, at: http://www.methanetomarkets.org/expo/coal.htm.

Subcommittee Meeting – 5 March 2010

Summary

The Coal Subcommittee held its eleventh session on 5 March 2010 in New Delhi, India, on the last day of the 2010 Methane to Markets Partnership Expo. Attendees discussed post-Expo activities for the Subcommittee, focusing in particular on the Steering Committee charges to the subcommittees, which

were reported during the Expo's closing plenary session. Additionally, representatives from Partner countries as well as the Project Network shared updates relating to CMM activities.

Opening Remarks and Introduction

The Coal Subcommittee meeting took place on the final day of the Partnership Expo, after the final roundtable session and closing plenary session. The meeting was attended by Methane to Markets Partner country delegates, Project Network members, and Administrative Support Group (ASG) staff, as well as other Expo participants and observers. More than 35 people, representing 11 countries, were present. A list of attendees is included as Annex 1 to these minutes. The meeting was opened at 12:10 pm.

Presiding over the meeting were:

- Acting Co-chair Dr. Jayne Somers, Program Manager of the Coalbed Methane Outreach Program (CMOP) at the U.S. Environmental Protection Agency (U.S. EPA).
- Co-chair Mr. Ashok Singh, Managing Director of the Central Mine Planning and Design Institute (CMPDI) in India.
- Vice-chair Dr. Huang Shengchu, President of the China Coal Information Institute (CCII).

Dr. Somers opened the meeting by expressing her appreciation for everyone's attendance. She noted the success of the previous days' technical and policy sessions and expressed her hopes that everyone would have a chance to see all of the project opportunities featured at the Expo. She then introduced Co-chair Ashok Singh and Vice-chair Huang Shengchu.

Mr. Singh and Dr. Huang gave introductory remarks, and at Dr. Somers's suggestion, introductions of country delegates, Project Network members, and other attendees followed. After introductions were made, Dr. Somers summarized the Subcommittee meeting objectives. The meeting's primary goal was to engage Partner country delegates and private sector representatives in a productive discussion about the post-Expo activities of the Coal Subcommittee and plans to carry out the charges from the Steering Committee to the Subcommittee.

Dr. Somers reviewed the agenda items, and after adding Kazakhstan to the list of countries expected to provide updates, attendees unanimously adopted the agenda. A copy of the agenda is included as Annex 2 of these minutes.

Update from the Administrative Support Group

Mr. Henry Ferland, Co-Director of the Methane to Markets ASG, followed with a review of the Steering Committee's charges to the subcommittees. He began by thanking the Coal Subcommittee for all its work relating to the Expo, including the development of technical and policy sessions and the identification of project opportunities and success stories that were featured in posters and flyers at the event. He then summarized the charges as follows:

- 2010 Expo follow-up:
 - o Continued project opportunity promotion
 - o Tracking of project opportunity development
 - o Expo participation publicity through press releases and Web site
- Subcommittee leadership:

- o Should be reviewed every three years
- o New co-chairs selected as necessary
- o Up to three chairs for each sector

• Outreach efforts:

- o Provision of information for redesigned Web site on ongoing basis
- o *Methane International* newsletter features for projects, conferences, or other success stories
- o Media outreach and press-release links on Web site
- o Distribution of Methane to Markets materials
- o Presentations at relevant conferences or meetings
- o Use of project tracking system
- o Engagement of Project Network
- o Promotion of Partnership Accomplishments Report

• Future work:

- o Continuation of country action plan development
- One more Subcommittee meeting in 2010, either in person or via phone or Webinar
- o Exploration of links between Subcommittee work and other initiatives or partnerships
- Consideration of scope expansion to include methane abatement in addition to methane use projects

After Mr. Ferland's presentation, the floor was opened for questions and comments.

- Dr. Somers asked by what specific means the Methane to Markets materials would be distributed. Mr. Ferland replied that interested parties could simply e-mail the ASG with a request and the ASG would send them any relevant brochures. Ms. Felicia Ruiz with U.S. EPA's CMOP clarified that the ASG's e-mail address is asg@methanetomarkets.org.
- Mr. Ferland was asked to further explain the issue regarding methane abatement. Mr. Ferland responded that the Partnership's original focus was the development of projects that would actually use captured methane while reducing its emissions, but now it is also important to consider other mechanisms for reducing methane, for example from rice cultivation or enteric fermentation, that don't necessarily have the benefit of energy production. He noted that this was not a policy measure, but just an idea under consideration for the Partnership. Dr. Somers noted that in the coal sector, abatement would come in the form of methane emissions avoided or methane emissions destroyed through flaring or some other technology that would not have.

Partner Country and Project Network Updates

Following the discussion on Mr. Ferland's presentation, country representatives were asked to provide the Subcommittee with updates on their countries' progress with respect to CMM policy and project development. Additionally, participating Project Network members were invited to present technology or project development updates for the private sector. Brief summaries of each update are provided below.

Australia

Mr. John Karas, of Australia's Department of Resources, Energy and Tourism, explained that their primary focus has been on the Australian government's Carbon Pollution Reduction Scheme, a major

component of which is the Coal Sector Abatement Fund, a \$270 million fund set up to support coal mine waste projects in Australia. Legislation to implement the program is currently before Parliament. Some of the things they'll be looking at in the design of the program will be to see how the fund can be used to give priority to the projects that will use methane to generate electricity or put in the pipelines. Mr. Karas noted that it may be difficult to give priority to projects focusing on VAM even though that counts for about two-thirds of the methane emissions from Australian coal mines. Another important element of the program will be technology dissemination internationally, which is where the Partnership will really fit in. Once the program is passed, there will be an even greater opportunity for Project Network members to work with representatives of the Australian coal mine industry to get more projects on the ground, and Methane to Markets is the ideal catalyst for these types of communications.

A question was raised regarding the different roles of the Commonwealth government and the state governments with regard to CMM policies. Mr. Karas explained that all of Australia's resources are owned by the state governments, which manage coal mining operations. However, the Commonwealth government comes into play in terms of the international greenhouse gas responsibilities, and because methane emissions from coal mines are a significant part of Australia's emissions, the Commonwealth government will provide funding (i.e. the Coal Sector Abatement Fund) to assist states in developing CMM/CBM projects. Additionally, the Australia government is developing an emissions trading scheme that will include CMM emissions.

China

Mr. Liu Wenge, of the China Coal Information Institute (CCII), began by saying that in October 2009 the government of China set up a Methane to Markets office to coordinate all four sectors of the Partnership as they relate to China. The main purpose of the office is to assist the National Development and Reform Commission (NDRC) in promoting methane reduction activities in China. Another function of the office is to facilitate the exchange of information between the four sectors. Mr. Liu then spoke briefly about last year's International Symposium on Coal Bed Methane (CBM) and CMM, which took place in November. The symposium covered technical, policy, and financial issues for CBM/CMM in China, and drew more than 100 attendees. Mr. Liu announced the upcoming CBM/CMM recovery and use workshop, to take place in Beijing in June 2010, and indicated that all the Subcommittee meeting attendees were welcome to participate in the workshop.

Dr. Somers asked whether the Methane to Markets office in China Mr. Liu mentioned had a Web site or some other point of contact. Mr. Liu replied that the office does not yet have a Web site, as it was just set up, but does have an e-mail address.

India

Mr. Singh presented a brief summary of the current state of coal production in India to emphasize the importance of coal as an energy resource in this country, noting that the commercial production of CBM has begun with the allotment of 26 CBM blocks by the government of India. Eight more blocks are currently in the bidding process. Mr. Singh announced that a Clearinghouse Web site has been launched, then provided brief updates for the CMM/CBM recovery demonstration projects at Moonidih and Sudamdih mines.

Mr. Singh then summarized the opportunities and challenges involved in the development of CMM in India, noting that India has little expertise with some of the technical challenges and would need assistance from experts in Partner countries. Finally, Mr. Singh explained that VAM development is also a priority in India and that the Coal Mine Planning and Design Institute (CMPDI) has recently generated VAM-specific data for several mines. Discussions have begun with suitable technology providers.

Mr. Karas noted the series of Memoranda of Understanding (MOUs) that were signed between Australia and India to support resources cooperation, and explained that Australia was planning to hold a major dialogue on the subject in June 2010, in Perth. Mr. Karas offered to incorporate CMM into the agenda for that meeting. An Indian participant thanked him and emphasized that although the Indian government is prioritizing the development of CMM, it is still very important to realize methane extraction from open cast mines (CBM), and he encouraged technology providers to keep this in mind.

Japan

Mr. Hiroaki Hirasawa, of the Japan Coal Energy Center (JCOAL), gave a brief statement about the cooperation between Japan's New Energy and Industrial Technology National Development & Development Organization (NEDO) and China's NDRC to implement CMM projects in China. He reported that a training program for coal sector engineers was set up, and that plans are underway for a joint CBM clearinghouse with China and Australia.

Kazakhstan

Mr. Tursyn Baimukhametov, of the Kazakh State Scientific Research Institute of Safety in Mining Industry, explained that only a small fraction of the methane recovered from coal mines in Kazakhstan is actually utilized. The main obstacles to utilization include safety concerns, gas purity and volume, as well as economic feasibility. There is strong disbelief that it could be practical or profitable to implement CMM utilization projects. Additionally, CMM is still treated as natural gas because there is no legislation to distinguish it separately as an alternative energy source. Only one project using CMM is currently operational, and even that uses a mixture of CBM and CMM. The project earns no carbon credits because it began before the Kyoto agreement took place.

Mexico

Mr. Mario Santillan, of MINOSA Mines Engineering, began with a brief summary of the current state of coal production in Mexico. He indicated that in Mexico it is thought that CBM holds more project potential than CMM, and he explained that studies are being undertaken with U.S. cooperation to conduct core samples for CBM exploration at a number of sites within Mexico. Results from these studies should be available in the coming months. Mr. Santillan also provided a brief update of the progress of the MINOSA project.

Mongolia

Mr. Badarch Mendbayar, of the Mongolian Nature and Environment Consortium, stated that Mongolia was rich in natural resources, particularly in coal, and that the Mongolian government is paying much attention to CMM and CBM. He announced that results have been obtained from the recent pre-feasibility study that was funded by an EPA grant. Methane resources from the Nalaikh mine were estimated to be about 15 million cubic meters per ton. The grant was also used to organize several useful workshops which were attended by a number of stakeholders and relevant agency representatives. Mr. Badarch stressed that the next step in Mongolia would really be to revise existing mining laws to support CBM and CMM project development.

Poland

Mr. Jacek Skiba, of the Central Mining Institute of Katowice, reviewed the current status of CMM development in Poland, reporting that there were 30 operating coal mines, 20 of which were draining methane and 14 of which utilize the drained methane. He reported that more than 924 billion cubic meters of methane was released in Poland in 2009. Mr. Skiba then provided an update on a research project funded by the U.S. EPA to quantify VAM emissions at 10 gassy coal mines, followed by and announcement of the Polish Government's full support of Poland's first VAM utilization project. The first steps in developing this project will be taken soon.

Mr. Skiba ended his presentation by explaining that new legislation introduced in 2009, including two items directly related to CMM development, is still on course. One activity will support the economic utilization of methane released during mining operations in coal mines by establishing connections to utilize electrical energy produced by CMM and performing analyses on the amount of energy that could be produced by CMM recovered from mines. The second activity is the introduction of technological solutions enabling the utilization of VAM released from coal mines into the atmosphere.

Ukraine

Ms. Meredydd Evans, of Pacific Northwest National Laboratory, provided a brief but thorough update on behalf of her Ukrainian colleagues who were unable to attend the meeting. She summarized the current status of coal development in Ukraine, stating that there are over 100 underground mines, both publicly and privately owned, which are very deep and hence gassy. This is one reason Ukraine ranks among the biggest coal mine methane emitters internationally. However, Ms. Evans noted that the economic climate for CMM development in Ukraine is not currently very good.

In terms of policy, Ms. Evans explained that a number of laws have passed in the last year. One is the Law on Coal Mine Methane, which defines ownership rights for CMM. Follow-on legislation, if passed, will provide financial benefits for CMM projects and would actually require mines to capture and use their CMM according to certain norms. She explained that this requirement would likely take a very long time to implement, but noted that might actually be a good thing for project development, which is driven in large part by the Clean Development Mechanism (CDM) and Joint Implementation (JI). If CMM capture and use were required by law, projects would not be considered additional and would thus not be eligible for CDM/JI registration and subsequent carbon credits. Other legislation recently passed includes a Green Tariff Law, which provides incentives for project development and also guarantees access to the local grid for electricity sales.

Finally, Ms. Evans reported that 14 Ukrainian JI projects have been approved, and eight of these are already operational. She also noted that seven to eight more projects are being developed or actively explored, including VAM. Additionally, the Alternative Fuel Center has begun work on a VAM survey for a range of Ukrainian mines to collect data on VAM resources in the country.

United States

Ms. Felicia Ruiz, with U.S. EPA's CMOP, began by reviewing the U.S. strategy for CMM project development. The domestic CMM strategy is focused on overcoming regulatory and institutional barriers to project development, through technical information exchange. The nodal U.S. agency is the U.S. EPA, and CMOP leads the Methane to Markets coal sector work. U.S. EPA also collaborates with its sister organization, the U.S. Department of Energy, in its domestic work.

Ms. Ruiz then summarized recent activities conducted as part of an international strategy for CMM project promotion, including the collection of information for the project opportunities featured during the expo. Featured projects included two success stories and 36 project opportunities from eight Partner countries. She reported that U.S. EPA had awarded 6 grants in the coal sector in 2009 for project development in China, India, and Poland, and that new grants would also be awarded in 2010. Ms. Ruiz also announced the availability of new technical reports and tools, such as the UNECE/Methane to Markets *Best Practices Guidance on Effective Methane Drainage and Use in Coal Mines* and a new CMM financial guide and financial model.

Country-specific objectives and activities included in the U.S. international strategy were explained in detail. U.S. goals for CMM development in other countries range from local project support, including feasibility studies and resource assessment, to capacity-building and assistance with legal and regulatory issues. In-depth details regarding specific U.S. activities in China, India, Mexico, Mongolia, Nigeria,

Poland, Russia, and Ukraine can be found in Ms. Ruiz's presentation on the Methane to Markets Web site.

Input from the Private Sector

In addition to updates from Partner country delegates, the Subcommittee welcomed input from the Project Network.

• Mr. Gerhard Pirker, of GE Jenbacher Gas Engines, reported no new technical updates from his perspective, because technology is already in place for CMM as low as 25 percent methane and pushing for lower concentrations would present safety concerns. Mr. Piker noted that in many cases the required regulatory framework for CMM project development is now in place, thanks in part to the efforts of the Partnership, and that the economics for this business are promising. He stressed that getting projects on the ground is what we need to work on next, and he announced that his company has developed a pilot project package aimed at countries not yet having any CMM projects in place. He invited developers or other stakeholders to contact him if interested in pursuing a project.

Mr. Pirker then asked the group whether anyone knew of any instances where CBM projects are eligible for carbon credits, and if not, if there are any plans in the works to make them eligible.

Dr. Somers replied that she wasn't sure about the CDM, but that in the U.S. CBM is not considered a greenhouse gas because it would not be released to the atmosphere. Therefore, it would not be eligible for carbon credits.

• Dr. Satya Harpalani, of Southern Illinois University, briefly presented some findings from the Moonidih mine pre-feasibility study. He reported that on a typical dead day methane concentrations in the VAM averaged about 0.1 percent, on a typical production day averaged around 0.2 percent, but never surpassed 0.3 percent. At those concentrations, Moonidih mine doesn't appear to have any potential for a VAM utilization project. However, some changes are planned to take place at the mine to increase production, and there may be an opportunity for VAM use if methane concentrations reach around 0.5 percent.

Another part of the study involved the arbitrary selection of three sealed off areas for methane concentration monitoring. It was found that these areas 'breathe', meaning that the methane concentrations went up and down depending on geologic conditions, pressure, or other factors, indicating that these areas are recharged with methane. Dr. Harpalani indicated that the gas, which ranged from 30 to 70 percent methane, could be drained from these areas and used either independently or with VAM as part of a utilization project.

Mr. Stanislaw Hlawicska, of Poland's Institute for Ecology of Industrial Areas, commented
that throughout the Expo's technical sessions and Subcommittee meeting presentations there
was a lack of discussion regarding abandoned mine methane (AMM). He explained that it
was important to remember this particular source of methane, citing the methane-rich Zory
mine as an example of such a project opportunity.

Mr. Hlawicska recognized that, especially in the case of abandoned mines, it is not usually economically viable to construct a pipeline to transport methane from such remote areas. However, he suggested that liquefying the gas and transporting it as LNG would be one solution and that it was important to support efforts to construct portable gas liquification units to be installed at these sites.

Dr. Somers replied that the reason abandoned mines weren't covered much in during the technical sessions was simply because no abstracts were received on the subject, but acknowledged that it was a good point to remember for future meeting.

Mr. Ron Collings, of Ruby Canyon Engineering, reported that the University of Colorado, together with CAMCO and Ruby Canyon, had received a grant to survey and characterize AMM in Shanxi Province, China. He also noted that there is an abandoned mine in the U.S. that is capturing methane and converting it to compressed natural gas for transport offsite.

Mr. Amitava Roy, of India's Directorate of Hydrocarbons, asked about the economic viability of LNG projects for abandoned mines, and Mr. Hlawicska explained that their studies showed LNG projects using gas with concentrations of at least 60 percent methane were indeed viable.

• Mr. Richard Mattus, of MEGTEC Systems, provided an update on the status of VOCSIDIZER technology. Highlights include the VAM processing plant in Australia, which processes around 250,000 cubic meters of VAM per hour and has been operational for 3 years. It is estimated that as of August 2009, over 500,000 tons of carbon credits and 80 gigawatt hours of electricity have been produced by the project. Mr. Mattus also mentioned the single VOCSIDIZER unit in Henan Province, China, which has been in operation for over a year and represents the first VAM project for which the UNFCCC has awarded certified emission reductions (CERs).

Steering Committee Directives

After all updates from country delegates and Project Network representatives were completed, Dr. Somers reviewed key items requested by the Steering Committee for subcommittee consideration during this session.

Leadership Review

Dr. Somers began by requesting feedback from the Subcommittee regarding the leadership review process. She explained that anyone interested in taking on leadership responsibilities within the Subcommittee could notify the Subcommittee for consideration. Ms. Ruiz asked what requirements were needed for a member to become a co-chair, and Dr. Somers replied that she was unaware of specific guidelines regarding how long one needed to be a Subcommittee member before being eligible to become a co-chair.

No comments or questions were raised about the current or future Subcommittee leadership. Because three co-chairs are allowed for each subcommittee, Dr. Somers proposed that Dr. Huang be promoted from vice-chair to co-chair. The attendees unanimously agreed. Dr. Somers then suggested that further discussion regarding subcommittee leadership could be tabled until the next Coal Subcommittee meeting, in order to give members time to think about it.

Methane Abatement

Dr. Somers reiterated the Steering Committee's interest in expanding the Partnership scope to include methane abatement and flaring. She acknowledged that this has been a somewhat controversial issue from a climate change perspective because flaring or the destruction of the gas should only be considered as a last resort. She stated that no decision needed to be made today, but that it was something to think about before the next meeting. She then opened the floor to discussion.

Mr. Ray Pilcher, of Raven Ridge Resources, commented that for most CDM projects, a flare is always in place for periods when methane concentrations are not sufficient or periods when gas utilization systems are down for maintenance or other reasons.

Mr. Karas noted that often times it is a simple matter of economics; the cost of installing a utilization system may be much more than installing a flare, and converting the methane to carbon dioxide through flaring is still better than nothing. He stressed that these issues should be considered in terms of overall environmental benefits. Although utilization is the best option from an environmental perspective, flaring will still reduce methane emissions.

Dr. Somers agreed and proposed reporting to the Steering Committee that the Subcommittee is open to including methane abatement in the framework of the Partnership. At that time, the Subcommittee could also ask for specific language from the Steering Committee regarding how exactly methane abatement would be incorporated. No objections were raised.

Links Between Methane to Markets and Other Organizations

Mr. Collings commented that the UNFCCC is an important organization in terms of methane mitigation projects in the coal sector. The current CDM methodology excludes pre-drainage of methane from opencast mines as well as abandoned mines, but it is generally accepted that there are methane emissions from these sources, and Mr. Collings proposed working with the UNFCCC to revise the methodology to include these options for methane reduction.

Dr. Somers agreed that it would be good for these sources to be included in the CDM methodology, but said that because the U.S. was not a signatory to the UNFCCC so could not raise the issue directly with this organization. She suggested that this was something that perhaps the Partnership as a whole, or individual signatories to the UNFCCC could bring this up. When Mr. Collings indicated his confusion regarding the relationship between the United Nations and the Partnership, Dr. Somers clarified that the relationship has been an informal one where the Partnership participates when asked to review some of the CDM methodologies. She stressed that the Partnership has not proactively pushed for certain methodologies.

Mr. Karas suggested looking into affiliations with organizations having research capabilities, citing the International Energy Agency (IEA) Clean Coal Centre as an example. Dr. Somers agreed.

Other Post-Expo Subcommittee Activities

After a brief diversion into a technical dialogue on opencast mines, Dr. Somers continued the discussion on potential post-expo activities for the Subcommittee. Meeting attendees provided the following feedback.

• Country Specific Strategies.

Dr. Somers explained that Partner countries were previously asked to develop action plans within each sector for the promotion of project development. She noted that there has been increased emphasis on these country-specific plans within the Steering Committee and said she was uncertain how useful the strategies would be unless they included specific targets or performance indicators that could be reported on regularly at Subcommittee meetings.

Ms. Ruiz expressed that the strategies are a good idea, particularly if updates or perhaps one-page reports about changes made to the strategy were provided during Subcommittee meetings. Dr. Somers asked if the Subcommittee should request such a report from each country delegation for the next Subcommittee meeting and received mixed feedback from attendees. Mr. Liu felt a one-page report would be viable for China. On the other hand, Mr. Karas felt that a one-page update would be of little value and proposed instead that countries develop a list of barriers or other issues important to their strategies. The Steering Committee

would then have a succinct digest over all countries, and each Steering Committee meeting could focus on one specific issue. Dr. Somers stated this was something to think about for inclusion in the agenda for the next Subcommittee meeting.

• Project Network Engagement

Dr. Somers affirmed that while not for lack of effort, little success has really been made thus far in improving Project Network participation in the Partnership. She asked for feedback and ideas for getting the coal mining sector more involved in the Partnership and encouraging more coal mine representatives to attend meetings and workshops.

Mr. Pilcher suggested that perhaps the Subcommittee simply isn't reaching out to the right people. However, Mr. Skiba noted that he brought to the Expo the president of Europe's largest hard coal company, who after seeing several technical sessions was very excited about the prospect of methane capture and use and promised to look into project development upon his return home.

Dr. Somers pointed out that a number of the country delegates on the Subcommittee were also Project Network representatives, and she wondered if it would be helpful to offer an official position on the Subcommittee in addition to the three official delegate positions permitted per country. Ms. Evans agreed, saying the opportunity for a Project Network member to have a formal position on the Subcommittee might encourage more participation from the private sector.

Again, Dr. Somers proposed giving this issue more time for Subcommittee consideration and suggested it be part of the next Subcommittee meeting agenda.

Plans for Next Subcommittee Meeting

The last agenda item for this Subcommittee meeting was to come up with ideas for the location and time of the next Subcommittee meeting. Dr. Somers asked if any countries wanted to host the meeting, and when no responses were received she announced that the UNECE had offered to host the meeting in conjunction with the next meeting of the Ad Hoc Group of Experts on CMM, to be held on 12 October 2010 in Geneva, Switzerland. No objections were raised, and Dr. Somers indicated that she would discuss this option further with the UNECE and report back to the Subcommittee.

Concluding Remarks and Adjournment

Dr. Somers concluded the meeting by summarizing Subcommittee action items, which primarily comprise the continued consideration of the following Steering Committee directives for future work:

- Impact of methane abatement inclusion into Partnership framework. Report willingness to accept expansion in coal sector to Steering Committee and request specific language to be drafted.
- Country-specific strategies. Determine what should be completed and/or presented for the next Subcommittee meeting.

After brief concluding remarks from Dr. Somers, Dr. Huang, and Mr. Prasad, the meeting was adjourned.

Annex 1 – Methane to Markets Coal Subcommittee Registrants

*Country Delegate

Australia

Mr. John Karas*

Department of Resources, Energy and

Tourism

GPO Box 1564

Canberra Act 2601

Australia

Tel: +61 2 6213 7815

E-mail: John.Karas@ret.gov.au

Mr. Su Shi

Commonwealth Scientific and Industrial

Research Organisation (CSIRO)

1 Technology Court Pullenvale OLD 4069

Australia

Tel: +61 7 33274679 E-mail: shi.su@csiro.au

Austria

Mr. Gerhard Pirker

GE Energy - Jenbacher Gas Engines

Achenseestrasse 1-3

Jenbach A-6200

Austria

Tel: +43 5244 600 2906

E-mail: gerhard.pirker@ge.com

China (republic of)

Dr. Huang Shengchu*

China Coal Information Institute 35 Shaoyaoju, Chaoyang District

Beijing 10002-9

P.R. China

Tel: +86-10-84657818

E-mail: huangsc@coalinfo.net.cn

Mr. Liu Wenge

China Coal Information Institute

35 Shaoyaoju, Chaoyang District

Beijing 10002-9

P.R. China

E-mail: liuwenge@coalinfo.net.cn

India

Mr. B.N. Prasad

Central Mine Planning & Design Institute

Gondwana Place

Ranchi Jharkhand 83403-1

India

Tel: 0651 223 0011

Fax: 0651 223 3314

E-mail: bnprasad54@yahoo.co.in

Mr. Amitava Roy

Ministry of Petroleum & Natural Gas

C-139, Sector 63

Noida Uttar Pradesh 201301

India

Tel: 09910174720

Mr. Ashok Singh*

Chairman-Managing Director

Office of Chairman-Managing Director

Central Mine Planning and Design Institute

Gondwana Place, Kanke Road

Ranchi, Jharkhand, PIN 834031 - India

Tel: +91 651 2230001 Fax: +91 651 2230003

E-mail: cmd@cmpdi.co.in

Japan

Mr. Hiroaki Hirasawa*

Japan Coal Energy Center

3-14-10 Mita

Tokyo 10800-73

Japan

Tel: +813-6400-5196

E-mail: hirasawa@jcoal.or.jp

Kazakhstan

Mr. Tursyn Baimukhametov

Kazakh State Scientific Research Institute of

Safety in Mining Industry

12, Alalykina str.

Karaganda 10000-8

Kazakhstan

Tel: +77212 49 28 42

E-mail: 129t@mail.ru

Annex 1 – Methane to Markets Coal Subcommittee Registrants

Ms. Aiymgul Ismagulova Kazakhstan Ministry of Environmental Protection Kazakhstan

Mexico

Mr. Mario Santillan

Minerales Monclova S.A. de C.V.

(MINOSA)

Final Prolongación Presidente Cardenas Sin

Numero

Palau, Coahuila 26350-

México

Tel: +528646116622

E-mail: msantillang@gan.com.mx

Mongolia

Mr. Badarch Mendbayar*
Mongolian Nature and Environment
Consortium
210526 P.O. Box 388
Ulaanbaatar 21052-6
Mongolia

Tel: +976-11-688688

E-mail: mnec@magicnet.mn

Poland

Mr. Stanislaw Hlawicska Institute for Ecology of Industrial Areas 6 Kossutha Street Katowice 40-844 Poland

Tel: +48 32 254 60 31 E-mail: rat@ietu.katowice.pl

Mr. Jacek Skiba*
Senior Specialist, M. Sc. Eng
Central Mining Institute of Katowice,
Experimental Mine "Barbara"
Podleska 72
43-190 Mikolow
Poland

Tel: +48 32 324 66 03 Fax: +48 32 202 87 45

E-mail: jskiba@gig.katowice.pl

Sweden

Mr. Richard Mattus Managing Director Energy & Process Systems MEGTEC Systems P.O. Box 8063 SE-402 78 Göteborg Sweden

Tel: +46 705 22 66 10 Fax: +46 31 22 83 19 E-mail: rmattus@megtec.se

United States of America

Ms. Amber Allen
Environmental Scientist
Eastern Research Group, Inc. (U.S.
Environmental Protection Agency Support
Contractor)
1600 Perimeter Park
Morrisville, NC 27560
United States of America
Tel: +919 468 78 89
Fax: +919 468 78 01

E-mail: amber.allen@erg.com

Mr. Ronald Collings Ruby Canyon Engineering, Inc. 743 Horizon Court - Suite 385 Grand Junction, CO 81506 United States

Tel: +1-970-241-9298

E-mail: collings@rubycanyoneng.com

Mr. Henry Ferland Director

Methane to Markets Partnership Secretariat U.S. Environmental Protection Agency

1200 Pennsylvania Avenue

Mailcode: 6207J Washington DC 20460 United States of America Tel: +202 343 9330 Fax: +202 343 2202

E-mail: Ferland.henry@epa.gov

Annex 1 – Methane to Markets Coal Subcommittee Registrants

Dr. Satya Harpalani Southern Illinois University 1230 Lincoln Avenue Carbondale, IL 62901 **United States**

Tel: +1-618-453-7918 E-mail: satya@engr.siu.edu

Mr. Jonathan Kelafant Advanced Resources International 4501 Fairfax Drive Arlington, VA 22203 **United States**

Tel: +1-703-528-8420

E-mail: jkelafant@adv-res.com

Mr. Raymond C. Pilcher President Raven Ridge Resources, Inc. 584 25 Road Grand Junction, CO 81505 United States of America

Tel: +1-970-245-4088 Fax: +1-970-256-2656

E-mail: pilcher@ravenridge.com

Ms. Felicia Ruiz* Coalbed Methane Outreach Program (CMOP) Climate Change Division U.S. Environmental Protection Agency 1200 Pennsylvania Ave NW 6207J Washington, DC 20460 United States of America

Tel: (202) 343-9129

E-mail: Ruiz.Felicia@epa.gov

Ms. Jayne Somers* Program Manager United States Environmental Protection 1200 Pennsylvania Ave. MC 6207J Washington DC 20460 United States of America

Tel: +1 202 343 9896 Fax: +1 202 343 22 02

E-mail: somers.jayne@epa.gov



METHANE TO MARKETS PARTNERSHIP EXPO COAL SUBCOMMITTEE MEETING 5 March 2010 New Delhi, India

AGENDA

8:30 – 9:30	CONTINENTAL BREAKFAST
9:30 – 10:15	Roundtable III: Cross-cutting Issues
10:15 – 11:30	Closing Plenary Session: Report Out From Steering Committee
11:30 – 12:00	TEA BREAK

COAL SUBCOMMITTEE MEETING BEGINS

12:00 – 12:15	Welcome Addresses
14.00 - 14.13	W CICUIIIC AUUI CSSCS

- Co-Chair A.K. Singh (India), Acting Co-Chair Jayne Somers (USA), Vice-Chair Huang Shengchu (China)
- Brief introduction of all meeting participants

12:15 – 12:30 Adoption of Agenda

Subcommittee Chairs

• Confirm the overall meeting objectives and specific Steering Committee directives to the Coal Technical Subcommittee.

12:30 – 13:30 **Country-specific Statements**

- Activities and commitments countries plan to bring to the Partnership
- Feedback from Expo

Partner countries expected to participate if present:

■ Argentina	■ India	■ Pakistan
■ Australia	■ Italy	Poland
■ Brazil	■ Japan	■ Republic of Korea
■ China	 Kazakhstan 	Russia
■ Colombia	Mexico	Ukraine
■ Georgia	■ Mongolia	United Kingdom
■ Germany	■ Nigeria	United States

13:30 – 13:45 **Break**

13:45 - 14:30 **WORKING LUNCH** (Continue country-specific statements)

Annex 2 – Coal Subcommittee Meeting Agenda

14:30 – 15:00	Updates from Project Network	
	Partnership Activities	
	 New project or technology developments 	
15:00 – 16:15	Open discussion covering possible post-Expo activities	
	Subcommittee adaptation to new framework for Methane to Markets	
	 Discussion of Steering Committee Directives 	
	 Importance of country-specific strategies in context of new framework 	
	 Better integration of Project Network and coal mining industry in Subcommittee activities to solicit broader input for the Partnership 	
	 Capitalizing on Expo contacts and lessons learned to incorporate more business and financial interests into the Partnership 	
16:15-16:30	TEA BREAK	
16:30 – 16:45	Planning for next Subcommittee meeting	
	 Shoot for between September and November 2010 	
	Solicitation of Volunteers to host Subcommittee meeting	
16:45 – 17:00	Summary of Action Items Discussed at this Meeting	
	Meeting action items	
	 Specific tasks that meeting participants agree to accomplish and report on within specified timeframes 	
17:00	ADJOURN	