



## METHANE TO MARKETS PARTNERSHIP AGRICULTURE SUBCOMMITTEE MEETING

Sixth Session of the Agriculture Subcommittee  
Guangzhou, China  
3-4 September 2009

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### Meeting Minutes

#### Summary

- 1 The Methane to Markets (M2M) Agriculture Subcommittee conducted their sixth session in Guangzhou, China in conjunction with a conference of the Livestock Waste Management in East Asia (LWMEA) project, *International Conference on Water Pollution Reduction and Climate Change Mitigation*. Multiple organizations hosted the event, including the World Bank, the United Nations Food and Agriculture Organization (FAO), the Chinese Ministry of Agriculture (MOA), the Global Environment Facility (GEF), M2M, Thailand's Ministry of Agriculture and Cooperatives (MOAC), Vietnam's Ministry of Natural Resources and the Environment (MONRE), the Asian Development Bank, and the People's Republic of Guangdong Province in the People's Republic of China. More information about the event is available online at: <http://www.lwmea.org/eventitems-folders/event.2009-06-08.2149225450>.
- 2 The event included a site visit on 2 September to a village that has been provided with funds from the Chinese government to implement the use of biogas for cooking and heating water. The conference attendees also visited three swine farms with anaerobic digestion (AD) projects, including:
  - Yihu Farm in Huzhen Township of Boluo County,
  - Luoxing Farm in Luoyang Township in Boluo County, and
  - Taimei Farm in Taimei Township of Bolou County.
- 3 The M2M Agriculture Subcommittee conducted their meeting on 3-4 September. The main objective of the meeting was to determine the future work of the Agriculture Subcommittee based on the input of the participants, including the Agriculture Subcommittee participation in the upcoming Partnership Expo. Key discussion topics included:
  - The possible inclusion of sources of agricultural methane beyond manure into the work of the Partnership, including enteric fermentation and rice cultivation,
  - Preparations for the Partnership Expo,
  - Development of international guidance to characterize the environmental performance of AD systems,
  - Discussion of resource assessments,
  - Country updates on activities, Expo preparations, and profiles and strategic plans,
  - Report on the activities of the Administrative Support Group (ASG).
- 4 The Subcommittee meeting agenda is posted online on the M2M Web site at: [http://www.methanetomarkets.org/m2m2009/documents/events\\_ag\\_20090903\\_ag-agenda\\_0625.pdf](http://www.methanetomarkets.org/m2m2009/documents/events_ag_20090903_ag-agenda_0625.pdf).

## Welcome and Introductions

- 5 Mr. Jeremy Eppel of the U.K. Department for Environment, Food and Rural Affairs (DEFRA) (U.K. representative and Agriculture Subcommittee Co-chair) and Mr. Jorge Hilbert of the Instituto Nacional de Tecnología Agropecuaria (INTA) (Argentina representative and Agriculture Subcommittee Co-chair) welcomed meeting attendees on behalf of the M2M Agriculture Subcommittee.
- 6 The meeting participants provided brief introductions; the meeting was attended by M2M Partner country delegates, Project Network members, ASG personnel, and other interested observers. A list of meeting participants is presented in Annex 1.
- 7 Ms. Ashley King of the U.S. EPA (ASG) provided a brief overview of the minutes of the last Agriculture Subcommittee meeting in Monterrey, Mexico.
- 8 In Monterrey, the Subcommittee discussed a number of items that are still in progress and included in the agenda of the Guangzhou meeting, including:
  - Partner country updates, including status of country profiles and strategic plans
  - Development of international protocol for AD
  - Possible inclusion of enteric fermentation and rice cultivation
  - Partnership-wide accomplishments report
  - Preparations for Partnership Expo
- 9 The action items from the Monterrey meeting included:
  - The US EPA and the ASG should organize a group of international experts to review the international protocol for AD.
  - The ASG should continue to work to identify a role for M2M in the enteric fermentation and rice cultivation sectors; the ASG will attend the March 2009 United Nations Framework Convention on Climate Change (UNFCCC) Ad-hoc Working Group on Long-term Cooperative Action (AWG-LCA) event to observe and report back to the Partnership.
  - Subcommittee members should:
    - Provide input for the Partnership-wide accomplishments report
    - Identify at least 2 potential projects, people, or organizations to participate in the Expo for the next Subcommittee meeting
  - The Subcommittee should work to meet the charges from the Steering Committee, which are available on the M2M Web site at:  
[http://www.methanetomarkets.org/events/2009/all/docs/all-27jan09/plenary/Report\\_Out\\_2009.pdf](http://www.methanetomarkets.org/events/2009/all/docs/all-27jan09/plenary/Report_Out_2009.pdf).
- 10 Mr. Eppel thanked Ms. King for the review of the minutes and reminded meeting attendees that the minutes from Monterrey were available online on the M2M Web site.
- 11 Next, Mr. Jianmin Wu, Project Officer of Department of Climate Change from the National Development Reform Commission (NDRC) of the People's Republic of China welcomed meeting attendees. Mr. Wu noted that the Chinese government places great importance on addressing climate change and reducing greenhouse gas (GHG) emissions. The Chinese government has established a working group to address energy saving, pollution reduction, and climate change. The government has also adopted measures to reduce GHG emissions. The Chinese Ministry of Agriculture (MOA) supports energy saving technologies, including AD. The Chinese government is devoted to the M2M Partnership and in 2007 hosted the Partnership Expo.

- 12 Mr. Eppel thanked Mr. Wu for the warm welcome. In addition, Mr. Eppel thanked the government of China for hosting the meeting and for their previous and continued involvement in the M2M Partnership.

### **Enteric Fermentation and Rice Cultivation**

- 13 Mr. Eppel explained to the Subcommittee that in November 2007, the Steering Committee first discussed incorporating other sources of agricultural methane (aside from manure management) into the scope of the Partnership. The main sources of agricultural methane are enteric fermentation and rice cultivation and the Partnership is considering including these sources. For the Monterrey meeting, the ASG prepared a paper summarizing mitigation options for these sources and presented a summary at the Steering Committee meeting. The Steering Committee discussed the topic and tasked the Agriculture Subcommittee with 1) discussing where M2M could add value to work being conducted on these sources and 2) consulting with the UNFCCC AWG-LCA to determine what role the UNFCCC will play in this area.
- 14 Mr. Eppel noted that in Guangzhou, the Agriculture Subcommittee should review the ASG's work since Monterrey in order to make suggestions to the Steering Committee. The ASG prepared white papers that were distributed to the Agriculture Subcommittee members and that will be available on the M2M Website.
- 15 In addition, Mr. Hilbert presented a brief summary of the enteric fermentation research that is being conducted by INTA. INTA has developed a telemetric device to measure emissions and emission reductions from cattle. The device has been implanted into six animals in INTA laboratories and emission data has been collected. More information about the research is available online at <http://www.adoxinta.com.ar>.
- 16 Mr. Eppel asked the Subcommittee representatives for their input on whether or not M2M should move forward with including enteric fermentation.
- 17 Tim Martin of Agriculture Canada (Canada representative) noted that enteric is a major source of agricultural methane emissions. However, there is no market for these emissions because they can not be captured. In addition, the skills and technologies required for enteric emissions are quite different than those required for manure management. Finally, Mr. Martin noted that the Livestock Emission Abatement Research Network (LEARN) is working to reduce emissions from enteric fermentation. M2M should not duplicate the efforts of any other organization, and if enteric is included in the Partnership's work, the Partnership should coordinate with LEARN to determine if there are ways that M2M could help LEARN better meet their goals.
- 18 Dr. Choi from Seoul National University (Project Network member) noted that rice is a bigger issue in Korea than enteric fermentation, but that there are significant cattle populations in Korea. He will explore what Korea is doing about this issue in order to fully participate in the discussions on this topic in India.
- 19 Mr. Kurt Roos of the U.S. EPA (U.S. representative) mentioned that M2M has limited resources so the Partnership has to be selective and determine how to best focus their work. Mr. Roos also noted that the Partnership's work needs to be complementary with other organizations, and not competitive.
- 20 Mr. Nguyen Van Tai (Vietnam representative) noted that there were many cattle and sheep in Vietnam and that Vietnam hoped to learn about reducing emissions from those animals from other countries in the Partnership.

- 21 Tracy Hart of the Word Bank (Project Network member) stated that there is no market for enteric fermentation emission reduction and since the market is an important part of M2M, maybe enteric fermentation does not fit into the scope of the Partnership. In order to evaluate whether or not to include enteric fermentation, Ms. Hart suggested that the Subcommittee compile a list of concern with enteric fermentation and then compare it to the concerns that the Partnership had when considering including manure. Finally, Ms. Hart noted that there was lots of work being conducted in developed countries in the private sector, by companies such as Stonyfield Farm and Dannon, and the M2M should also take these efforts into consideration.
- 22 Mr. Hilbert responded that there was currently no market for enteric fermentation because of the lack of baseline, the limitations of the methodologies to estimate emission reductions, and the absence of measurement tools. However, Mr. Hilbert noted that current research may help to address some of these limitations.
- 23 Based on the discussion, Mr. Eppel concluded that there were many issues associated with enteric fermentation, and the international community is a long way from saying that there is a market for the emission reductions. However, enteric fermentation is a large source of agricultural methane emissions and M2M should continue to collaborate with other organizations to determine what role the Partnership may play.
- 24 Next, the Subcommittee discussed rice cultivation.
- 25 Mr. Eppel noted that there have been practical projects undertaken in Asia to reduce emissions from rice cultivation, notably the Alternate Wetting and Drying (AWD) technique that was supported by the International Rice Research Institute (IRRI) in the Philippines.
- 26 Mr. Van Tai stated that Vietnam is a large producer of rice and would be interested in reducing emissions from rice cultivation; however there is no market for rice cultivation emissions reduction.
- 27 Mr. Roos noted that decreases in methane may increase nitrous oxide, and it is important for the Partnership to consider total GHG reductions.
- 28 Mr. Raul Sabularse of the Philippines Department of Science and Technology (Philippines representative) stated that he was not familiar with the IRRI work in the Philippines, but it sounded very promising as long as the nitrous oxide emissions were not increased as a result and the rice yield did not decrease. Mr. Sabularse noted that M2M should not duplicate the efforts of IRRI, but may be able to work in cooperation with them.
- 29 Ms. Hart noted that the Philippines and IRRI were strong partners that M2M could work with on rice cultivation, and there may be climate change adaptation funds available for reductions in rice cultivation emissions. Ms. Hart asked if there were other partners aside from IRRI that M2M should consider. Ms. King responded that the ASG scoped out the organizations working with rice cultivation for the first white paper on the mitigation options for enteric fermentation and rice cultivation. That could be revisited to determine if other partners should be considered.
- 30 Mr. Weigou Zhou from the World Bank (Project Network member) stated that there is a World Bank project in China that is looking to reduce emissions and rice cultivation emissions could possibly be reduced at this project, as long as the rice yield was not decreased as a result. Mr. Roos asked if this project required emission measurement, and Mr. Zhou responded that it did. Mr. Eppel thanked Mr. Zhou for the information, but noted that the Partnership was a long way

from supporting a project to reduce emissions from rice cultivation.

- 31 Mr. Xin Liu of the Energy and Environmental Development Research Center (Chinese representative) noted that he supported M2M being involved with information dissemination for reducing methane emissions from enteric fermentation and rice cultivation. However, neither source allowed for the capture of methane to be used as renewable energy. In addition, Mr. Liu noted his concern that the inclusion of these sources might make the scope of the Partnership too wide and not focused enough. Finally, Mr. Liu noted that it was imperative that any actions to reduce emission from rice cultivation did not decrease rice yield.
- 32 Mr. Eppel thanked Mr. Liu for his comments and noted that the Partnership was glad that China was participating in the conversation because China is a large rice producer and an active country in attempting to reduce climate change.
- 33 Mr. Martin noted that the white papers captured the issues well, and his concerns have already been noted by other country representatives including the lack of the market, the possible increase of nitrous oxide emissions, and the possible effects on food security.
- 34 Mr. Eppel concluded that the Partnership should continue to explore rice cultivation emission reductions with IRRI and Partner countries that are active in this area, including Japan.

### **Partnership Expo**

- 35 Mr. Hilbert noted that we need active participation of all Partner country representatives and Project Network members in order to ensure a successful Expo.
- 36 The call for papers to be presented at the Expo has been extended until 30 October 2009. For more information, please see: <http://www.methanetomarkets.org/expo/call-presentations.htm>
- 37 The submittal deadline for project templates for projects to be presented at the Expo is 15 November 2009. For more information, please see: <http://www.methanetomarkets.org/expo/call-projects.htm>
- 38 Ms. King asked all Subcommittee members to please help promote the Expo in their home countries by posting notices on applicable online list serves and bulletin boards, translating Expo documents into other languages, and informing the ASG of any possible sponsors. Ms. King noted that the success of the Expo and of the Partnership depends on the active participation of all Partnership members.
- 39 Mr. Eppel noted that the Expo is a very useful experience and he encouraged other countries to translate the project templates in order to attract more project submittals for the Expo. He asked the Subcommittee to please participate in the Expo and to submit presentation and projects to the ASG.
- 40 Mr. Martin inquired if the highlighted projects should be planned, underway, or completed. Ms. King responded that the project templates submitted for posters should feature potential projects, but completed projects could be highlighted in country booths or during the technical portion of the program.
- 41 Mr. Martin noted that in Canada, the federal government has not been actively involved but the province of Alberta has been so the Partnership should be sure to invite representatives from that province.

- 42 Mr. Hilbert noted that the Subcommittee needs to help plan the Agriculture technical workshop for the Expo. Mr. Hilbert suggested that a practical application of the international guidance for AD systems might be a good presentation for the Expo.
- 43 Mr. Sabularse recommended that there be a presentation about support tools that help people decide if they should install AD systems. These tools were discussed briefly at the conference earlier in the week but details were not provided.
- 44 Mr. Martin asked about the audience for the technical session. Ms. King replied that there would be both public and others that have attended our meetings in the past, so we need a balance of information to keep everyone interested.
- 45 Mr. Eppel stated that we have already received a limited number of abstracts for presentations, and he encouraged all meeting attendees to think about possible topics that they or their colleagues could present. After we receive all abstracts, a subset of the Subcommittee will review the abstracts and decide which will be selected for the program. Mr. Eppel noted that it might be beneficial to have presentations about enteric fermentation and rice cultivation to help with the Partnership's decision making on those topics. Mr. Eppel also noted that the ASG is looking for volunteers to help plan the event and to chair sessions; anyone that is interested can contact the ASG.
- 46 Ms. King recommended that all countries start thinking about their Expo participation now because March will come quickly.
- 47 Ms. Hart suggested that the Subcommittee and ASG could look through the sessions of the LWMEA conference and decide if any of the sessions would be useful to have at the Expo. Additionally, Ms. Hart suggested that the ASG solicit information on the Web site by asking users if they plan to attend the Expo, and for their contact information, title, and organization.
- 48 Mr. Hilbert recommended that each country representative contact private companies that should participate to encourage private sector involvement; he would have liked to have seen more private sector involvement at the last Expo.

### **International Guidance for Characterizing AD System Performance**

- 49 Mr. Hilbert discussed the development of an international guidance for characterizing AD performance. Mr. Hilbert explained that some AD projects have failed, unfortunately, which has led some to be skeptical about AD system technology. To help remedy this problem and to provide unbiased information on AD system performance, the Agriculture Subcommittee supported the development of an international protocol to establish an evaluation standard for AD systems to meet.
- 50 Mr. Roos led the development of a draft international protocol which was reviewed by a panel of international experts. Mr. Hilbert presented information about the protocol to the Subcommittee.
- 51 Mr. Eppel asked what the next steps for the international protocol should entail. He enquired if the Subcommittee members felt that it was wide ranging enough to address multiple types of systems and if it would fit for all situations and countries. He also noted that field testing is a practical next step.
- 52 Mr Sabularse enquired how long a project should be operating before being evaluated and if there

were templates or forms available for completing the protocol. Mr. Hilbert responded that the required operating times for various types of digesters were noted in the protocol. Mr. Hilbert also noted that existing data could be used if available. Mr. Eppel noted that there currently were not templates but that they could possibly be developed.

53 Ms. Hart queried if the different levels of evaluation were for different sizes of operation, and if there was a difference in the certification for the various levels. Mr. Hilbert explained that there was currently not a certification program, but there might be one developed in the future. Ms. Cortney Itle (Administrative Support Group) noted that the various levels of evaluation reflected varying levels of available resources, and not size differences in the operations.

54 Ms. Xianrong Hao, Director of the MOA (Chinese representative) noted that it would be beneficial to have the document translated into multiple languages and then to get technical reviews, because language might be a barrier. Mr. Eppel responded that there were international reviewers from China on the panel of reviewers, but it would be a good idea to translate the document to allow more people to have access. Ms. King noted that the ASG does not have resources for translation, and that partner countries would have to volunteer to translate documents.

55 Mr. Eppel noted that the document was technically sound, and that the review panel of experts helped to confirm this. However, Mr. Eppel noted that there needs to be more explanation of the context and the need for the document in the early sections.

56 The meeting was adjourned for the first day and resumed on Friday 4 September 2009 with follow-up comments on the international guidance for AD.

57 Mr. Roos noted that that U.S. developed a protocol several years ago and has used it to evaluate approximately 20 systems. The evaluations allow for the comparison of technology provider performance claims against actual performance. Ultimately, the plan for the U.S. protocol is to lead to a certification program to certify technologies that work well.

58 Mr. Eppel asked if the U.S. protocol had forms or templates for the users to fill out. Mr. Roos responded that there currently are not forms to fill out but that there are examples of completed evaluations. Forms could be developed for the international guidance.

59 Mr. Sabularse asked if there was a limit to the scale of the operation that could be evaluated; there are many small scale systems in the Philippines and using this evaluation would be a lot of work for a small system. Mr. Roos replied that the various levels of evaluation should allow even small systems to be evaluated.

60 Mr. Eppel concluded that forms will be added the international protocol, a better description of the context will be added, and then the document will be finalized and translated.

### **Resource Assessment Overview**

61 Mr. Roos presented information about the resource assessment work that has been supported by M2M.

62 Resource assessments provide the basis for country specific emission reduction strategy and implementation plan. They help to identify and characterize the potential for methane emission reduction, assess country market opportunities, identify location of opportunities, and prioritize opportunities. Currently, resource assessments have been completed for Argentina, Philippines,

Colombia and assessments are almost complete for Thailand and Vietnam. Assessments are underway for Mexico, India, and Korea and are starting for Brazil, Ecuador, and China.

63 Mr. Eppel thanked Mr. Roos for the update and stated that the work was very valuable. Mr. Eppel noted that the evaluations were very detailed and asked how much time and resources were invested in each assessment. Mr. Roos replied that the assessments teams consisted of 5 people at the most, and 3 people at the least. A team of people will go on data collection trips for a week and then take a couple of months to complete the assessment. It costs approximately \$30,000 per assessment.

64 Mr. Martin noted that this type of assessment would be a powerful addition to Canada's country report, and he requested that the completed assessments be made available on the M2M website so that other countries may replicate them.

65 Ms. Hao stated that this was very valuable work, and she enquired if resource assessments have been developed for China. Mr. Roos noted that M2M has completed some preliminary work in China, but it is difficult to obtain data for all of China. M2M could provide technical assistance to help MOA develop an assessment. Ms. Hao noted that in China, MOA deals with biogas and the NDRC deals with M2M, so MOA, NRDC, and M2M would have to work together to develop a report. Mr. Roos noted that they could discuss the possibility of developing an assessment for China after the meeting.

66 Mr. Hilbert noted that Argentina has a completed assessment and the experience was very valuable and it helped to increase awareness about the potential for emissions reductions. Mr. Hilbert recommended making the assessments available in Spanish. In addition, Mr. Hilbert noted that these are living documents with dynamic, changing data. Also, it is valuable to have data from many countries to compare and contrast.

### **Brief Statements and Updates from Country Representatives**

Mr. Eppel noted that the ASG currently has country profiles from 13 Partner countries, and he encouraged all countries to update or develop country specific action plans as appropriate. He asked all country representatives present at the meeting to provide updates on their activities.

#### ***Argentina***

67 Mr. Hilbert reviewed the recent activities in Argentina related to the work of the Agriculture Subcommittee.

68 Mr. Hilbert stated that there has been much activity in Argentina since the Monterrey meeting. Argentina has conducted 2 resource assessments, organized four conferences, conducted a survey to determine locations for potential AD projects, held an international workshop, and took the first steps to create M2M Argentina.

## *Canada*

- 69 Mr. Martin noted that there has been a significant increase in interest in electricity generation from biomass in Canada over the past year, but the major focus is on electricity generation through direct combustion of wood biomass. This is an attractive way to revitalize northern Canadian communities which have suffered from the downturn in the lumber and pulp and paper industries. At least five of the ten Canadian provinces have introduced policies or programs to promote such projects and several large electricity generation projects are underway.
- 70 Mr. Martin explained that the province of Ontario remains the only province in Canada with a specific program to directly promote AD of farm and food wastes. Mr. Martin reported on this program in previous meetings and since the last meeting, 7 new AD systems are operational in Ontario, with two more currently in commissioning phase, and 5 under construction. A further 10 projects have signed funding agreements, for a total of 24 new digesters in Ontario. At least one of these projects has also received some financial help from the Government of Canada. With approximately 16 digesters already in operation in Canada, this brings the expected total number of AD systems, operating or soon to be operating in Canada, to approximately 40. Almost all are on dairy farms, but some are on large beef operations or in the food processing industry. Most dairy operations also use some food wastes in the digesters, along with the dairy manure.
- 71 Mr. Martin believes that all of these have reactor tanks rather than covered lagoons, and all have co-generators, using heat from the generator to warm the reactor itself during winter months. Heat is also used in dairy operations, to heat farm buildings, and (in at least two cases) to heat greenhouses during cold weather. Electricity is typically sold to the electric grid.
- 72 Mr. Martin noted that the update of the Canada Country Report to include a national strategy is underway, but unfortunately it is still in draft stage.

## *China*

- 73 Mr. Liu explained that 2009 was a great year for biogas in China. The federal government granted \$8 billion RMB for biogas development including small household projects and medium and large AD systems. The government has also conducted training for management and technical staff for AD systems. Thanks to grants from the U.S. EPA, there have been training courses and marketing efforts to increase awareness of the potential of AD.
- 74 China has developed national standards for prefabricated digesters. Standards are also being developed for discharge of sludge and slurry from digesters. In addition, the government has developed a 5 year plan for biogas development.
- 75 Mr. Eppel asked if there was a standard for sludge application to fields and crops. Mr. Liu replied that the government was working on a standard which will be developed in the next year or two.
- 76 Mr. Hilbert asked if the fund provided by the government were for just the current year or for several years. Mr. Liu replied that the funds should be used by the end of this year to help stimulate the economy.

## *Philippines*

- 77 Ms. Sabularse presented a brief update of the agricultural M2M activities in the Philippines. He stated that the country has submitted an agriculture profile and will update the action plan in the

next few months. He explained that the Philippines government strives to raise awareness of potential AD projects and there have been discussions between the federal and local governments to promote M2M.

78 The Philippines is hosting a high level conference in mid-October about agriculture and emission reductions; the World Bank is supporting the conference and the President of the Philippines is scheduled to attend.

79 Mr. Eppel enquired if the Philippines had a targeted level of GHG reduction. Mr. Sabularse replied that there was no target.

### ***Thailand***

80 Dr. Arux Chaiyakul from the Department of Livestock Development (DLD) within the Ministry of Agriculture and Cooperatives represented Thailand. In Thailand, the swine sector emits the greatest amount of methane from livestock and offers the greatest potential for AD development. Farms in Thailand are planning to combine their waste in a centralized AD system and bundle their AD projects to participate in Programmatic Clean Development Mechanism (CDM). Construction has begun on the first project; and farms have signed agreements with the technology suppliers. Construction is scheduled to finish in late 2009.

### ***Vietnam***

81 Mr. Van Tai represented Vietnam at the meeting. He stated that Vietnam has a national biogas program and is supporting a survey on best practices and methane reductions.

82 There are many household and small scale biogas systems in Vietnam, and the government is working to increase the use of the systems on farms. Most farms in Vietnam are small to medium sized. Stakeholders in livestock waste management include organizations under the Ministry of Agriculture and Rural Development and the Ministry of Natural Resources and Environment. In addition, donors and NGOs provide funding for AD systems and domestic institutions and companies provide AD research and technology.

### ***United Kingdom***

83 Mr. Eppel stated that the United Kingdom (U.K.) is actively supporting the development of AD, as the use of AD supports many of the key policy objectives of the U.K. government, including using renewable energy, reducing GHG emissions, reducing landfill waste, and managing diffuse water pollution from agriculture.

84 Mr. Eppel noted that the *Anaerobic Digestion – Shared Goals* was published in the U.K. in February of 2009. This document was developed jointly with stakeholders, including AD industry, agriculture, energy and water utilities, the waste management sector, regulators, and local and regional governments. The document defines the plans and goals for the use of AD.

85 The U.K. government has created an AD Task Force to lead the development of an implementation plan for AD. The Task Force identified possible measures or actions and decided which of these should be recommended to the government. The Task Force also gained commitments from a range of stakeholders and obtained their input into developing the plan.

- 86 The U.K. government is providing 10 million pounds for AD demonstration projects. In June, 5 preferred bidders for the funding were announced. These bidders include dairy farms, food processing facilities, and a company that upgrades biogas for grid injection and vehicle use.
- 87 The U.K. government also developed an Energy Act of 2008, which provides the authority to introduce “banded” Renewables Obligation Certificates (ROCs), providing financial incentives for using renewable energy. Electricity suppliers need to obtain a portion of their electricity from renewable sources, which entitles them to ROCs. AD receives twice as many ROCs as some other renewable energy sources, making it a more economically attractive renewable energy source. The Energy Act gave the U.K. government the power to introduce a feed-in tariff for small-scale low-carbon electricity generation; this will provide support for installations up to 5 megawatts and is planned to be active starting in April 2010. The Energy Act also gave the government the power to develop a renewable heat incentive; this will allow generators of renewable heat to claim financial support for that heat and is planned to be introduced by April 2011.
- 88 Mr. Eppel explained that financial support is available for AD projects and research through new U.K. grant programs, including the Bio-energy Capital Grants Scheme, the Rural Development Program for England, and the Waste Resources and Actions Program’s Organics Capital Grant Program.
- 89 Mr. Martin noted that Mr. Eppel has previously reported on U.K. grocery stores that were interested in using AD. Mr. Eppel noted that all supermarket chains in the U.K. were looking to use AD, and the second largest chain has a goal to use all of their waste within the year.

### *United States*

- 90 Ms. King stated that approximately 135 AD systems operate in the United States, mostly at dairy operations. These systems produce about 300,000 MWhr per year of electricity. Mr. King explained that the U.S. Farm Bill is the largest project financing system for U.S. AD systems. The Recovery Act also has subsidies for renewable energy projects; this Act pays for up to 30 percent of the project’s cost.
- 91 U.S. EPA has proposed a draft national GHG mandatory reporting regulation, which will require U.S. entities with large GHG emissions to report their emissions to the U.S. EPA. The regulation includes manure management systems. Information about this rule is available online at: <http://www.epa.gov/climatechange/emissions/ghgrulemaking.html>
- 92 A bill was passed by the U.S House of Representatives that sets the groundwork for a carbon cap and trade scheme in the U.S. This is a significant first step in the lawmaking process; the bill is currently in the Senate. Agriculture is listed as an offset in this bill.
- 93 U.S. EPA provided grant money for international projects related to M2M. There were over 100 proposals and 30 projects from 11 countries were selected for funding. Of the funded projects, 7 or 8 are related to agriculture.

### **Report from the ASG**

- 94 Ms. King presented an update on the activities of the ASG.
- 95 Ms. King noted that the M2M Web site has been redesigned. There is a new look, as well as more native language information, improved searching of presentations, and other improved

features.

- 96 Ms. King thanks all Subcommittee members for assisting with the development of the Partnership-wide Accomplishments Report. This report makes the case to important stakeholders that the Partnership is valuable and producing benefits to the environment and to the member countries. It will be finalized in time for the United Nations Conference of Parties (CPO) in Copenhagen in December 2009. Ms. King noted that the ASG has attempted to be present at the COP to represent M2M, but has been encountering difficulties. She encouraged any Subcommittee members that were attending the COP to let the ASG know so the ASG could supply M2M materials to be distributed.
- 97 Mr. Bryce Lloyd of Organic Waste Technologies (Project Network Member) asked if there was information available on how to join the Partnership. Ms. King noted that this information was available on the M2M Web site for both Project Network members and countries that would like to join
- 98 Mr. King noted that the ASG is looking for suggestions of effectively communicating with the Subcommittees. The ASG currently has created a Facebook page and is looking for other suggestions for increased communication. If Subcommittee or Project Network members have any suggestions, please contact the ASG. Mr. Eppel asked if the Methane International newsletter was useful and frequently downloaded. Ms. King explained that it was downloaded and it helped to direct people to the Web site, and the ASG has web statistics to show that the Web site is well used.

#### **Action Items**

- 99 Mr. Hilbert and Mr. Eppel presented a short summary of the topics discussed and the action items resulting from the meeting.
- 100 The action items from the Subcommittee meeting include:
- The ASG will make recommendations to the Steering Committee about enteric fermentation and rice cultivation.
    - **Enteric fermentation:** M2M should explore coordinating with LEARN
    - **Rice cultivation:** M2M should explore coordinating with IRRI and key governments
  - The US EPA will add policy context plus possible templates and illustrative examples to the international protocol and seek translation into Spanish and Chinese.
  - The ASG will make best practices of resource assessments available to interested M2M countries and share results of completed assessments.
  - Subcommittee members will:
    - Plan country involvement in the Partnership Expo
      - Identify potential projects to showcase at the Expo (project deadline is November 15th).
      - Identify potential speakers and advertise call for presentations (deadline for presentations is October 30th).
      - Assist in raising awareness about the Expo amongst relevant stakeholders in their respective countries.
      - Sponsorships are available on a first-come first-served basis

- Continue efforts to complete country-specific action plans; the template is located online at:  
[http://www.methanetomarkets.org/resources/ag/docs/ag\\_profile\\_template.doc](http://www.methanetomarkets.org/resources/ag/docs/ag_profile_template.doc)
- Implement international protocol where appropriate

### **Closing Remarks**

- 101 Mr. Eppel thanked the meeting participants for a productive session and reminded everyone that the meeting proceedings would be available on the M2M Web site. Mr. Hilbert thanked the Chinese government for hosting the meeting. Mr. Eppel adjourned the meeting.



# Annex 1- Agriculture Subcommittee Meeting Participant List

Guangzhou, People's Republic of China  
3–4 September 2009

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