

Oil & Gas Subcommittee
25-26 March 2019
Geneva, Switzerland

MEETING MINUTES

The Global Methane Initiative (GMI) Oil & Gas (O&G) Subcommittee Meeting was held on 25-26 March 2019 in Geneva, Switzerland. Participants represented governmental, private sector, and non-governmental organizations, including Administrative Support Group (ASG) staff and GMI Partner Country delegates. O&G Subcommittee and Project Network members actively contributed and presented on a variety of topics. Subcommittee and Project Network member presentations are available on the [GMI Website](#).

Annex I contains the list of attendees. A copy of the final agenda, which was approved by the Subcommittee, is included as Annex II to these minutes.

25 March 2019

Introductions and Welcoming Remarks

Mr. James Diamond, Environment and Climate Change Canada (Canada), opened the meeting and provided welcoming remarks. He noted that Co-Chair Dr. Paulina Serrano, PEMEX (Mexico), was unable to participate in the Subcommittee meeting.

The agenda was reviewed and adopted.

ASG Charge to the Subcommittee

Ms. Monica Shimamura, Director of GMI's ASG (United States), expressed her appreciation for UNECE's hosting of the Subcommittee. She thanked UNECE's Group of Experts on Gas, noting that this was the first time the GMI O&G Subcommittee has met in conjunction with UNECE's Group of Experts on Gas. Ms. Shimamura announced the new Steering Committee Co-Chair, Ms. Helen Ryan, Environment and Climate Change Canada (Canada) and provided information about the upcoming GMI Capstone event planned for 2020. She outlined recent enhancements to ASG communications, including the launch of a new social media campaign, improved mailing list, and updates to the GMI website. She also provided information about the collaborative effort of UNECE and GMI to develop Best Practices Guidelines for Methane Management in the Oil and Gas Sector and invited participants to provide their written comments by 31 May 2019.

Ms. Shimamura announced the Global Methane Challenge (GMC), an ambitious initiative undertaken by GMI to highlight governmental, private sector, and non-governmental organizations that participate in methane mitigation activities. She described the purpose of the GMC, provided background information, and reviewed the benefits of participating. GMC commitments in the oil and gas sector were highlighted.

Partner Country Updates

Partner country delegates were asked to provide the Subcommittee updates on recent and future activities. Delegates from Canada, Colombia, Ghana, Indonesia, Turkey, and the United States delivered updates.

- Mr. James Diamond, Environment and Climate Canada (Canada), spoke about Canada’s 5-year plan, Strategy on Short-Lived Climate Pollutants, noting increased regulations, improvements to air quality, modeling, ongoing international collaboration and national requirements for the World Bank’s Zero Routine Flaring by 2030 initiative. He also addressed the significant challenge of fugitive emissions and described sub-national regulatory activity underway in British Columbia, Saskatchewan, and Alberta.
- Mr. Eduardo José Sanchez, Colombia Ministry of Mines and Energy (Colombia), provided an overview of the country’s comprehensive Climate Change Management Plan. Highlighting expectations of a reduction in 11.2 million tons of carbon dioxide (CO₂) by 2030, he discussed how energy efficiency, energy generation, fugitive emissions management, and demand response programs are being initiated to achieve national reduction goals. Noting that one of Colombia’s goals is to better understand emissions by sector, he stated that they would like companies to provide better data for analysis. The country’s main short-term goal is to engage sectors to reduce emissions.
- Mr. Joseph Essandoh-Yeddu, Energy Commission (Ghana), spoke about the unique challenges Ghana faces as a developing country. He spoke about exploration activities, highlighting the Voltaian Basin Project, an initiative that aims to determine the presence of a petroleum system in an under-explored onshore basin. He also detailed Ghana’s key issues with methane mitigation in the gas sector and the policy objectives of the government. He then outlined the areas of cooperation and investment for exploration and production in Ghana.
- Mr. Sugeng Riyono, Indonesia Centre for Oil and Gas Technology “LEMIGAS” (Indonesia), outlined methane mitigation initiatives, including the STAR Program, capacity-building projects, monitoring programs, international workshops, and the use of the LC calculator tool.
- Mr. Emre Özgür, Ministry of Energy and Natural Resources (Turkey), shared details about the upstream petroleum sector, Turkey’s low greenhouse gas emissions, and estimated flared methane amounts of 26 million cubic meters (m³).
- Ms. Cate Hight, U.S. Environmental Protection Agency (United States), reviewed voluntary domestic programs in the U.S., including the Natural Gas STAR program, which has eliminated almost 1.5 trillion cubic feet (Tcf) of methane emissions and contributed to 96.8 billion cubic feet (Bcf) of voluntary reductions by partners in 2017. She also highlighted the Methane Challenge program, which recognizes organizations that make specific commitments for reducing methane emissions and identify target achievement dates.

Climate & Clean Air Coalition Oil & Gas Methane Partnership Update

Mr. Manfredi Caltagirone, Climate and Clean Air Coalition Oil & Gas Methane Partnership (CCAC OGMP), provided an overview of the partnership. He noted that the initial focus on nine “core emission sources” was broadened to include overall emissions from all sources. He also provided an update on the Oil and Gas Methane Science Studies, which is focused on peer-reviewed scientific studies to measure methane emissions.

Identifying and Addressing Barriers to Oil & Gas Methane Mitigation Projects in GMI Partner Countries

Mr. Eduardo José Sanchez, Colombia Ministry of Mines and Energy (Colombia), moderated an open discussion on identifying and addressing barriers to oil and gas methane mitigation initiatives. He explained the background and described the objectives and goals, focusing on social benefits of methane abatement. Mr. Diamond added that, as a central element of the Subcommittee Action Plan, the barriers work is intended to help address barriers that impede methane mitigation projects.

He outlined the steps taken to compile a list of barriers and then invited attendees to provide input on key questions, including:

- Is your country facing any of the barriers included on the list?
- Is your country facing any barriers that are not included on the list? What are they?

- What are the most significant barriers affecting your country?
- What ideas or suggestions do you have for how these barriers could be overcome in your country?
- Have there been any barriers discussed today that your country is currently working to address? Can you share examples?

A participant from Mexico commented that financing issues and difficulties in measuring methane abatement were key barriers affecting Mexico. A U.S.-based participant from Houston, Texas, stated that companies would be more likely to participate in methane projects if there were more regulations requiring emissions reductions. In response, Mr. Sanchez stated that methane mitigation must benefit social processes, which can be accomplished by setting a pathway through regulations.

Adjournment

Mr. Diamond thanked attendees for their participation and concluded the meeting for the day. The meeting was adjourned.

26 March 2019

Welcoming Remarks

Mr. Diamond welcomed the participants and reviewed the objective for the morning's session.

Project Network Updates

- Mr. Santiago Martinez, Ecopetrol S.A. (Colombia), provided background information on Ecopetrol and their national and international framework that triggers action. Ecopetrol, primarily state-owned, aligns with government emissions goals. He outlined the 2021 laws for cap and trade systems and carbon tax, and highlighted Ecopetrol's forecasted 2019 emissions reductions and their emissions reduction goal between 15-20 percent by 2030. Mr. Martinez also highlighted programs with which Ecopetrol is involved, including reduction of flaring, reduction of venting and fugitive emissions energy efficiency, and renewable energies; he also noted that decarbonization projects underway will trigger mandatory goals for the company. Ecopetrol's CCAC membership was also highlighted.
- Ms. Mary Kwafo, Tema Oil Refinery (TOR) Limited (Ghana), discussed economic, technical, and legal challenges of methane mitigation in the oil and gas sector in Ghana. She reviewed actions that Tema Oil Refinery Limited has undertaken to overcome challenges, including construction of a gas letdown station to enable the use of gas for firing boilers, regular checks and maintenance, and optimization of operations for greenhouse gas emissions reduction. Ms. Kwafo requested assistance from GMI for a methane mitigation project in Ghana.

Identifying and Addressing Barriers to Oil & Gas Methane Mitigation Projects in GMI Partner Countries Continuation

Mr. Sanchez continued the open discussion to identify and address barriers to oil and gas methane mitigation initiatives.

Comments offered by participants included:

- Mr. Diamond shared his experiences in Canada, stating that there must be a champion for projects who provides strong support for projects. He also emphasized that progress must be made at a national level, noting that economic challenges look different depending on perspective (for example, government agency and an NGO). Canada's government has focused on regulatory impacts assessment, which have overwhelmingly yielded net positive results.

- Mr. Martinez from Ecopetrol Colombia observed that reaching goals may require less cost-effective projects at the onset and suggested that companies plan for increased regulations, especially from an industrial safety perspective. He added that Ecopetrol's leadership began to focus on methane awareness in 2010 and noted anticipation of increasing methane regulations prompted an extension of internal policies.
- Mr. Jonathon Banks of the Clean Air Task Force (CATF) (United States) stated that in the U.S. during the early 2000s, the oil and gas sector was a top emitter of short-lived climate pollutants. He encouraged countries and organizations to step up and participate in methane mitigation projects and emphasized the importance of obtaining good data for making progress. He added that CATF uses an open source model that allows adjustments based on available data.
- Ms. Kwafo emphasized the importance of regular inspections, adding that once started, greenhouse gas emissions projects spread to other parts of the country.
- Mr. Mark Boiling of 2C Energy (United States) described the OneFuture Coalition program, commenting that companies were initially reluctant to join voluntary programs because they would not receive credit for emission reductions that occur before regulations are in place. He noted that companies achieved success when targets were set for supply chains and the leadership was on board. Mr. Boiling also discussed the different types of emissions that must be considered, for example, chronic operator error and undersized vapor recovery units, stating that monitoring does not address chronic emission problems.

Participants also acknowledged a lack of commitments at high levels to overcome cost-related obstacles, as well as a lack of educated front-line workers, and substantial cultural barriers.

Wrap up and Adjourn

Mr. Diamond wrapped up the meeting by outlining the 2018 O&G Subcommittee Action Plan and highlighting the remaining items for the GMI O&G Subcommittee to address. He announced upcoming activities of the Subcommittee, which includes a webinar in summer 2019 and an in-person meeting in conjunction with UNECE's Group of Experts in Gas in 2020. Participants were encouraged to get involved with the GMC and stay engaged by signing up for GMI's mailing list.

The meeting was adjourned.

ANNEX I

Meeting Participants

Alas Pascal - GRT Gaz
Alexandra Shaykevich - Gas Exporting Counties Forum (GEFC)
Alfonzo Vigre - Naturgy
Amir Foster - Association of Oil & Gas Exploration Industries in Israel
Andreas Pentaliotis - DEFA
Andrew Pan Mikle - CERU
Anna Spirina - Russia
Benjamin Hellmig - EagleBurgmann Germany GmbH & Co. KG
Bernardino Gomes - DGEG
Boris Maksijan - Ministry of Environmental Protection and Energy Croatia (MZOE)
Branko Milicevic - United Nations Economic Commission for Europe
Carlos Trevino - Mexico
Cate Hight - Environmental Protection Agency
Cathy McGirl - Tetra Tech
Chris Cuijpers - Commission for Electricity and Gas Regulation (CREG)
Constantinos Papalucas - University of Cyprus
Dehaeseleer Jos - Marcogaz
Duitriy Shuedou - Russia
Eduardo José Sanchez - Colombia Ministry of Mines
Ellie Salzmann - akompani.ch
Emre Özgür - Ministry of Energy and Natural Resources
Fernanda Hermosillo - Mexican National Hydrocarbons Commission/ Comisión Nacional de Hidrocarburos
James Diamond - Environment and Climate Canada
Jan Klepac - Slovak Gas and Oil Association (SGOA)
Jean Marc Boucheret - CNGIND
Jean-Christophe Finidori - HODLNG
Johan Leuraers - Equinor
Jonathon Banks - Clean Air Task Force
Joseph Essandoh-Yeddu - Energy Commission
Julien Perez - OGCI
Julio R. Menaghini - USP
Kamla Piotrowska - IOGP
Karen Mascarenhas - USP
Katinka Grenli - University of Oslo, Energy
Lars Persson - Swedegas
Liene Laimina - Smiths Group plc
Luc Hardy - Smiths Group plc
Malene Nybroe - Energinet
Manfredi Caltagirone - Climate and Clean Air Coalition Oil & Gas Methane Partnership (CCAC OGMP)
Mark Boiling - 2C Energy
Martha Herrera - Ecopetrol
Martin Boyadjiev - Bulgarian Gas Center
Mary Kwafo - Tema Oil Refinery (TOR) Limited
Michael Woltran - OMV
Monica Shimamura - Global Methane Initiative Administrative Support Group
Monika Zsigri - European Commission, DG Energy
Ned Harvey - RMI
Nicholas Valandides - DEFA
Nicolas Jensen - Eurogas
Oscar Galvis - Solar OGC

Paul Kopecky - INNOGY
Rafael Guerra - Enagas
Robert Alpen - USA/Germany
Ronald Kenter - Gasunie
Santiago Martinez - Ecopetrol
Scott Foster - United Nations Economic Commission for Europe
Sid Ahmed Hamdani - Gas Exporting Countries Forum (GECF)
Stephanie Want - Total
Sugeng Riyono - Indonesia Centre for Oil and Gas Technology "LEMIGAS"
Symgon Kassianides - DEFA
Tania Meixus - Enagas
Tatiana Khanberg - IGU
Torstein Indrebo - TI Energy Advisory Services
Tyler Quillico - Columbia University
Uwe Wetzel - DVGW
Vebjorn Bakken - University of Oslo, Energy
Vladimir Budinsky - CEZ Group / UNECE Group of Experts on Cleaner Electricity Systems
Wanter Keepman - Shell
Younus Burhan - Tetra Tech



ANNEX II

GLOBAL METHANE INITIATIVE
Oil & Gas Subcommittee Meeting
25-26 March 2019
Geneva, Switzerland

Final Agenda

Day 1: Monday, 25 March

16:00-16:10	Welcome and Opening of the Meeting; Adoption of the Agenda <i>Subcommittee Co-Chair James Diamond, Environment and Climate Change Canada</i>
16:10-16:30	ASG Updates and the Global Methane Challenge <i>Monica Shimamura, GMI Administrative Support Group (ASG)</i>
16:30-17:10	Partner Country Updates <i>Moderator: Subcommittee Co-Chair James Diamond</i> Canada – <i>James Diamond, Environment and Climate Change Canada</i> Colombia – <i>Eduardo José Sánchez, Colombia Ministry of Mines and Energy</i> Ghana – <i>Joseph Essandoh-Yeddu, Energy Commission</i> Indonesia – <i>Sugeng Riyono, Indonesia Centre for Oil and Gas Technology (LEMIGAS)</i> Turkey – <i>Emre Özgür, Ministry of Energy and Natural Resources</i> United States – <i>Cate Hight, U.S. Environmental Protection Agency</i> Partner Organization Updates Climate and Clean Air Coalition Oil & Gas Methane Partnership – <i>Manfredi Caltagirone (CCAC OGMP)</i>
17:10-17:55	Discussion: Identifying and Addressing Barriers to Oil and Gas Methane Mitigation Projects <i>Moderator: Eduardo José Sánchez, Colombia Ministry of Mines and Energy</i>
17:55-18:00	Adjourn <i>Subcommittee Co-Chair James Diamond</i>

Day 2: Tuesday, 26 March

10:00-10:05	Welcome; Goals for Day 2 <i>Subcommittee Co-Chair James Diamond</i>
10:05-10:45	Project Development Barriers Discussion (continued) <i>Moderator: Subcommittee Co-Chair James Diamond</i>
TBD – 10:45	Project Network Updates (pending available time) <i>Moderator: Monica Shimamura, GMI ASG</i> Ecopetrol – <i>Santiago Martinez, Ecopetrol</i> Tema Oil Refinery – <i>Mary Kwafo, Tema Oil Refinery (TOR) Ltd</i>
10:45-11:00	Wrap-up and Adjourn <i>Subcommittee Co-Chair James Diamond</i>