



Agenda Item 7 – 31st Session of the Committee on Sustainable Energy

Mitigation of Methane Emissions from the Extractive Industries in Transition: *Concrete Actions, Goals, and the Costs of the Process*

22 September 2022, 15:00 – 16:00 CEST (Geneva time)

Objectives: (i) To learn about concrete actions undertaken by UNECE member States to tackle methane emissions from the energy sector, (ii) identify opportunities for better coordination of their efforts to measure and mitigate those emissions, (iii) assess the appetite for unification of monitoring and reporting mechanisms across the UNECE region, and (iv) highlight the consequences of narrowly construed methane mitigation policies focusing only on environmental matters and overlooking other important aspects that add up to the overall cost of their implementation.

Context: Methane is a powerful greenhouse gas with a global warming potential with an average of approximately 28 times that of CO₂ on a 100-year time horizon. However, since methane has a short residency time in the upper atmosphere, that ratio grows to approximately 86 times the potency of CO₂ when measured over a 20-year time horizon. Due to the short life of methane in the atmosphere, rapid and concerted efforts to reduce fugitive methane emissions will make a significant and needed impact on achieving climate goals set by member States.

About 60% of global methane emissions are due to human activities. The main sources of anthropogenic methane emissions are oil and gas industries, agriculture (including fermentation, manure management, and rice cultivation), landfills, wastewater treatment, and emissions from coal mines. Fossil fuel production, distribution and use are estimated to emit 110 million tonnes of methane annually.

Methane is the primary component of natural gas, with some emitted to the atmosphere during its production, processing, storage, transmission, distribution, and use. It is estimated that around 3% of total worldwide natural gas production is lost annually to venting, leakage, and flaring, resulting in substantial economic and environmental costs.

Coal is another important source of methane emissions. Coal mining related activities (extraction, crushing, distribution, etc.) release some of the methane trapped around and within the rock. Methane is emitted from active underground and surface mines, as well as from abandoned mines and undeveloped coal seams.

Setting the scene: A short presentation by the United States on concrete actions that the US undertakes domestically and internationally to address the problem of methane emissions.

- What are the US national monitoring, reporting, and mitigation regulations?
- What international methane emissions monitoring and mitigation schemes or initiatives is the US involved with?
- What methane emission targets have the US adopted and how does the Government track the country's performance in achieving those goals?

Topics to be explored:

- Is the UNECE region-wide unification of different national methane emissions monitoring and reporting practices desired and possible?
- New technologies in monitoring methane emissions

- What are the current practices in interpreting the data obtained from satellites and airborne platforms?
- How reliable is the data acquired from satellite and airborne systems?
- What are the policy and geopolitical issues related to data acquired from satellite platforms?
- Are any organizations preparing a cost analysis that will allow an open discussion of the cost of remote methane detection?
- Is there scope for an international treaty that allows the collection and use of data remotely acquired by satellite?
- What are the real costs of methane emissions regulations in the coal sector and how can they be reduced?
 - How is the coal sector different from the oil and gas sector in that context?
 - Why Just Transition mechanisms are the necessary component of methane emissions regulations in the coal sector?
 - Life after coal: business models to stimulate new economic activities and jobs in coal regions in transition

Plan of the session:

- **Opening remarks** (5 mins)
 - Mr. Raymond Pilcher, *Chair, UNECE Group of Experts on Coal Mine Methane and Just Transition*
 - **Methane emissions targets and actions to achieve them – domestic and international monitoring, reporting and mitigation efforts – the case study of the United States** (150 mins)
 - Presentations by the United States
 - Mr. Paul Gunning, Director, Climate Change Division, U.S. Environmental Protection Agency (8 minutes)
 - General discussion: Is there an appetite for ECE region-wide unification of methane emissions monitoring and reporting practices? (7 mins)
 - *Mr. Raymond Pilcher, Chair, Group of Experts on Coal Mine Methane and Just Transition (moderator)*
 - *Member States representatives*
- **Discussion of challenges and opportunities related to monitoring methane emissions from satellites and airborne platforms** (20 mins)
 - *Mr. Raymond Pilcher, Chair, Group of Experts on Coal Mine Methane and Just Transition (moderator)*
 - *Ángel E. Esparza, Technical Sales Engineer, GHGSat (TBC) (5 minutes)*
 - *Christian Lelong, Director Climate Solutions, Kayrros (5 minutes)*
 - *European Gas Research Group (TBC) (5 minutes)*
- **What are the real costs of methane emissions regulations in the coal sector and how can they be reduced?** (29 mins)
 - Clark Talkington, Vice President, Advanced Resources International - *Coal sector vs Gas sector (4 mins)*
 - Michal Drabik, Secretary, UNECE Group of Experts on Coal Mine Methane and Just Transition - *Need for Just Transition mechanisms in regulations on methane emissions from the coal sector (4 mins)*

- Alicja Krzemien, Head of Laboratory, Risk Assessment, Central Mining Institute (GIG) – *Business models to stimulate new economic activities and jobs in coal regions in transition; examples of POTENTIALS and GreenJOBS projects (7 mins)*
- Borys Karpus, Mayor, Novovolynsk – *Local perspective on Just Transition (TBC) (7 minutes) (TBC)*
- Bobbie Foot, BHP Mitsubishi Alliance - *Gender issues in closure and transitions: Planning using a social value approach (TBC) (7 minutes)*
- **Conclusions and recommendations**
 - *Mr. Raymond Pilcher, Chair, UNECE Group of Experts on Coal Mine Methane and Just Transition (6 minutes)*

Next steps: As a follow up to the discussion, the secretariat will engage with the member States on ways to improve coordination of their methane mitigation actions in the identified areas of opportunity. Provided that the member States express their interest in unifying the monitoring and reporting mechanisms across the ECE region, the secretariat will start working towards that goal.