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Improving the environmental footprint of energy systems:
Methane management in extractive activities

Group of Experts on Coal Mine Methane

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Work plan for 2018–2019

Work plan of the Group of Experts on Coal Mine Methane for 2018-2019

Prepared by the Group of Experts on Coal Mine Methane

I. Introduction

1. The mandate of the Group of Experts on Coal Mine Methane (the Group of Experts) is to promote the reduction of greenhouse gas emissions from coal mines by means of concrete, results-oriented activities that may help the recovery and use of methane in order to reduce the risks of explosions in coal mines, mitigate climate change, and support sustainable development.

2. The Group of Experts focuses on best practices for effective drainage, recovery and usage of coal mine methane.

II. Concrete activities in 2018-2019

3. Taking account of the outcomes and lessons learned from implementation of its 2014-2015 and 2016-2017 work plans, extensive consultations with a wide range of stakeholders, and the outcomes of the eleventh session of the Group of Experts on Coal Mine Methane, the Group of Experts proposes to undertake the following activities in 2018 and 2019:

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A. Disseminate and Expand the Best Practice Guidance for Effective Methane Drainage and Recovery in Coal Mines

Description: Since 2005, the Group of Experts has collaborated with the Global Methane Initiative (GMI), a voluntary, multilateral partnership that aims to reduce global methane emissions and to advance the abatement, recovery and use of methane. In partnership with GMI, in 2010 the Group of Experts published and has since disseminated the "Best Practice Guidance for Effective Methane Drainage and Use in Coal Mines". In 2016, the Best Practice Guidance was revised, updated and supplemented by a number of new case studies. On 30 June 2015, the Executive Committee of the United Nations Economic Commission for Europe (ECE) approved an extrabudgetary project “Dissemination of best practices in the abatement, recovery, and use of methane”, that was implemented in 2016 and 2017. Within the framework of this project, the Best Practice Guidance was effectively disseminated to a target audience of potential beneficiaries in the coal mining industry. Dissemination of the Best Practice Guidance is needed, as is development of a standard training module to augment education and outreach. The work of the Group of Experts to deliver these activities is supported by a grant that ECE received from the United States Environmental Protection Agency (U.S. EPA) to continue the extrabudgetary project “Dissemination of best practices in the abatement, recovery, and use of methane”.

Work to be undertaken:

(a) Plan, organize, and execute two pre-workshop fact-finding missions focused on identifying challenges locally faced in the abatement, recovery, and use of coal mine methane, subject to availability of extrabudgetary resources.

(b) Plan, organize, and execute two demand-driven capacity-building workshops on best practices for effective methane drainage and use in coal mines, subject to availability of extrabudgetary resources.

(c) Plan, organize, and execute a demand-driven capacity-building workshop on methane from abandoned mines, subject to extrabudgetary resources.

(d) Develop best practices (or recommendations) on sustainable management of abandoned coal mines, subject to availability of extrabudgetary resources.

(e) Develop a standard training module on best practices in the abatement, recovery, and use of methane from coal mines.

(f) Develop a risk management tool, in the form of a document and associated templates, on gas control and explosion prevention for the purpose of raising awareness of and providing training on methods and practices for identifying and mitigating risk.

(g) Continue the collaboration with GMI, including through the phase II of the extrabudgetary project on “Dissemination of best practices in the abatement, recovery, and use of methane”.

(h) Explore how to further expand and deepen the collaboration with GMI in the context of the Committee of Sustainable Energy and in collaboration with other ECE Groups of Experts.

Deliverables:

(a) Report/case study resulting from fact-finding missions providing a description of the situation and recommendations, subject to availability of extrabudgetary resources.

(b) Two demand-driven capacity-building workshops on best practices for effective methane drainage and use in coal mines, subject to availability of extrabudgetary resources.

(c) A demand-driven capacity-building workshop on methane from abandoned mines, subject to availability of extrabudgetary resources.

(d) Best practices (or recommendations) on sustainable management of abandoned coal mines, subject to availability of extrabudgetary resources.

(e) A standard training module on best practices in the recovery, use, and abatement of methane emissions from coal mines.

(f) A risk management tool on gas control and explosion prevention.

(g) A new expanded framework for collaboration between relevant ECE Groups of Experts and GMI.

Timeline:

(a) Report/case study resulting from fact-finding missions, by December 2019, subject to availability of extrabudgetary resources.

(b) Two workshops on best practices for effective methane drainage and use in coal mines by December 2019, subject to availability of extrabudgetary resources.

(c) A demand-driven capacity-building workshop on methane from abandoned mines, by December 2019, subject to extrabudgetary resources.

(d) Best practices (or recommendations) on sustainable management of abandoned coal mines, by December 2019, subject to extrabudgetary resources.

(e) A standard training module on best practices in the recovery, use, and abatement of methane emissions from coal mines, by December 2019.

(f) A risk management tool on gas control and explosion prevention, by December 2019.

(g) A new framework for collaboration between relevant ECE Groups of Experts and GMI by December 2019, subject to the continuous interest of both Parties to strengthen their relationship.

B. Launch and support the work of the International Centres of Excellence on Coal Mine Methane

Description: An International Centre of Excellence on Coal Mine Methane (ICE-CMM) is a non-profit entity established in a United Nations Member State under the national laws of that Member State that, under the auspices of and in close collaboration with the Group of Experts, supports capacity-building activities through dissemination of best practices in economically viable methane abatement and utilisation, socially acceptable underground coal mine practices, and environmentally-responsible methane management. The Group of Experts seeks to establish a network of independent ICE-CMMs operating in different locations and collaborating with one another under the guidance and supervision of the Group. In June 2017, the first ICE-CMM, located in Katowice, Poland, formally became operational and commenced its activities. In May 2017, a Memorandum of Understanding was signed between ECE and Shanxi Coking Coal Group Co Ltd of Taiyuan, China, to provide a framework for instituting an ICE-CMM in China. The Bureau of the Group of Experts will provide support for establishing the ICE-CMM in China, and will engage in planning, delivering and overseeing the activities of the ICE-CMMs in both Poland and in China, as requested or needed in accordance with the ICE-CMMs' Terms of Reference. The

Group of Experts stands ready to assist ICE-CMMs with organizing and delivery of activities specified in their respective Work Plans.

Work to be undertaken:

(a) Assist ICE-CMM in Poland in carrying out its work, as requested or needed in accordance with the ICE-CMM's Terms of Reference.

(b) Develop the work plan of ICE-CMM in China, with a list of deliverables.

(c) Inaugurate ICE-CMM in China.

(d) Once ICE-CMM in China is formally set up and operational, assist the host institution in carrying out work of ICE-CMM in China, as requested or needed in accordance with the ICE-CMM's Terms of Reference.

Deliverables:

(a) Three capacity-building seminars in the abatement, recovery, and use of methane from coal mines organized in cooperation with ICE-CMMs, in Geneva, or at other centrally-located location in the ECE region and beyond. Delivery of seminars is subject to availability of extrabudgetary resources.

(b) Yearly status reports on the activities of ICE-CMM in Poland, to be delivered by ICE-CMM Poland for the review and approval of the Group of Experts.

(c) Initial work plan with a list of deliverables of ICE-CMM in China, to be delivered by ICE-CMM China in coordination with the Group of Experts.

(d) Yearly status reports on the activities of ICE-CMM in China, to be delivered by ICE-CMM China for the review and approval of the Group of Experts.

Timeline:

(a) Three capacity-building seminars organized in cooperation with ICE-CMMs, in Geneva, or at other centrally-located location in the ECE region and beyond, to be delivered by December 2019, subject to availability of the extrabudgetary resources.

(b) Yearly status reports on the activities of ICE-CMM in Poland to be delivered by ICE-CMM Poland for the Group of Experts' review and approval, at the annual sessions of the Group in 2018 and 2019.

(c) Initial work plan with a list of deliverables of ICE-CMM in China by May 2018.

(d) Yearly status reports on the activities of ICE-CMM in China to be delivered by ICE-CMM China for the Group of Experts' review and approval, at the annual sessions of the Group in 2018 and 2019.

C. Collect and disseminate case studies on the application of best practice guidance in specific coal mines in different regions of the world

Description: Case studies are needed to demonstrate how the principles outlined in the Best Practice Guidance for Effective Methane Drainage and Recovery in Coal Mines can be implemented at operating coal mines around the world. The second edition of the Best Practice Guidance contains ten case studies organized in a common framework (Initial Conditions—Gas Control Problems—Solutions) for comparison purposes. The framework was reviewed by the Bureau of the Group of Experts and was found to be a useful tool to describe various coal mine problems and to offer solutions. A number of case studies following a similar structure were developed to support demand-driven capacity-building workshops organized within the framework of the extrabudgetary project "Dissemination of

best practices in the abatement, recovery, and use of methane" implemented during the 2016–2017 biennium. At its tenth session held on 28 October 2015, the Group of Experts recommended that a case study library be developed to complement the Best Practice Guidance. A library has been assembled in electronic form on the ECE coal mine methane website. Subject to extrabudgetary resources the case study database could be extended by elaborating concrete, in-depth case studies and analyses that demonstrate the benefits of applying the best practices.

Work to be undertaken:

(a) Reach out to coal mining institutions and coal mine operators to encourage them to share relevant case studies on the application of best practices.

(b) Review case studies through electronic exchanges and discuss them, as applicable, at the annual sessions of the Group in 2018 and 2019.

(c) Develop, compile and publish case studies on the ECE coal mine methane website, subject to availability of extrabudgetary resources.

Deliverables:

Case studies on implementation of best practices in methane management, subject to availability of extrabudgetary resources.

Timeline:

Case studies are reviewed and approved as they arrive. This process is an ongoing activity of the Group of Experts.

D. Contribute, in cooperation with other Groups of Experts and under the leadership of the Committee on Sustainable Energy, to the work on integrated methane management in the context of sustainable development.

Description: In January 2015, the Group of Experts offered to participate in the Task Force on methane management in extractive industries that reports to the Bureau of the Committee on Sustainable Energy. The Group of Experts will contribute, within the scope of its expertise, to the work on methane management in key energy-related extractive industries undertaken jointly by various Groups of Experts operating under the umbrella and leadership of the Committee.

Work to be undertaken:

Contribute, within the scope of the Group's expertise, to the work on the cross-cutting issue of methane management along the value chain in key energy-related extractive industries, for the purpose of determining and promoting the most efficient methods of measuring, monitoring, reporting and verifying methane emissions in these industries, and developing best practices for preventing such emissions.

Deliverables:

(a) Coal mining sector-related part of the summary report on the estimated volumes of methane emissions in extractive industries in the ECE region, subject to work on the report being continued and availability of extrabudgetary resources.

(b) Coal mining sector-related part of the summary report on techniques and methods used for measuring, monitoring, reporting and verifying methane emissions in extractive industries in the UNECE region, subject to work on the report being continued and availability of extrabudgetary resources.

Timeline:

(a) Contribution to the summary report on the actual volumes of methane emissions from extractive activities (to be determined by the progress of work on that matter and subject to availability of extrabudgetary resources).

(b) Contribution to the summary report on techniques and methods used for measuring, monitoring, reporting and verifying methane emissions, by (to be determined by the progress of work on that matter and the request by the Committee and subject to availability of extrabudgetary resources).

E. Further engage, in cooperation with other Groups of Experts and under the leadership of the Committee on Sustainable Energy, in the work on transition the coal industry in the ECE region

Description: In November 2015, the Committee on Sustainable Energy at its twenty-fourth session mandated the Group of Experts on Coal Mine Methane, to make a proposal on how to expand the current mandate of the Group of Experts to encompass work on the transition of traditional mining companies to become integrated energy providers and service companies and to explore the impact this transition might have on energy for sustainable development. In September 2017, at the twenty-sixth session of the Committee, the Group presented its proposal and recommendations. In accordance with the recommendations made to the Committee, the Group of Experts stands ready to further engage in the work on transition of the coal sector.

Work to be undertaken:

Explore, in cooperation with other Groups of Experts and under the leadership of the Committee on Sustainable Energy, development of a case-specific model for transition of a particular old industrial site.

Deliverables:

(a) Selection, in cooperation with other Groups of Experts and under the leadership of the Committee on Sustainable Energy, as well as in cooperation with interested member State and/or site operator located in the ECE region, upon its prior request and subject to its financial involvement, a specific old industrial site for development of a case-specific model for transition.

(b) A preliminary assessment, performed in cooperation with other Groups of Experts and under the leadership of the Committee on Sustainable Energy, of the industrial site selected for the project, including examination and evaluation of the profitability and sustainability of the current profile of the site's production, as well as a review of the relevant domestic regulations.

(c) Summary report and presentation, developed in cooperation with other Groups of Experts and under the leadership of the Committee on Sustainable Energy, on technical, legal and financial measures available for improvement of the selected site.

Timeline:

(a) Selection of the site and conclusion of the agreement with interested State and/or site operator by December 2018.

(b) Assessment of the industrial site by June 2019.

(c) Report summarizing project by December 2019.

F. Continue to provide advice on coal mine methane related standards to the United Nations Framework Convention on Climate Change (UNFCCC), the International Organization for Standardization (ISO), and other international, national and regional market-based coal mine methane emission reduction mechanisms. Engage and develop robust professional ties with the recognized expert entities operating in the field of fossil-based energy.

Description: In the past the Group of Experts advised UNFCCC on matters related to methane standards and methodologies, namely ACM0008 (Consolidated methodology for coal bed methane, coal mine methane and ventilation air methane capture and use for power (electrical or motive) and heat and/or destruction through flaring or flameless oxidation). The Group of Experts also provides comments on other international, national and regional market-based coal mine methane emission reduction mechanisms, such as the California Air Resources Board Mine Methane Capture Protocol or the ISO Technical Committee 263 Coalbed methane (CBM). To increase the efficiency and visibility of its work, the Group of Experts seeks to establish professional ties with recognized expert entities operating in the field of fossil-based energy. In order to change the negative and generalized image of the coal industry predominant among multilateral and bilateral financial institutions, which has become a barrier to financing and implementing coal mine methane capture and use projects, the Group of Experts seeks to engage with such institutions in order to educate them on the benefits deriving from efficient coal mine methane management.

Work to be undertaken: Continue to liaise with the above-mentioned and similar organizations and actively solicit the Group of Experts' advice and services. To establish professional ties with the recognized expert entities operating in the field of fossil-based energy. To change the negative and generalized image of the coal industry predominant among multilateral and bilateral financial institutions, and educate such institutions on the benefits deriving from efficient coal mine methane management.

Deliverables:

(a) Advice and comments on coal mine methane related standards.

(b) Undertake steps to re-establish professional ties with the World Coal Association and the International Energy Agency (IEA) Coal Industry Advisory Board.

(c) Explore opportunities for engagement with multilateral and bilateral financial institutions, with the goal to change the negative and generalized image of the coal industry, and raise extrabudgetary funds to support the current and future activities of the Group.

Timeline:

(a) To provide advice as requested.

(b) Re-engagement with the World Coal Association and the IEA Coal Industry Advisory Board, by December 2019, subject to the interest of the targeted partners.

(c) Engagement with multilateral and bilateral financial institutions, by December 2019, subject to the interest of the targeted partners.