

1. **Project title and project number:** Methane Management in Extractive Industries
2. **Expected timing/ duration:** First phase by July 2016. Subsequent phases to be defined after completion of first phase.
3. **Objective of the project:** The objective of the project is to explore methane management methods and technologies along the value chain in key energy-related extractive industries, namely coal, natural gas and oil, for the purpose of determining and promoting the most efficient methods of measuring, monitoring and reporting methane emissions in these industries, and developing best practices for preventing such emissions.
4. **Brief summary of the project:** The project will be developed in three phases:
  - A. The first phase of the project will focus on defining, understanding, and determining the magnitude of problems related to methane emissions in extractive industries. The above-mentioned goals will be achieved through the following activities:
    - review of existing information regarding measuring, monitoring and reporting methane emissions in the UNECE Member States, including national regulations and information from governments, academia, and NGOs,
    - compilation of data on the volume of methane emissions in extractive industries in the UNECE region,
    - assessment of the techniques and methods used for measuring, monitoring and reporting methane emissions in extractive industries in the UNECE Member States,
    - assessment of the actual volumes of methane emissions along the value chain in extractive industries in the UNECE Member States,
    - determination of the most important sources of emissions along the value chain in extractive industries.
  - B. The second stage will build upon the information gathered in the first stage and will comprise of compiling, analysing and comparing obtained data for the purpose of developing comprehensive best practices for measuring, monitoring and reporting methane emissions in extractive industries.
  - C. The third phase, drawing from the experiences obtained during the two previous stages of the project and from industry experience with addressing leaks, will develop best practices for leak prevention and abatement of methane emissions in extractive industries.
5. **Means to achieve the goals of the project:** The objective of the project will be achieved through the following activities:
  - review of available data on methane emissions in UNECE member states,
  - review of studies developed by: the UNECE Groups of Experts, the Global Methane Initiative (GMI), the United States Environmental Protection Agency (US EPA), the World Petroleum Council (WPC), the Climate & Clean Air Coalition (CCAC), The World Bank's Global Gas Flaring Reduction Initiative (GGFR), and other relevant studies by academia and NGOs.
  - engagement with companies operating in extractive industries for the purpose of obtaining data on techniques and methods used for measuring, monitoring and reporting methane emissions
  - design and dissemination among companies operating in extractive industries of a survey of techniques and methods used for measuring, monitoring and reporting methane emissions
  - compilation, assessment and comparison of obtained data
  - development and publication of intermediate studies comprising of: 1. relevant data on actual volumes of methane emissions in extractive industries in the UNECE region, and 2. techniques and methods used for measuring, monitoring and reporting methane emissions in extractive industries in the UNECE region
6. **Expected results of the project:**
  - EA1. Improved understanding of methane emissions in extractive industries
    - EA1.1 examination and evaluation of the techniques and methods used for measuring, monitoring and reporting methane emissions in extractive industries in the UNECE Member States,
    - EA1.2 assessment of volumes of methane emissions along the value chain in extractive industries in the UNECE region,
    - EA1.3 determination of the methane emissions along the value chain in extractive industries.
  - EA2. Improvement of techniques and methods of measuring, monitoring and reporting methane emissions in extractive industries in the UNECE Member States
    - EA2.1 Development of best practices for measuring, monitoring and reporting methane emissions in extractive industries
  - EA3. Reduction of methane emissions from extractive industries
    - EA3.1 Development of best practices for prevention and abatement of methane emissions in extractive industries
7. **Mandate:** At its twenty-fourth session held in Geneva on 18–20 November 2015, the Committee on Sustainable Energy took note of the report on methane management in extractive industries (ECE/ENERGY/2015/1) and requested the establishment of a task force under the Committee on Sustainable Energy with representatives of the Groups of Expert on Gas and Coal Mine Methane and other stakeholders to undertake further work to assess baseline, benchmarking and scale of current methane emissions in those industries, with the aim of giving clear guidance for report back at its twenty-fifth session (see §44 of ECE/ENERGY/99).

8. **Implementing body:** The project will be implemented by a newly created Task Force on Methane Management in Extractive Industries.

The Task Force will be run by a small group of four highly qualified professionals. It will be organized in the following way:

- one person will serve as the chair of the task force and a coordinator of its work,
- three others will be tasked with oversight of one of the key extractive industries each,
- the UNECE Group of Experts on Coal Mine Methane will help with the work on emissions in the coal sector,
- the UNECE Task Force on Reducing Gas Leaks along the Gas Value Chain chain together with the US EPA will contribute to the work on leakages in the gas sector,
- the work on leakages in the oil industry will be coordinated by the WPC, which will draw on information from GGFR while approaching the flaring issue,
- The UNECE secretariat will provide the Task Force with the necessary support.

9. **Target group and beneficiaries of the project:** Policy-makers, regulators, as well as companies and professionals operating in extractive industries in the UNECE Member States

10. **Justification of project and its relationship to the programme of work:** Task Force on Methane Management in Extractive Industries is mandated by the UNECE Committee on Sustainable Energy to undertake further work to assess baseline, benchmarking and scale of current methane emissions in extractive industries (see point 5).

The work of the Task Force on Methane Management in Extractive Industries will draw from the work of the Group of Experts on Coal Mine Methane and the Task Force on Reducing Gas Leaks in the Gas Value Chain. By compiling the results obtained by these two bodies with additional work done by UNECE external partners, the Task Force on Methane Management in Extractive Industries will produce a coordinated, comprehensive and solutions-oriented set of best practices for methane management in extractive industries, with a focus on establishing a baseline, benchmarking and scale of current methane emissions in those industries, as well as on providing a clear guidance to policymakers, regulators and practitioners operating in the field in question.

The principal area of work of the Group of Experts on Coal Mine Methane, which is to be actively involved in the work of the Task Force on Methane Management in Extractive Industries, is to develop and disseminate best practice for effective drainage, recovery and usage of coal mine methane. Furthermore, at its twenty-fourth session held Geneva on 18–20 November 2015, the Committee on Sustainable Energy, suggested the Group of Experts on Coal Mine Methane, to prepare, subject to availability of extra-budgetary resources, the study on standards and technologies for monitoring, recording, and reporting methane emissions at each stage of production, processing, storage, transmission, distribution, and use of fossil fuels, whether coal, oil, or natural gas, and on appropriate mechanisms for mobilizing needed resources for deployment of methods to reduce methane emissions (see §45 of ECE/ENERGY/99).

The Task Force on Reducing Gas Leaks in the Gas Value Chain, which is to be actively involved in the work of the Task Force on Methane Management in Extractive Industries, was established by the Group of Experts on Gas at its first session held in April 2014 (see §30 (a) ECE/ENERGY/GE.8/2014/2) for the purpose of

- preparing a systematic assessment of gas leakage rates across the full value chain, i.e., in gas production, transport, distribution, and use in ECE member States, including a review of approaches to measuring, monitoring, and reporting leakage rates,
- reviewing the range of gas technology, pipelines, and infrastructure construction and maintenance techniques deployed across the ECE region, with special focus on the best and worst performers, to explain the differences in leakage rates and to identify opportunities for improvement,
- reviewing the different options and techniques that exist and costs associated with reducing leakages throughout the gas chain,
- preparing Best Practice Guidance in Reducing Gas Leakage Rates throughout the gas chain, taking into account, when implementing it, the local conditions for use by industry, regulators, and policy-setters.

The Group of Experts on Gas decided that the work of Task Force on Reducing Gas Leaks in the Gas Value Chain will be undertaken by a task force of experts in collaboration with international organizations such as the International Energy Agency (IEA), national governments of the ECE member States and all other relevant stakeholders, including organizations of producers, transporters and distributors of gas such as the International Gas Union (IGU), and associations of system operators, and academia, and will be based both on any available sources including on statistics from the system of national accounts that are reported through national and international organizations (such as IEA or the World Bank) and on collaboration with producers and transport and distribution system operators and regulators, and, if needed, on a questionnaire.

<p>11. <b>Project Manager:</b> Date:</p>	<p>12. <b>Section/Division:</b> Energy Industry Section/Sustainable Energy Division</p>
<p>13. <b>Cleared by Programme Management Unit:</b> Date:</p>	<p>14. <b>Approved by EXCOM:</b> Date:</p>