Economic Commission for Europe
Committee on Sustainable Energy
Group of Experts on Gas

Second session
Geneva, 20-21 January 2015
Item 6 of the provisional agenda:
Best practice guidance in reducing gas leaks along the gas value chain

Draft Terms of Reference of the Task Force on reducing gas leaks along the gas value chain

Note by the secretariat

I. Introduction

1. Reducing leaks and emissions from the gas value chain is important from both economic and environmental perspectives. In many ECE member States there is an opportunity to improve efficiency in the gas supply chain from source to use. The differences between the volumes of gas produced at the source and the volumes delivered to end users show significant variances across ECE member States. Reducing the differences by improving the performance among laggards will improve the overall energy efficiency, gas affordability and producers' competitiveness. It will also reduce methane emissions from leaks in the gas value chain. Since methane is a potent greenhouse gas, reducing emissions will have a significant positive impact on the environment.

2. Following its first session in April 2014, the Group of Experts established a Task Force to develop best practice guidance in reducing gas leaks and emissions along the value chain.

3. The Committee on Sustainable Energy at its twenty-third session in November 2014 requested that the relevant expert groups prepare a coordinated, solutions-oriented report about methane management in extractive industries with a focus on establishing a baseline, benchmarking and scale of current methane emissions in those industries, with the aim of giving clear guidance to policy makers. The Task Force to develop best practice guidance in reducing gas leaks and emissions along the value chain could take a very active role in that work as well.

4. Building upon previous collaboration between IGU (and its Working Committee 5 (Utilisation of Gas), Study Group 5.3 – Natural Gas Vehicles) and the former UNECE Working Party on Gas (the predecessor of the current Group of Experts on Gas), and following decisions of the Bureau of the Group of Experts on Gas in September and October 2014, the International Gas Union has accepted to lead the work of the task force on best practice guidance in reducing gas leaks along the value chain. The UNECE Executive Secretary and the IGU’s Secretary-General met in November 2014 and decided to enter into a Memorandum of Understanding (MoU) that would define their collaboration more precisely. Among other things, the MoU calls for collaboration between UNECE Group of Experts on Gas and IGU and its Working Committees (WOCs) established along the natural gas value chain (WOC 1: Exploration and Production; WOC 2: Storage; WOC 3: Transmission; WOC 4: Distribution; and WOC 5: Utilisation).
II. Work and deliverables of the Task Force on best practice guidance in reducing gas leaks along the gas value chain

5. The work of Task Force on best practice guidance in reducing gas leaks along the gas value chain is to:

- Prepare a systematic assessment of gas leakage rates across the full value chain, i.e., in gas production, transport, distribution, and utilisation in ECE member States. This work is to be undertaken by a Task Force of experts in collaboration with international organisations such as the International Energy Agency (IEA), national governments of the ECE member States and all other relevant stakeholders.
- Review 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.
- Review the different options and techniques that exist and costs associated with reducing leakages throughout the gas chain; and
- Prepare 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.

6. Deliverables of the Task Force are:

- Performance benchmarking on gas leakage rates across the ECE region.
- Draft Best Practice Guidance in Reducing Gas Leakage Rates.

7. Work Methods:

- This work will require the engagement of experts as national and corporate representatives, and is expected to involve all stakeholders.
- A Task Force will be assembled under the direction of either the Chair or one of the Vice Chairs of the Bureau of the Group of Experts. The Task Force will include all stakeholders in the gas value chain, including a range of gas producers and transporters, system operators, distribution companies, academics, regulators, and ministry officials from member States;
- Experts from IGU, IEA, the United Nations Framework Convention on Climate Change (UNFCCC) bodies, national administrations, and the range of gas associations will be invited to join the Task Force;
- The work to be undertaken, as listed above, will be laid out in a project management plan developed and agreed by the Task Force;
- It is expected that the Task Force will work independently, supported both substantively and logistically by the secretariat, using electronic means of communication and meetings as needed in informal settings; and
- The Task Force will provide quarterly updates on progress to the Bureau of the Group of Experts (which the secretariat will post to the website and circulate to the Permanent Missions in Geneva), and will report to the annual meeting of the Group of Experts.
III. Draft best practice guidance in reducing gas leaks along the value chain

8. Below is an early draft of the outline of the best practice guidance in reducing gas leaks along the value chain.

Best practice guidance in reducing gas leaks along the value chain

Executive summary for policy makers
Introduction
Chapter 1: Methane emissions and climate change
Chapter 2: Gas value chain
  Extraction
  Production
  Transmission
  Storage
  Distribution
  Utilisation
Chapter 3: Assessment of leakage rates in ECE Member States
  Indicators
  Performance benchmarking
Chapter 4: Reducing leaks and emissions during extraction of gas
Chapter 5: Reducing leaks and emissions during production of gas
Chapter 6: Reducing leaks and emissions during transmission of gas
Chapter 7: Reducing leaks and emissions during storage of gas
Chapter 8: Reducing leaks and emissions during distribution of gas
Chapter 9: Reducing leaks and emissions during utilisation of gas
Conclusions
Case studies