

UNECE

Best Practice Guidance for Effective Methane Management in the Oil and Gas Sector

Monitoring, Reporting and Verification (MRV) and Mitigation



UNECE Energy Series



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Best Practice Guidance for Effective Methane Management in the Oil and Gas Sector

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p. 49, Annex I, Table 1, 1, Carbon Limits
p. 50, Annex I, Table 1, 2, Weatherford
p. 50, Annex I, Table 1, 3, CCAC
p. 51, Annex I, Table 1, 4, MESSCO
p. 51, Annex I, Table 1, 5, CCAC
p. 52, Annex I, Table 1, 6, Siemens
p. 53, Annex I, Table 1, 7, MESSCO
p. 53, Annex I, Table 1, 8, TZN Petroleum
p. 54, Annex I, Table 1, 9, NTECH Process Automation
p. 55, Annex I, Table 1, 10, Pipeliner CRM
p. 55, Annex I, Table 1, 11, EDF
p. 56, Annex I, Table 1, 12, Sparrows Group
p. 57, Annex II, Table 1, 1, Carbon Limits
p. 58, Annex II, Table 1, 2, Heath Consultants Inc
p. 59, Annex II, Table 1, 3, TransCanada
p. 59, Annex II, Table 1, 4, UNEP
p. 60, Annex II, Table 1, 5, UNEP
p. 61, Annex II, Table 1, 6, Kairos Aerospace
p. 62, Annex II, Table 2, 1, Carbon Limits
p. 62, Annex II, Table 2, 2, Carbon Limits
p. 63, Annex II, Table 2, 3, UNEP
p. 64, Annex II, Table 2, 4, BP
p. 64, Annex II, Table 2, 5, Lechtenbohmer, S., et al., Wuppertal Institute for Climate, Environment, Energy, Germany, International Journal of Greenhouse Gas Control, "Tapping the leakages: Methane losses, mitigation options and policy issues for Russian long-distance gas transmission pipelines," 2007

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Foreword

Growing atmospheric methane concentrations are of major concern for climate change. Methane has a global warming potential significantly higher than that of CO₂, so reducing methane emissions should be a top priority for all emitting sectors to achieve the Paris targets. There are several collaborative initiatives focused on the topic.

Human activities are not the only source of methane emissions, but they are an important and growing source. The energy industries have recognized that they are responsible for an important share of these emissions in the production, transformation, and delivery of energy and they are taking steps to remedy the problem for commercial, safety and environmental reasons. It is necessary to improve our understanding of the scale of methane emissions, potential sources, and opportunities for reductions. This initial analysis of best practices in the monitoring, reporting, and verification of methane emissions from the upstream oil and gas industries is an important step in addressing an important contributor to global warming.

The natural gas industry has an important contribution to make in reducing the carbon intensity of the world's energy system. The expected contributions are not only in home heating and power generation, but also in transportation and enabling greater deployment of intermittent renewable energy sources. If the challenge of methane is not addressed, however, then the sustainability credentials of the industry will be questioned, and the opportunities presented by natural gas might be missed. For this reason, accurate understanding of the scale of the problem and deployment of commensurate mitigation strategies are imperative.



Olga Algayerova
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The **United Nations Economic Commission for Europe** (UNECE) is one of the five UN Regional Commissions. It provides a forum for member States to forge cooperation. The main areas of UNECE's activity are: transport, environment, statistics, sustainable energy, economic cooperation and trade, timber, and human settlements.

www.unece.org

The **Global Methane Initiative** (GMI) is an international public-private partnership that works with government agencies around the world to facilitate project development in five key methane-producing sectors: agricultural operations, coal mines, municipal solid waste, oil and gas systems, and wastewater. Launched in 2004, GMI works in concert with other international agreements, including the United Nations' Framework Convention on Climate Change, to reduce greenhouse gas (GHG) emissions. It is comprised of 42 partner countries and the European Commission, representing about 70 percent of the world's anthropogenic methane emissions.

www.globalmethane.org

Structure

The work on the document was directed by the *Executive Steering Committee*, which defined the overall vision, as well as the scope, form and the tone of the publication. It was coordinated by the *Project Manager* who supervised the process and provided administrative support. The text was prepared by a *Technical Expert* who under the supervision of the *Executive Steering Committee* drafted and edited the document. The draft was first reviewed by a *Stakeholders Advisory Group* to ensure that messages were clear and effective for senior decision-makers, before undergoing a formal technical peer review process.

Disclaimer: The document does not necessarily reflect the position of the reviewers and partners listed below who provided their comments and helped to develop this publication.

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Case Studies: Case studies illustrating application of best practices identified in this document will be posted at: <https://www.unece.org/index.php?id=53067>.

Contents

Foreword.....	iii
Acknowledgements	iv
Acronyms and Abbreviations.....	ix
Glossary and Terms.....	xi
Executive Summary.....	xiii
1. Introduction	1
1.1 <i>Scope and objectives of this guidance document</i>	1
1.2 <i>The issues</i>	1
1.3 <i>MRV and mitigation</i>	2
1.4 <i>Structure of this document</i>	3
2. Methane emissions in the oil and gas industry	4
2.1 <i>The basis for emissions quantification</i>	4
2.2 <i>Estimated methane emission levels – global and for the ECE countries region</i>	7
3. Monitoring, reporting and verification (MRV).....	10
Key messages	10
3.1 <i>Challenges and approaches to methane measurement</i>	10
3.1.1 <i>Why quantification requires a methodical approach</i>	10
3.1.2 <i>Detection and measurement</i>	11
3.1.3 <i>Calculation based methods</i>	12
3.2 <i>MRV at the facility and company level</i>	15
3.2.1 <i>Detection and Measurement</i>	15
3.2.1.1 <i>Selection of the detection and measurement technology</i>	15
3.2.1.2 <i>Selection of the sites to be surveyed by the detection and measurement campaign</i> ...	16
3.2.2 <i>Calculation based methods – Elements of best practices</i>	17
3.2.3 <i>Reporting</i>	17
3.2.3.1 <i>Measurement surveys (bottom up) reports:</i>	18
3.2.3.2 <i>Emissions inventory reports</i>	18
3.2.4 <i>Verification</i>	21
3.3 <i>MRV at the national level and international reporting</i>	21
3.3.1 <i>The IPCC Guidelines</i>	21
3.3.2 <i>National Inventory Reports</i>	23
3.3.3 <i>International reporting and the Paris Agreement “Rulebook”</i>	25
3.3.4 <i>Review of national GHG inventories</i>	26

4. Mitigation.....	27
<i>Key messages</i>	27
4.1 <i>Abatement opportunities and barriers to action</i>	27
4.1.1 <i>Lack of awareness and knowledge</i>	28
4.1.2 <i>Economic - Financial</i>	28
4.1.3 <i>Regulatory</i>	29
4.1.4 <i>Structural</i>	29
4.2 <i>Company strategies and actions</i>	30
4.2.1 <i>Evaluate abatement potential and costs</i>	30
4.2.2 <i>Select abatement project</i>	34
4.2.3 <i>Execute abatement projects</i>	36
4.3 <i>National policies and regulations</i>	37
4.3.1 <i>Technical standards and emission limits</i>	40
4.3.2 <i>Economic instruments</i>	40
4.3.3 <i>Negotiated agreements</i>	41
4.4 <i>International initiatives and climate policies</i>	42
4.4.1 <i>NDCs and the Paris Agreement “Rulebook”</i>	42
4.4.2 <i>Climate finance and carbon market mechanisms</i>	43
4.4.3 <i>Carbon finance</i>	44
5. Conclusions and summary for policy makers	46
Annex 1 Emission source categories along the value chain	49
Annex 2 Mature detection and quantification technologies.....	57
References	66

List of Tables

预览已结束，完整报告链接和二维码如下：

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