

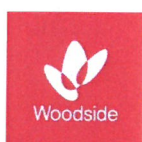
REDUCING METHANE EMISSIONS ACROSS THE NATURAL GAS VALUE CHAIN

GUIDING PRINCIPLES

Providing access to energy, while addressing global climate change, is one of the greatest challenges of the 21st century. Natural gas plays a major role in meeting global energy demand today. Since natural gas consists mainly of methane, a potent greenhouse gas, its part in the transition to a low-carbon future will be influenced by the extent to which the oil and gas industry reduces its methane emissions.

These Guiding Principles focus on priority areas for action along the natural gas value chain, from production to the final consumer. They are complementary to and mutually reinforcing of other initiatives, including the Oil and Gas Climate Initiative and the Climate and Clean Air Coalition's Oil and Gas Methane Partnership.

The signatory companies below commit to undertake the principles, the implementation of which will be defined in an action plan. A concerted industry response is needed to increase focus on the reduction of methane emissions. Therefore, signatories will encourage other companies to apply the principles.



A handwritten signature in black ink, appearing to read "P. Coleman", written over a horizontal line.

Peter Coleman, CEO & Managing Director

Other signatories:



These principles were developed collaboratively by BP, ENI, ExxonMobil, Repsol, Statoil, Shell, Total and Wintershall, as well as a coalition of international institutions, non-governmental organisations (NGOs) and academics.



THE GUIDING PRINCIPLES

These principles, which address priority areas for action highlighted in International Energy Agency's World Energy Outlook 2017, focus on reducing methane emissions across the natural gas value chain. The signatories intend to apply them concurrently. In the context of these principles, methane emissions refer to venting, fugitive (unintended) emissions, and incomplete combustion, including during flaring. In pursuing significant emission reductions through these principles, parties will consider cost effectiveness and efficiency. All activities will be undertaken in compliance with applicable anti-trust and competition laws.

1. CONTINUALLY REDUCE METHANE EMISSIONS

- We establish and maintain plans to systematically monitor and reduce methane emissions from identified sources in our existing operated assets, and we will prioritise higher emitting operations. We incorporate the management of methane emissions in maintenance plans, and the design and construction of our new projects. We encourage these actions in non-operated assets.
- We will reduce venting, and fugitive methane emissions, and improve combustion efficiency. We implement systematic leak detection and repair programmes, prioritising potential higher emitting sources.
- We implement and continue to develop effective technologies and practices for monitoring and reducing methane emissions, and consider them in our project engineering and design.
- We provide financial and operational support for the development and deployment of innovative technologies and approaches that monitor and reduce methane emissions.

2. ADVANCE STRONG PERFORMANCE ACROSS GAS VALUE CHAINS

- Given that it is necessary to understand methane emissions across the whole natural gas value chain, we seek to engage with upstream, midstream and downstream participants to undertake studies to that end.
- Through industry partnerships, trade associations and proactive stakeholder engagement, we work to help improve approaches to and the application of robust methane emissions management, including sound estimation, detection and abatement practices, as well as robust reporting as defined in Principle 5.

3. IMPROVE ACCURACY OF METHANE EMISSIONS DATA

- In operated assets, we continuously improve methane emissions data collection methodologies to improve the accuracy of methane emissions data.
- We will support research that improves the accuracy of the quantification of methane emissions, and make progress towards verifiable reductions.

4. ADVOCATE SOUND POLICY AND REGULATIONS ON METHANE EMISSIONS

- We advocate for sound methane policies and regulations that incentivise early action, drive performance improvements, facilitate proper enforcement, and support flexibility and innovation.
- We work constructively with international institutions, governments, industry and NGOs in the development and implementation of effective methane abatement policies or regulations.

5. INCREASE TRANSPARENCY

- We provide information in our relevant external reports on methane emissions data, methodologies used to derive these data, and progress and challenges in methane emissions management.
- We contribute towards the standardisation of comparable external methane reporting, thereby simplifying the reporting process, which may encourage others to participate.