

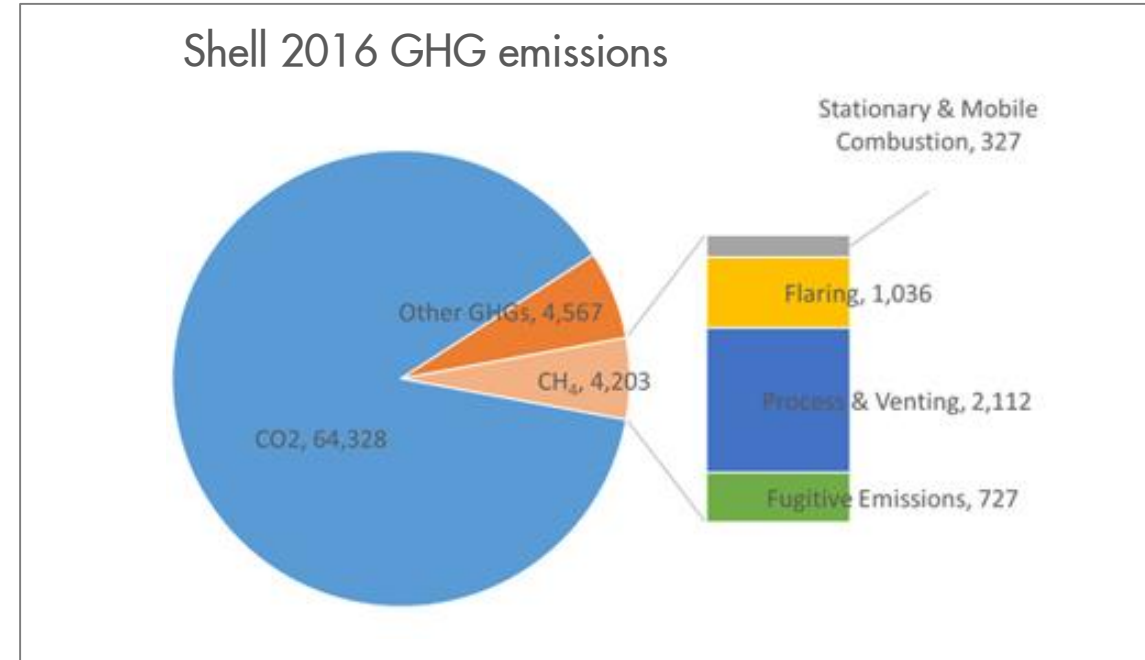
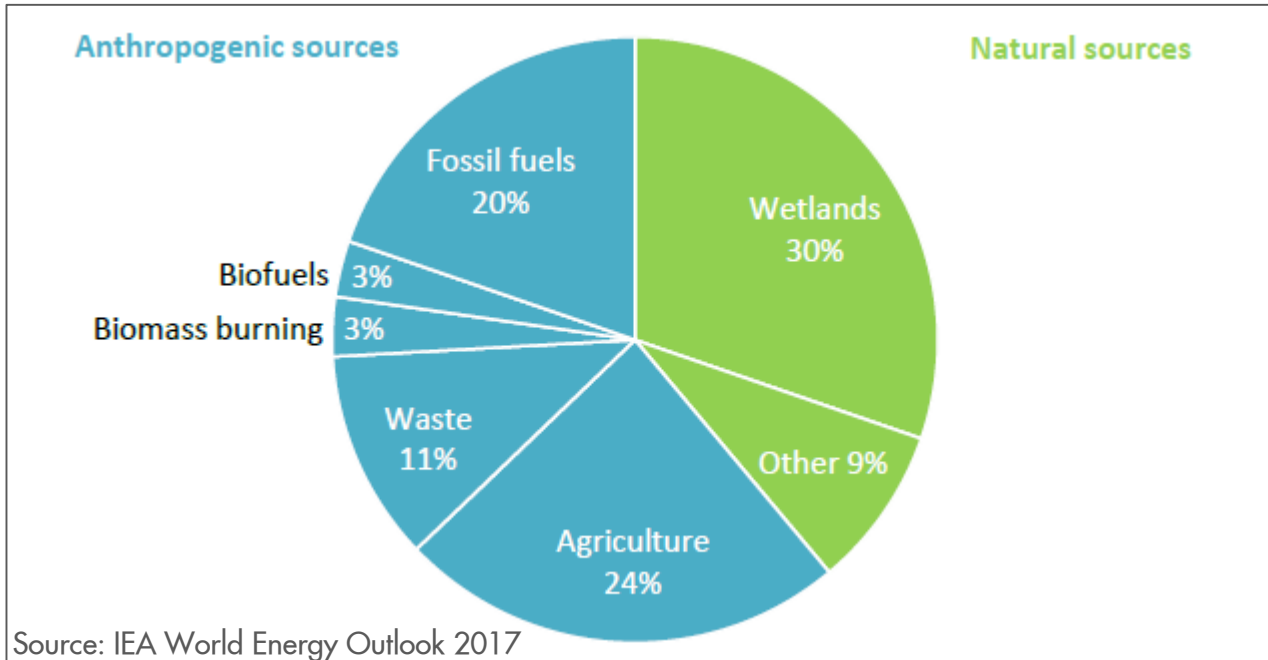


Methane Guiding Principles and OGCI

UNECE Industry workshop on reducing methane emissions from the gas sector

Sue-Ern Tan
Shell

METHANE EMISSIONS – BY THE NUMBERS



- Methane is the largest constituent of natural gas.
- Methane has between 28-36 times the global warming potential of CO₂ over a 100-year time frame (IPCC AR5)
- Fossil fuels accounts for around a fifth of the world's total man-made GHG emissions, oil and gas sector accounts for around 13%.



Overview of the global methane roundtable

- 22 November 2017 – Global roundtable, focused on ensuring greater consensus and alignment – between leading academics, NGOs, multilateral organisations and industry – **on the priority next steps for monitoring, measuring and reporting methane emissions**, as well as the actions needed to improve performance.
- Key output from the roundtable - Guiding Principles document which has global applicability and addresses the key priorities for the natural gas value chain, from production to the final consumer.

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.

These principles were developed collaboratively by a coalition of industry, international institutions, non-governmental organisations (NGOs) and academics. 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.



The principles cover:

- Continually reducing methane emissions;
- advancing strong performance across gas value chains;
- improving accuracy of methane emissions data;
- advocating sound policies and regulations on methane emissions;
- increasing transparency.

Unique feature - inclusive and ambitious focus on encouraging stronger methane management performance throughout the entire natural gas value chain.

Signing up

- **“Signatories”**: companies with direct responsibility for the management of methane within their business activities. By becoming a signatory, a company commits to apply the Guiding Principles across its relevant business activities and to promote the robust product stewardship of natural gas.
- **“Associate Signatories”**: industry and trade associations, which do not have a mandate to enjoin their members to the Guiding Principles but which can play an important role in meeting the spirit and intent of the principles, and in helping the reach of the Guiding Principles throughout the natural gas value chain.
- **“Non-signatory participants”**: principally the international institutions, academics and NGOs which took part in the Methane Roundtable in November 2017 (membership of this group may be extended where warranted and if agreed to by the signatories). Some of these organisations may elect to support the Guiding Principles through their participation in priority actions to address the principles.

OGCI (Oil and Gas Climate Initiative)



- OGCI is a voluntary, CEO-led Oil and Gas industry initiative which aims to catalyze meaningful actions on climate change through collaboration and engagement
- 10 member companies for now, IOCs and NOCs, representing around 1/5th of the world O&G production



- Members companies share a will to collaborate, a support to the Paris agreement, and a commitment to work (direct engagement from the CEOs to drive the initiative, active participation in OGCI program)



OGCI actions to accelerate methane emission mitigation

- Methane emission control and mitigation is one of the main focus of the OGCI Climate Investment fund
- Aiming at near zero methane emissions and preparing target

Working towards near zero methane emissions

Prevention of methane leaks is a top priority for OGCI. Our aim is to work towards near zero methane emissions from the gas value chain. We are also committed to ensure natural gas continues to deliver a clear climate and clean air benefit compared with coal.

Our next steps towards this aim are:

1. Following a pathway to reduce methane emissions from the upstream gas value chain (from wellhead to point of sale) where OGCI member companies have operational control by:
 - Establishing a methodology to improve the collection, verification and reporting of methane emission data in 2018
 - Developing a baseline of methane emissions by the end of 2018
 - Announcing a target by end 2018
 - Reporting progress through our annual report
2. Working with operators of downstream gas value chains (from point of sale to power plant or domestic supplies) to develop specific actions to improve quantification and mitigation actions along the gas value chain.

Ref. : OGCI 2017 report



OGCI actions to accelerate methane emission mitigation

- Methane emission control and mitigation is one of the main focus of the OGCI Climate Investment fund
- Aiming at near zero methane emissions and preparing target

Working towards near zero methane emissions

Prevention of methane leaks is a top priority for OGCI. Our aim is to work towards near zero methane emissions from the gas value chain. We are also committed to ensure natural gas continues to deliver a clear climate and clean air benefit compared with coal.

Our next steps towards this aim are:

1. Following a pathway to reduce methane emissions from the upstream gas value chain (from wellhead to point of sale) where OGCI member companies have operational control by:
 - Establishing a methodology to improve the collection, verification and reporting of methane emission data in 2018
 - Developing a baseline of methane emissions by the end of 2018
 - Announcing a target by end 2018
 - Reporting progress through our annual report
2. Working with operators of downstream gas value chains (from point of sale to power plant or domestic supplies) to develop specific actions to improve quantification and mitigation actions along the gas value chain.

Ref. : OGCI 2017 report

OGCI actions to address the knowledge challenge : O&G Methane Science Study

The Climate and Clean Air Coalition (CCAC), Environmental Defense Fund (EDF) and the Oil and Gas Climate Initiative (OGCI) work together on a series of studies to measure methane emissions in the oil and gas sector.

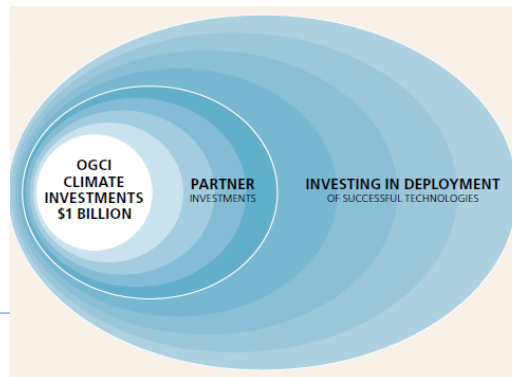


- Objective of the 3 years project is **to improve the understanding of the global sources and the magnitude of methane emissions from O&G supply chains**
- The Project will consist on several studies, with **field measurements in relevant O&G sites**, where knowledge gaps are identified:
 - LNG
 - Offshore (GOM, NS, ...)
 - Gas Transport and distribution Europe
- Results will be **published in peer reviewed scientific journals**
- Other companies and CCAC Partner governments are invited to provide additional funding to the studies to help expand their scope

OGCI Climate Investment partnership



- 1 B\$ investment on 10 years, to develop and facilitate deployment of economic and innovative technologies avoiding Green House Gases emission (R&D, start-up, demonstrations projects ...)
- Main focus :
 - Carbon Capture Utilization and Storage of CO2
 - Methane emission control and mitigation
 - Transportation
 - Energy efficiency
- Leveraging additional funds by working in partnerships, and with implementation of the technologies by the companies in their operations



Towards zero methane emissions

A deployment accelerator



What

- Invitation-only event hosted by OGCI Climate Investments and other potential investors
- Presentations by 10-15 companies seeking funding to support methane technology commercialisation
- Breakout sessions to challenge proposed technologies / business models and discuss deployment

Timing

Deadline for applications: 15 May 2018

Climate Investments Venture Day: 25 June 2018, Washington DC

Announcement of winners: 24 September 2018

Information

www.oilandgasclimateinitiative.com

Thank you.

www.oilandgasclimateinitiative.com



