Oil and Gas Climate Initiative (OGCI)

Rosanna Fusco Member of the excom and chair of the OGCI Role of Gas Workstream

Toronto – April 17th



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

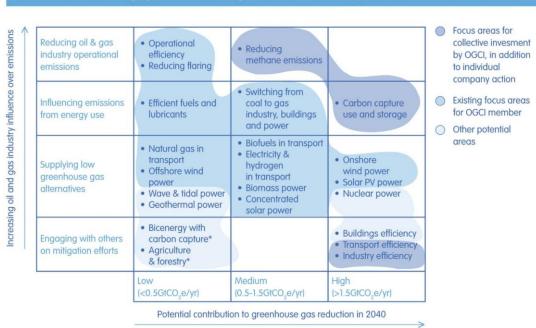


 Members companies share a will to collaborate, a support to the Paris agreement, and a commitment to work (direct engagement from the CEOs to drive the initiative, active participation in OGCI program)

Present OGCI focus

Where OGCI companies have a significant impact on reducing emissions ?

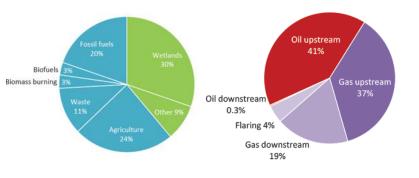
- Since the beginning of the initiative, a strong effort was dedicated to identify the most relevant areas where O&G sector can have an influence, in order to implement common actions
- Dedicated Workstreams for:
 - Role of Gas to implement common actions to boost the role of natural gas as transition fuel
 - Carbon Capture, Usage and Sequestration
 - Low Emissions Opportunities
 - Transport Efficiency
 - Industry Efficiency



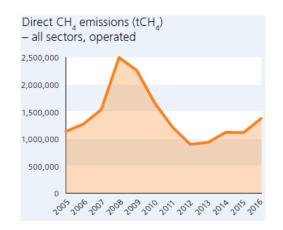
Reducing greenhouse gas emissions - possible actions

(From OGCI report 2016)

Significant uncertainties in Methane emission figures related to O&G are to be addressed



Ref: IEA WEO 2017



On the 570 MtCH4 emitted it is estimated that 76 Mt come from O&G.

78% of which is from upstream part (60 Mt CH4)

OGCI companies produces around 20 % of worldwide O&G.

If extrapolated to worldwide production, it would gives below 10Mt CH4 from O&G upstream worldwide

IOGP comes to similar order of magnitude

Ref : OGCI 2017

 \rightarrow Collaborative work for better understanding crucially needed

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
 - → Better knowledge will help companies and governments to prioritize actions and policies to reduce methane emissions.

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:

- 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
- 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.

Climate Investments 10 year mandate : deliver >1GT / year of greenhouse gas reduction



INVEST in technologies

REMOVE technical and commercial barriers across the value chain



DEPLOY with members and partners



COLLABORATE for speed and scale



Towards zero methane emissions A deployment accelerator





20

Venture Day

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



Investments

Reduce carbon dioxide





E´ _NIC

Novel cement and concrete manufacturing process. $CO_2 \downarrow$ by 70% and water \downarrow by 80%

Capture and store CO_2 from gas-power plant and local industrial emitters. $CO_2 \downarrow$ by 90%

Catalyst technology for CO_2 based polyols. 30% of all polyol production using Econic technology 3.5 m tonnes $CO_2 \downarrow$ saved each year

10

Reduce transport emissions

achatespower

Fundamentally Better Engines®

High fuel efficiency engines. $CO_2 \downarrow$ by 20%

Thank you.

www.oilandgasclimateinitiative.com

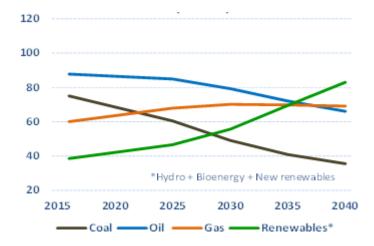




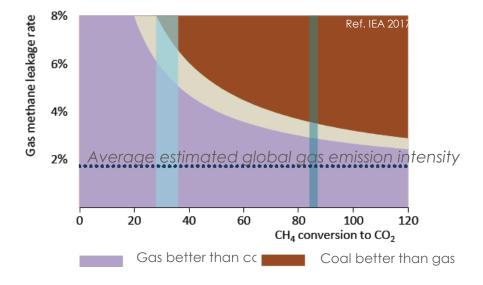




Gas will stays strong in the energy mix and its environmental benefits are to be maximized



In a Sustainable development Scenario, compatible with the Paris agreement, share of gas in the mix increases

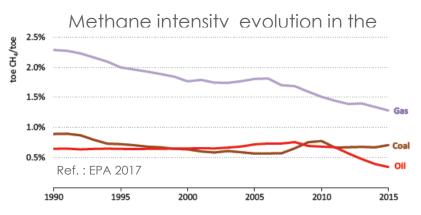


Gas has strong environmental advantages against coal

12

Reducing methane emission in the O&G chain to maximize benefits

- Several industrial actions underway (Climate and Clean Air Coalition, Methane roundtable, IPIECA, Global Methane Initiative ...)
- Progress have already been achieved



- Further progress must be done :
 - cheaper methane measurement method
 - increase LDAR frequency at lower cost
 - reduce flaring, in line with the World bank Zero routine flaring by 2030 initiative
 - avoiding gas instrument in a cost effective way

- ...

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 :
 - o Carbon Capture Utilization and Storage of CO2
 - o Methane emission control and mitigation
 - o Transportation
 - o Energy efficiency
- Leveraging additional funds by working in partnerships, and with implementation of the technologies by the companies in their operations

