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**GIE Key Messages on Methane Emissions**

**Geneva, 21<sup>st</sup> March 2018**

# GIE released its key messages on Methane Emissions



January 2018

## GIE Methane Emissions TF – Key messages on methane emissions

### 1 Introduction

Methane emissions have gained increasing attention over the last few years in the debate whether natural gas could contribute to meeting global climate change ambitions. Methane is a greenhouse gas (GHG) and an ozone (O<sub>3</sub>) precursor. Even though methane emissions from gas mid-stream make only a marginal percentage of total emissions, GIE and its members are strongly committed to support the transition to a low-carbon society by minimising GHG emissions, and methane emissions in particular, released during their operation and maintenance activities.

The oil and gas industry represents only a small fraction of the main sources of methane emissions in Europe. According to the European Environment Agency (EEA), methane emissions from the gas chain represent 0.8% of the total Green House Gas (GHG) emissions<sup>1</sup>. Considering MARCOGAS position paper<sup>2</sup> "CH<sub>4</sub> emissions in the European Natural Gas midstream sector" and the data provided by GIE members, the total amount of methane emitted from natural gas midstream activities (LNG terminals, underground gas storages and transmission grids) is estimated to be 0.062% of the total gas sales in Europe (EU 28). The total amount of GHG emissions caused by this emitted methane is estimated to be 0.1% of the total anthropogenic GHG emissions (CO<sub>2</sub> eq.) in Europe (EU 28).

Currently, many publications show a substantial uncertainty about the total methane emissions associated with the entire gas value chain. However, the publication "GHG intensity of natural gas" focused on the mobility sector found that emissions from the gas well to the downstream installation (excl. dispensing) account for 0.6% of the CNG supplied and 0.8% of the LNG supplied.<sup>3</sup>

GIE and its members are actively involved in technical initiatives. They provide necessary data to enable standardized, representative and transparent emissions mapping, quantification and monitoring for the gas industry to agree on a common methodology and on a set of recommendations related to reducing methane emissions and to implement them.

The results of the efforts taken so far are clearly successful, as methane emissions are further decreasing (according to the EEA report).

<sup>1</sup> Annual European Union greenhouse gas inventory 1990-2015 and inventory report 2017

<sup>2</sup> <https://www.eea.europa.eu/data-and-maps/publications/marcomgas-position-paper-ch4-emissions-in-the-european-natural-gas-midstream-sector>

<sup>3</sup> <https://www.eea.europa.eu/data-and-maps/publications/marcomgas-position-paper-ch4-emissions-in-the-european-natural-gas-midstream-sector>

<sup>4</sup> According to the European Gas Institute (ENI) and CO<sub>2</sub> emissions from the natural gas supply chain – an industry assessment<sup>4</sup>, the majority of activities (68 between 0.3% and 2% of produced methane, while according to the EEA are around 1.5%.

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of key messages related to the gas network, underground gas storage and gas processing activities as follows:

protection goals. methane emissions. For this reason, studies and initiatives on methane emissions from the total methane emissions from the gas chain.

minor fraction of the overall decreasing. minimizing methane emissions and are implementing the best methodology) and a set of needed. For this reason, the gas chain.

percentage of total emissions. in the European Natural Gas members, methane emissions are from UGS and 0.002% from LNG.

story to reduce emissions as fast as possible in meeting European climate change goals.

and "renewable" hydrogen with GHG emissions and advancing in underground storages provide and solar based energy system.

ne emissions. For this reason, studies and initiatives on methane emissions from the total methane emissions from the gas chain.

loss the natural gas chain. This is due to the fact that methane emissions from the gas chain are very low compared to other sectors.

ons, flaring, venting, pneumatic, etc.).

ents:

ted, etc.);

consistent with industry values. If are contributing to increased sales in order to overcome the gas chain. Moreover, they are data and they can prioritise the gas chain.

small fraction of the overall continuously decreasing.

to focus mainly on carbon dioxide (CO<sub>2</sub>) and methane (CH<sub>4</sub>) emissions from human activities affect global climate change.

from gas infrastructure: UNCCC questionnaire (2016) according to Article 15 of Council Directive (2003/96/EC) on the taxation of energy products.

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categories 1990 to 2015 in CO<sub>2</sub> equivalent categories in 2015



Inventory report 2017

ished in 2015, total methane emissions from the gas chain have decreased more than 21% compared to 2014. They only represent 0.002% of the total GHG emissions in the gas chain.

Gas: Trend

Inventory report 2017

Inventory report 2017

Inventory from all sources associated with the gas chain.

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minimizing methane emissions from the gas chain by implementing the best practices.

made to design and develop methane emissions reduction measures. The implementation of the "best available technology" (BAT) has led to a significant reduction in methane emissions.

before a maintenance work or electric or compressed air pipelines and above ground.

essing the need for venting):

maintenance works in order to reduce methane emissions.

missions reductions.

ing out economical efforts to reduce methane emissions. The implementation of the "best available technology" (BAT) has led to a significant reduction in methane emissions.

tors will provide significant methane emissions levels than currently.

re emissions can be improved, providing necessary data to support when required.

onal Inventory Reports (NIR) only due to the calculation of methane emissions.

each case. This does not mean that all methane emissions are reduced.

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actual measurements. There is a need for more accurate measurements. Authorities: firstly, they check accuracy and secondly, they implement the best practices.

percentage of total emissions

European Natural Gas midstream methane emissions from natural gas and transmission grids is estimated to be 0.062% of the total gas sales in Europe (EU 28).

stream sector

Gas midstream system

as provided by GIE members, storages represent 0.058% of methane emissions represent 0.003% of methane emissions.

the values emissions from Europe are 0.6% of the CNG

related to CNG dispensed in

related to LNG dispensed in

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ity of transport and use of natural gas in combinations with natural gas.

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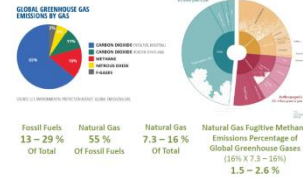
related to LNG dispensed in

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# GIE released its key messages on Methane Emissions



Percentage of Methane Global Greenhouse Gases : 1.5% – 2.6%  
(Based on GWP 100)



CH<sub>4</sub> emissions from the gas chain small fraction of the total CHG emissions



CH<sub>4</sub> emissions from the gas chain continuously going down



Working on common methodology and set of recommendations



Implementation of the best available techniques



Gas operators have strong commitment with the environment

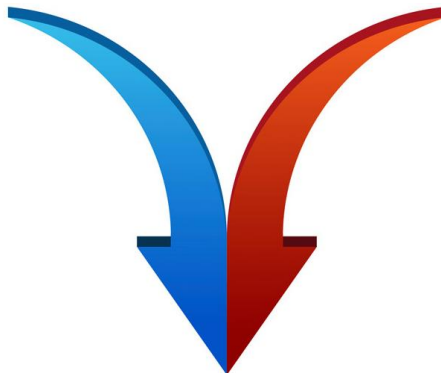
# GIE Advocacy Strategy



Identify **target group**



Identify the right  
**channels, timing and location**



Loading

**Take action**





Thank you for your attention

Geneva, 21<sup>st</sup> March 2018