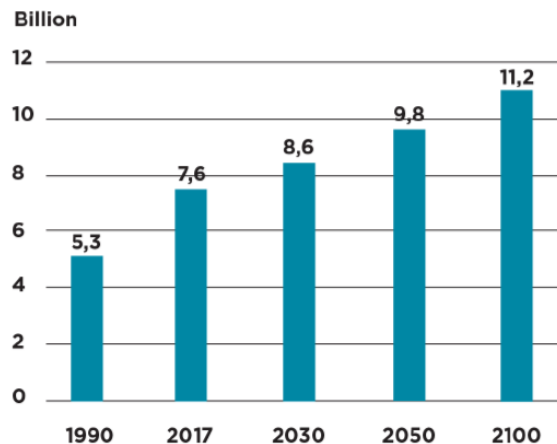


15TH OIL FORUM OF THE ENERGY COMMUNITY

OIL INDUSTRY STRATEGIC APPROACH TO NET ZERO

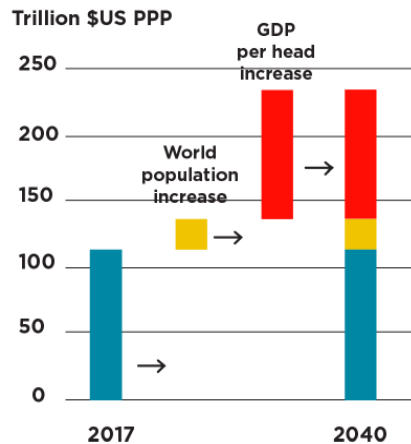
Karolina Čegir, Senior Gas Expert, Energy Community Secretariat

World population



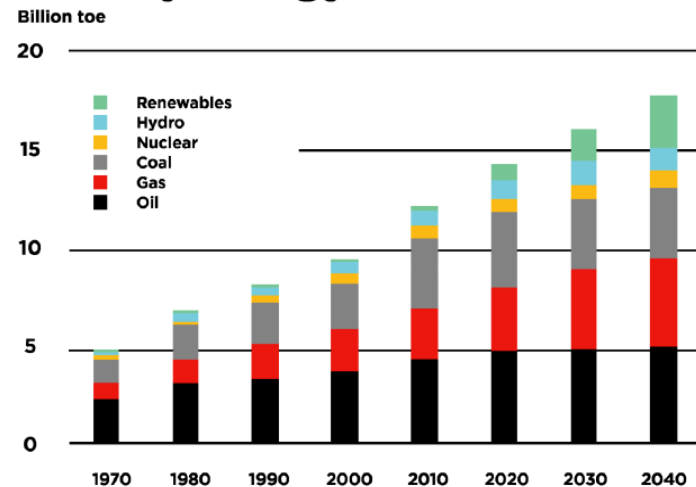
Source: United Nations, World Population Prospects 2019

Increase in global GDP



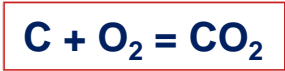
Source: BP Energy Outlook, 2019 Edition

Primary energy demand - fuel



Source: BP Energy Outlook, 2019 Edition

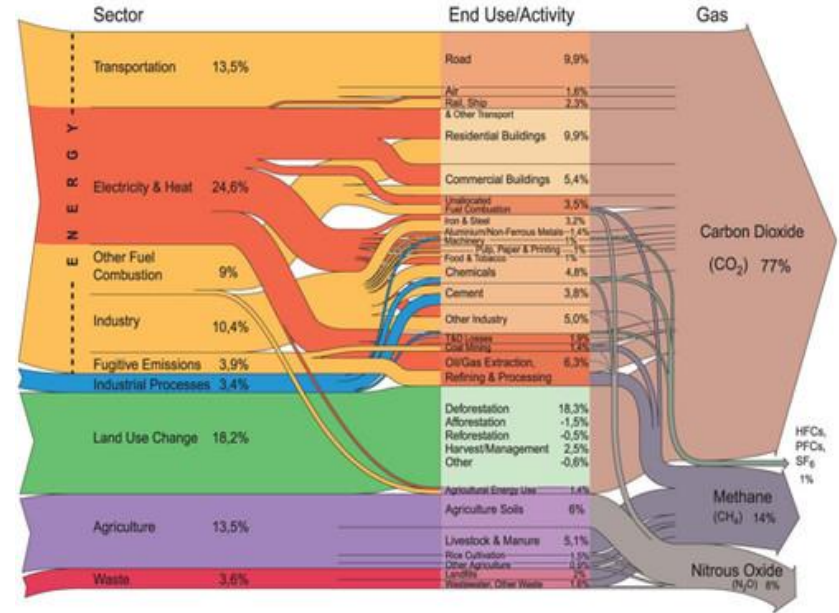
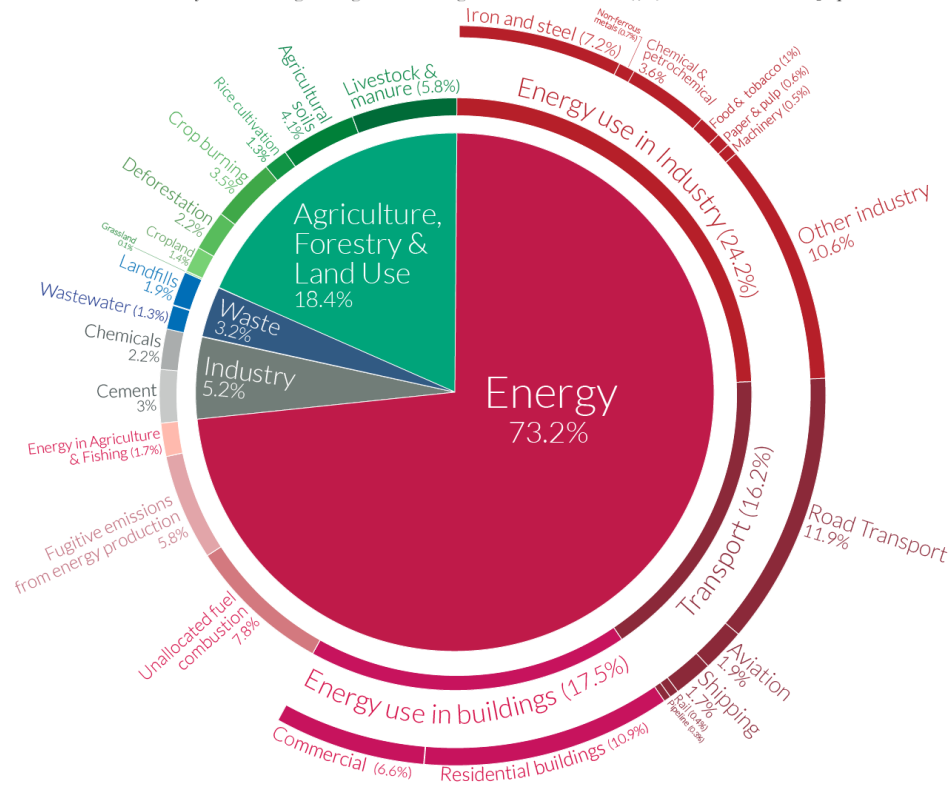
Usage of fossil fuels ~ GHG emissions



Global greenhouse gas emissions by sector

Our World in Data

This is shown for the year 2016 – global greenhouse gas emissions were 49.4 billion tonnes CO₂eq.



All data is for 2000. All calculations are based on CO₂ equivalents, using 100-year global warming potentials from the IPCC (1996), based on a total global estimate of 41 755 MtCO₂ equivalent. Land use change includes both emissions and absorptions. Dotted lines represent flows of less than 0.1% percent of total GHG emissions.

Source: World Resources Institute, Climate Analysis Indicator Tool (CAIT), Navigating the Numbers: Greenhouse Gas Data and International Climate Policy, December 2005; Intergovernmental Panel on Climate Change, 1996 (data for 2000).

OurWorldinData.org – Research and data to make progress against the world's largest problems.

Source: Climate Watch, the World Resources Institute (2020).

Licensed under CC-BY by the author Hannah Ritchie. (2020).

GHG	Symbol	Lifetime (years)	GWP ₂₀ (Over 20 years)	GWP ₁₀₀ (Over 100 years)	Total emissions (2018)
Carbon Dioxide	CO ₂	100-1000	1	1	81%
Methane	CH ₄	12	84	28	10%
Nitrous Oxide	N ₂ O	121	264	265	7%
Tetrafluoroethane	HFC-134a	13	3710	1300	2%
Trichlorofluoromethane	CFC-11	45	6900	4660	
Carbon Tetrafluoride	CF ₄	50,000	4880	6630	

CO₂ is the biggest GHG, but
CH₄ defines the speed of warming

The need to act in **the next decades**, not in the next century



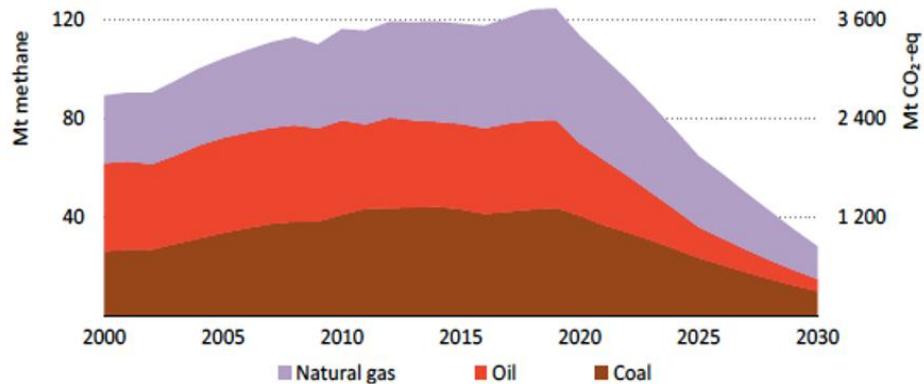
- **Combustion gases** consisting of **CO₂**, carbon dioxides and minor amounts of CO, NO, N₂O, SO₂, and un-combusted hydrocarbons (methane and volatile organic compounds (VOCs))
- **Hydrocarbons** consisting of **CH₄** and primarily aliphatic VOCs **vented** to the atmosphere or escaping from the hydrocarbon processes through **fugitive** emissions.
- Releases of halon and other Chlorofluorocarbon (CFC) gases from fire-fighting and refrigeration systems

Methane emissions by oil & gas industry [1]

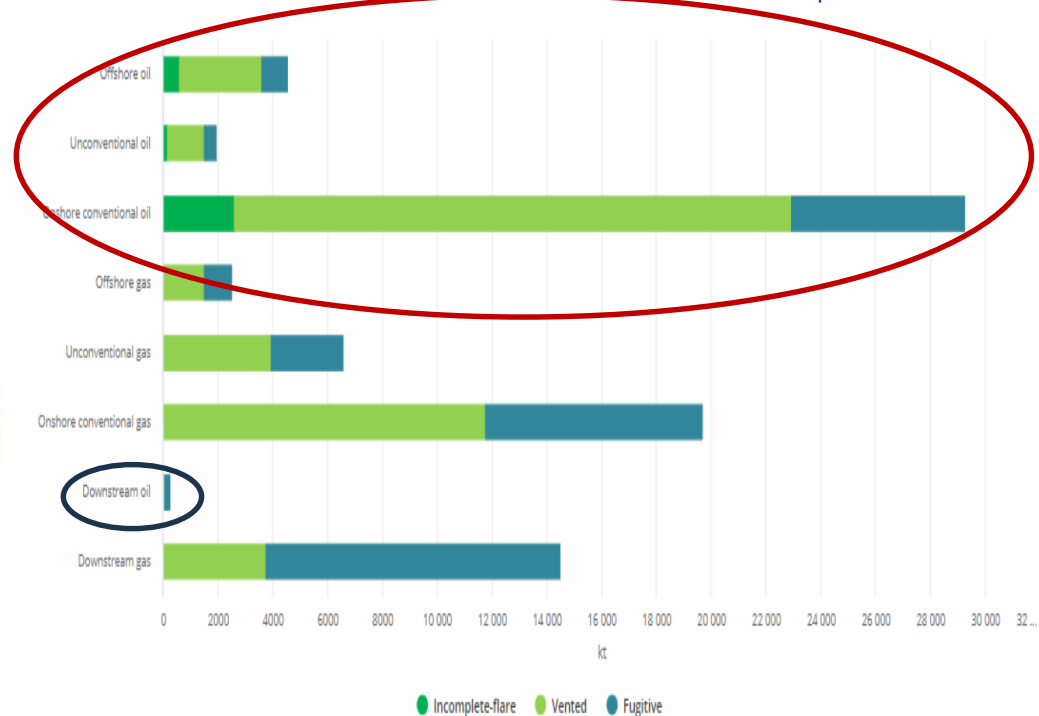
40% by nature (wetlands, permafrost melting)

60% anthropogenic, by human activities

- 35% fossil fuels – coal, oil, gas
- 32% Agriculture & food production
- 8% rice production
- 19% Waste
- 6% biogas industry

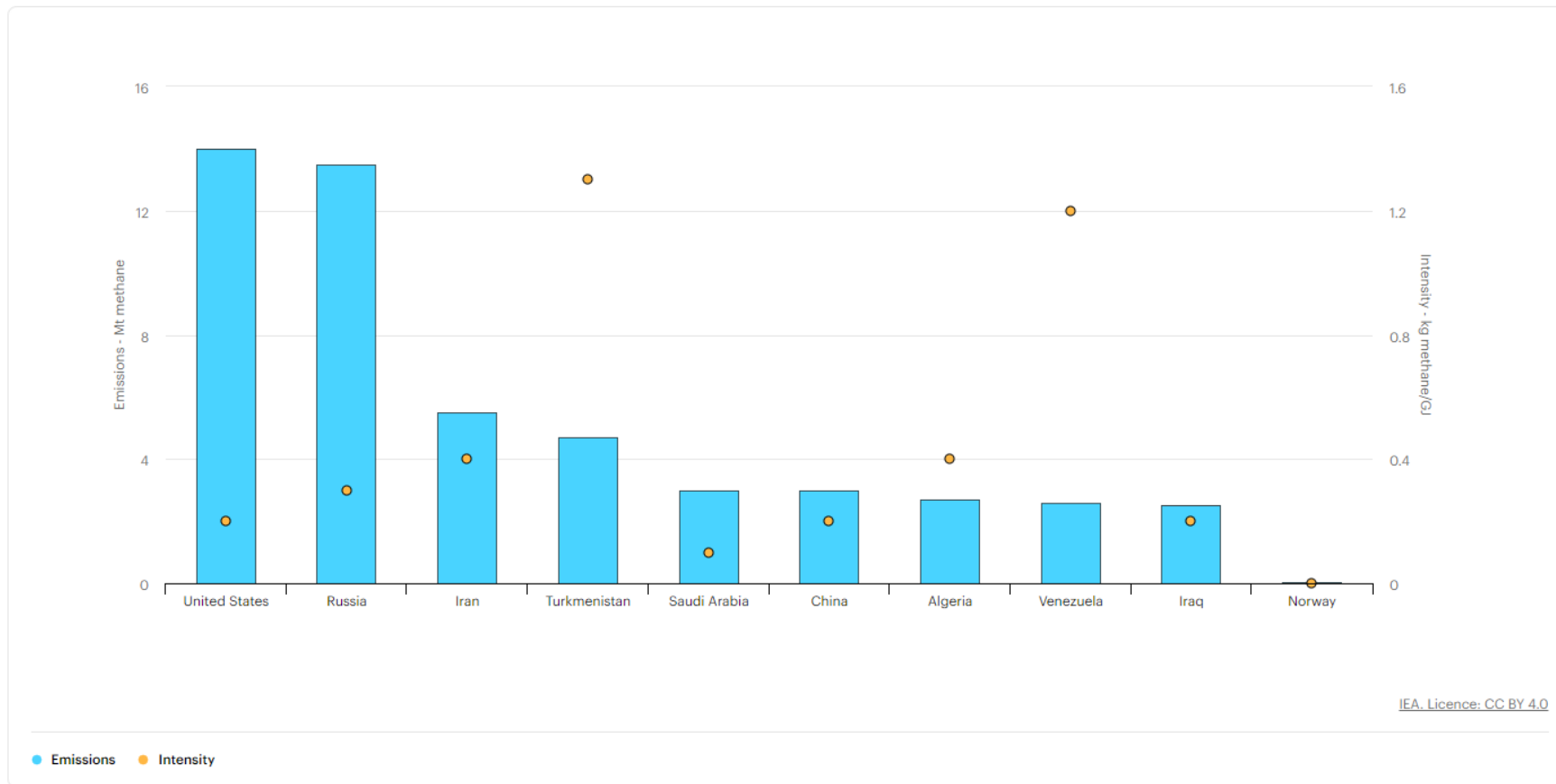


Global oil & gas sector methane emissions: 79 Mt CH₄



Source: IEA

Methane emissions by oil & gas industry [2]

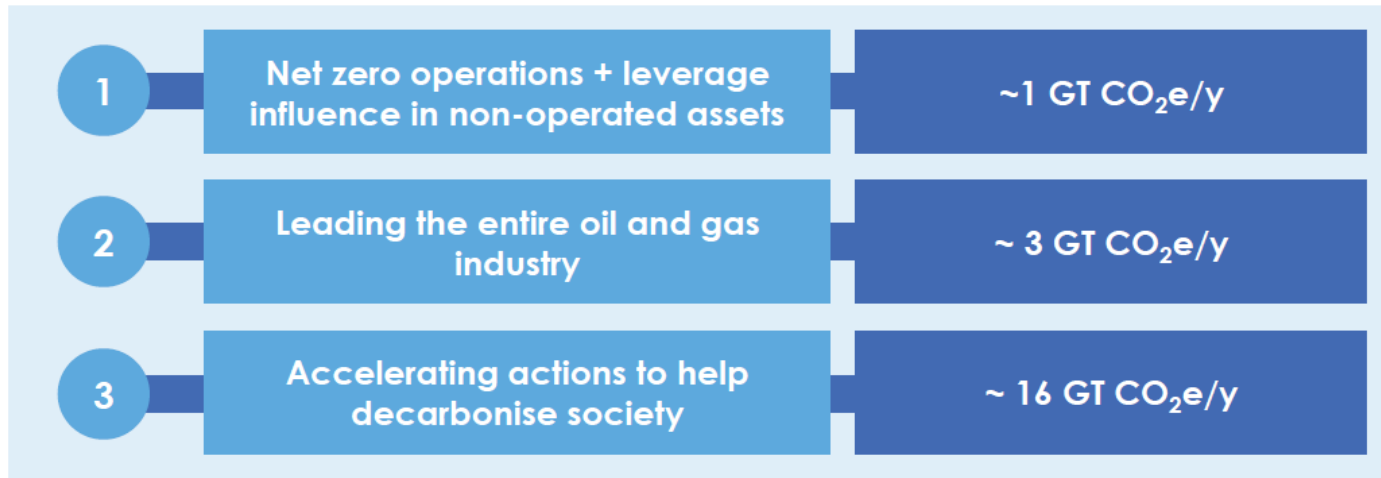


<https://www.iea.org/reports/global-methane-tracker-2023>

member companies



strategy to catalyse climate impact



Our focus areas



Source: OGCI Website (2023)

<https://www.ogci.com>



AIMING FOR ZERO

Methane Emissions Initiative

The Aiming for Zero initiative aims to **eliminate the oil and gas industry's methane footprint by 2030**.

“treats methane emissions as seriously as the oil and gas industry already treats safety. We aim for zero and we strive to do what is needed to get there”

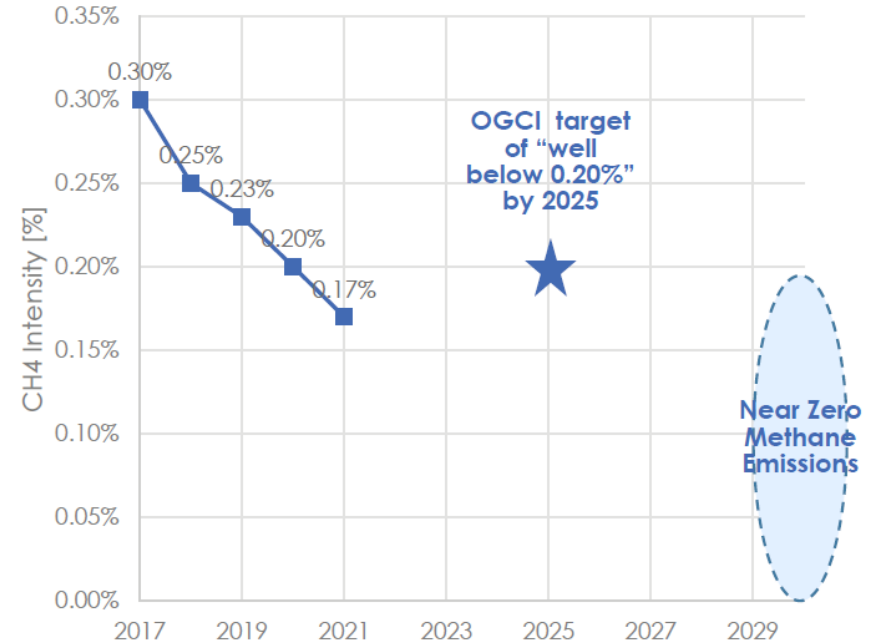
Size of the prize: 2 Gt CO₂e per year

O&G industry answer to the **Global Methane Pledge**

80+ Signatories & Supporters and counting

COP28 Presidency leveraged most of the language for future 2023 Dubai Announcement.

OGCI Upstream Methane Intensity Target & Aiming for Zero by 2030



Sources: OGCI Website(2021), GHGSat (2021)

<https://www.ogci.com/action-and-engagement/aiming-for-zero-methane-emissions-initiative/>



<https://www.iogp.org/>

Methane detection and quantification technology filtering tool

Recommended Practice for methane emissions detection and quantification technologies – upstream



ZRF WEBSITE

Zero Routine Flaring by 2030 (ZRF) Initiative

Launched in 2015, the ZRF initiative commits governments and oil companies to end routine flaring no later than 2030.



REPORT

Global Gas Flaring and Venting Regulations

A detailed review of regulatory frameworks governing gas flaring and venting in 21 oil-producing countries.



REPORT

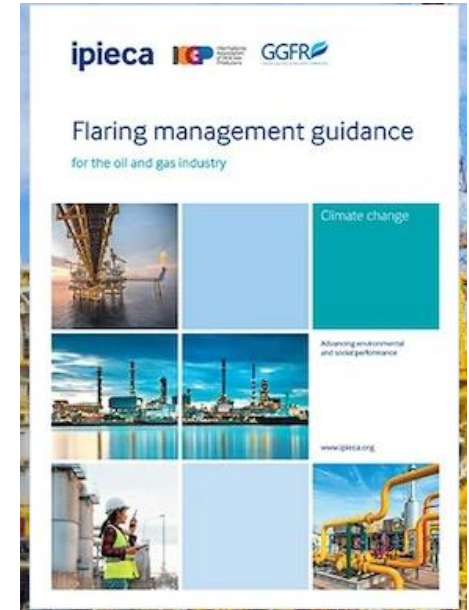
Financing Solutions to Reduce Flaring and Methane Emissions

A systematic framework for evaluating the feasibility of financing flare reduction projects at medium-sized flaring sites.

ipieca

The global oil and gas association for advancing **environmental** and **social performance** across the **energy transition**

<https://www.ipieca.org/>



Voluntary industrial initiatives – use the knowledge [2]



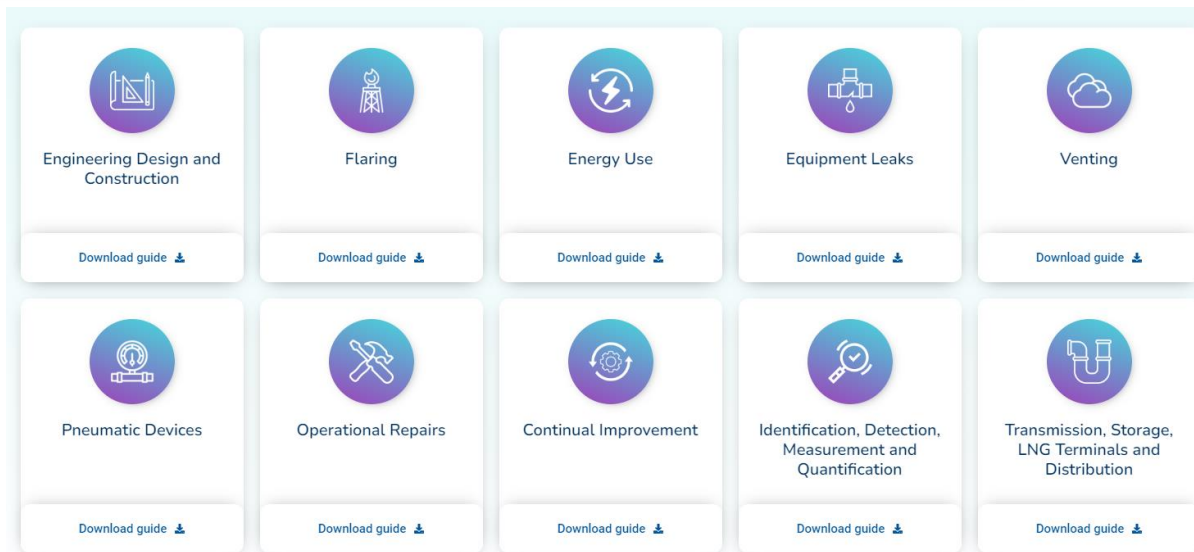
<https://methaneguidingprinciples.org/>

Toolkits
Best Practices Guidelines

.....



<https://mist.carbonlimits.no/>



User-friendly free tool which leverages the latest research to set up your methane inventory and help prioritize mitigation

Development of the EU legislation / part of the Decarbonisation Roadmap for the Energy Community:

- For the gas industry – mandatory **LDAR** (leak detection and repair)
- For coal, **oil**, and gas sectors – mandatory **MRV** (monitoring, reporting, verification)
- **For the gas & oil industry – a ban on venting and flaring**
- Methane transparency database for imports into the EU



Industry voluntary initiatives aiming to stop regular venting and flaring, to reach zero emissions



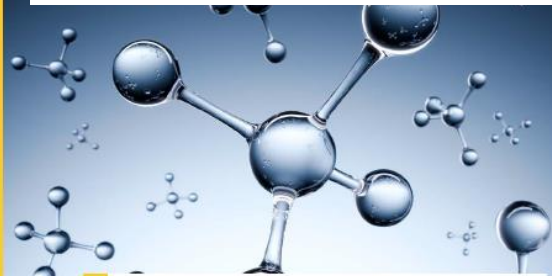
OGMP 2.0 Framework

International Methane Emissions Observatory (IMEO)



38.000 km of the transmission network
= 92% of the total in EnC CPs

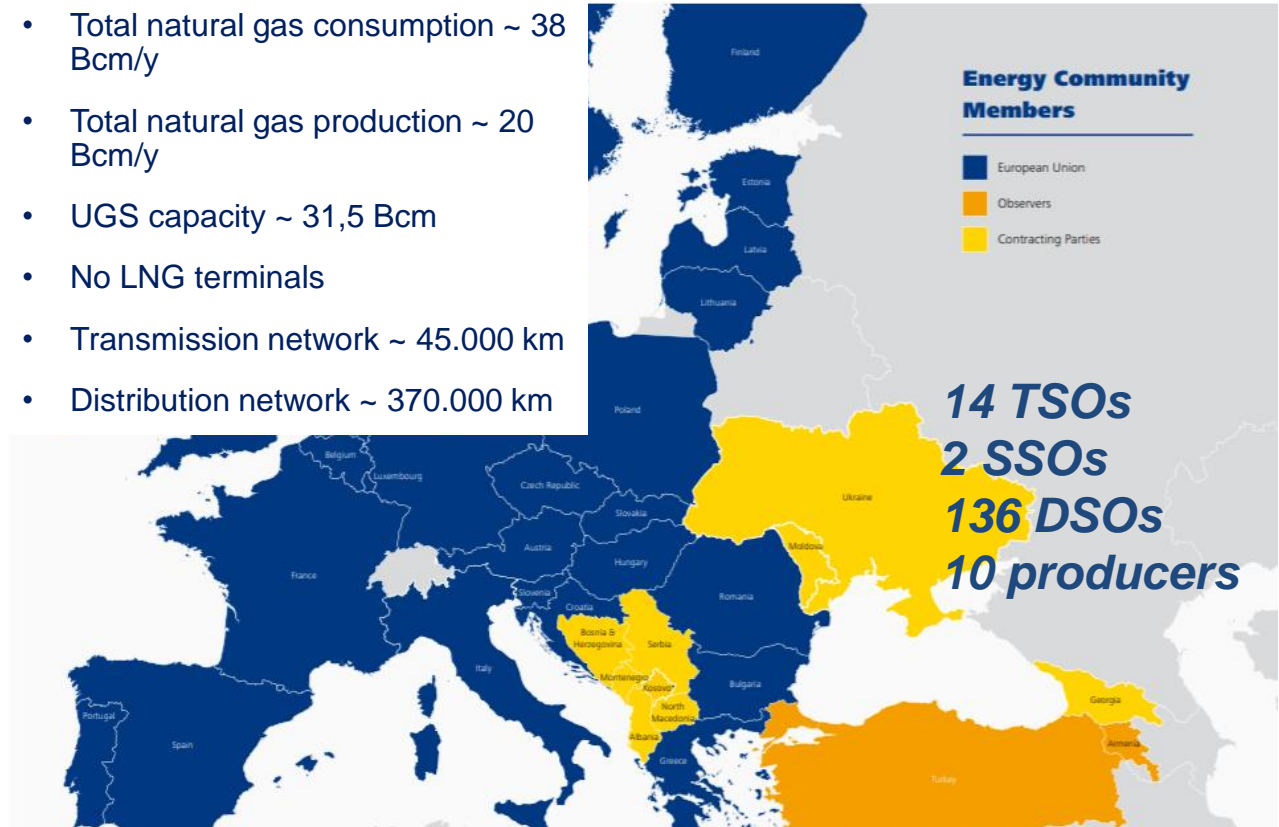
262.000 km of distribution network
= 71% of the total in EnC CPs



Report on methane emissions by gas transmission and distribution system operators in the Energy Community Contracting Parties

Energy Community Secretariat
May 2021

- Total natural gas consumption ~ 38 Bcm/y
- Total natural gas production ~ 20 Bcm/y
- UGS capacity ~ 31,5 Bcm
- No LNG terminals
- Transmission network ~ 45.000 km
- Distribution network ~ 370.000 km



Naftogaz, Moldovagaz, GAMA, TAP signatory to OGMP 2.0


- Webinars Monthly Methane Mondays
- Raising knowledge – bilaterally, via webinars
- Continuation of cooperation with GIE, Marcogaz, MGP, IOGP, OGCI....
- Opening horizontal discussions – regulators, ministries responsible for energy, environment
- **Inclusion of the oil industry** in reporting
- Inclusion of coal industry.....
- Waiting for the EU Regulation on mitigation of methane emissions by the energy sector / preparing for the adoption in the Energy Community
- Helping in the operationalization of the Global Methane Pledge
-



**THANK YOU
FOR YOUR ATTENTION**

karolina.cegir@energy-community.org

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