# OIL AND GAS METHANE PARTNERSHIP MODULE

## PRESENTATION 1 – Introduction to OGMP and the OGMP 2.0 Framework

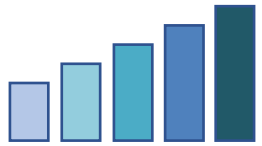
# UNDERSTAND HOW OGMP 2.0 AND ITS REPORTING FRAMEWORK WORK

# Module overview

## OIL AND GAS METHANE PARTNERSHIP MODULE

3 presentations:

1. Introduction to OGMP and the OGMP 2.0 Framework
   - Goal and main principles of the OGMP 2.0 Framework
2. The reporting levels
   - In practice how the emissions are quantified and reported in a standardized way
3. The journey to the gold standard
   - Requirements to obtain the gold standard: materiality rule, reporting timeline and implementation plan



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# OGMP 2.0: the Oil and Gas Methane Partnership

Governments and civil society

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European Commission

EDF ENVIRONMENTAL DEFENSE FUND Finding the ways that work

CLIMATE & CLEAN AIR COALITION TO REDUCE SHORT-LIVED CLIMATE POLLUTANTS

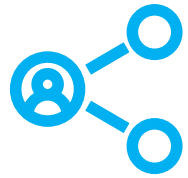
CLEAN AIR TASK FORCE

Industry: public, private and national Oil and Gas companies

More than 80 companies in over 60 countries in 2022

Map source: UNEP


Methane emissions reporting framework



Community of practice



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# Credibility and knowledge sharing

**Regulators, investors and public**

*Standardized yearly emission report*

Demonstrate **commitment** aligned with the **Paris Agreement** and the **Methane Pledge.**

Show reasonable and transparent **methane** emission **management**.

**Support** policy decisions through **credible** emission numbers.

**OGMP member**

*Annual implementation conferences and quarterly technical workshops*

**Other OGMP members**

**Share** knowledge, experience and best practice.

Participation in **writing OGMP 2.0 rules**.

Improve the **understanding** of emissions sources and mitigation



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# Reporting principles of the OGMP 2.0 framework


**Quantified methane emissions**

- ✓ For all emission sources.
- ✓ For all assets: operated and non operated (NOJV).
- ✓ Published by UNEP International Methane Emissions Observatory aggregated at company level.

Numbered emission **reduction target**

- ✓ As absolute reduction or emission intensity.
- ✓ Published by UNEP International Methane Emissions Observatory.
- ✓ To reach by 2025 (initial target)

**Implementation plan** outlining **credible path** to improve the reporting on all assets.



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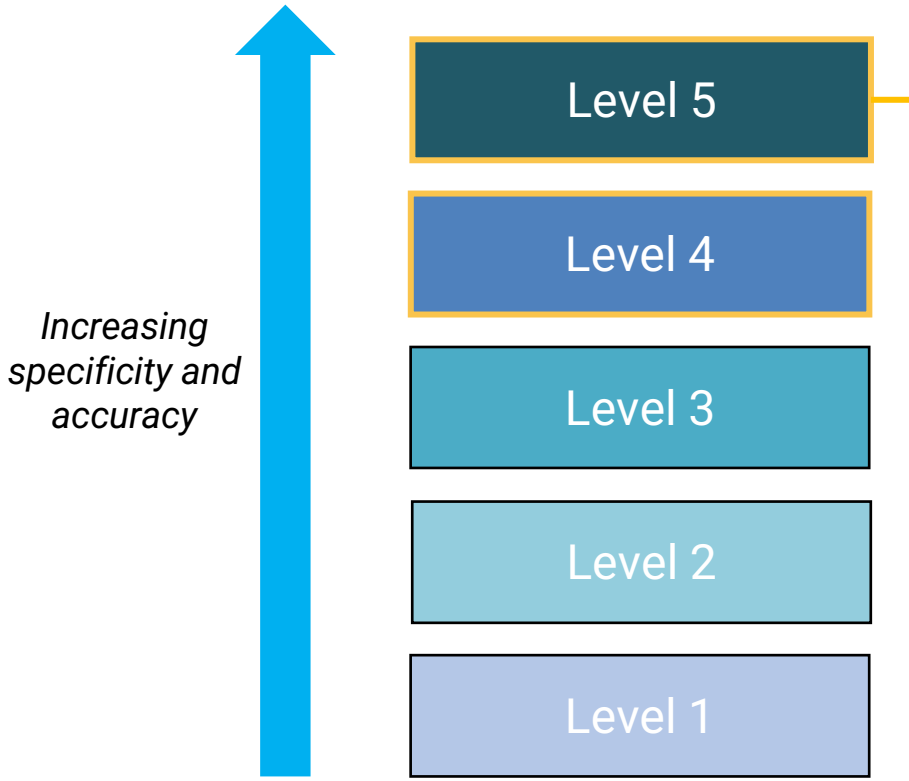
# The 5 levels: a “common language” for reporting emissions

**Reporting levels:** communicate in a standardized manner the quality of the methane emission estimates.




**Gold standard:** certifies the achievement of reaching level 4 and demonstrating efforts to reach level 5 on all assets with material emissions within the given timeline.



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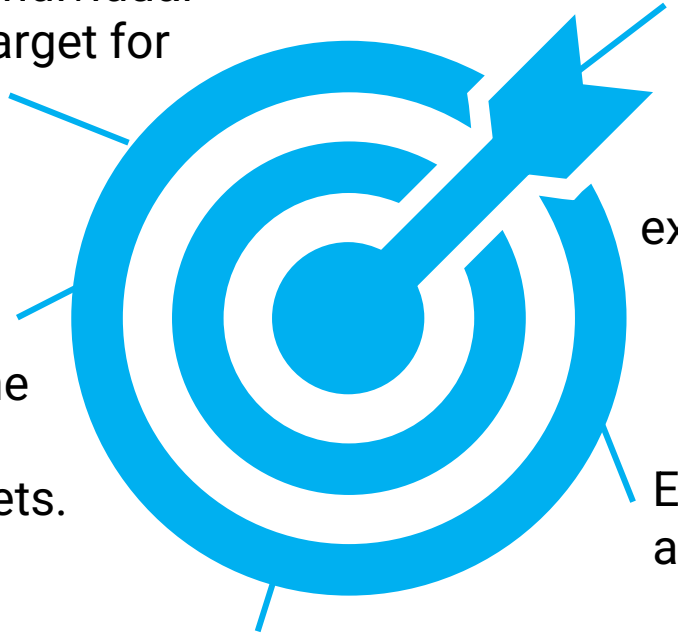
# Companies set their own performance target

Quantified individual reduction target for 2025

Target based on the performance of the companies.
➔ Higher targets expected for companies performing better.



Yearly report of the progress towards the target and gradual increase of the targets.

Either intensity or absolute target.

Mandatory for operated portfolio.
Desirable for non-operated assets.

Recommended targets for industry as a whole:

- **45% reduction by 2025** (compared to 2015)
- **60-75% reduction by 2030**

OR

- **'near zero' emissions intensity**

*e.g.* OGCI collective average target for upstream operations of **0.2% by 2025**



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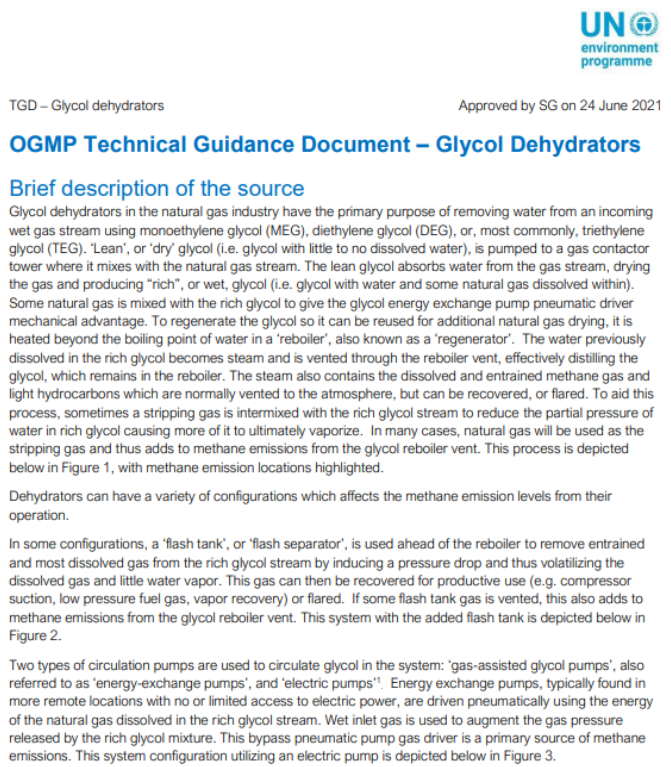
# The Technical Guidance Documents (TGDs):

## the beacon on the road towards methane management

17 available guidance documents:

- General TGD
  - ✓ general considerations on scope, definitions and estimates
- Level 1 and 2 TGD
  - ✓ methodology for reporting level 1 and level 2
- 1 TGD for **each core emission source**
  - ✓ description of the source
  - ✓ system boundaries
  - ✓ accepted quantification methods for level 3 and level 4 reporting
- "Uncertainty and Reconciliation" guidance document
  - ✓ definitions and methodology to reach level 5 reporting



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TGD – Glycol dehydrators Approved by SG on 24 June 2021

**OGMP Technical Guidance Document – Glycol Dehydrators**

Brief description of the source

Glycol dehydrators in the natural gas industry have the primary purpose of removing water from an incoming wet gas stream using monoethylene glycol (MEG), diethylene glycol (DEG), or, most commonly, triethylene glycol (TEG). 'Lean', or 'dry' glycol (i.e. glycol with little to no dissolved water), is pumped to a gas contactor tower where it mixes with the natural gas stream. The lean glycol absorbs water from the gas stream, drying the gas and producing "rich", or wet, glycol (i.e. glycol with water and some natural gas dissolved within). Some natural gas is mixed with the rich glycol to give the glycol energy exchange pump pneumatic driver mechanical advantage. To regenerate the glycol so it can be reused for additional natural gas drying, it is heated beyond the boiling point of water in a 'reboiler', also known as a 'regenerator'. The water previously dissolved in the rich glycol becomes steam and is vented through the reboiler vent, effectively distilling the glycol, which remains in the reboiler. The steam also contains the dissolved and entrained methane gas and light hydrocarbons which are normally vented to the atmosphere, but can be recovered, or flared. To aid this process, sometimes a stripping gas is intermixed with the rich glycol stream to reduce the partial pressure of water in rich glycol causing more of it to ultimately vaporize. In many cases, natural gas will be used as the stripping gas and thus adds to methane emissions from the glycol reboiler vent. This process is depicted below in Figure 1, with methane emission locations highlighted.

Dehydrators can have a variety of configurations which affects the methane emission levels from their operation.

In some configurations, a 'flash tank', or 'flash separator', is used ahead of the reboiler to remove entrained and most dissolved gas from the rich glycol stream by inducing a pressure drop and thus volatilizing the dissolved gas and little water vapor. This gas can then be recovered for productive use (e.g. compressor suction, low pressure fuel gas, vapor recovery) or flared. If some flash tank gas is vented, this also adds to methane emissions from the glycol reboiler vent. This system with the added flash tank is depicted below in Figure 2.

Two types of circulation pumps are used to circulate glycol in the system: 'gas-assisted glycol pumps', also referred to as 'energy-exchange pumps', and 'electric pumps'[1]. Energy exchange pumps, typically found in more remote locations with no or limited access to electric power, are driven pneumatically using the energy of the natural gas dissolved in the rich glycol stream. Wet inlet gas is used to augment the gas pressure released by the rich glycol mixture. This bypass pneumatic pump gas driver is a primary source of methane emissions. This system configuration utilizing an electric pump is depicted below in Figure 3.

Link to OGMP website: https://www.ogmpartnership.com/templates-guidance



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# OGMP 2.0:
# Community of practice &
# Standardized framework for quantified methane emission reporting

# Thanks for your attention.

Training material developed by: CARBON LIMITS

In collaboration with the **UNEP OGMP 2.0 Team**

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