OIL AND GAS CLIMATE INITIATIVE

Reducing Methane Emissions Across the LNG value chain

Learnings from the oil and gas sector

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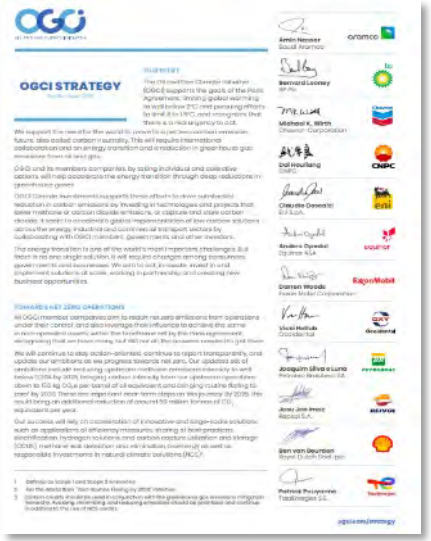
A CEO-led initiative leading industry efforts to reduce emissions since 2014

12 leading energy companies producing around 25% of global oil and gas output working to enable and accelerate action across the oil and gas sector to reduce GHG emissions

1	Net zero operations, influence non-operated assets	~1 GT CO_2e/year
2	Industry leadership to enable emissions reductions	~ 3 GT CO_2e/year
3	Support the scale up of solutions to help society decarbonize	~ 16 GT CO_2e/year



Our focus areas

Methane mitigation | Energy efficiency | CCUS | **Low-carbon mobility** | Natural climate solutions | Low-emission opportunities

Over a decade of work reducing emissions, including methane

62%
reduction of upstream methane intensity since 2017

24%
reduction of upstream CO2 intensity since 2017

72%
reduction of routine flared gas since 2018

100 $MtCO_2e/y$
reduction of Scope 1&2 operated GHG emissions since 2017

$125 billion
invested in low-carbon solutions since 2017

56
signatories to the Oil & Gas Decarbonization Charter. **OGCI is the secretariat**

50+
CCUS hubs under development by OGCI members, potential of 500 Mt CO2e stored by 2030

100+
companies signed up to OGCI's Aiming for Zero Methane Emissions Initiative

15+
partnerships with leading think tanks, NGOs and universities

25%
of global oil and gas output

0.5%
of global greenhouse gas emissions

OGCI Secretariat also supports the Oil & Gas Decarbonization Charter to speed up climate action

THE OIL & GAS DECARBONIZATION CHARTER

ACTION

Born out of COP28 in 2024, under the leadership of Dr. Sultan Al Jaber, OGDC is an initiative to accelerate voluntary actions towards individual companies' decarbonization in the oil and gas industry.

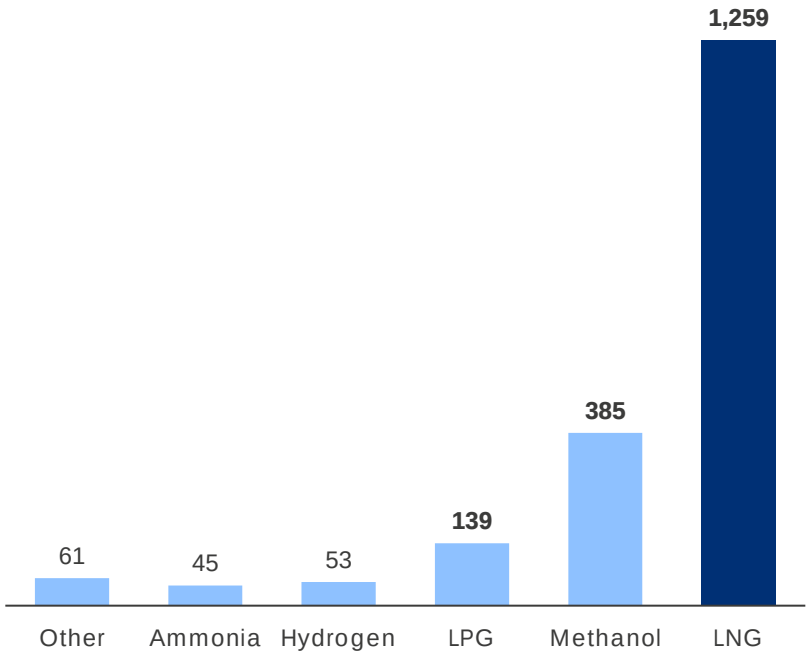
COLLABORATION

OGDC supports NOCs and IOCs with operations in 100+ countries. Two-thirds of signatories are NOCs – the largest NOC participation in any decarbonization initiative to date.

Fossil LNG is one of the most competitive and scalable lower-carbon shipping fuel in the short-term

Alternative fuel-capable shipping orderbook

in # of vessels



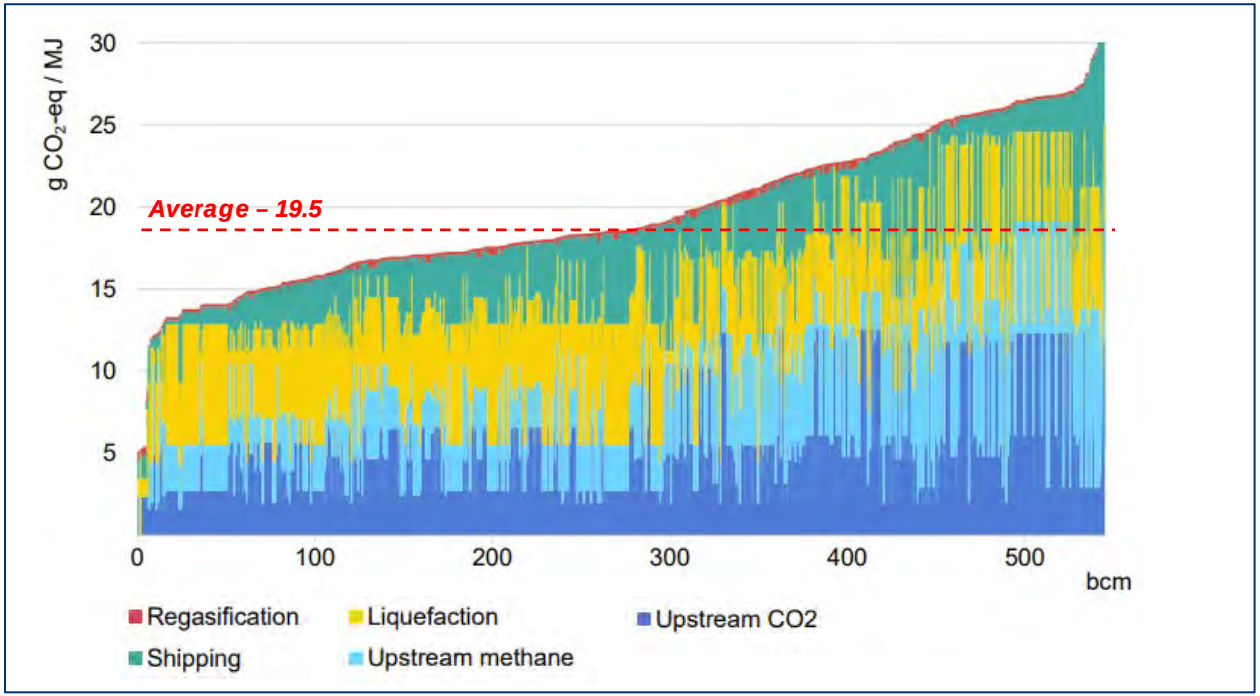
Fuel	Emissions reductions(1)	Cost *($/MWh output)*	Availability
Fossil LNG	5-20%	$50-150	High
Bio-LNG	30-100%[2]	$150-300	Limited
E-LNG	50-90%	$250-350	Very limited

(1) Against Very Low Sulfur Fuel Oil, on a well-to-wake basis;
(2) Depending on input feedstock (e.g., manure) and resulting avoided emissions, as recognized by some regulatory frameworks (e.g., EU RED II and California LCFS).

Sources: OGCI analysis based on Lloyd's Register (2026), *Alternative-fuelled ships order remain significant in 2025*; ICCT (2025), *Comparing The Future Demand For, Supply Of, And Life-cycle Emissions From Bio, Synthetic, And Fossil LNG Marine Fuels In The European Union*; SEA-LNG (2022), *The Role Of Bio-LNG In The Decarbonisation Of Shipping.*

Not all LNG is created equal – there is significant potential to lower the emissions intensity of LNG as a shipping fuel

Spectrum of GHG emissions intensity from LNG supply chain,2024



6x variability between the best and the worst performers

Upstream dominates emissions differentiation

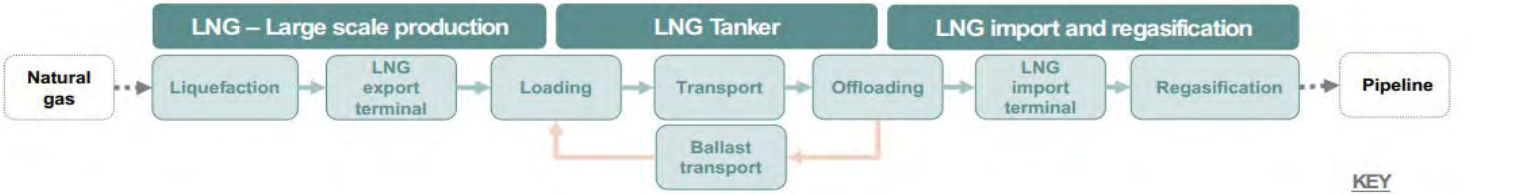
Methane is a significant opportunity: ~80% of emissions occurring upstream and weighted abatement cost of ~\$10/tCO_2e

Source: OGCI analysis based on IEA (2025), *Assessing emissions from LNG supply and abatement options.*

Methane detection and mitigation in the LNG value chain

Measuring and mitigating methane emissions across the LNG value chain requires combining ***accurate detection, continuous monitoring, and operational + engineering controls****. Few existing key frameworks, actors and partnerships are supporting and innovating in this space.*

Measuring methane	**Bottom-up methods**: Lead Detection and Repair (LDAR), Continuous Emissions Monitoring Systems (CEMS), direct source measurement **Top-down methods**: Droves, Aircraft surveys, Satellite monitoring



Emission sources	Leaks, incomplete combustion in energy generation and/or flaring, maintenance and irregular emissions	Venting of boil off gas and pressure management, incomplete combustion in energy generation
Mitigation options	LDAR, no leak valves, methane optimised combustion, catalytic conversion, improved flare efficiency, flare gas recovery	Reliquefication, methane optimised combustion, catalytic conversion

Key actors

MiQ · EQUITABLE ORIGIN · PROJECT CANARY · GMP Oil And Gas Methane Partnership 2.0 · CLEAN Coalition for LNG Emission Abatement toward Net-zero

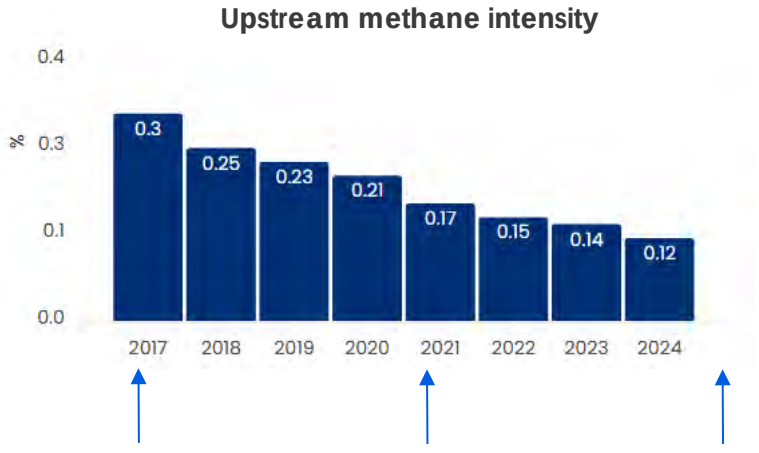
Source: Carbon Limits, 2021

Existing commitments on methane and progress to date

0.73 Mt CH_4 in 2024

-63% Since 2017

0.12% methane intensity in 2024



Well below 0.20% upstream methane intensity

Aiming for Zero Methane emissions initiative (2021)

Aiming for 0.1% by 2030 (2026)

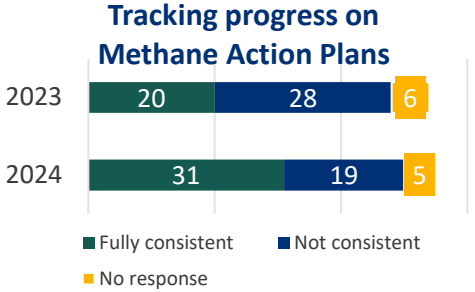
OGDC THE OIL & GAS DECARBONIZATION CHARTER

Near-zero upstream CH_4 emissions by 2030

as part of the Charter

OGDC roundtable at India Energy Week

Carbon Limits training in Angola



>4 Mt CH_4 in 2024

16 webinars held since 2014

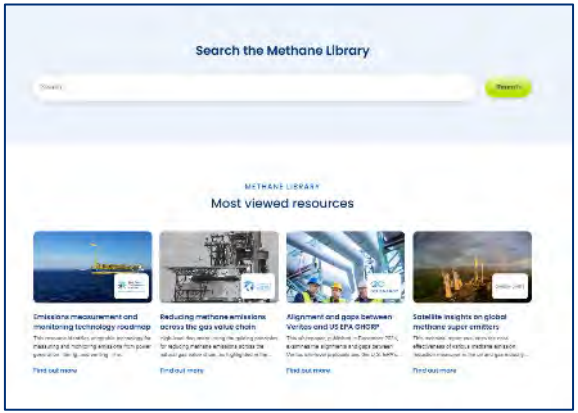
>1,200 staff trained since 2024

Examples of practical tools and knowledge shared with industry

OGCI member companies aim to support the industry through knowledge sharing and capacity building, enabling a better understanding of the methane challenge.

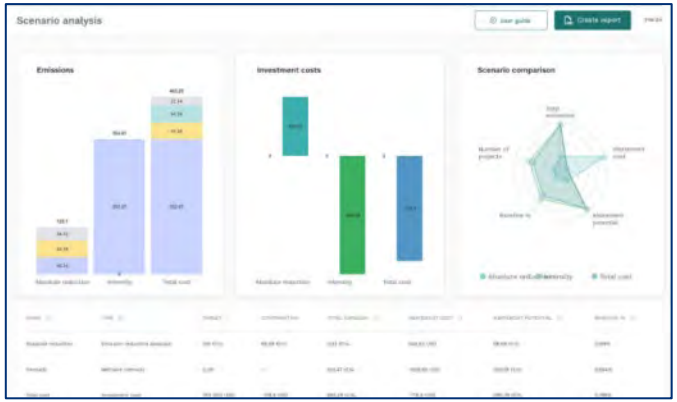
Methane Library

OGCI's methane library is a centralized repository of over 200 key resources focused on helping oil and gas companies accelerate methane emissions reductions. It is available free of cost on OGCI website.



Support to Methane Inventory Systematic Tool (MIST)

The tool is free for all oil and gas companies and allows them to easily develop their methane inventory no matter where they are in their methane journey, from the very first facility-level inventory to quantification using detailed engineering calculations and measurements.

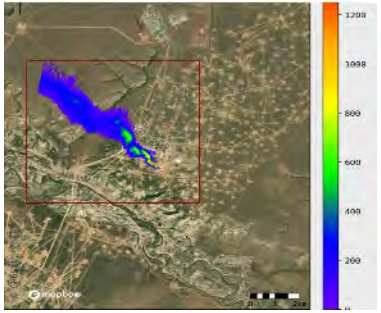


Monitoring / mitigation programs and technical support

OGCI supports operators with technology deployment, aiming at taking practical and tangible action to reduce methane emissions; and share technical knowledge.

OGCI Satellite Monitoring Campaign

The programme uses satellite technology to monitor, detect and ultimately enable mitigation of large methane emissions. The campaign has been expanded to 15+ countries, supporting 20+ operators.



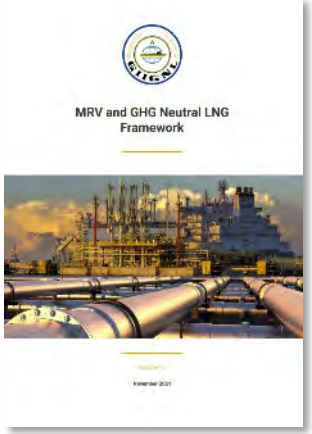
In 2026, OGCI and the nonprofit Carbon Mapper announced a new collaboration aimed at accelerating practical and measurable reductions in methane emissions from the oil and gas industry.

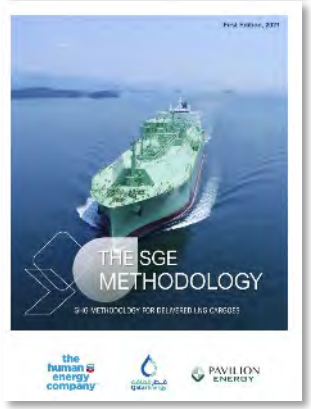
Satellite Playbook

6 steps framework to support operators following up on satellite detections. The playbook is publicly available on OGCI website.

More work is needed to improve the credibility and comparability of LNG carbon intensity estimates

System boundaries	• Choice of boundaries, stages and inclusions • Sources of direct and indirect emissions
Co-products	• Streams of co-products handled (e.g., natural gas, crude, natural gas liquids) • Definition for co-products and wastes • Allocation methods (e.g., mass, energy, economic value)
Units	• Carbon intensity units • Limits to unit normalization
Quality	• Measured VS estimated • Data availability / quality





Source: adapted from S&P Global Commodity Insights, based on internal OGCI analysis.

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Thank you

Link to OGCI methane library:

Link to OGDC website: