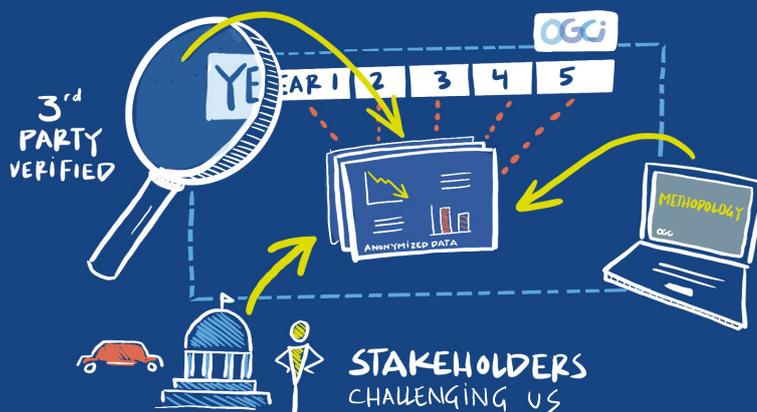


OGGI PERFORMANCE DATA 2020



OGGI and its member companies have continued to assess their reporting framework both for external and internal performance indicators. We have worked this year to improve our understanding of the trends behind the aggregate performance data and increase its reliability. Our focus has been on three key areas:

1. Understanding the impact of the Covid-19 pandemic on the performance, in order to distinguish between temporary trends and sustainable shifts in performance due to member company actions.
2. Analyzing more deeply the impact of specific actions such as flaring and venting reduction projects, leak detection and repair campaigns, electrification of assets and asset portfolio change.
3. Continuing our work with EY, as an independent third party, to expand the limited assurance statement for a set of aggregate data – reviewing and testing member company data and checking for third-party assurance.

OGGI data is collected and reviewed by EY as an independent third party. In 2021, EY issued a limited assurance statement (see page 6), covering eight companies.

Note: Our member companies' reporting methodologies are continually improved. As a result, some methodological changes have been incorporated for 2018 and 2019 in the published data, which may now differ slightly from those previously reported. Data for 2017 was updated in 2020.

Abbreviations and definitions

Operated production	Total output produced under a company's control and responsibility
Equity production	Total output in operations that are owned by a company (calculated by ownership share)
Mboe/day	Million barrels of oil equivalent per day
kgCO₂e/boe	Kilograms of carbon dioxide equivalent per barrels of oil equivalent
MtCO₂e	Million tonnes of carbon dioxide equivalent
MtCH₄	Million tonnes of methane
Mm³	Million cubic metres

All reported data is the aggregate for 12 companies unless otherwise stated.

Read more about definitions and methodology in the [OGGI Reporting Framework](#)

PRODUCTION

The aggregate oil and gas production of the 12 OGCI member companies fell by 2% in 2020 to 45.2 Mboe/day, largely driven by reduced oil production due to the impact of the Covid-19 pandemic on demand. Without those companies with major acquisitions in 2019 and 2020, the drop would have been 3%. Oil production fell by 2% to 29.3 Mboe/day, while gas production remained stable at 15.9 Mboe/day, raising the share of gas to just over 35% of aggregate oil and gas production.

OGCI member companies operated 28% of global oil and gas production in 2020.¹

OGCI indicators	Unit	2017	2018	2019	2020
OGCI oil production (operated)	Mboe/day	29.8	29.9	30.0	29.3
OGCI gas production (operated)	Mboe/day	15.2	15.7	15.9	15.9
OGCI oil and gas production (operated)	Mboe/day	45.0	45.6	45.9	45.2
Share of natural gas in OGCI operated portfolio	%	33.8	34.3	34.7	35.2
OGCI oil and gas production (equity)	Mboe/day	42.5	42.4	42.6	40.9

Notes:

¹ According to IEA data, global oil and gas production in 2020 was 159 Mboe/day. Global oil production in 2020 was 94 Mboe/day, while natural gas production was 65 Mboe/day. OGCI member companies' share of total oil and gas production is 28% on an operated basis and 26% on an equity basis. OGCI production data is included up until first point of sale, including LNG liquefaction plants if located before the first point of sale.

GREENHOUSE GAS EMISSIONS

Upstream carbon intensity fell by 8% in 2020 to 19.5 kg/boe – below the initial 2025 target of 20kg. While some of that reduction in greenhouse gas emissions is a result of falling production levels due to Covid-19, member companies also report impact from electrification of assets, flaring reduction projects, portfolio changes and methane emission reduction.

While collecting greenhouse gas and production data from member companies, EY ran an exercise this year to verify that the progress in reducing emissions is sustainable as demand rebounds. The result of this work has encouraged OGCI to sharpen its 2025 target to 17 kg CO₂e/boe by 2025. Compared to the 2017 baseline, upstream carbon intensity has fallen by 14%.

Aggregate absolute Scope 1 greenhouse gas emissions, both upstream and downstream, fell by 7% in 2020 and by 11% from 2017. At 632 MtCO₂e, they represent 1.1% of global greenhouse gas emissions, using 2019 data from the UNEP's [Emissions Gap Report 2020](#) (or 1.2% using 2019 OGCI data to discount any distortion due to Covid-19 reductions). Upstream emissions represent just under half of total aggregate Scope 1 emissions.

OGCI indicators	Unit	2017	2018	2019	2020
Upstream carbon intensity ¹	kgCO ₂ e/boe	22.7	22.1	21.2	19.5
Operated greenhouse gas emissions – all sectors (Scope 1) ²	MtCO ₂ e	709	687	682	632
<i>of which: upstream emissions (Scope 1)³</i>	MtCO ₂ e	362	349	341	311
Upstream greenhouse gas emissions (Scope 2)	MtCO ₂ e	41.4	43.5	43.4	39.3

Notes:

¹ This is the key performance indicator for OGCI's upstream carbon intensity target. It includes upstream carbon dioxide and methane emissions, both Scope 1 and 2, on an operated basis. It excludes emissions from gas liquefaction and gas-to-liquids.

² This figure includes direct (Scope 1) emissions of carbon dioxide, methane and nitrous oxide (for those companies that report it) from all operated activities (upstream as well as downstream, which includes refineries and petrochemicals).

³ Upstream activities comprise all operations from exploration to production and gas processing (up to the first point of sale), including LNG liquefaction plants if located before the first point of sale.

METHANE EMISSIONS

For 2020, OGCI reported an aggregate methane intensity of 0.20%, meeting the initial 2025 ambition. This progress means that collective methane intensity has fallen by 33% since 2017, with an improvement of 13% in 2020 alone. The fall in methane intensity is matched by a concomitant reduction in absolute upstream methane emissions which are now at 1.3 Mt, down from 2.0 Mt in 2017 – a reduction of 35%. Taken together, absolute upstream and downstream methane emissions fell by 33% over the three years, although reductions in downstream emissions in 2020 were also a result of refinery closures during the Covid-19 pandemic.

Upstream methane emissions reductions in 2020 came from venting (through equipment upgrades) and flaring. Extensive leak detection and repair campaigns also resulted in a continued reduction in fugitive leaks. Venting and fugitive leaks accounted for over 60% of upstream methane emissions in 2020. The upstream sector accounted for over 92% of OGCI aggregate methane emissions in 2020. Member companies are continuing their efforts to reach near zero emissions, aiming for well below 0.20% by 2025.

OGCI indicators	Unit	2017	2018	2019	2020
Upstream methane intensity ¹	%	0.30	0.25	0.23	0.20
Operated methane emissions – upstream	MtCH ₄	2.0	1.7	1.6	1.3
Operated methane emissions – all sectors ²	MtCH ₄	2.1	1.9	1.7	1.4

Notes:

¹ This is the key performance indicator for OGCI's 2025 upstream methane target. It includes total upstream methane emissions from all operated gas and oil assets. Emissions intensity is calculated as a share of marketed gas.

² This figure includes relevant operated activities (upstream, refineries, petrochemicals, power generation etc where these are operated by the company).

FLARING

OGCI member companies made progress in reducing flaring in 2020, linked to efforts to end routine flaring by 2030. Upstream flaring intensity fell by 21% in 2020 and by 33% since 2017, reflected in falling emissions from flaring. This progress was primarily linked to significant flare reduction projects. Routine flaring volumes, specifically, dropped by 15% in 2020, despite data including one additional company.

OGCI indicators	Unit	2017	2018	2019	2020
		(number of companies providing data)			
Upstream flaring intensity ¹	Mm ³ /Mtoe	10.8	9.5	9.2	7.3
Natural gas flared – upstream	Mm ³	24,221	21,465	20,998	16,473
Routine gas flared – upstream	Mm ³	–	5,636 (10)	5,020 (10)	4,254 (11)
Flaring greenhouse gas emissions – upstream	MtCO ₂ e	62	57	55	44

Notes:

¹ Upstream flaring intensity is calculated on the basis of the volume of gas flared per million tonnes of oil equivalent produced on an operated basis.

INVESTMENT AND R&D IN LOW CARBON TECHNOLOGIES

Member companies are still working to aggregate homogenous data on low carbon investment and R&D, so the OGCI aggregate numbers do not include all companies. Those that reported spent a total of US\$7.4 billion on low carbon technologies in 2020, with just over 70% spent on renewable energies. Investment in low carbon energy projects and acquisitions increased by 18% in 2020 – with a 45% increase in acquisition spending. R&D spending dropped sharply overall in 2020 because of the pandemic. Low-carbon R&D spending fell by 20% compared to 2019, but its share of total R&D spend remained relatively stable at 14%, compared to 15% in 2019.

OGCI indicators	Unit	2017	2018	2019	2020
		(number of companies providing data)			
Investment in low carbon technologies ¹	US\$ billion	4.7 (10)	5.5 (10)	5.6 (10)	6.6 (10)
<i>of which: acquisitions</i>	US\$ billion	0.3 (5)	1.0 (5)	1.1 (7)	1.6 (7)
R&D expenditures on low carbon technologies ²	US\$ billion	0.7 (9)	1.0 (9)	1.0 (9)	0.8 (10)
Low-carbon R&D as a share of total R&D spend	%	19 (9)	15 (9)	15 (9)	14 (10)

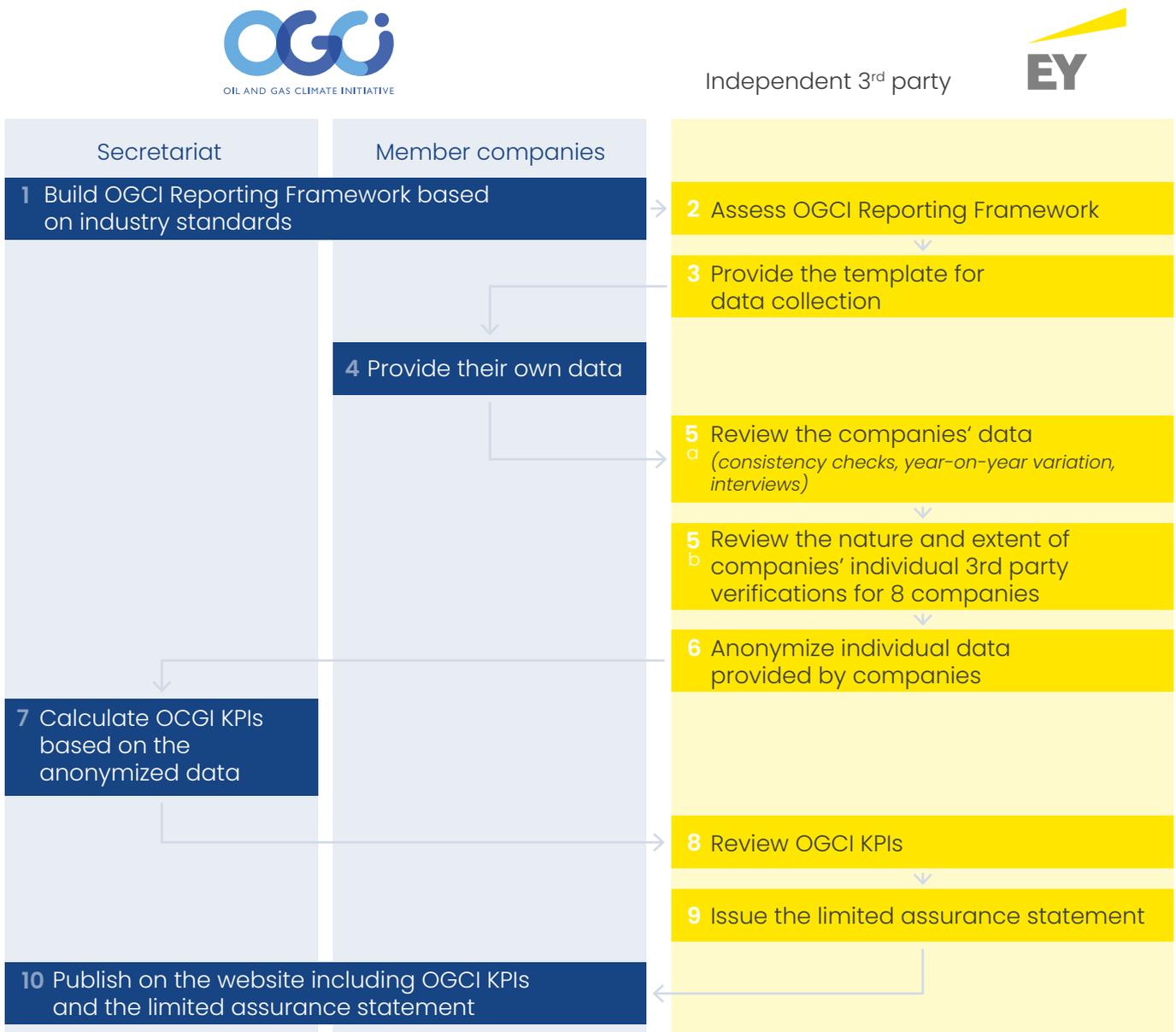
Notes:

¹ Low carbon energy technologies include but are not limited to wind, solar and other renewable energies, carbon-efficient energy management, CCUS, blue and green hydrogen, biofuels, synfuels, energy storage and sustainable mobility.

² R&D spending is additional to investment.

OGCI AND EY DATA CONSOLIDATION AND REVIEW PROCESS

Since 2016, OGCI has been working with EY & Associés (EY), as an independent third party, to collect and check data consistency, and guarantee the confidentiality of member companies' data. We developed together with EY an innovative process, applicable to both listed and state-owned national oil companies, to aggregate information about the level of third-party assurance that member companies apply individually into OGCI data reporting. Most OGCI member companies already ensure that data reported to OGCI are independently verified. This additional step confirms that OGCI data, as well as information about third-party data assurance, are consolidated, reviewed and challenged in order to increase the reliability of the aggregate data we publish. Since 2020, we have worked with EY to develop and implement a verification process for a selection of our aggregate data. EY's statement this year covers eight of OGCI's 12 members.



Our process for data consolidation and review

Independent verifier's report on a selection of indicators for calendar year 2020



Further to the OGCI CI request on behalf of OGCI and in our capacity as an independent verifier, and as a member of the EY network that is the statutory auditor of OGCI CI, we present our report on a selection of OGCI Indicators for the year ended December 31, 2020, that OGCI has chosen to prepare and present on its website.

Selected OGCI indicators (all operated)

- Greenhouse gas emissions – all sectors (Scope 1)
- Upstream greenhouse gas emissions – Scope 1
- Upstream greenhouse gas emissions – Scope 2
- Methane emissions – all sectors
- Upstream methane emissions
- Upstream natural gas flared
- Upstream flaring greenhouse gas emissions

Responsibility of OGCI

As part of this voluntary approach, it is the responsibility of OGCI:

- to disclose the OGCI Reporting Framework dated March 2021 (hereafter referred to as the “Criteria”), available on OGCI’s website,
- to consolidate the anonymized member companies’ data and ensure their consistency,
- to publish the consolidated OGCI Indicators on its website.

Responsibility of OGCI member companies

As part of this voluntary approach, it is the responsibility of OGCI member companies to report their data according to the Criteria to OGCI and to communicate the nature and details of the verification performed on their data at member company level.

Independence and quality control

Our independence is defined by the Code of Ethics of our profession. In addition, we have implemented a quality control system, including documented policies and procedures to ensure compliance with ethical standards, professional standards and applicable laws and regulations.

Responsibility of the independent verifier

It is our responsibility in response to the OGCI request, based on our work, to express a limited assurance conclusion that OGCI Indicators have been reported in accordance with the Criteria. It is not our responsibility to give an opinion on the entire annual report or on the compliance with applicable legal provisions.

Nature and scope of the work

We conducted the work described below in accordance with the international standard ISAE 3000 (International Standard on Assurance Engagements) and with the professional standards applicable in France.

- We assessed the suitability of the Criteria in terms of their relevance, comprehensiveness, reliability, neutrality and understandability by taking into consideration the best practices of the oil and gas industry.
- We conducted the following work related to consistency and arithmetical accuracy of member companies' data reported by the 12 OGCI member companies with the Criteria:
 - Assessment of the appropriate implementation of the Criteria for the calculation of member company data
 - Analysis and investigation of member company data value changes in 2020 compared to 2019
 - Calculation of consistency ratios and investigation to identify potential outliers among member company data
- We conducted a reconciliation between member company data and publicly available information
- We assessed the nature and extent of third-party verification conducted at company level on member company data.
- We conducted interviews with the 12 OGCI member companies.
- We reviewed the consolidation performed by OGCI on the anonymized member company data.

We consider that the work we have done by exercising our professional judgment allows us to express a limited assurance conclusion; an assurance of a higher level would have required more extensive verification work.

Qualification

For 8 companies out of the 12 OGCI member companies (representing 49% of the OGCI indicator Aggregate greenhouse gas emissions (operated) – all sectors, Scope 1), we reviewed the nature and extent of third-party verification conducted at company level on member company data.

For 4 companies out of the 12 OGCI member companies, the information on the nature and extent of third-party verification conducted at company level on member company data was either not provided or limited to the external third-party opinion.

Conclusion

Based on our work, except for the effect of the matter described above, nothing has come to our attention that causes us to believe that OGCI Indicators are not presented in accordance with the Criteria, in all material respects.

Comments

Member companies align their reported data with local methodologies required by local authorities, that may vary depending on geographies. For methane emissions quantification, companies are using different tiered approaches.



Signed by:

EY & Associés • Christophe Schmeitzky • Partner, Sustainable Development

Paris-La Défense, October 7, 2021

Percentage of OGCI indicators considered as reviewed by an external third party and covered by EY limited assurance statement

OGCI indicators	Total as a percentage of 2020 ...	
	... data considered reviewed by an external third-party	... data covered by EY limited assurance statement on 8 companies (see the EY statement)
Greenhouse gas emissions – all sectors (Scope 1)	75%	50%
Upstream greenhouse gas emissions – Scope 1	79%	57%
Upstream greenhouse gas emissions – Scope 2	32%	32%
Methane emissions – all sectors	63%	44%
Upstream methane emissions	64%	45%
Upstream gas flared	90%	65%
Upstream flaring greenhouse gas emissions	91%	62%

Notes:

- All indicators are operated and aggregated.
- The indicators “Upstream greenhouse gas emissions – all sectors”, “Methane emissions – all sectors”, “Upstream methane emissions”, “Upstream natural gas flared”, and “Upstream flaring greenhouse gas emissions” are considered reviewed if the “Upstream greenhouse gas emissions – all sectors” are reviewed, as they are part of the overall greenhouse gas emissions review.
- An indicator is considered as “reviewed” if it is published in a publicly available document and if it is covered by an opinion or conclusion statement provided by an external third party or is reported to a governmental authority and available for public review. None of the opinion/conclusion statements consulted contained any qualification. All levels of opinion and conclusion statements have been considered (reasonable assurance, limited assurance and assurance on implementation of processes).