



Methodological note for OGCI methane intensity target and ambition

Purpose

This methodological note is meant to describe the process and framework through which the OGCI methane emissions intensity target and ambition have been established. It covers the following aspects:

- The concept of the methane intensity target and ambition
- Scope of activities covered by the target and ambition
- Emissions sources included in the scope for the quantification of intensities
- Methodology for establishing the baseline, target and ambition intensities
- Data limitations

Methane intensity concept

The OGCI methane intensity target and ambition, announced in 2018, applies to the upstream, operated gas and oil sector. The target and ambition year is 2025. A baseline intensity was also established for 2017.

The intensity baseline, target and ambition are presented as percentage figures, which represent the volume of methane emissions for the upstream gas and oil sector as a percentage of the volume of the total gas marketed for the same upstream sector. The baseline, target and ambition represent the collective methane intensities for the OGCI as a whole.

$$Intensity\ OGCI = \left(\frac{\sum_{all\ OGCI\ companies} CH_4\ emissions}{\sum_{all\ OGCI\ companies} marketed\ natural\ gas} \right) = \text{methane}_{[Sm^3]} / \text{gas}_{[Sm^3]}$$

Figure 1: Quantification of the OGCI upstream methane intensity

The intensity figure covers upstream operations where OGCI member companies have operational control and for which each company has specific reporting routines and nomenclatures. All methane emissions from operated upstream assets marketing oil and/or gas are included: 100% of methane emissions at the asset level are included and are not divided based on equity or entitlement shares. Assets where an OGCI company has an equity interest, but does not function as operator, are outside of the boundary for inclusion and no emissions nor production associated with these “partner-operated” assets are included in the current baseline, target or ambition intensities. Within the context of the scope for the establishment of the intensity baseline, target and ambition, “upstream” can be described broadly as “from wellhead to point of sale”. More specifically, upstream is defined in line with the concept referenced in the IEA’s Outlook for Natural Gas¹ as including the production of oil and gas, as well as the gathering and processing of natural gas.

¹ **International Energy Agency, World Energy Outlook 2017:** “For simplicity, the oil and gas sectors are divided into upstream and downstream segments and then further into the subsectors of production, gathering and processing, refining, transmission

In addition, the choice has been made to include gas liquefaction within the OGCI’s “upstream” scope concept. Refining, shipping, transmission and distribution activities, considered as “downstream” activities, are excluded from the OGCI “upstream” scope. Moreover, exploration drilling activities are considered outside of the boundary for inclusion (as this activity can be seen as separate from the value chain for marketed gas and oil), while production drilling and completions are considered within the boundary for inclusion.

The figure below details the scope of assets covered by the methane intensity target:

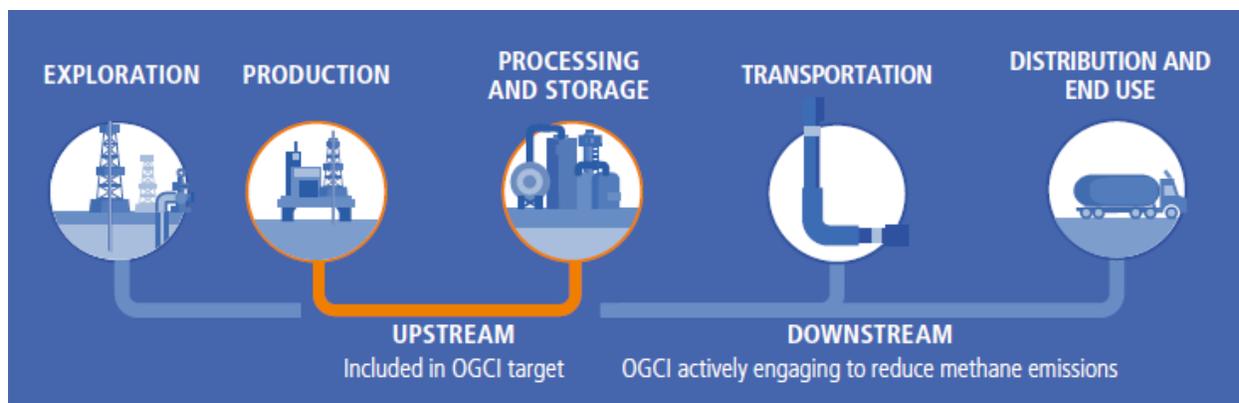


Figure 2: Boundaries of the methane intensity target (illustration)

In the case of gas liquefaction (e.g. LNG, GTL), in particular, the boundaries for inclusion for the quantification of the OGCI upstream methane intensity may vary from company to company, operation to operation and even cargo to cargo, depending upon where the point of sale is located. For example, based upon the boundary description, if a company has operational control for a regasification facility, with point of sale being defined as where the gas from this facility enters the transportation network, then this regasification facility and its emissions fall within the boundary for inclusion, which again is more conservative than the “upstream” concept referenced in the IEA’s Outlook for Natural Gas.

An intensity target and ambition, as opposed to an absolute target or ambition, has been chosen, as it remains relevant even if there are changes to the OGCI asset make-up. Specifically, due to the nature of the upstream oil and gas business, it must be expected that some of the assets (and corresponding methane emissions and hydrocarbon production) within the boundaries for inclusion for the 2017 baseline, will not be relevant in the target and ambition year of 2025. This may, for example be due to decommissioning or divestment in the 2018-2025 period. Similarly, new assets may enter the inclusion scope for the target and ambition over the same period, as a result of start-ups and/or acquisitions. At

and distribution. The production subsector includes all onshore and offshore oil and gas facilities from either conventional or unconventional reservoirs. Liquefaction of natural gas, transportation either by pipeline or as liquefied natural gas (LNG) and regasification are included in downstream processes in our methane emissions estimation”.

the same time the make-up of the OGCI may also change towards 2025, with the potential that some companies may join the initiative, while others may leave.

The utilization of an intensity-based target and ambition, rather than an absolute target and ambition, helps to mitigate the possibility that variations in OGCI members' asset portfolios and/or amongst the OGCI membership will have a material impact on the ability of OGCI, collectively, to reach the 2025 methane intensity target and ambition. Nonetheless, the possibility does exist that changes in OGCI members' portfolios and/or in OGCI membership, towards 2025, could lead to material increases or reductions in the collective, upstream methane intensity for OGCI. To monitor this, methane intensity will be calculated and tracked annually towards the 2025 target/ambition year, based upon the assets included within the inclusion scope in the given year.

In addition, an intensity-based target and ambition allows the OGCI to positively influence the methane performance of industry at large, as the methane intensity metric allows for easy benchmarking by others.

Emissions sources covered by the methane target

As the aim of the methane intensity baseline, target and ambition are to demonstrate the level of methane emissions from upstream gas and oil production, all sources within the upstream sector are covered by the baseline, target and ambition. This means that methane emissions from fugitives, venting and incomplete combustion, for example in flares and turbines, are all included. Following this approach, emissions linked to *force majeure* events or sabotage are also included.

The (non-comprehensive) list below details typical sources of emissions that are included in the scope of methane emissions reported:

Non-combustion related emissions

- Hydrocarbon storage tanks
- Compressor seals
- Pneumatic controls and pumps
- Liquids unloading and storage
- Fugitive leaks
- Loss of primary containment
- Gas dehydration
- Venting (e.g. casing head, gas separation)
- Well completion

Combustion-related/indirect emissions

- Flaring

- Stationary combustion sources, e.g. turbines

Establishing the target and ambition

To support the establishment the OGCI methane emissions intensity target and ambition for 2025, methane emissions and marketed gas volumes for 2017 were collected for each company and a 2017 baseline was established for each company, as well as for OGCI collectively. Using their company-specific baseline emission intensities, companies then indicated an ambitious methane intensity level for the year 2025, assuming that 2017 marketed gas production volumes would be similar to those of 2025. The OGCI members then defined an OGCI intensity target and ambition for 2025, taking into account the 2017 collective intensity baseline, as well as the ambitious emission intensity levels indicated by individual companies.

Upstream methane emissions reduction measures

This target and ambition-setting process was further supported through the submission of methane emission reduction measures by individual member companies, which were identified as enabling these companies, collectively, to move the OGCI emissions intensity towards the identified target and ambition levels by 2025. To reduce the OGCI's collective methane emissions intensity, member companies will target key emissions sources through a variety of measures, as appropriate.

Data limitations

Considering that it is only recently that methane has been in the spotlight as a potent climate gas, company and/or regulatory recording and reporting requirements for methane vary between and within OGCI companies and operating jurisdictions.

All OGCI companies have internal routines for the gathering, quantification and reporting of methane emissions data, though the data coverage and granularity may vary from company to company. The OGCI member companies have, for the purpose of setting the baseline, target and ambition, agreed on the scope and boundaries for which the data shall apply. As part of this process, the OGCI companies have had to evaluate their own operations to determine if any gaps in data coverage and quality exist and then take steps to include all relevant sources and figures in the data supplied to the OGCI as part of the methane intensity, baseline, target and ambition establishment work. Similarly, companies have had to evaluate the applicability of methane quantification methods utilized for their own operations and update their methodologies as required.

For the OGCI to collectively increase confidence in the data used as the basis for the establishment of a methane emissions intensity baseline, target and ambition, all companies have provided an assessment of their own activities related to methane management and reporting (based upon the UN PRI Methane guide for investors). All companies also participated in follow-up interviews with an independent third party.

Restatement of the baseline and previous year's methane intensity

If new companies join or leave the OGCI, the baseline may need to be re-estimated and revised as a result of these changes. However, the target itself will not be restated as new member companies will be expected to endorse the existing target. When individual companies' methane emission quantification methodologies are updated (e.g. because of new regulatory emission factors, improvement of reporting processes, etc.), the emissions quantified using these updated methodologies shall also be used in connection with the OGCI intensity target tracking. Significant changes in the reported methane intensity performance linked to the update of reporting methodologies for one or multiple companies will be commented on in the annual OGCI report.

Assessment of data quality and accuracy

The review and assessment process provided by an independent third party as part of the methane intensity baseline, target and ambition establishment process is important to ensuring that there is a common understanding within the OGCI regarding the overall quality and coverage associated with the methane emissions data.