



METHANE  
GUIDING  
PRINCIPLES

# Methane Guiding Principles Signatory Reporting

Repsol

January 2022





COMPANY: **Repsol**

YEAR OF JOINING METHANE GUIDING PRINCIPLES: **2017**

SENIOR REPRESENTATIVE: **Fernando Ruiz Fernandez , Sustainability Director**

ALTERNATE REPRESENTATIVE: **Antonio López Rodríguez, Energy Transition & Climate Change Sr Manager**



## Principle One: Continually reduce methane emissions

2021 completed activity	2022 intended activity
<p>Repsol is committed to methane emissions reductions, and has implemented different reduction opportunities in the last years.</p> <p>We have taken on the objective of achieving a methane emissions intensity of our operated assets of <b>0.2% by 2025</b>, a value recognized as near-zero by relevant shareholders for the oil and gas sector. Achieving this goal is mainly based on three lines of action:</p> <ul style="list-style-type: none"> <li>• Implementing more precise technologies for emissions detection and quantification</li> <li>• Identifying and applying technological opportunities for emissions reduction</li> <li>• Transition to a lower-emissions portfolio</li> </ul> <p>To see the progress of Repsol’s methane intensity target, please consult the website: <a href="https://www.repsol.com/en/sustainability/sustainability-strategy/reports-and-kpis/sustainability-kpis/climate-change/index.cshtml">https://www.repsol.com/en/sustainability/sustainability-strategy/reports-and-kpis/sustainability-kpis/climate-change/index.cshtml</a></p> <p>To achieve consolidated reduction actions several initiatives are being performed, focused on implementing <b>LDAR</b> campaigns in all operated assets. During 2021 we continued to expand the LDAR campaigns in our operated assets, and execute similar in non operated assets where possible. These campaigns help us reduce our fugitives emissions and increase the accuracy of our methane inventory thanks to quantification.</p> <p>In some of the assets, a substantial source of venting is associated with pneumatic devices running on instrument gas. As part of a multi year effort, hundreds of high bleed pneumatic devices were systematically replaced with low bleed ones. Through a multi-year plan over 2000 devices were converted. The result of converting the high bleed devices to low bleed ones was a reduction of more than 3.000 tonnes of methane.</p> <p>With methane emissions reduction core to these programmes, Repsol has successfully piloted new-generation membranes in one of its offshore assets in South East Asia. Due to high carbon dioxide content in the gas produced from the reservoir, several membrane separation trains are required to purify the natural gas to meet quality specifications. By upgrading the membranes, Repsol was able to increase the membrane system selectivity, while also increasing the methane recovery rate. A membrane skids replacement schedule was established as a multiyear plan, achieving a reduction of more than 6 ktCH<sub>4</sub>.</p>	<p>For 2022, Repsol plans to continue with its reduction plan, implementing every year new reduction actions and implementing new technologies improving the monitoring and reduction of methane emissions.</p>



**Principle Two:**

**Advance strong performance across the gas supply chain**

2021 completed activity	2022 intended activity
<p>Since 2016 Repsol has joined several global initiatives: OGCI, OGMP and MGP. Repsol had been reporting methane emissions externally and taking action on methane reductions for many years. However, the endorsement to these partnerships has been considered a good opportunity for increasing focus, sharing knowledge on methodologies and technologies, improving scientific and technical understanding of methane emissions in our industry and expanding outreach in order to engage the full value chain in these good practices.</p> <p>Our ambition is to proactively engage with other players in the value chain, including joint venture partners in the gas production and transportation sector, to encourage them to commit to comparable efforts.</p> <p>In 2020 Repsol reconfirmed its endorsement to OGMP in its new version OGMP 2.0. In 2021 we have developed an engagement plan to be deployed in 2022 and implemented some actions internally in order to try to eliminate barriers in future agreements.</p> <p>Through the Methane Guiding Principles (MGP) Repsol actively participated in the Non-Operated Joint Venture (NOJV) initiative, leading one of the activities.</p>	<p>We plan to deploy the engagement plan already developed in 2021 as part of our implementation plan of OGMP 2.0.</p> <p>Within MGP we will continue our participation in the NOJV group and the new proposed MGP activity Methane Source Identification, Calculation and Mitigation Tool.</p>



**Principle Three:**  
Improve accuracy of methane emissions data

2021 completed activity	2022 intended activity
<p>Repsol acknowledges the difficulty of reporting with accuracy and the challenge of continuous monitoring. Investments in technological innovation, through our Corporate Venturing Fund and OGCI-CI (Oil &amp; Gas Climate Initiative – Climate Investments), will help improve capability to reduce emissions over time and improve the accuracy of monitoring.</p> <p>Besides that, Repsol is supporting the development of technologies for remote sensing (drones, aircrafts, satellites, etc.) through the OGCI-CI. Repsol believes that the reconciliation of top-down and bottom-up data is the way to move forward in CH<sub>4</sub> emissions quantification, which helps us to improve our performance and transparency. Testing new and emerging technologies such as drones, aircrafts and satellites will help us to deliver real reductions.</p> <p>To help us to decide what technologies may be applied we have been piloting emerging technologies in different assets, specifically we tested satellites detection technology, aircrafts and drones, followed by an extensive communication plan to test the applicability in other assets across Repsol's portfolio.</p>	<p>As part of our OGMP 2.0 implementation plan, we are planning to deploy the technologies tested in our operated assets.</p>



**Principle Four:**

**Advocate sound policy and regulations on methane emissions**

2021 completed activity	2022 intended activity
<p>Convinced of the importance of the role that regulation can play in achieving real reductions, in May 2020 Repsol, together with other MGP partners, proposed a set of policy <a href="#">recommendations</a> to the European Commission aimed at driving the reduction of methane emissions ahead the EU Methane Strategy.</p> <p>After the publication of the EU Methane Strategy in October 2020, a group of companies including Repsol and organizations working together under the MGP umbrella, developed <a href="#">five sets of detailed recommendations</a> to support timely European Union legislation in order to achieve ambitious methane emissions reduction outcomes across the supply chain of natural gas consumed in the EU.</p> <p>The recommendations claim for a robust Monitoring Reporting &amp; Verification system, building on OGMP 2.0 methodology, the need to address fugitives emissions through detection and repair, and requirements to limit methane emissions from flaring and venting. They also see the biogas as a key opportunity for the decarbonization of the EU gas system, along with other low-carbon and renewable gases. The scope of the Strategy includes domestic gas and imports, this is why we recommend setting targets to achieve real reductions and offer support to the EU to lead a diplomatic outreach campaign seeking for rules and regulations that create a global level playing field and greater transparency across the gas supply chain.</p>	<p>Repsol's plan for 2022 includes to continue support the EU in the coming legislation and continue the advocacy of the recommendations submitted to the EC.</p>



## Principle Five: Increase transparency

2021 completed activity	2022 intended activity
<p>Methane emissions are reflected in Repsol’s publicly available Integrated Management Report: <a href="https://www.repsol.com/content/dam/repsol-corporate/en_gb/sostenibilidad/reports/2020/integrated-management-report-2020.pdf">https://www.repsol.com/content/dam/repsol-corporate/en_gb/sostenibilidad/reports/2020/integrated-management-report-2020.pdf</a></p> <p>The reporting year is 2020 and the boundaries are operated assets, 100% basis. In this figure, methane emissions from Exploration &amp; Production (E&amp;P) and from Refining and Chemicals businesses are included, but the majority of them comes from E&amp;P. To see the breakdown of methane emissions, please consult Repsol’s CDP report, with detailed information of sources and businesses (note that downstream operations are referred to as Refining and Chemical business):</p> <p><a href="https://www.repsol.com/content/dam/repsol-corporate/es/sostenibilidad/informes/2021/repsol-climate-change-2021.pdf">https://www.repsol.com/content/dam/repsol-corporate/es/sostenibilidad/informes/2021/repsol-climate-change-2021.pdf</a></p> <p>The final result is based on application of a combination of different methodologies, from direct measurement, engineering calculations and emission factors. All these methodologies are adequately applied in the different types of asset. The verification of these data is performed annually by a certified third party under ISO 14064-1 Through the verification process it is confirmed that all the calculations, measurement and estimations are robust, and provided confidence in the final data. During 2021, 99% of our GHG inventory was verified, and as every year, we verify CH<sub>4</sub> emissions separately.</p> <p>Repsol joined the CCAC OGMP, a UNEP-led initiative, in 2016 according to our commitment with the methane emissions reduction in the oil and gas sector. During these years we have been reducing venting, performing fugitive emissions surveys, improving flare management and retrofitting pneumatics devices. Repsol was involved in the launch of the OGMP 2.0 Reporting Framework and signed its endorsement in October 2020. Transparency and technology, which are top priorities for Repsol and also for OGMP, will help us enhance our methane reduction strategy and deliver more ambitious and challenging objectives aligned with our global Net Zero Emissions strategy.</p> <p>OGMP 2.0 is the gold standard reporting framework that will improve the reporting accuracy and transparency of methane emissions in the oil and gas sector. In October 2021 the first IMEO report was published ahead of COP26, and Repsol achieved a Gold Standard status with the presentation of our implementation plan. In this plan we are envisioning a combination of technologies depending the type of asset that will help us to achieve the Gold Standard reporting in our operated assets. To help us to decide what technologies may be applied we have been piloting emerging technologies in different assets, specifically we tested satellites detection technology, aircrafts and drones, followed by an extensive communication plan to test the applicability in other assets across Repsol’s portfolio.</p>	<p>The plan for 2022 is to continue reporting detailed methane emission information and improve our reporting under OGMP 2.0, with more detailed information on sources and methodologies.</p>



<p><b>Do you report absolute methane emissions within your sustainability report?</b></p> <p><i>If so provide link.</i></p>	<p>Yes</p> <p><a href="https://www.repsol.com/content/dam/repsol-corporate/en_gb/sostenibilidad/reports/2020/integrated-management-report-2020.pdf">https://www.repsol.com/content/dam/repsol-corporate/en_gb/sostenibilidad/reports/2020/integrated-management-report-2020.pdf</a></p>
<p><b>Do you report a methane intensity within your sustainability report?</b></p> <p><i>If so provide link.</i></p>	<p>Yes</p> <p><a href="https://www.repsol.com/content/dam/repsol-corporate/en_gb/sostenibilidad/reports/2020/integrated-management-report-2020.pdf">https://www.repsol.com/content/dam/repsol-corporate/en_gb/sostenibilidad/reports/2020/integrated-management-report-2020.pdf</a></p>
<p><b>What are your organisation's total absolute methane emissions?</b></p> <p><b>Provide a figure in tonnes.</b></p> <p><b>Provide latest data publicly available.</b></p>	<p>128 ktCH<sub>4</sub></p> <p><a href="https://www.repsol.com/content/dam/repsol-corporate/en_gb/sostenibilidad/reports/2020/integrated-management-report-2020.pdf">https://www.repsol.com/content/dam/repsol-corporate/en_gb/sostenibilidad/reports/2020/integrated-management-report-2020.pdf</a></p>
<p><b>State your methodology.</b></p>	<p>The final result is based on application of a combination of different methodologies, from direct measurement, engineering calculations and emission factors. All these methodologies are adequately applied in the different type of assets.</p>
<p><b>State your reporting boundary.</b></p>	<p>Operated assets, 100% basis</p>
<p><b>What are your organisation's methane intensity?</b></p> <p><b>Provide latest data publicly available.</b></p>	<p>Repsol reports and follows a methane intensity figure as its performance most important metric. It is reported annually in our Integrated Management Report:</p> <p><a href="https://www.repsol.com/content/dam/repsol-corporate/en_gb/sostenibilidad/reports/2020/integrated-management-report-2020.pdf">https://www.repsol.com/content/dam/repsol-corporate/en_gb/sostenibilidad/reports/2020/integrated-management-report-2020.pdf</a></p>
<p><b>State your methodology.</b></p>	<p>OGCI methane intensity metric is followed, and it is referred to the volume of methane that gets lost in the atmosphere when producing oil and gas, as a percentage of the gas sold</p>
<p><b>State your reporting boundary.</b></p>	<p>As Repsol only operates the Upstream segment of the gas value chain, it is this segment that is included in the methane intensity figure. This figure takes into account all operated assets on 100% basis.</p>
<p><b>Do you have a methane emission target?</b></p> <p><b>If yes, please state what it is, including the boundaries and methodology.</b></p>	<p>We have taken on the objective of achieving a methane emissions intensity of our operated assets of <b>0.2% by 2025</b>.</p> <p>To see the progress of Repsol's methane intensity target, please consult the website: <a href="https://www.repsol.com/en/sustainability/sustainability-strategy/reports-and-kpis/sustainability-kpis/climate-change/index.cshtml">https://www.repsol.com/en/sustainability/sustainability-strategy/reports-and-kpis/sustainability-kpis/climate-change/index.cshtml</a></p>



If no, are you developing such a target? Please state your intended timeline.

## Methane Emissions

