CLIMATE CHANGE

2021 Sustainability Plans

REPSOL

Contents

1 Our visión of sustainability

At Repsol, we contribute to sustainable development by seeking to satisfy the growing demand for energy, which is essential for the fulfillment of people's fundamental rights, and by creating value in both the short and long term.

We maximize our positive impact and minimize our negative impact on society and the environment throughout our value chain by acting ethically and transparently. In doing so, we seek to comply not only with the regulations in force but also with the main international standards.

Under these premises, our sustainability model incorporates ethical, environmental, and social considerations into our decision-making process, based on dialogue with stakeholders. We do this every year, creating initiatives that address the concerns of these stakeholders. This is how the **Sustainability Plans** — action plans that are available to the public and created on an annual basis — are born. The **Global Sustainability Plan** is the roadmap forming the basis for deployment of **Local Plans.** The plans also contain commitments in relation to the local context.

The **Sustainability Plans** are put together on the basis of the **six axes** of Repsol's Sustainability Model.

Climate change

We aim to be a net zero emissions company by 2050

Environment

Innovation and technology

People

Ethics and transparency

Safe and secure operation

2 Climate Change

AT REPSOL, WE CONTRIBUTE TO SUSTAINABLE DEVELOPMENT

We share society's concern about the effect that human activity is having on the climate and we are firmly committed to the aspiration of limiting the increase in the planet's global average temperature well below 2ºC with regard to pre-industrial levels.

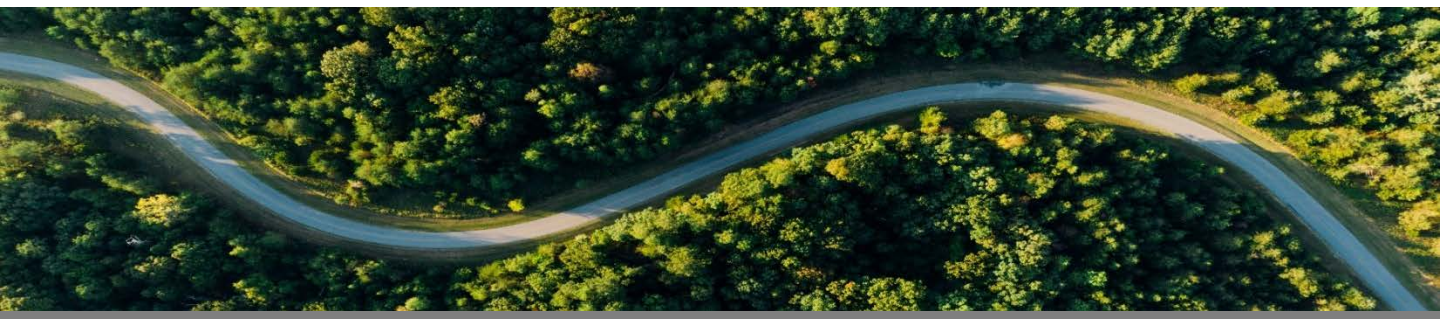
Our challenge is to supply energy in a safe, efficient, accessible and sustainable manner, reducing Greenhouse Gas (GHG) emissions in line with the objectives of the Paris Agreement and the Sustainable Development Goals of the United Nations (SDGs).

In December 2019 Repsol publicly expressed that it would align its strategy to be a net-zero emissions company by 2050, making it the first in its sector to set this ambitious goal. Our 2021-2025 Strategic Plan sets out the roadmap for continuing to successfully advance the energy transition. With the technological advances available, we anticipate achieving between 80% and 90% net emissions reductions by that year, and we are committed to applying the best technologies to raise this figure, including CO2 capture, use and storage. Without major technological disruptions, Repsol would rely on natural carbon sinks to reach its goal of zero emissions by 2050.

Accordingly, we have joined the Oil and Gas Climate Initiative (OGCI) to share best practices and technology solutions, and participate in the OGCI Climate Investment Fund, to channel the committed investment of $1 billion over ten years in the development of technologies to reduce GHG emissions on a significant scale.

Below, we list the actions that show our commitment to the Climate Change.

The **actions** that make up in **Climate Change** issues in the **Sustainability Plans** help support the United Nations' **2030 Agenda** by addressing the following Sustainable Development Goals (SDG):



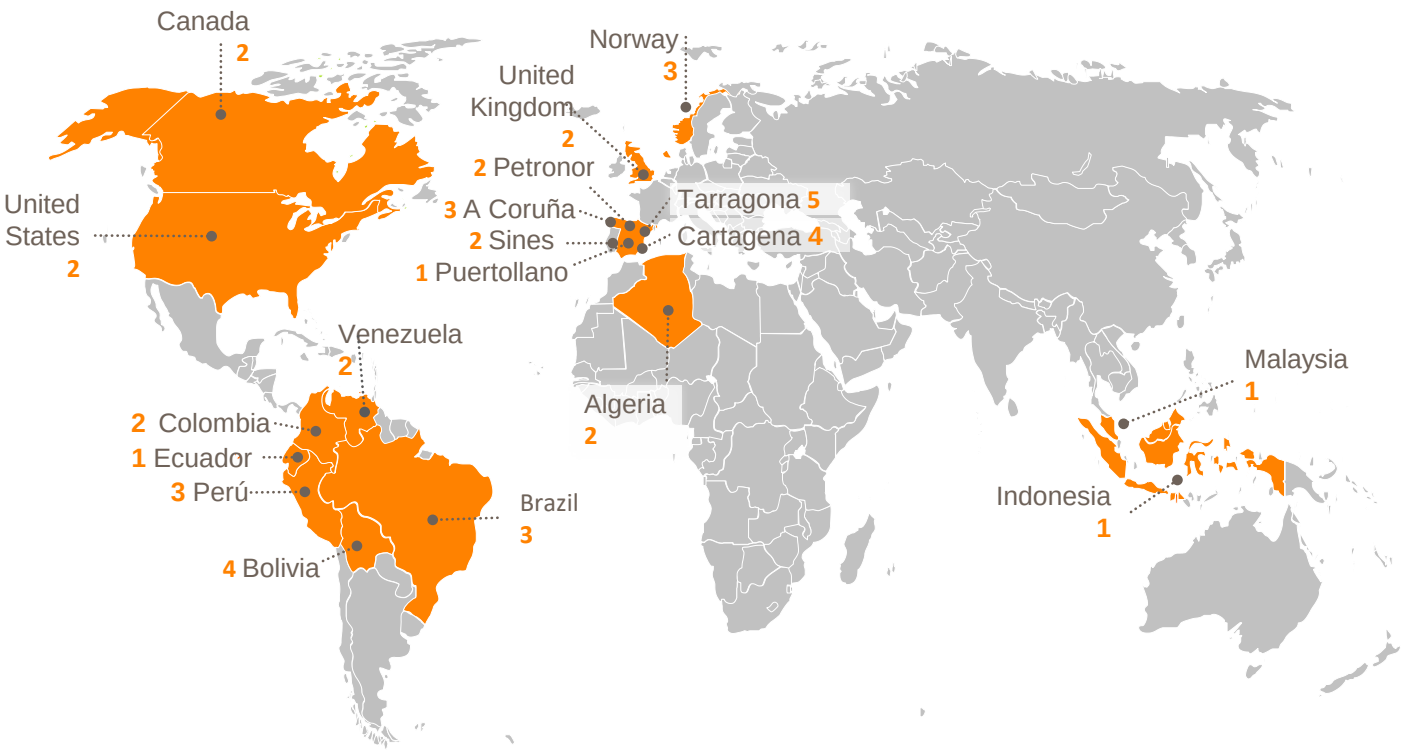
3 Balance

At the end of the year, it is time to review each of the **Climate change initiatives of the Sustainability Plans**. The degree to which the objectives have been fulfilled is as follows:

45 Actions / **91** % Fulfillment

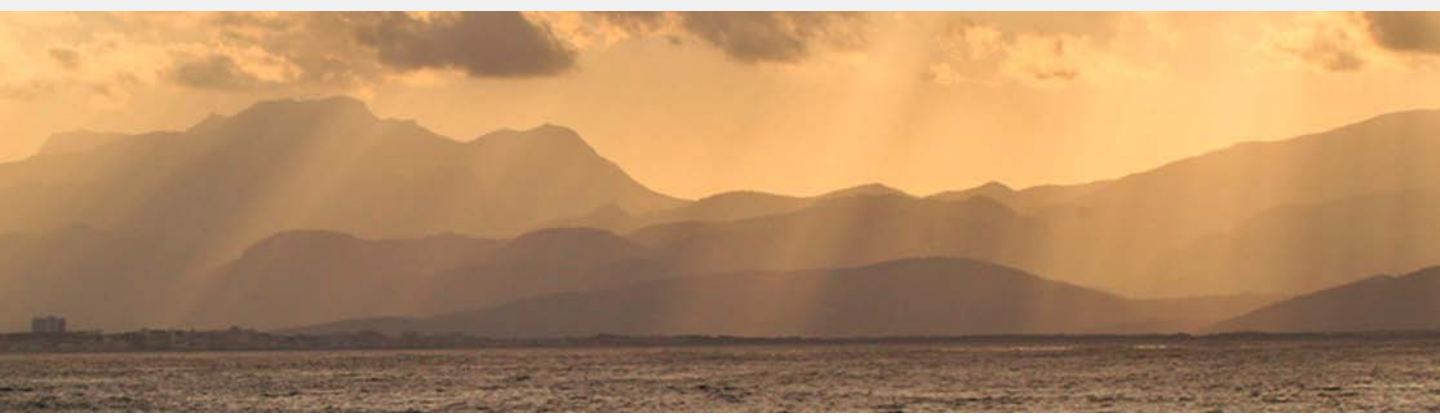
Further down, we provide the actions from the **Climate change axis.**

Number of actions in Climate Change



4 List of actions

COUNTRY	ACTION
Algeria	• Improve the Green House Gases (GHG) emissions reporting. • Raise awareness of company Greenhouse Gases (GHG) emissions.
Bolivia	• Reduce 5,000 tCO2eq in our and operations. • Improve efficiency in flaring and veting. • Report GHG emissions for Non-Operated Assets. • Progressively align the Emissions Inventory to the Oil & Gas Methane Partnership 2.0 requirements to improve methane quantifications.
Brazil	• Update our emissions inventory including an emissions management plan for Repsol Sinopec. • Implement research projects aimed at CO2 capture and use. • Continue to develop new low-emission businesses through the use of natural gas.



4 List of actions

COUNTRY	ACTION
Canada	• Contribute to the Company's pledge to achieve net zero emissions by 2050. • Support responsible production and consumption of energy.
Colombia	• Calculate and offset the carbon footprint generated in 2020 in Repsol Colombia. • Report GHG emissions for non-operated assets.
Ecuador	• To reduce energy consumption in electro-submersible pumping systems through continuous design optimization and application selection considering 2020 energy consumption.
Indonesia	• Perform a CO2 capture and injection study for Sakakemang block.
Malaysia	• Drive GHG reduction initiatives.
Norway	• Ensure implementation of short-term climate change improvements for Yme. • Perform an evaluation on YME`s low-to-zero emissions alternatives resulting in a roadmap. • Focus on emission reductions from non-operated assets.
Perú	• Maintain the Peru Carbon Footprint recognition from the Ministry of the Environment level 3 by Refining and obtain level 2 recognition by Exploration and Production. • Implement a fugitive emissions detection and repair (LDAR) program in the Kinteroni field. • Develop an energy optimization study for the Kinteroni field.

4 List of actions

COUNTRY	ACTION
United Kingdom	• Support the transition to a low carbon future by seeking to become a Net Zero Operator and an industry leader in the UK's energy landscape. • Improve our methane reporting as part of our net zero commitment.
United States	• Contribute to global emissions reduction targets in the Eagle Ford Business Unit. • Contribute to global emissions reduction targets in the Marcellus Business Unit.
Venezuela	• Support the five non-operated assets of the Business Unit in conducting a self-assessment on the quantification of methane emissions in their operations. • Assist non-operated assets to complete 2020 Greenhouse Gas (GHG) emissions reporting for their operations and identify reduction initiatives.

4 List of actions

INDUSTRIAL COMPLEXES	ACTION
A Coruña	• Achieve the reduction of GHG tonnes targeted in our Emission Reduction Plan 25-25. • Invest in energy efficiency projects. • To carry out actions in the Refinery's processes that contribute to climate change mitigation.
Cartagena	• Contribute to Repsol's goal of being a zero net emissions company by 2050. • Reduce CO_2 emissions by 2021. • Implement new technologies in refinery processes. • Ensure the incorporation of biofuels into refinery products.
Petronor	• Guarantee the quality of analytical results related to greenhouse gas emissions. • Install four photovoltaic energy generation centers.
Puertollano	• Reduce CO_2 emissions through energy efficiency.
Sines	• Promote the use of renewable energy in the Complex. • Implement the study and evaluation plan to install photovoltaic panels in the Sines Industrial Complex on a self-consumption basis.
Tarragona	• Manage the energy efficiency system according to the ISO 50,001 standard. • Achieve a 100% reduction in tons of CO_2 in accordance with the emissions reduction program for the year 2021. • Development of transformation projects. • Actions to improve energy efficiency and decarbonisation. • Identification and analysis of the waste map available in the Tarragona Complex with the aim of developing circularity projects.

5 Annexes

Below, we detail the actions carried out in the axis of Climate Change in all Local Sustainability Plans. The information referring to the countries and the reference to the industrial complexes are published in English.

Countries

2021 Sustainability Plan

Algeria

Action
Raise awareness of company Greenhouse Gases (GHG) emissions.

Description
We will study the feasibility of the Greenhouse Gases (GHG) reduction initiatives identified in 2019 at Groupement Reggane Nord (GRN).

Indicator
Prepare a feasibility report about the GHG reduction initiatives identified.

What we've achieved

A report on the feasibility of the Greenhouse Gases (GHG) reduction initiatives identified in 2019 at Groupement Reggane Nord (GRN) has been prepared. It includes the initiatives identified, their status, description, planning and viability (for those that have not yet been implemented).

Contribution to the SDGs:

2021 Sustainability Plan

Algeria

Action
Improve the Green House Gases (GHG) emissions reporting.

Description
We will prepare an action plan to implement the Repsol procedure "Management of GHG Emissions in E&P" regarding the internal reporting of GHG in our non-operated assets.

We will prepare an action plan to improve the reporting of CH4 emissions in the non-operated assets selected by the company, in the framework of the Oil and Gas Methane Partnership (OGMP 2.0) implementation.

Indicator
Report GHG emissions periodically.

Define CH4 action plans

What we've achieved

1. After performing a gap analysis in our non-operated assets against the procedure "Management of GHG Emissions in Exploration and Production (E&P) ", an action plan has been prepared for its full implementation. Following this procedure the Business Unit periodically reports GHG emissions.
2. The action plan to improve the reporting of CH4 emissions in the non-operated assets, in the framework of the Oil and Gas Methane Partnership (OGMP 2.0), has been postponed until 2022.

Contribution to the SDGs:

2021 Sustainability Plan

Bolivia

Action
Reduce 5,000 tCO_2eq in our and operations.

Description
We will identify and execute initiatives to reduce emissions in our operations and projects, contributing to a reduction of more than 5,000 tCO_2eq in 2021.

Indicator
Reduction of more than 5000 tCO_2eq.

What we've achieved

We have exceeded the reduction of committed emissions, reaching a total of 62,421 t CO_2eq, through the execution of two important projects: the Flare Project in the Cambeiti field (EE274), with a total of 50,552 tCO_2eq reduced by December 2021, and the project Energy Optimization at the Margarita Plant (EE0245), achieving a reduction of 11,869 Tn CO_2 eq reduced by December 2021.

Contribution to the SDGs:

2021 Sustainability Plan

Bolivia

Action
Improve efficiency in flaring and veting.

Description
Carry out at least one LDAR campaign to identify and quantify fugitive emissions and schedule the repair of identified leaks. Improve efficiency in the flaring and venting processes in torches, allowing the reduction of burning in torches and venting (methane emissions).

Indicator
Carry out an implemented improvement project.

What we've achieved

We have executed the LDAR (Leak Detection & Repair) campaign in Margarita with the aim of identifying and quantifying fugitive emissions and programming the repair of identified leaks. Based on this campaign, we have adapted the flare in the Cambeiti field, with a significant reduction in emissions (venting). These initiatives have allowed a reduction in emissions of 62,421 tCo_2 in the year.

Contribution to the SDGs:

2021 Sustainability Plan

Bolivia

Action
Report GHG emissions for Non-Operated Assets.

Description
Include the greenhouse gas (GHG) emissions inventory report for Non-Operated Assets, so that the main GHGs (CO_2, CH4) and the main emission sources are included according to their processes.

Indicator
Perform an annual inventory of GHG in non-operated at the end of the year.

What we've achieved

We have annually requested an inventory of GHG emissions from Non-Operated assets, to include them in the greenhouse gas (GHG) emissions inventory report, thus identifying the main sources of emissions reported by operating processes.

Contribution to the SDGs:

2021 Sustainability Plan

Bolivia

Action
Progressively align the Emissions Inventory to the Oil & Gas Methane Partnership 2.0 requirements to improve methane quantifications.

Description
We will evaluate technology for methane gas measurements and start purchasing management, with the aim of aligning the report with the requirements of the Oil & Gas Methane Partnership (OGMP2.0 Gold Standard).

Indicator
Carry out the management of equipment purchases for methane measurement.

What we've achieved

We have managed to purchase a piece of equipment to measure methane and thus progressively align the emissions inventory to the requirements of the Oil & Gas Methane Partnership 2.0. The equipment has a detection of thirty (30) meters and is developed exclusively to detect methane gas and does not show cross-sensitivity with other hydrocarbons.

Contribution to the SDGs:

2021 Sustainability Plan

Brazil

Action

Update our emissions inventory including an emissions management plan for Repsol Sinopec.

Description

We will update the greenhouse gas (GHG) emissions inventory data with annual emissions from office activities, production assets and oil trading activities, adding a framework for GHG emissions management in accordance with Repsol Sinopec's strategy.

Indicator

Updated version of the 2021 emissions inventory.

Report methane emissions according to recommended emission sources and transparency in calculation methodologies.

Define goals and develop a GHG emissions management plan (carbon dioxide - CO_2, methane - CH_4 and nitrous oxide - N_2O).

What we've achieved

We have updated the GHG emissions inventory of Repsol Sinopec Brasil (RSB), resulting in an emission of 12.46 Kton CO_2eq per MMBbl (corresponds to the net/liquid emissions of RSB) produced in 2021, compared to 12.58 Kton CO2eq per MMBbl for the year 2020. Additionally, we have defined an emissions reduction plan together with the partners in the assets in which we have a stake.

Contribution to the SDGs:

2021 Sustainability Plan

Brazil

Action
Implement research projects aimed at CO_2 capture and use.

Description
We will start the first research, development and innovation projects to compose our research line in technological innovation with a focus on CO_2 management.

Indicator
Investment of 10% of Repsol Sinopec's budget.

What we've achieved

We have started a new line of research and development for carbon management with the launch of the CO_2CHEM project, which uses pioneering technology for the use of carbon with applicability in E&P (exploration and production) businesses. So far, we have invested 6.3 million reais, which is equivalent to 6.7% of the R&D budget in 2021.

Contribution to the SDGs:

2021 Sustainability Plan

Brazil

Action
Continue to develop new low-emission businesses through the use of natural gas.

Description
We will actively participate in the process of opening the natural gas market in Brazil, evaluating all business opportunities and working with partners to find solutions to monetize pre-salt gas. Through these activities, we will seek to offer society a safe and less carbon-intensive energy source.

Indicator
Evidence, through contracts with third parties, of Repsol Sinopec's participation in the Natural Gas value chain.

What we've achieved

We have made progress in the priority issues related to the Natural Gas chain, entering into sales contracts for gas from the Sapinhoá Norte field with Petrogal. The beginning of this contract was made thanks to the Swap agreement with Petrobras that allows virtual access to processing capacity for the subsequent sale of gas in specification. It is a milestone for Repsol Sinopec and the gas sector in Brazil, by offering society a safe and less carbon-intensive source of energy.

Contribution to the SDGs:

2021 Sustainability Plan

Canada

Action
Contribute to the Company's pledge to achieve net zero emissions by 2050.

Description
We will continue to contribute to the Company's objective to reduce carbon emissions through various initiatives. We will work to detect and quantify the methane emission sources at our operated assets, improving our estimates of fugitive emissions which will advance our reporting and identify opportunities for reduction.

Indicator
Reduce 32,000 tCO_2eq emissions by December 31, 2021.

Continue methane emissions detection and quantification program and update methane emissions inventory by December 31, 2021.

Participate in the global Energy Components GHG reporting project.

What we've achieved
In 2021, we successfully reduced 33,280 tonnes of carbon dioxide equivalent (CO_2e) within our Canadian assets.
We worked diligently to refine our understanding of our fugitive CO_2e emissions from our existing well sites through data analysis of statistical review of our emissions and by conducting a field campaign to measure our emission sources.
We also actively participated in the global GHG reporting project, aligning our reporting efforts with global practices.

Contribution to the SDGs:


2021 Sustainability Plan

Canada

Action
Support responsible production and consumption of energy.

Description
We will work to reduce energy consumption and improve energy efficiencies at existing facilities throughout our assets.

Indicator
Implement one energy consumption efficiency initiative outlined in our Energy Management Plan.

What we've achieved

In 2021, we successfully reduced 33,280 tonnes of carbon dioxide equivalent (CO_2e) In 2021, we have successfully completed work on three energy consumption efficiency initiatives. This included equipment and facility modifications and upgrades, operational maintenance, and field optimization of existing facilities, promoting our efforts towards responsible production and consumption of energy.

Contribution to the SDGs:

2021 Sustainability Plan

Colombia

Action
Calculate and offset the carbon footprint generated in 2020 in Repsol Colombia.

Description
We will calculate the carbon footprint generated by Repsol Colombia in Bogota during 2020 for air travel and energy consumption and subsequently offset the emissions through the purchase of carbon credits.

Indicator
Calculate the carbon footprint for air travel and energy consumption for 2020 in Repsol Colombia.

Acquire the carbon credits required for the compensation corresponding to the calculated carbon footprint.

What we've achieved

We have calculated a carbon footprint of 46.42 tonnes of CO_2 from travel and energy consumption in 2021.

We have purchased carbon credits from the CO_2Cero forestry project for 46.42 tonnes of CO_2 as a result of the calculation.

Contribution to the SDGs:

2021 Sustainability Plan

Colombia

Action
Report GHG emissions for non-operated assets.

Description
We will include greenhouse gas (GHG) emissions inventory reporting for non-operated assets, including the main GHGs (CO_2, CH_4).

Indicator
Submit annual emissions report for the two non-operated assets by 2020.

What we've achieved

In line with our public commitment to be a Carbon Neutral company by 2050, we are working not only to identify and measure our Greenhouse Gas (GHG) emissions, but also to monitor the emissions generated by our partners. For that reason, we have sent the annual emission report of the non-operating assets of Llanos Norte and CPO9, including the main GHGs (CO_2, CH_4).

Contribution to the SDGs:

2021 Sustainability Plan

Ecuador

Action

To reduce energy consumption in electro-submersible pumping systems through continuous design optimization and application selection considering 2020 energy consumption.

Description

We will optimize the selection of electro-submersible pumping equipment (ESP) in order to reduce energy consumption in the diesel power generation system. The project considers all BES equipment replacement works to be executed in 2021 when the wells are being reconditioned.

Indicator

Reduction of 1900 Tn CO_2eq until December 2021.

What we've achieved

We have reached 100% of the target by November 2021 with a reduction of 2,134 tnCO_2eq above the reduction established in the indicator.

Contribution to the SDGs:

2021 Sustainability Plan

Indonesia

Action
Perform a CO_2 capture and injection study for Sakakemang block.

Description
The Carbon Geological Storage Group will carry out the CO_2 capture and injection study for Sakakemang. It aims at the geological study in the Dayung and Gelam fields within the corridor block, so that in the future development of the entire Sakakemang field, all CO_2 produced, as well as the CO_2 produced by Corridor, can be captured and re-injected with a substantial decrease at country level of CO_2 emissions.

Indicator
Complete the geomechanics and dynamics study.

What we've achieved

We have completed the Carbon Geological Storage Site Characterization Report, about stimulating reservoirs' capacity to store CO_2, simulation the evolution of the allowed injections rates, reservoir pressure and rock mechanical and petrophysical properties in time, and geomechanical analysis of determining geological events.

The geomechanics and dynamics study focused on 1D and 3D geomechanical models, seal integrity analysis, evaluation of CO_2 injection scenarios and calibration of the dynamic model.

Contribution to the SDGs:

2021 Sustainability Plan

Malaysia

Action
Drive GHG reduction initiatives.

Description
We will implement a series of GHG reduction initiatives in year 2021 which include the initiative to reduce the emission of methane by converting one of the vent streams to flare. This is inline with Repsol's commitment in moving towards a low-emissions future.

Indicator
Quantify monthly and verify by external auditor at the end of the year GHG reduction achieved by this initiative.

What we've achieved

We have reached a cumulative GHG reduction for 2021 of 34.6 kt CO2eq. Actual reduction is lower than the planned reduction of 61 kt CO2eq due to lower sales gas demand and bad weather which limited the chances of the implementation of HCO2 flaring initiative. All reduction initiatives were verified by third party.

Contribution to the SDGs:

2021 Sustainability Plan

Norway

Action

Ensure implementation of short-term climate change improvements for Yme

Description

We will set an ambition to reduce emissions from Yme with 5.000 tonnes CO_2 based on Roadmap for reducing short-term emissions

Indicator

Appoint a host and be a driver for the new Yme Energy & Environment Committee.

Arrange a workshop to achieve input to the 2021 Yme Energy Improvement plan. Prepare recommendation for emission reductions for implementation in 2021 and 2022.

Prepare and follow up the 2021 Yme Energy Improvement plan to achieve ambition.

What we've achieved

We have successfully established the new Yme Energy & Environment Committee with a host and regularly meetings have been set up.

We have arranged a workshop focusing on GHG emission reduction opportunities at Yme and have identified 15 proposals for further assessment and implementation.

We have prepared an Environmental Improvement Plan for Yme which includes both proposals, ongoing and completed environmental improvements.

Contribution to the SDGs:

2021 Sustainability Plan

Norway

Action
Perform an evaluation on YME`s low-to-zero emissions alternatives resulting in a roadmap.

Description
We will deliver a decision support package based on roadmap to decide the way forward for Yme with respect to achieving reduced emissions. For this purpose, we will identify potential Yme gas deficiency, we will evaluate power from shore and we will participate in the Deep Purple project, to produce renewable energy

Indicator
Ensure focus on and follow up work to identify potential Yme gas deficiency and present to Yme Energy & Environment Committee.

Establish a study in Yme to evaluate power from shore as an option aligned with other long-term initiatives and READs assessment (environmental impact profile).

Participate in the Deep Purple project with operational input and establish a use case for Yme

What we've achieved

We have performed a screening study evaluating power options at Yme to reduce CO2 emissions. As a part of that study effects on emissions and economy of gas deficiency scenarios has been evaluated. The study has resulted in a recommendation to evaluate installation of a floating windmill at Yme.

We have participated in the Deep Purple project by providing insights into operation data and the case definition of renewable energy to oil & gas and leading the work delivering an operational philosophy.

Contribution to the SDGs:

2021 Sustainability Plan

Norway

Action
Focus on emission reductions from non-operated assets

Description
We will be a proactive partner who influence and challenge the operator related to reducing the assets' carbon and environmental footprint.

Indicator
Share our learnings about the READs tool (environmental impact profile) to foster mutual learning in the licenses.

Conduct at least one workshop with partners in non-operated assets to identify and propose reduction initiatives.

Engage in a dialogue with relevant operators regarding long term plans for "Virtual Inventory" to identify potential efficiency measures and reductions.

What we've achieved

We have given three presentations of the READS tool. We have shared and promoted Repsol's best practices and improvements in the regular licensee meetings throughout the year. The operator has shown and reported emission plans and zero emission projects during the year, and they have demonstrated the same reporting standard as Repsol. No separate workshop has been deemed necessary.

We have approached operators in our non-operated assets, and we have had a dialog with promotion of Virtual Inventory.

Contribution to the SDGs:

2021 Sustainability Plan

Peru

Action

Maintain the Peru Carbon Footprint recognition from the Ministry of the Environment level 3 by Refining and obtain level 2 recognition by Exploration and Production.

Description

We will carry out actions to maintain the Carbon Footprint Recognition, which values the efforts of organizations to reduce their Greenhouse Gas (GHG) emissions.

This recognition is made up of four levels, the first certifies that the measurement of GHG emissions is carried out, the second that the GHG inventory is submitted to external verification, the third registers the reduction of said inventory and the fourth and maximum level recognizes actions that seek to neutralize them.

Indicator

Maintain the Peru Carbon Footprint level 3 recognition for the 2020 financial year for Refining.

Obtain level 2 recognition for the year 2020 for Exploration and Production.

What we've achieved

Within the framework of the efforts to reduce GHG emissions during the 2020 financial year, we obtained the Level 3 Carbon Footprint recognition for the Exploration and Production business unit and for the second consecutive year for La Pampilla Refinery, being the first company in the mining-energy sector to obtain this recognition for the aforementioned exercise.

Contribution to the SDGs:

2021 Sustainability Plan

Peru

Action
Implement a fugitive emissions detection and repair (LDAR) program in the Kinteroni field.

Description
- We will establish the methane leak detection methodology, using a portable instrument in the measurement program.

- We will establish the field report model to authenticate the emissions results and replace the report that is based on theoretical calculation methodology.

Indicator
Formalize the report of fugitive emissions data with portable methane detection equipment.

Have the aforementioned emission measurement program by the area of operations.

What we've achieved

In the first quarter of 2021, we established and implemented the methane leak detection methodology using portable LDAR equipment. The results of these field measurements were presented in a report on the Kinteroni Asset which, supported by fugitive emissions measurements, revealed the results of the emissions generated by the asset.

Contribution to the SDGs:

2021 Sustainability Plan

Peru

Action
Develop an energy optimization study for the Kinteroni field.

Description
We will develop the scope and content of the tender with which the energy optimization study for the Kinteroni field will be carried out.

We will develop, through a specialized consultant, the execution of the study, which will serve to establish the baseline on which the initiatives to reduce and optimize resources will be developed to reach the goal of zero emissions.

Indicator
Carry out the energy optimization study of the Kinteroni field.

What we've achieved

We carried out the bidding process for the energy optimization study for the Kinteroni field, which was declared void. We are reviewing and modifying the technical scope of the tender, so the study is planned to be carried out in the course of 2022.

Contribution to the SDGs:

2021 Sustainability Plan

United Kingdom

Action

Support the transition to a low carbon future by seeking to become a Net Zero Operator and an industry leader in the UK's energy landscape.

Description

We will work on the following actions to drive reductions in our emissions: 1) Automation of emissions' reporting, 2) Forensic review of flare and vent systems to understand sources and potential for reduction, 3) 3rd Party verification of baseline data, 4) Regular site performance / Emissions hopper review, 5) Annual site specific emission reduction plans in place and 6) Raise profile of emissions management through communications.

Indicator

Total CO_2e emissions. Achive 1,300,283 tCO_2eq

CO_2e intensity. Achieve 43.20 Tonnes CO_2e per thousand Barrel of Oil Equivalents

Total flared gas. Achieve 90,663 Tonnes of flared gas

What we've achieved

During 2021, we have accomplished our objective of achieving less than 1,300,283 Tonnes CO_2e emissions, with a real figure of 1,079,678 Tonnes. In terms of CO_2e intensity, we have achieved 44.6 Tonnes CO_2e per thousand Barrel of Oil Equivalents, not reaching the annual objective of 43.20 Tonnes. Regarding flared gas, we have not achieved the target of 90,663 Tonnes, but there is a positive trend, with a reduction of 5% compared to recent years. We will continue working on these objectives throughout 2022.

Contribution to the SDGs:

2021 Sustainability Plan

United Kingdom

Action
Improve our methane reporting as part of our net zero commitment.

Description
We will implement OGMP (Oil and Gas Methane Partnership) 2.0 reporting and the procedure "Management of GHG Emissions in E&P". In order to achieve these goals we will have a plan approved in April and the procedure completed the first semester.

Indicator
Implement the OGMP 2.0 report.

Implement the procedure "Management of GHG Emissions in E&P" the first semester.

What we've achieved

We have implemented OGMP 2.0 reporting, after completing the following actions: we prepared OGMP questionnaires for all assets and we held meetings with the operator. Also, we have implemented procedure "Management of GHG Emissions in E&P", for which we organized a webinar attended by key personnel of the Business Unit, and we prepared a gap analysis of the procedure.

Contribution to the SDGs:

2021 Sustainability Plan

United States

Action
Contribute to global emissions reduction targets in the Eagle Ford Business Unit.

Description
We will identify opportunities to reduce emissions in the Eagle Ford Business Unit.

Indicator
Identify at least two projects and start with the visualization by the end of the year.

What we've achieved

We have carried out one workshop to review emissions by source and identified 52 reduction opportunities. The first project planned in 2022 will replace gas-driven compressors with electric units at three facilities and adopt alternative methane quantification technologies for improved leak identification and quantification. We also have a project underway for ongoing flare metering and operations to improve the accuracy of emissions representation and achieve routine zero flaring by 2025.

Contribution to the SDGs:

2021 Sustainability Plan

United States

Action
Contribute to global emissions reduction targets in the Marcellus Business Unit.

Description
We will implement processes to more accurately calculate fugitive emissions and modify our facilities to minimize the use of fuel gas in the Marcellus Business Unit.

Indicator
Reduce GHG emissions by 60,000 tCO_2eq.

What we've achieved
We have reduced emissions from our operations in the Marcellus Shale by 61,000 metric tons of CO_2 equivalent, which exceeds our target objective for 2021, by increasing the number of well sites included in our leak detection and repair (LDAR) program, optimizing the number of gas processing units at well sites and other minor maintenance projects.

Contribution to the SDGs:


2021 Sustainability Plan

Venezuela

Action

Support the five non-operated assets of the Business Unit in conducting a self-assessment on the quantification of methane emissions in their operations.

Description

We will implement an action plan to get each of the five non-operated assets of the Venezuela Business Unit to complete the methane emissions questionnaire, having verified what information they are able to collect from its activities and records. We will then commit to an action plan to improve this quantification.

Indicator

Have an action plan to implement the self-diagnosis.

Complete seven questionnaires by March 15 (three from Petroquiriquire and one each from Petrocarabobo, Cardón IV, Quiriquire Gas and Ypergas).

Define and agree on an improvement plan for at least two assets.

What we've achieved

We have implemented an action plan to perform the self-diagnosis of methane emissions at UN Venezuela with each of the assets. As of 15 March, we had the questionnaire for all assets (seven in total, including Petroquiriquire's three).

Subsequently, we completed an improvement plan for the reporting of methane emissions from the Business Unit's assets, following verification of the activities and records carried out at each of the assets.

Contribution to the SDGs:

2021 Sustainability Plan

Venezuela

Action

Assist non-operated assets to complete 2020 Greenhouse Gas (GHG) emissions reporting for their operations and identify reduction initiatives.

Description

We will encourage the non-operated assets of the Venezuela Business Unit to complete Repsol's GHG emissions reporting, verifying the information they can collect from their activities and records. We will commit to an action plan to improve quantification and estimation mechanisms. In Cardón IV and Ypergas, we will identify, evaluate, register and prioritize initiatives to reduce GHG emissions.

Indicator

Complete seven GHG emissions reports (three from Petroquiriquire, and one each from Petrocarabobo, Cardón IV, Quiriquire Gas and YPergas).

Prepare an agreed improvement plan for at least two of the assets.

Have a list of emissions reduction initiatives evaluated and prioritized in Cardón IV and Ypergas.

What we've achieved

We have completed the 2020 GHG emissions report for each of the Business Unit's assets, defining a specific improvement plan for each asset that was implemented during 2021.

In addition, we have a list of GHG emissions reduction initiatives for Cardón IV that have been reviewed and prioritised, several of which have been implemented, and the list of initiatives for Ypergas is under review.

Contribution to the SDGs:

Industrial Complexes

2021 Sustainability Plan

A Coruña

Action
Achieve the reduction of GHG tonnes targeted in our Emission Reduction Plan 25-25.

Description
The Repsol A Coruña Industrial Complex has been assigned a series of actions within the CO_2 emissions reduction plan. To achieve this objective in 2021, we will make the investments set out in the plan and work to implement the operational actions derived from the continuous improvement of the process.

Indicator
Achieve a reduction of 20,000t of theoretical CO_2 emissions.

What we've achieved

In 2021 we have implemented operational improvements and executed and commissioned investments in the units with a reduction of more than 24,000 tonnes of CO_2 emissions per year. Of particular note was the investment made in the Gas Recovery-3 unit with the start-up of the project to change the unit's turbocharger, which involved an investment of close to 16 million euros.

Contribution to the SDGs:

2021 Sustainability Plan

A Coruña

Action
Invest in energy efficiency projects.

Description
We will work on the execution of the energy efficiency improvement projects to be implemented during the general shutdown in May at the Crudo1 unit and on the progress of the projects to be implemented in the following years, as contemplated in the 25/25 Plan.

Indicator
Exceed 11.5% progress on the curve of the 25/25 plan projects.

What we've achieved

This year we have surpassed the indicator, reaching 11.6% progress in the 25/25 Plan projects curve. These projects, which will be implemented at the refinery in the coming years, aim to achieve a net reduction in CO_2 emissions, supporting the Company's decarbonization objective of zero net CO_2 emissions by 2050.

Contribution to the SDGs:

2021 Sustainability Plan

A Coruña

Action
To carry out actions in the Refinery's processes that contribute to climate change mitigation.

Description
We will incorporate bio-based components in the formulation of our fuels.

Indicator
Incorporate 150,000 tonnes of bio-based components into fuels.

What we've achieved

The amount of bio-based components incorporated in the production of fuels at the Repsol A Coruña Industrial Complex in 2021 was 178,700 tonnes. Of particular note is the incorporation of used cooking oil (UCO) as a new component.

Contribution to the SDGs:

2021 Sustainability Plan

Cartagena

Action
Contribute to Repsol's goal of being a zero net emissions company by 2050.

Description
We will identify actions that will enable us to reduce our CO_2 emissions by 25% by 2025 compared to 2017 in line with the company's target.

Indicator
Advance by 17.9% in the development of projects under the 25/25 plan.

What we've achieved

Within the framework of Repsol's objective to decarbonise its operations and advance towards the goal of being a company with zero net emissions by 2050, the Cartagena refinery has made progress in different actions throughout 2021, reaching 18.3% of the planned plan's execution. Specifically, we have made progress in actions such as improving the efficiency of some of the refinery's furnaces, with an estimated annual saving of 11,000 tonnes of CO_2.

Contribution to the SDGs:

2021 Sustainability Plan

Cartagena

Action
Reduce CO_2 emissions by 2021.

Description
We will identify and devise ways to reduce CO_2 emissions by 2021 to slow climate change. All measurements will be audited to verify progress.

Indicator
Implement actions to reduce 21,000 tCO_2 by 2021.

What we've achieved

The Cartagena refinery has managed to reduce 32,278 tons of CO2 in 2021 thanks to the implementation of different projects and investments. It is worth highlighting the start-up of new equipment in the topping unit, which improves its energy efficiency, and the installation of thermocompressors in the coker unit.

Contribution to the SDGs:

2021 Sustainability Plan

Cartagena

Action
Implement new technologies in refinery processes.

Description
We will make progress in the study of new technologies at Repsol's facilities in Cartagena to tackle climate change and the goal of being a company with zero net emissions by 2050, based on the circular economy, renewable hydrogen and the capture and use of CO_2.

Indicator
Define and initiate the development of renewable hydrogen projects in Cartagena, both for the application of electrolysis and for the production of biogas.

What we've achieved
The Cartagena Industrial Complex, in collaboration with other Repsol´s areas, is working on the technological definition and the synergies search with potential partners for the implementation of an electrolyzer, among other projects. Also, in 2021, the refinery produced for the first time, renewable hydrogen from biomethane.

Contribution to the SDGs:


2021 Sustainability Plan

Cartagena

Action
Ensure the incorporation of biofuels into refinery products.

Description
We will start work on the construction of an advanced biofuels plant that will enable the production of sustainable biofuels from recycled feedstocks from 2023 onwards.

Indicator
Achieve 37% of the project's progress.

What we've achieved

In 2021 we obtained the necessary authorisations to initiate the project and start construction work, which is 37% complete. The new facility, which is expected to be completed in 2023, will produce advanced biofuels that will prevent the emission of 900,000 tonnes of CO_2 per year.

Contribution to the SDGs:

2021 Sustainability Plan

Petronor

Action
Guarantee the quality of analytical results related to greenhouse gas emissions.

Description
We will ensure the quality of sample analysis results related to environmental impact. We will carry out analytical intercomparisons with reference laboratories of tests related to greenhouse gas emissions into the atmosphere.

Indicator
1 Intercomparison of liquid fuels (Fuel oil).

1 Natural Gas Intercomparison.

What we've achieved
We have carried out the intercomparisons and the results obtained show that the system applied in the tests for the characterization of liquid and gas fuels is adequate.

Contribution to the SDGs:


2021 Sustainability Plan

Petronor

Action
Install four photovoltaic energy generation centers.

Description
We will install photovoltaic generation centers with the entities and institutions that have established agreements and alliances.

Indicator
Carry out 4 photovoltaic generation installations of 100KW each.

Reach the generation capacity of 120Mw/h/year.

What we've achieved

We have exceeded the proposed objectives by installing eight photovoltaic power generation modules. The total available power of these is 388Kw. We have reached a generation capacity of 465.5 MWh/year.

Contribution to the SDGs:

2021 Sustainability Plan

Puertollano

Action
Reduce CO_2 emissions through energy efficiency.

Description
We will reduce our CO_2 emissions by applying our energy management system to achieve operational excellence and implementing different actions aimed at increasing energy efficiency in our processes. Our goal is to contribute to Repsol's goal of becoming a net zero emissions company by 2050.

Indicator
Reduce by at least 53,000 tCO_2 in the 2020-2021 period. Indicator updated with respect to 2020.

Dedicate at least 15% of the total planned investment to improvements aimed at reducing CO_2.

What we've achieved

In 2021 we have achieved the goal of reducing CO_2 emissions set in 2020 by 114%. Of the 53,000 tons of CO_2 per year that we set ourselves as a joint goal in 2020 and 2021, we have achieved a reduction of 60,680 tons of CO_2 per year, the equivalent of the absorption of CO_2 that would be generated by a forest with an area like 12,500 football fields. We have invested more than 11 million euros in energy efficiency, which represents 105% compliance with the objective.

Contribution to the SDGs:

2021 Sustainability Plan

Sines

Action
Promote the use of renewable energy in the Complex.

Description
We will install photovoltaic panels in the exterior car park of the Complex, seeking greater energy profitability, within the framework of the car park capacity expansion project.

Indicator
Award the photovoltaic panel commissioning phase until September 2021.

What we've achieved

We have achieved the 2021 objective, after receiving the panels in the third quarter of 2021. The installation and assembly work of the panels will be carried out during 2022 and 2023. An annual generation is estimated in the first year of 1,195,357.00 kWh

Contribution to the SDGs:

2021 Sustainability Plan

Sines

Action
Implement the study and evaluation plan to install photovoltaic panels in the Sines Industrial Complex on a self-consumption basis.

Description
We will prepare a study and evaluation of a plan for the installation of photovoltaic panel parks with the aim of reducing CO_2 emissions from the Sines Industrial Complex, to achieve operational excellence and launching different actions, aimed at increasing energy efficiency in our processes. This project will allow us to reduce approximately 1,800 tCO_2/year.

Indicator
Complete the FEL phase by September 2021.

What we've achieved
In 2021 we have covered 100% of the objective, reaching the conclusion of the FEL (Front End Loading) study in June 2021. We have also awarded the EPC order (Engineering, Procurement, Construction) in Dec 2021. After the execution of the investment, the electricity produced by photovoltaic parks is estimated at around 10GWh/year with a reduction of indirect emissions around 4,000 tCO_2/year.

Contribution to the SDGs:

2021 Sustainability Plan

Tarragona

Action
Manage the energy efficiency system according to the ISO 50,001 standard.

Description
We will continue with the consolidation and continuous improvement of the energy efficiency management system according to the ISO 50,001 standard with the aim of increasing efficiency in the consumption and use of energy and the reduction of associated CO_2 emissions.

Indicator
Pass the ISO 50001 certification maintenance audit.

What we've achieved

We have consolidated the energy efficiency management system, showing continuous improvement and having passed the audit of the ISO 50,001 standard.in

Contribution to the SDGs:

2021 Sustainability Plan

Tarragona

Action

Achieve a 100% reduction in tons of CO_2 in accordance with the emissions reduction program for the year 2021.

Description

The Repsol Tarragona Industrial Complex has assigned a series of actions within the plan to reduce CO_2 emissions. During the exercise, we will manage the assigned tasks for their correct development and completion. Our work will be aimed at the identification, study, execution and start-up of new investments related to efficiency and operational improvements in the process units.

Indicator

Achieve 100% reduction in tons of CO_2 defined for the year 2021.

Maintain ISO 14064 certification and pass the planned audits.urna.

What we've achieved

We have achieved a reduction in emissions of 5,896 tons of CO_2 with the execution of actions of the established reduction plan. We have also maintained and renewed the ISO14064 certification, associated with the 2020 actions, validated in the March 2021 audit.

Contribution to the SDGs:

2021 Sustainability Plan

Tarragona

Action
Development of transformation projects.

Description
We will identify and implement technologies for the production of Biofuels, reduction of carbon footprint in fuels and specialization. We will lead the Strategic Project of the Recovery, Transformation and Resilience Plan for Green Hydrogen in Catalonia. We will work on engineering studies on circularity projects.

Indicator
Implementation of new biofuel production technologies.

Active participation in PERTE of H2 Verde.

Achieve 100% planned progress in FEL circularity studies.

What we've achieved

We have carried out a feasibility study to process used cooking oils in the Isomax unit. In addition, we have successfully completed the industrial trial of biojet production in a Hydrodesulfurization unit and we have treated vegetable oil in another Hydrodesulfurization unit. We have also carried out a feasibility study for a new green Hydrogen plant and we have a conceptual engineering study underway to process oil from recycled plastics.

Contribution to the SDGs:

2021 Sustainability Plan

Tarragona

Action
Actions to improve energy efficiency and decarbonisation.

Description
We will advance in the study of energy efficiency improvement projects to be carried out during the general shutdown of the Refinery, scheduled for 2022.

Indicator
Progress of the detailed engineering of the projects to be undertaken in the general shutdown.

What we've achieved

We have completed the detailed engineering of the projects to improve energy efficiency, to be carried out during the general shutdown of the Refinery in May 2022. Among the projects, the new air preheater in the Platforming unit and the increases in the exchange area stand out. in the preheating trains in two of the Hydrodesulfurization units.

Contribution to the SDGs:

2021 Sustainability Plan

Tarragona

Action
Identification and analysis of the waste map available in the Tarragona Complex with the aim of developing circularity projects.

Description
We will develop the Conceptual Engineering of the best alternative for reuse of waste available in the area, according to the availability identified.

Indicator
Development of Conceptual Engineering for waste revaluation project.

What we've achieved

We have collaborated in the FEL (Front-End Loading) conceptual engineering and detailed engineering study of the urban solid waste recovery project, with the aim of being able to produce methanol in the Ecoplant, applying innovative technology.

Contribution to the SDGs:

6 More Information

If you want to know more information about the Sustainability Plans in which you find these actions you can visit our website repsol.com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