

C0. Introduction

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C0.1

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**(C0.1) Give a general description and introduction to your organization.**

Repsol is an international integrated Oil&Gas Company whose main activity consists of the upstream and downstream business. The Company has become firmly established as one of the most important international companies in the O&G industry operating in more than 35 countries and working towards energy solutions which are responsible with the planet. Regarding the development of new businesses associated with the energy transition, the company is working on developing the gas business, low-emission production and the marketing of gas and electricity. In this sense, Repsol has started to engage in the low-emission electricity production and gas and electricity marketing businesses in Spain through a new brand, Repsol Electricidad y Gas. Moreover, the Company is developing three new renewable energy projects (two wind farms and one photovoltaic plant) aiming an installed capacity of 800 MW.

At Repsol we believe that access to energy is a universal right. Everyone is entitled to economic and sustainable energy sources. Therefore, our obligation is to guarantee a safe and competitive supply while preserving the environment and ensuring a better planet for future generations. We work on solutions that allow society to enjoy a sustainable future with low emissions of greenhouse gases.

The Company has a Carbon Strategy aligned with public policies (regarding CO2 emissions and energy efficiency), reduce the carbon footprint in its entire value chain, and is committed to technological innovation and to continue promoting greater energy efficiency in its operations. We are also continuously monitoring the latest trends and technologies developed in the field of renewable energy, investing in sustainable mobility, and contributing to the reduction of emissions through biofuel production and research.

The Company is engaged in all aspects of the Oil and Gas business, and produces and markets low-emission electricity and natural gas, offering global energy solutions. Its main business activities include the exploration, development and production, of crude oil and natural gas reserves: (1) Crude oil and gas transport by pipeline or in tankers from the production areas to the consumption areas; (2) Refining crude oil to turn it into value added products such as gasoline and diesel; (3) Marketing such products and liquefied petroleum gas (LPG) via, in each case, the petrol station network and the network for distribution to the end customer; (4) Chemicals, from oil derivatives, which produces and sells a wide variety of products ranging from basic petrochemicals to derivatives; (5) lubricants, asphalts and specialties; and renewable production projects.

We develop our activities to become an even more sustainable and competitive company, with a responsible commitment to the environment and to the areas in which we operate. We are decidedly and continuously committed to sustainability as a key factor for creating value, now and in the future.

This is always done by using processes that respond to the strict controls on safety and respect for the environment.

We are committed to technological innovation as the key to building a more efficient, secure, competitive and sustainable energy model. This commitment is assigned to the Repsol Technology Center: a leading European center where we promote R&D+i with high investments every year.

C0.2

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**(C0.2) State the start and end date of the year for which you are reporting data.**

|       | Start date     | End date         | Indicate if you are providing emissions data for past reporting years | Select the number of past reporting years you will be providing emissions data for |
|-------|----------------|------------------|---|--|
| Row 1 | January 1 2018 | December 31 2018 | No  | <Not Applicable>   |

C0.3

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**(C0.3) Select the countries/regions for which you will be supplying data.**

- Bolivia (Plurinational State of)
- Canada
- Ecuador
- Malaysia
- Norway
- Peru
- Portugal
- Russian Federation
- Spain
- United States of America

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

USD

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your consolidation approach to your Scope 1 and Scope 2 greenhouse gas inventory.

Operational control

C-OG0.7

(C-OG0.7) Which part of the oil and gas value chain and other areas does your organization operate in?

Row 1

Oil and gas value chain

- Upstream
- Downstream
- Chemicals

Other divisions

- Grid electricity supply from renewables
- Carbon capture and storage/utilization

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

| Position of individual(s)                  | Please explain  |
|--|---|
| Chief Executive Officer (CEO)              | The CEO and Repsol's Executive Committee are the highest executive level within the company for taking strategic decisions and setting lines of action with regard to climate change. Specifically, their responsibilities in this regard are the following: (1) They propose climate change strategy and targets, and supervise their implementation (2) They oversee the climate change strategy and periodically review the evolution of GHG emissions and compliance of the climate change mitigation objectives (GHG emission reduction and carbon intensity indicator). Repsol Executive Committee is integrated by the CEO and the Senior C-level Management, and meets regularly (once a month), and at least twice a year (or as often as necessary), review information on execution of the climate change and CO2 emission strategy. |
| Other, please specify (Board of Directors) | The Board of Directors approves the climate change policy and strategy, as well as the remuneration of the Board and Senior Management linked to the achievement of energy and climate change objectives.   |
| Board-level committee                      | SUSTAINABILITY COMMITTEE: Oversees and periodically monitors the climate change strategy and compliance of the associated plans and objectives, as well as emerging risks related to energy transition and climate change. AUDIT AND CONTROL COMMITTEE: Oversees the effectiveness of the company's risks management and internal control system as a whole and annually supervises emerging risks and climate change as part of the review of Repsol's risks map. COMPENSATION COMMITTEE: Proposes Board and Senior Management remuneration linked to the achievement of energy and climate change objectives.   |

C1.1b

**(C1.1b) Provide further details on the board's oversight of climate-related issues.**

| Frequency with which climate-related issues are a scheduled agenda item | Governance mechanisms into which climate-related issues are integrated   | Please explain  |
|---|--|---|
| Scheduled – all meetings  | <p>Reviewing and guiding strategy</p> <p>Reviewing and guiding major plans of action</p> <p>Reviewing and guiding risk management policies</p> <p>Monitoring and overseeing progress against goals and targets for addressing climate-related issues</p> | <p>These issues are reviewed and monitored frequently at many levels of the company in addition to the Board of Directors or Executive Committee. (1)The Board of Directors is responsible for the approval of climate change strategy and policy. (2)The Executive Committee is responsible for proposing and overseeing the climate change strategy and periodically review the evolution of GHG emissions and compliance of the climate change mitigation objectives. The CE meets once a month and, at least twice a year (or as often as necessary), review information on execution of the climate change and CO2 emission strategy. (3) The Sustainability Committee is a specialized committee within the Board of Directors, and is responsible for overseeing and monitoring periodically the climate change strategy and the progress of the plans and objectives associated with it, as well as the emerging risks related to the transition energy and climate change. It meets quarterly and evaluates how the Company performs in terms of sustainability, including climate issues. (4) Audit and Control Committee: Oversees the effectiveness of the company's risks management and internal control system as a whole and annually supervises emerging risks and climate change as part of the review of Repsol's risks map.</p> |

**C1.2**

**(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.**

| Name of the position(s) and/or committee(s)                   | Responsibility  | Frequency of reporting to the board on climate-related issues |
|---|---|---|
| Chief Sustainability Officer (CSO)                            | Both assessing and managing climate-related risks and opportunities | Quarterly   |
| Sustainability committee                                      | Both assessing and managing climate-related risks and opportunities | Quarterly   |
| Chief Risks Officer (CRO)                                     | Both assessing and managing climate-related risks and opportunities | Half-yearly   |
| Other committee, please specify (Audit and control committee) | Assessing climate-related risks and opportunities                   | Annually  |

**C1.2a**

**(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).**

The Technological Development, Resources and Sustainability Division, acting as Chief Sustainability Officer CSO, and reporting directly to the CEO, coordinates the climate change strategy and the development of this strategy with all units

involved. This strategy is integrated into the company's strategy. In addition to the proposal of objectives and monitoring of action plans to reduce Repsol's GHG emissions, it ensures the deployment of it.

The Audit, Control and Risks Division has a systematic process that allows identifying and assessing emerging and climate change risks at the Company in the short, medium and longterm. Management of such risks is overseen by the Sustainability Committee and by the Audit and Control Committee, each within the scope of their respective responsibilities.

The Sustainability Committee is a specialized committee within the Board of Directors and have supervisory, reporting, advisory, and proposal functions. The Sustainability Committee is governed by Article 37 of the Company Bylaws and Article 37 of the Regulations of the Board of Directors, which outline its composition, functioning, and competencies. Members of this committee are: 2 dominical directors, 2 Proprietary directors, Chief Sustainability Officer

It is aware of and orients the Company's policy, objectives and guidelines with respect to environmental, social and safety matters. In 2018, the Committee met four times and discussed the following matters, among others:

- Supervision of non-financial information: 2017 Integrated Management Report.
- Supervision of Company sustainability strategy: proposal of 2018 targets and monitoring, evaluation and closure of 2017 targets
- Global Sustainability Plan
- Sustainability risk map.
- Sustainability communication plan
- Safety culture in Repsol
- Strategic thinking on safety and the environment for 2025
- Setting emission reduction targets for 2025
- Analysis and periodic monitoring of performance in:
  - Safety scorecard and accidentability indicators.
  - Energy and climate change
  - Community Relations and Human Rights
- Analysis of international sustainability standards
- Energy transition
- Analysis of initiatives related to the Task Force on Climate-related Financial Disclosures (TCFD).

The Sustainability Division, through the energy and climate change unit, gives support the Technological Development, Resources and Sustainability Division for the assessment of the climate change strategy and the development of this strategy across all units.

### C1.3

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**(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?**

Yes

### C1.3a

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**(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).**

**Who is entitled to benefit from these incentives?**

Corporate executive team

**Types of incentives**

Monetary reward

**Activity incentivized**

Emissions reduction target

**Comment**

All members of Corporate Executive Team have medium and long-term objectives, including emission reduction

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**Who is entitled to benefit from these incentives?**

Chief Executive Officer (CEO)

**Types of incentives**

Monetary reward

**Activity incentivized**

Emissions reduction target

**Comment**

All members of Corporate Executive Team have medium and long-term objectives, including emission reduction

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**Who is entitled to benefit from these incentives?**

Chief Financial Officer (CFO)

**Types of incentives**

Monetary reward

**Activity incentivized**

Emissions reduction target

**Comment**

All members of Corporate Executive Team have medium and long-term objectives, including emission reduction

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**Who is entitled to benefit from these incentives?**

Chief Sustainability Officer (CSO)

**Types of incentives**

Monetary reward

**Activity incentivized**

Emissions reduction target

**Comment**

All members of Corporate Executive Team have medium and long-term objectives, including emission reduction

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**Who is entitled to benefit from these incentives?**

Management group

**Types of incentives**

Monetary reward

**Activity incentivized**

Emissions reduction target

**Comment**

**Who is entitled to benefit from these incentives?**

Business unit manager

**Types of incentives**

Monetary reward

**Activity incentivized**

Emissions reduction target

**Comment**

**Who is entitled to benefit from these incentives?**

Energy manager

**Types of incentives**

Monetary reward

**Activity incentivized**

Emissions reduction target

**Comment**

**Who is entitled to benefit from these incentives?**

Environment/Sustainability manager

**Types of incentives**

Monetary reward

**Activity incentivized**

Emissions reduction target

**Comment**

**Who is entitled to benefit from these incentives?**

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Facilities manager

**Types of incentives**

Monetary reward

**Activity incentivized**

Emissions reduction target

**Comment**

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**Who is entitled to benefit from these incentives?**

Process operation manager

**Types of incentives**

Monetary reward

**Activity incentivized**

Emissions reduction target

**Comment**

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**Who is entitled to benefit from these incentives?**

Other, please specify (Energy/environment engineers&tech staff)

**Types of incentives**

Monetary reward

**Activity incentivized**

Emissions reduction target

**Comment**

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**Who is entitled to benefit from these incentives?**

Chief Executive Officer (CEO)

**Types of incentives**

Other non-monetary reward

**Activity incentivized**

Emissions reduction target

**Comment**

Shares (30% of annual variable remuneration)

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**Who is entitled to benefit from these incentives?**

Other, please specify (General Counsel and Secretary of Board)

**Types of incentives**

Other non-monetary reward

**Activity incentivized**

Emissions reduction target

**Comment**

Shares (30% of annual variable remuneration)

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## C2. Risks and opportunities

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### C2.1

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**(C2.1) Describe what your organization considers to be short-, medium- and long-term horizons.**

|             | From (years) | To (years) | Comment  |
|-------------|--------------|------------|--|
| Short-term  | 0            | 1          | This is the time horizon of the budget   |
| Medium-term | 1            | 5          | This is the time horizon of the strategic plan   |
| Long-term   | 5            | 25         | The long-term time horizon varies depending on the nature and purpose of the prospect, and can be shorter than the stated 25-year span. This is the indicative time horizon of prospective assessments which anticipate global and sectoral trends relevant for Repsol. This time horizon is aligned with those of the International Energy Agency |

### C2.2

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**(C2.2) Select the option that best describes how your organization's processes for identifying, assessing, and managing climate-related issues are integrated into your overall risk management.**

Integrated into multi-disciplinary company-wide risk identification, assessment, and management processes

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## C2.2a

### (C2.2a) Select the options that best describe your organization's frequency and time horizon for identifying and assessing climate-related risks.

|       | Frequency of monitoring        | How far into the future are risks considered? | Comment   |
|-------|--------------------------------|---|---|
| Row 1 | Six-monthly or more frequently | >6 years                                      | The frequency of monitoring is annual by default. Nevertheless, as provisions exist for updating the analysis of any risk at any moment, whenever it's presumed that the exposure might have changed since last assessment for any reason, the risk profile reflects a real-time view of the risk exposure. Therefore the frequency of monitoring is, as a matter of fact, six-monthly or more frequent. Besides, a strength of our Enterprise Risk Management (ERM) methodology is that it allows for the analysis of any given risk, or any given set of risks, at any given moment in the future. We are able to report risk severity and/or loss for each of the following 5 years and for the subsequent years as well. With this approach, we can analyse emerging long term risks even though if they are not expected to affect our objectives in the coming years. |

## C2.2b

### (C2.2b) Provide further details on your organization's process(es) for identifying and assessing climate-related risks.

Repsol defines risk as any factor of uncertainty that can cause a deviation in the achievement of company's objectives.

We use a bottom-up approach to build Repsol Risk Map.

At the beginning of this process (executed yearly by default, but with provision for more frequent identification & assessment whenever it's presumed that the exposure might have changed since last assessment for any reason), business and corporate units that manage risk-exposing assets or activities examine changes that have happened from the last revision, and they assess how these changes have modified the business context. Based on the results, they identify and prioritize their risks (and opportunities). In order to guide the context analysis and the risk identification process, they use a unique corporate overarching taxonomy that prevents the units from omitting any relevant risk. This tailor-made taxonomy contains 76 risk types, classified as strategic (23), operational (41) or financial (12).

Climate change can trigger many different risk events of our risk taxonomy, among others: Wars, armed conflicts and social instability, Deterioration (or improvement) of competitive position, Regulatory changes, Media manipulation/activism, Inadequate investment/divestment decisions, Technological obsolescence due to the appearance of disruptive technologies, Epidemics or similar outbreaks and Extreme weather events, non-predictable weather changes and natural disasters. Any of these events can hamper the adequate execution of the business processes of the company, and ultimately the achievement of its strategic goals. That's why climate change is a risk and opportunity factor we consider throughout the whole ERM process.

Once the risks have been defined, a risk analysis methodology is applied combining both quantitative techniques for the analysis of frequencies and economic losses, and qualitative techniques for the analysis of impacts on reputation and people. Qualitative estimations of impact on people consider potential injuries and the effects on the commitment or motivation of company's employees. Once each business or corporate unit has produced its risk map, it's reported to its managers. This report comprises both the risk profile and the state of the controls that mitigate the risks, as well as the improvement potential of such controls. With this information, the managers can make decisions on the controls to be implemented or improved and allocate resources accordingly. Repsol has risk appetite statements for those risks that it's not willing to assume. These statements are contained in Repsol's Risk Policy and replicated in the specific policies and norms that regulate the management of those risks. Therefore the management systems of these "zero appetite" risks promote the continuous improvement of our performance, regardless their severity. Reputation & brand, HSE, security, ethics & conduct and compliance risks are examples of "zero appetite" risks. The rest of the risks, i.e., those which the company is willing to assume up to a certain threshold, are compared with each other in terms of their severity and loss (our risk metrics).

The next milestone is the aggregation of the risks contained in the individual risk maps (asset level), in terms of severity and loss, to produce the Company-wide Risk Map (company level), as well as several intermediate consolidated reports, including the Downstream-wide and the E&P-wide Risk Maps. Once this has been completed, specific reports are prepared for corporate units that supervise the management of specific risks so that they can make decisions as well, with the guidance of the same principles regarding risk appetite. Examples of these reports are the maps of legal, reputational, HSE, security, IT, procurement, compliance, fiscal and financial risks. A specific report of sustainability risks is prepared as well, with a chapter of climate change risks where the relative contribution of these risks to the overall risk profile of the company is examined in terms of loss and severity. Additionally, it contains different scenarios considering the short, medium and long term.

Repsol Risk Map, reported to the Board, as well as the stochastic simulations of the P&L, are made available for the optimization of key decision-making processes such as the development of the strategic plan and budget. According to Repsol's ERM process, the SUBSTANTIVE RISKS, which are those reported at corporate level, are the top-20 risks, i.e., the 20 most severe risks of the Company. Out of these 20 risks, 12 (60%) are included because of their cumulative loss (at 50 and 95 percentiles), 4 (20%) because of their reputational impact at the 95 percentile, and 4 (20%) because of their impact on people at the 95 percentile.

In 2018, Repsol produced 48 individual risk maps: 35 correspond to business units and 13 to corporate units, with a total amount of 453 risks analyzed, part of them related to climate change.

## C2.2c

**(C2.2c) Which of the following risk types are considered in your organization's climate-related risk assessments?**

|                     | Relevance & inclusion     | Please explain  |
|---------------------|---------------------------|---|
| Current regulation  | Relevant, always included | Repsol assesses the potential effects of current regulation in countries and markets where the company has business interests. An example of this risk is the potential deviation in the cost of procurement of the EUAs (European Union Allowances) which are needed for compliance purposes under Phases III and IV of the ETD (Emissions Trading Directive) because of the market volatility and/or a significant reduction of the free allowances to be allocated to Repsol's facilities under Phase IV (2021-2022). In order to mitigate this risk, direct greenhouse gas emissions reductions have been targeted by 2025 vs 2017 (3 MtCO <sub>2</sub> eq/year company-wide). Green bonds have been issued to fund the outstanding investments, such as energy efficiency enhancements, that shall enable the company to achieve this objective.   |
| Emerging regulation | Relevant, always included | Repsol assesses the impacts of potential changes in the regulation of those countries and markets where it has business interests (the emerging regulation). For instance, the EU FQD (Fuel Quality Directive) rules that the content of biofuels blended into fuels supplied for road transport must be raised. On the other hand, the EU Renewable Energy Directive (RED) stipulates that biofuels production must not interfere with food market and therefore restricts the use of 1st generation biofuels and promotes the use of 2nd generation biofuels instead. Even though the RED rules do not affect the FQD currently, there is the possibility that these limitations be extended to the FQD before 2020. Should this happen, a larger amount of 2nd generation biofuels, more expensive, would be needed for FQD compliance and, ultimately, the 2020 target itself could be in danger due to an eventual lack of supply. Repsol's expert departments on biofuels and regulation continuously monitor this risk, which is factored in the annual budget and the strategic plan, and advice the business managers in order to make the best decisions.   |
| Technology          | Relevant, always included | Technology risk (with its potential downside but with an obvious upside as well) is a relevant risk for Repsol, especially in the long term (2030 and 2040 scenarios). Some of the most prominent risks within this category are the appearance of technologies aimed at a) enhancing the operational efficiency of facilities, b) producing, storing and distributing renewable energy, and c) developing new materials external to the O&G value chain. In order to mitigate these risks, Repsol is acting on three levers. First one is technology watch, i.e., track the status, evolution and potential of incumbent and emerging technologies. Second one is research, development and innovation, i.e., develop projects in selected fields driven by business needs with a clear focus on future profitability. And third one is investment, i.e., investing through capital ventures in technology start-ups, boosting their quick deployment.   |
| Legal               | Not relevant, included    | There are several ongoing proceedings whose actual outcomes are uncertain, and therefore they are risks included in the Enterprise Risk Management (ERM) process. These proceedings are closely monitored and managed by our legal department. However, none of these proceedings relate to climate, so they cannot be considered as relevant climate change risks.   |
| Market              | Relevant, always included | Market risk is one of the most outstanding risks of Repsol's risk profile. This risk typically has both a downside and an upside (risk upside is often referred to as "opportunity") Some market risks, but not all of them, are related to climate change. For instance, the development of market alternatives to traditional fuels (gasoline and diesel) for road transport, such as electricity- hydrogen-, natural gas- or LPG-powered engines poses a relevant risk to Repsol's retail business, with both downside and upside (opportunity) potential. There are ongoing initiatives aimed at minimizing the downside and maximizing the upside of this risk, consisting of the addition of new products and services to Repsol's current retail portfolio, e.g., LNG (liquefied natural gas), CNG (compressed natural gas), LPG (liquefied petroleum gases) or charge points for electric vehicles.   |
| Reputation          | Relevant, always included | The risk of stigmatization of the O&G sector is a relevant risk for Repsol in the short, medium and long term. There are several risks that relate to reputation and brand. For instance, third parties could perform communication actions, either in the media or in social networks, intended to interfere in the achievement of the company's objectives. In order to manage this risk, a dedicated communication department performs a variety of tasks, such as: real-time monitoring of media and social networks, assessing of truthfulness and impact of published news, early warning, continuous dialogue with concerned business units, awareness raising, development of countermeasures including dissemination of mitigating communications, identification of influencers and referents, and involvement in discussions. In addition, Repsol performs predictive assessments of macro-trends in order to anticipate risks and opportunities.  |
| Acute physical      | Not relevant, included    | Repsol is exposed to acute physical risks. However, these risks are considered as not relevant. Several of these risks have been identified and analyzed. For instance, Repsol premises in Houston are exposed to extreme weather events such as hurricanes, which could trigger the interruption of business activities. In order to mitigate this risk Repsol has developed and implemented a Business Continuity Plan (BCPs) where roles and responsibilities have been defined and assigned, and procedures have been defined and documented. Employees are trained in order to ensure its effective enforcement.   |
| Chronic physical    | Not relevant, included    | Even though Repsol is exposed to -properly identified- chronic physical risks such as for instance the uncertainty on future sales of gas oil for heating and agricultural applications, which are affected by temperature and rainfall patterns, they are not considered as relevant risks.  |
| Upstream            | Relevant, always included | The Upstream business units are exposed to numerous risks of different nature, either strategic, operational or financial. Part of them are related to climate change, e.g., the risk of deviation in the commodity price forecast (oil and gas). The price of commodities is basically the result of a balance between supply and demand, and the demand is influenced by the climate policy, especially in the long term. In Repsol, this risk is factored both in the short-term planning (the budget) and in the medium and long-term strategy. The commodity price risk is inherent to every oil and gas company, and all of them decide to expose themselves at some extent. In the case of Repsol this extent has been set up by the risk tolerance statement, which is part of Repsol's Risk Policy. Given the relevance of this risk (which has an upside as well), the prevailing responsibility for its management corresponds to the OpCom and the Board. The risk is continuously monitored and can be hedged at any moment if needed. The monitoring of the exposure of the business units, and the company as a whole, in terms of value-at-risk (VaR) and other supplementary metrics, relies on corporate market risk IT systems. The business units must report their positions to the market risk department and follow Repsol's price risk procedure. |
| Downstream          | Relevant, always included | The Downstream business units are exposed to a variety of strategic, operational and financial risks, as well as the Upstream ones. Part of them relate to climate change. For instance, the downstream business units run several combined heat and power (CHP) plants, which supply power to the public grid. These facilities are highly efficient if compared to other power production technologies, so they are incentivized. In a context of stricter climate policy, power market regulation could be changed and incentives for CHP plants removed to favor zero-emission technologies. In order to mitigate this risk, policy development is constantly monitored by Repsol, so that the company is enabled to participate in discussions with regulators. Repsol is member of several CHP associations, which serve the purpose of channeling proposals, comments to policy drafts, etc.   |

**C2.2d**

## (C2.2d) Describe your process(es) for managing climate-related risks and opportunities.

As has been provided in the answer to question CC2.2b, we use a bottom-up approach in order to build the Repsol Risk Map. At the beginning of this process, which by default is executed on a yearly basis (but with provision for more frequent identification & assessment whenever it's presumed that the exposure might have change since the last assessment for any reason), the business and corporate units that manage risk-exposing assets or activities examine the changes that have happened during the last year, and they assess how these changes have modified the internal and external business context. Based on the results of this context analysis, they identify and prioritize their risks (and opportunities, as many risks have both a downside and an upside). In order to guide the context analysis and the risk identification process, they use a unique corporate overarching taxonomy that prevents the units from omitting any relevant risk. This tailor-made taxonomy contains 76 risk types, which are classified as strategic (23 risk types), operational (41) or financial risks (12). In Repsol, the risk management process includes typically the stages of the ISO 31000 standard for risk management, which basically comprises the identification, the assessment and the mitigation of risks. The mitigating strategies that can possibly be adopted are: treat the risk (i.e., implement preventive or contingent controls), transfer the risk (i.e., use the financial or insurance markets to hedge the risk), terminate the risk (i.e., interrupt the activity that generates the exposure), and tolerate the risk (if the exposure is acceptable, i.e., aligned with the risk tolerance statement as expressed in the Risk Policy).

Multiple examples of climate related risks can be found throughout current individual and consolidated risk maps raised by the ERM process. Some of them have been reported in section 2.2.c). For the purpose of answering to this section of the CDP questionnaire, we can select USA Business Unit, where Repsol explores and produces crude oil and natural gas. A physical risk of this business unit that has gone through the ERM process is the risk of extreme weather events such as hurricanes, which could trigger the interruption of business activities, both those of the offshore and onshore facilities, and those of the Houston headquarters. It is well known that climate change can exacerbate the frequency and severity of these episodes in the Gulf of Mexico. Another example, in this case of a transitional risk, that is included in current USA Business Unit Risk Map, is the commodity price risk, which is considered a climate-related risk, as long-term price forecast reflects the effect of climate policies and customers behavior on the future demand of oil and gas.

These are two examples of risks that have gone through the ERM process. This means that they are identified and prioritized by the Business Unit. They are subsequently analyzed in order to ascertain their loss distribution and their severity, measured in terms of their potential effects on the company's P&L, the reputation and the people. The maturity of their mitigating controls is assessed as well. Additional controls are proposed and the improvement potential they entail is rated. The risk profile, together with the judgement on the maturity of the controls and the improvement potential is then reported to the business unit management in order to help them make better decisions, and then the BU risks go through the aggregation process so that they become part of successive consolidated reports to the Exploration & Production OpCom, the ExCom and the Board, where additional decisions are made, if needed. Moreover, supplementary specific reports on short, medium and long-term climate change risks are presented to the Board. The Board is ultimately responsible for monitoring climate change risks and ensuring their sound management.

## C2.3

### (C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes

## C2.3a

### (C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

#### Identifier

Risk 1

#### Where in the value chain does the risk driver occur?

Supply chain

#### Risk type

Transition risk

#### Primary climate-related risk driver

Market: Uncertainty in market signals

#### Type of financial impact

Change in revenue mix and sources resulting in decreased revenues

#### Company- specific description

Climate change could become a commercial risk if Repsol is not able to adapt their product portfolio and its assets to the requirements of low-emissions society. For example, an increased competition from renewable energy and from the commercialization of hybrid and fully electric vehicles could reduce demand for GHG intensive products. This could be considered a commercial risk that would erode the competitiveness of companies which are not able to adapt to this shift in consumption patterns. The company has analyzed negative impacts associated with a competitive de-positioning. It would be due to an increase of the pressure of local competitors, due to an inadequate commercial strategy or its incorrect application and/or because of the loss of clients due to the markets conditions. Below a list of different factors that has been analyzed: • Entry of new competitors or improvement of the positioning of current competitors due to an increase in installed capacity or the modification of the complexity of the conversion system. • Improvement of the positioning of competitors by increasing the percentage of utilization of its installed capacity. • Variations in oil supply or demand volumes that modify, unforeseen, the differential between heavy and light crudes. • Deterioration of competitive position in the markets where we have our operations. • Improvement of the competitive positioning of competitors for access to cheaper raw materials or lower production costs. • Potential loss of the operating license in Exploration and Production activities. • Irruption of new competitors with competitive alternative technologies. The company develops its Downstream activity mainly in Spain, Portugal and Peru, and markets its products in more than in 50 countries. Competitiveness within the downstream area is a permanent challenge that increases in an environment in which we have to adapt the Company to a low carbon economy. Being able to develop advanced biofuels in the refining area or differentiated sustainable ranges of plastic products for the Chemical division are some examples of challenges of the risk that the company must face.

#### Time horizon

Medium-term

#### Likelihood

Likely

#### Magnitude of impact

High

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

54000000

**Potential financial impact figure – minimum (currency)**

<Not Applicable>

**Potential financial impact figure – maximum (currency)**

<Not Applicable>

**Explanation of financial impact figure**

This economic impact would result in a reduced stock price and/or a diminished demand for the products we produce as automotive and industrial fuels or chemical products. Repsol can observe that a decrease of 1% in the demand of our products and services would be approximately USD 54 Million, as defined in the Strategic Plan (considering 2017 CFFO USD 5.4 Billion). Repsol as a company committed with the Task Force on Climate Financial Disclosure recommendations, is currently working on making an exhaustive and rigorous analysis on the economic impacts derived from Climate Change. The Risk Division, the Strategy Division, the Sustainability Division, the Communication Division, the Financial Division and the Downstream and upstream Divisions are implied in the analysis.

**Management method**

Repsol is developing climate scenarios tools to determine the needs of the company to face a low carbon economy future. From these scenarios, Repsol undertakes market analysis as part of the strategic planning exercises. These analyses take into account evolving demand for its products as a result of many factors including price-pressure and changing market sentiment due to climate change and environmental factors. Financial implications are then factored into the strategic planning. ACTIONS BEING IMPLEMENTED: - Our strategic plan faces this risk increasing our portfolio of lower emissions products (biofuels, chemicals, renewable energy) foreseen investments of MUSD 2950 for low emissions business in the 2018-2020 period (MUSD 1770 of which for the growth of the downstream business). This includes low emissions power generation, sustainable mobility, highlighting Repsol Electric mobility (the largest recharging network in Spain and car sharing). Example: In 2018 Repsol has acquired low emission power generation from Viesgo and Power and Gas customers portfolio with an investment of MUSD 865. - Additionally, Repsol Tech Hub works to identify improvement opportunities and specific investments with an important potential for reducing CO2 emissions, developing solutions focused on mitigating climate change (MUSD 10,2 investment). Example: hydrogen production without CO2 emissions, fuel production from waste, CCUS systems, residual heat recovery or advanced biofuels.

**Cost of management**

876000000

**Comment**

Figure provided as cost of management corresponds to 2018: The cost of development of low emissions business is USD 865 million in 2018. Additionally, Repsol's Technology Hub sets annual budgets for energy efficiency, CCUS, low carbon processes and electric mobility, investing during 2018 around USD 10,2 million in these issues

**Identifier**

Risk 2

**Where in the value chain does the risk driver occur?**

Direct operations

**Risk type**

Transition risk

**Primary climate-related risk driver**

Policy and legal: Mandates on and regulation of existing products and services

**Type of financial impact**

Increased operating costs (e.g., higher compliance costs, increased insurance premiums)

**Company- specific description**

To face Climate Change the authorities and governments are implementing legislation increasingly more restrictive. It is worth highlighting the following policies: Europe: • Structural reform of the European carbon market (Phase IV): To achieve at least 40% EU target, sectors covered by the ETS have to reduce their emissions by 43% compared to 2005. The overall number of emission allowances will decline at an annual rate of 2.2% from 2021 to 2030, compared to 1.74% currently. • Renewable Energy Directive (RED): It establishes an overall policy for the production and promotion of energy from renewable sources in the EU in 2020. RED required the EU to fulfil at least 20% of its total energy needs with renewables by 2020 and at least 32% in 2030. • Energy Efficiency Directive (EED): This Directive requires Member States imposing indicative targets for energy efficiency to achieve savings of 20% of primary energy by 2020. Energy Efficiency targets at Union level, expressed in primary and/or final energy consumption should be set out in the form of a target of at least 32.5% for 2030. • Promotion of clean and energy efficiency road transport vehicles: It sets a specific emission target for transport. More precisely light vehicles have to reduce their emissions from 130 gr CO2/km in 2015 to 95 gr CO2/km by 2020. In addition, manufacturers will have to reduce emissions further to meet the targets of 95 gr CO2/km by 2021 for cars. The European Commission is proposing more ambitious limits by 2025 and 2030. Repsol has 5 refineries in Spain and 3 chemical complexes in Europe, so these directives affect directly: ETS affects in direct emissions in our facilities, RED sets the amount of biofuels that we have to incorporate in our fuel products, according EED our facilities carry out energy efficiency systems and audits, etc. Canada: • Pan Canadian Framework on Clean Growth and Climate Change: Prime Minister of Canada announced that the Federal Government will establish a "floor price" on carbon pollution of USD 7.5 per ton in 2018, rising to USD 37.57/t by 2022. We operate our Canadian facilities mainly in Alberta Province. This province has already in force a carbon pricing scheme, so this affects to our direct emissions and we manage it through improving our cogeneration units, energy efficiency opportunities, etc.

**Time horizon**

Medium-term

**Likelihood**

Likely

**Magnitude of impact**

High

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

100000000

**Potential financial impact figure – minimum (currency)**

<Not Applicable>

**Potential financial impact figure – maximum (currency)**

<Not Applicable>

**Explanation of financial impact figure**

The financial impact includes the EU ETS, RED, FQD and Energy Efficiency Directives that has been mentioned before. Taking into account the differences between free allowances (our facilities are under carbon leakage scheme), expected emissions for the following years and CO2 prices forecast, the potential impact was estimated in an internal study. The result takes into account current legislation by 2020 (Mainly impacts are located in EU). The company is now analyzing new European legislation by 2030 (new EU ETS Directive, 32% of renewable in final energy, etc.).

**Management method**

We are implementing ambitious plans to reduce our CO2 emissions through energy efficiency. As an example, during 2018 we avoided 158.8 kt CO2 through reduction actions implemented in our EU refineries and chemical facilities. These measurements have an indefinite timeframe. ACTION BEING IMPLEMENTED: We are working on ambitious plans to reduce emissions by 2025 in our Upstream and Downstream businesses. In 2018 we have defined a new GHG emissions reduction plan for 2018-2025 with the objective of achieving an annual reduction of 3 million tons of CO2e at the end of the period compared to 2017. We have also defined a strategy to reduce methane and routine flaring emissions at our facilities based on the application of best practices in measurement and mitigation and aligned with that we have joined several international initiatives as active participants. COST OF MANAGEMENT: Repsol was the first company in the Oil & Gas sector to issue a green bond amounting to USD 590 million, to finance energy efficiency projects and low-emissions technologies according to the technical specifications. In June 2018, the first external verification was carried out, and USD 326 million were recorded in period 2014-2018.

**Cost of management**

326000000

**Comment**

The cost of management is a direct investment. It is not a mitigation cost.

**Identifier**

Risk 3

**Where in the value chain does the risk driver occur?**

Direct operations

**Risk type**

Transition risk

**Primary climate-related risk driver**

Reputation: Stigmatization of sector

**Type of financial impact**

Reduced revenue from decreased demand for goods/services

**Company- specific description**

In recent years, concern about the negative effects of climate change has become more important, and the Oil and Gas sector has been in the spotlight of many stakeholders. The company has analyzed negative impacts associated with communication actions in any media, made by thirds parties whose purpose is to interfere in the fulfillment of the objectives of the Organization, without taking into account the efforts made to adapt our activities to a low carbon economy. The company operates in sensitive areas where media pressure is a challenge that needs to be managed, to avoid any negative impact in the short, medium and long term. We can mention some EXAMPLES that materialize the company's exposure to public opinion, in Colombia there is a growing social opposition to the development of hydrocarbon projects, in Malaysia there is a need to reduce GHG emissions or in Ecuador there is an impairment of the Company's image due to accusations made by suppliers during the negotiation of contracts, acquisition of goods and / or services. Additionally, there is a tendency towards activism in countries / geographical areas that are especially sensitive to the effects of climate change (for example, islands or coastal areas).

**Time horizon**

Medium-term

**Likelihood**

Likely

**Magnitude of impact**

High

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

54000000

**Potential financial impact figure – minimum (currency)**

<Not Applicable>

**Potential financial impact figure – maximum (currency)**

<Not Applicable>

**Explanation of financial impact figure**

The financial impact due to a reputation would result in a diminished demand for the products we sold as automotive and industrial fuels or chemical products. Repsol can observe that a decrease of 1% in the demand of our products and services would be approximately USD 54 Million (considering 2017 CFFO USD 5.4 Billion). Repsol as a company committed with the Task Force on Climate Financial Disclosure recommendations, is currently working on making an exhaustive and rigorous analysis on the economic impacts derived from Climate Change. The Risk Division, the Strategy Division, the Sustainability Division, the Communication Division, the Financial Division and the Downstream and upstream Divisions are implied in the analysis.

**Management method**

The company carries out the management of these risks by increasing transparency and engagement with its stakeholders: This can be found in: • Management Report of the Company, which as of this year includes the sustainability report. • Relationship with ESG investors. • Roadshows with investors at the highest level of the company. • Sustainability Day. The permanent dialogue with the groups of interest is key to know their concerns and to make known our positioning and company strategy. In 2018 and in line with our strong commitment to transparency, Repsol is aligning its report to comply with the recommendations of the TCFD, facilitating greater transparency in relation to climate related risks. Regarding the COST OF MANAGEMENT, in 2018 we invested USD 118,000 in different actions of engagement with investors (Sustainability day, roadshows, etc.), and USD 269,000 in Low Carbon Technology studies through the Oil & Gas Climate Initiative (OGCI CI). In addition all the sustainable information of the company published is verified annually by a third party, the cost of the verification is approximately USD 118,000.

**Cost of management**

505000

**Comment**

Finally, we would like to remark that Since 2007, we have verified the GHG emissions inventory according to ISO 14064-1. This verification currently includes emissions from Refining, Chemicals and Exploration & Production operating assets, accounting for more than 99% of the company's emissions. We have made the reports derived from these verifications available to stakeholders as further evidence of Repsol's commitment to transparency. This figure has not been considered when calculating the cost of management.

**C2.4****(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?**

Yes

**C2.4a****(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.****Identifier**

Opp1

**Where in the value chain does the opportunity occur?**

Direct operations

**Opportunity type**

Energy source

**Primary climate-related opportunity driver**

Use of lower-emission sources of energy

**Type of financial impact**

Reduced operational costs (e.g., through use of lowest cost abatement)

**Company-specific description**

Energy transition can be an opportunity because we are developing a lot of programs to improve Energy Efficiency and reduce GHG emissions in our processes. Specifically Repsol conducts energy audits and keeps training their staff in the different Business Units to find savings and possibilities for reducing their energy consumption. Related to that, Repsol is setting Energy Management System (EnMS) in their facilities under the international standard ISO 50001. Flaring contributes to climate change and impacts the environment. Flaring is a safety measure of the O&G processes; so all of the initiatives towards flare gas reduction are focused on reducing routine flaring. E&P is our main contributor business, so it's the one that is affected by this commitment (assets that are located in places without the necessary infrastructure to take advantage of gas recuperation). In this sense, in 2018 Repsol has worked on segregating routine/non-routine gas flaring data, and this has enabled the company to establish a routine flaring reduction target of 50% by 2025 in terms of our operated E&P assets. MAIN LINES OF ACTION are: (1) improvement of the design and operational procedures of the facilities; (2) Reutilisation of gas as a fuel, to generate electricity or for reinjection; (3) Commercial solutions to make use of the gas once it has been treated. This can be an opportunity because it's a valuable energy resource that could be used to advance the sustainable development of producing countries. In addition, several initiatives have been established to regulate methane emissions, such as the implementation of more precise emission detection and quantification technologies. Methane is 25 times more potent than CO2 and many consider the gas industry to be one of the largest man-made emitters of methane after agriculture. The IEA identified minimizing methane emissions from upstream O&G production as one of five key global GHG mitigation opportunities, noting that low-cost reductions in this area could account for nearly 15% (over 0.5 Gt CO2eq) of the total GHG reductions needed by 2020 to keep the world on a 2-degree path. In this sense, Repsol has undertaken the objective of reducing methane intensity in its operated assets by 25% by 2025, being an opportunity for Repsol to increase gas production capacity avoiding emissions.

**Time horizon**

Short-term

**Likelihood**

Virtually certain

**Magnitude of impact**

Medium-high

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

940000000

**Potential financial impact figure – minimum (currency)**

&lt;Not Applicable&gt;

**Potential financial impact figure – maximum (currency)**

&lt;Not Applicable&gt;

**Explanation of financial impact figure**

In Repsol's strategic plan Repsol's foresees to increase their CFFO (50 \$/bbl) taking advantage of the previous opportunities. To be precise: • Efficiency and digitalization program in upstream units: USD 0.71 billion . • Profitability increase in Downstream units: USD 0.24 billion.

**Strategy to realize opportunity**

Our catalogue of GHG emission reduction opportunities is continuously updated and nearly 1,500 actions have already been identified in our facilities worldwide so far. All our Business Units carry out energy efficiency programs that develop specific activities to improve its energy performance. EXAMPLE: in 2018, 310 kt CO2 savings were carried out in our facilities. Moreover, 8 facilities and 1 multisite business are currently certified under ISO 50001. ACTION BEING IMPLEMENTED: - To reduce methane emissions we are implementing best practices in measurement and mitigation, aligned with our active participation in several international initiatives. In 2018, 3180 tCH4 were avoided in our facilities - Our endorsement to Zero Routine Flaring by 2030 World Bank Initiative allows us to collaborate with other companies and institutions to look

for the most advanced technologies that minimize the routine gas flaring. COST TO REALIZE OPPORTUNITY: Repsol was the first company in the O&G sector to issue a green bond amounting to MUSD 590, to finance energy efficiency projects and low-emissions technologies, in period 2014-2018 MUSD 326 were recorded. For the implementation of EnMS we dedicate one full-time worker (estimated in USD 150k, considering 100 USD/h) and an annual certification cost about USD 90k to cover all of our certificated facilities). In order to boost the struggle against climate change, in 2018 we invested USD 269k in Low Carbon Technology studies through OGCI

#### Cost to realize opportunity

326500000

#### Comment

In addition, in 2016 a fund was created by OGCI (OGCI Climate Investment) to invest US\$1 billion over 10 years to develop and accelerate the commercial deployment of low-emission technologies. This cost has not been considered in the cost to realize opportunity.

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#### Identifier

Opp2

#### Where in the value chain does the opportunity occur?

Direct operations

#### Opportunity type

Products and services

#### Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

#### Type of financial impact

Increased revenue through demand for lower emissions products and services

#### Company-specific description

Current and future regulatory and social requirements related to climate change generate business opportunities for Repsol. These new requirements increase the demand of low-emission products and services, open up new markets and boost access to market shares. Natural gas is the lowest carbon-intensive fossil fuel is the best alternative to reduce emissions in the power sector link to the CCS technology. It represents nowadays a great portion of our main reserves (more than 60% of our production and more than 70% of our reserves are gas). Being Natural Gas the fossil fuel with less CO2 emissions, Repsol would be able to provide more energy with less CO2 emissions than its competitors, increasing its revenues. This is an opportunity for Repsol since it is possible to create in the long term new business lines associated to low emission products and services. We endeavor to promote, boost and provide business grounding to new initiatives that contribute to a more diversified future energy mix with lower CO2 emissions. EXAMPLE: In 2018 Repsol acquire low emission power generation from Viesgo and Power and Gas customers portfolio. Repsol is WORKING IN THE DESIGN OF PRODUCTS THAT REDUCE GHG EMISSIONS WHEN USED. Our Technology Center uses R+D+i to improve and continually reduce emission intensity throughout the value chain. This enables a reduction in our customers' carbon footprint during the transformation or use of the products we market. We are working in different fields related with green asphalts, fuels and lubricants. The production of biofuel from waste is a very effective way to reduce emissions of CO2 and at the same time generate value with the recycling of urban, agricultural and industrial waste, without affecting the use of natural resources. In Repsol Technology Lab we study different industrial processes (hydrogenation, fermentation, pyrolysis) to transform waste such as used frying oils, fats, solid urban waste and used plastics or tires into clean fuels. Repsol is WORKING ON ALTERNATIVE ELECTRICITY GENERATION AND NEW MOBILITY SCHEMES. Through Repsol Electric Mobility, we invest in electric mobility, providing a comprehensive recharging service using 100% renewable energy, smart facilities and terminals, and a control center for the infrastructure. We had also invested in technology-based start-up that boosts our activities.

#### Time horizon

Medium-term

#### Likelihood

Very likely

#### Magnitude of impact

Medium

#### Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

#### Potential financial impact figure (currency)

354000000

#### Potential financial impact figure – minimum (currency)

<Not Applicable>

#### Potential financial impact figure – maximum (currency)

<Not Applicable>

#### Explanation of financial impact figure

In Repsol's strategic plan Repsol's foresees to increase their CFFO (50\$/bbl) taking advantage of the previous opportunities. To be precise: • Low emissions businesses: USD 354 Million

#### Strategy to realize opportunity

EXAMPLES (in addition to Viesgo acquisition): - Sustainable mobility: 1) Production and research on biofuels by promoting advanced biofuel projects and producing HVO or hydro biodiesel in our refineries. 2) We have positioned ourselves as a leading company in electric mobility participating in the largest recharging network in Spain, with more than 1,700 points 3) Repsol and Kia created WIBLE, a new carsharing operator that offers its services in the city of Madrid, with a fleet of 500 plug-in hybrid vehicles with 600 kilometers of range labeled "Zero Emissions". 4) Promoting the use of Autogas in direct injection liquid phase engines (712 supply points, and gradually extending our network). Through our Repsol Tech Lab, we have invested in the company BEGAS for the commercialization of an engine for heavy vehicles powered 100% by LPG. - Innovation, development and research: (a) Catalysts and processes for the use of CO2 as a raw material for polymers (new applications were developed in our Tech Hub, as fireproof polyols, marketing of polypropylene for a 3D powder-printing system), (b) research of new technologies to help electric car batteries charge more rapidly and last longer, (3) Development of micro-organisms based on a new synthetic metabolic route, for the generation of new advanced biofuels. COST: Repsol invested MUSD 865 in 2018 in low emissions business. Repsol's Tech Hub invested MUSD 10,2 in energy efficiency, CCUS, low carbon processes and electric mobility

#### Cost to realize opportunity

876000000

#### Comment

The cost to realize opportunity corresponds to 2018. Additionally, in 2016 a fund was created by OGCI (OGCI Climate Investment) to invest US\$1 billion over 10 years to develop and accelerate the commercial deployment of low-emission technologies (not included in cost of management).

**Identifier**

Opp3

**Where in the value chain does the opportunity occur?**

Direct operations

**Opportunity type**

Products and services

**Primary climate-related opportunity driver**

Ability to diversify business activities

**Type of financial impact**

Increased revenue through demand for lower emissions products and services

**Company-specific description**

Searching other financing sources for low emissions projects. Green Bond market aims to enable and develop the key role debt markets can play in funding projects that contribute to environmental benefits. Green Bonds are any type of bond instrument where the proceeds will be exclusively applied to finance or re-finance new and/ or existing eligible Green Bond Projects such as renewable energy, energy efficiency; pollution prevention and control; terrestrial and aquatic biodiversity conservation or climate change adaptation among others. They are intended for use by market participants and are designed to drive the provision of information needed to increase capital allocation to such projects. With a focus on the use of proceeds, the Green Bonds Principles aim to support issuers in transitioning their business model towards greater environmental sustainability through specific projects. Source: The Green Bond Principles 2017 (ICMA) CASE STUDY: In May 2017, Repsol has issued a Green Bond. With this issuance, the Company reinforces its commitment with Corporate and Social Responsibility demonstrating its investment in sustainable purposes. Repsol is convinced that innovation and technological development are essential for ensuring reliable and sustainable supply in the long term. That is why; financing our projects with a green bond we are contributing to a low emissions future.

**Time horizon**

Medium-term

**Likelihood**

Likely

**Magnitude of impact**

High

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

5000000

**Potential financial impact figure – minimum (currency)**

&lt;Not Applicable&gt;

**Potential financial impact figure – maximum (currency)**

&lt;Not Applicable&gt;

**Explanation of financial impact figure**

OECD estimated that the green bond market could increase to USD 4.7 trillion to USD 5.6 trillion in outstanding bonds by 2035, with annual issuances of USD 620 billion to USD 720 billion. Green Bonds can advance adoption of innovative new technologies, finance projects that provide green jobs, and promote economic and climate resiliency across regions. Green bonds are an excellent way to secure large amounts of capital to support environmental investments that may not otherwise be available, or that may be uneconomic using more expensive capital. Green bonds are well suited for large-scale sustainability projects such as wind and solar development, which often require capital investment ahead of revenues, and which generate modest revenue over a longer investment horizon. More precisely, for Repsol this Green Bond is an opportunity to improve its financing costs. An improvement in the interest rate by a total of 100 basis points could imply savings of USD 5 Millions.

**Strategy to realize opportunity**

For the issuance of Repsol Green Bond, we have established a framework of eligible projects to avoid GHG emissions through the implementation of energy efficiency and low emissions technology investments that contribute to climate change mitigation. The projects must have a positive environmental impact (avoidance of GHG emissions) and shall be aligned with Repsol sustainability policies to be selected as eligible. The projects are part of an active plan to avoid 1.9 million of tons of GHG emissions annual run rate by 2020. This bond complies with the Green Bond Principles in its four core components: (1) Use of Proceeds; (2) Project Evaluation and Selection; (3) Management of Proceeds; (4) Reporting An ESG agency has certificated the integrity of the requirements and evaluation of the selected projects issuing an external opinion. EXAMPLES: Energy efficiency Bilbao Refinery: Substitution of two compressors for more efficient ones, with variable speed motor that optimizes the power consumed by adapting to the demand of the process (reduction of 77,000 tons of CO2/y). Modifications in reformer furnace Hydrogen 2 Unit Cartagena Refinery: The objective of this project is to carry out modifications in the Hydrogen plant aimed at reducing the specific consumption of natural gas and fuel gas, reducing steam production and improving performance (reduction of 25,400 tCO2/y) Cost to realize the opportunity: MUSD 590 of investment to cut emissions by improving efficiency (Green Bond)

**Cost to realize opportunity**

590000000

**Comment**

Repsol's commitment is to invest USD 590 million in selected projects and avoid 1.2 millions of tons of CO2eq. By the year 2018, 55% of the funds were allocated and 63% of the GHG emissions were avoided. The share of refinancing does not exceed a 55% of the proceeds.

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**C2.5**

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**(C2.5) Describe where and how the identified risks and opportunities have impacted your business.**

|                                      | Impact  | Description   |
|--------------------------------------|---|---|
| Products and services                | Impacted  | In renewable energy, the incorporation of assets acquired from Viesgo included three hydroelectric plants in the north of Spain with an installed capacity of 700 MW to Repsol's asset portfolio. Our company, through its new subsidiary Repsol Electricity and Gas, has become a significant player in the Spanish electricity market, with a total installed capacity of 2,952 MW (2,352 MW from the Viesgo hydroelectric and gas combined cycle acquired facilities, plus 600 MW from our cogeneration plants), a market share of over 2% in the electricity and gas retail sector in Spain and a portfolio of 830,000 customers. In addition, we have expanded our presence in the renewable sector with the entrance into the Valdesolar Hive project, which is being developed in Valdecaballeros (Badajoz) one of the largest solar photovoltaic farms in Spain, with a capacity of 264 MW. These actions will contribute to the reduction of our carbon intensity and to the objectives set for 2025 in our Strategic Plan, thus combining the management of climate change 2025 target objectives risks with taking advantage of opportunities. In the update of our strategic plan we have foreseen investments of USD 2,950 million in the 2018-2020 period for the growth of the low emissions businesses  |
| Supply chain and/or value chain      | Impacted for some suppliers, facilities, or product lines | Repsol is changing primary energy sources toward alternatives that are less carbon intensive. The company is committed to natural gas, biofuels and new low-emissions businesses. The use of biofuels in transport provides an immediate opportunity to reduce emissions, which can be extended in the longer-term with the development of the next generations of biofuels. Repsol has been adding biofuels to its automotive fuels for more than 20 years, including Bio-ETBE in its gasoline from bio-ethanol and producing HVO in its refineries from vegetable biomass, with a production of 380,000 tons per year, which amounted a cost of MUSD 1300 in the period 2015-2020   |
| Adaptation and mitigation activities | Impacted for some suppliers, facilities, or product lines | Repsol is taking measures to reduce the risks, as well as the magnitude of the impacts that climate change may have on natural resources, the weather phenomena to which we and our facilities are exposed to. To cite an example, Repsol operates in areas that may be affected by the water stress, which would affect the correct operation of its facilities. In these areas, the company develops plans to reduce water consumption and increase reuse. More precisely, Repsol's refinery in Puertollano has developed some modifications in order to reuse the water after treatment, with an investment of USD 3.2 million   |
| Investment in R&D                    | Impacted  | We believe in technology and innovation as drivers of growth and sustainability. With more than 200 researchers, our Repsol Technology Lab is the largest private R&D center in Spain and bases its operating model on open innovation and networking, in alliance with other business centers and universities around the world. In this way, it contributes to our company's ability to anticipate the development of technologies related to energy transition and find solutions throughout our entire value chain to achieve a business with fewer emissions, which is more efficient and competitive. Some of the projects we develop several are focused on solutions that contribute to mitigate climate change: • Hydrogen production without CO2 emissions • Fuel production from waste • CO2 capture and use systems • Residual heat in industrial processes recovery • Advanced biofuels All these researches are estimated in USD 3 million in 2018.   |
| Operations                           | Impacted  | We are committed to reducing energy use and GHG emissions in all our operations. We established a 2014-2020 plan with an emissions reduction target of 1.9 million tons of additional annual CO2 at the end of the period, which we extended to 2.1 million after the acquisition of Talisman Energy in 2015. In 2018 we have defined a new GHG emissions reduction plan for 2018-2025 with the objective of achieving an annual reduction of 3 million tons of CO2eq at the end of the period compared to 2017. The ambition of the new objective requires us to widen the field of action, which was until now focused on energy efficiency measures, also covering: • Reduction of methane emissions • Reduction of routine flaring • Additional improvement of energy efficiency • Use of low-emission technologies and renewable energies in our operations Repsol was the first company in the Oil & Gas sector to issue a green bond amounting to USD 590 million, to finance those activities according to the following technical specifications: Energy efficiency: Upgrade of equipment: Heat Upgrade of equipment: Dynamic equipment Improvements of operating criteria Energy integration New units / Process scheme modification Network optimization Low-emissions technologies: Methane emissions mitigation Reduction of flaring and venting Alternative power generation Our commitment is to report and annually verify the projects associated with the green bond in financial terms and those of avoided emissions. In June 2019, the second external verification was carried out, in which USD 326 million available and 750 kt CO2 avoided were recorded (55% and 63% of the total bonus targets, respectively). |
| Other, please specify                | Please select   |   |

**C2.6**

**(C2.6) Describe where and how the identified risks and opportunities have been factored into your financial planning process.**

|   | Relevance     | Description  |
|---|---------------|--|
| Revenues                                  | Impacted      | As a result of the RED (Renewable Energy Directive) and FQD (Fuel Quality Directive) directives, it will be necessary to incorporate biofuels into gasoline (GNA) and diesel (GO) supplied in 2020. The RED Directive requires reaching a 8.5% of biofuels while the FQD requires reducing the carbon footprint of fuels sold (6% in 2020 compared to 2010), which in practice implies increasing this amount. The impacts estimated by these directives are the following: - The incorporation of 8.5% of biofuels has an impact as a difference between the cost of biofuels and the fossil fuel equivalent., that would increase until compliance with the FQD directive (around 13% biofuels) - The cost of certification of biofuels. The impact is MUSD 1.300 in the 2015-2020 period.   |
| Operating costs                           | Impacted      | In Europe, the 2020 and 2030 Energy and Climate packages, include key directives such as the Directive that regulates the Emissions Trading System. Allowances shortfall of 20.3 MtCO2 is estimated from 2015 to 2020. The gross impact is MUSD 367.5  |
| Capital expenditures / capital allocation | Impacted      | In May 2017, Repsol has issued a USD 590 million Green Bond to invest in projects aimed to avoid GHG emissions by around 1.2 millions of tons of CO2eq. This includes the refinancing of implemented projects since 2014, and financing of two Eligible Projects categories solely in our production facilities: (i) energy efficiency projects and (ii) low emissions technologies. By the year 2018, 55% of the funds have been allocated and 62% of the GHG emissions have been avoided.  |
| Acquisitions and divestments              | Impacted      | During 2018 Repsol has sold their participation in Naturgy obtaining USD 4,484 million. This participation didn't fit the current strategy of the company due to the fact that it was a non operated asset focused on the regulated business of gas and electricity. New assets from Viesgo are operated and focused on commercial unregulated businesses. The total amount invested was USD 865 million and this acquisition fully fit with Repsol's strategy growth, allowing us to take advantage of the synergies with other business of the Company.  |
| Access to capital                         | Impacted      | Green Bond market aims to enable and develop the key role debt markets can play in funding projects that contribute to environmental benefits. With the issuance of this Green Bond in May 2017, Repsol reinforces its commitment with Sustainability demonstrating its investment in sustainable purposes. On May 9th, Repsol announced its inaugural Green Bond offering having previously made available to the investors a NetRoadshow presentation and links to the Company's Green Bond Framework and Second Party Opinion, provided by Vigeo. In addition, during the day one-on-ones and group calls were held with investors. The deal was announced to the market with Initial Price Talks of MS+55bp area. At the time of Guidance announcement, the spread was revised to MS+40bp as the orderbook reached USD 3.2 billion, which represents an oversubscription of five times the amount offered. Given the strong demand and continued growth of the orderbook, the deal was revised further to MS+35bp. Repsol finally issued USD 590 million in a 5-year deal and the coupon was set at 0.500%, which represents the lowest coupon ever achieved by Repsol in a public benchmark. Circa 45% of the bonds were allocated to investors with Environmental, Social and Governance (ESG) mandates. |
| Assets                                    | Impacted      | As an energy company we are convinced that setting a global carbon price and applying it homogeneously to all sectors is the best tool to move toward a low emissions future. In this way, each ton of CO2 would have an associated price that everyone, from the industry to the final consumer, would see reflected in their activity and that would allow them to become aware and modify their habits toward a production and consumption of energy that is efficient as possible. This would also be reinforced by clear and transparent information on costs and their impact on each party involved. In accordance with this position, and in the absence of global measures, Repsol has established an internal carbon price that we apply to every new investment we make. The values we have set are US\$25 per t in 2018, reaching US\$40 per t from 2025   |
| Liabilities                               | Impacted      | We are committed to reducing energy use and GHG emissions in all our operations. Our energy management systems enable us to establish energy efficiency plans and emissions reduction targets, both annually and in the long-term. Therefore, we have developed emissions reduction plans since 2006, reaching with our first plan 2006-2013 a reduction of more than 3 million tons of CO2 per year at the end of this period. We then established a second 2014-2020 plan with an emissions reduction target of 1.9 million tons of additional annual CO2 at the end of the period, which we extended to 2.1 million after the acquisition of Talisman Energy in 2015. In 2018 we have defined a new GHG Emissions Reduction Plan for 2018-2025 with the objective of achieving an annual reduction of 3 million tons of CO2e at the end of the period compared to 2017. As an example, in 2018 Repsol invested USD 47 million in reduction actions included in this plan.   |
| Other                                     | Please select |  |

## C3. Business Strategy

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### C3.1

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#### (C3.1) Are climate-related issues integrated into your business strategy?

Yes

### C3.1a

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#### (C3.1a) Does your organization use climate-related scenario analysis to inform your business strategy?

Yes, quantitative

### C-AC3.1b/C-CE3.1b/C-CH3.1b/C-CO3.1b/C-EU3.1b/C-FB3.1b/C-MM3.1b/C-OG3.1b/C-PF3.1b/C-ST3.1b/C-TO3.1b/C-TS3.1b

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#### (C-AC3.1b/C-CE3.1b/C-CH3.1b/C-CO3.1b/C-EU3.1b/C-FB3.1b/C-MM3.1b/C-OG3.1b/C-PF3.1b/C-ST3.1b/C-TO3.1b/C-TS3.1b) Indicate whether your organization has developed a low-carbon transition plan to support the long-term business strategy.

Yes

### C3.1c

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#### (C3.1c) Explain how climate-related issues are integrated into your business objectives and strategy.

Repsol carries out and has a carbon strategy, which is based on scenario analysis that shows how the company can adapt its activity to a low emissions future. The way in which the company evolves and adapts to that future is determined by the "levers" employed and how they impact individually in the achievement of the target set.

*i. A company-specific explanation of how business objectives and strategy have been influenced by climate-related issues;*

In Repsol two different time horizons have taken into account when defining our business strategy:

- In the short-medium-term we take into consideration aspects that are more closely related to competitiveness, such as the costs of energy and CO<sub>2</sub>, as well as the regulatory framework of our activities. Examples of this regulatory is the EU – ETS, Renewables Directive (RED)

and Energy Efficiency Directive (EED) in Europe or the Canadian Framework. Those legislations are increasing the costs of operational cost and the company is developing ambitious plans to answer these challenges:

o In the short term (2020-2025) operational efficiency (energy efficiency, methane management, routine flaring reduction, etc.) to reduce our Scope 1 and 2 emissions are the corner stone of our strategy. Regarding our Scope 3 emissions biofuels, chemicals, natural gas production are the most important levers. In addition, those legislations are changing the energy use and consumption, so new opportunities arise from our sector. Those challenges are analysed through our Risk Management System and our strategy shaped this future with new business lines and products.

o In the medium term (2025-2030) renewables, retail and wholesale gas natural, sustainable fuels, sustainable mobility, are being the main levers.

- In the longer-term (2040 - 2050), there are legislative developments at the international level, such as the energy and climate roadmap from the EU to 2050, sustainable finance at the EU level or national contributions from other countries to the Paris Agreement, which will be transposed into future regulations over the years. In the long term new technology solutions will have to be developed to reach a low emissions future according Paris Agreement. Those technologies will be CCS, CCUs, Natural Based Solutions, Hydrogen, etc.

*ii. Explanation of whether your business strategy is linked to an emissions reductions target or energy reduction target;*

To make progress in this area Repsol has developed a carbon intensity indicator with which the company measures CO<sub>2</sub> emissions for every unit of energy that we put at society's disposal (t CO<sub>2</sub>/GJ), which allows us to set reduction targets, support strategic and investment decision making and monitor their progress. We have the ambition to reduce our carbon intensity in line with climate change mitigation needs, which we represent today through the IEA's SDS scenario, without forgetting that at the same time we must provide the energy society needs for its development and well-being.

Our commitment to reduce the carbon intensity indicator takes the form of a short-term target and a long-term ambition, which take 2016 as the baseline:

- Target to reduce the carbon intensity indicator by 3% by 2020.
- Ambition to reach a 40% reduction by 2040, in line with the Paris Agreement, making our company evolve at the pace of the energy transition that the world needs.

In order to support this effort the company has precise objective and targets for every lever:

- In 2018 we have defined a new GHG emissions reduction plan for 2018-2025 with the objective of achieving an annual reduction of 3 million tons of CO<sub>2</sub>e at the end of the period compared to 2017.
- We have a commitment to reduce our methane emissions intensity by 25% in our operating exploration & production assets by 2025 compared to 2017.
- In 2018 Repsol set a target of 50% reduction in routine flaring by 2025 compared to 2018, aligned with the ambition of minimizing it by 2030.
- Repsol has been adding biofuels to its automotive fuels for more than 20 years. Therefore, in Spain our gasoline and diesel contain on average 6% in energy content of biofuels and in 2020 this figure will increase to 8.5% in line with EU regulatory requirements and 14% in 2030.
- 4.500 MW low-emissions electricity generation capacity and 5% gas and electricity retail market share (Spain) by 2025.
- 15% gas wholesale market share in Spain by 2025.
- In the update of our strategic plan we have foreseen investments of €1,500 million in the 2018-2020 period for the growth of the Downstream businesses, part of which will be dedicated to boosting the Chemicals business.

Therefore, our business strategy is strongly linked to climate targets and objectives.

iii. *What have been the most substantial business decisions made during the reporting year that have been influenced by the climate change driven aspects of the strategy (e.g. investment, location, procurement, mergers and acquisitions (M&A), research and development (R&D). Both the business decision and the aspect of climate change that has influenced the business decision must be made clear in the answer. If there are none to report, this should be stated;*

In renewable energy, the incorporation of assets acquired from Viesgo included three hydroelectric plants in the north of Spain with an installed capacity of 700 MW to Repsol's asset portfolio. Our company, through its new subsidiary Repsol Electricity and Gas, has become a significant player in the Spanish electricity market, with a total installed capacity of 2,952 MW (2,352 MW from the Viesgo hydroelectric and gas combined cycle acquired facilities, plus 600 MW from our cogeneration plants), a market share of over 2% in the electricity and gas retail sector in Spain and a portfolio of 830,000 customers.

In addition, we have expanded our presence in the renewable sector with the entrance into the Valdesolar Hive project, which is being developed in Valdecaballeros (Badajoz) one of the largest solar photovoltaic farms in Spain, with a capacity of 264 MW. These actions will contribute to the reduction of our carbon intensity and to the objectives set for 2025 targets in our Strategic Plan, thus combining the management of climate change risks with taking advantage of opportunities.

The use of biofuels in transport provides an immediate opportunity to reduce emissions, which can be extended in the longer-term with the development of the next generations of biofuels. Repsol has been adding biofuels to its automotive fuels for more than 20 years

### C3.1d

#### (C3.1d) Provide details of your organization's use of climate-related scenario analysis.

| Climate-related scenarios            | Details  |
|--------------------------------------|--|
| IEA Sustainable development scenario | <p>The TIME HORIZON to reduce the carbon intensity indicator takes the form of a short-term target and a long-term ambition, which take 2016 as a baseline: • Target to reduce the carbon intensity indicator by 3% by 2020. • Ambition to reach a 40% reduction by 2040, in line with the Paris Agreement, making our company evolve at the pace of the energy transition that the world needs. - METHODOLOGY: To define the tons of CO<sub>2</sub> in the numerator it is included: • The direct and indirect emissions of the E&amp;P, Refining and Chemical businesses of our industrial complexes in Spain, Portugal and Peru and of the low-emission electricity generation of the Repsol Electricidad &amp; Gas subsidiary. • The emissions associated with the use of our products corresponding to our production of oil and gas from the E&amp;P business. Oil production includes the emissions associated with the biofuels used. To define the energy in the denominator it is included: • Energy corresponding to our oil and gas production from E&amp;P. Oil production includes the energy associated with the biofuels used. • Chemical products are considered carbon sinks and, though they are not strictly energy products, the oil energy needed for their production is accounted for. • Energy from renewable and non-renewable electricity generation sources (through natural gas). -RESULTS AND OUTCOMES FROM SCENARIO ANALYSIS: It is a top-down assessment and it is reported to de Board at least twice a year. These results are aligned with the establishment of the SDS. The conclusions of this analysis are: oAll levers are needed: In the short-term, energy efficiency, methane emissions management and routine flaring reduction. In the medium-term, renewables are getting more important, though limiting for its intermittence. Biofuels have an important role in the short and medium term (in Europe the target is 14%) because electrification has a limited impact and is restricted to light transport. Chemical products are getting important in oil use. MACC curves (marginal abatement costs curves) are being performed in order to assess how these different scenarios are admissible based on its costs. In the long-term, CCUS, e-fuels, green and blue hydrogen, natural sinks, etc. oAll these levers include scope 1,2 and 3 oAll these results are shared with the areas involved in strategy and decision making (risks assessment area, strategy area, etc) -CHANGES TO THE ORGANIZATION'S STRATEGY resulting from the climate change scenario analysis: To lower our carbon intensity indicator, in addition to continuing to implement energy efficiency measures, we increased holdings in our portfolio of lower-emission products and incorporated renewable electricity generation. CASE STUDY: In renewable energy, the incorporation of assets acquired from Viesgo included three hydroelectric plants in the north of Spain with an installed capacity of 700 MW to Repsol's asset portfolio. Our company has become a significant player in the Spanish electricity market, with a total installed capacity of 2,952 MW, a market share of over 2% in the electricity and gas retail sector in Spain and a portfolio of 830,000 customers. In addition, we have expanded our presence in the renewable sector with the entrance into the Valdesolar Hive project, which is being developed in Valdecaballeros (Badajoz) one of the largest solar photovoltaic farms in Spain, with a capacity of 264 MW. Regarding the boosting of the Chemical business, in the update of our strategic plan we have foreseen investments of €1,500 million in the 2018-2020 period for the growth of the Downstream businesses, part of which will be dedicated to Chemicals business. -Carbon intensity indicator and the FOLLOW UP of the strategic plan will be revised twice a year. -Results are REPORTED internally (board of directors) and externally to all of our stakeholders. Repsol reported an external document, "Toward a low-emissions future" making special focus on Repsol climate roadmap.</p> |

C-AC3.1e/C-CE3.1e/C-CH3.1e/C-CO3.1e/C-EU3.1e/C-FB3.1e/C-MM3.1e/C-OG3.1e/C-PF3.1e/C-ST3.1e/C-TO3.1e/C-TS3.1e

Repsol has a clear strategy to lower our carbon intensity indicator. In the medium term horizon, we will increase holdings in our portfolio of lower-emission products and incorporated renewable electricity generation.

#### **Biofuels:**

The use of biofuels in transport provides an immediate opportunity to reduce emissions, which can be extended in the longer-term with the development of the next generations of biofuels. Repsol has been adding biofuels to its automotive fuels for more than 20 years. Therefore, in Spain our gasoline and diesel contain on average 6% in energy content of biofuels and in 2020 this figure will increase to 8.5% in line with EU regulatory requirements. Since 1998, we have invested in the transformation of MTBE plants, a component of mineral origin used in the preparation of gasoline, into Bio-ETBE plants using bio-ethanol as the component, with a renewable origin content of 37% in energy. Since then, we have incorporated more than 4.5 million tons of Bio-ETBE into our gasolines. In addition, in 2006 we started a line of technological development that has allowed us to produce HVO in our refineries from vegetable biomass, with a production of 380,000 tons per year, an amount which we expect to increase.

#### **Chemicals:**

Our production in Europe is centralized in three large petrochemical complexes: two in Spain, in Puertollano and Tarragona and a third in Sines, Portugal. Furthermore, through the Dynasol Group, a company in which Repsol and the KUO Group have a stake, we are present in Santander (Spain), Altamira (Mexico) and Liaoning (China). The chemicals business develops high value-added products aimed at improving people's quality of life, well-being and safety. These materials are used in non-energy applications and therefore their use is decoupled from the emissions of CO2 into the atmosphere.

In the update of our strategic plan we have foreseen investments of €1,500 million in the 2018-2020 period for the growth of the Downstream businesses, part of which will be dedicated to boosting the Chemicals business.

#### **Renewable energy:**

In renewable energy, the incorporation of assets acquired from Viesgo included three hydroelectric plants in the north of Spain with an installed capacity of 700 MW to Repsol's asset portfolio. Our company, through its new subsidiary Repsol Electricity and Gas, has become a significant player in the Spanish electricity market, with a total installed capacity of 2,952 MW (2,352 MW from the Viesgo hydroelectric and gas combined cycle acquired facilities, plus 600 MW from our cogeneration plants), a market share of over 2% in the electricity and gas retail sector in Spain and a portfolio of 830,000 customers. In addition, we have expanded our presence in the renewable sector with the entrance into the Valdesolar Hive project, which is being developed in Valdecaballeros (Badajoz) one of the largest solar photovoltaic farms in Spain, with a capacity of 264 MW. These actions will contribute to the reduction of our carbon intensity and to the objectives set for 2025 targets in our Strategic Plan, thus combining the management of climate change risks with taking advantage of opportunities. We also have a stake in Principle Power Inc. (PPI), provider of technology and services for the offshore wind energy market in deep water. One of its floating prototypes, located offshore Portugal, generated 17,000 MWh between December 2011 and July 2016. This technology is already being developed on a commercial scale with the Windfloat Atlantic project (with three 8 MW turbines) that we are carrying out in partnership with EDP Renovables and Engie. It is scheduled to start up in December 2019.

## C4. Targets and performance

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### C4.1

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#### **(C4.1) Did you have an emissions target that was active in the reporting year?**

Both absolute and intensity targets

#### C4.1a

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**(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.**

**Target reference number**

Abs 1

**Scope**

Scope 1+2 (location-based)

**% emissions in Scope**

100

**Targeted % reduction from base year**

15.4

**Base year**

2010

**Start year**

2014

**Base year emissions covered by target (metric tons CO2e)**

13662231

**Target year**

2020

**Is this a science-based target?**

No, but we are reporting another target that is science-based

**% of target achieved**

85

**Target status**

Revised

**Please explain**

Our decision taking and lines of action on climate change is performed at the highest hierarchical level within the company. The Executive Committee and the Sustainability Committee have the task of proposing the approval of the strategy and guiding and monitoring the objectives, action plans and practices of the company on sustainability, including the climate change issues. In 2013 our 2006-2013 reduction target of 2.5 million tons of CO2e was achieved. We far exceeded the goal set, reaching a reduction of 3.1 million tons at the end of the period. The company has set a new target for the 2020 horizon: the reduction of 2.1 million ton of CO2e in the period 2014–2020, using 2010 base line activity as a reference. Since 2014 we have driven actions which reduced CO2e by 1.8 millions of tons. Annually, and linked to our strategic long term objective, Repsol sets energy efficiency and CO2 reduction plans in all assets. The annual reduction in 2018 was almost 310,000 tons of CO2e. The accumulated emission reduction considering 2014-2020 plan has been 1.8 MtCO2e. In 2018 we have defined a new GHG emissions reduction plan for 2018-2025 with the objective of achieving an annual reduction of 3 million tons of CO 2e at the end of the period compared to 2017. When finishing the current plan, we will start reporting the new one.

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**C4.1b**

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**(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).**

**Target reference number**

Int 1

**Scope**

Scope 1+2 (location-based) +3 (upstream)

**% emissions in Scope**

100

**Targeted % reduction from base year**

40

**Metric**

Metric tons CO2e per barrel of oil equivalent (BOE)

**Base year**

2016

**Start year**

2017

**Normalized base year emissions covered by target (metric tons CO2e)**

**Target year**

2040

**Is this a science-based target?**

Yes, we consider this a science-based target, but this target has not been approved as science-based by the Science Based Targets initiative

**% of target achieved**

**Target status**

Underway

**Please explain**

Repsol has developed a carbon intensity indicator with which the company measures CO2 emissions for every unit of energy that we put at society's disposal (t CO2/GJ), which allows us to set reduction targets, support strategic and investment decision making and monitor their progress. We have the ambition to reduce our carbon intensity in line with climate change mitigation needs, which we represent today through the IEA's SDS scenario, without forgetting that at the same time we must provide the energy society needs for its development and well-being. To define the tons of CO2 in the numerator it is included: • The direct and indirect emissions of the Exploration and Production, Refining and Chemical businesses of our industrial complexes in Spain, Portugal and Peru and of the low-emission electricity generation of the Repsol Electricidad & Gas subsidiary are included. • The emissions associated with the use of our products corresponding to our production of oil and gas from the Exploration and Production business are also included. Oil production includes the emissions associated with the biofuels used. To define the energy in the denominator it is included: • Energy corresponding to our oil and gas production from the Exploration & Production businesses is included. Oil production includes the energy associated with the biofuels used. • Chemical products are considered carbon sinks and, although they are not strictly energy products, the oil energy needed for their production is accounted for. • Energy from renewable and non-renewable electricity generation sources (through natural gas) is included.

**% change anticipated in absolute Scope 1+2 emissions**

**% change anticipated in absolute Scope 3 emissions**

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C4.2

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**(C4.2) Provide details of other key climate-related targets not already reported in question C4.1/a/b.**

**Target**

Methane reduction target

**KPI – Metric numerator**

Total methane emissions (m3/y)

**KPI – Metric denominator (intensity targets only)**

Total marketed gas (m3/y)

**Base year**

2017

**Start year**

2018

**Target year**

2025

**KPI in baseline year**

1.34

**KPI in target year**

1

**% achieved in reporting year**

13

**Target Status**

Underway

**Please explain**

The scope and methodology of the KPI calculation complies with the following features: • Just methane emissions from operated assets are considered (not Working Interest) • The target is set at 2025, being the baseline year 2017 • The target is set to a specific emission defined as the percentage of methane emitted (on volume basis) divided by the total volume of marketed gas • All assets are included (gas and oil assets)

**Part of emissions target**

100%

**Is this target part of an overarching initiative?**

Other, please specify (This one is an own target for Repsol. )

**C-OG4.2a**

**(C-OG4.2a) If you do not have a methane-specific emissions reduction target for your oil and gas activities or do not incorporate methane into your target(s) reported in C4.2 please explain why not and forecast how your methane emissions will change over the next five years.**

We have a methane-specific target as reported before

**C4.3**

**(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.**

Yes

**C4.3a**

**(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.**

|                           | Number of initiatives | Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *) |
|---------------------------|-----------------------|--|
| Under investigation       | 42                    |  |
| To be implemented*        | 12                    | 85664  |
| Implementation commenced* | 72                    | 224314   |
| Implemented*              | 192                   | 310000   |
| Not to be implemented     | 10                    |  |

**C4.3b**

**(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.**

**Initiative type**

Energy efficiency: Processes

**Description of initiative**

Process optimization

**Estimated annual CO2e savings (metric tonnes CO2e)**

310000

**Scope**

Scope 1

**Voluntary/Mandatory**

Voluntary

**Annual monetary savings (unit currency – as specified in C0.4)**

24900000

**Investment required (unit currency – as specified in C0.4)**

47000000

**Payback period**

1-3 years

**Estimated lifetime of the initiative**

11-15 years

**Comment**

During 2018, 192 energy efficiency measures related to efficiency improvements in furnaces, energy integration of units, heat recovery, more efficient energy generation and distribution and operation optimization of dynamic systems and processes were implemented in our assets. Scope 1 + 2 are included in all these reduction opportunities.

**C4.3c**

**(C4.3c) What methods do you use to drive investment in emissions reduction activities?**

| Method                                 | Comment   |
|--|---|
| Dedicated budget for energy efficiency | In 2018 we have invested USD 47 Million during in energy efficiency actions and we have the commitment to invest USD 590 Million in the Green Bond. In addition, Repsol's Technology Centre sets annual budgets for product and process R&D, which include dedicated areas for energy efficiency. In 2018, approximately USD 2.2 Million have been invested in energy efficiency and CCUS R&D.  |
| Internal price on carbon               | At Repsol, we take the price of carbon into account for our strategic plans. This way, we prepare our company to a low emissions future defining a Corporate Carbon Pricing. The price of carbon is included in the business model sheets for new investment decisions, ensuring that our portfolio is resilient to external CO2 regulations and policies, encouraging energy efficiency and low carbon technologies. CO2 price is also considered in risk management procedures of Business Units since new legislative developments could increase operational costs. That is to say, Carbon Pricing has influence and drives technology choices and has had some influence around various design elements throughout the project life cycle. Our carbon price pathway starts with 25 USD\$/t CO2 and this value will reach to 40 USD\$/t CO2 in 2025 |

**C4.5**

**(C4.5) Do you classify any of your existing goods and/or services as low-carbon products or do they enable a third party to avoid GHG emissions?**

Yes

**C4.5a**

**(C4.5a) Provide details of your products and/or services that you classify as low-carbon products or that enable a third party to avoid GHG emissions.**

**Level of aggregation**

Product

**Description of product/Group of products**

Electricity from renewable sources

**Are these low-carbon product(s) or do they enable avoided emissions?**

Low-carbon product and avoided emissions

**Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions**

Other, please specify (Methodology developed by Repsol)

**% revenue from low carbon product(s) in the reporting year**

0

**Comment**

In renewable energy, the incorporation of assets acquired from Viesgo included three hydroelectric plants in the north of Spain with an installed capacity of 700 MW to Repsol's asset portfolio. Our company, through its new subsidiary Repsol Electricity and Gas, has become a significant player in the Spanish electricity market, with a total installed capacity of 2,952 MW (2,352 MW from the Viesgo hydroelectric and gas combined cycle acquired facilities, plus 600 MW from our cogeneration plants), a market share of over 2% in the electricity and gas retail sector in Spain and a portfolio of 830,000 customers. In addition, we have expanded our presence in the renewable sector with the entrance into the Valdesolar Hive project, which is being developed in Valdecaballeros (Badajoz) one of the largest solar photovoltaic farms in Spain, with a capacity of 264 MW. These actions will contribute to the reduction of our carbon intensity and to the objectives set for 2025 2025 targets in our Strategic Plan, thus combining the management of climate change risks with taking advantage of opportunities. As the acquisition was accomplished by november 2018 we consider this revenue negligible.

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**Level of aggregation**

Product

**Description of product/Group of products**

Biofuels: Biofuels contribute to the reduction of CO2 emissions mainly in three ways: 1) avoiding the emissions associated with gasoline and diesel; 2) allowing the CO2 content of the fossil fuels to remain in storage and 3) providing a mechanism for CO2 absorption by growing new biomass for fuels. Repsol contribute to CO2 emissions reduction through the use of biofuels, incorporating bioethanol in gasoline and biodiesel and Vegetable Oil (VO) in gasoil. They are sold through Repsol service stations and direct sales to other suppliers. The avoided emissions represent the third party's Scope 1 emissions.

**Are these low-carbon product(s) or do they enable avoided emissions?**

Low-carbon product and avoided emissions

**Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions**

Other, please specify (Methodology developed by repsol)

**% revenue from low carbon product(s) in the reporting year**

1.93

**Comment**

The use of biofuels in transport provides an immediate opportunity to reduce emissions, which can be extended in the longer-term with the development of the next generations of biofuels. Repsol has been adding biofuels to its automotive fuels for more than 20 years. Therefore, in Spain our gasoline and diesel contain on average 6% in energy content of biofuels and in 2020 this figure will increase to 8.5% in line with EU regulatory requirements. Since 1998, we have invested in the transformation of MTBE plants, a component of mineral origin used in the preparation of gasoline, into Bio-ETBE plants using bio-ethanol as the component, with a renewable origin content of 37% in energy. Since then, we have incorporated more than 4.5 million tons of Bio-ETBE into our gasolines. In addition, in 2006 we started a line of technological development that has allowed us to produce HVO in our refineries from vegetable biomass, with a production of 380,000 tons per year, an amount which we expect to increase.

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C-OG4.6

#### **(C-OG4.6) Describe your organization's efforts to reduce methane emissions from your activities.**

Repsol is committed with the methane emissions reductions. As a part of this, Repsol joined CCAC-OGMP in 2016. Although our company had been reporting methane emissions externally and taking action on methane reductions for many years, the endorsement to the partnership has been considered a good opportunity for increasing focus, sharing knowledge on methodologies and technologies and improving scientific and technical understanding of methane emissions in our industry.

In the initial implementation plan submitted to the OGMP we have included our most important gas production assets, where we are developing and implementing GHG emissions reduction plans in a multi-year basis. We continue to focus on venting mitigation, fugitive emissions surveys (rolling out leak detection and repair (LDAR) programs), flare management and pneumatics devices retrofit.

On the other hand, our work within the Oil and Gas Climate Initiative (OGCI) complements our efforts in this Partnership and includes specific focus on technologies to support methane detection, measurement and mitigation.

Additionally Repsol has signed a set of Methane Guiding Principles ("MGPs") along with other international oil and gas companies. The Guiding Principles are a voluntary, international multi-stakeholder partnership between industry and non-governmental organizations (NGOs) with focus on continually reduce methane emissions and advance on strong performance across the natural gas values chain, from production to the final consumer, improving accuracy of emissions data and advocating sound policy and regulation on methane emissions.

The MGPs are complementary to and mutually reinforcing of relevant international initiatives, including the Oil and Gas Climate Initiative (OGCI) and the Climate and Clean Air Coalition's OIL and Gas Methane Partnership.

All these efforts have the result last year of setting a methane intensity reduction target for the Upstream business by 2025, considering 2017 as baseline This is going to be a company target that will be considered also in the OGCI methane intensity reduction target, announced in September 2018.

During 2018, Repsol has continued its projects in Canada with the substitution of high-bleed pneumatic devices for low-bleed ones, and indeed has performed new projects reducing methane emissions in Malaysia. In PM3 asset (offshore facility in Malaysia), reservoir gas has CO<sub>2</sub> content and it must be removed to comply with the sales gas composition requirements. This process is performed using a membrane system but the CO<sub>2</sub>/CH<sub>4</sub> separation is not complete. This opportunity is focused on the improvement of the selectivity of this system in order to reduce methane emissions and increase hydrocarbon recovery, resulting in a reduction of 2850 tCH<sub>4</sub>/year.

Another example or case study of our methane reduction efforts, we can mention the LDAR campaigns performed in 2018 in our assets in Bolivia and Malaysia. These campaigns help us reducing our fugitives emissions but also it increases the accuracy of our methane inventory.

#### **COG4.7**

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##### **(C-OG4.7) Does your organization conduct leak detection and repair (LDAR) or use other methods to find and fix fugitive methane emissions from oil and gas production activities?**

Yes

#### **C-OG4.7a**

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##### **(C-OG4.7a) Describe the protocol through which methane leak detection and repair or other leak detection methods, are conducted for oil and gas production activities, including predominant frequency of inspections, estimates of assets covered, and methodologies employed.**

Through implementation of the company Environmental Performance Practices (EPP) we have set Leak Detection and Repair (LDAR) programs in order to detect and repair methane leaks. These guidelines make up a set of common standards regardless of the geographical area where we are operating and local legislation in each country.

We have also developed an internal standard (edited as a guidelines document) to carry out Hybrid LDAR campaigns, combining Optimal Gas Imaging (OGI) cameras for detection and field ionization flame devices (FID) for emission quantification of methane and other VOCs.

As an average, we perform a LDAR campaign annually in each facility, which is the recommended frequency in our standard. In any case, an increase in the LDAR campaigns frequency is considered in the methane emissions reduction plan for achieving our target by 2025.

Several examples can be provided (mainly in our assets located in North America), as this is a standard procedure already implemented. In 2018 we extend these practices to other assets in Bolivia and Malaysia.

The LDAR programs include the use of either an optical gas imaging camera or a VOC monitoring instrument specified in Method 21 (EPA) such as a gas leak detector, (typically an FID, capable of reading methane concentrations in air of 0% to 5% with an accuracy of  $\pm 0.2\%$ ). The optical camera or gas leak detector utilized for the LDAR monitoring is operated in accordance with appropriate manufacturer-recommended practices.

The following equipment is monitored: valves, flanges, connectors, pressure Relief Devices, open-ended lines, storage vessels/storage tanks, compressor seals in natural gas or hydrocarbon liquids service and meters/instruments.

Leaks are determined to be any of the following observations: a) Visible methane or hydrocarbon emissions when utilizing an optical gas imaging camera; or b) A concentration measured 500 ppmv volatile organic compounds (VOC) if using a gas leak detector instrument.

Any leaks found from subject equipment are to be repaired within 15 days from the date of leak detection, except for certain circumstances in which facility shutdowns or ordering spare replacement parts are necessary for completion of repair. After leak repair, the equipment must be resurveyed within 15 days.

## C-OG4.8

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**(C-OG4.8) If flaring is relevant to your oil and gas production activities, describe your organization's efforts to reduce flaring, including any flaring reduction targets.**

In 2018, Repsol flared a total amount of gas equivalent of 0.9 million tons of CO<sub>2</sub>eq, which accounts for 4% of total Repsol CO<sub>2</sub>eq emissions.

Approximately, 55% of the total CO<sub>2</sub>eq from flaring corresponds to E&P emissions (0, 51 million tons of CO<sub>2</sub>eq).

In June 2019 Repsol has reported for the first time to the World Bank the 2018 routine and non-routine flaring (On June 10th 2016, Repsol endorsed the Zero Routine Flaring (ZRF) by 2030 World Bank Initiative. This endorsement is fully aligned with Repsol policies and commitment as part of the OGCI)

As Repsol is strongly committed to fight against climate change, in recent years our company has proposed targets and plans to reduce the energy consumption and carbon intensity of our operations, being flaring a key issue to focus on our attention and efforts. Flaring reduction initiatives have also an economical profit potential associated to the gas sales or to the possible use of the gas as internal fuel.

In this sense, in 2018 Repsol set a target of 50% reduction in routine flaring by 2025 compared to 2018, align with the ambition of minimizing it by 2030. In addition, it has its own Environmental Performance Practice (EPP) that allows ensuring that new facilities include from their design phase, solutions to avoid routine flaring. As a member of the ZRF Repsol is committed to continually seek technical and economically viable solutions to minimize routine flaring as soon as possible and no later than 2030 in its upstream facilities by means of the reuse of gas, the onsite minimization and the search of commercial solutions. During 2018, Repsol has carried out many flaring reduction projects in its upstream facilities, reaching 114.434 tCO<sub>2</sub>eq emissions avoided.

Regarding downstream facilities, flaring as a loss of direct fuel and taking into account the importance of energy in their operation costs, reduction objectives have been part of the refineries energy targets for years. A "zero-flaring" strategy has been implemented in normal plant operation. Since design phases, both reuse and/or recovery of gas streams are considered before flaring. All Spanish refineries have one or more flare gas recovery compressors to reuse the gas as fuel in their processes

## C5. Emissions methodology

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### C5.1

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**(C5.1) Provide your base year and base year emissions (Scopes 1 and 2).**

#### Scope 1

**Base year start**

January 1 2016

**Base year end**

December 31 2016

**Base year emissions (metric tons CO<sub>2</sub>e)**

24875372

**Comment**

#### Scope 2 (location-based)

**Base year start**

January 1 2016

**Base year end**

December 31 2016

**Base year emissions (metric tons CO<sub>2</sub>e)**

540562

**Comment**

#### Scope 2 (market-based)

**Base year start**

January 1 2016

**Base year end**

December 31 2016

**Base year emissions (metric tons CO<sub>2</sub>e)**

649743

**Comment**

### C5.2

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**(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions.**

American Petroleum Institute Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Natural Gas Industry, 2009  
Defra Voluntary 2017 Reporting Guidelines  
EPRA (European Public Real Estate Association) guidelines, 2011  
European Union Emission Trading System (EU ETS): The Monitoring and Reporting Regulation (MMR) – General guidance for installations  
IPIECA's Petroleum Industry Guidelines for reporting GHG emissions, 2nd edition, 2011  
ISO 14064-1  
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

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**C6. Emissions data**

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**C6.1**

**(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?**

**Reporting year**

**Gross global Scope 1 emissions (metric tons CO2e)**

22000092

**Start date**

January 1 2018

**End date**

December 31 2018

**Comment**

Viesgo acquisition was accomplished in November 2018. The figures provided (scope 1, 2, 3) exclude these assets, as the process of consolidation that will provide such information is underway. It doesn't include the emissions of non-industrial facilities (Headquarters and Technology Center), which are 4,740 tCO2eq. However, these emissions are annually verified under ISO-14064

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**C6.2**

**(C6.2) Describe your organization's approach to reporting Scope 2 emissions.**

**Row 1**

**Scope 2, location-based**

We are reporting a Scope 2, location-based figure

**Scope 2, market-based**

We are reporting a Scope 2, market-based figure

**Comment**

We are reporting a Scope 2 location-based and a market-based figures following this criterion: The located based emission factor for the electricity purchased to third parties is calculated based on the 2017 published information by Red Eléctrica Española (REE) of Spain regarding national energy balances (located factors were needed prior to the publication of the 2018 report for ISO-14064 certification audits carried out between January and March of 2019). The located based emission factor is 0.2850 metric tonnes CO2e per MWh. The market based emission factors for the electricity purchased to third parties is calculated based on the last published information by CNMC of Spain. The market based factors used depends on the electricity marketing company: Gas Natural: 0.25 metric tonnes CO2e per MWh, Engie: 0.35 metric tonnes CO2e per MWh, Iberdrola: 0.27 metric tonnes CO2e per MWh, Endesa: 0.38 metric tonnes CO2e per MWh, Repsol E&G: 0.21 metric tonnes CO2e per MWh. Viesgo acquisition was accomplished in November 2018. The figures provided (scope 1, 2, 3) exclude these assets, as the process of consolidation that will provide such information is underway

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**C6.3**

**(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?**

**Reporting year**

**Scope 2, location-based**

436062

**Scope 2, market-based (if applicable)**

442885

**Start date**

January 1 2018

**End date**

December 31 2018

**Comment**

It doesn't include the emissions of non-industrial facilities (Headquarters and Technology Center), which are 9,901 tCO2eq (market based and 9,127 tCO2eq location based) . However, these emissions are annually verified under ISO-14064

## C6.4

**(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?**

Yes

## C6.4a

**(C6.4a) Provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure.**

**Source**

Offices located outside industrial sites.

**Relevance of Scope 1 emissions from this source**

Emissions are not relevant

**Relevance of location-based Scope 2 emissions from this source**

Emissions are not relevant

**Relevance of market-based Scope 2 emissions from this source (if applicable)**

Emissions are not relevant

**Explain why this source is excluded**

Scope 1 and 2 emissions from offices located outside industrial facilities are not included within the operational boundary based on the oil industry guidelines for the reporting of greenhouse gas emissions developed by IPIECA, IOGP and API. During 2018, Campus headquarter, Tres Cantos building (where the Company's main Data Processing Center is located) and the Tecnology Center verified their emissions following ISO 14064 standard.

## C6.5

**(C6.5) Account for your organization's Scope 3 emissions, disclosing and explaining any exclusions.**

**Purchased goods and services**

**Evaluation status**

Relevant, calculated

**Metric tonnes CO<sub>2</sub>e**

8177448

**Emissions calculation methodology**

This category includes emissions associated with the purchased of crude oil and hydrogen used both as a feedstock in our facilities - Repsol's GHG inventories include indirect CO<sub>2</sub> emissions resulting from the production of hydrogen. The emissions associated to this category are calculated by multiplying a specific emission factor for H<sub>2</sub> by the quantity of this gas purchased and distributed to the various Repsol refineries and chemicals facilities. The emission factor for hydrogen acquisition is 6.9 tCO<sub>2</sub>/tH<sub>2</sub> for Spain, Portugal and Peru. This emission factor is the sum of two components: 1. Reaction component: the raw material used is 100% methane natural gas, with 100% H<sub>2</sub> recovery and 100% conversion to CO<sub>2</sub> (vapour reforming reaction: CH<sub>4</sub> + H<sub>2</sub>O → CO + 3H<sub>2</sub>, displacement reaction of water vapour: CO + H<sub>2</sub>O → CO<sub>2</sub> + H<sub>2</sub>), implying process emissions of 5.50 tCO<sub>2</sub>/tH<sub>2</sub>. 2. Necessary energy component: The fuel used in the reforming furnaces is natural gas, at a rate of 25,500 MJ/tH<sub>2</sub> (a). The natural gas emission factor will be used following the GHG emissions National Inventory in case of Spain and IPCC guidelines for national GHG inventories in case of Portugal and Peru. (a) Average value taken from the BREF of refineries, Integrated Pollution Prevention and Control (IPPC) -reference document on best available techniques for mineral oil and gas refineries, February 2003. -The Repsol GHG inventory includes indirect CO<sub>2</sub> emissions resulting from the extraction of crude to be processed in our refineries (Cartagena, La Coruña, Puertollano, Tarragona, Petronor and La Pampilla) and the crude used in Asesa for asphalts production. The associated emissions in this category are calculated by multiplying an emission factor established by geographical area, the amount of oil that is imported and comes to our refineries. The emission factors used are obtained from the IOGP and are divided according to the following geographic areas: Africa, Asia, Australasia, Europe, FSU, Middle East, North America, South America.

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

0

**Explanation**

**Capital goods**

**Evaluation status**

Not relevant, explanation provided

**Metric tonnes CO<sub>2</sub>e**

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

<Not Applicable>

**Explanation**

Repsol bought Viesgo in November 2018, but this category is considered as not relevant. Capital goods are no likely to be material source of emissions in any given year for our company.

## Fuel-and-energy-related activities (not included in Scope 1 or 2)

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO<sub>2</sub>e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Explanation

To calculate emissions from this category we have considered the emissions associated with the extraction, production (liquefaction and regasification) and transportation of natural gas consumption in our facilities. Different natural gas origins have been considered and bibliographic emission factors that consider each of these sources. Moreover the emissions associated with the extraction, production and transport of fuels used to produce electricity we consume in our facilities have been taken into account by using an emission factor that considers the national energy mix. The result of this estimation contributes to total Scope 3 emissions at a rate less than 1% and Repsol considers that they are not relevant to the company As an integrated oil and gas company, this category is not likely to be material because we consume energy we predominately produce ourselves.

## Upstream transportation and distribution

### Evaluation status

Not relevant, calculated

### Metric tonnes CO<sub>2</sub>e

1241964

### Emissions calculation methodology

To calculate emissions from shipping the following values are considered: - Average distance from regions of departure to port of arrival: This information was calculated based on Repsol Trading and transport department files. The Trading and transport business unit aims to manage and optimize marketing activities, supply and transportation of crude and products of the Group in international markets. - According to the information provided most vessels (76%) used to transport upstream products have been between 100,000 < dwt < 170,000 metric tonnes and its average loading is 70%. Based on previous years calculations (Fuel consumed based on a regression line which links the fuel consumption per day travelled with the deadweight, average speed for days travelled and four days to unload and return trip consumption estimates. Emissions factor for Fuel oil by IPCC 2006) we have calculated 0.00398 t CO<sub>2</sub>e/ kt km as emission factor. DEFRA considers 0.00446 t CO<sub>2</sub>e/ kt km for 100,000 < dwt < 199.999 metric tonnes and 48% as average loading, so we think our emission factor as aligned for this category estimation.

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

### Explanation

The result of this calculation contributes less than a 1% to Scope 3 emissions, so Repsol considers this source as not relevant.

## Waste generated in operations

### Evaluation status

Not relevant, calculated

### Metric tonnes CO<sub>2</sub>e

31597

### Emissions calculation methodology

The emissions reported in this category include emissions related to waste treatment and transportation of these from the centers where they are generated to their final destination. The emissions from processing and waste management in industrial centers (refining and chemical) are calculated by multiplying the amount of waste generated that are managed by the emission factors for each type of waste and treatment. We have selected more than 60 different emission factors from the Ecoinvent v.3 database. The Ecoinvent factors include all the life cycle, from cradle, including all upstream activities, to grave.

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

### Explanation

The result of this calculation contributes to total Scope 3 emissions at a rate less than 1% and Repsol considers that they are not relevant to the company.

## Business travel

### Evaluation status

Not relevant, calculated

### Metric tonnes CO<sub>2</sub>e

10796

### Emissions calculation methodology

CO<sub>2</sub> emissions from Employee business travel and Employee hotel nights are estimated by Carlson Wagonlit Travel, a global leader specialized in business travel management. Carlson Wagonlit Travel, working for and together with its British client UK Defra (Department for Environment, Food and Rural Affairs), has developed an approach to calculating the burden business trips place on the environment. The "CO<sub>2</sub> calculator" lets users calculate the carbon emissions from possible transportation alternatives by using specific CO<sub>2</sub> emission factors. Repsol has estimated the distance travelled (kilometres) by employees in Spain from the use of the following categories of mobile transport sources: § Rail transport. § Air transport: in this category there are two different types of distance travelled, long haul (>660 km) and medium-short haul. Each category has assigned a default emission factor (g CO<sub>2</sub>/km) and the CO<sub>2</sub> emissions are calculated by the following equation: CO<sub>2</sub> Emissions = Distance Travelled x Emission Factor.

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

### Explanation

The result of this calculation contributes to total Scope 3 emissions at a rate less than 1% and Repsol considers that they are not relevant to the company.

## Employee commuting

### Evaluation status

Not relevant, calculated

### Metric tonnes CO2e

3645

### Emissions calculation methodology

During 2012 Repsol employees have moved from various offices in Madrid to the Repsol Campus, the new headquarters opened by the company in the Méndez Álvaro area of Madrid. Surveys have been conducted to determine the following information: The number of people who have used each type of transport mode (walking, cycling, bus, taxi, subway, rail, motorcycle, private car, company car and car sharing) and the miles made with this mode of transport and the corresponding percentages in the case of using multiple modes. Emissions of individual workers are calculated by multiplying the number of kilometers travelled by each mode of transport by a specific bibliographic emission factor for each of these modes, considering the way round. With all this information Repsol has calculated the share of emissions from commuting to the old offices and those due to travel to campus after the move. The number has not change in 2018.

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

### Explanation

This is a methodology conducted by Repsol for calculating these emissions The result of this calculation contributes to total Scope 3 emissions at a rate less than 1% and Repsol considers that they are not relevant to the company.

## Upstream leased assets

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Explanation

Repsol has obtained an average emission factor (74 tCO<sub>2</sub> / year / service station) considering emissions from 10 company service stations. This is considered as a representative sample for the company since it includes all possible variations in terms of services, shop, washing machines, storage and dispensing, etc. The calculation of emissions in this category has been carried out with this average emission factor and the number of service stations that are leased and operated by Repsol. The result of this calculation contributes to total Scope 3 emissions at a rate less than 1% and Repsol considers that they are not relevant to the company.

## Downstream transportation and distribution

### Evaluation status

Not relevant, calculated

### Metric tonnes CO2e

512117

### Emissions calculation methodology

Repsol is able to estimate the CO<sub>2</sub> emissions from the external distribution of our activities using the UK Defra guidelines. It is important to stress, however, that several assumptions regarding transport capacities were required due to the complexity of logistics in our industry. In order to calculate External distributions/logistics emissions, Repsol has used the Guideline "Calculating CO<sub>2</sub> Emissions from Mobile Sources" available on the GHG Protocol website. The CO<sub>2</sub> emissions have been calculated using distance and cargo-based emission factors which are derived from the source: UK's Department for Environment, Food and Rural Affairs (DEFRA). The emission factors are specific to different types of vehicles, and they offer an expanded coverage of freight transport. The freight transport emission factors require activity data on tonne-kilometres travelled by the different types of freight vehicles used in Repsol operations, which included road and rail vehicles. Calculating emissions requires two main steps: Collect data on distance travelled by vehicle type. We have considered two types of vehicles: road transport (heavy goods vehicle) and rail transport. Depending on its weight, it will be used in step 2 a specific emission factor provided by UK DEFRA. Convert tonne-kilometres to CO<sub>2</sub> emissions by multiplying results from step 1 by distance and cargo-based emissions factors. CO<sub>2</sub> Emissions = Distance travelled-Cargo x Emission Factor.

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

### Explanation

This is a methodology conducted by Repsol for calculating these emissions The result of this calculation contributes to total Scope 3 emissions at a rate less than 1% and Repsol considers that they are not relevant to the company.

## Processing of sold products

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Explanation

Repsol has calculated emissions that take place in our customer's facilities for the use of chemicals which represent the greater number of sales for Repsol. For calculations Repsol has considered the criteria of the PAS 2050 standard and used an emission factor provided by one of our most important customers. The result of this calculation contributes to total Scope 3 emissions at a rate less than 1% and Repsol considers that they are not relevant to the company

## Use of sold products

### Evaluation status

Relevant, calculated

### Metric tonnes CO2e

176415262

### Emissions calculation methodology

We take into account the total equity gas production plus our downstream production. We used the "High tier", specifically equation number 21 (page 19 of the CDP guide) which takes into account the quantity produced, the emission factor and EO effective oxidation rate. The emission factors used are based on The Institute's Compendium of Greenhouse Gas Emissions Methodologies for the Oil and Gas Industry of API (American Petroleum Institute). Effective oxidation rates used are from CDP Scope 3 category 11 guide.

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

### Explanation

Activity data are based on the source used for our external financial statements.

## End of life treatment of sold products

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Explanation

Repsol has calculated emissions from landfill and recycling of chemicals which represent the greater number of sales for Repsol. To be conservative, it was considered that only 50% of these products have been recycled while the rest has been taken to landfill. The company has conducted several case studies, considering different recycling processes and percentages for them. The result of this calculation contributes to total Scope 3 emissions at a rate less than 1% and Repsol considers that they are not relevant to the company.

## Downstream leased assets

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Explanation

Repsol has obtained an average emission factor (74 tCO<sub>2</sub> / year / service station) considering emissions from 10 company service stations. This is considered as a representative sample for the company since it includes all possible variations in terms of services, shop, washing machines, storage and dispensing, etc. The calculation of emissions in this category has been carried out with this average emission factor and the number of service stations that are owned by Repsol and leased to other entities. The result of this calculation contributes to total Scope 3 emissions at a rate less than 1% and Repsol considers that they are not relevant to the company.

## Franchises

### Evaluation status

Not relevant, explanation provided

### Metric tonnes CO2e

<Not Applicable>

### Emissions calculation methodology

<Not Applicable>

### Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

### Explanation

Repsol has obtained an average emission factor (74 tCO<sub>2</sub> / year / service station) considering emissions from 10 company service stations. This is considered as a representative sample for the company since it includes all possible variations in terms of services, shop, washing machines, storage and dispensing, etc. The calculation of emissions in this category has been carried out with this average emission factor and the number of service stations that are owned by Repsol and leased to other entities. The result of this calculation contributes to total Scope 3 emissions at a rate less than 1% and Repsol considers that they are not relevant to the company.

**Investments**

**Evaluation status**

Not relevant, explanation provided

**Metric tonnes CO2e**

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

<Not Applicable>

**Explanation**

Repsol considers this category as not relevant since the company has not made significant investments that can be relevant in this category in 2018

**Other (upstream)**

**Evaluation status**

**Metric tonnes CO2e**

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

<Not Applicable>

**Explanation**

**Other (downstream)**

**Evaluation status**

**Metric tonnes CO2e**

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

**Percentage of emissions calculated using data obtained from suppliers or value chain partners**

<Not Applicable>

**Explanation**

C6.7

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**(C6.7) Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?**

Yes

C6.7a

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**(C6.7a) Provide the emissions from biologically sequestered carbon relevant to your organization in metric tons CO2.**

**Row 1**

**Emissions from biologically sequestered carbon (metric tons CO2)**

165

**Comment**

This emissions come from the offsetting of commercial flights activities performed by Business Unit staff in Colombia and energy consumption from offices in Bogota

C6.10

---

**(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.**

**Intensity figure**

0.0004

**Metric numerator (Gross global combined Scope 1 and 2 emissions)**

22436154

**Metric denominator**

unit total revenue

**Metric denominator: Unit total**

58647377537

**Scope 2 figure used**

Location-based

**% change from previous year**

23

**Direction of change**

Decreased

**Reason for change**

Regarding the numerator, during 2018 our total Scope 1 and 2 emissions were 22436154 t CO2e, which implies a reduction of 4% over the previous year, the reduction has been achieved, among other reasons, by the emissions reduction activities carried out by the company. In our refining business we keep implementing energy efficiency activities with a reduction of GHG emissions. As an example, in Cartagena refinery we improved heat recovering in furnaces, resulting in a reduction of 14.000 tCO2/year. With respect to the denominator, Repsol's revenues in term of sales for 2017 was USD 58,647,377,537, 20% higher than the previous year's result (USD 46,950,592,233). The reduction in the intensity figure is thanks the reduction of the numerator and the increase of the denominator.

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**C-OG6.12**

**(C-OG6.12) Provide the intensity figures for Scope 1 emissions (metric tons CO2e) per unit of hydrocarbon category.**

**Unit of hydrocarbon category (denominator)**

Thousand barrels of crude oil / condensate

**Metric tons CO2e from hydrocarbon category per unit specified**

0.19

**% change from previous year**

0

**Direction of change**

No change

**Reason for change**

The throughput in refining decreased in 2018 respect to 2017 but our emissions decreased as well in the same proportion, so the intensive value is the same.

**Comment**

The indicator corresponds to the Refining segment

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**Unit of hydrocarbon category (denominator)**

Thousand barrels of crude oil / condensate

**Metric tons CO2e from hydrocarbon category per unit specified**

60.5

**% change from previous year**

4

**Direction of change**

Decreased

**Reason for change**

During 2018 we implemented many emissions reduction opportunities, especially in methane emissions. Besides, our production activity has decreased, having impact in our emissions.

**Comment**

The indicator corresponds to the Exploration, production & gas processing segment

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**C-OG6.13**

**(C-OG6.13) Report your methane emissions as percentages of natural gas and hydrocarbon production or throughput.**

**Oil and gas business division**

Upstream

**Estimated total methane emitted expressed as % of natural gas production or throughput at given division**

1.17

**Estimated total methane emitted expressed as % of total hydrocarbon production or throughput at given division**

1.16

**Comment**

Our methane intensity is expressed as m3 CH4 /m3 production

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**C7. Emissions breakdowns**

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**C7.1**

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**(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?**

Yes

**C7.1a**

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**(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).**

| Greenhouse gas | Scope 1 emissions (metric tons of CO2e) | GWP Reference  |
|----------------|---|--|
| CO2            | 17847855                                | IPCC Fourth Assessment Report (AR4 - 100 year)<br><i>It doesn't include the emissions of non-industrial facilities (Headquarters and Technology Center), which are 4740 tCO2eq. However, these emissions are annually verified under ISO-14064</i> |
| CH4            | 4107556                                 | IPCC Fourth Assessment Report (AR4 - 100 year)   |
| N2O            | 44681                                   | IPCC Fourth Assessment Report (AR4 - 100 year)   |

**C-OG7.1b**

---

**(C-OG7.1b) Break down your total gross global Scope 1 emissions from oil and gas value chain production activities by greenhouse gas type.**

**Emissions category**

Combustion (excluding flaring)

**Value chain**

Upstream

**Product**

Oil

**Gross Scope 1 CO2 emissions (metric tons CO2)**

715186

**Gross Scope 1 methane emissions (metric tons CH4)**

16

**Total gross Scope 1 emissions (metric tons CO2e)**

718887

**Comment**

---

**Emissions category**

Combustion (excluding flaring)

**Value chain**

Upstream

**Product**

Gas

**Gross Scope 1 CO2 emissions (metric tons CO2)**

1716897

**Gross Scope 1 methane emissions (metric tons CH4)**

2702

**Total gross Scope 1 emissions (metric tons CO2e)**

1796415

---

**Comment**

---

**Emissions category**

Combustion (excluding flaring)

**Value chain**

Downstream

**Product**

Oil

**Gross Scope 1 CO2 emissions (metric tons CO2)**

8961550

**Gross Scope 1 methane emissions (metric tons CH4)**

9.5

**Total gross Scope 1 emissions (metric tons CO2e)**

8988916

**Comment**

---

**Emissions category**

Flaring

**Value chain**

Upstream

**Product**

Oil

**Gross Scope 1 CO2 emissions (metric tons CO2)**

269817

**Gross Scope 1 methane emissions (metric tons CH4)**

1181

**Total gross Scope 1 emissions (metric tons CO2e)**

300797

**Comment**

---

**Emissions category**

Flaring

**Value chain**

Upstream

**Product**

Gas

**Gross Scope 1 CO2 emissions (metric tons CO2)**

194490

**Gross Scope 1 methane emissions (metric tons CH4)**

956

**Total gross Scope 1 emissions (metric tons CO2e)**

218739

**Comment**

---

**Emissions category**

Flaring

**Value chain**

Downstream

**Product**

Oil

**Gross Scope 1 CO2 emissions (metric tons CO2)**

380060

**Gross Scope 1 methane emissions (metric tons CH4)**

44.18

**Total gross Scope 1 emissions (metric tons CO2e)**

381719

**Comment**

---

**Emissions category**

Venting

**Value chain**

Upstream

**Product**

---

Oil

**Gross Scope 1 CO2 emissions (metric tons CO2)**

0

**Gross Scope 1 methane emissions (metric tons CH4)**

1381

**Total gross Scope 1 emissions (metric tons CO2e)**

34536

**Comment**

---

**Emissions category**

Venting

**Value chain**

Upstream

**Product**

Gas

**Gross Scope 1 CO2 emissions (metric tons CO2)**

3139143

**Gross Scope 1 methane emissions (metric tons CH4)**

146823

**Total gross Scope 1 emissions (metric tons CO2e)**

6809725

**Comment**

---

**Emissions category**

Fugitives

**Value chain**

Upstream

**Product**

Oil

**Gross Scope 1 CO2 emissions (metric tons CO2)**

23.82

**Gross Scope 1 methane emissions (metric tons CH4)**

804

**Total gross Scope 1 emissions (metric tons CO2e)**

20133

**Comment**

---

**Emissions category**

Fugitives

**Value chain**

Upstream

**Product**

Gas

**Gross Scope 1 CO2 emissions (metric tons CO2)**

2358

**Gross Scope 1 methane emissions (metric tons CH4)**

8566

**Total gross Scope 1 emissions (metric tons CO2e)**

216506

**Comment**

---

**Emissions category**

Fugitives

**Value chain**

Downstream

**Product**

Oil

**Gross Scope 1 CO2 emissions (metric tons CO2)**

0

**Gross Scope 1 methane emissions (metric tons CH4)**

1818

**Total gross Scope 1 emissions (metric tons CO2e)**

45390

---

**Comment**

**Emissions category**

Process (feedstock) emissions

**Value chain**

Downstream

**Product**

Oil

**Gross Scope 1 CO2 emissions (metric tons CO2)**

2468330

**Gross Scope 1 methane emissions (metric tons CH4)**

0

**Total gross Scope 1 emissions (metric tons CO2e)**

2468330

**Comment**

**C7.2**

**(C7.2) Break down your total gross global Scope 1 emissions by country/region.**

| Country/Region                   | Scope 1 emissions (metric tons CO2e) |
|----------------------------------|--------------------------------------|
| Bolivia (Plurinational State of) | 222033                               |
| Canada                           | 846363                               |
| Ecuador                          | 570033                               |
| United States of America         | 536581                               |
| Spain                            | 10726581                             |
| Malaysia                         | 7834451                              |
| Norway                           | 33442                                |
| Peru                             | 661908                               |
| Portugal                         | 566019                               |
| Russian Federation               | 2681                                 |

**C7.3**

**(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.**

By business division

**C7.3a**

**(C7.3a) Break down your total gross global Scope 1 emissions by business division.**

| Business division                             | Scope 1 emissions (metric ton CO2e) |
|---|-------------------------------------|
| E&P   | 10115738                            |
| Refining                                      | 8856075                             |
| Chemicals                                     | 3018362                             |
| LPG business                                  | 1648                                |
| Marketing                                     | 1402                                |
| Lubricants, asphalts and specialized products | 6866                                |

C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4

**(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO2e.**

|  | Gross Scope 1 emissions, metric tons CO2e | Net Scope 1 emissions, metric tons CO2e | Comment   |
|--|---|---|---|
| Cement production activities                   | <Not Applicable>                          | <Not Applicable>                        | <Not Applicable>  |
| Chemicals production activities                | <Not Applicable>                          | <Not Applicable>                        | <Not Applicable>  |
| Coal production activities                     | <Not Applicable>                          | <Not Applicable>                        | <Not Applicable>  |
| Electric utility generation activities         | <Not Applicable>                          | <Not Applicable>                        | <Not Applicable>  |
| Metals and mining production activities        | <Not Applicable>                          | <Not Applicable>                        | <Not Applicable>  |
| Oil and gas production activities (upstream)   | 10115738                                  | <Not Applicable>                        | Includes the emissions caused for all the upstream activities (exploration, development and production of oil and gas) of the company.  |
| Oil and gas production activities (downstream) | 11884354                                  | <Not Applicable>                        | Includes the emissions caused for all the downstream activities (refining, processing, distribution and marketing of products derived and the manufacture, distribution and marketing of chemical products derived from oil and gas) of the company. It doesn't include the emissions of non-industrial facilities and Technology Center, which are 4740 tCO2eq |
| Steel production activities                    | <Not Applicable>                          | <Not Applicable>                        | <Not Applicable>  |
| Transport OEM activities                       | <Not Applicable>                          | <Not Applicable>                        | <Not Applicable>  |
| Transport services activities                  | <Not Applicable>                          | <Not Applicable>                        | <Not Applicable>  |

**C7.5**

**(C7.5) Break down your total gross global Scope 2 emissions by country/region.**

| Country/Region           | Scope 2, location-based (metric tons CO2e) | Scope 2, market-based (metric tons CO2e) | Purchased and consumed electricity, heat, steam or cooling (MWh) | Purchased and consumed low-carbon electricity, heat, steam or cooling accounted in market-based approach (MWh) |
|--------------------------|--|--|--|--|
| Canada                   | 103242                                     | 103242                                   | 114713   | 0  |
| Ecuador                  | 15   | 15                                       | 64   | 0  |
| Malaysia                 | 178  | 178                                      | 270  | 0  |
| United States of America | 2420                                       | 2420                                     | 4653   | 0  |
| Peru                     | 20433                                      | 20433                                    | 141268   | 0  |
| Portugal                 | 50634                                      | 32379                                    | 118147   | 0  |
| Spain                    | 259140                                     | 284217                                   | 1014457  | 0  |

**C7.6**

**(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.**

By business division

**C7.6a**

**(C7.6a) Break down your total gross global Scope 2 emissions by business division.**

| Business division                             | Scope 2, location-based emissions (metric tons CO2e) | Scope 2, market-based emissions (metric tons CO2e) |
|---|--|--|
| E&P   | 105933   | 105933   |
| Refining                                      | 175520   | 178614   |
| Chemicals                                     | 108419   | 108744   |
| LPG business                                  | 5242   | 5854   |
| Marketing                                     | 38863  | 41418  |
| Lubricants, asphalts and specialized products | 2084   | 2322   |

**C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7**

**(C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7) Break down your organization's total gross global Scope 2 emissions by sector production activity in metric tons CO2e.**

|  | Scope 2, location-based, metric tons CO2e | Scope 2, market-based (if applicable), metric tons CO2e | Comment  |
|--|---|---|--|
| Cement production activities                   | <Not Applicable>                          | <Not Applicable>  | <Not Applicable>   |
| Chemicals production activities                | <Not Applicable>                          | <Not Applicable>  | <Not Applicable>   |
| Coal production activities                     | <Not Applicable>                          | <Not Applicable>  | <Not Applicable>   |
| Metals and mining production activities        | <Not Applicable>                          | <Not Applicable>  | <Not Applicable>   |
| Oil and gas production activities (upstream)   | 105933                                    | 126366  | Includes the emissions caused for all the upstream activities (exploration, development and production of oil and gas) of the company.   |
| Oil and gas production activities (downstream) | 330129                                    | 316518  | Includes the emissions caused for all the downstream activities (refining, processing, distribution and marketing of products derived and the manufacture, distribution and marketing of chemical products derived from oil and gas) of the company. It doesn't include the emissions of non-industrial facilities and Technology Center, which are 9901 tCO2eq (market based and 9127 location based) |
| Steel production activities                    | <Not Applicable>                          | <Not Applicable>  | <Not Applicable>   |
| Transport OEM activities                       | <Not Applicable>                          | <Not Applicable>  | <Not Applicable>   |
| Transport services activities                  | <Not Applicable>                          | <Not Applicable>  | <Not Applicable>   |

**C7.9**

**(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?**

Decreased

**C7.9a**

**(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined) and for each of them specify how your emissions compare to the previous year.**

|   | Change in emissions (metric tons CO2e) | Direction of change | Emissions value (percentage) | Please explain calculation  |
|---|--|---------------------|------------------------------|---|
| Change in renewable energy consumption  | 0                                      | No change           | 0                            | We don't have renewable energy consumption in our assets. Although in 2018 Repsol acquired three hydroelectric plants from Viesgo, this acquisition was performed in the last months of 2018.   |
| Other emissions reduction activities    | 310000                                 | Decreased           | 1.3                          | The change in emissions has been calculated considering the total avoided emissions associated to quantified reduction activities carried out by the company during 2018 Included in our reduction plan 2014-2020 and 2018-2025. Emissions value (percentage) has been calculated dividing 310000 metric tons CO2e between the emissions Scope 1+Scope 2 of the company in 2017: 23353724 metric tonnes CO2e. |
| Divestment                              |  | <Not Applicable >   |                              |   |
| Acquisitions                            |  | <Not Applicable >   |                              |   |
| Mergers                                 |  | <Not Applicable >   |                              |   |
| Change in output                        | 545000                                 | Decreased           | 2.3                          | The change in emissions has been calculated considering the actual throughput of every asset in 2018 with respect to 2017. Emissions value (percentage) has been calculated dividing 545000 metric tons CO2e between the emissions of the company in 2017: 23353724 metric tonnes CO2e  |
| Change in methodology                   |  | <Not Applicable >   |                              |   |
| Change in boundary                      |  | <Not Applicable >   |                              |   |
| Change in physical operating conditions |  | <Not Applicable >   |                              |   |
| Unidentified                            |  | <Not Applicable >   |                              |   |
| Other                                   |  | <Not Applicable >   |                              |   |

**C7.9b**

**(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?**

Location-based

**C8. Energy**

**C8.1**

**(C8.1) What percentage of your total operational spend in the reporting year was on energy?**

More than 5% but less than or equal to 10%

**C8.2**

**(C8.2) Select which energy-related activities your organization has undertaken.**

|  | Indicate whether your organization undertakes this energy-related activity |
|--|--|
| Consumption of fuel (excluding feedstocks)         | Yes  |
| Consumption of purchased or acquired electricity   | Yes  |
| Consumption of purchased or acquired heat          | No   |
| Consumption of purchased or acquired steam         | Yes  |
| Consumption of purchased or acquired cooling       | No   |
| Generation of electricity, heat, steam, or cooling | Yes  |

**C8.2a**

**(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.**

|   | Heating value             | MWh from renewable sources | MWh from non-renewable sources | Total MWh        |
|---|---------------------------|----------------------------|--------------------------------|------------------|
| Consumption of fuel (excluding feedstock)               | LHV (lower heating value) | 0                          | 56683200                       | 56683200         |
| Consumption of purchased or acquired electricity        | <Not Applicable>          | 0                          | 826293                         | 826293           |
| Consumption of purchased or acquired heat               | <Not Applicable>          | <Not Applicable>           | <Not Applicable>               | <Not Applicable> |
| Consumption of purchased or acquired steam              | <Not Applicable>          | 0                          | 518242                         | 518242           |
| Consumption of purchased or acquired cooling            | <Not Applicable>          | <Not Applicable>           | <Not Applicable>               | <Not Applicable> |
| Consumption of self-generated non-fuel renewable energy | <Not Applicable>          | 0                          | <Not Applicable>               | 0                |
| Total energy consumption                                | <Not Applicable>          | 0                          | 58027736                       | 58027736         |

**C8.2b**

**(C8.2b) Select the applications of your organization's consumption of fuel.**

|   | Indicate whether your organization undertakes this fuel application |
|---|---|
| Consumption of fuel for the generation of electricity   | Yes   |
| Consumption of fuel for the generation of heat          | Yes   |
| Consumption of fuel for the generation of steam         | Yes   |
| Consumption of fuel for the generation of cooling       | No  |
| Consumption of fuel for co-generation or tri-generation | Yes   |

**C8.2c**

**(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.**

**Fuels (excluding feedstocks)**

Natural Gas

**Heating value**

LHV (lower heating value)

**Total fuel MWh consumed by the organization**

19888752

**MWh fuel consumed for self-generation of electricity**

5870036

**MWh fuel consumed for self-generation of heat**

380965

**MWh fuel consumed for self-generation of steam**

0

**MWh fuel consumed for self-generation of cooling**

<Not Applicable>

**MWh fuel consumed for self-cogeneration or self-trigeneration**

13637750

**Comment**

**Fuels (excluding feedstocks)**

Fuel Gas

**Heating value**

LHV (lower heating value)

**Total fuel MWh consumed by the organization**

34170782

**MWh fuel consumed for self-generation of electricity**

1707559

**MWh fuel consumed for self-generation of heat**

31356354

**MWh fuel consumed for self-generation of steam**

526632

**MWh fuel consumed for self-generation of cooling**

<Not Applicable>

**MWh fuel consumed for self-cogeneration or self-trigeneration**

580236

**Comment**

It includes offgas streams

---

**Fuels (excluding feedstocks)**

Fuel Oil Number 4

**Heating value**

LHV (lower heating value)

**Total fuel MWh consumed by the organization**

859941

**MWh fuel consumed for self-generation of electricity**

40338

**MWh fuel consumed for self-generation of heat**

754244

**MWh fuel consumed for self-generation of steam**

65359

**MWh fuel consumed for self-generation of cooling**

&lt;Not Applicable&gt;

**MWh fuel consumed for self-cogeneration or self-trigeneration**

0

**Comment**

---

**Fuels (excluding feedstocks)**

Diesel

**Heating value**

LHV (lower heating value)

**Total fuel MWh consumed by the organization**

778043

**MWh fuel consumed for self-generation of electricity**

771335

**MWh fuel consumed for self-generation of heat**

6708

**MWh fuel consumed for self-generation of steam**

0

**MWh fuel consumed for self-generation of cooling**

&lt;Not Applicable&gt;

**MWh fuel consumed for self-cogeneration or self-trigeneration**

0

**Comment**

---

**Fuels (excluding feedstocks)**

Liquefied Petroleum Gas (LPG)

**Heating value**

LHV (lower heating value)

**Total fuel MWh consumed by the organization**

110229

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

110229

**MWh fuel consumed for self-generation of steam**

0

**MWh fuel consumed for self-generation of cooling**

&lt;Not Applicable&gt;

**MWh fuel consumed for self-cogeneration or self-trigeneration**

0

**Comment**

---

**Fuels (excluding feedstocks)**

Crude Oil

**Heating value**

LHV (lower heating value)

**Total fuel MWh consumed by the organization**

875453

**MWh fuel consumed for self-generation of electricity**

875453

**MWh fuel consumed for self-generation of heat**

0

**MWh fuel consumed for self-generation of steam**

0

**MWh fuel consumed for self-generation of cooling**

<Not Applicable>

**MWh fuel consumed for self-cogeneration or self-trigeneration**

0

**Comment**

---

C8.2d

---

**(C8.2d) List the average emission factors of the fuels reported in C8.2c.**

**Crude Oil**

**Emission factor**

0.0733

**Unit**

metric tons CO2 per GJ

**Emission factor source**

2006 IPCC Guidelines for National Greenhouse Gas Inventories

**Comment**

**Diesel**

**Emission factor**

0.0741

**Unit**

metric tons CO2 per GJ

**Emission factor source**

2006 IPCC Guidelines for National Greenhouse Gas Inventories

**Comment**

**Fuel Gas**

**Emission factor**

2.401

**Unit**

metric tons CO2 per metric ton

**Emission factor source**

Real data

**Comment**

We operate in different countries with different quality of fuel gas. The factor reported is the average of all the factors that has been used to calculate the GHG emissions.

**Fuel Oil Number 4**

**Emission factor**

0.076

**Unit**

metric tons CO2 per GJ

**Emission factor source**

Compendium of Greenhouse Gas Emissions Estimation Methodologies for the Oil and Gas Industry. American Petroleum Institute (API).

**Comment**

**Liquefied Petroleum Gas (LPG)**

**Emission factor**

0.0631

**Unit**

metric tons CO2 per GJ

**Emission factor source**

Compendium of Greenhouse Gas Emissions Estimation Methodologies for the Oil and Gas Industry. American Petroleum Institute (API).

**Comment**

**Natural Gas**

**Emission factor**

0.0561

**Unit**

metric tons CO2 per GJ

**Emission factor source**

2006 IPCC Guidelines for National Greenhouse Gas Inventories

**Comment**

**C8.2e**

---

**(C8.2e) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.**

|             | Total Gross generation (MWh) | Generation that is consumed by the organization (MWh) | Gross generation from renewable sources (MWh) | Generation from renewable sources that is consumed by the organization (MWh) |
|-------------|------------------------------|---|---|--|
| Electricity | 6808843                      | 6808843   | 0   | 0  |
| Heat        | 22825950                     | 22825950  | 0   | 0  |
| Steam       | 8254730                      | 8254730   | 0   | 0  |
| Cooling     | 0                            | 0   | 0   | 0  |

## C8.2f

**(C8.2f) Provide details on the electricity, heat, steam and/or cooling amounts that were accounted for at a low-carbon emission factor in the market-based Scope 2 figure reported in C6.3.**

**Basis for applying a low-carbon emission factor**

No purchases or generation of low-carbon electricity, heat, steam or cooling accounted with a low-carbon emission factor

**Low-carbon technology type**

<Not Applicable>

**Region of consumption of low-carbon electricity, heat, steam or cooling**

<Not Applicable>

**MWh consumed associated with low-carbon electricity, heat, steam or cooling**

<Not Applicable>

**Emission factor (in units of metric tons CO2e per MWh)**

<Not Applicable>

**Comment**

Our company doesn't purchase specifically low carbon electricity, steam or cooling.

## C9. Additional metrics

### C9.1

**(C9.1) Provide any additional climate-related metrics relevant to your business.**

### C-OG9.2a

**(C-OG9.2a) Disclose your net liquid and gas hydrocarbon production (total of subsidiaries and equity-accounted entities).**

|   | In-year net production | Comment |
|---|------------------------|---------|
| Crude oil and condensate, million barrels                         | 95.37                  |         |
| Natural gas liquids, million barrels                              | 0                      |         |
| Oil sands, million barrels (includes bitumen and synthetic crude) | 0                      |         |
| Natural gas, billion cubic feet                                   | 0.93                   |         |

### C-OG9.2b

**(C-OG9.2b) Explain which listing requirements or other methodologies you use to report reserves data. If your organization cannot provide data due to legal restrictions on reporting reserves figures in certain countries, please explain this.**

For the estimation of proven and unproven oil and gas reserves, Repsol uses the criteria established by the system "SPE / WPC / AAPG / SPEE Petroleum Resources Management System", usually referred to by its acronym SPE-PRMS (SPE - Society of Petroleum Engineers).

### C-OG9.2c

(C-OG9.2c) Disclose your estimated total net reserves and resource base (million boe), including the total associated with subsidiaries and equity-accounted entities.

|       | Estimated total net proved + probable reserves (2P) (million BOE) | Estimated total net proved + probable + possible reserves (3P) (million BOE) | Estimated net total resource base (million BOE) | Comment |
|-------|---|--|---|---------|
| Row 1 |   |  |   |         |

### C-OG9.2d

(C-OG9.2d) Provide an indicative percentage split for 2P, 3P reserves, and total resource base by hydrocarbon categories.

|  | Net proved + probable reserves (2P) (%) | Net proved + probable + possible reserves (3P) (%) | Net total resource base (%) | Comment |
|--|---|--|-----------------------------|---------|
| Crude oil / condensate / Natural gas liquids     | 28                                      | 30   | 36                          |         |
| Natural gas                                      | 72                                      | 70   | 64                          |         |
| Oil sands (includes bitumen and synthetic crude) | 0                                       | 0  | 0                           |         |

### C-OG9.2e

(C-OG9.2e) Provide an indicative percentage split for production, 1P, 2P, 3P reserves, and total resource base by development types.

#### Development type

Onshore

#### In-year net production (%)

73

#### Net proved reserves (1P) (%)

68

#### Net proved + probable reserves (2P) (%)

66

#### Net proved + probable + possible reserves (3P) (%)

67

#### Net total resource base (%)

71

#### Comment

The breakdown includes only onshore and offshore categories, as most of the listed development types can be included in both categories

#### Development type

Other, please specify (Offshore)

#### In-year net production (%)

27

#### Net proved reserves (1P) (%)

32

#### Net proved + probable reserves (2P) (%)

34

#### Net proved + probable + possible reserves (3P) (%)

33

#### Net total resource base (%)

29

#### Comment

The breakdown includes only onshore and offshore categories, as most of the listed development types can be included in both categories

### C-OG9.3a

(C-OG9.3a) Disclose your total refinery throughput capacity in the reporting year in thousand barrels per year.

|          | Total refinery throughput capacity (Thousand barrels per day) |
|----------|---|
| Capacity | 1013  |

### C-OG9.3b

**(C-OG9.3b) Disclose feedstocks processed in the reporting year in million barrels per year.**

|                  | Throughput (Million barrels) | Comment  |
|------------------|------------------------------|--|
| Oil              | 331.29                       | Density: 0,884 t/m3 (average density of all kinds of oils processed) |
| Other feedstocks | 58.99                        | Density: 0,884 t/m3  |
| Total            | 390.29                       |  |

**C-OG9.3c****(C-OG9.3c) Are you able to break down your refinery products and net production?**

Yes

**C-OG9.3d****(C-OG9.3d) Disclose your refinery products and net production in the reporting year in million barrels per year.**

| Product produced  | Refinery net production (Million barrels) *not including products used/consumed on site |
|---|---|
| Other, please specify (Intermediate distillates)                  | 203.42  |
| Gasolines   | 79.26   |
| Fuel oils   | 29.81   |
| Liquified petroleum gas   | 11.46   |
| Asphalt and tar   | 9.96  |
| Lubricants  | 1.81  |
| Other, please specify (Others (including petrochemical products)) | 65.97   |

**C-OG9.3e****(C-OG9.3e) Please disclose your chemicals production in the reporting year in thousand metric tons.**

| Product                               | Production, Thousand metric tons | Capacity, Thousand metric tons |
|---------------------------------------|----------------------------------|--------------------------------|
| High value chemicals (Steam cracking) | 1790.8                           | 2475                           |

**C-CO9.6/C-EU9.6/C-OG9.6****(C-CO9.6/C-EU9.6/C-OG9.6) Disclose your investments in low-carbon research and development (R&D), equipment, products, and services.****Investment start date**

January 1 2018

**Investment end date**

December 31 2018

**Investment area**

R&amp;D

**Technology area**

Carbon capture and storage/utilisation

**Investment maturity**

Applied research and development

**Investment figure**

800651.24

**Low-carbon investment percentage**

81-100%

**Please explain**

Repsol is developing catalysts and processes for the use of CO2 as a raw material for polymers, eco-design methodology and its application to new polymer materials. Repsol is also developing carbon capture and storage technology for implementation in E&P assets

**Investment start date**

January 1 2019

**Investment end date**

December 31 2019

**Investment area**

R&amp;D

**Technology area**

Carbon capture and storage/utilisation

**Investment maturity**

Applied research and development

**Investment figure**

53623.92

**Low-carbon investment percentage**

81-100%

**Please explain**

Repsol is developing catalysts and processes for the use of CO2 as a raw material for polymers, eco-design methodology and its application to new polymer materials. Repsol is also developing carbon capture and storage technology for implementation in E&P assets

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**Investment start date**

January 1 2018

**Investment end date**

December 31 2018

**Investment area**

R&D

**Technology area**

Other, please specify (Energy efficiency)

**Investment maturity**

Applied research and development

**Investment figure**

1754715.46

**Low-carbon investment percentage**

61-80%

**Please explain****Investment start date**

January 1 2019

**Investment end date**

December 31 2019

**Investment area**

R&D

**Technology area**

Other, please specify (Energy efficiency)

**Investment maturity**

Applied research and development

**Investment figure**

1262886.74

**Low-carbon investment percentage**

61-80%

**Please explain****Investment start date**

January 1 2018

**Investment end date**

December 31 2018

**Investment area**

Products

**Technology area**

Renewable energy

**Investment maturity**

Large scale commercial deployment

**Investment figure**

864940000

**Low-carbon investment percentage**

81-100%

**Please explain**

Repsol has acquired renewable assets from Viesgo including three hydroelectric plants in the north of Spain with an installed capacity of 700 MW

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## C-OG9.7

(C-OG9.7) Disclose the breakeven price (US\$/BOE) required for cash neutrality during the reporting year, i.e. where cash flow from operations covers CAPEX and dividends paid/ share buybacks.

54

## C-OG9.8

(C-OG9.8) Is your organization involved in the sequestration of CO2?

Yes

### C-OG9.8a

(C-OG9.8a) Provide, in metric tons CO2, gross masses of CO2 transferred in and out of the reporting organization (as defined by the consolidation basis).

|                     | CO2 transferred – reporting year (metric tons CO2) |
|---------------------|--|
| CO2 transferred in  | 0  |
| CO2 transferred out | 24720  |

### C-OG9.8b

(C-OG9.8b) Provide gross masses of CO2 injected and stored for the purposes of CCS during the reporting year according to the injection and storage pathway.

| Injection and storage pathway | Injected CO2 (metric tons CO2) | Percentage of injected CO2 intended for long-term (>100 year) storage | Year in which injection began | Cumulative CO2 injected and stored (metric tons CO2) |
|-------------------------------|--------------------------------|---|-------------------------------|--|
|-------------------------------|--------------------------------|---|-------------------------------|--|

### C-OG9.8c

(C-OG9.8c) Provide clarification on any other relevant information pertaining to your activities related to transfer and sequestration of CO2.

Part of the CO2 emissions generated at Petronor Refinery are transferred to an external enterprise that use it as a raw material. The CO2 flow transferred is registered with ultrasonic flow meters located in the refinery to calculate the amount sold. Carbon capture, use and storage (CCUS): Repsol participates in the development of these technologies as a member of the OGCI with the investments made by the OGCI Climate Investments fund, which to date has taken stakes in:

- Solidia: a company dedicated to the production of cement and concrete, which has patented a technology that allows the use of CO2 in the setting of concrete instead of water.
- Econic: a pioneering company in the development of catalytic systems, which has been able to incorporate up to 50% in weight of CO2 as a raw material in the production of polyols, the basis of all polyurethanes.
- Inventys: a company that has developed a process for capturing CO2 which uses a patented architecture of solid adsorbent structures that avoids the high costs associated with other conventional processes.

## C10. Verification

### C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

|  | Verification/assurance status                          |
|--|--|
| Scope 1                                  | Third-party verification or assurance process in place |
| Scope 2 (location-based or market-based) | Third-party verification or assurance process in place |
| Scope 3                                  | Third-party verification or assurance process in place |

### C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 and/or Scope 2 emissions and attach the relevant statements.

Scope

Scope 1

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

REPSOL 14064 declaration MARCELLUS 2018 -eng-V2.pdf  
REPSOL 14064 declaración CANADA 2018 - sp-V1.pdf  
REPSOL 14064 declaration Malaysia 2018 -eng-V1.pdf  
Declaración REPSOL REFINO PERU 2018.PDF  
Declaración REPSOL REFINO ESPAÑA 2018.pdf  
Repsol - Edson Gas Plant - 2018 CCIR Verification Report - FINAL.pdf  
REPSOL 14064 declaration Sedes 2018 Rev1-eng firmado.pdf  
REPSOL 14064 declaration Casablanca 2018 -eng firmado.pdf  
REPSOL 14064 declaration Margarita 2018 rev1- en firmado.pdf  
Declaracion QUIMICA REPSOL.pdf

**Page/ section reference**

The attached information contains: - Chemical facilities (page 2). - Non industrial facilities (page 2). - Refining Facilities: Spanish refineries (page 7) and Peru refinery (page 4). - Upstream assets: Casablanca (page 2), Margarita (page 2), Malaysia (page 2), Edson (Canadá, page 4), Bigstone and Wild River (Canadá, page 2), Marcellus (page 2)

**Relevant standard**

ISO14064-3

**Proportion of reported emissions verified (%)**

99

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**Scope**

Scope 2 location-based

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

REPSOL 14064 declaration MARCELLUS 2018 -eng-V2.pdf  
REPSOL 14064 declaración CANADA 2018 - sp-V1.pdf  
REPSOL 14064 declaration Malaysia 2018 -eng-V1.pdf  
Declaración REPSOL REFINO PERU 2018.PDF  
Declaración REPSOL REFINO ESPAÑA 2018.pdf  
Repsol - Edson Gas Plant - 2018 CCIR Verification Report - FINAL.pdf  
REPSOL 14064 declaration Sedes 2018 Rev1-eng firmado.pdf  
REPSOL 14064 declaration Casablanca 2018 -eng firmado.pdf  
Declaracion QUIMICA REPSOL.pdf

**Page/ section reference**

The document attached contains: - Chemical facilities (page 2). - Non industrial facilities (page 2). - Refining Facilities: Spanish refineries (page 7) and Peru refinery (page 4). - Upstream assets: Casablanca (page 2), Malaysia (page 2-3), Edson (Canadá, page 4), Bigstone and Wild River (Canadá, page 2), Marcellus (page 2)

**Relevant standard**

ISO14064-3

**Proportion of reported emissions verified (%)**

89

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**Scope**

Scope 1

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

Verification report 2018.pdf  
integrated-management-report-and-independent-verification-report-non-financial-2018.pdf

**Page/ section reference**

The document attached contains: - 2018 Integrated management report. Detail of indicator 305-1 Direct GHG emissions (Scope 1) in page 68. - 2018 Verification report, pages 1-3

**Relevant standard**

ISAE3000

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**Proportion of reported emissions verified (%)**

100

**Scope**

Scope 2 location-based

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

Verification report 2018.pdf

integrated-management-report-and-independent-verification-report-non-financial-2018.pdf

**Page/ section reference**

The document attached contains: - 2018 Integrated management report. Detail of indicator 305-2 Indirect GHG emissions from energy generation (Scope 2) in page 68. - 2018 Verification report, pages 1-3

**Relevant standard**

ISAE3000

**Proportion of reported emissions verified (%)**

100

**Scope**

Scope 1

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Moderate assurance

**Attach the statement**

Verification report 2018.pdf

integrated-management-report-and-independent-verification-report-non-financial-2018.pdf

**Page/ section reference**

The document attached contains: - 2018 Integrated management report. Detail of indicator 305-1 Direct GHG emissions (Scope 1) in page 68. - 2018 Verification report, pages 1-3

**Relevant standard**

A1000AS

**Proportion of reported emissions verified (%)**

100

**Scope**

Scope 2 location-based

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Underway but not complete for reporting year-previous statement of process attached

**Type of verification or assurance**

Moderate assurance

**Attach the statement**

Verification report 2018.pdf

integrated-management-report-and-independent-verification-report-non-financial-2018.pdf

**Page/ section reference**

The document attached contains: - 2018 Integrated management report. Detail of indicator 305-2 Indirect GHG emissions from energy generation (Scope 2) in page 68. - 2018 Verification report, pages 1-3

**Relevant standard**

A1000AS

**Proportion of reported emissions verified (%)**

100

C10.1b

**(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.**

**Scope**

Scope 3- all relevant categories

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Attach the statement**

Verification report 2018.pdf

integrated-management-report-and-independent-verification-report-non-financial-2018.pdf

**Page/section reference**

The document attached contains: - 2018 Integrated management report. Detail of indicator 305-3 Other indirect GHG emissions (Scope 3) in page 68. - 2018 Verification report, pages 1-3

**Relevant standard**

ISAE3000

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**Scope**

Scope 3- all relevant categories

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Attach the statement**

Verification report 2018.pdf

integrated-management-report-and-independent-verification-report-non-financial-2018.pdf

**Page/section reference**

The document attached contains: - 2018 Integrated management report. Detail of indicator 305-3 Other indirect GHG emissions (Scope 3) in page 68. - 2018 Verification report, pages 1-3

**Relevant standard**

AA1000AS

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**C10.2**

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**(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?**

Yes

**C10.2a**

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**(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?**

| Disclosure module verification relates to | Data verified                              | Verification standard   | Please explain  |
|---|--|---|---|
| C4. Targets and performance               | Emissions reduction activities             | ISO 14064-1 (reasonable assurance)  | During 2018, we implemented actions that reduce our CO2 emissions in 310 ktons . All the initiatives have been verified according to ISO14064, the same standard used to verify the GHG inventory. The reduction was a result of different investment and operating improvement actions across all the Company's operations. These verifications are carried out with annual frequency. To ensure transparency in the management of GHGs it is important for the company that a third party certifies this type of actions. These actions mainly include improvements in energy efficiency through projects such as energy unit integration, steam consumption optimization, improvements in isolation, furnace modifications, residual heat recovery, technological updating of the equipment, installation of variable speed motors, as well as actions to reduce the amount of flared and vented gas.  |
| C12. Engagement                           | Emissions reduction activities             | Clima Projects" following the specifications established by the Spanish Ministry of Agriculture, Food and the Environment | Repsol manages its carbon footprint along the entire value chain. The Climate Projects of the Carbon Fund for a Sustainable Economy (FES-CO2) are greenhouse gas (GHG) emissions reduction projects developed in Spain and designed "to set a path of transformation of the Spanish productive system towards a low carbon model". They must be located in Spain, and developed across diffuse sectors (not subject to the European emission trading scheme), such as the transport, agriculture, residential, waste, etc. sectors. In this context, Repsol was the first company in the history of the CLIMA projects in Spain to verify the reductions of GHG emissions through an accredited external company. During 2019, Repsol verified the reduction of GHG emissions for the seventh consecutive year. The Repsol Electric Mobility Climate Project already has an emission reduction of 1,297.36 tCO <sub>2</sub> (9,742,173.75 km traveled without emissions, equivalent to more than 240 laps around the world), accounting for reduction of 173,42 tCO <sub>2</sub> in 2018. |
| C6. Emissions data                        | Year on year change in emissions (Scope 1) | AA 1000 Assurance Standard (Moderate assurance) ISAE3000 (limited assurance).   | The change in Scope 1 emissions between years 2006 and 2018 has been reported in our Integrated Management Report. In 2018 PwC has verified 100% Scope 1 GHG emissions. The data has been verified according to AA 1000 and ISAE3000, the standard used to verify the 2018 Integrated Management Report. These verifications are carried out with annually. To ensure transparency in the management of GHGs it is important for the company that a third party certifies the data of the company reports.  |
| C6. Emissions data                        | Year on year change in emissions (Scope 2) | AA 1000 Assurance Standard (Moderate assurance) ISAE3000 (limited assurance).   | The change in Scope 2 emissions between years 2006 and 2018 has been reported in our Integrated Management Report. In 2018 PwC has verified 100% Scope 2 GHG emissions. The data has been verified according to AA 1000 and ISAE3000, the standard used to verify the 2018 Integrated Management Report. These verifications are carried out with annually. To ensure transparency in the management of GHGs it is important for the company that a third party certifies the data of the company reports.  |
| C6. Emissions data                        | Year on year emissions intensity figure    | AA 1000 Assurance Standard (Moderate assurance) ISAE3000 (limited assurance).   | The change in our emission intensity figure between years 2006 and 2018 has been reported in our Integrated Management Report. In 2018 PwC has verified the emission intensity figures reported. The data has been verified according to AA 1000 and ISAE3000, the standard used to verify the 2018 Integrated Management Report. These verifications are carried out with annually. To ensure transparency in the management of GHGs it is important for the company that a third party certifies the data of the company reports.   |

**C11. Carbon pricing**

**C11.1**

**(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?**

Yes

**C11.1a**

**(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.**

Alberta SGER  
EU ETS

**C11.1b**

(C11.1b) Complete the following table for each of the emissions trading systems in which you participate.

**Alberta SGER**

**% of Scope 1 emissions covered by the ETS**

72

**Period start date**

January 1 2018

**Period end date**

December 31 2018

**Allowances allocated**

148177

**Allowances purchased**

58691

**Verified emissions in metric tons CO2e**

206868

**Details of ownership**

Facilities we own and operate

**Comment**

**EU ETS**

**% of Scope 1 emissions covered by the ETS**

72

**Period start date**

January 1 2018

**Period end date**

December 31 2018

**Allowances allocated**

8073220

**Allowances purchased**

3110149

**Verified emissions in metric tons CO2e**

11183369

**Details of ownership**

Facilities we own and operate

**Comment**

C11.1d

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**(C11.1d) What is your strategy for complying with the systems in which you participate or anticipate participating?**

1. Manage EU ETS positions of Repsol's installations as a single integrated position to reduce emission costs and minimize market risk:

Repsol manages deficit positions of all affected business units (in Spain the Refining and Chemicals Business Units and in Portugal the Chemicals Business Units) in the EU ETS. We are committed to reducing energy use and GHG emissions in all our operations. Our energy management systems enable us to establish energy efficiency plans and emissions reduction targets, both annually and in the long-term. Specifically, we are working on two different CO2 reduction plans that overlap: 2014-2020 plan with an emissions reduction target of 2.1 million tCO2 eq and 2018-2025 plan with the objective of achieving an annual reduction of 3 million tons of CO2e at the end of the period compared to 2017. As an example, this year in Cartagena refinery we improved heat recovering in furnaces, resulting in a reduction of 14.000 tCO2/year.

During 2018 Repsol closely followed the EU legislative measure referred to the EU ETS (Phase IV development) and anticipating price effects using different market tools such as futures, forwards and other structured operations that have contributed to reduce the risk of the Group. In addition, we participate in IETA (International Emission Trading Association) emerging trading markets working group following the new carbon market developments wherever introduce national trading systems could have implications for Repsol's upstream or downstream assets.

2. New market-based Mechanism.

Following article 6 of Paris Agreement a mechanism to contribute to the mitigation of greenhouse gas emissions and support sustainable development should be established under the authority on a voluntary basis. It shall be supervised and shall aim:

- (a) To promote the mitigation of greenhouse gas emissions while fostering sustainable development;
- (b) To incentivize and facilitate participation in the mitigation of greenhouse gas emissions by public and private entities;
- (c) To contribute to the reduction of emission levels, which will benefit from mitigation activities resulting in emission reductions that can also be used to fulfil its nationally determined contribution; and
- (d) To deliver an overall mitigation in global emissions.

UNFCCC (United Nations Framework Convention on Climate Change) will be responsible for developing rules as well as for the governance of mechanisms. Repsol is supporting those measures, monitoring and participating in industrial associations and think tanks in order to define the modalities and procedures of NMM.

**C11.2**

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**(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?**

Yes

**C11.2a**

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**(C11.2a) Provide details of the project-based carbon credits originated or purchased by your organization in the reporting period.**

**Credit origination or credit purchase**

Credit purchase

**Project type**

Forests

**Project identification**

Proyecto Forestal CO2CERO (Forestal project)

**Verified to which standard**

CDM (Clean Development Mechanism)

**Number of credits (metric tonnes CO2e)**

78

**Number of credits (metric tonnes CO2e): Risk adjusted volume**

78

**Credits cancelled**

Yes

**Purpose, e.g. compliance**

Voluntary Offsetting

---

**Credit origination or credit purchase**

Credit purchase

**Project type**

Forests

**Project identification**

Manejo Sostenible De Los Bosques Aplicado Al Predio Santa Ana, Vereda El Popal, Municipio De Sonsón, Bajo El Esquema Banco2 (sustainable management of forests)

**Verified to which standard**

CDM (Clean Development Mechanism)

**Number of credits (metric tonnes CO2e)**

87

**Number of credits (metric tonnes CO2e): Risk adjusted volume**

87

**Credits cancelled**

Yes

**Purpose, e.g. compliance**

Voluntary Offsetting

---

**C11.3**

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**(C11.3) Does your organization use an internal price on carbon?**

Yes

**C11.3a**

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**(C11.3a) Provide details of how your organization uses an internal price on carbon.**

**Objective for implementing an internal carbon price**

Navigate GHG regulations  
Stakeholder expectations  
Change internal behavior  
Drive energy efficiency  
Drive low-carbon investment

**GHG Scope**

Scope 1  
Scope 2

**Application**

All business units in all counties where the company operates.

**Actual price(s) used (Currency /metric ton)**

25

**Variance of price(s) used**

Our carbon price pathway starts with 25 USD\$/t CO2 and this value will increase in the future. The aim is to reach 40 USD\$/t CO2 by 2025.

**Type of internal carbon price**

Shadow price

**Impact & implication**

As an energy company we are convinced that setting a global carbon pricing and applying it homogeneously to all sectors is the best tool to move toward a low emissions future. In this way, each ton of CO2 would have an associated price that everyone, from the industry to the final consumer, would see reflected in their activity and that would allow them to become aware and modify their habits toward a production and consumption of energy that is efficient as possible. This would also be reinforced by clear and transparent information on costs and their impact on each party involved. The global application of this measure would promote a model in which sustainability and competitiveness would reinforce each other. Furthermore, the homogeneous application at a global level would eliminate the risk of delocalization of industry and would avoid overlap with other environmental policies currently in force, aimed at incentivizing or penalizing specific sectors or technologies, which undermine the effectiveness of this tool and whose cost per ton of CO2 avoided is much greater than the result of putting the same price on each ton of CO2. This system would also make it possible to address the transition to a low-emissions future in an orderly manner and at the lowest cost to the consumer. In accordance with this position, and in the absence of global measures, Repsol has established an internal carbon pricing that we apply to every new investment we make. The values we have set are US\$25/t in 2018, reaching US\$40/t from 2025.

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**C12. Engagement**

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**C12.1**

**(C12.1) Do you engage with your value chain on climate-related issues?**

Yes, our suppliers  
Yes, our customers  
Yes, other partners in the value chain

---

**C12.1a**

**(C12.1a) Provide details of your climate-related supplier engagement strategy.**

**Type of engagement**

Innovation & collaboration (changing markets)

**Details of engagement**

Run a campaign to encourage innovation to reduce climate impacts on products and services

**% of suppliers by number**

11.5

**% total procurement spend (direct and indirect)**

8

**% Scope 3 emissions as reported in C6.5**

10

**Rationale for the coverage of your engagement**

8% is the result of dividing the expenditure of those initiatives that aim to incorporate motor 6 engines in the trucks the company use for product transportation (downstream businesses) by the total expenditure of downstream business units

**Impact of engagement, including measures of success**

The percentage of trucks (downstream businesses) equipped with euro 6 engines has increased from 50% to 65% in 2018. Considering a total amount of 317million km traveled by road in 2018, and that emissions for trucks equipped with euro 6 engines are 129 gCo2eq/km, the initiative has reduced 4.803 Tn CO2eq in 2018, and further reductions are expected in coming years, as a higher percentage of trucks in the company will be equipped with these engines.

**Comment**

Percentage of scope 3 emissions has been calculated considering only Downstream transportation and distribution source.

## C12.1b

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### (C12.1b) Give details of your climate-related engagement strategy with your customers.

#### Type of engagement

Collaboration & innovation

#### Details of engagement

Run a campaign to encourage innovation to reduce climate change impacts

#### % of customers by number

6

#### % Scope 3 emissions as reported in C6.5

0

#### Please explain the rationale for selecting this group of customers and scope of engagement

According to Repsol's update of the Strategic Plan (2018 – 2020), one of the three pillars it is based in, consists of the development of new business associated with the energy transition. Mobility is an example of these business, This is the reason why customers who have recharged their electric vehicles within the Repsol Electric Mobility Climate Project during the year 2018 has been selected. There have been about 4,000 customers and, taking into account that at the end of the year there was a fleet of 63,000 electric vehicles, the size of engagement is 6%.

#### Impact of engagement, including measures of success

Repsol manages its carbon footprint along the entire value chain. The Climate Projects of the Carbon Fund for a Sustainable Economy (FES-CO2) are greenhouse gas (GHG) emissions reduction projects developed in Spain and designed "to set a path of transformation of the Spanish productive system towards a low carbon model". They must be located in Spain, and developed across diffuse sectors (not subject to the European emission trading scheme), such as the transport, agriculture, residential, waste, etc. sectors. In this context, Repsol was the first company in the history of the CLIMA projects in Spain to verify the reductions of GHG emissions through an accredited external company. During 2019, Repsol verified the reduction of GHG emissions for the seventh consecutive year. The Repsol Electric Mobility Climate Project already has an emission reduction of 1,297.36 tCO<sub>2</sub> (9,742,173.75 km traveled without emissions, equivalent to more than 240 laps around the world), accounting for reduction of 173,42 t/CO<sub>2</sub> in 2018.

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## C12.1c

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### (C12.1c) Give details of your climate-related engagement strategy with other partners in the value chain.

Repsol also seeks to engage investors and the civil society at large. In 2018 we held the forth "[Repsol Sustainability Day](#)", an event for analysts and investors, where the key projects were explained. Investors are also engaged through General Shareholders' Meeting.

In addition, Repsol promotes the Entrepreneurs Fund of the Fundación Repsol. The Fund is aimed at entrepreneurs with innovative technological projects in the field of energy who have set up or intend to set up a company. The 8th call of proposals of Fundación Repsol's acceleration program closed on March, 4th (2019) with a total of 649 applications. This year the increase in the number of applications for certain scopes with respect to last year stands out. In particular, new materials, circular economy and biotech, and digitalization and advanced mobility (+16%). Additionally, almost 50% of the applications coming from outside of Spain which translates into an increase of 25% with respect to 2018. The measurement of success of the Entrepreneurs Fund is the number of ideas received every year. This edition has seen an increase of 78% in the number of entrepreneurs interested in receiving support from the Repsol Entrepreneurs Fund.

Fundación Repsol has also conducted Learning Workshops that help schoolchildren to understand current and future energy challenges. In 2018, more than 5,500 students from 6th grade and 3rd grade from 120 schools in A Coruña, Autonomous Community of Madrid, Cartagena, the Basque Country, Puertollano and Tarragona enjoyed the activities of the Aprendenergía workshops. This initiative was developed during school hours in the classroom or in the centers of visits of the Repsol Industrial Complexes.

To prioritize engagement Repsol analyzes the portfolio of socially responsible investors and seeks to increase it proving the effort carried out to reduce GHG emissions. A measurement of success is the increase of the percentage of socially responsible investors in our portfolio, which has increased to a 29.9% in 2018 (from 14% in 2017).

## C12.3

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### (C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?

Direct engagement with policy makers

Trade associations

Funding research organizations

Other

## C12.3a

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**(C12.3a) On what issues have you been engaging directly with policy makers?**

| Focus of legislation  | Corporate position            | Details of engagement   | Proposed legislative solution  |
|---|-------------------------------|---|--|
| Cap and trade   | Support with minor exceptions | We have answered to EC public consultations related to the implementation of the Emissions Trading System (ETS) Reform: - Revising the rules for free allocation in the EU Emissions Trading System. - Methodological choices for determining the list of sectors and subsectors deemed exposed to a significant risk of carbon leakage, for the period 2021-2030. - Public Consultation on the Establishment of the Innovation Fund. We have also shared our messages with trade associations such as FuelsEurope, IOGP. Scope: European Union | We believe EU ETS should remain as the cornerstone of climate policies in the EU. The EU ETS must therefore provide the right incentives towards a competitive low-carbon economy. It should support industrial competitiveness, guarantee security of supply and assure sustainability. It must balance the efforts and reinforce competitiveness as a fundamental element to support growth and jobs. In the absence of a global agreement on climate change that includes all major contaminant countries, the risk of carbon leakage is critical and harms European Union industry, while discourages new industrial investments.  |
| Energy efficiency   | Support with major exceptions | We have been directly involved with policy makers in the discussions on the Commission proposal related to the Revision of the Energy Efficiency Directive 2012/27/EU. Scope: European Union  | Repsol supports one target-approach, the single GHG reduction target for 2030, as the most cost-efficient way to the low-carbon society using energy efficiency and use of renewable energy. The European Union should ensure that all the pieces of its energy and climate policy form a coherent whole in order to avoid a distorting effect on the carbon price. The main focus of the future climate policy should be on GHG emissions reduction rather than on setting specific targets for energy mix and energy efficiency. Industrial sectors should not be obliged parties of the energy efficiency directive post- 2020 as they have ETS to reduce GHG emissions through Energy efficiency and renewable sources.  |
| Clean energy generation   | Support with minor exceptions | We have been directly involved with the policy makers in the discussions about the Commission proposal on the Renewables Energy Directive Reform (RED II).  | Repsol welcomes the Commission's proposal on the Renewable Energy Directive II (RED II) as the policy instrument to promote the use of renewable energy in the electricity, heating & cooling and the transport sector and recognizes that the deployment of renewable energy is one of the main measures to tackle security of supply and climate change. Repsol considers that transport can play an important role in achieving the EU-wide renewable energy target of at least 32% renewables in 2030. Homogeneous policy across the EU will be key in creating conditions that remain predictable and stable over the long term and that prevent fragmentation of the EU single energy market   |
| Clean energy generation<br><i>Undecided, as no draft text was available in 2018 we sent a position paper to the Commission highlighting key questions for its consideration</i> | Undecided                     | As part of the Alliance of HVO producers in Europe, we sent a letter to DG Energy referred to the future Delegated Act on the determination of high indirect land-use change-risk feedstock and Low ILUC certification of low indirect land use change-risk biofuels, bio liquids and biomass fuels   | Europe's HVO producers strongly believe that technological innovation is a key enabler for CO2 emissions reduction. The preservation of forests and high carbon stock lands form already an integral part of the biofuel production process. HVO producers believe that the Delegated Act is a unique opportunity to enhance the sustainability criteria and creates a reference which could be later on extended and applied worldwide. The aim of the regulation should be to stop the future possible deforestation: it can be achieved with a dynamic regulation that provides opportunities for those that will switch from unsustainable practice to best practice.  |
| Climate finance   | Support with major exceptions | We have been directly involved with the policy makers in the discussions about the EU Action Plan on Financing Sustainable Growth.  | Repsol is aware of the importance of the EU Action Plan on Financing Sustainable Growth launched by the European Commission to reorient EU capital flows towards more sustainable investments. Innovation, cutting edge technology and new applications for already existing technologies will be decisive to undertake the paradigm change. For that, access to competitive funding will be crucial, therefore sustainable finance will play a critical role in the energy transition. The Oil & Gas sector, as an integral part of current energy model, should have access to the required funding in order to accomplish all key changes and challenges to ensure a gradual transition to the new energy model. ". A financial approach, based on the principles of technology neutrality, cost effectiveness and free competition, should allow all involved sectors to take part of this energy process recognizing their valuable contribution.   |
| Regulation of methane emissions   | Support                       | Repsol monitored Alberta's proposed changes to the regulation of methane emissions through our engagement with CAPP   | Repsol supports the identification of sources, the measurement and the mitigation of methane emissions, avoiding any legislation which may lead to double regulation or duplicities. In this sense, Repsol is fully committed to reduce its methane emissions and has recently endorsed the Climate and Clean Air Coalition Initiative – Oil and Gas Methane Partnership promoted by UN Environment  |
| Other, please specify (Clean Mobility Packages)   | Support with major exceptions | Repsol engaged directly with the policy-makers on the Alternative Fuels Infrastructure Fund. We also engaged, directly on the CO2 Standard emissions for new Heavy Duty Vehicles.   | Regarding the Alternative Fuels Infrastructure Fund, at Repsol, we are fully aware of the European Clean Mobility initiative and we are closely monitoring its development and progress. Our company is fully committed in the fight against climate change and is actively participating and investing in alternative mobility solutions by developing infrastructure and promoting: electric mobility – charging points, LPG mobility – Gas natural stations (Repsol AutoGas) and carsharing – (WIBL) Regarding the CO2 Standard emissions for HDVs, Repsol believes that including a life-cycle emission calculation will ensure that legislation is implemented in the most accurate way, taking into account the entirety of emissions beyond the vehicle engine. Including a well-to-wheel approach will ensure that all technologies with a proven climate track record will be able to compete on an equal footing. The new Regulation should include the proposed carbon corrector factor as another incentive for the uptake of a variety of alternative fuels. In order to seize the potential of alternative powertrains, all options should be encouraged in order to ensure the diversity and effectiveness of Europe's future fuel pool.  |
| Other, please specify (Strategy for Long Term EU GHG emissions reduction)   | Support with minor exceptions | We have answered to EC public consultation related to the Strategy for Long Term EU GHG emissions reduction both as Repsol as well as through IOGP.   | The Paris Agreement has introduced a global ambition, World population growth; need for sustainable economic development and the corresponding growing energy demand may slow down the convergence of asymmetric climate policies. For investments to materialize, we need an industry minded EU policy for large-scale investments, safeguarding industrial competitiveness. Europe can work to achieve this on an international level, by encouraging other countries to adopt similarly targets and, on a domestic level, ensuring carbon leakage protection for at-risk sectors. The low carbon commitments will lead to greater innovation. We highlight the potential of the following technologies in the transition to a low-carbon economy: - Process improvement technologies that reduce operations emissions. - Liquid low carbon fuels - Renewable/low CO2 hydrogen - Use of alternative low carbon feedstock - CCS and CCU. The development of different energies and energy carriers will bring flexibility and resilience to the economy, allowing the market to select the optimal solution for every sector and use. No promising technology should be a priori excluded. A technology neutral policy framework is essential to ensure EU competitiveness and economic growth. |

**C12.3b**

**(C12.3b) Are you on the board of any trade associations or do you provide funding beyond membership?**

Yes

**C12.3c**

**(C12.3c) Enter the details of those trade associations that are likely to take a position on climate change legislation.**

**Trade association**

**Is your position on climate change consistent with theirs?**

Consistent

**Please explain the trade association's position**

IETA encourages carbon pricing of many forms, but its primary focus is on emissions trading because of its environmental assurance and economic advantages. Its vision is a single global carbon price produced by markets of high environmental integrity. In Europe, IETA supports the EU emissions trading system (ETS) as the central policy instrument of the 2030 Climate and Energy package. IETA highlights the importance of efficient functioning of the market, with predictable rules, greater policy coordination and appropriate measures to address ETS impacts on trade-exposed sectors. One of its priorities is to form a vision on longer-term strategic issues, such as extending the scope of the ETS, investment incentives for low-carbon technologies and use of markets to meet the European Union's rising ambitions.

**How have you influenced, or are you attempting to influence their position?**

During 2018, Repsol has participated different Working Groups, related to the expansion of EU ETS to new sectors, overlapping policies and carbon leakage.

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**Trade association**

FuelsEurope

**Is your position on climate change consistent with theirs?**

Consistent

**Please explain the trade association's position**

FuelsEurope recognizes that climate change is real and warrants action towards a global challenge. To address a global challenge global actions are required. These measures should however be compatible with the need to supply energy to a growing world population. Increasing volumes of energy – secure, reliable and affordable - are necessary to fight poverty in several regions of the world, to permit access to higher living standards to a rising middle class in many developing countries and to maintain today's life quality in the developed countries. The EU refining industry is committed to contribute to this objective by continuing to reduce its CO2 emissions and providing the economy and citizens with low-carbon fuels and other products that society needs. Development of a diversity of energies and energy carriers will give an economy flexibility, resilience and the possibility for the market to select the optimal solution for every sector and use. Liquid fuels, with their unique characteristics will continue to be employed in many transport fields. Therefore, the EU refining industry has an important and enduring role to play in the energy choices of the future, by providing low-carbon liquid fuels to complement low-carbon electrons, gas and hydrogen as energy carriers. Technology and collaboration across industries will facilitate the production of these low-carbon liquid fuels.

**How have you influenced, or are you attempting to influence their position?**

Repsol is member of the board and participates actively in several working groups of the association related with EU Emission Trade System, Transport, etc.

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**Trade association**

International Association of Oil and Gas Producers (IOGP)

**Is your position on climate change consistent with theirs?**

Consistent

**Please explain the trade association's position**

IOGP recognizes the risks of climate change due to rising greenhouse gas emissions and has welcomed the Paris Agreement. Greenhouse gas emissions come from a variety of sources, including agriculture and hydro-carbon-fueled transport and industrial activity that the world still needs to drive economic growth and improve living conditions in developing nations. IOGP supports the international community's commitment to address the global challenge of climate change and also believes that the oil and gas industry is very much a part of the solution to this challenge, which can be addressed while meeting society's future energy needs. The long-term objective of climate change policy should be to reduce the risk of serious impacts on society and ecosystems, while recognizing the importance of reliable and affordable energy to society

**How have you influenced, or are you attempting to influence their position?**

Repsol participates in the EU Committee which is the one directly dealing with European legislation and engaging European regulators. Under the EU Committee there are also many Sub Committees and Task Forces in which we are also involved. The special interest for this project is the Energy and Climate Sub-committee reviewing the Climate Change policy. We collaborate with the position participating in conference calls, face to face meetings, reviewing and making comments to position papers.

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**Trade association**

PlasticsEurope

**Is your position on climate change consistent with theirs?**

Consistent

**Please explain the trade association's position**

PlasticsEurope is one of the leading industrial trade associations in Europe. It gathers 55 industrial companies, which produce nearly 90% of all polymers across the EU28 member states plus Norway, Switzerland and Turkey. Plastics Europe promotes the positive contributions of plastics by communicating plastics contribution to sustainable development, innovation and quality of life. The association highlights the material's beneficial properties throughout its life cycle, making relevant contributions to sustainable welfare by facilitating resource efficiency and climate protection: Not only most plastics products require less energy for their production if compared to alternative materials but also many of them help saving significant amounts of energy during their lifespan use (lightweight materials for transport, insulation for building and construction, energy savings in packaging, etc). Plastics Europe promotes the use of Life Cycle Thinking (LCT) to improve understanding about product benefits and to take more informed decisions. As a scientific method, Life Cycle Assessment (LCA) is a technique to analyze the potential environmental impacts associated with a product, process or service.

**How have you influenced, or are you attempting to influence their position?**

Repsol participates in several working groups and task forces such as Life Cycle Task Force, among others. This group is developing eco profiles that are Life Cycle Inventory datasets (LCI) and Environmental Product Declarations (EPD) for plastics. Repsol is also collaborating with Plastics Europe to implement Circular Economy concepts and approach on what regards plastic materials.

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**Trade association**

CEFIC

**Is your position on climate change consistent with theirs?**

Consistent

**Please explain the trade association's position**

CEFIC is one of the leading industrial trade associations in Europe, and acts as the voice of the chemical industry in Europe. It represents 29,000 large, medium and small chemical companies in Europe, which directly provide 1.2 million jobs and account for 17% of world chemical production. The chemical industry is committed to contributing to the agreed EU targets of reducing greenhouse gas emissions, including the Clean Energy Package proposal of the European Union and its ambitions to reform and

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harmonise energy markets in Europe and to pioneer the low-carbon economy for the benefit of all its citizens. In December 2015, the European Chemical Council publicly backed the Paris Climate Agreements with their strong global commitments, and applauded the diplomatic efforts to achieve an ambitious and globally-binding agreement, as stated again on a press release in June 1st 2017. With the strong belief that the EU chemical industry is a pillar for tomorrow's low carbon economy, the association reminds that Chemical innovations enable current and future climate change solutions, including renewable energy, energy storage and thousands of products to improve energy efficiency, such as in vehicles and buildings.

**How have you influenced, or are you attempting to influence their position?**

Repsol participates in several working groups such as Energy and Climate Action Working Group, the Environment Working Group, the BusinessEurope's Advisory and Support Group.

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**Trade association**

BusinessEurope

**Is your position on climate change consistent with theirs?**

Consistent

**Please explain the trade association's position**

Climate change is a global challenge that requires global actions. BUSINESSEUROPE is committed to and aware of the challenges that climate change presents as well as the impacts of human activities. This is why they firmly expect an ambitious legally binding global agreement, which reflects the long-term objective of limiting global warming below 2°C. Development of a global carbon market should play a stronger role in the future. Economic instruments can best help to stimulate investment in innovative low-carbon technologies and products in locations where they deliver the greatest possible climate benefits at the lowest costs.

**How have you influenced, or are you attempting to influence their position?**

Repsol participates in several working groups such as Energy and Climate Action Working Group, the Environment Working Group, the BusinessEurope's Advisory and Support Group.

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**Trade association**

Canadian Association of Petroleum Producers (CAPP)

**Is your position on climate change consistent with theirs?**

Consistent

**Please explain the trade association's position**

CAPP's Climate Change Policy Principles Canada's oil and natural gas producers are ready and willing to do their part to contribute to the overall Canadian plan on climate change. Collaborative and solutions-oriented: • Given Canada's climate commitments and industry impacts, CAPP will proactively collaborate with governments and stakeholders towards appropriate policy solutions. • Policy solutions need to be adaptive and carefully consider environmental, economic, and social outcomes. Efficient, effective & predictable: • Climate policy should target reductions where they are most efficient and effective right across the entire energy value chain from production to end use and considering fairly all sectors and jurisdictions. • Climate change policies should achieve emissions reductions at the least cost to Canadians, the economy and industry. • Revenues from climate policy should be fully recycled back into the economy to incent innovation, assist transition or reduce other taxes and levies. Technology and innovation focused: • Policy should incent technology and innovation to address climate change, and capture the opportunity to export solutions to the world. • Considerable future emissions reductions will stem from improving the hydrocarbon energy sector requiring continuing strong innovation and policy effort in these areas. Globally competitive: • Canada's climate policies must ensure Canada's resource development is cost and carbon competitive with other jurisdictions, especially the U.S. as Canada's largest trading partner. • Canada's climate policy leadership should bring proportionate benefits to Canada, including ensuring the industry receives full value for Canadian energy products through effective access to global markets. • Canada is highly dependent on the development and trade of its natural resources, and on its ability to attract foreign investment. Canada's climate policies must be designed to maintain Canada's ability to raise global investment capital.

**How have you influenced, or are you attempting to influence their position?**

Repsol participated in the development of policy positions at CAPP. Repsol's employees are participating in various committees and working groups, several of which are responsible for developing positions on policies and influencing emerging legislations or changes to legislation and regulations related to climate change, carbon price, energy efficiency and methane emission reductions.

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**Trade association**

Canadian Chamber of Commerce

**Is your position on climate change consistent with theirs?**

Consistent

**Please explain the trade association's position**

The Canadian Chamber of Commerce supports evidence-based policymaking that appropriately accounts for environmental externalities as well as efforts by the government of Canada to cooperate with provinces and territories to address environmental issues that are of shared jurisdiction. The Chamber favors a price on carbon, supports the creation of a water strategy and believes in the imperative to foster technological innovation and ensure efficient regulatory processes.

**How have you influenced, or are you attempting to influence their position?**

Repsol participated in the Chamber's committee on natural resources and, which is in charge of the development of the Chamber's policy positions on climate change.

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**Trade association**

AEGLP (European LPG Association)

**Is your position on climate change consistent with theirs?**

Consistent

**Please explain the trade association's position**

Climate change constitutes a problem of unprecedented scope, complexity and importance for humanity in general and for the policy community in particular. Achieving a global consensus on how and when to act while balancing competing environmental, social, political and economic imperatives is a challenge but it is a challenge that must be met. As citizens and as representatives of a clean and relatively low carbon gaseous fuel, the European LPG industry strongly supports the emergence of an ambitious EU climate strategy, and is committed to optimizing LPG's role in the transition towards a more climate friendly energy model. Combining an established market presence with CO2 emission advantages over more carbon intensive alternatives such as coal, oil and conventionally generated electricity, LPG can and should be part of the solution. LPG's climate credentials are significantly enhanced by the emerging evidence regarding the role of black carbon in global warming. Due to the clean combustion typically associated with gaseous fuels, LPG generates extremely low levels of black carbon, making it an ideal component of any global warming reduction strategy. Moreover, its portability makes it an ideal auxiliary fuel for systems based on renewable energy such as solar thermal and photovoltaic, particularly in areas beyond the reach of the natural gas network. Finally, as Europe's leading alternative fuel (see the transport section of the website for details), LPG is helping to tackle the particularly persistent challenge of reducing CO2 and black carbon emissions in the European road transport sector.

**How have you influenced, or are you attempting to influence their position?**

### C12.3d

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**(C12.3d) Do you publicly disclose a list of all research organizations that you fund?**

No

### C12.3e

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**(C12.3e) Provide details of the other engagement activities that you undertake.**

Repsol has been a part of the Oil and Gas Climate Initiative (OGCI) along with nine other leading sector companies to collaborate on climate action since 2015, sharing best practices and technological solutions. In 2016 a fund was created to invest US\$1 billion over 10 years to develop and accelerate the commercial deployment of low-emission technologies. The recently created fund will invest in the development of innovative technologies that, once marketed, will contribute in the future to significantly reducing GHG emissions. It will also work jointly with similar initiatives from other sectors and stakeholders. The two areas on which the activity of the OGCI investment vehicle will focus in principle will be the development and implementation of technologies for capturing, utilizing, and storing carbon; and the reduction of methane emissions throughout the value chain to promote the role of natural gas as a fuel for generating electricity.

OGCI is a voluntary, CEO-led initiative, which supply a fifth of world oil and gas production and nearly 10% of the world's energy. The main lines of work are as follows:

- Establish the road map towards a low-emission future: we are researching the areas where the Oil & Gas sector can work to achieve the objective of limiting the increase in global temperature to 2 °C.
- Manage methane emissions: we are collaborating in the research required to gain in-depth knowledge of methane emissions and detection technology to help both companies and governments to act with greater effectiveness.
- Carbon Capture, Utilization, and Storage (CCUS): the large-scale use of this technology will make us reduce costs, develop viable market mechanisms, and improve our understanding of geological storage capacity.
- Energy efficiency and energy efficiency in transport have started their activities recently. In those activity lines O&G industry can play a relevant role and influence due to its expertise and background over time.

In 2016 Repsol joined the UN Environment's Climate & Clean Air Coalition – Oil & Gas Methane Partnership, to implement methane emission reduction projects in collaboration with other companies, institutions and governments. We seek to eliminate barriers and come up with technical and economically viable solutions. Repsol also joined the World Bank's Zero Routine Flaring by 2030 initiative, which allows us to collaborate with other companies and institutions to look for the most advanced technologies that minimize the routine gas flaring by 2030.

IV Energy for Europe Conference:

On Thursday 27 September 2018, Repsol organised the IV Annual Repsol Conference in Brussels entitled "Energy for Europe – innovating for a sustainable future". The Conference attracted members of the European Institutions and stakeholders from industry and civil society.

Antonio Brufau, Chairman of Repsol, opened the conference. He stated "We all need to work together, with the EU leading the effort, towards competitive transformations that will promote social, economic and environmental sustainability". Keynote speakers and a single panel discussion looked at the availability of funds for innovative and breakthrough technologies, as well as analyzing how innovation in different areas will be needed to shape the future of energy, including but not limited to technical, social and financial innovation. They also looked at the policy approach needed to ensure Europe's competitiveness in a low-carbon future.

### C12.3f

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**(C12.3f) What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?**

The [Sustainability Division of Repsol](#) has responsibilities for developing a corporate carbon strategy. At the same time, Repsol establishes internal working groups to follow policy and regulation that may affect the company and also to coordinate the engagement activities that are undertaken related to these policies regulations.

These groups create legislative records to summarize the status of every legislative proposal and regulation that could affect Repsol. The possible impacts and common position of the company are outlined in those documents, so that they can be used by all employees involved in the process. This is to ensure proper coordination of the regulatory activities of the company. The members of these groups are also participants in trade associations. They share the information they receive from the trade associations along with the association's position and activities with the rest of the members of the group. The members of these groups are also the experts on areas affected by a specific regulation as well as some members from the Sustainability Division if the regulation is related to climate change and from the European Affairs Division if it comes from the European Union.

The internal working groups arrange team meetings regularly, which guarantee proper coordination among team members and across the company.

CANADA:

The Institutional Relations Direction has accountability for engagements with policymakers in Canada and is committed to perform Repsol's engagement on the climate policy consistent with Repsol's corporate strategy and overall corporate position on carbon price and climate change. In coordination with the Canadian Business Unit, both teams collaborate to ensure alignment between federal and provincial work on these policies.

## C12.4

**(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).**

**Publication**

In mainstream reports, incorporating the TCFD recommendations

**Status**

Complete

**Attach the document**

integrated-management-report-and-independent-verification-report-non-financial-2018\_tcm14-147660.pdf

**Page/Section reference**

Section 6. Sustainability Section 6.1. Climate Change

**Content elements**

Governance  
Risks & opportunities  
Emissions figures  
Emission targets  
Other metrics

**Comment**

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**Publication**

In mainstream reports, incorporating the TCFD recommendations

**Status**

Complete

**Attach the document**

consolidated\_financial\_statements\_and\_audit\_report\_tcm14-147658.pdf

**Page/Section reference**

Page 81-82: 31 Environmental information/ 31.1 Environmental Expenses /31.2 Carbon emission allowances. Page 103: Appendix IV - Regulatory Framework - Climate change and alternative fuels

**Content elements**

Risks & opportunities  
Emissions figures  
Other metrics

**Comment**

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**Publication**

In voluntary communications

**Status**

Complete

**Attach the document**

closing\_2018\_global\_sustainability\_plan\_tcm14-148701.pdf

**Page/Section reference**

Pages 20-21

**Content elements**

Other, please specify (Climate Change Targets & Ambitions)

**Comment**

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**Publication**

In voluntary communications

**Status**

Complete

**Attach the document**

2018-sustainability-plan-year-end-report-ic-acoruna-en\_tcm14-128554.pdf

**Page/Section reference**

Pages 26-28

**Content elements**

Other, please specify (Climate change actions )

**Comment**

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**Publication**

In voluntary communications

**Status**

Complete

**Attach the document**

2018-sustainability-plan-year-end report-ic-cartagena\_tcm14-136724.pdf

**Page/Section reference**

Pages 28-29

**Content elements**

Other, please specify (Climate change actions )

**Comment**

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**Publication**

In voluntary communications

**Status**

Complete

**Attach the document**

cierre-ps-petronor-2018\_tcm14-149020.pdf

**Page/Section reference**

Pages 26-28

**Content elements**

Other, please specify (Climate change actions )

**Comment**

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**Publication**

In voluntary communications

**Status**

Complete

**Attach the document**

cierre-ps-puertollano-2018\_tcm14-150940.pdf

**Page/Section reference**

Pages 31-32

**Content elements**

Other, please specify (Climate change actions )

**Comment**

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**Publication**

In voluntary communications

**Status**

Complete

**Attach the document**

cierre-plan-sostenibilidad-sines-2018\_tcm14-149022.pdf

**Page/Section reference**

Pages 29-30

**Content elements**

Other, please specify (Climate change actions )

**Comment**

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**Publication**

In voluntary communications

**Status**

Complete

**Attach the document**

2018-sustainability-plan-year-end report-ic-tarragona-en\_tcm14-128560.pdf

**Page/Section reference**

Pages 32-34

**Content elements**

Other, please specify (Climate change actions )

**Comment**

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**Publication**

In voluntary communications

**Status**

Complete

**Attach the document**

2018-sustainability-plan-year-end report-brasil-en\_tcm14-128458.pdf

**Page/Section reference**

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Pages 23-24

**Content elements**

Other, please specify (Climate change actions)

**Comment**

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**Publication**

In voluntary communications

**Status**

Complete

**Attach the document**

sp\_yer\_bolivia\_2018\_tcm14-150938.pdf

**Page/Section reference**

Pages 30-31

**Content elements**

Other, please specify (Climate change actions)

**Comment**

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**Publication**

In voluntary communications

**Status**

Complete

**Attach the document**

2018-year-end-report-colombia\_tcm14-149008.pdf

**Page/Section reference**

Pages 28-29

**Content elements**

Other, please specify (Climate change actions)

**Comment**

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**Publication**

In voluntary communications

**Status**

Complete

**Attach the document**

2018-sustainability-plan-year-end report-ecuador-en\_tcm14-128461.pdf

**Page/Section reference**

Pages 29-30

**Content elements**

Other, please specify (Climate change actions)

**Comment**

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**Publication**

In voluntary communications

**Status**

Complete

**Attach the document**

indonesia-year-end-report-2018\_tcm13-149230.pdf

**Page/Section reference**

Pages 22-23

**Content elements**

Other, please specify (Climate change actions)

**Comment**

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**Publication**

In voluntary communications

**Status**

Complete

**Attach the document**

malaysia-year-end-report-2018\_tcm13-149232.pdf

**Page/Section reference**

Pages 31-32

**Content elements**

Other, please specify (Climate change actions)

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**Comment****Publication**

In voluntary communications

**Status**

Complete

**Attach the document**

year-end-report-norway-2018\_tcm14-150942.pdf

**Page/Section reference**

Pages 27-30

**Content elements**

Other, please specify (Climate change actions)

**Comment**

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**Publication**

In voluntary communications

**Status**

Complete

**Attach the document**

trinidad-tobago-year-end-report-2018\_tcm13-149016.pdf

**Page/Section reference**

Pages 15-16

**Content elements**

Other, please specify (Climate change actions)

**Comment**

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**Publication**

In voluntary communications

**Status**

Complete

**Attach the document**

equity\_story\_esg\_vf\_tcm14-131394.pdf

**Page/Section reference**

Sections: Our position on Climate Change (Page 23) and Low carbon business (page 33)

**Content elements**

Other, please specify (Energy transition )

**Comment**

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**Publication**

In voluntary communications

**Status**

Complete

**Attach the document****Page/Section reference**

<https://www.repsol.com/en/sustainability/index.cshtml>

**Content elements**

Other, please specify (Sustainability: Repsol Climate Roadmap)

**Comment**

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**Publication**

In voluntary communications

**Status**

Complete

**Attach the document****Page/Section reference**

<https://www.repsol.com/en/sustainability/climate-change/index.cshtml>

**Content elements**

Other, please specify (Climate change)

**Comment**

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**Publication**

In voluntary communications

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**Status**

Complete

**Attach the document**

**Page/Section reference**

<https://www.repsol.com/en/sustainability/climate-change/our-commitment/index.cshtml>

**Content elements**

Other, please specify (Climate change: our commitment)

**Comment**

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**Publication**

In voluntary communications

**Status**

Complete

**Attach the document**

**Page/Section reference**

<https://www.repsol.com/en/sustainability/climate-change/energy-efficiency/index.cshtml>

**Content elements**

Other, please specify (Climate change: Energy efficiency)

**Comment**

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**Publication**

In voluntary communications

**Status**

Complete

**Attach the document**

**Page/Section reference**

<https://www.repsol.com/en/sustainability/climate-change/key-role-of-natural-gas/index.cshtml>

**Content elements**

Other, please specify (Climate change: Key role of natural gas)

**Comment**

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**Publication**

In voluntary communications

**Status**

Complete

**Attach the document**

**Page/Section reference**

<https://www.repsol.com/en/sustainability/climate-change/new-energy-solutions/index.cshtml>

**Content elements**

Other, please specify (Climate change: New energy solutions)

**Comment**

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**Publication**

In voluntary communications

**Status**

Complete

**Attach the document**

**Page/Section reference**

<https://www.repsol.com/en/sustainability/climate-change/our-climate-change-strategy/index.cshtml>

**Content elements**

Other, please specify (Climate change: Our climate change strategy)

**Comment**

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**Publication**

In voluntary communications

**Status**

Complete

**Attach the document**

**Page/Section reference**

<https://www.repsol.com/en/sustainability/climate-change/carbon-pricing/index.cshtml>

**Content elements**

Other, please specify (Climate change: carbon pricing)

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**Comment**

**Publication**

In voluntary communications

**Status**

Complete

**Attach the document**

**Page/Section reference**

<https://www.repsol.com/en/sustainability/climate-change/carbon-capture-use-and-storage/index.cshtml>

**Content elements**

Other, please specify (Climate change: Carbon capture use and storage)

**Comment**

C14. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

C14.1

(C14.1) Provide details for the person that has signed off (approved) your CDP climate change response.

|       | Job title               | Corresponding job category    |
|-------|-------------------------|-------------------------------|
| Row 1 | Chief Executive Officer | Chief Executive Officer (CEO) |

SC. Supply chain module

SC0.0

(SC0.0) If you would like to do so, please provide a separate introduction to this module.

SC0.1

(SC0.1) What is your company's annual revenue for the stated reporting period?

|       | Annual Revenue |
|-------|----------------|
| Row 1 |                |

SC0.2

(SC0.2) Do you have an ISIN for your company that you would be willing to share with CDP?

Please select

SC1.1

(SC1.1) Allocate your emissions to your customers listed below according to the goods or services you have sold them in this reporting period.

SC1.2

(SC1.2) Where published information has been used in completing SC1.1, please provide a reference(s).

### SC1.3

(SC1.3) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?

|                       |  |
|-----------------------|--|
| Allocation challenges | Please explain what would help you overcome these challenges |
|-----------------------|--|

### SC1.4

(SC1.4) Do you plan to develop your capabilities to allocate emissions to your customers in the future?

Please select

### SC2.1

(SC2.1) Please propose any mutually beneficial climate-related projects you could collaborate on with specific CDP Supply Chain members.

### SC2.2

(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?

Please select

### SC3.1

(SC3.1) Do you want to enroll in the 2019-2020 CDP Action Exchange initiative?

Please select

### SC3.2

(SC3.2) Is your company a participating supplier in CDP's 2018-2019 Action Exchange initiative?

Please select

### SC4.1

(SC4.1) Are you providing product level data for your organization's goods or services?

Please select

### Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

|                             | Public or Non-Public Submission | I am submitting to     | Are you ready to submit the additional Supply Chain Questions? |
|-----------------------------|---------------------------------|------------------------|--|
| I am submitting my response | Public                          | Investors<br>Customers | Yes, submit Supply Chain Questions now                         |

Please confirm below

I have read and accept the applicable Terms