

C0. Introduction

C0.1

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

Galp is an integrated energy player that develops profitable and sustainable businesses, aiming to create value to its stakeholders. Our businesses include the exploration and production of oil and natural gas, the refining and marketing of oil products, the distributions and supply of natural gas and the renewable generation and marketing of electricity. To accomplish success, its customer-oriented organisational structure is vital, not only for meeting customers' needs but also for respecting integrity and transparency principles.

Our mission is to create value for all our stakeholders (customers, employees, shareholders, suppliers and business partners), acting in energy markets with ambition, innovation and competitiveness, promoting respect for the principles of ethics and sustainability. The activity of our Company is also based on key values, such as: trust; partnership; agility; innovation and sustainability. Our activities are expanding strongly worldwide and are predominantly located in Portugal, Spain, Brazil and Africa.

Galp is committed to developing its value-focused E&P strategy by optimising and maintaining its portfolio competitiveness based on its high-quality assets that can deliver an above-average production growth until the end of the decade. Especially following the world-class oil and gas discoveries in the pre-salt Santos basin in Brazil and in the Rovuma basin in Mozambique. The Exploration & Production (E&P) business is anchored in these two countries alongside Angola, although Galp's diversified portfolio spans across six countries and over 50 E&P projects.

Galp is a leading player in Iberia, operating across refining, distribution and oil marketing activities. It operates an integrated refining system comprising two refineries in Portugal with a total processing capacity of 330 thousand barrels of oil per day (kbpd), and a distribution network including approximately 1,465 service stations. Refined products are primarily marketed in the Iberian Peninsula but also in Africa, with total sales to direct clients hitting 8.7 mton in 2019. While the Refining business is centred in Iberia, the Company continues to expand its marketing of oil products activity in selected markets in Africa.

Through its Gas & Power (G&P) business, Galp distributes and supplies natural gas both in Iberia and in the broader international market, where it has been consolidating the trading activity. In Iberia, where Galp is a relevant player, it has also been consolidating the power business in order to increase integration. Galp is currently an Iberian operator with a triple offering of oil products, natural gas and electricity and is also developing solar power generation projects. Galp sold in 7.6 bcm of natural gas/LNG and 3.2 TWh of electricity.

As part of Galp's low carbon strategy, the Company aims to develop its power generation activity from differentiated and competitive renewable sources, particularly within a lower carbon intensity context. The new Renewables & New Businesses unit is a clear step for Galp to embrace the energy transition, by developing a sustainable and diversified portfolio of renewable power generation and represents a natural hedge to our Iberian commercial power activities. Additionally, this unit is developing new business opportunities where Galp can have a competitive advantage to grow and scale fast. Galp has been strengthening its commercial portfolio to provide renewable energy to its customers. In 2019, the Company established two long-term Power Purchase Agreements (PPAs) for a total of c.650 GWh per year for a 12-year period, which underpin 400 MW solar power projects. Galp aims to develop a profitable renewable power generation business, with 10% to 15% of the Group's future investment to be allocated to those activities as well as to new businesses that could be scaled up. We will expand our renewables' business leveraged on proven technologies, like solar PV, and taking advantage of the existing natural hedge to our power commercial activity in Iberia. Galp's renewable portfolio consists of 3.3 GW capacity to be installed and operating by 2023, and with a longer-term ambition to reach around 10 GW by 2030, starting in Iberia but looking to explore opportunities in other regions where we believe to have competitive advantages. We will also support our customers in this transition, developing decentralised generation solutions, tailored to their needs.

For further information about GALP please visit our corporate website, at: www.galp.com/corp and our Annual Report 2019, at:

<https://www.galp.com/corp/en/investors/reports-and-presentations/reports-and-results>

C0.2

(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
Reporting year	January 1 2019	December 31 2019	No	<Not Applicable>

C0.3

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

Angola
Brazil
Cabo Verde
Eswatini
Guinea-Bissau
Mozambique
Namibia
Portugal
Spain

C0.4

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

EUR

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 chosen approach for consolidating your GHG 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
- Midstream
- Downstream

Other divisions

- Biofuels
- Grid electricity supply from gas
- Grid electricity supply from renewables

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
Board-level committee	The Board of Directors (BoD) defines, monitors and supervises the strategic guidelines related to Climate Change (CC), in the context of the Business Plan and in line with the company's CC Policy, approved by the BoD. The Sustainability Committee and the Risk Management Committee support the BoD in the definition, monitoring and supervision of the strategic guidelines related to Climate Change (CC). Both board-level committees, composed by non-executive directors, meet quarterly and directly report to the BoD. In 2019 both committees had a 100% attendance. The Executive Committee (EC), appointed by the BoD, is directly responsible for developing and implementing the strategic objectives and guidelines related to CC. The EC monitors and supervises the main risks and opportunities identified, including CC, as well as, follows the execution of critical projects from a risk perspective. As example of climate-related decision made by the BoD, it was created the new Renewables & New Businesses unit that is a clear step for Galp to embrace the energy transition, by developing a sustainable and diversified portfolio of renewable power generation and represents a natural hedge to our Iberian commercial power activities. Besides the acquisition of 3.3 GW of renewable power capacity operational by 2023, from which 0.9 GW already operational, this unit is developing new business opportunities where Galp can have a competitive advantage to grow and scale fast. In this sense, in 2019, the Company established two long-term Power Purchase Agreements (PPAs) for a total of c.650 GWh per year for a 12-year period, which underpin 400 MW solar power projects.

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	Scope of board-level oversight	Please explain
Scheduled – all meetings	<ul style="list-style-type: none"> Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding annual budgets Reviewing and guiding business plans Setting performance objectives Monitoring implementation and performance of objectives Overseeing major capital expenditures, acquisitions and divestitures Monitoring and overseeing progress against goals and targets for addressing climate-related issues 	<Not Applicable>	<p>In accordance with the Regulations of the Board of Directors (BoD), GALP's BoD meets periodically, and at least quarterly, to review and guide the company's strategy, monitoring implementation of strategic guidelines and performance of objectives. Annually, the BoD approves the company annual Budget and Business Plan and the strategic investments/divestitures greater than 75M€. According to the key long-term variables approved by the BoD to assess investments, valuations must embed a long-term carbon price assumption. Regarding the Executive Committee (EC), the respective meetings are held on a weekly basis for reviewing and guiding plans of action, risk management policies, setting performance objectives, among others, including to approve investments below 75M€, also considering the same long-term carbon price assumption. Climate change issues are a relevant part of the company's strategy and are discussed whenever relevant, as Galp's strategy is based on the execution of our competitive upstream portfolio, an efficient and dynamic refining and midstream activity, a commercial business focused on the needs of our customers, and on the development of a profitable renewable portfolio and new business models, supported by innovative and differentiating solutions that promote the transition to a low carbon economy. Also, quarterly, the Sustainability Committee and Risk Management Committee report to the BoD its main conclusions and its activity on monitoring and overseeing the performance of goals and targets, in particular for addressing climate-related issues.</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)	Reporting line	Responsibility	Coverage of responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly
Chief Financial Officer (CFO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly
Chief Risks Officer (CRO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly
Chief Sustainability Officer (CSO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly
Risk committee	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	Quarterly
Sustainability committee	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	Quarterly

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).

Galp has two main Committees that oversee climate-related issues – the Risk Management Committee and the Sustainability Committee. The Chairman of both the Risk Management Committee and the Sustainability Committee is the Vice-chairman and Lead Independent Director of the Board of Directors (BoD), thus ensuring that discussions of the risk topics including related to Climate Change (CC) are consistent and effective at all levels. The Chairman of the Sustainability Committee is also a member of the Risk Management Committee, while the Chairman of the Risk Management Committee is also a member of the Audit Committee.

The Risk Management Committee is responsible for monitoring Galp’s main risks; evaluating the compliance with the tolerance levels and the execution and effectiveness of decided mitigation actions; assessing Galp Group’s internal control and risk management systems; issuing appropriate opinions and recommendations; and evaluating compliance with Galp’s risk management policy. The main decisions and activities performed by the Risk Management Committee are quarterly reported to the Audit Board.

The Sustainability Committee’s mission is to support the BoD in integrating sustainability principles (including CC) in the management process of the group companies, promoting best practices in all business areas and corporate services with a view to long-term value creation. The Sustainability Committee meets at least quarterly and directly reports to the BoD. It’s chaired by the independent Vice-Chairman of the Board of Directors and comprises two more non-executive directors.

Galp integrates the risks and opportunities related to CC in the definition of the annual strategic guidelines and Business Plan that are discussed and approved by the BoD. In these analysis and decision processes, several tools are used depending on a set of critical uncertainties for Galp’s business models. Namely, a scenario analysis, that includes a Paris agreement aligned scenario, and M/L-term variables also aligned with the scenarios, including variables as the carbon price, and the calculation of the value@risk and/or the carbon intensity associated to the business plan and/or strategy proposed. These analysis guarantees a decision-making process that covers the R&O related to CC and ensures the development of a more resilient portfolio in different contexts that contributes to the reduction of climate-related impacts.

At the organisational level, climate-related issues are also managed and/or addressed by the business unit managers, which incorporate climate-related issues in their management decisions (e.g. when acquiring power generated through renewables or when implementing energy efficiency and water use minimisation), by the procurement manager, in the contracting processes in order to reduce climate-related impacts in the materials, equipment and solutions used by the Group, by the corporate affairs manager within the stakeholder management processes and guidelines, by the risk manager in the risk assessment processes, such as in the case of investments. At Galp, climate-related topics are transversal to the organisation at different levels, which include strategy definition, policy approval, strategy and policy implementation, business management, business implementation, stakeholder management and risk assessment.

Climate Change risks and opportunities are part of the Company’s strategic formulation process. In this process, top management is supported by the Sustainability Committee, the Risk Management Committee and the Strategy and Market Intelligence team along with other business units. We take into account the key macro trends and context, including developments carbon market and also new trends in terms of energy consumption. After identifying the main issues, Galp assesses risks on the basis of probability and impact, and opportunities based on their relevance, defining priority lines of action and setting strategic axes. Galp established a risk radar, including for relevant developments and regulatory changes, measuring potential impacts and defining risk mitigating actions.

C1.3

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

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	

C1.3a

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

Entitled to incentive	Type of incentive	Activity incentivized	Comment
Board/Executive board	Monetary reward	Emissions reduction project Emissions reduction target	The corporate bodies’ Remuneration Policy aims at reinforcing values, skills, abilities and behaviours, in view of the Company’s long term interest, culture and strategy, and is, particularly, guided by 4 principles, being one of them reward safety, environmental sustainability and energy efficiency (EE) in the activities material to the Company, through incentives related with the execution of objectives and targets, including within the context of the appropriate management of the respective carbon intensity. As from 2019, the indicators defined by the Remuneration Committee to determine the annual variable remuneration incorporates the achievement of objectives and targets related to safety and environmental sustainability of activities material to the company, in the context of the proper management of their respective carbon intensity, namely through the Carbon Intensity Indexes. Quantitative performance represents 65% of annual variable remuneration. The 2019 Remuneration Policy for executive directors builds on the previous year’s policy in four key matters, being one of them the following: The management performance appraisal factors for the safety and environmental sustainability of the Company’s main activities were strengthened, as part of an appropriate carbon intensity management, by specifying explicit indexes related with scope 1, 2 and 3 GHG emissions resulting from energy production, transformation and commercialization, based on The Greenhouse Gas Protocol - A Corporate Accounting and Reporting Standard.
All employees	Monetary reward	Emissions reduction target	In order to strengthen the commitment towards environment, quality, safety and sustainability (EQSS) issues (including climate change) and promote continuous improvement, all Galp employees have the EQSS Factor attached to its performance evaluation. This EQSS factor influences the performance appraisal and variable remuneration. This Factor includes emissions reduction targets and energy reduction targets as basic KPI, together with some more proactive KPI like the level of fulfilment of improvement action plans. This EQSS Factor is monitored every quarter and is followed by the Board of Directors, as well as the EQSS report, quarterly issued. Therefore, there is a clear incentive to integrate climate matters into the business strategy and decision-making processes. Part of the employees have specific KPI’s related to the strategy achievement, e.g. Sustainability Strategy and Electric Mobility. In 2019, KPI’s related to Low Carbon Portfolio Development and Green Projects were developed.
Business unit manager	Monetary reward	Emissions reduction target	Financial incentives for senior management take into account the risk appetite/limits defined for the Group. Financial incentives/KPI’s ensure that management goals’ are aligned with strategy execution, including making sure that the Company is successful in implementing innovative and differentiating solutions in a scenario of decarbonisation. The Directors of the Sines and Matosinhos refineries of GALP have variable remuneration attached to the performance related to several KPI associated to energy efficiency and GHG emissions reduction, namely: KPI reduction of Energy Intensity Index (EII) and KPI emissions performance - reduction of CO2/CWT. These KPI are also applicable to all directors of the different areas of the Refining segment, as well as to the employees of the same areas.

C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?

Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	0	1	Annual strategic budget
Medium-term	1	5	General strategy cycle
Long-term	5	30	Long term strategy cycle

C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

Galp aims to adapt its portfolio to future needs, gradually diversifying a part of its capital allocation to new businesses/low carbon, with the corresponding risk reduction. For this, Galp implement scenario planning and sensitivity analysis, which consider different climate change and environmental contexts, test potential effects and determine value at risk.

Galp is incorporating carbon into its project investment analysis. We consider an internal carbon pricing (\$50/tonCO₂e) when evaluating M/L term investment projects, ensuring that potential costs arising from a global internal carbon price are incorporated into investment analyses. When assessing GHG emissions, we include the entire value chain of the project, ensuring proper management of the risk associated with decarbonisation. For this analysis, the upstream and downstream GHG emissions of the activity being assessed are estimated and incorporated, together with the impact of the operation's emissions on Galp's carbon footprint.. We use a number of tools to model the reduction of the GHG emissions from our activities and projects, incorporating this information into the decision-making process of top management. Together with a due diligence analysis of the activity's carbon intensity, ensures the alignment of our assets and operations with a lower carbon economy.

Galp conducts regular risk reappraisals. In the analysis and identification of risks related to climate change, the participation and commitment of representatives of the top management ensure that these risks are fully addressed and considered in the company's business strategy.

Galp has in place a decision-making process that incorporates a risk assessment for all strategic decisions. To assure independence and objectiveness in the analysis, this exercise is conducted by the Risk Management Department and is addressed to the Chief Risk Officer that is an executive board member.

In addition, the Audit Board requests an annual report from the Risk Management Department to know the Company's value@risk, taking into account the expected evolution of Galp's business and the business context (including the climate change risks and opportunities) over a four-year period (business plan 2020-2025). Such as the Sustainability Department that evaluates the variation of the carbon intensity of the business, taking into account the same 4-year expected evolution and surrounding context, in order to ensure a positive evolution of this intensity over time.

Besides other relevant risks and opportunities, relevant climate-related uncertainties are also embedded in the risk analysis. This risk assessment incorporates a quantitative analysis typically supported by Monte-Carlo simulation and a qualitative analysis that includes an evaluation of the risk response strategy regarding relevant risk sources.

A substantive change (financial impact) can be described as (direct operations) one that can directly affect the Company, e.g. financially - changes in EBITDA (e.g. up to 10%).

Although these analyses are usually fitted for the medium and long-term periods (>6 years), if a relevant short term impact can potentially exist, it is included in the assessment to assure that the senior management is incorporating in its decision all the relevant information.

Regarding its current activities, Galp implemented the three lines of defence framework that enables a consistent relationship between risk management activities developed at different levels and of different periodicity. It assures that any relevant climate-related risk (or other) identified by a business manager is analysed and assessed at a business unit level by the respective Local Risk Officer that periodically informs the corporate risk department.

The first line of defence is responsible for the daily activities of internal control and risk management. It must identify and understand the risk environment, assess and communicate the value of risk potential exposure, determine and implement the best way to capture or mitigate such risk exposure.

It is up to the second line of defence the standardization and monitoring of risk and controls in the Group's processes. It should monitor corporate risk, define risk standards and periodically communicate the risk and status of the action plans to the Risk Management Committee, the Executive Committee, the Audit Board and the Board of Directors, depending on the topic.

The third line of defence is responsible for strategic and corporate risk oversight and the internal control system. It shall supervise and evaluate the effectiveness of risk management and the internal control process, using internal and external independent entities.

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered

Direct operations
Upstream
Downstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

Identify and assessing Galp has in place a decision-making process that incorporates a risk assessment for all strategic decisions. To assure independence and objectiveness in the analysis, this exercise is conducted by the Risk Management Department and is addressed to the Chief Risk Officer, that is an executive board member, and to the Risk Management Committee. In addition, the Audit Board requests annually a report from the Risk Management Department to be aware of the Company's value@risk, taking into account the expected evolution of Galp's business and the business context (including the climate change risks and opportunities) over a five-year period (budget and plan 2019-2023). Such as the Sustainability Department that evaluates the variation of the carbon intensity of the business, taking into account the same 5-year expected evolution and surrounding context, in order to ensure a positive evolution of this intensity over time. Besides relevant risks and opportunities, relevant climate-related uncertainties are also embedded in the risk analysis. This risk assessment incorporates a quantitative analysis typically supported by a Monte-Carlo simulation and a qualitative analysis that includes an evaluation of the risk response strategy regarding relevant risk sources. A substantive change (financial impact) can be described as one that can directly affect the Company, e.g. financially - changes in EBITDA (e.g. up to 10%). Although these analysis are usually fitted for the medium and long-term periods (>6 years), if a relevant short term potential impact exists, it is included in the assessment to assure that the senior management is incorporating in its decision all the relevant information. Regarding its current activities, Galp implemented the three lines of defence framework that enables a consistent relationship between risk management activities developed at different levels and of different periodicity. It assures that any relevant climate-related risk (or other) identified by a business manager is analysed and assessed at a business unit level by the respective Local Risk Officer that periodically informs the corporate risk department. The first line of defence is responsible for the daily activities of internal control and risk management. It must identify and understand the risk environment, assess and communicate the value of risk potential exposure, determine and implement the best way to capture or mitigate such risk exposure. It is up to the second line of defence the standardization and monitoring of risk and controls in the Group's processes. It should monitor corporate risk, define risk standards and periodically communicate the risk and status of the action plans to the Risk Management Committee, the Executive Committee, the Audit Board and the Board of Directors, depending on the topic. The third line of defence is responsible for strategic and corporate risk oversight and the internal control system. It shall supervise and evaluate the effectiveness of risk management and the internal control process, using internal and external independent entities. Managing Galp integrates climate and sustainability risks and opportunities, through mechanisms and requirements that are considered in the decision-making processes connected to the various project development stages, throughout their life cycle. The identification and assessment of risks and opportunities (R&O) associated with CC take into account the context and key trends, consider a benchmarking analysis, the political and socio-economic context, the regulatory and strategic analysis & carbon market and the expectations of stakeholders. The climate change and energy transition related R&O integrate the Company's strategic formulation processes and are overseen by the Board of Directors (BoD) and the Executive Committee (EC), with their members participating actively in specialised committees in these areas such as, the Sustainability Committee, Risk Management Committee, among others. Strategy formulation is based on Scenario planning & sensitivity analysis considering climate change (CC) and environmental contexts, test potential effects and determine value at risk of the company. Galp measures volume and margin effects in four contrasting scenarios (aligned with the IEA scenarios, including the New Policies Scenario and the Sustainable Development Scenario). Furthermore, Galp assesses the CC-related R&O (transitional R&O) that can affect Galp as a whole (company level), such as market risks/opportunities, derived from poor/high performance (e.g. better performance of GHG emissions under EU-ETS) related to climate change or development of products with high/low carbon content (e.g. biofuels produced by our Enerfuel plant; energy efficiency services developed by our GSE unit; production of renewable energy – solar PV; production of green hydrogen); legal risks, derived from international & EU policies (climate-energy policy contexts in relation to carbon fuels and O&G reserves). The control and adequate management of these R&O have been relevant for the solid growth and performance of Galp. The strategic guidelines defined reflect the operational chain and are unfolded in targets and actions at BU and site-level. The extent of the R&O related to physical climate parameters is particularly relevant at asset level. Thus, specific risk analysis is conducted considering bioclimatic parameters, location (e.g. local environment), vulnerability, infrastructure features and their respective value (regarding Galp's assets). Galp incorporates an assessment of infrastructure exposure (asset level) to the physical risk of CC into the decision-making process, analysing the exposure to this risk and draw up plans or adaptation measures. This process allows to identify R&O of CC and set priorities at assets level (e.g. Refineries, Terminals, Pipelines in Portugal). Aware of the challenges from a transition to a low carbon economy, Galp has made a strategic commitment to gradually diversify the portfolio by integrating energy solutions that lead to lower carbon emissions and new business models. As an integrated energy player our current market presence puts us in a strong position to integrate current products with new services and business models during the decarbonisation of the economy. Also, in investment analyses an internal carbon price of \$50/tCO₂e is applied, incorporating potential global internal carbon price costs. When assessing GHG emissions, we include the entire value chain of the project, ensuring proper management of the risk associated with decarbonisation. For this analysis, the upstream and downstream GHG emissions of the activity being assessed are estimated and incorporated, together with the impact of the operation's emissions on Galp's carbon footprint. Galp is conducting an in-depth analysis of the financial impacts of its main risks, in line with the industry best practices.

C2.2a

(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Current laws and regulations (related to climate topics or others) are a risk factor of extreme importance for OPEX and investment and/or divestment decision-making, as they affect, for example, the locations that can be exploited, the form of exploitation, the means used and the repatriation of capital. For example, Galp is subject to existing EU legislation (e.g. EU-ETS, Renewable Energy Directive, Fuels Quality Directive, among others) covering the industrial facilities (e.g. Refineries and Cogenerations of Sines and Matosinhos are covered by EU-ETS) and Galp Business units (e.g. Enerfuel plant in Sines, is affected by RED). Thus, current legislation (related to climate topics or others) are an integral part of the Risk Assessment carried out by the Risk Management Department, included in the Country Risk Profile (under "Regulatory Risk"). Furthermore, this risk is included in the top 10 risk matrix monitored by the Risk Management Department (as "Legal").
Emerging regulation	Relevant, always included	Emerging laws and regulations (related to climate topics or others) are a risk factor of extreme importance for OPEX and investment and/or divestment decision-making, as they can affect, for example, the locations that can be exploited, the form of exploitation, the means used and the repatriation of capital. The approval of international agreements and/or new regulations, encouraging the use of low-carbon energies is an additional risk factor for Galp, as the company needs to update its current portfolio. Thus, current and emerging legislation (e.g. related to low-carbon energies) are an integral part of the Risk Assessment carried out by the Risk Management Department, included in the Country Risk Profile (under "Regulatory Risk"). One of Galp's strategic goals is to build an innovative and differentiated lower carbon business through a CAPEX allocation of 10-15% (2020+) and 40% to energy transition. Furthermore, this risk is included in the top 10 risk matrix monitored by the Risk Management Department (as "Legal").
Technology	Relevant, always included	The development of technology and/or the emergence of disruptive technologies can impact on Galp's performance as a result of: compliance risk, if these technologies derive from legal impositions to which Galp is subject - namely in terms of GHG emissions and carbon capture, sequestration and use (CCUS) - and/or risk of competition if Galp is unable to keep up with its peers in terms of cutting-edge technology, especially in the E&P segments in Brazil and Angola. Galp currently has 11 CCUS projects in Brazil. In addition, under the PHD Programme in Refining, Petrochemical and Chemical Engineering (EngQ), in partnership with Portuguese universities, we are developing projects that aim to extract more value from our sourcing, refining and logistics activity. Thus, development of technology is an integral part of the Risk Assessment carried out by the Risk Management Department, included in the Partner Risk Profile (under "Technology Expertise"). This risk is furthermore included in the Risk Matrix monitored by the Risk Management Department (as "Logistics chain" and "Legal").
Legal	Relevant, always included	Galp's activities, especially downstream activities in Iberia are subject to legal and regulatory risks. In fact, any changes in these levels can have an impact on the business context in which the Company operates. Any significant change in the rules in force at the time investment projects are selected, can put at risk operation continuity, and may cause a negative impact in assets value (e.g. refineries in Sines and Matosinhos, given their characteristics) and Group's results. Thus, legal risks (e.g. related to climate topics) are an integral part of the Risk Assessment carried out by the Risk Management Department, included in the Country Risk Profile (as "Political and Legal/Regulatory"). Furthermore, this risk is included in the top 10 risk matrix monitored by the Risk Management Department (as "Legal").
Market	Relevant, always included	The dynamics of supply and demand in the market affect the prices of oil, natural gas, LNG and petroleum products, variables that influence Galp's performance. In this context, the potential impact on demand for oil and gas, due to changes in consumption patterns, namely by higher demand for low carbon intensity solutions, is a major risk for Galp. In that sense, one of Galp's strategic goals is to build an innovative and differentiated lower carbon business through a CAPEX allocation of 10-15% (2020+). In line with this, Galp is developing solar power generation projects, starting in Iberia. During 2019, Galp acquired solar power generation licences in southern Portugal. Currently, the Company is continuing to develop these projects to ensure a timely Commercial Operation Date, as well as analysing new projects that will enable Galp to develop its strategy of incorporating energy production from renewable sources. Galp agreed the acquisition of solar PV projects in Spain comprising a total generation capacity of 2.9 GW. The agreement includes over 900 MW of power generation capacity already in production and a pipeline of projects at different stages of development to be installed until 2023, all with grid access permits. This move is in line with our strategy, risk and returns profile aimed for this business. With all solar PV opportunities in Galp's pipeline in Iberia and expected to be online from 2023, the Company expects to raise its overall power generation capacity to 3.3 GW by that time. These projects are expected to be leveraged and developed through potential partnerships. Galp will be exposed to the largest solar generation businesses in Iberia, a region where Galp has several synergies to explore with our existing businesses. And this will be the platform to develop this business even further. Galp's ambition is to gradually grow this business and reach 10 GW by 2030. On the other hand, the increase in prices of oil or natural gas may affect the value and profitability of Galp's assets. Even though the prices that the Company charges its clients reflect market prices, they may not be adjusted immediately, and may not entirely reflect the changes in market prices. Thus, market is one of the top 10 risks included in the Risk Matrix monitored by the Risk Management Department (as "Market").
Reputation	Relevant, always included	Galp can be subject to negative impacts on its reputation as a result of a lack of (actual or perceived) compliance with laws and regulations related climate change and also through stakeholder pressure. Particularly in a context of increasing stakeholder influence, the shift in consumer preference towards lower carbon energy may lead to stigmatization of the Oil & Gas sector and imposes on Galp an increasingly prominent reputation risk. If Galp fails in this purpose, there might be reputational risks associated, regarding negative perception of the company by its stakeholders. Negative perception about the Galp's climate change strategy, management and performance may reduce investors' interest in the company (as we are an integrated energy player). Besides, the increased awareness of global society about climate change may lead to a change in consumer behaviour, increasing the consumer's preference for alternative fuels (e.g. biofuels) and renewable energy (low carbon electricity). Currently, Galp is already facing this risk, being visible a change in the consumption pattern, as our customers are more informed and aware of climate change. Thus, reputation is one of the top 10 risks included in the Risk Matrix monitored by the Risk Management Department (as "Legal" and "Project Execution").
Acute physical	Relevant, always included	The risk of exposure to events of a disruptive nature is identified and is analysed in the context of the Risk Assessments carried out by the Risk Management Department. Acute physical risks are included in this category, which refer to changes in weather patterns and acute physical hazards related to events, including natural disasters, such as extreme weather events (cyclones, floods, among others). The nature, technical complexity and diversity of Galp's operations, e.g. upstream (E&P segment) and downstream (R&D segment) means that this type of events have a very high potential impact on the execution and operations conditions. Main industrial facilities of Galp (e.g. refineries of Sines in the South and Matosinhos in the North of Portugal) are located in the Atlantic Ocean coast and are threatened by these events (e.g. floods). Similarly, extreme storms can affect the capacity of refineries and that could compromise the supply of raw materials to these refineries through the sea terminals (In Sines and mainly Matosinhos). This is particularly relevant as Galp processed in 2019 around 96 mmbœ of raw materials. Thus, acute physical risks integrate the top 10 risks included in the Risk Matrix monitored by the Risk Management Department (as "Business Continuity" and "Logistics chain").
Chronic physical	Relevant, always included	The risk of exposure to events of a disruptive nature is identified and is analysed in the context of the Risk Assessments carried out by the Risk Management Department. Chronic physical risks are included in this category, which refer to long-term changes in weather patterns (e.g. sustained higher temperatures) that may cause sea level rise or chronic heat waves. The nature, technical complexity and diversity of Galp's operations, e.g. upstream (E&P segment) and downstream (R&D segment) means that this type of events have a very high potential impact on the execution and operations conditions. Main industrial facilities of Galp (e.g. refineries of Sines in the South and Matosinhos in the North of Portugal) are located in the Atlantic Ocean coast and are threatened by these events (e.g. sea level rise). Similarly, extreme storms can affect the capacity of refineries and that could compromise the supply of raw materials to these refineries through the sea terminals (In Sines and mainly Matosinhos). This is particularly relevant as Galp processed in 2019 around 96 mmbœ of raw materials. Thus, chronic physical risks integrate the top 10 risks included in the Risk Matrix monitored by the Risk Management Department (as "Business Continuity" and "Logistics chain").

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?

Direct operations

Risk type & Primary climate-related risk driver

Current regulation	Carbon pricing mechanisms
--------------------	---------------------------

Primary potential financial impact

Increased indirect (operating) costs

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

Galp recognizes the importance of climate change as the challenge it represents for companies and Governments. Galp's refineries (Sines and Matosinhos) in Portugal are included in the European Union Emission Trading System (EU ETS) and a third party verifies its CO2 emissions. In 2013, the third period established under the EU ETS began, and it will run until 2020. During this period, free allowances are allocated by benchmarking and the eventual deficit has to be covered by allowances purchase, through auction. Under the EU-ETS, Galp was awarded, in 2019, with free allowances totalling 1.95 Mt. Since the free allowances may be not sufficient to satisfy the Company's needs, once Galp is gradually approaching the best in class benchmark, the Company identifies a risk related to cap and trade schemes, as it will be necessary to buy additional emission licenses during the third phase of the EU-ETS, for these two facilities (Sines, Matosinhos).

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

40100000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

The third period established under the EU ETS began in 2013 and will run until 2020. During this period, the CO2 will be allocated primarily by benchmarking or purchases made through auction. Galp will need to purchase CO2 licenses on the market, with an estimated purchase of around 1.5 million tonnes for 2020. Under this scenario and considering the expected average price of carbon for Phase III (2013-2020) in 2019 would be €27.33/t CO2 (source: Annual GHG Market Sentiment Survey 2019 – IETA/PwC), the financial implication may reach €40.1 million. Galp may also need to purchase additional allowances to meet ETS obligations in subsequent years (Phase IV).

Cost of response to risk

266000

Description of response and explanation of cost calculation

Galp has an internal standard (NR-004) about GHG emission management, regarding ETS, defining the responsibilities in managing GHG data, to ensure compliance with applicable legal requirements and to enable timely action and to fully informed decision making in the process, anticipating risk/opportunities related to the purchase/sale of allowances. This standard requires that managers of facilities covered by the ETS (two refineries in Sines & Matosinhos in Portugal) to, at least, quarterly periodically report to the Executive Committee, actual and projected emissions, estimating deficits/surpluses. Galp also has an information system that tracks all regulatory changes, in order to be aware of all legislation with impact on the activities of Galp. Regarding to Refineries operations, Galp focuses on two main aspects: the reduction of absolute emissions, directly impacting the dependence on the purchase of allowances, and improving the sectorial benchmark (CO2/CWT) in order to maintain or increase the number of long-term allowances provided. Moreover, to reduce the need to purchase allowances, the relevant facilities of Galp covered by ETS have been reducing their specific emissions (CO2/CWT), approaching the sectorial benchmark (SR 32.7 kg CO2/CWT & MR 29.3 kg CO2/CWT in 2019). This is being accomplished through the improvements on what regards to energy efficiency, fuels portfolio (introduction of natural gas) and BAT implementation. In addition, Galp participates in international groups (e.g. FuelsEurope) where we discuss the impact of legislative proposals, ensuring the incorporation of these risks in their strategy and informing the legislators regarding its position. For example, Galp participates in the ETS Taskforce of FuelsEurope, which specifically analyses and deals with risks related to regulatory aspects of ETS. Galp estimates that the costs associated with managing the identified risk, considering costs related to human resources, travelling, representation and fee memberships was around €266k in 2019.

Comment

Galp estimates that the costs associated with managing the identified risk, considering costs related to human resources, travelling, representation and fee memberships was around €266k in 2019.

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Current regulation	Mandates on and regulation of existing products and services
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Primary potential financial impact

Other, please specify (Fines, loss of reputation and losses in revenues)

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

Galp may face some risks derived from the Renewable Energy Directive (RED) (2009/28/CE) as well as the Fuel Quality Directive (FQD) (2009/30/CE). RED defines a mandatory target for Member-States towards the introduction of 10% of renewable energy in the transport sector by 2020. FQD, at the same time, outlines a mandatory target of reducing GHG emissions per unit of energy from fuel and energy supplied by up to 10% by 31 December 2020. Galp as a refiner (Sines and Matosinhos refineries in Portugal) and fuel distributor (1465 service stations in Portugal, Spain and Africa) is committed towards meeting these targets as they represent both an opportunity and a challenge. Nevertheless, these mandates may pose risks towards the supplying biofuels to the European fuel markets where Galp operates in. The main risk is directly

related to the lack of sufficient biofuels supply sourced from sustainable eligible towards meeting both targets. Aware that it has to adapt its business to the long-term needs, in order to meet European targets, Galp is reducing the operational risks, through the project of produce distilled biodiesel (FAME) in Portugal from waste feedstock (animal fats). This plant, located at Sines (south of Portugal) has an annual capacity of 27kt/year.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

13340000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Not complying with regulations would affect Galp, resulting in fines, loss of reputation and losses in revenues. The Portuguese Government set up fines of around €50k plus other sanctions for failure to accomplish the goals of biofuels incorporation. Also, reputational damage may be more severe, with potential brand depreciation. According to Brand Finance (2019), Galp brand, the second most valuable in Portugal, is currently worth € 1,329 million. It is reasonable to assume a 1% brand depreciation, meaning a financial implication of about €13.29 million. $€13.29M + €50k = €13,340,000$.

Cost of response to risk

16600000

Description of response and explanation of cost calculation

In order to manage this risk, Galp holds in its business portfolio, activities related to the production of biofuels. Belém Bioenergia Brasil (Galp's still had in 2019 stake on company). Yields were increased from 18.6 kton to approximately 242 kton last year. Besides, Galp has in place a project to produce distilled biodiesel (FAME.) has an annual capacity of 27kt /year of second generation biofuels, enhancing the recovery of cooking oils and animal fats, provided by operators of integrated waste management. In 2019 Enerfuel produced approximately 24 kton of FAME. As such, we contributed to an 83% reduction in GHG emissions from use of traditional mineral diesel fuel, which is replaced by biodiesel. Also, in 2019, Galp introduced around 310 m3 of biofuels (biodiesel; HVO; BIO-ETBE, 100% with proven sustainability) into the Iberian fuel market, allowing the GHG reduction of the third parties that purchases these fuels. According to the criteria of the RE Directive this incorporation represents a potential reduction of GHG emissions of more than 352 kt CO2e/year. Costs are related to significant investments made in biofuels. Main costs are associated to develop on-site infrastructure, fuel blending and introduction of biofuels in the Iberian market. The annual total amount invested (CAPEX), in 2019, was approximately €16.6 million (€16.4M for BBB and €195k for Enerfuel Plant).

Comment

Costs are related to significant investments made in biofuels. Main costs are associated to prospecting for land in Brazil for the production of vegetable oils, plantations, fuel blending and introduction of biofuels in the Iberian market. The annual total amount invested (CAPEX), in 2019, was approximately €16.6 million (€16.4M for BBB and €195k for Enerfuel Plant).

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Chronic physical	Changes in precipitation patterns and extreme variability in weather patterns
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Primary potential financial impact

Increased indirect (operating) costs

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

Change in precipitation patterns may affect the geographic distribution of water resources, both regionally and at national level. This scenario of uncertainty can lead to the definition of policies and tariff that may increase the cost associated with the purchase of water. At Galp, due to the existence of several industrial facilities (specifically refineries in Sines and Matosinhos in Portugal) with non-negligible water consumption (around 9.5 million m3), the change (increase) in tariffs charged by water utilities may have a significant impact on the structure of our operating costs of the facilities. Given this scenario, it is likely that part of the control measures of water use will be reflected in its price, causing the price of water to raise significantly and forcing society in general and industry in particular (industrial facilities of Galp previously referred), to optimize its use as a way to ensure competitiveness.

Time horizon

Long-term

Likelihood

More likely than not

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

10950711

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Based on the data from the study 'Water Cost Index', from IBM and Waterfund, in the Global scenario water presents a cost of €1.62 per m3, reflecting production costs and environmental and social externalities, associated with this scarce resource. In this context, comparing this value with the average water bill in the Refining segment (Sines and Matosinhos in Portugal), water-related expenses would increase around 5% of operating costs, representing a financial implication of around €10.95 million per year, considering both refineries (Sines and Matosinhos).

Cost of response to risk

3686375

Description of response and explanation of cost calculation

Considering the relevance of the nexus water-energy, Galp recognizes the importance of the integrated management of these issues. For this reason, Galp developed the study 'Supporting document to the corporate strategy for sustainable water management', identifying risks and business lines. In this sense, Galp develops analysis and monitors risk associated with variation on the price of water, due to possible changes in physical climate parameters, and also on the level of exposure of its facilities to water scarcity (by geography). In 2019 the study covered around 70 facilities (e.g. Matosinhos and Sines Refineries in PT; storage facilities in PT, Spain and Africa; Sea terminals; facilities of EP), 100% of the operating facilities and also the facilities where Galp is not yet physically operating, in all countries where Galp has activities. In this risk analysis, Galp measures water stress exposure through WWF Water Risk Filter and the WRI Aqueduct Water Tool to manage water risks. Galp also developed (and updates every year) the Case Study - Refineries sensitivity to variation in water prices, in order to assess this risk. Considering the different scenarios and approaches assessed, Galp understand that water is purchasing a more significant importance in the company's cost structure (especially at industrial units in Sines and Matosinhos in Portugal – total water withdrawal of 9.5 million m3). Galp also implement, every year in each refinery, several measures for protection of water resources, soils and underground water. Galp also participates in forums where these issues are discussed in order to develop studies and identify best practices to mitigate these risks. In 2019, for the Matosinhos and Sines refineries, costs related to the protection of water resources and groundwater amounted for around €3,680,375. For the development of the study about climate change-related water risks, the cost was mainly associated to human capital, being estimated at €2k. Besides, in 2019 costs associated to BCSD membership related to these issues amounted for €4k.

Comment

Identifier

Risk 4

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Chronic physical	Rising sea levels
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Primary potential financial impact

Decreased revenues due to reduced production capacity

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

Rising of sea levels due to change in physical climate parameters could affect Galp's coastal facilities (specifically Refineries in Portugal, Ports and Terminals) as events such as floods can become more frequent. Main industrial facilities of Galp (e.g. refineries of Sines in the South and Matosinhos in the North of Portugal) are located in the Atlantic Ocean coast, being threatened by these extreme events. Similarly, extreme storms can affect the capacity of our refineries and that could compromise the supply of raw materials to these refineries through the petroleum sea terminals (In Sines and mainly Matosinhos), since they are the means of receiving raw materials. This is particularly relevant as Galp processed in 2019 around 96 mmb of raw materials. Galp imported crude from 19 countries, with medium and heavy crude accounting for 87%.

Time horizon

Long-term

Likelihood

More likely than not

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

4779968

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Given the two refineries of Galp and sea terminals are located in coastal areas (Atlantic Ocean), assuming a scenario of climate change extreme events (e.g. extreme precipitation or flooding by sea level rising), where the two refineries will have to interrupt its production for a week, due to lack of raw-materials supply or flooding, the financial implication (refining margins) of this risk may be over €4.78 million (calculation based on 2019 average refining margin, for reference purposes only).

Cost of response to risk

100000

Description of response and explanation of cost calculation

For assessing the physical climate change (CC) related risks at an asset level, Galp developed an Action Plan for CC Adaptation, where we considered the most significant infrastructures due to their relevant technical location, vulnerability and asset value. Galp considered variables such as temperature, rainfall, storm, wind and other criteria associated with the infrastructure. The results showed that some assets (Sea Terminals, Sines and Leixões, & Mitrena Storage Park in Portugal) may have a high risk related to severe precipitations and storms by 2060-2080. The CC lines of action for Refining & Distribution and EP, includes a strategic goal for the medium-term exposure to physical risks and the definition of a plan and adaptation measures. In this context, specific actions were identified (e.g. risk assessment for new infrastructure; training employees and partners). Another measure implemented by Galp for managing these risks is insurance of its facilities against severe weather events. Galp subscribes to a multirisk insurance policy covering all business facilities of Galp Group (e.g. Refineries, Sea terminals, Storage parks, Service stations, Pipelines), that includes specific clauses on extreme events, such as floods, storms, extreme precipitation, among others). Also, The Galp framework of the HSE Management System has an element (17th) related to mechanical integrity of facilities. The practices and procedures related with this topic are subject to internal audits. Regarding cost calculation, in the investment business plan there are several items with direct impact on the adaptation capacity to climate change. A €100k investment was related to equipment replacement and maintenance in Leixões terminal in the past, so costs are estimated to not exceed €100k/year.

Comment

Regarding cost calculation, in the investment business plan there are several items with direct impact on the adaptation capacity to climate change. A €100k investment was related to equipment replacement and maintenance in Leixões terminal, identified as priority in the Action Plan. Costs are estimated to be around €100k/year. The Group multirisk insurance policy had an average capital value of insurance of around € 15.2 billion, covering the insured facilities and potential operating losses in the event of a disaster.

Identifier

Risk 5

Where in the value chain does the risk driver occur?

Downstream

Risk type & Primary climate-related risk driver

Reputation	Shifts in consumer preferences
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Primary potential financial impact

Other, please specify (Reduced brand value due to reputation damage)

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

Galp must demonstrate that the Company is aligned with the climate change challenge, helping to satisfy future energy needs and minimising the intensity of its carbon footprint, producing and delivering cleaner fuels and low carbon energy. If Galp fails in this purpose, there might be reputational risks associated, regarding negative perception of the company by its stakeholders. This negative perception about Galp's climate change strategy, management and performance could reduce investors' interest in the company (as we are an integrated energy player). Furthermore, the increased awareness of global society about climate change may lead to a change in consumers behaviour, increasing consumer preference for renewable and alternative fuels (e.g. biofuels) and energy (low carbon electricity, energy efficiency related services) that may also lead to less demand for conventional products. Currently, Galp is already facing this risk, being visible a change in the consumption pattern, as our customers are more informed and aware of climate change and these challenges were described on Galp's last stakeholder consultation. As Galp's customers are demanding for more sustainable solutions and low carbon products and services, these newer demands may affect Galp's reputation and as therefore Galp is committed to develop and sell products and services with a lower carbon footprint, such as: cleaner diesel (hydrocracker diesel produced in Sines Refinery with a lower carbon content); biofuels (produced at the Enerfuel Plant and plantations in Brazil); energy efficiency products and services (developed by Galp Soluções de Energia); and renewable energy projects (Wind farm projects, e.g. Ventinveste; Solar PV projects, and production of electricity from renewable sources-GalpPower).

Time horizon

Medium-term

Likelihood

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)

13290000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

The risks are associated with loss of brand value, consequently affecting Galp's operational performance and financial position. If Galp is perceived by stakeholders, as a company not committed with climate change, it is reasonable to assume that the brand could loss up to 1% of its value. According to the last assessment of Brand Finance (2019), Galp's brand is the second most valuable in Portugal, and currently worth €1,329 million. Assuming a conservative scenario of around 1% of brand depreciation, the financial implication may go up to €13.29 million.

Cost of response to risk

18871264

Description of response and explanation of cost calculation

In order to reinforce its commitment to climate change issues, improve performance and reputation, Galp implemented several initiatives, such as the disclosure of its carbon footprint and the publication of Galp's Strategic Sustainability Plan and Commitments, with targets and actions. Galp implemented concrete actions, demonstrating coherence of the company's positioning regarding climate change. Many of these activities involve different segments of stakeholders (customers, partners, public institutions) that will contribute to a positive brand awareness and reputation. Examples: educational campaigns for EE and partnerships with clients; development of Educational UP projects, about energy and climate change at schools (more than 1.7M students impacted & 5k energy lessons). Furthermore, Galp is committed to develop and sell more sustainable fuels and low carbon products and services, such as: cleaner diesel (hydrocracker diesel) from Sines Refinery with a lower carbon

content; biofuels (and 2nd generation biodiesel through HVO co-processing technology and residual raw materials, biomethane, biorefineries) - produced at the Enerfuel Plant (24 kt produced and 310 thousand m3 incorporated in the Iberian market; 352 kt CO2 avoided); energy efficiency products/services (developed by GSE) and renewable energy projects, e.g. Wind farm projects (Ventinveste, 31.7 GWh produced, 8 kt CO2 avoided); and production of electricity from renewable sources by GalpPower & Alcoutim PP); Sustainable mobility (24 electric fast chargers and 32 normal chargers). Galp is also committed to increase its presence in the generation of electricity from renewable sources in order to reach an installed capacity of 10 GW in 2030. GALP reports these initiatives in its IMR 2019, corporate website and CDP questionnaire every year. Regarding cost calculation, in 2019, Galp incurred in different costs (around €18.9M) associated to several projects, namely: Energy Efficiency products/services developed by Galp Soluções de Energia (around €1.3M); Enerfuel Plant (€195k); Belém Bioenergia in Brazil (€16.4 million), Alcoutim Photovoltaic Park (€742k), Portcoeração (€233k) among others.

Comment

In 2019, Galp incurred in different costs (around €18.9M) associated to several projects, namely: Energy Efficiency products/services developed by Galp Soluções de Energia (around € 1.3M); Enerfuel Plant (investment of € 195k); Belém Bioenergia in Brazil (€ 16.4 million), Alcoutim Photovoltaic Park (€ 742k), Portcoeração (€233k) among others.

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

Products and services

Primary climate-related opportunity driver

Ability to diversify business activities

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

Instruments aimed at reducing emissions from the use of fuels/energy, such as Renewable Energy Directive (2009/28/CE) (RED) and Fuels Quality Directive (2009/30/CE) (FQD) provide incentives to develop cleaner fuels with lower carbon content. Taxes and regulatory constraints can incentive energy efficiency measures. Galp foresees specific opportunities, such as: the development of natural gas business (both in B2B and B2C business); opportunities for integrating renewable energy in the transportation system, mainly through biofuels (through the Enerfuel plant and plantations in Brazil); and opportunities for generation of electricity from renewable sources, mainly wind and solar (through the Ventinveste project; through Galp Soluções de Energia; through photovoltaic Parks; and through GalpPower with production of zero emission electricity).

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

213300000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

The utilisation of cleaner fuels is an opportunity for Galp, particularly as it may sustain current dynamics on the international LNG market. It is expected that the business of Gas and Power may generate an EBITDA of €189 million/year. Also, Galp estimates that the annual financial opportunity (revenues) for Enerfuel (biofuel plant) may be more than € 24M per year.

Cost to realize opportunity

18600000

Strategy to realize opportunity and explanation of cost calculation

Galp held in its business portfolio in 2019, activities related to the production of biofuels. Last year, In BBB yields were increased to 242 kton last year. Besides, Galp has in place a project to produce distilled biodiesel (FAME). In 2019 Enerfuel produced approximately 24 kton of FAME and Galp incorporated into the Iberian market 310 m3 of biofuels (352 kt CO2 avoided). Galp has also been increasing the percentage of NG in the upstream portfolio. Regarding the G&P business, Galp has also been focusing on providing technical and EE services and continued its focus on the combined supply of NG and electricity. Galp is pursuing an active management policy for its different sources of supply, including the SPOT market. Galp supplies NG to the Iberian market, where it has steady demand for NG, and focuses efforts on increasing the activity's profitability. At the same time, Galp has intensified its trading operations in the international LNG market, and has been successful in capturing opportunities in markets

such as Latin America and Asia. In 2019, Galp supplied 7646 mm³ (2937 mm³ of NG/LNG trading & 4 709 mm³ NG sales to direct clients). Galp is developing a low carbon portfolio that promote the transition into a low-carbon economy. Galp expects that its investment in low-carbon and new business models will account for 10-15% of total capex (2020+) and 40% for energy transition. Related to costs, Galp incurred in different costs associated to several projects, namely: Enerfuel Plant (€195k); Belém Bioenergia in Brazil (€16.405 million). Also, capex of Gas and Power segment amounted for €2 million in 2019. Costs associated with trading of natural gas are negligible (near zero) as they are related to administrative costs in which the company already incurred for other activities. Total equals to €18.6M.

Comment

Galp incurred in different costs associated to several projects, namely: Enerfuel Plant (€195k); Belém Bioenergia in Brazil (€16.405 million). Also, capex of Gas and Power segment amounted for €2 million in 2019. Costs associated with trading of natural gas are negligible (near zero) as they are related to administrative costs in which the company already incurred for other activities. Total equals to €18.6M.

Identifier

Opp2

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

Galp, as an integrated energy player sees in product efficiency regulations and standards an opportunity to offer energy efficiency as a service to its customer in order to prepare them to comply with future regulation. Particularly, Galp sees opportunities to help its customers to optimise their energy consumption by promoting energy efficiency and sustainability in its clients from industry, buildings and transportations sectors. Galp sees also opportunities to develop user-friendly systems to manage home energy for its customers. Through its specific unit 'Galp Soluções de Energia', Galp is currently providing energy efficiency & renewable energy solutions to its customers, developing and implementing innovative solutions and improvements in processes, such as the installations of photovoltaic panels and energy efficiency services. It is also an opportunity to develop new low carbon products and services, increasing the market share.

Time horizon

Short-term

Likelihood

Very likely

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

372075

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Galp estimates that the annual financial opportunity (revenues) for Galp Soluções de Energia (GSE) may be €372k per year. This figure will increase in the future.

Cost to realize opportunity

1296174

Strategy to realize opportunity and explanation of cost calculation

Galp, through its specific unit 'Galp Soluções de Energia' (GSE), helps its customers to optimize their energy consumption by promoting energy efficiency and renewable energies. It is based on the idea of capitalising the knowledge and expertise developed in projects of this nature at own facilities, employing them in the marketplace. The activity is directed primarily at B2B markets: service, transport, and industrial buildings, sectors that represent the largest share of energy consumption in Portugal. Galp applies defined and tested methodologies, including IPMVP – International Performance Measurement and Verification Protocol. Some concepts developed in 2019 were: 1) TGLS: efficient lightning project (191 MWh electricity saved; 48 t CO₂ avoided); 2) Hotel Villa Batalha (Solar PV project; 135 MWh saved; 39.9 t CO₂ avoided); 3) COOPVAL (Solar PV project – ESCO model; 588 MWh saved; 148 t CO₂ avoided); 4) Roche (Solar PV project; 209 MWh saved; 52 t CO₂ avoided); 5) Joferlis (Solar PV project; 418 MWh saved; 105 t CO₂ avoided). GSE has developed and implemented other projects in the past, namely: 1) EE Hotel (Phases I-III): The measures of EE include the recovery of thermal energy for water heating, replacement of lighting systems, installation of a solar system & cogeneration system. In the 1st phase, this project enables a saving of 2.3 GWh/year, around 25% of total consumption and 740 t CO₂/year avoided. In the 2nd phase, a reduction of around 1.7 GWh/year will be accomplished, meaning 520t CO₂/year avoided. 2) Sustainable Campus network: Implementation of energy efficiency projects in cooperation with 3 Universities (UA, UBI and IST), in a total floor area of 300,000 m² spread by 100 buildings. 5 solar plants were installed, reaching over 900 kW in buildings of the UL. It was also developed a project of decentralized production of renewable energy, by installing 4 photovoltaic power plants - around 1 million kWh/year of energy (savings of 322 t CO₂/year). The production was about 220 MWh, meaning savings of about 67 tCO₂. 3) PV panels in Wastewater Treatment Plants: Over 180 kW installed, over 135 MWh produced, avoiding the emission of over 40 tCO₂/year. Related to costs, GALP incurred in around €1.3M in 2019, associated to all energy efficiency products/services developed by Galp Soluções de Energia and described above.

Comment

Galp incurred in around €1.3M in 2019, associated to all energy efficiency products/services developed by Galp Soluções de Energia and described above.

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

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

The increase in global average temperature and changes in the climate patterns (higher temperatures in the summer and lower temperatures in winter) may result in electricity and gas demand by clients for cooling of air conditioners or heating for other equipment, and electricity producers, allowing Galp through its Gas & Power segment to increase its revenues. Also, the decrease in average temperature in winter (lower temperatures) may result in demand for natural gas and electricity for heating. This represents an opportunity to Galp, as the company sells natural gas and produces electricity from renewable sources, such as photovoltaic (e.g. in the Galp's service stations in Portugal), wind (e.g. Wind farm in Vale Grande), production of clean electricity (GalpPower from renewable sources and NG), and also acts in the market as a trader (both electricity and natural gas).

Time horizon

Medium-term

Likelihood

More likely than not

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

196193670

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

The electricity produced in Vale Grande Wind Farm represents a financial opportunity of € 4.5-6.8 million/year. Electricity produced in service stations (Ecoposto concept: photovoltaic & energy efficiency) represents around €370k/year. The utilisation of cleaner fuels is an opportunity for Galp, especially LNG market. It is expected that the business of Gas & Power may generate for the next 5 years, an EBITDA of €189 million/year. total equals around €196 million.

Cost to realize opportunity

2000000

Strategy to realize opportunity and explanation of cost calculation

For the production of electricity from renewable sources, Galp has a wind farm in Portugal (Vale Grande Project). By the end of 2019, the Company had an installed capacity of 12 MW in the wind farm. Vale Grande delivered, in 2019, 31.7 GWh and annual CO2 savings were around 8 kt. Galp also produces electricity from photovoltaic panels at Galp's service stations. The implemented measures achieve a reduction of electricity consumption of 3.3 GWh/year, as well as a reduction of billing by €370k/year. In 2019, Galp produced 3513 TJ of electricity and sold 2381 TJ, including the production of cogenerations units at Sines & Matosinhos refineries (R&D segment), service stations (R&D segment) and Agroger cogeneration (G&P segment). Galp operates across the natural gas supply value chain, as well as operating regulated infrastructure for the distribution of natural gas. Galp's Supply & Trading business is currently centred on two pillars. The first is the Iberian market, where the Company maintains a stable demand and where it is focused on improving the profitability of operations. Regarding the second pillar – the international NG/LNG market, Galp is working to further consolidate and develop operations and sustainably pursue new opportunities. In 2019, Galp sold 7646 mm³ (2937 mm³ of NG/LNG trading & 4709 mm³ NG sales to direct clients). Related to costs, capex of G&P segment amounted for €2 million in 2019. Costs associated with trading of natural gas are negligible (near zero) as they are related to administrative costs in which the company already incurred for other activities.

Comment

Related to costs, capex of G&P segment amounted for €2 million in 2019. Costs associated with trading of natural gas are negligible (near zero) as they are related to administrative costs in which the company already incurred for other activities.

Identifier

Opp4

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Shift in consumer preferences

Primary potential financial impact

Other, please specify (Increase brand value)

Company-specific description

Galp, as an integrated energy player, sees an opportunity to improve its reputation and to promote the shifting on consumer preferences by acting responsibly towards climate change and by communicating its practices to its stakeholders. The rising awareness and concerns of general society about climate change may be a driver to improve the reputation of the company. Galp addresses these concerns and show proactivity through the commitment to develop new solutions and businesses supporting society in the transition into a low-carbon economy, to promote energy efficiency and innovative solutions reducing the carbon intensity of our assets and operations and to plan the adaptation to climate change, minimizing operational risks resulting from extreme weather events, by implementing several projects related to energy efficiency, cleaner fuels and renewable energies. Besides, changes in industry/commercial behaviour due to regulatory activity and increased stakeholder (e.g. investors, shareholders, clients) interest, namely a focus on energy efficiency and conservation, offers an opportunity to Galp for engaging with stakeholders (e.g. Educational UP projects, with more than 1M students engaged & 3.5k energy lessons) and developing new low-carbon products and services, which Galp is already commercializing. In this context, Galp has, among others, the special unit 'Galp Soluções de Energia', which aim is to provide an energy efficiency services to Galp's clients from industry, buildings and transportations sectors (e.g. Hotels), mainly in Portugal, helping to rationalize energy consumption, meeting the technological development and the actual

developments in regulation in the EU.

Time horizon

Medium-term

Likelihood

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)

13290000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

As a company committed with climate change, it is reasonable to assume that the brand could increase up to 1% of its value if Galp is perceived as strongly committed to climate change adaptation and mitigation, and also if it shows a strong environmental performance. According to the last study of Brand Finance (2018), Galp's brand is worth € 1,329 million. Assuming a scenario of around 1% of brand valuation, the financial opportunity may go up to €13.29 million. 1

Cost to realize opportunity

1371174

Strategy to realize opportunity and explanation of cost calculation

In order to reinforce Galp's commitment to CC issues which may lead to the improvement of its reputation, the company implemented several initiatives, such as the determination and disclosure of its carbon footprint on an annual basis and the publication of the Strategic Sustainability Plan and Commitments, with goals and actions (2018-2022). Also, Galp promoted actions to captivate the community's attention to this subject, through educational campaigns for EE and partnerships with clients. Still regarding reputation, Galp developed the Educational Future UP projects (Missão UP; Power UP; Switch UP), 3 educational projects about EE and CC at schools (more than 1.7M students impacted; 5k energy lessons). Besides, Galp is committed to develop and sell more sustainable fuels and low carbon products/services, such as: Biofuels - produced at Enerfuel Plant (24 kton in 2019); 310 m3 biofuels incorporated into the Iberian market (352 kt CO2 avoided); Energy efficiency products/services - developed by GSE, e.g. Hotel Villa Batalha (Solar PV project; 135 MWh saved; 34 t CO2 avoided); COOPVAL (Solar PV project – ESCO model; 588 MWh saved; 148 t CO2 avoided); Wind farm projects, e.g. Ventinveste – 31.7 GWh produced and 8 kt CO2 avoided. Galp reports these initiatives with more detail in its IMR2019 and corporate website and responds to the CDP questionnaire annually. Related to costs, in 2019, Galp incurred in different costs associated to several projects, namely: Energy Efficiency products/services by Galp Soluções de Energia (around €1.3M in 2019) and UP Educational Social Movement (around €75k).

Comment

Related to costs, in 2019, Galp incurred in different costs associated to several projects, namely: Energy Efficiency products/services by Galp Soluções de Energia (around €1.3M in 2019) and UP Educational Social Movement (around €75k).

Identifier

Opp5

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

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

As part of Galp's low carbon strategy, Galp aims to develop its power generation activity from differentiated and competitive renewable sources, particularly within a lower carbon intensity context. Our Renewables & New Businesses Unit is a clear step for Galp to embrace the energy transition, by developing a sustainable and diversified portfolio of renewable power generation and represents a natural hedge to our Iberian commercial power activities. In this sense, Galp, as an integrated energy player, sees the opportunity on Solar PV and that is why Galp has been strengthening its commercial portfolio to provide renewable energy to its customers. We will expand our renewables' business leveraged on proven technologies, like solar PV, and taking advantage of the existing natural hedge to our power commercial activity in Iberia. Galp's renewable portfolio consists of 3.3 GW capacity to be installed and operating by 2023, and with a longer-term ambition to reach around 10 GW by 2030, starting in Iberia but looking to explore opportunities in other regions where we believe to have competitive advantages. We will also support our customers in this transition, developing decentralised generation solutions, tailored to their needs.

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)

200000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Galp expects a cash flow from operations (CFFO) of around €200 million/year associated to the development of solar PV project, with an installed capacity of 3.3 GW by 2023.

Cost to realize opportunity

733000000

Strategy to realize opportunity and explanation of cost calculation

During 2019, Galp acquired solar power generation licences in southern Portugal. Currently, the Company is continuing to develop these projects to ensure a timely Commercial Operation Date, as well as analysing new projects that will enable Galp to develop its strategy of incorporating energy production from renewable sources. Galp agreed the acquisition of solar PV projects in Spain comprising a total generation capacity of 2.9 GW. The agreement includes over 900 MW of power generation capacity already in operation and a pipeline of projects at different stages of development to be installed until 2023, all with grid access permits. This move is in line with our strategy, risk and returns profile aimed for this business. With all solar PV opportunities in Galp's pipeline in Iberia and expected to be online from 2023, the Company expects to raise its overall power generation capacity to 3.3 GW by that time. These projects are expected to be leveraged and developed through potential partnerships. Galp will be exposed to the largest solar generation businesses in Iberia, a region where Galp has several synergies to explore with our existing businesses. And this will be the platform to develop this business even further. Galp's ambition is to gradually grow this business and reach 10 GW by 2030, depending on project screening and potential returns, focusing on strengthening the Company's presence in Iberia, while looking to explore opportunities in geographies where it finds competitive advantages. We have established two long-term Power Purchase Agreements (PPAs) for a total of 650 GWh per year for a 12-year period, which underpin 400 MW solar power projects. When operational, these will generate enough energy to power more than 200,000 homes. Some KPI are: 400 MW capacity; 650 GWh/year production; 430 ktonCO2e avoided (for a 12 year period). The estimated costs to realize the opportunity amounts for €733M/year. The transaction, which includes the acquisition, development and construction of all these projects, that has a total value of €2,200 million over a 3-year period. Related to costs to realize the opportunity, it amounts for €733M/year. The transaction, which includes the acquisition, development and construction of all these projects, that has a total value of €2,200 million over a 3-year period.

Comment

Costs to realize the opportunity amounts for €733M/year. The transaction, which includes the acquisition, development and construction of all these projects, that has a total value of €2,200 million over a 3-year period.

C3. Business Strategy

C3.1

(C3.1) Have climate-related risks and opportunities influenced your organization's strategy and/or financial planning?

Yes, and we have developed a low-carbon transition plan

C3.1a

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

Yes, qualitative and quantitative

C3.1b

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

Climate-related scenarios and models applied	Details
IEA Sustainable development scenario IEA NPS IEA CPS Other, please specify (Baseline scenario)	Galp developed a scenario planning process aimed at identifying long-term alternative outcomes for the energy sector. This exercise was coordinated by the Strategy Department and had the participation of more than 50 internal and external experts with different backgrounds, including executive and non-executive board members. We have built four contrasting scenarios, considering different levels of technological and political regulation disruption, as we deem these uncertainties critical for the energy sector. The scenarios were tested and discussed internally through interviews and multidisciplinary workshops. One of the scenarios is supported by the IEA SDS scenario data and its GHG emissions (tCO2e) curve is consistent with a long term global average temperature rise of 1.7-1.8 °C, in 2040 (time horizon, relevant for Galp as projections for energy sector are up to 2040), above pre-industrial levels. Galp crossed the scenario oil and gas total demand with a third-party supply curves (adjusted to our scenario narrative) and forecasted oil price and gas price curves until 2040. Galp also reflected the total final consumption and energy mix in the market demand of our domestic markets in order to assess the potential impact on Galp's present downstream businesses. As a result, Galp obtained total primary energy demand mix in 2040 (in bn toe) for each of the 4 scenarios. This scenario analysis has directly informed and influenced our business objectives and strategy, as the data allowed Galp to measure the potential impact of each scenario on the present value of the company, according to the existing strategy. It also allowed Galp to identify new potential businesses and strategic guidelines, which could increase the company's resilience to an IEA SDS-like environment. In the decision-making process of new investments and large projects, the feasibility and resilience of each investment/project is evaluated against the 4 scenarios developed. For Galp to maintain a sustainable development in the various projected scenarios, in our strategy we reflect the main guidelines that aim at ensuring a resilient and agile organisation, prepared for a complex and uncertain world. Galp is developing a resilient portfolio, with over 40% of its planned investments to be allocated to projects that promote the energy transition. The Company will foster economically and environmentally sustainable solutions, reinforcing its investment strategy in renewable energies and in new business models (10% to 15% of future investments), as well as increasing the weight of natural gas in its portfolio.

C3.1d

(C3.1d) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	Climate change risks and opportunities has impacted Galp's products and services. Galp places its customers at the centre of all its activity and, in this sense, aims to meet their expectations through the products and services developed. As example, Galp has in place a business unit (Galp Energy Solutions) geared towards supporting Galp's customers in the implementation of energy efficiency and renewable energy solutions (revenues of €2.3M in 2018/19). The business is based on the idea of capitalising the knowledge and expertise developed in project management of this nature at our own facilities, employing them in the marketplace. Our activity is mainly directed to B2B markets, which are sectors that represent the largest share of energy consumption in Portugal. Our business model is based on energy performance contracts, between our Company and the customer, that include planning, financing, and implementation of measures and project operation. The savings achieved throughout the project are divided between the company and its customers. Thus, our Company rewards them for the investment, without their need to invest. Savings are presented and the actual value observed is billed to Customers. Galp applies defined and tested methodologies, including IPMVP – International Performance Measurement and Verification Protocol. This is an international protocol developed for this purpose that can be downloaded on the website EVO – Efficiency Valuation Organization. The energy efficiency solutions implemented has been reducing energy consumption and avoiding CO2 emissions. In 2018, it was avoided 1,601 MWh of energy consumption and 292 t CO2. In 2019, 1,541 MWh of energy consumption avoided and 387 t CO2. Galp has also developed an electric transportation offer through the inclusion of electric transportation solutions in our integrated commercial offer and the implementation of a network of normal and fast-charging points (32 & 24 by 2019) in Iberia. The electricity supplied at Galp's charging points is entirely from renewable sources. Additionally, Galp developed a B2C strategy for the decentralised energy generation segment. With this strategy Galp expects a growth of up to 250 thousand units installed. Also, since this year, all Galp B2C customers that contract Galp's electricity services will be supplied with 100% green electricity (15k clients until now).
Supply chain and/or value chain	Yes	Climate change risks and opportunities has affected Galp's supply value chain. Galp aims to play an active role in changing the energy paradigm, in particular by anticipating new trends, by adapting its portfolio to future needs, creating synergies with the present activity whenever possible, consolidating the Company's knowledge and enhancing asset diversification, with the corresponding risk reduction, namely through lower carbon intensity energy, as in the case of the use of natural gas as an alternative to coal for the transition to a lower carbon economy, among other lower carbon and new business solutions such as green hydrogen (Galp is integrated in Portuguese Consortium for production) and solar energy through PV panels. Galp set an ambition to install 10 GW of gross renewable energy capacity by 2030. Together with our partners in the development of Area 4 in Mozambique, we took the final investment decision (FID) regarding the Coral South project, the first commitment to start developing the large natural gas discoveries in the Rovuma basin. Coral South will produce liquefied natural gas (LNG) 3.4 million tonnes per annum (mtpa) through a floating unit (FLNG). The investment for upstream and midstream development is estimated at about \$7 bn and production is expected to start in 2022.
Investment in R&D	Yes	Climate change risks and opportunities have influenced Galp's investment in R&D. In 2019, Galp has invested €18.9 million in R&D and estimate to invest more than €245 million in R&D until 2025. To address the transformational challenges of the industry, we will continue to invest in the transition to a business model supported by digital, decarbonised and decentralised solutions. Innovation projects are developed in-house or in partnership with reference players or scientific and technological entities. The strategic agenda for R&D that we redefined was based on a scenario planning exercise from which we identified four major axes: Galp 4.0: We intend to adapt our assets to the new industry paradigms; Galp in a smart world: seeks to explore the opportunities arising from profound technological changes as new trends of mobility and provision of services and solutions for future homes and cities; Digital transformation: We execute our strategy, taking advantage of the opportunities that arise from digitisation at all levels of the Organisation; Businesses of the future: we explore opportunities that arise from new technologies and business models. Additionally, Galp creates a new innovation facility in 2020. UP – Upcoming Energies is the name of the project very much focused in searching for solutions for the axes of energy transition, mobility, digital and circular economy. Galp will invest up to €20 million over the next 5 years in the EIP Platform and join the European coalition to reinforce its commitment to develop a sustainable renewable power generation portfolio and to capture new business opportunities by working with the world best scale-ups. The EIP Platform has over \$1.5 billion in assets under management and invests globally across venture, growth, structured credit, and infrastructure. Galp will be the only energy player in Iberia to have full access to the EIP network, which brings together the critical players in the energy transition across power, technology and mobility. As previously announced, Galp is committed to develop a sustainable renewable power generation portfolio, with 10% to 15% of the Group's investment to be allocated to renewables and to capture opportunities from new businesses that could be scaled up.
Operations	Yes	Climate change risks and opportunities has influenced Galp's operations. Galp's strategy remains focused on developing a resilient upstream portfolio, embedded with an efficient and competitive downstream business, supported by innovative and differentiating solutions that promote the transition to a lower carbon economy. One of Galp's strategic goals is to build an innovative and differentiated lower carbon business supported by the allocation of 10-15% of our CAPEX (2020+) and 40% on energy transition. Galp has a modern and complex integrated refining system, comprising the Sines and Matosinhos refineries, with a crude oil processing capacity of 330 kbpd. The system has a hydrocracking and fluid catalytic cracking (FCC) unit at the Sines refinery for the production of medium and light distillates, respectively, as well as a visbreaker unit and aromatics and base oils plants at the Matosinhos refinery. Galp is focused on improving the efficiency and conversion capabilities of its refining system. We carry out the analysis of projects that may change the paradigm of Galp's operations and products sold (e.g. large refining projects to reduce emissions, increase energy efficiency, reducing dependency raw materials such as VGO and greater production of biofuels and/or low carbon fuels). We continued to optimise our activities, increase energy efficiency in the refining process. In 2019, Galp has invested €42.6 million in operational eco-efficiency in refining. By 2028, we will invest €80 million in eco-efficiency projects, avoiding the emission of more than 170 kton CO2e. In the upstream, Galp continues to ensure the sustainability of its E&P portfolio, which should be competitive and profitable in any expected oil and carbon pricing scenario. Our strategy focuses on identifying new opportunities in geographies where we have a competitive advantage or a strategic angle, namely through exploration and discovered resources opportunities, in order to sustain the competitiveness of future production growth while maintaining a balanced exposure to natural gas. Galp regularly measures its position in terms of operational efficiency by monitoring upstream carbon intensity and production costs in E&P activities compared to its peers. The main priorities will continue to be the disciplined execution of the existing projects and to extract more value from them.

C3.1e

(C3.1e) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Capital expenditures Acquisitions and divestments Assets	<p>Revenues: climate change related risks and opportunities have factored our financial planning process, namely revenues. Through several companies in the group, Galp currently owns a renewable portfolio, consisting in wind energy (e.g. Ventinveste project), vegetable oil, FAME biodiesel (New Energies BU, with Enerfuel Industrial Plant in Sines), that have been generating revenues aggregating to Galp's global revenues, besides the solar energy projects in development. With the strategic decision to strengthen the lower carbon energies in the portfolio (solar energy, wind energy, biofuels, EV), the expectation is that the contribution of this area of activity to the group's EBITDA will gain importance over the next decade. Regarding biofuels, Galp operates an industrial unit in Sines, Enerfuel, focused on the transformation of waste oils and waste animal fats into second generation FAME (fatty acid methyl ester) biodiesel. In addition, we became producers of second generation biofuels by co-processing vegetable oil together with gasoil, obtaining a final diesel fuel undistinguishable from diesel of fossil origin. Regarding the introduction of biofuels in Iberia, in accordance with the goals established by the European Commission and the respective countries, Galp will continue to pursue the goal of incorporating 10% by 2020 in gasoline and diesel, using the various complementary renewable sources at its disposal. In 2019, Galp introduced around 310 thousand m³ of biofuels in the Iberian market. Through the introduction of biofuels in the road market, we have contributed to prevent 352 kt CO₂. The Company also has 12 MW installed capacity at a wind farm in Portugal. In 2019, we produced 31.7 GWh, which corresponds to 8 kt CO₂ avoided and between €4.5-6.8 million in avoided energy imports. Electricity sales to the grid were 1,325 GWh, following higher volumes sold in Portugal. Galp aims to be present in power generation from differentiated renewable activities that are competitive, particularly within a context of lower carbon intensity. Capital expenditure & acquisitions and divestment: Climate change related risks and opportunities have factored our financial planning process, namely capital expenditure/allocation and acquisitions and divestment. Galp is focusing on improving the efficiency and conversion capabilities of its refining system. In 2019, Galp invested €42.6 million in eco-efficiency measures in the Refining segment. By 2025, we will invest €80 million in eco-efficiency projects, avoiding the emission of more than 170 kt CO₂e. In addition, we became producers of second generation biofuels by co-processing vegetable oil together with gasoil (in our Enerfuel plant), obtaining a final diesel fuel indistinguishable from diesel of fossil origin. Furthermore, Galp committed to allocate 10-15% of CAPEX in new businesses and low carbon solutions (2020+) and 40% to energy transition. During 2018 and 2019, Galp acquired solar power generation licences in southern Portugal. Currently, the Company is continuing to develop these projects to ensure a timely Commercial Operation Date, as well as analysing new projects that will enable Galp to develop its strategy of incorporating energy production from renewable sources. Galp agreed the acquisition of solar PV projects in Spain comprising a total generation capacity of c.2.9 GW. The agreement includes over 900 MW of power generation capacity already in production and a pipeline of projects at different stages of development to be installed until 2023, all with grid access permits. The transaction, which includes the acquisition, development and construction of all these projects, has a total value of c.€2.2 bn up to 2023. Assets: Climate change related risks and opportunities have factored our financial planning process, namely assets. Galp's presents a post-2020 portfolio breakeven forecast of approx. \$25/bbl, resilient to lower oil price situations expected in fast transition scenarios. Moreover, the LNG gas project to be developed in Mozambique will promote a lower carbon portfolio. In assessing new opportunities, Galp incorporates carbon into its investment analysis, through two different mechanisms. We consider a carbon price (\$50/tonCO₂e) in all investment decision-making processes, which together with a due diligence analysis of the activity's carbon intensity ensures the alignment of our assets and operations with a lower carbon economy. In this way, we contribute to the sustainability and resilience of our portfolio, which should be competitive, profitable and environmentally efficient and responsible.</p>

C3.1f

(C3.1f) Provide any additional information on how climate-related risks and opportunities have influenced your strategy and financial planning (optional).

C4. Targets and performance

C4.1

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

Both absolute and intensity targets

C4.1a

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

Target reference number

Abs 1

Year target was set

2018

Target coverage

Country/region

Scope(s) (or Scope 3 category)

Scope 2 (market-based)

Base year

2017

Covered emissions in base year (metric tons CO2e)

210268

Covered emissions in base year as % of total base year emissions in selected Scope(s) (or Scope 3 category)

92

Target year

2021

Targeted reduction from base year (%)

100

Covered emissions in target year (metric tons CO2e) [auto-calculated]

0

Covered emissions in reporting year (metric tons CO2e)

107149

% of target achieved [auto-calculated]

49.0416991648753

Target status in reporting year

Underway

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

Please explain (including target coverage)

Galp has made the commitment to gradually acquire, until 2021, 100% of the electricity purchased in Portugal from renewable sources. Therefore, Galp has established the target of reducing its scope 2 GHG emissions to zero until 2021. The objective was established in 2018, having as reference scope 2 GHG emissions of 2017 (base year). This commitment will enable Galp, from 2021 onwards, to avoid the emission of more than 210 thousand tCO2 per year. Galp considers that its targets are aligned with the required level of decarbonization to keep global temperature increase below 2 degrees Celsius compared to pre-industrial temperatures, given the high reduction rates compared to the baseline. The Science-based targets Initiative has not yet defined a methodology for the oil and gas sector. Investment in new business models expected to account for 10-15 % of total CAPEX by 2020 onwards and 40% for energy transition.

C4.1b

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

Target reference number

Int 1

Year target was set

2014

Target coverage

Site/facility

Scope(s) (or Scope 3 category)

Scope 1

Intensity metric

Other, please specify (kg CO2/CWT)

Base year

2008

Intensity figure in base year (metric tons CO2e per unit of activity)

47.8

% of total base year emissions in selected Scope(s) (or Scope 3 category) covered by this intensity figure

71

Target year

2022

Targeted reduction from base year (%)

40.59

Intensity figure in target year (metric tons CO2e per unit of activity) [auto-calculated]

28.39798

% change anticipated in absolute Scope 1+2 emissions

-8

% change anticipated in absolute Scope 3 emissions

0

Intensity figure in reporting year (metric tons CO2e per unit of activity)

32.7

% of target achieved [auto-calculated]

77.8269479157325

Target status in reporting year

Underway

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

Please explain (including target coverage)

This target is for the Sines Refinery. GALP defined ambitious objectives and goals for our refineries: we intend to attain benchmark levels in terms of energy efficiency (EE) and the carbon intensity of the activity. The target set (described in the table) is for both Sines and Matosinhos Refineries. Scope 1 GHG emissions from both refineries represent around 99% of total scope 1 GHG emissions of GALP Group. GALP established the following carbon targets for its refineries: 1. Matosinhos Refinery (MR): to achieve 27.1 kg CO2/CWT by 2022 (achieve a carbon intensity performance in line with the industry's top ten). 2. Sines Refinery (SR): to achieve 28.4 kg CO2/CWT by 2022 (achieve a carbon intensity performance in line with the industry's top ten). The investments that have been made, together with reducing operating costs and modernising refining equipment, contribute towards attaining the CO2 reduction objectives and goals set by the Company. To this end, the specific emissions expressed in kg CO2/CWT maintained the downward trend seen in previous years. In the case of the Matosinhos refinery, Galp witnessed a performance by the end of 2019 of 29.3 kg CO2/CWT (in the right pace to accomplish the target set for 2022). Energy efficiency investments will allow Galp to keep this performance level relative to the European benchmark. At Sines refinery, the recent commissioning of new units led to a performance of 32.7 kg CO2/CWT (in the right pace to accomplish the target set for 2022). By 2025, we will have invested €80M in eco efficiency projects, avoiding the emission of more than 170 kton of CO2e. By 2022, we will have cut our carbon intensity by 25% at the Sines refinery and 15% at the Matosinhos refinery, based on the figures for 2013. The Matosinhos refinery has been ranked in the upper quartile of the Solomon Reference in terms of energy efficiency since 2015, and we have assumed that both refineries will be in this quartile by 2021.

Target reference number

Int 2

Year target was set

2014

Target coverage

Company-wide

Scope(s) (or Scope 3 category)

Scope 1

Intensity metric

Other, please specify (kg CO2/CWT)

Base year

2008

Intensity figure in base year (metric tons CO2e per unit of activity)

47.8

% of total base year emissions in selected Scope(s) (or Scope 3 category) covered by this intensity figure

28

Target year

2022

Targeted reduction from base year (%)

43.31

Intensity figure in target year (metric tons CO2e per unit of activity) [auto-calculated]

27.09782

% change anticipated in absolute Scope 1+2 emissions

-8

% change anticipated in absolute Scope 3 emissions

0

Intensity figure in reporting year (metric tons CO2e per unit of activity)

29.3

% of target achieved [auto-calculated]

89.3625695458159

Target status in reporting year

Underway

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

Please explain (including target coverage)

This target is for the Matosinhos Refinery. GALP defined ambitious objectives and goals for our refineries: we intend to attain benchmark levels in terms of energy efficiency (EE) and the carbon intensity of the activity. The target set (described in the table) is for both Sines and Matosinhos Refineries. Scope 1 GHG emissions from both refineries represent around 99% of total scope 1 GHG emissions of GALP Group. GALP established the following carbon targets for its refineries: 1. Matosinhos Refinery (MR): to achieve 27.1 kg CO2/CWT by 2022 (achieve a carbon intensity performance in line with the industry's top ten). 2. Sines Refinery (SR): to achieve 28.4 kg CO2/CWT by 2022 (achieve a carbon intensity performance in line with the industry's top ten). The investments that have been made, together with reducing operating

costs and modernising refining equipment, contribute towards attaining the CO2 reduction objectives and goals set by the Company. To this end, the specific emissions expressed in kg CO2/CWT maintained the downward trend seen in previous years. In the case of the Matosinhos refinery, Galp witnessed a performance by the end of 2019 of 29.3 kg CO2/CWT (in the right pace to accomplish the target set for 2022). Energy efficiency investments will allow Galp to keep this performance level relative to the European benchmark. At Sines refinery, the recent commissioning of new units led to a performance of 32.7 kg CO2/CWT (in the right pace to accomplish the target set for 2022). By 2025, we will have invested €80M in eco efficiency projects, avoiding the emission of more than 170 kton of CO2e. By 2022, we will have cut our carbon intensity by 25% at the Sines refinery and 15% at the Matosinhos refinery, based on the figures for 2013. The Matosinhos refinery has been ranked in the upper quartile of the Solomon Reference in terms of energy efficiency since 2015, and we have assumed that both refineries will be in this quartile by 2021.

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?

Target(s) to increase low-carbon energy consumption or production

C4.2a

(C4.2a) Provide details of your target(s) to increase low-carbon energy consumption or production.

Target reference number

Low 1

Year target was set

2020

Target coverage

Company-wide

Target type: absolute or intensity

Absolute

Target type: energy carrier

Electricity

Target type: activity

Production

Target type: energy source

Renewable energy source(s) only

Metric (target numerator if reporting an intensity target)

MWh

Target denominator (intensity targets only)

<Not Applicable>

Base year

2020

Figure or percentage in base year

0

Target year

2030

Figure or percentage in target year

16446000

Figure or percentage in reporting year

0

% of target achieved [auto-calculated]

0

Target status in reporting year

New

Is this target part of an emissions target?

No

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain (including target coverage)

We will expand our renewables' business leveraged on proven technologies, like solar PV, and taking advantage of the existing natural hedge to our power commercial activity in Iberia. Galp's renewable portfolio consists of 3.3 GW capacity to be installed and operating by 2023, and with a longer-term ambition to reach around 10 GW by 2030 (corresponding to an annual production of 16,446 GWh), starting in Iberia but looking to explore opportunities in other regions where we believe to have competitive advantages. We will also support our customers in this transition, developing decentralised generation solutions, tailored to their needs.

C-OG4.2c

(C-OG4.2c) Indicate which targets reported in C4.1a/b incorporate methane emissions, or if you do not have a methane-specific emissions reduction target for your oil and gas activities, please explain why not and forecast how your methane emissions will change over the next five years.

Methane emissions represent a very small fraction of total GHG emissions of Galp (only 0.01% of CO2e emissions). Thus, the Company does not have yet methane specific emissions reduction targets.

To ensure that our operations and our products are more sustainable, Galp promotes the efficient use of energy and have implemented the Best Available Technologies (BAT) expressed in the reference documents applicable to the sector, to reduce atmospheric emissions, including methane emissions. In the E&P segment, Galp ensures that its projects are developed in accordance with the principle to meet Zero Routine flaring or venting of hydrocarbons. Additionally, we assure the monitoring and management of our methane emissions from combustion and fugitives sources and that our performance is verified by an independent third-party.

Also in the E&P segment, in 2019 Galp conducted once again a fugitive emissions monitoring campaign, namely methane, throughout the Rabo Branco concession (around 500 points monitored). This activity follows-up the annual plan for research and monitoring of fugitive emissions. The results obtained demonstrate a low rate of fugitive emissions, confirming the asset's good mechanical integrity conditions, and the adequate management of the equipment's. The majority of the mapped points did not show perceptible leaks to the meter. In order to contribute to the management and reporting of methane emissions in the O&G industry, we follow-up the initiatives related to methane management and reporting from IPIECA, IOGP and the Oil and Gas Climate Initiative (OGCI). Indeed, we recognise that there are opportunities within the industry to maximise the benefits of methane as a low carbon fuel.

In the R&D segment, Sines and Matosinhos refinery's fugitive emissions come from the following sources: product storage, process (including the drainage network) and effluent treatment. Galp refineries' carries out fugitive monitoring annual campaigns, under its Leak Detection Repair programme (LDAR). This methodology assumes the continual assessment of the leaks through a phased and iterative process of detection/measurement of leaks in equipment, followed by repair by maintenance team, until the effective reduction of the emission. We also quantify diffuse emissions from the WWTP the EPA programme Water9 is being used and diffuse emissions from storage the software TANKS 4.09D is being applied.

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	4	4695
To be implemented*	4	33962
Implementation commenced*	1	12455
Implemented*	4	122912
Not to be implemented	0	0

C4.3b

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

Initiative category & Initiative type

Energy efficiency in production processes	Process optimization
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Estimated annual CO2e savings (metric tonnes CO2e)

86303

Scope(s)

Scope 1

Voluntary/Mandatory

Voluntary

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

11353000

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

30810000

Payback period

1-3 years

Estimated lifetime of the initiative

16-20 years

Comment

Energy efficiency - Processes: at Sines Refinery, revamping of the heat exchanger train of atmospheric distillation. Increase of the exchange area from 0.072 to 0.099 m2 / bbl of the atmospheric distillation heat exchange train (12 new heat exchangers), in order to increase the temperature at the entrance of the CC-H1 ovens from 205 to

250°C. Scope type: 1. Voluntary initiative. Estimated annual CO2e (tons) savings: 86,303; Annual monetary savings (€): 11.4M; Investment (€): 30.8M; Estimated lifetime (years): 20 years; payback: 2.7 years.

Initiative category & Initiative type

Energy efficiency in production processes	Other, please specify (Flare gases recovering)
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Estimated annual CO2e savings (metric tonnes CO2e)

23474

Scope(s)

Scope 1

Voluntary/Mandatory

Voluntary

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

3721093

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

10684000

Payback period

1-3 years

Estimated lifetime of the initiative

16-20 years

Comment

Energy efficiency – Processes: at Sines Refinery, Flare gas recovery. The installation of a gas recovery system for the 3 flares of the Sines Refinery, allows direct savings in natural gas. Scope type: 1. Voluntary initiative. Estimated annual CO2e (tons) savings: 23,474; Annual monetary savings (€): 3.7M; Investment (€): €10.7M; Estimated lifetime (years): 20 years; payback: 2.9 years.

Initiative category & Initiative type

Energy efficiency in production processes	Process optimization
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Estimated annual CO2e savings (metric tonnes CO2e)

7176

Scope(s)

Scope 1

Voluntary/Mandatory

Please select

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

1844641

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

1102783

Payback period

<1 year

Estimated lifetime of the initiative

16-20 years

Comment

Energy efficiency - Processes: at Sines Refinery, Rationalization and upgrade of the Hydrogen network. The increase in the capacity of the ROG-PSA unit, which recovers H2 from the fuel gas network, makes it possible to reduce the emissions and consumption of the Steam Methane Reforming units. FI was possible to de-bottleneck the unit and immediately achieve benefits. Scope type: 1. Voluntary initiative. Estimated annual CO2e (tons) savings: 7,176; Annual monetary savings (€): 1.8M; Investment (€): 1.1M; Estimated lifetime (years): 20 years; payback: 0.6 years.

Initiative category & Initiative type

Energy efficiency in production processes	Process optimization
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Estimated annual CO2e savings (metric tonnes CO2e)

5960

Scope(s)

Scope 1

Voluntary/Mandatory

Voluntary

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

1800000

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

0

Payback period

<1 year

Estimated lifetime of the initiative

16-20 years

Comment

Energy efficiency - Processes: at Sines Refinery, ELLA (Energy Lean & Live Advisor). Scope type: 1. Voluntary initiative. Estimated annual CO2e (tons) savings: 5,960; Annual monetary savings (€): 1.8M; Estimated lifetime (years): 20 years.

C4.3c

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

Method	Comment
Compliance with regulatory requirements/standards	In order to comply with Portuguese and European regulation, Galp will reach, in 2020, incorporation of 10% of energy from renewable sources in fuel for road transport, ensuring a minimum of 60% in the reduction of CO2 emissions in the life cycle, and comply with EU-ETS allowance cap.
Dedicated budget for energy efficiency	One of the strategic goals of the Refining and Marketing business unit is focused on energy efficiency and process optimization of the refining system, guaranteeing both cost and energy consumption reductions and the increase of return on capital employed. To address this challenge, Galp promotes a number of projects aiming to boost energy efficiency at our facilities and with our stakeholders (e.g. clients, community), namely: Refinery Conversion project; energy efficiency at service stations; Galp Energy Solutions projects (energy solutions for clients, inc. industry and services); Social projects (JP educational projects); among others. In addition to it, Galp also has a programme to transfer knowledge and innovation between the business and academic worlds in Portugal (Galp 21 Programme), focused on energy efficiency and solutions. Galp creates a new innovation facility in 2020. UP – Upcoming Energies is the name of the project very much focused in searching for solutions for the axes of energy transition, mobility, digital and circular economy.
Dedicated budget for low-carbon product R&D	In 2019, Galp created a New Business Models unit with dedicated budget and a clear mission to develop new businesses both beneficial for the company and its customers and aligned with the transition for a lower carbon economy. Additionally, Galp creates a new innovation facility in 2020. UP – Upcoming Energies is the name of the project very much focused in searching for solutions for the axes of energy transition, mobility, digital and circular economy. Galp has in place a project to produce distilled biodiesel (FAME) in Portugal from waste feedstock (animal fats). The Enerfuel plant began its production in middle 2013 and in 2019 produced approximately 24 kton of second generation FAME. As such, we contributed to an 83% reduction in GHG emissions from use of traditional mineral diesel fuel, which is replaced by biodiesel. This unit produces biofuel from residual raw materials, particularly used cooking oils and animal fat, which only enhances its merits. In view of the good performance, we have received, at Enerfuel, the "International Sustainability Carbon Certification (ISCC)", which consists of the voluntary implementation of a system that seeks to ensure the sustainability of materials involved in the biodiesel production chain.
Internal price on carbon	When evaluating new project developments, expansions or upgrades of existing assets, we run a sensitivity in what regards carbon pricing, assuming an initial price of \$50/ton of CO2 (44.51 €/ton) in the long-term. Aware of the future potential changes in consumer and technological patterns and the risks associated to long-term business plans analysis, Galp is analysing the possibility of considering a progressive price on carbon based on the international references and forecasts. This price is applicable to all businesses and geographies, and this has been approved by the Board of Directors/Executive Committee. The inclusion of carbon price in the assessment of investment projects (medium and long-term) represents a tool to reflect the overall objective of limiting average temperature rises. Note: The price on carbon considered US 50 \$/ton equals to 44.51 €/ton. This price in US\$ was converted into € considering the last conversion rate of 2019 made available by the Bank of Portugal (31/12/2019, 1 USD = 0.89015 EUR).
Internal incentives/recognition programs	Galp developed a Low Carbon Initiatives Programme, Our CO2mmitment, which aims to promote, identify, monitor and communicate Galp's key initiatives aligned with the transition to a low-carbon economy. This programme expresses Galp's commitment to reducing greenhouse gas emissions along its value chain, through actions, projects, plans, initiatives and targets aligned with the decarbonisation of the activity: in operations; in products and services; in innovation and research projects; and, in sectoral partnerships and corporate commitments. Actions covered by the programme can have a direct impact on GHG emissions, resulting in a quantitative reduction against a baseline scenario, or contribute to future reductions, for example through the development of new technologies, support for research and innovation or definition goals and adherence to commitments. The programme follows the general principles of the GHG Protocol and IPIECA regarding the calculation of carbon footprint. The current programme includes the initiatives that started, were implemented or had an impact during 2018 (495 ktCO2e of avoided emissions) and 2019 (796 ktCO2e of avoided emissions). The initiatives that are part of the programme will be re-evaluated on an annual basis. In case the initiatives have taken place under an equity share scheme, only the percentage under Galp's responsibility is reported. The methodologies for calculating emissions savings were externally verified by a third party.

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

Group of products

Description of product/Group of products

Biofuels: Galp introduced, in 2019, around 310 thousand m3 of biofuels (biodiesel, BIO-ETBE & HVO) into the Iberian fuel market (either through its retail network, either through the sale to other operators), allowing the GHG reduction of the third parties that purchases these fuels. According to the criteria of the Renewable Energy Directive (RED II), this incorporation represents a potential reduction of GHG emissions of more than 352 kt CO2e/year. Biofuels production - Enerfuel: Galp has in place a project to produce distilled biodiesel (FAME) in Portugal from waste feedstock (animal fats). The Enerfuel plant began its production in middle 2013 and in 2019 produced approximately 27 kton of second generation FAME. As such, we contributed to an 83% reduction in GHG emissions from use of traditional mineral diesel fuel, which is replaced by biodiesel. This unit produces biofuel from residual raw materials, particularly used cooking oils and animal fat, which only enhances its merits. Aligned with the best practices, we have received, at Enerfuel, the "International Sustainability Carbon Certification (ISCC)", which consists of the voluntary implementation of a system that seeks to ensure the sustainability of materials involved in the biodiesel production chain.

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 (GHG Protocol methodology)

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

0.15

% of total portfolio value

<Not Applicable>

Asset classes/ product types

<Not Applicable>

Comment

Biofuels: Galp introduced, in 2019, around 310 thousand m3 of biofuels (biodiesel, BIO-ETBE & HVO) into the Iberian fuel market (either through its retail network, either through the sale to other operators), allowing the GHG reduction of the third parties that purchases these fuels. According to the criteria of the Renewable Energy Directive (RED II), this incorporation represents a potential reduction of GHG emissions of more than 352 kt CO2e/year. Biofuels production - Enerfuel: Galp has in place a project to produce distilled biodiesel (FAME) in Portugal from waste feedstock (animal fats). The Enerfuel plant began its production in middle 2013 and in 2019 produced approximately 27 kton of second generation FAME. As such, we contributed to an 83% reduction in GHG emissions from use of traditional mineral diesel fuel, which is replaced by biodiesel. This unit produces biofuel from residual raw materials, particularly used cooking oils and animal fat, which only enhances its merits. Aligned with the best practices, we have received, at Enerfuel, the "International Sustainability Carbon Certification (ISCC)", which consists of the voluntary implementation of a system that seeks to ensure the sustainability of materials involved in the biodiesel production chain.

Level of aggregation

Group of products

Description of product/Group of products

Galp Soluções de Energia (Galp Energy Solutions) is a business unit of Galp geared towards supporting our customers in the implementation of energy efficiency and renewable energy projects. It is based on the idea of capitalising the knowledge and expertise developed in projects of this nature at own facilities, employing them in the marketplace. The activity is directed primarily at B2B markets: service, transport, and industrial buildings, sectors that represent the largest share of energy consumption in Portugal. Savings are presented (measures), and the actual value observed is billed to Customers. Galp applies defined and tested methodologies, including IPMVP – International Performance Measurement and Verification Protocol. Some concepts undergoing in 2019 were: 1) TGLS: efficient lightning project (191 MWh electricity saved; 48 t CO2 avoided); 2) Hotel Villa Batalha (Solar PV project; 135 MWh saved; 39.9 t CO2 avoided); 3) COOPVAL (Solar PV project – ESCO model; 588 MWh saved; 148 t CO2 avoided); 4) Roche (Solar PV project; 209 MWh saved; 52 t CO2 avoided); 5) Joferlis (Solar PV project; 418 MWh saved; 105 t CO2 avoided). GSE has developed and implemented other projects in the past, namely: 1) EE Hotel (Phases I-III): The measures of EE include the recovery of thermal energy for water heating, replacement of lighting systems, installation of a solar system & cogeneration system. In the 1st phase, this project enables a saving of 2.3 GWh/year, around 25% of total consumption and 740 t CO2/year avoided. In the 2nd phase, a reduction of around 1.7 GWh/year will be accomplished, meaning 520t CO2/year avoided. 2) Sustainable Campus network: Implementation of energy efficiency projects in cooperation with 3 Universities (UA, UBI and IST), in a total floor area of 300,000 m2 spread by 100 buildings. 5 solar plants were installed, reaching over 900 kW in buildings of the UL. It was also developed a project of decentralized production of renewable energy, by installing 4 photovoltaic power plants - around 1 million kWh/year of energy (savings of 322 t CO2/year). The production was about 220 MWh, meaning savings of about 67 tCO2. 3) PV panels in Wastewater Treatment Plants: Over 180 kW installed, over 135 MWh produced, avoiding the emission of over 40 tCO2/year.

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

Avoided emissions

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

Other, please specify (GHG Protocol methodology)

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

0.01

% of total portfolio value

<Not Applicable>

Asset classes/ product types

<Not Applicable>

Comment

Galp Soluções de Energia (Galp Energy Solutions) is a business unit of Galp geared towards supporting our customers in the implementation of energy efficiency and renewable energy projects. It is based on the idea of capitalising the knowledge and expertise developed in projects of this nature at own facilities, employing them in the marketplace. The activity is directed primarily at B2B markets: service, transport, and industrial buildings, sectors that represent the largest share of energy consumption in Portugal. Savings are presented (measures), and the actual value observed is billed to Customers. Galp applies defined and tested methodologies, including IPMVP – International Performance Measurement and Verification Protocol. Some concepts undergoing in 2019 were: 1) TGLS: efficient lightning project (191 MWh electricity saved; 48 t CO2 avoided); 2) Hotel Villa Batalha (Solar PV project; 135 MWh saved; 39.9 t CO2 avoided); 3) COOPVAL (Solar PV project – ESCO model; 588 MWh saved; 148 t CO2 avoided); 4) Roche (Solar PV project; 209 MWh saved; 52 t CO2 avoided); 5) Joferlis (Solar PV project; 418 MWh saved; 105 t CO2 avoided). GSE has developed and implemented other projects in the past, namely: 1) EE Hotel (Phases I-III): The measures of EE include the recovery of thermal energy for water heating, replacement of lighting systems, installation of a solar system & cogeneration system. In the 1st phase, this project enables a saving of 2.3 GWh/year, around 25% of total consumption and 740 t CO2/year avoided. In the 2nd phase, a reduction of around 1.7 GWh/year will be accomplished, meaning 520t CO2/year avoided. 2) Sustainable Campus network: Implementation of energy efficiency projects in cooperation with 3 Universities (UA, UBI and IST), in a total floor area of 300,000 m2 spread by 100 buildings. 5 solar plants were installed, reaching over 900 kW in buildings of the UL. It was also developed a project of decentralized production of renewable energy, by installing 4 photovoltaic power plants - around 1 million kWh/year of energy (savings of 322 t CO2/year). The production was about 220 MWh, meaning savings of about 67 tCO2. 3) PV panels in Wastewater Treatment Plants: Over 180 kW installed, over 135 MWh produced, avoiding the emission of over 40 tCO2/year.

C-OG4.6

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

To ensure that our operations and our products are more sustainable, Galp promotes the efficient use of energy and have implemented the Best Available Technologies (BAT) expressed in the reference documents applicable to the sector, to reduce atmospheric emissions, including methane emissions. In the E&P segment, Galp ensures that its projects are developed in accordance with the principle to meet Zero Routine flaring or venting of hydrocarbons. Additionally, we assure the monitoring and management of our methane emissions from combustion and fugitives sources and that our performance is verified by an independent third-party.

Also in the E&P segment, in 2019 Galp conducted once again a fugitive emissions monitoring campaign, namely methane, throughout the Rabo Branco concession (more than 500 points monitored). This activity follows-up the annual plan for research and monitoring of fugitive emissions. The results obtained demonstrate a low rate of fugitive emissions, confirming the asset's good mechanical integrity conditions, and the adequate management of the equipment's. The majority of the mapped points did not show perceptible leaks to the meter. In order to contribute to the management and reporting of methane emissions in the O&G industry, we follow-up the initiatives related to methane management and reporting from IPIECA, IOGP and the Oil and Gas Climate Initiative (OGCI). Indeed, we recognise that there are opportunities within the industry to maximise the benefits of methane as a low carbon fuel.

In the R&D segment, Sines and Matosinhos refinery's fugitive emissions come from the following sources: product storage, process (including the drainage network) and effluent treatment. Galp refineries' carries out fugitive monitoring annual campaigns, under its Leak Detection Repair programme (LDAR). This methodology assumes the continual assessment of the leaks through a phased and iterative process of detection/measurement of leaks in equipment, followed by repair by maintenance team, until the effective reduction of the emission. We also quantify diffuse emissions from the WWTP the EPA programme Water9 is being used and diffuse emissions from storage the software TANKS 4.09D is being applied.

C-OG4.7

(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

(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.

Galp refineries' commitment to environmental sustainability it reflected in one more tool for monitoring emissions reduction: the LDAR programme (Leak Detection and Repair). As part of this programme, which includes the application of the Best Available Technologies expressed in the reference documents applicable to the sector, the refinery carries out monitoring campaigns of the VOCs, which are measured in order to minimise leaks. The methodology assumes the continual assessment of the leaks through a phased and iterative process of detection/measurement of leaks in equipment, followed by repair, until the effective reduction of the emission.

Therefore, in an initial phase, a thorough study of the Piping and Instrumentation Diagrams (P&IDs) is carried out and the parts liable to be included in the Leak Identification Programme are identified, drawing up a list of parts per plant. This equipment includes valves, exchangers, pumps, compressors, flanges, sampling points, vents, purges and other end-of-lines, and also an estimate of the VOC emissions that originate in the first phases of the wastewater treatment process at the WWTP, including the storm basins.

The refineries have been carrying out annual monitoring of around 1,500 and 14,000 stock parts in the various plants and biannual monitoring of around 150 elements in some process units, in Matosinhos and Sines Refinery, respectively. Around 18,000 + 14,000 components were identified, monitored and registered in the Database, which enables the whole process history to be recorded and filed, allowing the record of each piece of equipment under analysis and/or being repaired to be quickly checked.

The type of parts and the composition of the lines included in the LDAR programme meet the criteria established through method 21 of the EPA and the EN 15446 standard.

The next phase consists of labelling the monitoring points. The labels used, made from Teflon-coated aluminium, have a barcode so they can be optically read using a PDA. This code unequivocally identifies each piece of equipment, in the facility, the database and the P&ID.

After the labelling, the continual monitoring phase of VOC leaks begins in the equipment outlined in the leak identification programme. If any leaks are detected during the monitoring phase a list of parts that will subsequently be repaired internally by Sines and Matosinhos refineries are created, following a defined maintenance plan. After the repair, VOCs are again measured in the equipment that was previously leaking, to check that the leak has been plugged. The monitoring, repair and post-repair monitoring phases will be repeated as many times as required until the leaks are eliminated.

The LDAR programme also includes an estimate of the emissions coming from the refinery's drainage system and the Wastewater Treatment Plant, through the inclusion of several variables in a graphical interface, using the WATER9 software, of US EPA and diffuse emissions from storage the software TANKS 4.09D is being applied.

C-OG4.8

(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.

Flaring is relevant to Galp's operations as we are an exploration and production operator. Galp ensures that its projects are developed in accordance with the principle to meet Zero Routine Flaring or venting of hydrocarbons. We monitor and manage our GHG emissions from gas flared and our performance is verified by an independent third-party. The goal is to reduce gas flaring (in normal operation), as it contributes to GHG emissions and other pollutants.

Galp is governed by a responsible activity, focusing on a safe operation, and applying the reference standards in energy management and emissions.

In this sense, we are committed to scaling new E&P projects to zero flaring under normal operating conditions, by joining the Zero Routine Flaring by 2030 initiative as an E&P operator (target & target year: zero flaring until 2030). We joined, in 2015, the initiative Zero Routine Flaring by 2030, as a production and exploration operator. The goal is to reduce gas flaring (in normal operation), as it contributes to GHG emissions and other pollutants. This objective extends until 2030 and the initiative relies on the cooperation of several institutions, governmental entities and companies within our sector.

Current projects are being adapted to reduce emissions, with a registered gas flaring volume of 1,020 thousand m3 in 2019 (decrease of 14%, from 1,192 thousand m3 in 2018 to 1,020 in 2019) and 2,598 tCO2e. This volume is expected to be reduced upon the implementation of the energy production project, through the reutilisation of the gas produced.

In addition, although there is no regulation in Brazil that requires the injection of gas, in the E&P segment the consortium in where Galp participates (block BM-S-11) has taken the initiative to separate and inject the gas from the production since the beginning, reducing the operation's ecological footprint and optimising the maintenance of the reservoir's pressure. This separation is carried out in the production unit through the selective permeation method, with the gas being injected back into the reservoir using the WAG method.

C5. Emissions methodology

C5.1

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

Scope 1

Base year start

January 1 2011

Base year end

December 31 2011

Base year emissions (metric tons CO2e)

3199557

Comment

Base year set when Galp updated its carbon footprint.

Scope 2 (location-based)

Base year start

January 1 2011

Base year end

December 31 2011

Base year emissions (metric tons CO2e)

192470

Comment

Base year set when Galp updated its carbon footprint.

Scope 2 (market-based)

Base year start

January 1 2011

Base year end

December 31 2011

Base year emissions (metric tons CO2e)

192470

Comment

Base year set when Galp updated its carbon footprint.

C5.2

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

IPIECA's Petroleum Industry Guidelines for reporting GHG emissions, 2nd edition, 2011

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

C6. Emissions data

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)
3298107

Start date
<Not Applicable>

End date
<Not Applicable>

Comment
Gross global Scope 1 emissions (metric tons CO2e) equals to 3,298,107. Broken down by business unit (metric tons CO2e): E&P (9,120), R&M (3,265,510); G&P (18,029); Others (5,448).

C6.2

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

Row 1

Scope 2, location-based
We are not 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 market-based figure.

C6.3

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

Reporting year

Scope 2, location-based
<Not Applicable>

Scope 2, market-based (if applicable)
112504

Start date
<Not Applicable>

End date
<Not Applicable>

Comment
Gross global Scope 2 emissions (metric tons CO2e) equals to 112,504. Broken down by business unit (metric tons CO2e): E&P (29), R&M (111,475); G&P (71); Others (929).

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?

No

C6.5

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

Purchased goods and services

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

6466581

Emissions calculation methodology

GHG emissions resulting from the extraction, production, and transportation of goods and services purchased or acquired by Galp. The emission sources associated with purchases of crude oil, natural gas and petrochemical products used as raw material are considered, as well as liquid fuels, not processed by Galp, bought for sale to the final consumer are considered. The inventory were accounted taking into account the emissions produced upstream of their acquisition, based on theoretical emissions factors, representative of the average emissions associated with the transformation processes, and on the amount of goods and services acquired. The emissions resulting from liquid fuels acquired (Fueloil, Jetfuel, Gasoline, Diesel & LPG) are calculated in a well-to-tank perspective. The GHG emissions from the natural gas lifecycle are accounted until the combustion (excluding the emissions resulting from combustion). In the case of the crude oil, the well-to-refinery perspective is considered.

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

0

Please explain

Upstream emissions resulting from the crude oil, natural gas and fuels (including fuel oil, jet fuel, gasoline, diesel and LPG) purchased by Galp from other operators.

Capital goods

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>

Please explain

Galp considers that emissions associated to capital goods are not material (less than 5% of total GHG emissions). The Company reassessed the materiality of this category last year and decided not to report it given its non-materiality and potential inaccuracies in the information needed to account for the emissions associated with this category, given the complexity of the process of gathering all information.

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

Evaluation status

Not relevant, calculated

Metric tonnes CO₂e

935716

Emissions calculation methodology

GHG emissions from the upstream activities to the electricity purchased by Galp for resale, including both the emissions from the lifecycle of the fuels associated to electricity purchased and the emissions resulted from the power generation. The amount of emissions is calculated based on the amount of power sold by Galp and two different emission factors, for the lifecycle assessment is used a theoretical emission factor from DEFRA, and for the power generation is used a market-based emission factor.

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

0

Please explain

Upstream GHG emissions from the power sold by Galp to its customers, including the emissions from the lifecycle of the fuels associated to electricity purchased and emissions resulted from the power generation.

Upstream transportation and distribution

Evaluation status

Not relevant, calculated

Metric tonnes CO₂e

669161

Emissions calculation methodology

Accounting for emissions associated with primary transportation, using the marine mode, was done through the activity data associated with the operations in time charter and spot charter. For diesel and fuel oil resulting from shipping in time charter, direct emissions from combustion in respective ships were calculated, based on the quantity (tones) of fuel consumed. For spot charter it was considered the quantity transported and distance covered. The emission factors are based on the values defined by the IPCC, adjusted to the Portuguese reality, based on data published by official national entities. For the carbon footprint calculation purposes, Galp considered the primary transportation in upstream transport, so as to be distinguished from secondary logistic.

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

100

Please explain

Primary transportation using the marine mode, of operations in own marine fleet, time charter and spot charter.

Waste generated in operations

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>

Please explain

Galp considers that emissions associated to waste generated in operations are not material (less than 5% of total GHG emissions). The Company reassessed the materiality of this category last year and decided not to report it given its non-materiality and potential inaccuracies in the information needed to account for the emissions associated with this category, given the complexity of the process of gathering all information.

Business travel

Evaluation status

Not relevant, calculated

Metric tonnes CO₂e

6204

Emissions calculation methodology

GHG emissions associated to business travel by air and train. Passenger.km transported by train was calculated based on the locations of origin and destination of each journey and the distance of the rail service provided by the suppliers CP (Portugal) and RENFE (Spain). For trips made in other countries, were considered linear distances between points of origin and destination. For the accounting for indirect emissions associated with the production of the electricity consumed in trains in Portugal and Spain were used emission factors published by the suppliers RENFE and CP, respectively. The passenger.km transported by plane was quantified through the linear distances on the surface, calculated based on the locations of origin and destination of each. For consumption of jetfuel by plane, were recorded direct emissions resulting from fuel combustion, by applying emission factors representative of the international air traffic, considering occupancy rates and average aircrafts for each type of route (short, medium and long distance). In this case, the GHG emissions that occur on air (measured in CO₂e) are affected by the Index Radiative Force.

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

100

Please explain

GHG emissions associated to business travel by plane and train.

Employee commuting

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>

Please explain

Galp considers that emissions associated to employee commuting are not material (less than 5% of total GHG emissions). The Company reassessed the materiality of this category last year and decided not to report it given its non-materiality and potential inaccuracies in the information needed to account for the emissions associated with this category, given the complexity of the process of gathering all information

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>

Please explain

Not relevant/Not applicable. This activity is not applicable to Galp as the company does not have leased assets from a third party which are operated. Note: Galp has leased assets, namely Floating Production Storage and Offloading (FPSO). However, as Galp does not hold operational control, this data is not consolidated in the carbon footprint of the Company.

Downstream transportation and distribution

Evaluation status

Not relevant, calculated

Metric tonnes CO₂e

64913

Emissions calculation methodology

Secondary transport of goods by road. For emissions associated with secondary transport of goods by road in vehicles, were accounted direct emissions from the combustion of diesel fuel in vehicles with internal combustion engine, based on the distances travelled. The emission factors are based on the values defined by the IPCC, adjusted to the Portuguese reality, based on data published by official national entities.

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

100

Please explain

Secondary transport of goods by road and train in Portugal, Spain and Galp Marketing International.

Processing of sold products

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

16452872

Emissions calculation methodology

GHG emissions resulting from the processing of intermediate products sold by Galp to other downstream companies, based on the quantities of crude oil sold and emission factors defined by IPCC.

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

0

Please explain

GHG emissions resulting from the crude oil processing made by the downstream company to whom Galp sold its crude oil.

Use of sold products

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

34011302

Emissions calculation methodology

Direct emissions of the consumption of fuels sold to end consumers were accounted through the respective combustion (stationary and mobile sources), based on the quantities sold and emission factors defined by the IPCC, adjusted to the Portuguese reality, based on data published by official national entities (National Inventory Report). In the case of road fuels, it was considered the average rate of incorporation of biofuels, based on the latest official data. As Galp is the refining players for most of the fuel suppliers in Portugal and part of Spain, considering the overall fuel sales (including the sales to other operators) will mean a clear double-counting situation with the use of product emissions reported by other oil marketing companies present in Portugal. Given this and following the Greenhouse Gases Protocol principle to avoid emissions double-counting, Galp only considers the sales to end consumers.

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

0

Please explain

GHG emissions associated to the use of sold products, namely: Diesel oil; Gasoline; Jet; Natural gas; Fuel oil and LPG.

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>

Please explain

Not relevant/Not applicable. This activity is not applicable to Galp as the main products that the company sells (fuels) are not recovered, since they are consumed entirely, not generating any waste.

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>

Please explain

Galp has some service stations leased to third parties. However, through a materiality analysis Galp concluded that emissions associated with the leased service stations are not material (less than 5%) compared to other activities of scope 3 GHG emissions. The Company reassessed the materiality of this category last year and decided not to report it given its non-materiality and potential inaccuracies in the information needed to account for the emissions associated with this category, given the complexity of the process of gathering all information.

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>

Please explain

Galp has some service stations franchised. However, through a materiality analysis, Galp concluded that emissions associated with franchising are not material (less than 5%) compared to other activities of scope 3 GHG emissions. The Company reassessed the materiality of this category last year and decided not to report it given its non-materiality and potential inaccuracies in the information needed to account for the emissions associated with this category, given the complexity of the process of gathering all information.

Investments

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

689834

Emissions calculation methodology

Direct emissions from the operation of the exploration and production assets which are not operated by Galp, based on the operation data received from the partner who is responsible for the operation, considering reference emission factors (defined by the IPCC, IPIECA and/or IOGP) and direct measurement techniques. It also includes the fugitive emissions from the Natural Gas Distribution System Operator, based on the number of kilometers of the distribution system and a theoretical percentage of fugitive emissions from API.

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

100

Please explain

GHG emissions resulting from the operation of businesses and assets where Galp is present as a joint-venture or with an equity stake, without management control. It includes all the working interest in Exploration and Production assets non-operated by Galp and the Company's stake in the Natural Gas Distribution System Operator.

Other (upstream)

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>

Please explain

Not relevant. No other categories have been identified.

Other (downstream)

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>

Please explain

Not relevant. No other categories have been identified.

C6.7

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?

No

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

0.000206

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

3410611

Metric denominator

unit total revenue

Metric denominator: Unit total

1657000000

Scope 2 figure used

Market-based

% change from previous year

4.1

Direction of change

Increased

Reason for change

In 2019, this performance metric increased 4.1% compared to the previous year (from 0.000198 to 0.000206) mainly due to a decrease in revenues. Global scope 1+2 GHG emissions remained almost the same (from 3,398,451 tCO2e in 2018 to 3,410,611 tCO2e in 2019) and total revenues decreased 4% (from €17,181,742,240 to 16,570,000,000). In 2019, Galp maintained its focus on maximising energy efficiency, continuing its work on continuous improvement of its refining system, using resources more efficiently and reducing its carbon intensity. To this end, we invested €42.6 m in improving operational efficiency, including energy efficiency, and in relevant projects, such as the revamping of the atmospheric distillation unit, with an impact on greenhouse gas emissions, representing an annual reduction of 117 kton CO2e.

Intensity figure

534.08

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

3410611

Metric denominator

full time equivalent (FTE) employee

Metric denominator: Unit total

6386

Scope 2 figure used

Market-based

% change from previous year

0.1

Direction of change

Decreased

Reason for change

In 2019, this performance metric decreased 0.1% compared to the previous year (from 534.35 to 534.08). In our view, this difference is not very significant. Global scope 1+2 GHG emissions remained almost the same (from 3,398,451 tCO2e in 2018 to 3,410,611 tCO2e in 2019) and total FTE increase in 6 people (from 6,380 to 6,386). In 2019, Galp maintained its focus on maximising energy efficiency, continuing its work on continuous improvement of its refining system, using resources more efficiently and reducing its carbon intensity. To this end, we invested €42.6 m in improving operational efficiency, including energy efficiency, and in relevant projects, such as the revamping of the atmospheric distillation unit, with an impact on greenhouse gas emissions, representing an annual reduction of 117 kton CO2e.

Intensity figure

0.228

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

3410611

Metric denominator

Other, please specify (tonne of feedstock processed)

Metric denominator: Unit total

14962721

Scope 2 figure used

Market-based

% change from previous year

3.2

Direction of change

Increased

Reason for change

In 2019, this performance metric increased 3.2% compared to the previous year (from 0.221 to 0.228) mainly due to a decrease in feedstock processed. Global scope 1+2 GHG emissions remained almost the same (from 3,398,451 tCO2e in 2018 to 3,410,611 tCO2e in 2019) and total feedstock processed decreased around 3% (from 15,382,150 ton to 14,962,721 ton). In 2019, Galp maintained its focus on maximising energy efficiency, continuing its work on continuous improvement of its refining system, using resources more efficiently and reducing its carbon intensity. To this end, we invested €42.6 m in improving operational efficiency, including energy efficiency, and in relevant projects, such as the revamping of the atmospheric distillation unit, with an impact on greenhouse gas emissions, representing an annual reduction of 117 kton CO2e.

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)

Other, please specify (Million Barrels of Oil Equivalent - mmmboe)

Metric tons CO2e from hydrocarbon category per unit specified

3271975

% change from previous year

1

Direction of change

Increased

Reason for change

In 2019, this performance metric increased 1.4% compared to the previous year (from 29,377 to 29,777). Global scope 1 GHG emissions (E&P+Refining - including biofuels) had a 1% increase (from 3,237,665 tCO2e to 3,271,975 tCO2e) and total Million Barrels of Oil Equivalent (mmboe) produced had a 0.3% decrease (from 110.2 mmboe to 109.9 mmboe). Thus, $3,271,975/109.9=29,777$. In 2019, Galp maintained its focus on maximising energy efficiency, continuing its work on continuous improvement of its refining system, using resources more efficiently and reducing its carbon intensity. To this end, we invested €42.6 m in improving operational efficiency, including energy efficiency, and in relevant projects, such as the revamping of the atmospheric distillation unit, with an impact on greenhouse gas emissions, representing an annual reduction of 117 kton CO2e.

Comment

The numerator 3,271,975 tCO2e includes scope 1 GHG emissions of Exploration & Production and Refining (including biofuels) segments. The denominator (109.9 mmboe) includes hydrocarbons produced at upstream oil and natural gas produced & refining intake (feedstock processed), including biofuels, at the Refining segment.

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

1.32

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

0.13

Comment

Galp monitors upstream (E&P) CH4 emissions. Galp follows the methodology proposed by API for the determination of CH4 emissions.

C7. Emissions breakdowns

C7.1

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

Yes

C7.1a

(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	3297501	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	294	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	312	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

Fugitives

Value chain

Upstream
Downstream

Product

Oil

Gross Scope 1 CO2 emissions (metric tons CO2)

0

Gross Scope 1 methane emissions (metric tons CH4)

237.3

Total gross Scope 1 emissions (metric tons CO2e)

5933

Comment

CH4 fugitive emissions reported are related to flare at Refining. Fugitive emissions from equipment at the refining system are not relevant. Galp does not have natural gas fields in production in 2019.

Emissions category

Flaring

Value chain

Upstream

Product

Oil

Gross Scope 1 CO2 emissions (metric tons CO2)

0

Gross Scope 1 methane emissions (metric tons CH4)

11.1

Total gross Scope 1 emissions (metric tons CO2e)

276

Comment

CH4 fugitive emissions from flaring at E&P, according to API Compendium and IOGP Assumption. Galp does not have natural gas fields in production in 2019.

Emissions category

Combustion (excluding flaring)

Value chain

Upstream
Downstream

Product

Oil

Gross Scope 1 CO2 emissions (metric tons CO2)

2278816

Gross Scope 1 methane emissions (metric tons CH4)

0.4

Total gross Scope 1 emissions (metric tons CO2e)

2278948

Comment

Methane emissions included in values of CO2e. CO2 emissions also include the cogeneration units within the refineries. It includes CO2 emissions from combustion of fuels in other operations (e.g. Logistics; Fuel Marketing; Biofuels; Others).

Emissions category

Combustion (excluding flaring)

Value chain

Other (please specify) (Power Generation)

Product

Gas

Gross Scope 1 CO2 emissions (metric tons CO2)

17831

Gross Scope 1 methane emissions (metric tons CH4)

0.3

Total gross Scope 1 emissions (metric tons CO2e)

18029

Comment

Emissions from Galp's cogeneration unit (Agroger).

Emissions category

Process (feedstock) emissions

Value chain

Downstream

Product

Oil

Gross Scope 1 CO2 emissions (metric tons CO2)

998533

Gross Scope 1 methane emissions (metric tons CH4)

0

Total gross Scope 1 emissions (metric tons CO2e)

998533

Comment

Process emissions from refining. Methane emissions included in values of CO2e.

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

Country/Region	Scope 1 emissions (metric tons CO2e)
Portugal	3287335
Spain	557
Brazil	2633
Cabo Verde	359
Guinea-Bissau	362
Mozambique	336
Eswatini	3
Namibia	6522

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)
Exploration and Production (E&P) - Operated Blocks	9120
Refining and Marketing (R&M)	3265510
Gas and Power (G&P)	18029
Others	5448

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 activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	9120	<Not Applicable>	Exploration and Production (E&P) Operated Assets
Oil and gas production activities (midstream)	0	<Not Applicable>	Not applicable.
Oil and gas production activities (downstream)	3288987	<Not Applicable>	Refining and Marketing (R&M) + Gas and Power (G&P) + Others
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 for in Scope 2 market-based approach (MWh)
Portugal	0	111961	441273	255367
Spain	0	98	389	0
Brazil	0	29	235	0
Cabo Verde	0	310	519	0
Guinea-Bissau	0	25	42	0
Mozambique	0	12	1055	0
Eswatini	0	69	115	0
Namibia	0	0	0	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 (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Exploration and Production (E&P) - Operated Blocks	0	29
Refining and Marketing (R&M)	0	111475
Gas and Power (G&P)	0	71
Others	0	929

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)	0	29	Exploration and Production (E&P) Operated Assets
Oil and gas production activities (midstream)	0	0	N/A
Oil and gas production activities (downstream)	0	112475	Refining and Marketing (R&M) + Gas and Power (G&P) + Others
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?

Increased

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	21011	Decreased	0.6	Explanation for 'Change in renewable energy consumption' category. Global Figure (Scope 1+2) 2019: 3,410,611 tCO2e; Global Figure (Scope 1+2) 2018: 3,398,451 tCO2e; Reduction due to 'Change in renewable energy consumption': approx. -21,011 tCO2e. Galp decreased -0.6% $(\frac{-21,011}{3,398,451} * 100 = -0.6\%)$ its scope 1+2 GHG emissions due to change in the EF of the electricity consumed (electricity was produced with less fossil fuels and more renewables). General explanation for gross global emissions (Scope 1 and 2 combined): In 2019, absolute gross scope 1 and 2 GHG emissions combined slightly increased +0.4% $(\frac{+12,160}{3,398,451} * 100 = +0.4\%)$ compared to previous year (from 3,398,451 t CO2e to 3,410,611 t CO2e; slightly increase of +12,160 tCO2e). Disaggregating this slight increase (+0.4%) by different reasons, emissions were: (1) Reduced -0.6% (approx. -21,011 t CO2e) due to change in the emission factor of the electricity consumed by Galp in Portugal (electricity was produced with less fossil fuels and more renewables); (2) Reduced -3.6% (approx. -122,912 t CO2e) due to 'Other emission reduction activities' implemented mainly in the Refining segment; (3) Increased +4.6% (approx. +156,084 tCO2e) due to scheduled partial shutdowns for maintenance purposes in the refining sector. Thus, Global +0.4% increase equals to: Change (%) = +0.4% = -0.6% (1) - 3.6% (2) + 4.6% (3) = +0.4%. Change (tCO2e) = +12,160 = -21,011 (1) -122,912 (2) + 156,084 (3) = +12,160 tCO2.
Other emissions reduction activities	122912	Decreased	3.6	Explanation for 'Other emission reduction activities' category. Global Figure (Scope 1+2) 2019: 3,410,611 tCO2e; Global Figure (Scope 1+2) 2018: 3,398,451 tCO2e; Reduction due to 'Other emission reduction activities': approx. -122,912 tCO2e. Galp reduced -3.6% $(\frac{-122,912}{3,398,451} * 100 = -3.6\%)$ its scope 1+2 GHG emissions due to Emission Reduction Activities, such as the implementation of energy efficiency initiatives in the Refining segment. For example, in 2019, Galp invested €42.5 million in ecoefficiency projects at the Sines refinery. Galp has been reducing the GHG emissions in the refining operations, through the implementation of the BAT to improve Eco-efficiency of resource use. Some examples are reported in C4.3b, such as: i) Energy efficiency - Processes: at Sines Refinery, revamping of the heat exchanger train of atmospheric distillation; ii) Energy efficiency – Processes: at Sines Refinery, Flare gas recovery. The installation of a gas recovery system for the 3 flares of the Sines Refinery; iii) Energy efficiency - Processes: at Sines Refinery, rationalization and upgrade of the Hydrogen network; iv) Energy efficiency - Processes: at Sines Refinery, ELLA (Energy Lean & Live Advisor). General explanation for gross global emissions (Scope 1 and 2 combined): In 2019, absolute gross scope 1 and 2 GHG emissions combined slightly increased +0.4% $(\frac{+12,160}{3,398,451} * 100 = +0.4\%)$ compared to previous year (from 3,398,451 t CO2e to 3,410,611 t CO2e; slightly increase of +12,160 tCO2e). Disaggregating this slight increase (+0.4%) by different reasons, emissions were: (1) Reduced -0.6% (approx. -21,011 t CO2e) due to change in the EF of the electricity consumed by Galp in Portugal (electricity was produced with less fossil fuels and more renewables); (2) Reduced -3.6% (approx. -122,912 t CO2e) due to 'Other emission reduction activities' implemented mainly in the Refining segment; (3) Increased +4.6% (approx. +156,084 tCO2e) due to scheduled partial shutdowns for maintenance purposes in the refining sector. Thus, Global +0.4% increase equals to: Change (%) = +0.4% = -0.6% (1) -3.6% (2) +4.6% (3) = +0.4%. Change (tCO2e) = +12,160 = -21,011 (1) -122,912 (2) + 156,084 (3) = +12,160 tCO2.
Divestment	0	No change	0	Not applicable.
Acquisitions	0	No change	0	Not applicable.
Mergers	0	No change	0	Not applicable.
Change in output	0		0	Not applicable.
Change in methodology	0	No change	0	Not applicable.
Change in boundary	0	No change	0	Not applicable.
Change in physical operating conditions	0	No change	0	Not applicable.
Unidentified	0	No change	0	Not applicable.
Other	156084	Increased	4.6	Explanation for 'Other' category. Global Figure (Scope 1+2) 2019: 3,410,611 tCO2e; Global Figure (Scope 1+2) 2018: 3,398,451 tCO2e; Increase due to 'Other': approx. +156,084 tCO2e. Galp increased +4.6% $(\frac{+156,084}{3,398,451} * 100 = +4.6\%)$ its scope 1+2 GHG emissions due to scheduled partial shutdowns for maintenance purposes in the refining sector. General explanation for gross global emissions (Scope 1 and 2 combined): In 2019, absolute gross scope 1 and 2 GHG emissions combined slightly increased +0.4% $(\frac{+12,160}{3,398,451} * 100 = +0.4\%)$ compared to previous year (from 3,398,451 t CO2e to 3,410,611 t CO2e; slightly increase of +12,160 tCO2e). Disaggregating this slight increase (+0.4%) by different reasons, emissions were: (1) Reduced -0.6% (approx. -21,011 t CO2e) due to change in the EF of the electricity consumed by Galp in Portugal (electricity was produced with less fossil fuels and more renewables); (2) Reduced -3.6% (approx. -122,912 t CO2e) due to 'Other emission reduction activities' implemented mainly in the Refining segment; (3) Increased +4.6% (approx. +156,084 tCO2e) due to scheduled partial shutdowns for maintenance purposes in the refining sector. Thus, Global +0.4% increase equals to: Change (%) = +0.4% = -0.6% (1) -3.6% (2) +4.6% (3) = +0.4%. Change (tCO2e) = +12,160 = -21,011 (1) -122,912 (2) + 156,084 (3) = +12,160 tCO2.

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?

Market-based

C8. Energy

C8.1

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

More than 0% but less than or equal to 5%

C8.2

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

	Indicate whether your organization undertook this energy-related activity in the reporting year
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	No
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 (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	0	11362680	11362680
Consumption of purchased or acquired electricity	<Not Applicable>	255367	188261	443628
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
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>	255367	11550941	11806308

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	No
Consumption of fuel for the generation of heat	No
Consumption of fuel for the generation of steam	No
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

5446887

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

5426166

Emission factor

0.0567

Unit

metric tons CO₂e per GJ

Emissions factor source

APA (2016) - National Inventory Report + API Compendium.

Comment

Natural Gas consumed for self-cogeneration in R&D and G&P.

Fuels (excluding feedstocks)

Diesel

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

38273

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

0.0744

Unit

metric tons CO2e per GJ

Emissions factor source

APA,2016. National Inventory Report (Table 3.3)

Comment

Diesel consumption.

Fuels (excluding feedstocks)

Motor Gasoline

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

168

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

0.00228

Unit

metric tons CO2e per GJ

Emissions factor source

APA (2016) - National Inventory Report + API Compendium.

Comment

Gasoline consumption.

Fuels (excluding feedstocks)

Fuel Gas

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

5872308

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

0.0643

Unit

metric tons CO2e per GJ

Emissions factor source

APA (2016) - National Inventory Report + API Compendium.

Comment

Fuel gas consumption.

Fuels (excluding feedstocks)

Fuel Oil Number 1

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

5044

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Emission factor

0.0775

Unit

metric tons CO2e per GJ

Emissions factor source

APA (2016) - National Inventory Report + API Compendium.

Comment

Fuel oil consumption.

C8.2d

(C8.2d) 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	975968	0	33	0
Heat	0	0	0	0
Steam	0	0	0	0
Cooling	0	0	0	0

C8.2e

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

Sourcing method

Other, please specify (Grid mix of renewable electricity)

Low-carbon technology type

Other, please specify (Wind, Hydropower and other low-carbon technology (renewable cogeneration + other renewables))

Country/region of consumption of low-carbon electricity, heat, steam or cooling

Portugal

MWh consumed accounted for at a zero emission factor

255367

Comment

Galp purchases all electricity consumed in Portugal (441,273 MWh) to GalpPower (a Group company). GalpPower commercialized in 2019 a portfolio of electricity with 57.9% of renewable energy (19.3% hydro; 26.5% wind; 3.5% renewable cogeneration; 8.6% other renewables). By law, Galp is required to sell to the national grid all electricity produced by the company (renewable or not).

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	38.8	Galp produced 38.8 million barrels in 2019 (including: Angola and Brazil).
Natural gas liquids, million barrels	0	Galp does not produce natural gas liquids.
Oil sands, million barrels (includes bitumen and synthetic crude)	0	Galp does not produce oil sands.
Natural gas, billion cubic feet	30.2	Galp produced 30.2 billion cubic feet in 2019 (including: Brazil).

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.

Galp estimates of proved, probable and possible reserves presented have been prepared in accordance with the Petroleum Resources Management System (PRMS) approved in March 2007 by the Society of Petroleum Engineers, the World Petroleum Council, the American Association of Petroleum Geologists, and the Society of Petroleum Evaluation 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	738.6	981.7	5141.4	Reserves data.

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	79	80	66	Reserves and Resources data
Natural gas	21	20	34	Reserves and Resources data
Oil sands (includes bitumen and synthetic crude)	0	0	0	Reserves and Resources data

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 (%)

1

Net proved reserves (1P) (%)

0

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

0

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

0

Net total resource base (%)

0

Comment

Onshore represents 1% of total O&G production in 2019. In-year net production (%): 0.6% Net proved reserves (1P) (%): 0.1% Net proved + probable reserves (2P) (%): 0.2% Net proved + probable + possible reserves (3P) (%): 0.2% Net total resource base (%): 0.1%

Development type

Deepwater

In-year net production (%)

3

Net proved reserves (1P) (%)

1

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

1

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

1

Net total resource base (%)

10

Comment

Deepwater represents 3.0% of total O&G production in 2019. In-year net production (%): 3.0% Net proved reserves (1P) (%): 0.8% Net proved + probable reserves (2P) (%): 0.7% Net proved + probable + possible reserves (3P) (%): 0.7% Net total resource base (%): 9.9%

Development type

Ultra-deepwater

In-year net production (%)

96

Net proved reserves (1P) (%)

99

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

99

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

99

Net total resource base (%)

90

Comment

Ultra Deepwater represents 96.4% of total O&G production in 2019. In-year net production (%): 96.4% Net proved reserves (1P) (%): 99.1% Net proved + probable reserves (2P) (%): 99.2% Net proved + probable + possible reserves (3P) (%): 99.2% Net total resource base (%): 90.0%

C-OG9.3a

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

	Total refinery throughput capacity (Thousand barrels per day)
Capacity	418

C-OG9.3b

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

	Throughput (Million barrels)	Comment
Oil	82.5	83 million barrels (oil)
Other feedstocks	21.15	21 million barrels (other feedstocks)
Total	103.65	104 million barrels (total)

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
Liquified petroleum gas	3.57
Gasolines	21.69
Naphtha	7.35
Kerosenes	10.37
Diesel fuels	43.34
Fuel oils	14.16
Lubricants	0.68
Waxes	0.06
Asphalt and tar	1.02
Petroleum coke	0
Still gas	0
Other, please specify (Chemicals)	2.89

C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6

(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

	Investment in low-carbon R&D	Comment
Row 1	Yes	Galp has several investments in low carbon R&D

C-CO9.6a/C-EU9.6a/C-OG9.6a

(C-CO9.6a/C-EU9.6a/C-OG9.6a) Provide details of your organization's investments in low-carbon R&D for your sector activities over the last three years.

Technology area	Stage of development in the reporting year	Average % of total R&D investment over the last 3 years	R&D investment figure in the reporting year (optional)	Comment
Energy efficiency in transport	Large scale commercial deployment	61-80%	19100000	Galp, along with its partners and under the ECO-GATE project, is investing to develop several natural gas filling stations on the Iberian Peninsula. The company will open two natural gas filling stations in each country, Portugal and Spain. Galp's infrastructure plans are not limited to the installations covered by ECO-GATE, with several new stations planned for the near future. ECO-GATE covers more than 20 gas stations located in each of the 4 countries where the project is deployed: Germany, France, Portugal and Spain. The ambitious project on conventional and renewable vehicular natural gas provides the deployment of infrastructure along the Atlantic Corridor and the Mediterranean Corridor through new technologies and innovative solutions. Last year, Galp deployed the first natural gas filling stations under the ECO-GATE project in Sines.
Enhanced Oil Recovery (EOR) techniques	Applied research and development	≤20%	7376000	Given the increasing complexity of exploration and production activities, it has been Galp's priority to develop its technological dimension, capitalising on innovative solutions that allow to create value in the projects in which participates, but also on the possibility of licensing and extending the use of these technologies to other projects, with the aim of creating an additional source of value. Galp has been developing several projects related to production and primary processing systems dedicated to CO2 management, namely Enhanced oil recovery (EOR) techniques.

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.

25

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 emissions, and attach the relevant statements.

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Reasonable assurance

Attach the statement

GALP_NFI_GRI Standards 2019.pdf

GALP_NFI_TCFD 2019.pdf

GALP_Integrated Management Report 2019_Part IV Appendices.pdf

GALP_Integrated Management Report 2019_Part I IMR.pdf

Page/ section reference

The document attached is the Galp Integrated Management Report (IMR) 2019 (Part I and Part IV). Independent Assurance Report (that covers scope 1 GHG emissions) is attached in Part IV (p. 32-34) and scope 1 GHG emissions are reported in Part I (p. 89, Carbon Footprint). Also, complimentary to the IMR 2019, GRI Content Index 2019 (GALP_NFI_GRI Standards 2019) is published, with scope 1 GHG emissions (p. 13) and Independent Assurance Report covering scope 1 GHG emissions (p. 42-44).

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

100

C10.1b

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

Scope 2 approach

Scope 2 market-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Reasonable assurance

Attach the statement

GALP_NFI_GRI Standards 2019.pdf

GALP_NFI_TCFD 2019.pdf

GALP_Integrated Management Report 2019_Part IV Appendices.pdf

GALP_Integrated Management Report 2019_Part I IMR.pdf

Page/ section reference

The document attached is the Galp Integrated Management Report (IMR) 2019 (Part I and Part IV). Independent Assurance Report (that covers scope 2 GHG emissions) is attached in Part IV (p. 32-34) and scope 2 GHG emissions are reported in Part I (p. 89, Carbon Footprint). Also, complimentary to the IMR 2019, GRI Content Index 2019 (GALP_NFI_GRI Standards 2019) is published, with scope 2 GHG emissions (p. 13) and Independent Assurance Report covering scope 2 GHG emissions (p. 42-44).

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

100

C10.1c

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

Scope 3 category

Scope 3: Purchased goods and services

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

GALP_NFI_GRI Standards 2019.pdf

GALP_NFI_TCFD 2019.pdf

GALP_Integrated Management Report 2019_Part IV Appendices.pdf

GALP_Integrated Management Report 2019_Part I IMR.pdf

Page/section reference

The document attached is the Galp Integrated Management Report (IMR) 2019 (Part I and Part IV). Independent Assurance Report (that covers scope 3 GHG emissions) is attached in Part IV (p. 32-34) and scope 3 GHG emissions are reported in Part I (p. 89, Carbon Footprint). Also, complimentary to the IMR 2019, GRI Content Index 2019 (GALP_NFI_GRI Standards 2019) is published, with scope 3 GHG emissions (p. 13) and Independent Assurance Report covering scope 3 GHG emissions (p. 42-44).

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

100

Scope 3 category

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)

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

GALP_NFI_GRI Standards 2019.pdf

GALP_NFI_TCFD 2019.pdf

GALP_Integrated Management Report 2019_Part IV Appendices.pdf

GALP_Integrated Management Report 2019_Part I IMR.pdf

Page/section reference

The document attached is the Galp Integrated Management Report (IMR) 2019 (Part I and Part IV). Independent Assurance Report (that covers scope 3 GHG emissions) is attached in Part IV (p. 32-34) and scope 3 GHG emissions are reported in Part I (p. 89, Carbon Footprint). Also, complimentary to the IMR 2019, GRI Content Index 2019

(GALP_NFI_GRI Standards 2019) is published, with scope 3 GHG emissions (p. 13) and Independent Assurance Report covering scope 3 GHG emissions (p. 42-44).

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

100

Scope 3 category

Scope 3: Business travel

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

GALP_NFI_GRI Standards 2019.pdf

GALP_NFI_TCFD 2019.pdf

GALP_Integrated Management Report 2019_Part IV Appendices.pdf

GALP_Integrated Management Report 2019_Part I IMR.pdf

Page/section reference

The document attached is the Galp Integrated Management Report (IMR) 2019 (Part I and Part IV). Independent Assurance Report (that covers scope 3 GHG emissions) is attached in Part IV (p. 32-34) and scope 3 GHG emissions are reported in Part I (p. 89, Carbon Footprint). Also, complimentary to the IMR 2019, GRI Content Index 2019 (GALP_NFI_GRI Standards 2019) is published, with scope 3 GHG emissions (p. 13) and Independent Assurance Report covering scope 3 GHG emissions (p. 42-44).

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

100

Scope 3 category

Scope 3: Upstream transportation and distribution

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

GALP_NFI_GRI Standards 2019.pdf

GALP_NFI_TCFD 2019.pdf

GALP_Integrated Management Report 2019_Part IV Appendices.pdf

GALP_Integrated Management Report 2019_Part I IMR.pdf

Page/section reference

The document attached is the Galp Integrated Management Report (IMR) 2019 (Part I and Part IV). Independent Assurance Report (that covers scope 3 GHG emissions) is attached in Part IV (p. 32-34) and scope 3 GHG emissions are reported in Part I (p. 89, Carbon Footprint). Also, complimentary to the IMR 2019, GRI Content Index 2019 (GALP_NFI_GRI Standards 2019) is published, with scope 3 GHG emissions (p. 13) and Independent Assurance Report covering scope 3 GHG emissions (p. 42-44).

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

100

Scope 3 category

Scope 3: Downstream transportation and distribution

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

GALP_NFI_GRI Standards 2019.pdf

GALP_NFI_TCFD 2019.pdf

GALP_Integrated Management Report 2019_Part IV Appendices.pdf

GALP_Integrated Management Report 2019_Part I IMR.pdf

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Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

100

Scope 3 category

Scope 3: Processing of sold products

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[GALP_NFI_GRI Standards 2019.pdf](#)[GALP_NFI_TCFD 2019.pdf](#)[GALP_Integrated Management Report 2019_Part IV Appendices.pdf](#)[GALP_Integrated Management Report 2019_Part I IMR.pdf](#)**Page/section reference**

The document attached is the Galp Integrated Management Report (IMR) 2019 (Part I and Part IV). Independent Assurance Report (that covers scope 3 GHG emissions) is attached in Part IV (p. 32-34) and scope 3 GHG emissions are reported in Part I (p. 89, Carbon Footprint). Also, complimentary to the IMR 2019, GRI Content Index 2019 (GALP_NFI_GRI Standards 2019) is published, with scope 3 GHG emissions (p. 13) and Independent Assurance Report covering scope 3 GHG emissions (p. 42-44).

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

100

Scope 3 category

Scope 3: Use of sold products

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[GALP_NFI_GRI Standards 2019.pdf](#)[GALP_NFI_TCFD 2019.pdf](#)[GALP_Integrated Management Report 2019_Part IV Appendices.pdf](#)[GALP_Integrated Management Report 2019_Part I IMR.pdf](#)**Page/section reference**

The document attached is the Galp Integrated Management Report (IMR) 2019 (Part I and Part IV). Independent Assurance Report (that covers scope 3 GHG emissions) is attached in Part IV (p. 32-34) and scope 3 GHG emissions are reported in Part I (p. 89, Carbon Footprint). Also, complimentary to the IMR 2019, GRI Content Index 2019 (GALP_NFI_GRI Standards 2019) is published, with scope 3 GHG emissions (p. 13) and Independent Assurance Report covering scope 3 GHG emissions (p. 42-44).

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

100

Scope 3 category

Scope 3: Investments

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[GALP_NFI_GRI Standards 2019.pdf](#)[GALP_NFI_TCFD 2019.pdf](#)[GALP_Integrated Management Report 2019_Part IV Appendices.pdf](#)[GALP_Integrated Management Report 2019_Part I IMR.pdf](#)**Page/section reference**

The document attached is the Galp Integrated Management Report (IMR) 2019 (Part I and Part IV). Independent Assurance Report (that covers scope 3 GHG emissions) is attached in Part IV (p. 32-34) and scope 3 GHG emissions are reported in Part I (p. 89, Carbon Footprint). Also, complimentary to the IMR 2019, GRI Content Index 2019 (GALP_NFI_GRI Standards 2019) is published, with scope 3 GHG emissions (p. 13) and Independent Assurance Report covering scope 3 GHG emissions (p. 42-44).

Relevant standard

Proportion of reported emissions verified (%)

100

C10.2**(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**(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
C6. Emissions data	Year on year change in emissions (Scope 1 and 2)	ISAE 3000	Year-on-year change in emissions (Scope 1 and 2) is verified by third party (Integrated Management Report). GALP_NFI_GRI Standards 2019.pdf GALP_NFI_TCFD 2019.pdf GALP_Integrated Management Report 2019_Part IV Appendices.pdf GALP_Integrated Management Report 2019_Part I IMR.pdf
C6. Emissions data	Year on year change in emissions (Scope 3)	ISAE 3000	Year-on-year change in emissions (Scope 3) is verified by third party (Integrated Management Report). GALP_NFI_GRI Standards 2019.pdf GALP_NFI_TCFD 2019.pdf GALP_Integrated Management Report 2019_Part IV Appendices.pdf GALP_Integrated Management Report 2019_Part I IMR.pdf
C6. Emissions data	Year on year emissions intensity figure	ISAE 3000	Progress made on intensity figure CWT (complexity weighted tonne) is verified every year for the Downstream segment (R&D). Specific emissions expressed in kg CO2/complexity weighted tonne (CWT) (benchmark recognised by the European Commission for the refining industry). In 2019 stood at 32.7 CO2/CWT for the Sines Refinery and 29.3 CO2/CWT for the Matosinhos Refinery. Progress made on other intensity figure for the Upstream segment (E&P) (CO2e/boe) is also verified every year. GALP_NFI_GRI Standards 2019.pdf GALP_NFI_TCFD 2019.pdf GALP_Integrated Management Report 2019_Part IV Appendices.pdf GALP_Integrated Management Report 2019_Part I IMR.pdf
C4. Targets and performance	Progress against emissions reduction target	ISAE 3000	Downstream segment (R&D). Specific emissions expressed in kg CO2/complexity weighted tonne (CWT) (benchmark recognised by the European Commission for the refining industry). In 2019 stood at 32.7 CO2/CWT for the Sines Refinery and 29.3 CO2/CWT for the Matosinhos Refinery. GALP_NFI_GRI Standards 2019.pdf GALP_NFI_TCFD 2019.pdf GALP_Integrated Management Report 2019_Part IV Appendices.pdf GALP_Integrated Management Report 2019_Part I IMR.pdf
C4. Targets and performance	Emissions reduction activities	ISAE 3000	Emission reduction initiatives reported in the Galp Integrated Management Report are verified, under the GRI Indicators GRI 302-4, GRI 302-5 and GRI 305-5. As the Integrated Management Report is an Integrated Report (financial & non-financial data), GRI Content Index 2019 is published at Galp's website. GALP_NFI_GRI Standards 2019.pdf GALP_NFI_TCFD 2019.pdf GALP_Integrated Management Report 2019_Part IV Appendices.pdf GALP_Integrated Management Report 2019_Part I IMR.pdf
C8. Energy	Energy consumption	ISAE 3000	Energy consumption reported in the Galp Integrated Management Report and GRI Content Index is verified, under the GRI Indicators GRI 302-1. As the Integrated Management Report is an Integrated Report (financial & non-financial data), GRI Content Index 2019 is published at Galp's website. GALP_NFI_GRI Standards 2019.pdf GALP_NFI_TCFD 2019.pdf GALP_Integrated Management Report 2019_Part IV Appendices.pdf GALP_Integrated Management Report 2019_Part I IMR.pdf

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.**

EU ETS

C11.1b

(C11.1b) Complete the following table for each of the emissions trading schemes you are regulated by.

EU ETS

% of Scope 1 emissions covered by the ETS

99

% of Scope 2 emissions covered by the ETS

0

Period start date

January 1 2019

Period end date

December 31 2019

Allowances allocated

1954186

Allowances purchased

1304523

Verified Scope 1 emissions in metric tons CO2e

3258709

Verified Scope 2 emissions in metric tons CO2e

0

Details of ownership

Facilities we own and operate

Comment

For 2019 (period January 1, 2019 to December 31, 2019) Galp was awarded with 1,954,186 free emissions allowances. Galp purchased 1,304,523 allowances. The final verified emissions for 2019, under the EU-ETS, in metric tons of CO2 were 3,258,709.

C11.1d

(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

Galp has an internal regulatory standard (NR-024 GHG Emissions Management - ETS) on GHG emission management, regarding ETS. This standard defines the responsibilities in managing GHG emissions and data, to ensure compliance with applicable legal requirements and guarantee a fully informed and timely decision-making process, anticipating risk situations and opportunities and supporting decision making. As an example, this internal standard requires that managers of facilities covered by the ETS to periodically report current and projected emissions, estimating deficits and surpluses that will allow minimising the risks and maximising the opportunities associated. This reporting is done quarterly and reported to the Executive Committee. The responsible for the management of allowances accounts of each installation covered by the ETS were appointed by the Executive Committee, through deliberation. Galp also has an specific information system that tracks all regulatory changes, including those related to the ETS, in order to be constantly updated about all legislation in force and with impact on the activities of Galp. Galp is currently under the 2013-2020 period and will be involved in the post 2020 period (2021-2030, namely IV phase).

Moreover, Galp as a member of Fuels Europe and CONCAWE participates in their ETS-related taskforces, guaranteeing a permanent update about the ETS topics and enabling the anticipation of potential risks that may arise. At the operational level, Galp is focused on two main aspects: the reduction of absolute emissions, directly impacting the dependence on the purchase of allowances, and improving the sectorial benchmark (CO2/CWT) in order to maintain or increase the number of long-term allowances provided. The costs arising from EU-ETS and the expected increase of these costs are subject of the Business Plan 2020-2025.

C11.2

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

No

C11.3

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

Yes

C11.3a

(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
Stress test investments
Identify and seize low-carbon opportunities
Supplier engagement

GHG Scope

Scope 1
Scope 2

Application

Galp considers that there are potential impacts on its business model associated with a transition to a lower carbon economy, as result of several developments and disruptions (e.g. regulatory changes, changes in consumer behaviours, physical impacts, among others). Accordingly, when evaluating new projects, we run a sensitivity analysis regarding carbon pricing, assuming \$50/ton of CO2 nominal in the long-term (44.51 €/ton). This price is applicable to all businesses and geographies, and has been approved by the BoD & Executive Committee. Thus, it intends to give more emphasis to the alternatives with lower CO2 emissions and strives to build a portfolio suitable to the transition to a lower carbon economy. Galp considers the carbon pricing as the most efficient and cost-effective mean of achieving the GHG emissions reduction targets (scopes 1&2). However, we consider as fundamental a worldwide common approach that guarantee a cost effective long-term trajectory for carbon abatement.

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

44.51

Variance of price(s) used

Galp sets a uniform price that is applied throughout the company independent of geography and business unit. When evaluating new projects, we run a sensitivity analysis regarding carbon pricing, assuming \$50/ton of CO2 nominal in the long term (approx. 44.51 €/ton). This price is applicable to all businesses and geographies, and has been approved by the Board of Directors/Executive Committee. Thus, on the one hand, it intends to give more emphasis to the alternatives with lower CO2 emissions and, on the other hand, strives to build a portfolio suitable to the transition to a lower carbon economy.

Type of internal carbon price

Shadow price

Impact & implication

Recognising the practice of putting a price on carbon as an essential and strategic tool to minimising the activity's carbon intensity, Galp submitted its commitment to the We Mean Business Platform. The inclusion of carbon price in the assessment of investment projects (medium and long-term) represents a tool to reflect the overall objective of limiting average temperature rises. It is also a way of positively influencing the necessary technological transitions leading to maximising energy efficiency and minimising the carbon footprint of activities and products. Galp assumes this as a criterion in the valuation of its new projects as a variable in its investment decision-making process. The establishment of an internal price on carbon allow us to evaluate risk and opportunities areas, considering the overall energy consumption and the possible improvement actions to be implemented. This is one of the variables considered as reference for the establishment of corporate emissions reduction targets. Moreover, the choice of the energy mix for internal consumption also takes into account the carbon content of each energy type and the carbon price. To monitor and continually manage the carbon price and risks we have maintained an internal structure in the Company. In this sense, within the scope of the Compliance, Environment, Quality, Safety and Regulatory Changes workgroup, created by the Risk Management Committee, we established a risk radar, which follows relevant developments, regulatory changes and Galp's performance, measuring and monitoring potential impacts and defining mitigation actions. We also have a specific Business Unit that monitors the carbon market in all geographies in which Galp operates. According to an established risk profile, this unit provides support for the Budget & Plan (medium and long-term) and to the management of Galp emission allowances portfolio. Relevant information within the scope of the carbon market is provided to the Executive Committee and Board of Directors, as well as to the Business Units of the Group, in a quarterly basis. Note: The price on carbon considered US 50\$/ton equals to approx. 44.51 €/ton. This price in US\$ was converted into € considering the last conversion rate of 2019 made available by the Bank of Portugal (31/12/2019, 1 USD = 0.89015 EUR).

C12. Engagement

C12.1

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

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

C12.1b

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

Type of engagement

Education/information sharing

Details of engagement

Run an engagement campaign to education customers about your climate change performance and strategy

% of customers by number

87

% of customer - related Scope 3 emissions as reported in C6.5

3.9

Portfolio coverage (total or outstanding)

<Not Applicable>

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

Galp remains focused on selling additive-enhanced fuel and committed to the excellence of the products and services provided, differentiating strategy in the marketing of oil products. With this in mind, Galp has launched a new fuel offer for Iberian clients. These fuels, named Evologic diesel and gasoline are marketed in the Iberian Peninsula (around 90% of retail sales). These fuels have high-performance additives, which allow greater fuel savings, extended engine life and more efficiency, with lower GHG emissions associated, consequently benefiting the environment. Galp concentrates its marketing activity in Iberia (downstream), where it is a relevant player. We have a vast distribution network and we are one of the leading operators in the region where Evologic fuels are marketed. These fuels are sold at most Galp service stations. Since this initiative was launched, Galp has carried out several strong engagement campaigns with this group of customers (Iberian Clients) with the aim of promoting this type of fuels and the environmental benefits associated. Success is measured through the level of sales of these new fuels, which have increased compared to last year, as customers are being engaged and accept the Evologic fuels. In 2019 Evologic fuels represent 31% of the total of diesel and gasoline sales for the Iberian Peninsula.

Impact of engagement, including measures of success

Galp remains focused on selling additive-enhanced fuel and committed to the excellence of the products and services provided, differentiating strategy in the marketing of oil products. With this in mind, Galp has launched a new fuel offering for Iberian clients. These fuels, named Evologic diesel and gasoline are marketed in the Iberian Peninsula (around 90% of retail sales). These fuels have high performance additives, which allow for greater fuel savings, extended engine life and greater efficiency, with lower GHG emissions associated, consequently benefiting the environment. Galp concentrates its marketing activity in Iberia (downstream), where it is a relevant player. We have a wide distribution network and we are one of the leading operators in the region where Evologic fuels are marketed, moreover these fuels are sold at most Galp service stations. Since this initiative was launched, Galp has carried out several strong engagement campaigns with this group of customers (Iberian Clients) with the aim of promoting this type of fuels and the environmental benefits associated. Success is measured through the level of sales of these new fuels, which have increased compared to last year, as customers are being engaged and accept the Evologic fuels. In 2019, Evologic fuels represent 31% of total of diesel and gasoline sales for the Iberian Peninsula.

C12.1d

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

Galp's main engagement methods are collaborative projects, cooperation programmes and providing training. However, whenever necessary, we also carry out one to one meetings and written correspondence (documentation exchange, signing protocols, etc.).

Partners: Galp 21 is a university cooperation programme that aims to identify and develop rational energy systems and behaviours. The programme is based on a shared mentoring system between Galp (the client manager), the client company and the university concerned. The studies' accomplishment is followed up by Galp, with the objective of contributing to its materialisation into specific energy efficiency projects in its clients. Each year, the program awards 21 research scholarships of €3k to 21 students to carry out the projects at 21 clients chosen by Galp in a range of sectors. The projects implemented have resulted in average reductions of 7% in primary energy consumption and 6% in CO2 emissions and had a total amount of savings potential of €1.5M. In 2019, 28 measures were proposed, of which 11% were adopted by the participating entities. Since its twelve editions, Galp has already supported 160 grantees.

Civil Society: Climate change educational projects Future UP: UP Mission | United by the Planet is an educational project on energy efficiency that we have developed since 2010. This project is targeted at Primary School students, aged between six and 10 years, as well as their teachers, guardians and parents. These programs are addressing issues such as energy sources, sustainable mobility, energy footprint and energy-related careers and schools receive play-based educational visits that aim to contribute to changing behaviours towards a more efficient energy consumption. Following, another innovative project was launched: Switch UP, which is targeted at secondary and vocational education students. This programme promotes entrepreneurship by creating Clubs in secondary schools throughout the country, for developing projects that promote local community engagement and the sharing of ideas and activities about energy efficiency. Regarding Educational Future UP projects, they covered more than 1.7 million students and over 5,000 energy classes were taught. Main outcomes of 2019 for Mission UP were: 950 schools signed up; 2,655 teachers involved; 49,000 students involved; 210 classes on energy.

Peers and technical associations: Galp is currently participating in two technical working groups (TWG) co-coordinated by CDP. The Science-based targets (SBT) TWG aims to develop a SBT definition methodology applicable to the oil and gas companies and it is fully coordinated by CDP. The second TWG, which is co-coordinated by ADENE and CDP, aims to develop a methodology to assess the low carbon strategies of the companies to be used by ACT Initiative. Both TWG are composed both by O&G companies and external stakeholders, covering NGOs, think-tanks, universities and institutes specialised in climate change.

Trade associations: With an update context information we influence the business strategy to adopt best practices and to define ambitious targets towards continuous improvement. Galp is positioning for the future of energy, integrating energy transition across all business units. In order to tackle this challenge and other material issues identified by Galp, we maintain an active network of cooperation, sharing, understanding and knowledge development, participating in various industry associations in different business segments. These engagements are particularly relevant, namely in those whose mission is related to NG/LNG, development of renewable power generation, improvement of asset efficiency, development of lower to no carbon fuels, CCS, etc. aligned with our strategic guidelines. Other organizations that we support to move towards the energy transition and a low carbon economy:

- CDP
- Hydrogen Europe
- NGVA Natural Gas Vehicle Alliance Europe
- Natural & bio gaz vehicle association
- APREN - Portuguese Association of Renewable Energies
- GASNAM - Asociación Española del Gas Natural para la Movilidad

C12.3

(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

C12.3a

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

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Adaptation or resilience	Support	Continuing the open dialogue with stakeholders and an active participation in legislative and regulatory development processes, we created a company-wide taskforce to have an active and positive participation in public consultations on energy and climate policies and laws in Portugal and in the European Union. This approach was the result of an evolution from the proactive positions that the company already had in the discussions with the Portuguese government for the presentation, discussion and implementation of the Net Zero Carbon roadmap for 2050 (RNC2050) and the National Plan of Energy and Climate until 2030 (PNEC2030). This taskforce also have an active participation in the EU Green Deal public consultations by identifying which are more relevant to the company and developing the company's positions. Galp also supported the participation of its related associations in these public consultations, namely the Business Council for Sustainable Development in Portugal (BCSD Portugal), the Portuguese Association of Petroleum Companies (APETRO) and the Portuguese Association for the Chemical, Petrochemical and Refining businesses (APQuímica). The overall objective of this participation is to engage our business perspective in a collaborative way, within a common scope for the identification of corporate solutions and contributions to public policies, within the framework of the national strategy. The development of the project allows us to strengthen the relationship with political stakeholders, enable our Company to have a proactive internal discussion and knowledge sharing to adapt the business models to a future scenario of decarbonisation of the economy, and leverage a prominent position within the organization. In 2020 we became an associate member of World Business Council for Sustainable Development (WBCSD) to push our sustainability journey forward, focus on Climate and Energy. Other organizations that we support to move towards the energy transition and a low carbon economy: - Hydrogen Europe - NGVA Natural Gas Vehicle Alliance Europe - Natural & bio gaz vehicle association - APREN - Portuguese Association of Renewable Energies - GASNAM Asociación Española del Gas Natural para la Movilidad	The decision-making and legislative processes of the European Union increasingly involve cooperation between the EU institutions and industry sectors which are commonly assessed by consultants that act as their interest representatives. In this sense, Galp registered a lobbyist in the "Transparency register" - a voluntary lobbyist register operated jointly by the European Parliament and the EU-Commission - who follows up matters such as: Energy; Environment; General and Institutional Affairs; Research and innovation; Climate Action; Trans-European Networks; Transport, among others. Additionally, Galp worked with several internal and external stakeholders, namely political ones and Portuguese associations, to analyse and contribute to the Portuguese decarbonisation pathway until 2030 and a carbon neutral country in 2050. Also, to identify alternative solutions with higher added value and contribute to a policy action, through technical and specialised know-how, enabling the definition of strategic priorities at national and international level. In 2019, Galp started to expand this perspective from the national scope to the European one, by applying similar principles to the public consultations related to the EU Green Deal.
Clean energy generation	Support	Galp is participating, together with other partners in the study of a major green hydrogen project in Portugal. This project is supported by the Portuguese government and aims to create a Green H2 Hub in Portugal. The project viability and costs are still in study by the consortium, which is composed by several Portuguese companies with different skills in the energy and non-energy sector. Galp supports "Collaborative Laboratory NET4CO2" Is a network of R&D competences and technologies with the goal of creating new processes and products that make a significant contribution to the CO2 sustainable circular economy. For that, technical solutions are being developed on two main fronts: A safe, efficient and profitable capture and separation of CO2; A competitive production of alternative fuels: synthetic fuels, which provide a route for CO2 and CH4 reutilization; and hydrogen which involves zero CO2 emissions. Galp is an affiliate member contributing with its expertise in different fields of knowledge.	Galp is working, together with the Portuguese Government and consortium partners, to analyse and study every option to support the project development. The project aims to leverage the competitive advantages of endogenous renewable natural resources, contributing to the reindustrialisation of the Portuguese and European economies on a more sustainable basis, as well as to even the trade balance. The production of green hydrogen covered by the H2 Sines project integrates and optimises the entire value chain, including the generation of renewable electricity, the production of hydrogen, and its distribution, transportation, storage, marketing and export. At an early stage the installation of a pilot project of 10MW of electrolysis is planned, which, according to economic and technological criteria, can evolve up to 1GW of electrolysis capacity over the decade, supported, in the long term, by the capacity to generate around 1.5GW of renewable electric power to supply the electrolyzers.

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

FuelsEurope

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

Galp is a member of the Energy and Climate Issue Group and the Emission Trading System and is participating in the Vision 2050 project, among the energy and climate issues, in the European industry association FuelsEurope. Participation in this association allows us to have an overview of trends, context and policies on energy and climate in Europe, through this participation we understand and support EU initiatives and leadership, recognising the need to address both climate change and security of energy supply. Besides, Galp believes that the emissions trading scheme is the most important and functional instrument to ensure the CO2 emissions reduction in the most cost-effective way. However, Galp does not support artificial market interventions. Galp also believes in a level playing field between energy sources and competing economies and in technologically neutral policies. Besides, Galp calls for transparency within the EC calculations which determine the amount of allowances in the market each year.

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

Galp has a common presence at working groups and discussion forums to anticipate the impact of industry trends and ensure active participation in policy-making processes in the context of climate change. Our participation is focused on sharing knowledge about best practices and industry directives (participation in FuelsEurope position papers), identifying risks and opportunities related to political decision-making processes and technology development moving towards a decarbonised economy.

C12.3f

(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?

Galp has specialised working groups with high skills that actively participate in the development of legislation and in discussion forums (national and international) with policymakers, to ensure that the vision, strategy and objectives of Galp regarding climate change are taken into account. Thus, Galp ensures that activities, direct and indirect, made in the development of regulation are fully aligned with the climate change strategy of the company. Also, the department that promoted the development of the climate change strategy of Galp (Environment, Quality, Safety & Sustainability) is the same that represents the company in international forums and working groups, which engage in activities that either directly or indirectly influences public policy on climate change, ensuring that direct and indirect activities that influence policy are consistent with the Galp's Climate Change Strategy, Policy and Vision.

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

GALP_NFI_GRI Standards 2019.pdf

GALP_NFI_TCFD 2019.pdf

GALP_Integrated Management Report 2019_Part IV Appendices.pdf

GALP_Integrated Management Report 2019_Part I IMR.pdf

Page/Section reference

Please consult Integrated Management Report 2019 (whole report). Some direct references to TCFD, climate change and GHG emissions can be found at pages: 3-4; 28-30; 49; 58; 66; 83; 88-93;. Please also consult attached two complimentary pieces which are Annexes of the Integrated Report but which are published separately, namely: 1. Galp's alignment with the Recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD) (full pages) and 2. GRI Content Index 2019.

Content elements

Governance

Strategy

Risks & opportunities

Emissions figures

Emission targets

Other metrics

Comment

Please consult Integrated Management Report 2019 (whole report). Some direct references to TCFD, climate change and GHG emissions can be found at pages: 3-4; 28-30; 49; 58; 66; 83; 88-93;. Please also consult attached two complimentary pieces which are Annexes of the Integrated Report but which are published separately, namely: 1. Galp's alignment with the Recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD) (full pages) and 2. GRI Content Index 2019.

Publication

In voluntary communications

Status

Complete

Attach the document

GALP_NFI_TCFD 2019.pdf

Page/Section reference

All pages of the document Non-Financial Information 2019 - Galp's alignment with the Recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD).

Content elements

Governance

Strategy

Risks & opportunities

Emissions figures

Emission targets

Other metrics

Comment

All pages of the document Non-Financial Information 2019 - Galp's alignment with the Recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD).

C15. 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.

No further information.

C15.1

(C15.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Executive Board Director and Chief Sustainability Officer (same person).	Board/Executive board

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 2020-2021 CDP Action Exchange initiative?
Please select

SC3.2

(SC3.2) Is your company a participating supplier in CDP's 2019-2020 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

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

Please confirm below

I have read and accept the applicable Terms