

C0. Introduction

C0.1

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

Galp is an integrated energy operator with activities that span from exploration and production of oil and natural gas to refining and marketing oil products and biofuels, distributes and supplies natural gas and generates and markets electricity. To accomplish success, Galp updated its purpose to 'Let's regenerate the future together'. To fulfil this purpose Galp will regenerate its portfolio, relationships but also our people- Overall, this will set a direction for the company, internally and externally, to adapt to a low carbon the future.

All these changes will be translated into our portfolio and operations. In the first half of the decade we intend to allocate 50% of our net capital to low and zero carbon products and services. By 2030, we aim to have a more electrified, diversified and decarbonized global portfolio, offering a combination of long-term growth and value opportunities in the energy sector.

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. Our activities are expanding strongly worldwide and are predominantly located in Portugal, Spain, Brazil and Africa. The activity of our Company is also based on 4 key business pillars, such as: Upstream, Commercial, Industrial & Energy Management and Renewables & New Businesses.

The Upstream business comprises a portfolio of c.40 projects in different phases, such as exploration, development and production along 3 countries (Brazil, Angola and Mozambique). Galp's projects under development include two of the largest oil and natural gas discoveries of the last decades, located, respectively, in the pre-salt of the Santos basin (Bacalhau), in Brazil, and the Rovuma basin, in Mozambique (Coral FLNG).

The Industrial & Energy Management business unit, which includes Refining & Midstream, incorporates the refining and logistics business as well as the Group's oil, gas and power supply and trading activities, Cogeneration and Biofuels. In this sense, Galp operates an integrated refining system comprising Sines refinery in Portugal (Matosinhos Refinery closed in 2020) with a total processing capacity of 220 thousand barrels of oil per day (kbpd), 87.1 mmboe of raw materials processed, 1.4 TWh of electricity sold from cogeneration, 26 TWh from sales of NG/LNG through trading, 13.9 mton of oil products sales.

The Commercial pillar integrates a distribution network including approximately 1,475 service stations. Refined products are primarily marketed in the Iberian Peninsula but also in Africa, with total sales to direct clients of 6.0 mton and 3.3 TWh of electricity in 2020.

The 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. With c. 50% of its planned investments to be allocated to projects that promote the energy transition, Galp aspires to anticipate new trends, adapt its portfolio to future needs, explore synergies with its current Iberian activities and by promote a progressive reduction of its carbon intensity while sustaining a track record of value creation. In 2020, Galp had 926 MWp of installed capacity under operation and expects a total capacity of 3.8 GW by 2024. We are targeting a gross renewable operating capacity of c.12 GWp by 2030. We are evaluating the development of green hydrogen solutions, taking advantage of our privileged position and industrial skills. Additionally, we are also assessing entry opportunities in the fast-growing battery value chain, namely in lithium processing, capturing an early mover advantage in Europe.

For further information about GALP please visit our corporate website, at: www.galp.com/corp and our Annual Integrated Report 2020, at: <https://www.galp.com/corp/Portals/0/Recursos/Investidores/SharedResources/Relatorios/en/2020/GalpRC20doctotalen.pdf>

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 2020	December 31 2020	No	<Not Applicable>

C0.3

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

Brazil
Cabo Verde
Eswatini
Guinea-Bissau
Mozambique
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 2020 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. This new unit represents a milestone in embracing of the energy transition, through the development of a sustainable and diversified portfolio of renewable energy generation and new solutions in the area of mobility and energy. Galp has expanded its renewable portfolio, now totalising c.3.8 GWp; At the end of 2020, Galp was the leading solar player in Iberia and one of the key renewable power producers in the region, with an installed capacity of 926 MW on a 100% basis. In 2020 Galp also launched EI - Energia Independente, a decentralised energy production business promoting the sale and optimisation of PV solar energy self-consumption systems in the B2C and B2B segments.

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. 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 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	Climate related issues are incorporated into the compensation of all of Galp’s employees, with specific KPIs for the CEO, Board members and business unit directors.

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. 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 2020 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 and energy efficiency 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. Since 2021 the CEO remuneration is part of a LTI through the right to a set of Galp shares, attributable to after 3 y. The no. shares effectively attributed, will be calculated by multiplying the no. of provisional shares attributed by a performance factor, based on the following 3 categories, all with the same %: TSR; Peer ranking in TSR and growth of CFFO; Carbon Intensity Index .
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 fulfillment 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 2020, KPI’s related to Low Carbon Portfolio Development and Green Projects were developed. In addition, several climate-related objectives and goals are defined in the Galp’s Sustainability Strategic Plan, whose fulfillment is a KPI of the Group’s business units, and, as such, affect their performance assessment. Therefore, there is a clear incentive to integrate climate matters into the business strategy and decision-making processes.
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 (which evolves from \$50/tCO₂e in the present day to 80\$/tCO₂e in 2050) 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 2021-2025). 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 (business plan 2021-2025). 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 two contrasting scenarios (aligned with the IEA scenarios, including the Stated 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. produced biofuels; energy efficiency services provided by GSE or EI; 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 low carbon products, energy solutions that lead to lower carbon emissions and new business models with lower carbon intensities. Also, in investment analyses an internal carbon price varying between \$50-80/tCO₂e is applied between present day and 2050, 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. Presently, Galp is conducting an in-depth analysis of the financial impacts of its main climate related physical and transition risks and opportunities, in line with the industry best practices and TCFD guidelines.

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 national and international climate related laws and regulations (or others) are a risk factor of high importance for OPEX and investment and/or divestment decision-making, as they affect, for example, the project location, 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, project location, 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 and the EU Commission's Fit for 55 package) are analysed by a multidisciplinary team – Strategy and Sustainability, Business Units, among others - and 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 allocating 50% of its capex to low carbon initiatives including: (i) the development of a renewable generation portfolio, with a target gross capacity of 12 GW by 2030, with production both in Europe and outside of the continent, (ii) the development of a 270 kton HVO production in the Sines refinery (iii) the development of a desulfurization unit in the Sines refinery, (iv) supporting our customers in this transition, by developing decentralised generation solutions, (e.g. renewable energy production; energy efficiency projects, electric mobility, increasing the sales of renewable power generation by 2x until 2025), development of green hydrogen solutions with potential to reach 1 GW of electrolyser capacity by 2030 and assessing the entry into the Li-on battery value chain through lithium chemical processing. 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 Upstream segments in Brazil and Angola. Galp currently has 7 CCUS projects in Brazil. In addition, under the PhD Programme in Refining, Petrochemical and Chemical Engineering (EngIQ), 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. refinery in Sines , 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 allocating 50% of its capex to low carbon initiatives including: the development of a renewable generation portfolio, with a target gross capacity of 12 GW by 2030, with production both in Europe and outside of the continent, the development of a 270 kton HVO production in the Sines refinery, supporting our customers in this transition, by developing decentralised generation solutions, tailored to their needs (e.g. renewable energy production; energy efficiency projects, electric mobility, increasing the sales of renewable power generation by 2x until 2025), development of green hydrogen solutions with potential to reach 1 GW of electrolyser capacity by 2030 and assessing the entry into the Li-on battery value chain through lithium chemical processing. In 2020 Galp acquired a 75.01% stake in a joint venture with the ACS group which has a portfolio of 2.9GWp solar PV projects in Spain. This includes 914 MWp already in operation. In addition to these projects, the company also has other Solar PV projects in different stages of development in Portugal (e.g. Alcouthim, Ourique and Odemira) and a 51.5% stake in the Ventinvest windfarm (12 MW installed capacity), which make up a 3.8 GWp portfolio. At the end of 2020 Galp was the leading solar player in Iberia and one of the key renewable power producers in the region, with an installed capacity of 926 MWp on a 100% basis. These projects generated a total of 1346 GWh in 2020, of which 327 GWh were generated under the company's ownership. 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 in collaboration with relevant business units. 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, wildfires, among others). The nature, technical complexity and diversity of Galp's operations, e.g. upstream (E&P segment) and downstream (refining 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. the « Sines refinery) is located in the south of Portugal and might be threatened by these events (e.g. wildfires). 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. This is particularly relevant as Galp processed in 2020 around 87.1 mmboe 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 in collaboration with relevant business units. 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 and downstream (Refining segment) means that this type of events have a very high potential impact on the execution and operations conditions. Industrial facilities such as the Sines refinery in the South of Portugal, is located by the Atlantic Ocean coast and might be threatened by these events (e.g. sea level rise). This is particularly relevant as Galp processed in 2020 around 87.1 mmboe 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

Acute physical	Other, please specify (Increased likelihood of extreme hot weather events)
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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

Galp used scenario analysis to assess the physical risks and opportunities related to climate change. These correspond to IPCC scenarios (Intergovernmental Panel on Climate Change). Thus, the Committed scenario was combined with a RCP 1.9, which points to a scenario of 1.5°C (less than 2°C), and the Fragmented scenario with a RCP 4.5, which points to a scenario between 1.7 and 3.2°C in 2100. Due to the limited existence of climate models related to the RCP 1.9 scenario, the data used on the variation of physical variables for the more sustainable scenario is aligned with a RCP 2.6. The IPCC RCP 2.6 and RCP 4.5 scenarios represent a 2°C and between 1.7 and 3.2°C in 2100 scenario, respectively. For these scenarios, several physical variables were evaluated and quantified. These were, for acute risks: number of hot days (Tmax>30°C), number of cold days (Tmin<0°C), number of days with extreme wind (wind speed>10 and 20m/s), number of days with extreme precipitation (days with precipitation>100mm), number of days with high fire risk (fire weather index>45). All the values for these variables were obtained considering the geographic coordinates of the various assets, using three different time horizons, considering the short, medium and long term (as recommend by TCFD): 2025, 2030 and 2050. The data was collected from reliable sources such as initiatives developed and sponsored by the European Union (Copernicus) and the World Meteorological Organization (Cordex). Local sources are used as complementary (and back test) sources (Portal do Clima, Projeções Climáticas for Brazil, etc.). Due to climate change, days with very high temperatures will become more frequent. Internally we evaluate the risk arising from the increase in the number of days per year with maximum temperature above 35°C. Taking into account the two physical scenarios considered (RCP 2.6 and RCP 4.5) we verified that there is a clear trend towards an increase in heat waves in all geographies where we operate. Although evaluated by the different business units, this risk was only considered relevant by Renewables. It was considered that for each degree above 35°C there is a production decline of 0.5% in our solar farms. Therefore, and taking into account the physical variables collected (number of days per year with temperature above 35°C) the maximum expected loss was calculated for the two scenarios and three time horizons considered.

Time horizon

Long-term

Likelihood

More likely than not

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)

3770000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

It was considered that for each degree above 35°C there is a production decline of 0.5% in our Iberian solar farms. In the RCP4.5 scenario the number of days with temperatures above 35°C would impact production negatively, generating losses of approximately 3.77 M€ by 2050 in relation to a scenario with no significant changes in temperature.

Cost of response to risk

120983

Description of response and explanation of cost calculation

Galp is committed to the identification and quantification of climate related risks across its activities and geographies and has recently spent 121k€ in specialized study address these issues, using scenario analysis with physical variables compatible with Galp's in house scenarios. The risk of decreased solar power production in very hot days was identified and quantified during this study and a plan for adaptation and mitigation is under preparation to address it.

Comment

Galp is committed to the identification and quantification of climate related risks across its activities and geographies and has recently spent 121k€ in specialized study address these issues, using scenario analysis with physical variables compatible with Galp's in house scenarios.

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Current regulation	Carbon pricing mechanisms
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Primary potential financial impact

Increased direct costs

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

Galp's activities, namely its refining operations (Sines refinery), are directly impacted by increased CO2 prices, since these are covered by the EU-ETS. The increased ambition in emissions reduction announced by the EU commission recently and the accompanying Fit for 55 legislative package will put increased pressure on CO2 prices which are likely to rise, as well as in the allocation of free emission allowances, which might decrease. We estimated the cost associated with the purchase of licences for Galp's activities up to 2030 (phase IV of EU-ETS, which encompasses the Sines Refinery) in a scenario where there were no emissions reductions and prices increased until that year aligned with recent developments.

Time horizon

Medium-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)

41000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

The impact presented for risks driven by changes in regulation and associated carbon prices corresponds to average yearly cost of refinery CO2 emissions licences per year for the 2021-2030 (EU-ETS phase IV) period, in a scenario where ETS prices continue increasing. This potential impact represents 41 M€ per year.

Cost of response to risk

490000000

Description of response and explanation of cost calculation

The estimated costs of the response to risk identified to mitigate the risks represent the average annual capex to be invested in the Industrial and Energy Management unit (€490 M), which includes the refining business. This corresponds 70% of the CAPEX allocated to Industrial and Energy Management for the 2021-2025 and includes efficiency energy projects and business transformation for industrial sites, including the new HVO unit in Sines and also other initiatives within the segment that will increase resilience, decrease emissions and diversify and increase the offer of low carbon products, mitigating the risks from increased emission allowances prices. In addition, 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 facilities covered by ETS have been progressively reducing their specific emissions, approaching the sectorial benchmark (SR 30.3 kg CO2/CWT & MR 30.2 kg CO2/CWT in 2020). In parallel, the company is also investing 5% of CAPEX in the 21-25 period on New Energies projects which include developing a Green Hydrogen project in Sines which can give an additional contribution to the decarbonization of the refinery through the integration of green hydrogen in the refining processes and consequential reduction in CO2 emissions from the substitution of grey hydrogen. Galp aims to have 100 MW electrolysis capacity installed by 2025 which can be expanded up to 600-1000 MW in 2030 as business cases are proven.

Comment

The estimated costs of the response to risk identified to mitigate the risks represent the average annual capex to be invested in the Industrial and Energy Management unit (€490 M), which includes the refining business where efficiency energy and business transformation projects will be implemented, including the new HVO unit in Sines .

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Acute physical	Other, please specify (Extreme wind events)
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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

Galp used scenario analysis to assess the physical risks and opportunities related to climate change. These correspond to IPCC scenarios (Intergovernmental Panel on Climate Change). Thus, the Committed scenario was combined with a RCP 1.9, which points to a scenario of 1.5°C (less than 2°C), and the Fragmented scenario with a RCP 4.5, which points to a scenario between 1.7 and 3.2°C in 2100. Due to the limited existence of climate models related to the RCP 1.9 scenario, the data used on the variation of physical variables for the more sustainable scenario is aligned with a RCP 2.6. The IPCC RCP 2.6 and RCP 4.5 scenarios represent a 2°C and between 1.7 and 3.2°C in 2100 scenario, respectively. For these scenarios, several physical variables were evaluated and quantified. These were, for chronic risks: increase in mean temperature (°C), sea level rise (m), difference in mean precipitation (mm), mean wind (m/s). And for acute risks: number of hot days (Tmax>30°C), number of cold days (Tmin<0°C), number of days with extreme wind (wind speed>10 and 20m/s), number of days with extreme precipitation (days with precipitation>100mm), number of days with high fire risk (fire weather index>45). All the values for these variables were obtained considering the geographic coordinates of the various assets, using three different time horizons, considering the short, medium and long term (as recommend by TCFD): 2025, 2030 and 2050. The data was collected from reliable sources such as initiatives developed and sponsored by the European Union (Copernicus) and the World Meteorological Organization (Cordex). Local sources are used as complementary (and back test) sources (Portal do Clima, Projeções Climáticas for Brazil, etc.). The acute risk of being exposed to extreme wind events with speeds above those considered during the infrastructure design is the most significant physical risk identified and assessed in Galp. The list of potential assets damaged by extreme wind events includes: damage /destruction of storage tanks in refineries and logistics parks (e.g. Sines, Matosinhos); Changes in swell patterns that could disrupt accessibility to ports, interrupt the logistics chain and compromise raw material supplies; Damage to photovoltaic installations, namely damage to solar panels and trackers in our solar farms.

Time horizon

Long-term

Likelihood

About as likely as 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)

149970000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

From the assessment and quantification made, the most significant risk was derived from extreme wind events. It was considered the most relevant for the refining, the Logistics and the Renewables businesses. The risk was quantified for the 3 time horizons and for 2 climate scenarios. The results for the possible maximum loss are: 149,97M€ (2050). For each of the risks, different mitigation measures were identified by the business areas, taking into account how the risk materializes in each of them.

Cost of response to risk

122530000

Description of response and explanation of cost calculation

Regarding refining and the possible risk of damage/destruction of storage tanks in Galp's refineries (Sines and Matosinhos) and Galp's logistics parks, mitigation measures were identified as reconstruction of the tanks, increasing their resistance to extreme winds, and strengthening of existing tanks when possible. Regarding the risk identified by Logistics, the possible mitigation measures are the strengthening of logistics chains and the hiring of spot vessels to mitigate the unavailability of ports due to the effect of extreme winds on the swell. Finally, regarding Renewables, the mitigation measure identified is to turn off the trackers when there is excessive wind, preserving the integrity of the equipment (already in operation). These mitigation measures have an associated cost of 122,53M€ (considering the reconstruction of all storage tanks – 2M€ by tank).

Comment**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

Galp has conducted an analysis of climate change related opportunities that have the potential to generate a substantive positive change in its business operations, revenue, and/or expenditure. Opportunities are driven by development and/or expansion of low emission goods and services, ability to diversify business activities and shift in consumer preferences. Following TCFD recommendations, this analysis involves the use of different scenarios in order to assess the performance of the different identified opportunities under different climate related variables. The financial implications of these opportunities were evaluated on a short (5 years), median (10 years) a long term (30 years) basis. Galp identified several opportunities arising from development and/or expansion of low carbon projects, the ability to diversify business activities and shift in consumer preferences. To manage these opportunities, Galp is allocating 50% of its net capex in the 2021-25 period to low carbon initiatives including the development of a renewable electricity generation portfolio, with a target gross operating capacity of 12 GWp by 2030, with production both in and outside Iberia, distributed across wind and solar assets, whilst considering other technologies.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

250000000

Potential financial impact figure – maximum (currency)

300000000

Explanation of financial impact figure

The financial impact figure (250-300M€) corresponds to a pro forma OCF from the renewables business expected in 2030. This Pro forma OCF considers all renewables projects as if they were consolidated according to Galp's equity stakes. These projects are also expected to deliver a > 9% equity IRR.

Cost to realize opportunity

270000000

Strategy to realize opportunity and explanation of cost calculation

During 2020 Galp announced the acquisition of 75.01% stake in a JV which incorporates a selection of high-quality solar PV projects in Spain with a total capacity of 2.9 GWp. The agreement includes 914 MWp of commissioned generation capacity already in operation, in addition to a number of projects at different stages of development. Since that announcement, the renewable portfolio has expanded and now totalises c.3.9 GWp. More recently the company announced the growth of its renewable power generation business with the target of having 12 GWp gross installed operating capacity in 2030 while simultaneously expanding its portfolio diversifying technologies and geographies by growing beyond Iberia. The costs estimated correspond to the average annual capex necessary to invest in the identified opportunities, over the next 5 years, this would be approximately 30% of the group's net CAPEX for the 21-25 period (€0.8-1.0 bn p.a.). To enhance a balanced risk profile, Galp is targeting a balanced PPA coverage, optimised capital structure with D/E ration of 60-70% and an active asset rotation and partnership model, with targeted average stakes at commercial operation date of c.50%. Cost to realize the opportunity is an average of the range of 240-300M€ which corresponds to 30% of average yearly net CAPEX (estimated at a range of €0.8-1.0 bn p.a.) to be invested in renewables in the 2021-2025 period.

Comment

Cost to realize the opportunity is an average of the range of 240-300M€ which corresponds to 30% of average yearly net CAPEX (estimated at a range of €0.8-1.0 bn p.a.) to be invested in renewables in the 2021-2025 period.

Identifier

Opp2

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

Galp has conducted an analysis of climate change related opportunities that have the potential to generate a substantive positive change in its business operations, revenue, and/or expenditure. Opportunities are driven by development and/or expansion of low emission goods and services, ability to diversify business activities and shift in consumer preferences. Following TCFD recommendations, this analysis involves the use of different scenarios in order to assess the performance of the different identified opportunities under different climate related variables. The financial implications of these opportunities were evaluated on a short (5 years), median (10 years) a long term (29 years) basis. Galp identified several opportunities arising from development and/or expansion of low carbon projects, the ability to diversify business activities and shift in consumer preferences which will impact hydrocarbon demand. To manage these opportunities, Galp is allocating 50% of its net capex in the 2021-25 period to low carbon initiatives including the diversification of its commercial sales portfolio to offer more low carbon products including gas and power, electricity for mobility, non-fuel offer, decentralized power production equipment (through EI) and integrated fleet management services (through Flow).

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)

160000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

The potential financial impact of the low carbon products offered and initiatives in the commercial business corresponds to over 40% of this business unit's 2025 expected OCF (160 M€). This moves from a c.20% weight in 2021's expected OCF.

Cost to realize opportunity

450000000

Strategy to realize opportunity and explanation of cost calculation

Galp aims to transform its commercial business by diversifying its portfolio offering more low carbon solutions to its customers and therefore assisting them on the decarbonization of their activities. By 2025, the company aims to increase its electric mobility network to c.10,000 charging points in Iberia, more than double electricity sales (including 100% renewable electricity) and grow by more than 1.5x in gas sales, all figures vs 2021. Additionally, businesses that will produce efficiency gains and reduce emissions for our customers like decentralized solar PV panels sold by EI, and integrated fleet management services provided Flow are thought to show significant growth and contribute to their decarbonization. The costs estimated correspond to the average of the range of CAPEX necessary to invest in the identified opportunities, over the next 5 years, this would be approximately 75% of the CAPEX allocated to the transformation of the Commercial business unit (between 400-500 M€), most of which will be allocated to low carbon solutions. Commercial net capex corresponds to 15% of Group's net CAPEX (€0.8-1.0 bn p.a.) for the 21-25 period.

Comment

he costs estimated correspond to the average of the range of CAPEX necessary to invest in the identified opportunities, over the next 5 years, this would be approximately 75% of the CAPEX allocated to the transformation of the Commercial business unit (between 400-500 M€). Commercial net capex corresponds to 15% of Group's net CAPEX (€0.8-1.0 bn p.a.) for the 21-25 period.

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

Galp has conducted an analysis of climate change related opportunities that have the potential to generate a substantive positive change in its business operations, revenue, and/or expenditure. Opportunities are driven by development and/or expansion of low emission goods and services, ability to diversify business activities and shift in consumer preferences. Following TCFD recommendations, this analysis involves the use of different scenarios in order to assess the performance of the different identified opportunities under different climate related variables. The financial implications of these opportunities were evaluated on a short (5 years), median (10 years) a long term (30 years) basis. Galp identified several opportunities arising from development and/or expansion of low carbon projects, the ability to diversify business activities and shift in consumer preferences. To manage these opportunities, Galp is allocating 50% of its net capex for the 2021-25 period to low carbon initiatives including the development of a 270 ktpa HVO production and continuing investment in its Enerfuel FAME producing unit.

Time horizon

Medium-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)

50000000

Potential financial impact figure – minimum (currency)

<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

The financial impact figure (50M€) corresponds to the estimated yearly EBITDA figure of the HVO biofuels produced by Galp by 2025.

Cost to realize opportunity

200000000

Strategy to realize opportunity and explanation of cost calculation

Galp recently announced its plans to develop a 270 ktpa HVO renewable fuel unit. A unit that is aligned with the increase in Biofuels demand to meet the RED II incorporation targets and reach the EU's target of 55% reduction in emissions by 2030. The HVO produced in this unit would have the capability to be transformed into both sustainable road and aviation fuels. For the construction of this unit we are considering re-using equipment from the decommissioned Matosinhos refinery and take advantage of synergies in the Sines refinery during operation, namely the surplus hydrogen available, delivering a very cost effective project on the CAPEX and OPEX sides. The costs estimated correspond to the approximate capex necessary to invest in the HVO unit which is estimated at around 200 M€ over 4 years, with production starting before 2025 and IRR expected at >15%.

Comment

The costs estimated correspond to the approximate capex necessary to invest in the HVO unit which is estimated at around 200 M€ over 4 years, with production starting before 2025 and IRR expected at >15%.

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) Is your organization's low-carbon transition plan a scheduled resolution item at Annual General Meetings (AGMs)?

	Is your low-carbon transition plan a scheduled resolution item at AGMs?	Comment
Row 1	No, but we intend it to become a scheduled resolution item within the next two years	We intend it to become a scheduled resolution item in the next AGM. Galp annually holds a day dedicated to investors, the 'Capital Markets Day', in addition to AGM. This day communicates and addresses all issues related to climate changes, including the low-carbon transition plan, carbon intensity metrics, GHG emission reduction metrics and measures to achieve them.

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?

Yes, qualitative and quantitative

C3.2a

(C3.2a) Provide details of your organization's use of climate-related scenario analysis.

Climate-related scenarios and models applied	Details
RCP 2.6 RCP 4.5 Other, please specify (Two scenarios used: the Committed scenario (lower than 2°C scenario), which is aligned with the Sustainable Development scenario, and the Fragmented scenario based on the IEA Stated Policies scenario.)	Galp has conducted an analysis of climate risks and it is exposed to climate change risks driven by changes in regulation and driven by change in physical climate parameters and other climate-change related developments. Our methodology for quantifying climate-related risks and opportunities is consistent with TCFD: Adaptation of the corporate risks dictionary in order to incorporate climate-related risks from TCFD recommended taxonomy, and creation of a dictionary of opportunities based entirely on TCFD Definition of the climate scenario framework: considering physical and transition scenarios. In order for this scenario framework be common to the whole group and used by the different business areas, transition scenarios already developed within Galp were used as a starting point. The transition scenarios already used in the group were developed by adapting IEA scenarios such as the NZE, the SDS and STEPS. The 2 transition scenarios considered were: the Committed scenario, which is aligned with the SDS and the Fragmented scenario based on STEPS. Next, and taking into account the existing narratives of each of the transition scenarios, they were combined with the appropriate physical scenarios. The scenarios used by Galp to assess the physical risks and opportunities related to climate change were the IPCC scenarios. Thus, the Committed scenario was combined with a RCP 1.9 (or RCP 2.6 when data for RCP 1.9 wasn't available), which points to a scenario of 1.5°C (less than 2°C), and the Fragmented/Resilience scenario with a RCP 4.5, which points to a scenario between 1.7 and 3.2°C in 2100. Due to the limited existence of climate models related to the RCP 1.9 scenario, the data used on the variation of physical variables for the more sustainable scenario is aligned with a RCP 2.6. The IPCC RCP 2.6 and RCP 4.5 scenarios represent a 2°C and between 1.7 and 3.2°C in 2100 scenario, respectively. For these scenarios, several physical variables were evaluated and quantified. These were, for chronic risks: increase in mean temperature (°C), sea level rise (m), difference in mean precipitation (mm) and mean wind (m/s) and for acute risks: number of hot days (Tmax>30°C), number of cold days (Tmin<0°C), number of days with extreme wind (wind speed>10 and 20m/s), number of days with extreme precipitation (days with precipitation>100mm) and number of days with high fire risk (fire weather index>45). All the values for these variables were obtained considering the geographic coordinates of the various assets, using 3 different time horizons, considering the short, medium and long term (as recommend by TCFD): 2025, 2030 and 2050. The data was collected from reliable sources such as initiatives developed and sponsored by the EU (Copernicus) and the WMO (Cordex). Local sources are used as complementary (and back test) sources (Portal do Clima, etc). From the assessment and quantification made, the most significant risk was derived from extreme wind events. It was considered the most relevant for Refining, Logistics and Renewables businesses. The risk was quantified for the 3 time horizons and for the 2 climate scenarios presented. For each of the risks, different mitigation measures were identified by the business areas, taking into account how the risk materializes in each of them. Regarding refining and the possible risk of damage/destruction of storage tanks, mitigation measures were identified as reconstruction of the tanks, increasing their resistance to extreme winds, and strengthening of existing tanks when possible. Regarding the risk identified by Logistics, the possible mitigation measures are the strengthening of logistics chains and the hiring of spot vessels to mitigate the unavailability of ports due to the effect of extreme winds on the swell. Regarding Renewables, the mitigation measure identified is to turn off the trackers when there is excessive wind, preserving the integrity of the equipment (already in operation).

C3.3

(C3.3) 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 two businesses (Galp Energy Solutions and Ei- Energia Independente) geared towards supporting Galp's customers in the implementation of energy efficiency and renewable energy solutions. 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 directed to the B2C (EI) and B2B (EI and GSE) markets. GSE's business model is based on energy performance contracts 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. Savings are presented and the actual value observed is billed to Customers. In 2020 the implemented projects have saved 354 tCO2e. EI offers decentralized power production and monitoring systems to the B2C and B2B segments. EI uses advanced technologies in order to optimise the acquisition and installation cost. During 2020 EI did more than 500 domestic installations and 8 installations in companies. These represent an estimated annual production of about 4 GWh and about 1.2 kton CO2e/year avoided. Galp, through GoWithFlow, is promoting an integrated solution for its customers, in transition to electrification, including charging, fleet management and vehicle sharing systems. GoWithFlow has 4,500 vehicles and 4,000 charging stations. The Company also owns a network of charging stations in Portugal, with 65 Fast Charging Stations and 448 Normal Charging Stations. The electricity sold by Galp for mobility has avoided approximately 0.4 ktonCO2e. Along with its regular electricity retail offer, which has a lower emission factor than the one purchased from the national Portuguese grid, in 2020 Galp started offering its costumers the possibility to purchase 100% renewable electricity. Galp's total renewable power provided through PPAs will grow to around 650 GWh per annum by 2022, securing long-term sourcing portfolio for its power activities.
Supply chain and/or value chain	Yes	Climate change risks and opportunities have 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 development of green hydrogen solutions with potential to reach 1 GW of electrolyser capacity by 2030, assessing the entry into the Li-on battery value chain through lithium chemical processing and solar energy through PV panels. Recently Galp set an ambition to install 12 GWp of gross renewable energy capacity by 2030 with operations in diverse geographical settings. Also, together with our partners in the development of Area 4 in Mozambique, the Coral Sul will be the first project to develop the large-scale natural gas resources of Area 4, with the start of production planned for 2022. Construction of a FLNG unit started in 2018 and is proceeding as planned. The unit will have a processing capacity of about 3.4 mtpa of LNG. The last module of the FLNG unit was lifted in November 2020. The FLNG unit will be connected to the southern region of the Coral discovery, located exclusively in Area 4 and containing a deposit of approximately 16 tcf of natural gas. The drilling campaign is progressing according to the project timeline, despite its suspension in 2020 as a preventive measure to the Covid-19 pandemic. Additionally in late 2020 Galp announced the discontinuing of refining operations in the Matosinhos refinery after the first quarter of 2021. This reconfiguration will allow for a reduction of more than €90 m per year in fixed costs and investments, and more than 900 kton of CO2e emissions (scope 1 and 2) associated with the current system. The company will continue to supply the regional market, maintaining the access of the maritime terminal, storage and distributing facilities in Matosinhos and is currently assessing usage alternatives for the complex.
Investment in R&D	Yes	Climate change risks and opportunities have influenced Galp's investment in R&D. In 2020, Galp has invested €14.6 million in R&D and estimate to invest more than €180 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. During 2020, Galp defined a new organisation structure that led to the creation of four Innovation Centres. These work together with the respective business units to build new products, services or solutions that will generate new revenue / profit streams to ensure the growth and sustainability of the current business. Additionally, Galp created a new innovation facility in 2020. UP – Upcoming Energies is the name of the project focused in searching for solutions for the axes of energy transition, mobility, digital and circular economy bringing Galp closer to the innovation, entrepreneurship and start-up ecosystem. With the new innovation structure, Galp intends to position itself for the next growth cycle and the future of energy, increasing the resilience and competitiveness of its portfolio through investment over the entire energy value chain, aligned with the energy 3D's: Decarbonisation, Decentralisation and Digitalisation. Galp will also 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. 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.
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 through allocating 50% of its capex to low carbon initiatives including: (i) the development of a renewable generation portfolio, with a target gross capacity of 12 GW by 2030, with production both in Europe and outside of the continent, (ii) the development of a 270 kton HVO production in the Sines refinery (iii) supporting our customers in this transition, by developing decentralised generation solutions, tailored to their needs (e.g. decentralized renewable energy production; energy efficiency projects, electric mobility, increasing the sales of renewable power generation by 2x until 2025), development of green hydrogen solutions with potential to reach 1 GW of electrolyser capacity by 2030 and assessing the entry into the Li-on battery value chain through lithium chemical processing. In 2020, Galp has invested €4.4 million in operational eco-efficiency in refining. In the upstream, Galp continues to ensure the sustainability of its Upstream portfolio, which should be competitive and profitable in any expected oil and carbon pricing scenario. In 2020, around 327 GWh of renewable energy was generated from solar photovoltaic projects in Spain and from the wind power project in Portugal, thus avoiding the emission of approximately 98 ktonCO2. In 2020, Galp added renewable electricity to its commercial offer. This green energy will be supplied to the consumer through long-term solar PV energy supply contracts (PPAs). Capacity of 400 MW Production of approximately 650 GWh/year 430 ktonCO2e avoided.

C3.4

(C3.4) 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 with a present day installed capacity of 926 GWp and a further 2.8 GWp under development, consisting in solar and wind energy (e.g. Alcoutim, Ourique, Vale Grande), FAME biodiesel (Enerfuel Industrial Plant in Sines), that have been generating revenues aggregating to Galp's global revenues. In 2020, Galp entered the solar power market in Spain, signing an agreement with the ACS Group to establish a joint venture (JV) aimed at developing a portfolio of solar photovoltaic projects in Spain, with a total power generation capacity of 2.9 GWp. The portfolio includes 914 MWp of generation capacity already in operation, in addition to a number of projects at different stages of development. It is estimated that the full capacity will be operational by 2024. All projects have already secured access to the grid, while the administrative and environmental licensing process is being developed to begin the solar park construction phase. The portfolio incorporates a selection of high-quality projects in privileged locations and is expected to have a yield equivalent to 1,800 sun hours per year, supporting Galp's strategic ambitions and positioning the Company as a leader in solar PV in the Iberia. The transaction considers a business value of approximately €2.2 bn (enterprise value) related to the acquisition, development and construction of the entire portfolio (100%) and was completed in September 2020. In Portugal, Galp currently holds a portfolio of approximately 495 MWp of solar PV projects, of which 144 MWp are in Alcoutim, Algarve, as well as 343 MWp in Ourique, and 8 MWp in Odemira, both in Alentejo. These projects are at different stages of development and the total installed capacity is estimated to be operational by 2023. In addition to solar PV capacity, Galp's installed capacity for renewable generation in Portugal also includes 12 MWp from a wind farm, where the Company operates through its invested enterprise Ventinveste, S.A., Portugal, in which Galp holds a 51.5% stake. 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. Recently Galp also announced the investment in a HVO producing unit in its Sines refinery with a 270 ktpa capacity which will materialize an investment of <200M€ over 4 years. At the end of 2020, Galp was the leading solar player in Iberia and one of the key renewable power producers in the region, with an installed capacity of 926 MW on a 100% basis, with around 327 GWh of renewable energy was generated from solar photovoltaic projects in Spain and from the wind power project in Portugal, thus avoiding the emission of approximately 98 ktonCO2. 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 2020, Galp invested €4.4 million in eco-efficiency measures in the Refining segment. In addition, we produced 26 kton of FAME biodiesel in the Enerfuel facility and became producers of second generation HVO biofuels by co-processing vegetable oil which resulted in 25 kton of this product. Furthermore, one of Galp's strategic goals is to build an innovative and differentiated lower carbon business through allocating 50% of its capex to low carbon initiatives including: (i) the development of a renewable generation portfolio, with a target gross capacity of 12 GW by 2030, with production both in Europe and outside of the continent, (ii) the development of a 270 kton HVO production in the Sines refinery (iii) supporting our customers in this transition, by developing decentralised generation solutions, tailored to their needs (e.g. renewable energy production; energy efficiency projects, electric mobility, increasing the sales of renewable power generation by 2x until 2025), development of green hydrogen solutions with potential to reach 1 GW of electrolyser capacity by 2030 and assessing the entry into the Li-on battery value chain through lithium chemical processing. Additionally in late 2020 Galp announced the discontinuing of refining operations in the Matosinhos refinery after the first quarter of 2021. This reconfiguration will allow for a reduction of more than €90 m per year in fixed costs and investments, and around 900 kton of CO2e emissions (scope 1 and 2) associated with the current system. The company will continue to supply the regional market, maintaining the access of the maritime terminal, storage and distributing facilities in Matosinhos and is currently assessing usage alternatives for the complex. Assets: Climate change related risks and opportunities have factored our financial planning process, namely assets. Galp's presents a post-2020 portfolio NPV 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 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>

C3.4a

(C3.4a) Provide any additional information on how climate-related risks and opportunities have influenced your strategy and financial planning (optional).

No further comments.

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

2020

Target coverage

Company-wide

Scope(s) (or Scope 3 category)

Scope 1+2 (market-based)

Base year

2017

Covered emissions in base year (metric tons CO2e)

4105189

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

100

Target year

2030

Targeted reduction from base year (%)

40

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

2463113.4

Covered emissions in reporting year (metric tons CO2e)

3490885

% of target achieved [auto-calculated]

37.4102142434855

Target status in reporting year

New

Is this a science-based target?

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

Target ambition

Well-below 2°C aligned

Please explain (including target coverage)

Galp established a target of reducing 40% its scope 1 + 2 (market-based) GHG emissions by 2030, compared to 2017 base year. Target is company wide and includes all operated emissions, even the ones from non operated upstream assets. We considered this to be a SBT, well-below 2°C aligned and will be shortly submitted to SBTi for official approval, when possible for O&G sector. In 2020 Galp reduced 6.0% (37.4% of the target) its scope 1+2 (market-based) GHG emissions compared to previous year (2019). The SBTi methodology for the oil and gas sector has not yet been finalized and launched so it is not possible for integrated oil and gas companies to validate targets under the Science-Based Targets initiative. Galp is involved in the working group that has been developing the SBTi Oil & Gas methodology and will evaluate its impact on the targets that have been defined once it is finalized.

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

2020

Target coverage

Company-wide

Scope(s) (or Scope 3 category)

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

Intensity metric

Other, please specify (grams of CO2e per megajoule (MJ) produced)

Base year

2017

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

93.42

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

100

Target year

2030

Targeted reduction from base year (%)

40

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

56.052

% change anticipated in absolute Scope 1+2 emissions

-40

% change anticipated in absolute Scope 3 emissions

-40

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

82.5

% of target achieved [auto-calculated]

29.2228644829801

Target status in reporting year

New

Is this a science-based target?

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

Target ambition

Well-below 2°C aligned

Please explain (including target coverage)

Galp established the goal of reduce its carbon intensity - emissions from operations (scopes 1+2) plus emissions from use of Upstream products (O&G scope 3) by 40% in 2030.

Target reference number

Int 2

Year target was set

2020

Target coverage

Company-wide

Scope(s) (or Scope 3 category)

Scope 1+2 (market-based) +3 (downstream)

Intensity metric

Other, please specify (grams of CO2e per megajoule (MJ) of all products sold)

Base year

2017

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

76.3

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

100

Target year

2030

Targeted reduction from base year (%)

20

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

61.04

% change anticipated in absolute Scope 1+2 emissions

-20

% change anticipated in absolute Scope 3 emissions

-20

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

74.86

% of target achieved [auto-calculated]

9.4364351245085

Target status in reporting year

New

Is this a science-based target?

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

Target ambition

Well-below 2°C aligned

Please explain (including target coverage)

Galp established the goal of reduce its carbon intensity - emissions from operations (scopes 1+2) plus emissions from lifecycle from products sold by Galp (oil products, gas & power scope 3) by 20% in 2030. The scope and categories of emissions considered in the setting of this target are aligned with the draft SBTi methodology for the Oil & Gas sector. The SBTi methodology for the oil and gas sector has not yet been finalized and launched so it is not possible for integrated oil and gas companies to validate targets under the Science-Based Targets initiative. Galp is involved in the working group that has been developing the SBTi Oil & Gas methodology and will evaluate its impact on the targets that have been defined once it is finalized.

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
Net-zero target(s)

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

2019

Target coverage

Company-wide

Target type: absolute or intensity

Absolute

Target type: energy carrier

Electricity

Target type: activity

Consumption

Target type: energy source

Renewable energy source(s) only

Metric (target numerator if reporting an intensity target)

Percentage

Target denominator (intensity targets only)

<Not Applicable>

Base year

2019

Figure or percentage in base year

57.9

Target year

2021

Figure or percentage in target year

100

Figure or percentage in reporting year

80

% of target achieved [auto-calculated]

52.4940617577197

Target status in reporting year

New

Is this target part of an emissions target?

Yes, it aligns with target Abs1.

Is this target part of an overarching initiative?

No, it's not part of an overarching 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 in Portugal. The objective was established in 2019, having as reference scope 2 GHG emissions of 2019 (base year). This commitment will enable Galp, from 2021 onwards, to avoid the emission of approximately 100 thousand tCO₂ per year. In 2020 the percentage of renewable energy in the electricity acquired by Galp in Portugal was 80% and the associated scope 2 emissions were 36 875 t CO₂e, a reduction of approximately 70% in relation to the base year.

C4.2c

(C4.2c) Provide details of your net-zero target(s).

Target reference number

NZ1

Target coverage

Company-wide

Absolute/intensity emission target(s) linked to this net-zero target

Abs1

Int2

Target year for achieving net zero

2050

Is this a science-based target?

Yes, but we have not committed to seek validation of this target by the Science Based Targets initiative in the next 2 years

Please explain (including target coverage)

In 2020 Galp established the goal of becoming a Net zero company until 2050, aligning its position with the commitments of EU and Portuguese government.

C-OG4.2d

(C-OG4.2d) 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 (<1% 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 Upstream 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 Upstream segment, Galp conducted fugitive emissions monitoring campaigns, namely methane, throughout the Rabo Branco [CS1] [RM2] concession (around 500 points monitored). This activity followed-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 equipments. 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

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	1	91000
To be implemented*	2	38000
Implementation commenced*	1	23559
Implemented*	2	59024
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
---	----------------------

Estimated annual CO2e savings (metric tonnes CO2e)

50484

Scope(s)

Scope 1

Voluntary/Mandatory

Voluntary

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

7198557

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

3248780

Payback period

4-10 years

Estimated lifetime of the initiative

16-20 years

Comment

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 allowing to reduce scope 1 CO₂ emissions. In 2020, 3.25M€ were invested in this project, with the total investment in this project being approximately 44.2M€.

Initiative category & Initiative type

Energy efficiency in production processes	Process optimization
---	----------------------

Estimated annual CO2e savings (metric tonnes CO2e)

8540

Scope(s)

Scope 1

Voluntary/Mandatory

Voluntary

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

6400000

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

32329

Payback period

4-10 years

Estimated lifetime of the initiative

16-20 years

Comment

At the Sines refinery, the installation of Catcooler unit at the FCC, in order to increase flexibility in that unit. It also increases steam production, avoiding the consumption of natural gas in utilities plant. In 2020 32 k€ were invested in this project, in a total of approximately 20M€ invested since the beginning of this project.

C4.3c

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

Method	Comment
Dedicated budget for energy efficiency	One of the strategic goals of the Refining & Midstream 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: the refining infrastructure optimisation; the launch of EI – Energia Independente to supply out customers with decentralized power solutions that will reduce emissions from energy generation; Galp Energy Solutions projects (energy solutions for clients, inc. industry and services); Social projects (UP educational projects); among others.
Dedicated budget for low-carbon product R&D	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. Galp has in place a project to produce distilled biodiesel (FAME) in Portugal from waste feedstock (animal fats). The Enerfuel plant in 2020 produced approximately 26 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. In 2020 Galp invested 14.6 M€ in innovation and R&D, including 7 CCUS projects. Up to 2025 the company is planning to invest more than 180 M€ in R&D, which will encompass the development of low carbon products and energy efficiency solutions.
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 which can go up to \$80/tCO2e in the long-term (2050). Aware of the future potential changes in consumer and technological patterns and the risks associated to long-term business plans analysis, Galp considers a progressive price on carbon based on the international references and forecasts. Our carbon prices also change in the different scenarios used to test the long term strategy of the company. 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.
Internal incentives/recognition programs	All employees, including General Managers have KPI's linked to the employee's annual performance assessment through a variable remuneration: 1. EQSS Factor, which consists of a set of indicators (80% TRIR + 20% Carbon Intensity Index); 2. Specific KPI's related to the strategy achievement (e.g. Energy transition and Low Carbon initiatives , Sustainability Strategic Plan, Renewables portfolio, new business portfolio, Mobility reinvention, etc). Additionally Galp implemented a system that recognizes daily sustainable practices by attributing sustainability badges to employees who make efforts to improve the sustainability of their work environment. Each year, the employee with the most badges is publicly recognized in the Galp awards ceremony.

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 2020, around 245 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. This incorporation represents a potential reduction of GHG emissions of more than 640 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 in 2020 produced approximately 26.6 thousand m3 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. Also in 2020, Galp produced approximately 25 kton of Hydrogenated Vegetable Oil (HVO) in a hydrogenation unit at the Sines Refinery. The integration of this HVO allowed the reduction of 80 kton of CO2 emissions.

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

Low-carbon product and avoided emissions

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

Other, please specify (GHG Protocol methodology)

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

1.11

% of total portfolio value

<Not Applicable>

Asset classes/ product types

<Not Applicable>

Comment

Biofuels: Galp introduced, in 2020, around 247 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. This incorporation represents a potential reduction of GHG emissions of more than 640 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 in 2020 produced approximately 26.6 thousand m3 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

Electricity retail sales: Along with its regular electricity retail offer, which has a lower emission factor than the one purchased from the national Portuguese grid, in 2020 Galp started offering its costumers the possibility to purchase 100% renewable electricity. To secure the supply of renewable electricity the company has strengthened its commercial portfolio to provide renewable power to its customers by establishing two PPAs in Spain, with X-Elio and Grenergy Renovables. Galp's total renewable power provided through PPAs will grow to around 650 GWh per annum by 2022, securing long-term sourcing portfolio for its power activities. Galp Electric: The company also pr

owns a network of charging stations in Portugal, with 65 Fast Charging Stations and 448 Normal Charging Stations. It is currently developing its infrastructure in Spain, which includes 31 charging stations installed in 2020. The company ambitions to grow its charging points to 1000 in 2021 and > 10 000 in 2025. The electricity sold by Galp for mobility has avoided approximately 0.4 ktonCO_{2e}. Total avoided emissions by retail electricity sales and Galp electric: 106000 tCO_{2e}

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

1.75

% of total portfolio value

<Not Applicable>

Asset classes/ product types

<Not Applicable>

Comment

Level of aggregation

Product

Description of product/Group of products

Renewable energy (wind + solar) production: in 2020 Galp acquired a 75.01% stake in a joint venture with the ACS group which has a portfolio of 2.9GWp solar PV projects in Spain. This includes 914 MWp already in operation, with the remaining projects being at different stages of development. In addition to these projects, the company also has other Solar PV projects in different stages of development in Portugal (e.g. Alcoutim, Ourique and Odemira) and a 51.5% stake in the Ventinvest windfarm (12 MW installed capacity), which make up a 3.8 GWp portfolio. At the end of 2020 Galp was the leading solar player in Iberia and one of the key renewable power producers in the region, with an installed capacity of 926 MWp on a 100% basis. These projects generated a total of 1346 GWh in 2020, of which 327 GWh were generated under the company's ownership. Avoided emissions: 97 716 tCO_{2e} when compared with energy purchased from the grid

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

0.27

% of total portfolio value

<Not Applicable>

Asset classes/ product types

<Not Applicable>

Comment

Level of aggregation

Group of products

Description of product/Group of products

In 2020 Galp launched Energia Independente (EI) a company that sells decentralized power production and monitoring systems catering to the B2C and B2B segments. EI uses highly advanced technologies, such as like satellite image analysis, artificial intelligence algorithms and big data, in order to optimise the acquisition and installation cost, offering the solution that caters to each customer's needs. EI seeks to develop new products and services related with the energy transition in the near future (e.g. batteries, smart home) and grow outside the Iberian market. During 2020 EI did more than 500 domestic installations and 8 installations in companies. These represent an estimated annual production of about 4 GWh and about 1.2 kton CO_{2e}/year avoided. Galp Soluções de Energia (Galp Energy Solutions) supports our customers in decarbonizing their activities by the implementation of energy efficiency projects and by providing energy from less carbon intensive sources. The activity is directed primarily at B2B markets: service, transport, and industrial buildings. Savings are presented (measured), and the actual value observed is billed to Customers. Galp applies defined and tested methodologies, including IPMVP – International Performance Measurement and Verification Protocol. This year the implemented projects have saved 354 ton CO_{2e}, in addition to an annual saving of over 1,583 tonCO_{2e} from other projects executed by Galp's Energy Solutions in previous years. GoWithFlow: Galp, through GoWithFlow, is promoting an integrated solution for its customers, in transition to electrification, including charging, fleet management and vehicle sharing systems. GoWithFlow has 4,500 vehicles and 4,000 charging stations.

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

Please select

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

0.02

% of total portfolio value

<Not Applicable>

Asset classes/ product types

<Not Applicable>

Comment

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 Upstream 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 Upstream segment, Galp conducts fugitive emissions monitoring campaigns, 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.

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.

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 Upstream projects to zero flaring under normal operating conditions, by joining the Zero Routine Flaring by 2030 initiative as an Upstream 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 341 thousand m3 in 2020 (decrease of 67%, from 1,020 thousand m3 in 2019 to 341 in 2020) and 869 tCO₂e. This volume is expected to be reduced in the later stages of implementation of the production projects, through the reutilisation and reinjection or export of the gas produced.

In addition, although there is no regulation in Brazil that requires the injection of gas, in the Upstream segment the consortiums in where Galp participates (blocks BM-S-11 and BM-S-11a, Bacalhau field) have 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 2017

Base year end

December 31 2017

Base year emissions (metric tons CO₂e)

3624706

Comment

Base year set for Scope 1 GHG emissions and for emission reduction targets.

Scope 2 (location-based)

Base year start

January 1 2017

Base year end

December 31 2017

Base year emissions (metric tons CO₂e)

228035

Comment

Base year set for Scope 2 GHG emissions and for emission reduction targets.

Scope 2 (market-based)

Base year start

January 1 2017

Base year end

December 31 2017

Base year emissions (metric tons CO₂e)

228035

Comment

Base year set for Scope 2 GHG emissions and for emission reduction targets.

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)

3096401

Start date

<Not Applicable>

End date

<Not Applicable>

Comment

Gross global Scope 1 emissions (metric tons CO2e) equals to 3,096,401. Broken down by business unit (metric tons CO2e): Upstream (870), Refining and Midstream (3,073,958); Commercial (17,340); Others (4,233).

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)

42026

Start date

<Not Applicable>

End date

<Not Applicable>

Comment

Gross global Scope 2 emissions (metric tons CO2e) equals to 42,026. Broken down by business unit (metric tons CO2e): Upstream (3), Refining & Midstream (41,704); Commercial (30); Others (289).

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

4605750

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 was 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 and biofuels) 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, LPG and biofuels) 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

986597

Emissions calculation methodology

GHG emissions from the upstream activities to the electricity purchased by Galp for resale, including the emissions from the lifecycle of the fuels associated to electricity purchased and 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

255354

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

1823

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 in the past 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

39046

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

15571923

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 combustion 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 combustion of crude oil processed by the downstream company to whom Galp sold its crude oil.

Use of sold products

Evaluation status

Relevant, calculated

Metric tonnes CO2e

24735282

Emissions calculation methodology

Direct emissions of the consumption of fuels sold to Galp's 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.

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

0.000276

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

3138427

Metric denominator

unit total revenue

Metric denominator: Unit total

11381000000

Scope 2 figure used

Market-based

% change from previous year

34

Direction of change

Increased

Reason for change

In 2020, this performance metric increased 34.0% compared to the previous year (from 0.000206 to 0.000276) mainly due to a decrease in revenues (as a result of the Covid-19 pandemic). Global scope 1+2 GHG emissions decreased 8% (from 3,410,611 tCO2e in 2019 to 3,138,427 tCO2e in 2020) and total revenues decreased 31% (from €16,570,000,000 to 11,381,000,000). Thus, $3,138,427 / 11,381,000,000 = 0.000276$. In 2020, 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 €4.4 m in improving operational efficiency in refining, representing an annual reduction of 81 kton CO2e.

Intensity figure

513.32

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

3138427

Metric denominator

full time equivalent (FTE) employee

Metric denominator: Unit total

6114

Scope 2 figure used

Market-based

% change from previous year

3.9

Direction of change

Decreased

Reason for change

In 2020, this performance metric decreased 3.9% compared to the previous year (from 534.08 to 513.32). Global scope 1+2 GHG emissions decreased (from 3,410,611 tCO2e in 2019 to 3,138,427 tCO2e in 2020) and total FTE decreased (from 6,386 to 6,114). Thus, $3,138,427 / 6,114 = 513.21$. In 2020, 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 €4.4 m in improving operational efficiency in refining, representing an annual reduction of 81 kton CO2e.

Intensity figure

0.24

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

3138427

Metric denominator

Other, please specify (tonne of feedstock processed)

Metric denominator: Unit total

Scope 2 figure used

Market-based

% change from previous year

5.1

Direction of change

Increased

Reason for change

In 2020, this performance metric increased 5.1% compared to the previous year (from 0.228 to 0.240) mainly due to a decrease in feedstock processed associated with lower processing loads and operational constraints related to the ongoing pandemic. Global scope 1+2 GHG emissions decreased (from 3,410,611 tCO2e in 2019 to 3,138,427 tCO2e in 2020) and total feedstock processed decreased around 12% (from 14,962,721 ton to 13,099,097 ton). Thus, $3,138,427 / 13,099,097 = 0.240$. In 2020, 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 €4.4 m in improving operational efficiency in refining, representing an annual reduction of 81 kton CO2e.

(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

3072846

% change from previous year

6

Direction of change

Increased

Reason for change

In 2020, this performance metric increased 10.6% compared to the previous year (from 29,777 to 32,941). Global scope 1 GHG emissions (operated Upstream+Refining - including biofuels) had a 6.1% decrease (from 3,271,975 tCO2e to 3,072,846 tCO2e) and total Million Barrels of Oil Equivalent (mboe) produced had a 15.1% decrease (from 109.9 mboe to 93.3 mboe). Thus, 3,072,846/93.3=32,941. In 2020, 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 €4.4 m in improving operational efficiency in refining, representing an annual reduction of 81 kton CO2e.

Comment

The numerator 3,072,846 tCO2e includes scope 1 GHG emissions of operated Upstream assets and Refining (including biofuel production) segments. The denominator (93.3 mboe) 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

0.1

Comment

Galp monitors Upstream (operated assets) 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	3096006	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	108	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	287	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)

165.5

Total gross Scope 1 emissions (metric tons CO2e)

4138

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 2020.

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)

3.7

Total gross Scope 1 emissions (metric tons CO2e)

92

Comment

CH4 fugitive emissions from flaring at operated Upstream projects, according to API Compendium and IOGP Assumption. Galp does not have natural gas fields in production in 2020.

Emissions category

Combustion (excluding flaring)

Value chain

Upstream

Downstream

Product

Oil

Gross Scope 1 CO2 emissions (metric tons CO2)

22122517

Gross Scope 1 methane emissions (metric tons CH4)

0.3

Total gross Scope 1 emissions (metric tons CO2e)

2212690

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)

17150

Gross Scope 1 methane emissions (metric tons CH4)

0.31

Total gross Scope 1 emissions (metric tons CO2e)

17340

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)

865950

Gross Scope 1 methane emissions (metric tons CH4)

0

Total gross Scope 1 emissions (metric tons CO2e)

865950

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	3094389
Spain	347
Brazil	885
Cabo Verde	275
Guinea-Bissau	296
Mozambique	209
Eswatini	0

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)
Upstream (E&P) - Operated Blocks	869
Refining and Midstream (R&M)	3073959
Commercial	17340
Others	4233

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)	869	<Not Applicable>	Upstream Operated Assets
Oil and gas production activities (midstream)	0	<Not Applicable>	Not applicable.
Oil and gas production activities (downstream)	3095532	<Not Applicable>	Refining and Midstream (R&M) +Commercial + 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	36285	402588	152782
Spain	0	5347	44	0
Brazil	0	24	22	0
Cabo Verde	0	243	408	0
Guinea-Bissau	0	39	65	0
Mozambique	0	12	1008	0
Eswatini	0	76	127	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)
Upstream (E&P) - Operated Blocks	0	3
Refining and Midstream	0	34997
Commercial	0	6737
Others	0	289

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	3	Upstream (E&P) Operated Assets
Oil and gas production activities (midstream)	0	0	N/A
Oil and gas production activities (downstream)	0	42023	Refining and Midstream (R&M) + Commercial + 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?

Decreased

C7.9a

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

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	70478	Decreased	2.1	In 2020, absolute scope 1 and 2 GHG emissions combined decreased 8% compared to previous year (from 3,410,611 t CO2e to 3,138,427 t CO2e, reduction of 272,185 t CO2e). A 8% decrease equals to $(272,185 / 3,410,611) * 100 = 8.0\%$. This reduction was mainly due to 3 reasons, namely: (i) Change in renewable energy consumption, (ii) Emission Reduction Activities and (iii) Change in output. Disaggregating this decrease (-8.0%) by reason, emissions were: (i) Change in renewable energy consumption: reduced 2.1% (approx. 70,478 tCO2e => $(70,478 / 3,410,611) * 100 = 2.1\%$), due to the increase of green electricity (emission factor zero) in Galp operations. (ii) Emission reduction activities: reduced 1.7% (approx. 59,024 tCO2e => $(59,024 / 3,410,611) * 100 = 1.7\%$), due to emission reduction activities such as the implementation of energy efficiency initiatives in the Refining segment. In 2020, Galp maintained its focus on maximizing energy efficiency in its refining system. To this end, we invested €4.4 M in improving operational efficiency in refining. Sines Refinery implemented an efficiency project with the 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, allowing to reduce scope 1 CO2 emissions by 50,484 tCO2e. At the Sines refinery, the installation of Catcooler unit at the FCC, in order to increase flexibility in that unit. It also increases steam production, avoiding the consumption of natural gas in utilities plant. This measure allows 8,540 tCO2e avoided, annually. (iii) Change in output: reduced 4.2% (approx. 142,682 tCO2e => $(142,682 / 3,410,611) * 100 = 4.2\%$), due to change in output - less production and sales due to COVID-19. In response to a reduction in demand for oil products and a high level of inventories, Galp suspended operations at the Sines complex for about one month in May, while simultaneously adjusting the use of the fuel plants at the Matosinhos refinery and, given the persistent fragility of the refining environment, at the end of the year, Galp once again adjusted its operations. Thus, a 8.0% reduction (approx. 272,185 tCO2e) equals to: (i) reduction of -2.1% (approx. 70,478 tCO2e) plus (ii) reduction of -1.7% (approx. 59,024 tCO2e) plus (c) reduction of -4.2% (approx. 142,682 tCO2e).
Other emissions reduction activities	59024	Decreased	1.7	In 2020, absolute scope 1 and 2 GHG emissions combined decreased 8% compared to previous year (from 3,410,611 t CO2e to 3,138,427 t CO2e, reduction of 272,185 t CO2e). A 8% decrease equals to $(272,185 / 3,410,611) * 100 = 8.0\%$. This reduction was mainly due to 3 reasons, namely: (i) Change in renewable energy consumption, (ii) Emission Reduction Activities and (iii) Change in output. Disaggregating this decrease (-8.0%) by reason, emissions were: (i) Change in renewable energy consumption: reduced 2.1% (approx. 70,478 tCO2e => $(70,478 / 3,410,611) * 100 = 2.1\%$), due to the increase of green electricity (emission factor zero) in Galp operations. (ii) Emission reduction activities: reduced 1.7% (approx. 59,024 tCO2e => $(59,024 / 3,410,611) * 100 = 1.7\%$), due to emission reduction activities such as the implementation of energy efficiency initiatives in the Refining segment. In 2020, Galp maintained its focus on maximizing energy efficiency in its refining system. To this end, we invested €4.4 M in improving operational efficiency in refining. Sines Refinery implemented an efficiency project with the 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, allowing to reduce scope 1 CO2 emissions by 50,484 tCO2e. At the Sines refinery, the installation of Catcooler unit at the FCC, in order to increase flexibility in that unit. It also increases steam production, avoiding the consumption of natural gas in utilities plant. This measure allows 8,540 tCO2e avoided, annually. (iii) Change in output: reduced 4.2% (approx. 142,682 tCO2e => $(142,682 / 3,410,611) * 100 = 4.2\%$), due to change in output - less production and sales due to COVID-19. In response to a reduction in demand for oil products and a high level of inventories, Galp suspended operations at the Sines complex for about one month in May, while simultaneously adjusting the use of the fuel plants at the Matosinhos refinery and, given the persistent fragility of the refining environment, at the end of the year, Galp once again adjusted its operations. Thus, a 8.0% reduction (approx. 272,185 tCO2e) equals to: (i) reduction of -2.1% (approx. 70,478 tCO2e) plus (ii) reduction of -1.7% (approx. 59,024 tCO2e) plus (c) reduction of -4.2% (approx. 142,682 tCO2e).
Divestment	0	No change	0	No change
Acquisitions	0	No change	0	No change
Mergers	0	No change	0	No change
Change in output	142682	Decreased	4.2	In 2020, absolute scope 1 and 2 GHG emissions combined decreased 8% compared to previous year (from 3,410,611 t CO2e to 3,138,427 t CO2e, reduction of 272,185 t CO2e). A 8% decrease equals to $(272,185 / 3,410,611) * 100 = 8.0\%$. This reduction was mainly due to 3 reasons, namely: (i) Change in renewable energy consumption, (ii) Emission Reduction Activities and (iii) Change in output. Disaggregating this decrease (-8.0%) by reason, emissions were: (i) Change in renewable energy consumption: reduced 2.1% (approx. 70,478 tCO2e => $(70,478 / 3,410,611) * 100 = 2.1\%$), due to the increase of green electricity (emission factor zero) in Galp operations. (ii) Emission reduction activities: reduced 1.7% (approx. 59,024 tCO2e => $(59,024 / 3,410,611) * 100 = 1.7\%$), due to emission reduction activities such as the implementation of energy efficiency initiatives in the Refining segment. In 2020, Galp maintained its focus on maximizing energy efficiency in its refining system. To this end, we invested €4.4 M in improving operational efficiency in refining. Sines Refinery implemented an efficiency project with the 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, allowing to reduce scope 1 CO2 emissions by 50,484 tCO2e. At the Sines refinery, the installation of Catcooler unit at the FCC, in order to increase flexibility in that unit. It also increases steam production, avoiding the consumption of natural gas in utilities plant. This measure allows 8,540 tCO2e avoided, annually. (iii) Change in output: reduced 4.2% (approx. 142,682 tCO2e => $(142,682 / 3,410,611) * 100 = 4.2\%$), due to change in output - less production and sales due to COVID-19. In response to a reduction in demand for oil products and a high level of inventories, Galp suspended operations at the Sines complex for about one month in May, while simultaneously adjusting the use of the fuel plants at the Matosinhos refinery and, given the persistent fragility of the refining environment, at the end of the year, Galp once again adjusted its operations. Thus, a 8.0% reduction (approx. 272,185 tCO2e) equals to: (i) reduction of -2.1% (approx. 70,478 tCO2e) plus (ii) reduction of -1.7% (approx. 59,024 tCO2e) plus (c) reduction of -4.2% (approx. 142,682 tCO2e).
Change in methodology	0	No change	0	No change
Change in boundary	0	No change	0	No change
Change in physical operating conditions	0	No change	0	No change
Unidentified	0	No change	0	No change
Other	0	No change	0	No change

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	10795202	10795202
Consumption of purchased or acquired electricity	<Not Applicable>	322070	109908	431978
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>	322070	110905110	11227180

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

5875095

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

5854564

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 Refining and Midstream. The electricity generated is sold to the grid.

Fuels (excluding feedstocks)

Diesel

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

9824

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

116

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

4906003

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

4164

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	1319161	0	327000	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

Unbundled energy attribute certificates, Guarantees of Origin

Low-carbon technology type

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

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

Portugal

MWh consumed accounted for at a zero emission factor

327000

Comment

Electricity consumed by Galp in Portugal (402,588 MWh) included 80% of renewable energy (31.38% hydro; 0.18% wind; 1.41% renewable cogeneration; 47.02% other renewables). This contributes to the target of using only renewable energy in Galp operations in Portugal by 2021. By law, Galp is required to sell to the national grid all electricity produced by co-generation. In 2020 the co-generations of Sines and Matosinhos produced 1319 GWh of electricity. The renewable projects acquired by Galp in 2020, along with the wind farm already in the portfolio produced 327 GWh under Galp's management.

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	42.1	Galp produced 42.1 million barrels in 2020 (net entitlement)
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	27.2	Galp produced 27.2 billion cubic feet of natural gas in 2020 net entitlement).

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	700	923	5255	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	81	66	Reserves and Resources data
Natural gas	21	19	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 (%)

0

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 less than 1% of total O&G production in 2020. In-year net production (%): 0.5% Net proved reserves (1P) (%): 0.2% Net proved + probable reserves (2P) (%): 0.4% Net proved + probable + possible reserves (3P) (%): 0.5% 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 (%)

9

Comment

Deepwater represents 3.0% of total O&G production in 2020. In-year net production (%): 2.6 Net proved reserves (1P) (%): 0.7% Net proved + probable reserves (2P) (%): 0.8% Net proved + probable + possible reserves (3P) (%): 0.8% Net total resource base (%): 9.3%

Development type

Ultra-deepwater

In-year net production (%)

97

Net proved reserves (1P) (%)

99

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

99

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

99

Net total resource base (%)

91

Comment

Ultra Deepwater represents 97% of total O&G production in 2020. In-year net production (%): 96.9% Net proved reserves (1P) (%): 99.1% Net proved + probable reserves (2P) (%): 98.7% Net proved + probable + possible reserves (3P) (%): 98.7% Net total resource base (%): 90.6%

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	330

C-OG9.3b

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

	Throughput (Million barrels)	Comment
Oil	77.74	78 million barrels (oil)
Other feedstocks	9.36	9 million barrels (other feedstocks)
Total	87.1	87 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	2.66
Gasolines	16.32
Naphtha	4.91
Kerosenes	4.63
Diesel fuels	37.71
Fuel oils	14.15
Lubricants	0.9
Waxes	0.05
Asphalt and tar	1.11
Petroleum coke	0
Still gas	0
Other, please specify (Aromatics, chemicals)	2.97

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
Carbon capture and storage/utilisation	Applied research and development	0%	0	The PilotStrategy project's goal is to characterize the Lusitanian basin storage complex to assess the safe and permanent storage of CO2.
Enhanced Oil Recovery (EOR) techniques	Applied research and development	≤20%	0	The project 'Low Salinity Water Injection Alternating with Miscible CO2 Injection in Oil Reservoirs' investigates the combined effect of low salinity water injection alternated to miscible CO2 injection for oil recovery in carbonate and sandstone reservoirs.
Enhanced Oil Recovery (EOR) techniques	Applied research and development	≤20%	0	Optimization of WAG and PAG Processes Aiming to Increase the Recovery Factor using Numerical Simulation and Experimental Validation (ORFEU). This project develops an enhanced oil recovery processes, injecting mixtures of polymers, surfactants, salt water and CO2, in different water alternating gas and polymer alternating gas arrangements, both in laboratory rock cores and in numerical simulators to find the case with the greatest oil recovery.
Other, please specify (Energy efficiency measures in the oil and gas value chain)	Applied research and development	≤20%	0	Net4GTL promotes the Development of a Catalytic Reactor Prototype for Continuous Production of Liquid Hydrocarbons (HC) from synthesis gas (CO and H2) by the Fischer-Tropsch (FT) reaction, based on a new reactor production (NETmix)
Renewable energy	Applied research and development	≤20%	0	Research and Development of a New Methodology for Assessing the Potential for the Generation of Photovoltaic Solar Energy and New uses of the Technology in Brazil.
Renewable energy	Applied research and development	≤20%	0	Research and Development of Microchannel-Based Heat Sinks for High Concentration Photovoltaic Cells with Recovery of Rejected Heat for seawater desalination.
Renewable energy	Applied research and development	≤20%	0	Research and Development of a New Hybrid Power Plant Solution for Electricity Generation. This new hybrid power plant solution for electricity generation, uses the best solar photovoltaic technologies, combined with natural gas , or another viable source, as well as with energy storage solutions with source in lithium-ion an /or H2 batteries.
Carbon capture and storage/utilisation	Pilot demonstration	0%	0	Galp integrates MEMBER project. The MEMBER's key objective is the scale-up and manufacturing of advanced materials and their demonstration in novel membrane-based technologies that outperform current technologies for pre- and post-combustion CO2 capture in power plants as well as industrial H2 generation processes with integrated CO2 capture. In particular, the selected applications are the following: 1) Pre-combustion capture in power plants (Prototype A); 2) Post-combustion capture in power plants (Prototype B); 3) Hydrogen production with integrated CO2 capture (Prototype C) The Prototype B will be installed at GALP premises and designed and built by HYGEAR.
Other, please specify (Advanced biofuels)	Applied research and development	0%	0	Through Bio4Portugal, Galp aims to demonstrate the technological concept of the techno-economic and environmental viability of a Biorefinery for advanced biofuels exclusively from forest residues.
Other, please specify (Advanced biofuels)	Applied research and development	0%	0	Through BIOREF - Collaborative Laboratory (CoLAB) for the Biorefineries - Galp collaborates in order to deploy highly qualified knowledge and innovation to the market, identifying industrial needs in biorefining technologies and promoting the bioeconomy and bioenergy. The strategic plan of BIOREF is composed by three main domains: (1) Bioenergy, (2) Renewable gases, and (3) Sustainable bioeconomy.
Other, please specify (Advanced biofuels)	Applied research and development	≤20%	0	Galp integrates Move2LowC project. This project mobilizes Universities, R&D Institutes, SMEs and Large Companies to cooperate with the objective of increasing the use of aquatic biomass (microalgae), residual forest biomass and industrial effluents for production biofuels, in a circular economy logic.
Smart systems	Applied research and development	0%	0	Galp integrates V2G Azores project. This is the first project of this kind in Portugal. Fleet of 10 EVs performing grid services such as time of use and frequency regulation and taking advantage of the surplus of wind energy in night period. Project aims to test V2G technology, acquire know-how in some parts of the value-chain, create a new business model and define value proposition for customer and contribute to develop a regulatory framework. Project executed in Azores coordinated by Galp in collaboration with 8 partners (EDA, Nissan, Nuvve, MagnumCap, DREn, ERSE, DGEG, INESC-TEC)

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_TCFD 2020.pdf

GALP_Integrated Management Report 2020_Part IV_Appendices.pdf

GALP_Integrated Management Report 2020_Part I_IMR.pdf

GALP_NFI_GRI Standards 2020.pdf

Page/ section reference

The document attached is the Galp Integrated Management Report (IMR) 2020 (Part I and Part IV). Independent Assurance Report (that covers scope 1 GHG emissions) is attached in Part IV (p. 47-48) and scope 1 GHG emissions are reported in Part I (p. 98, Carbon Footprint and p. 114). Also, complimentary to the IMR 2020, GRI Content Index 2020 (GALP_NFI_GRI Standards 2020) is published, with scope 1 GHG emissions (p. 14) and Independent Assurance Report covering scope 1 GHG emissions (p. 45-47).

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_TCFD 2020.pdf

GALP_Integrated Management Report 2020_Part IV_Appendices.pdf

GALP_Integrated Management Report 2020_Part I_IMR.pdf

GALP_NFI_GRI Standards 2020.pdf

Page/ section reference

The document attached is the Galp Integrated Management Report (IMR) 2020 (Part I and Part IV). Independent Assurance Report (that covers scope 2 GHG emissions) is attached in Part IV (p. 47-48) and scope 2 GHG emissions are reported in Part I (p. 98, Carbon Footprint and p. 114). Also, complimentary to the IMR 2020, GRI Content Index 2020 (GALP_NFI_GRI Standards 2020) is published, with scope 1 GHG emissions (p. 15) and Independent Assurance Report covering scope 1 GHG emissions (p. 45-47).

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_TCFD 2020.pdf

GALP_Integrated Management Report 2020_Part IV_Appendices.pdf

GALP_Integrated Management Report 2020_Part I_IMR.pdf
GALP_NFI_GRI Standards 2020.pdf

Page/section reference

The document attached is the Galp Integrated Management Report (IMR) 2020 (Part I and Part IV). Independent Assurance Report (that covers scope 3 GHG emissions) is attached in Part IV (p. 47-48) and scope 3 GHG emissions are reported in Part I (p. 98, Carbon Footprint). Also, complimentary to the IMR 2020, GRI Content Index 2020 (GALP_NFI_GRI Standards 2020) is published, with scope 3 GHG emissions (p. 15) and Independent Assurance Report covering scope 3 GHG emissions (p. 45-47).

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_TCFD 2020.pdf
GALP_Integrated Management Report 2020_Part IV_Appendices.pdf
GALP_Integrated Management Report 2020_Part I_IMR.pdf
GALP_NFI_GRI Standards 2020.pdf

Page/section reference

The document attached is the Galp Integrated Management Report (IMR) 2020 (Part I and Part IV). Independent Assurance Report (that covers scope 3 GHG emissions) is attached in Part IV (p. 47-48) and scope 3 GHG emissions are reported in Part I (p. 98, Carbon Footprint). Also, complimentary to the IMR 2020, GRI Content Index 2020 (GALP_NFI_GRI Standards 2020) is published, with scope 3 GHG emissions (p. 15) and Independent Assurance Report covering scope 3 GHG emissions (p. 45-47).

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_TCFD 2020.pdf
GALP_Integrated Management Report 2020_Part IV_Appendices.pdf
GALP_Integrated Management Report 2020_Part I_IMR.pdf
GALP_NFI_GRI Standards 2020.pdf

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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_TCFD 2020.pdf
GALP_Integrated Management Report 2020_Part IV_Appendices.pdf
GALP_Integrated Management Report 2020_Part I_IMR.pdf

GALP_NFI_GRI Standards 2020.pdf

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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_TCFD 2020.pdf

GALP_Integrated Management Report 2020_Part IV_Appendices.pdf

GALP_Integrated Management Report 2020_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_TCFD 2020.pdf

GALP_Integrated Management Report 2020_Part IV_Appendices.pdf

GALP_Integrated Management Report 2020_Part I_IMR.pdf

GALP_NFI_GRI Standards 2020.pdf

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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

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GALP_Integrated Management Report 2020_Part IV_Appendices.pdf

GALP_Integrated Management Report 2020_Part I_IMR.pdf

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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_TCFD 2020.pdf

GALP_Integrated Management Report 2020_Part IV_Appendices.pdf

GALP_Integrated Management Report 2020_Part I_IMR.pdf

GALP_NFI_GRI Standards 2020.pdf

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Relevant standard

ISAE3000

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_TCFD 2020.pdf GALP_Integrated Management Report 2020_Part IV_Appendices.pdf GALP_Integrated Management Report 2020_Part I_IMR.pdf GALP_NFI_GRI Standards 2020.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_TCFD 2020.pdf GALP_Integrated Management Report 2020_Part IV_Appendices.pdf GALP_Integrated Management Report 2020_Part I_IMR.pdf GALP_NFI_GRI Standards 2020.pdf
C6. Emissions data	Year on year emissions intensity figure	ISAE 3000	Progress made on carbon intensity gCO2e/MJ is verified every year. This metric covers the whole Galp Group. Progress made on other intensity figures are also verified, such as: - 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). - Progress made on other intensity figure for the Upstream segment (E&P) (CO2e/boe) is also verified every year. GALP_NFI_TCFD 2020.pdf GALP_Integrated Management Report 2020_Part IV_Appendices.pdf GALP_Integrated Management Report 2020_Part I_IMR.pdf GALP_NFI_GRI Standards 2020.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 2020 is published at Galp's website. GALP_NFI_TCFD 2020.pdf GALP_Integrated Management Report 2020_Part IV_Appendices.pdf GALP_Integrated Management Report 2020_Part I_IMR.pdf GALP_NFI_GRI Standards 2020.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 2020 is published at Galp's website. GALP_NFI_TCFD 2020.pdf GALP_Integrated Management Report 2020_Part IV_Appendices.pdf GALP_Integrated Management Report 2020_Part I_IMR.pdf GALP_NFI_GRI Standards 2020.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

99.1

% of Scope 2 emissions covered by the ETS

0

Period start date

January 1 2020

Period end date

December 31 2020

Allowances allocated

1914427

Allowances purchased

1153378

Verified Scope 1 emissions in metric tons CO₂e

3067805

Verified Scope 2 emissions in metric tons CO₂e

0

Details of ownership

Facilities we own and operate

Comment

For 2020 (period January 1, 2020 to December 31, 2020) Galp was awarded with 1,914,427 free emissions allowances. Galp purchased 1,153,378 allowances. The final verified emissions for 2020, under the EU-ETS, in metric tons of CO₂ were 3,067,805.

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 was previously under the 2013-2020 period and will still 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 2021-2025.

Additionally we continually implement energy efficiency projects in our refineries in order to reduce emissions, energy consumption and expenses related with the purchasing of emission allowances.

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 (~40.75€/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)

40.75

Variance of price(s) used

When evaluating new project developments, expansions or upgrades of existing assets, Galp considers an internal carbon price in the investment analysis that changes with time, varying from a present day value of \$50/tonCO₂e (40.75 €/ton) to \$80/tonCO₂e (65.19€/ton) in 2050 on direct GHG emissions, ensuring the incorporation of a potential global carbon price and its temporal evolution. By using a dynamic carbon price, the company demonstrates that it is aware of the future potential changes in regulation, consumer and technological patterns and the risks associated to long-term business plans analysis. Additionally, Galp also considers different carbon prices in its scenario analysis which are based on the international references and forecasts used in scenario modelling. In the case of the Committed scenario (a 1.5°C-compliant scenario) the carbon price considered is higher than the previously mentioned 80\$/tCO₂e used on regular investment analysis. This allows us to stress test our long term strategy and perform sensitivity analysis to the carbon price variable. This price is applicable to all businesses and geographies. Long-term carbon price considered is updated every year, guaranteeing the alignment with the most recent price variation trends. Moreover, when assessing new projects, we analyze the GHG emissions from the entire value chain of the project, ensuring the alignment of our assets and operations with a lower carbon economy. By using an internal carbon price, the company intends to highlight businesses with lower CO₂ emissions and build a portfolio suitable for the transition to a lower carbon economy. Galp considers that the implementation of carbon cost internalisation mechanisms is the most effective and efficient way to promote the economy decarbonisation on a global scale. These mechanisms can, simultaneously, cover all the different alternatives with potential to drive an effective reduction of the greenhouse gases emissions and promote a comparable impact assessment of the different technologies in the full lifecycle, based on a well-to-wheel approach, while securing technology neutrality. This is also the process that best guarantees an alignment between all industries, products, services and geographies in view of the commitment to decarbonisation.

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. 40.75 €/ton. This price in US\$ was converted into € considering the last conversion rate of 2020 made available by the Bank of Portugal (31/12/2020, 1 USD = 0,81493 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

6

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 2020 Evologic fuels represent 22% of the total of diesel and gasoline sales for the Iberian Peninsula.

Impact of engagement, including measures of success

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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

8

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

0

Portfolio coverage (total or outstanding)

<Not Applicable>

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

Galp now offers its individual and corporate customers plans for green electricity produced from 100% renewable sources, such as hydro, wind or solar energy, with low carbon emissions. This new Galp offer had strong acceptance in the first weeks, reaching the threshold of 15 thousand new customers. As part of the strategy that has positioned Galp as an active agent in the energy transition, the new Green Electricity plans are yet another example of how Galp has diversified its portfolio of offering customers with solutions that promote the use of cleaner and sustainable. Focused on an increasingly integrated offer, Galp also offers its customers charging solutions for electric vehicles, including the supply of electricity and a wide and national fast charging network at our service stations in Portugal. By joining a Galp Green Electricity plan, customers benefit from 100% renewable energy (emission factor 0), allowing them access to the most competitive prices available.

Impact of engagement, including measures of success

Galp now offers its individual and corporate customers plans for green electricity produced from 100% renewable sources, such as hydro, wind or solar energy, with low carbon emissions. This new Galp offer had strong acceptance in the first weeks, reaching the threshold of 15 thousand new customers. As part of the strategy that has positioned Galp as an active agent in the energy transition, the new Green Electricity plans are yet another example of how Galp has diversified its portfolio of offering customers with solutions that promote the use of cleaner and sustainable. Focused on an increasingly integrated offer, Galp also offers its customers charging solutions for electric vehicles, including the supply of electricity and a wide and national fast charging network at our service stations in Portugal. By joining a Galp Green Electricity plan, customers benefit from 100% renewable energy (emission factor 0), allowing them access to the most competitive prices available.

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. Since its inception, 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 were severely impacted by the restriction related with the Covid-19 pandemic in 2020 but still covered more than 26000 students were involved and over 200 energy classes were taught in more than 1000 schools and 1400 teachers. Until 2025 we expect to involve 2643 schools and 75500 students in over 240 energy classes.

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.

Additionally, Galp, along with seven other leading companies in the energy sector (BP, Eni, Equinor, Repsol, Shell and Total Energies) also participates in several working groups that aim to define the "Energy Transition Principles", which establish the commitment to contribute to the acceleration of the energy transition and the reduction of GHG emissions, in accordance with the goals set in the Paris agreement, while simultaneously improving GHG reporting consistency and transparency.

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 (including biofuels), 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
- EPRA (European Petroleum Refiners Association) – includes FuelsEurope and Concawe
- Natural & bio gaz vehicle association
- APREN - Portuguese Association of Renewable Energies
- Batpower - Battery Cluster Portugal
- APPB Portuguese Biofuels producers association

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 taskforce has also had 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 - Batpower - Battery Cluster Portugal - APPB Portuguese Biofuels producers 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 trade associations, to analyse and contribute to several legislative proposals related with the EU Green Deal and associated "Fit for 55" package. Whenever possible we attempted at identifying 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. Galp applied this to several dossiers, namely Just Transition Fund, Hydrogen Strategy, Critical Raw Materials, EU-ETS, Smart Mobility and RED II, to mention a few.
Clean energy generation	Support	Galp supports "Collaborative Laboratory NET4CO2" which 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 a founding member of BatPower. Bringing together industry players and academic and institutional members, BatPower is the Portuguese association for the Batteries Cluster. As is well-known, the lithium batteries are one of the strategic and most important solutions to achieve the international 2050 decarbonisation goals. As such, BatPower brings together the best Portuguese players in the battery field to create a real solution for the Portuguese and European market.	Galp is working together with institutional and business stakeholders to analyse and study every option to support the development of decarbonization related opportunities namely in the hydrogen, batteries and CCUS value chains. The company aims to leverage the competitive advantages of endogenous renewable natural resources and promote a low carbon economy while contributing to the reindustrialisation of the Portuguese and European economies on a more sustainable basis, as well as to even the trade balance. The company aims to have the first 100 MW of green hydrogen capacity already in the first half of this decade. This can be scaled up to 600-1000MW of electrolysis capacity over the decade. With the batteries value chain, the objective is to have a first lithium processing facility of at least 25 ktons LCE production capacity by 2025. To assure participation at the European level, Galp has worked with several internal stakeholders, and trade associations, to analyse and contribute to public consultations of several relevant dossiers, namely Just Transition Fund, Hydrogen Strategy, EU-ETS and Critical Raw Materials.

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

EPRA (European Petroleum Refiners Association) – includes FuelsEurope and CONCAWE

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 participates 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. Please consult Galp's participation in Industry Associations: Climate Change

<https://www.galp.com/corp/Portals/0/Recursos/Sustentabilidade/SharedResources/Documents/Parceiros%20setoriais/Participation%20in%20Industry%20Associations%20-%20Climate%20Change.pdf>

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. Please consult Galp's participation in Industry Associations: Climate Change

<https://www.galp.com/corp/Portals/0/Recursos/Sustentabilidade/SharedResources/Documents/Parceiros%20setoriais/Participation%20in%20Industry%20Associations%20-%20Climate%20Change.pdf>

Trade association

BCSD Portugal

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

BCSD Portugal is part of the global network of the World Business Council for Sustainable Development (WBCSD), the largest international business organization working in the area of sustainable development. It has worked with member companies along and across value chains to deliver impactful business solutions on the most challenging sustainability issues. BCSD Portugal has recently publish its manifesto where the signing companies committed to support the goals of the Paris Agreement, paving the way for robust policies to be adopted towards the upcoming COP26.

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

Galp participates on working groups that cover a wide range of subjects from Sustainable Finance to Sustainable Cities and Circular Economy, and in Carbon Neutrality working group and Task Forces. The participating companies share business solutions that can contribute to climate neutrality and also participate in aligning positions for public consultations in relevant legislative pieces (e.g. proposals for the Portuguese Climate law, Legislative proposal Sustainable Corporate Governance, etc).

Trade association

APPB (Associação Portuguesa de Produtores de Biocombustíveis)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

APPB and Galp believe that biodiesel, as an ecological alternative to fossil fuels, plays a crucial role in renewable energies and decarbonization, especially in the sector of road transport. APPB's objectives encompass the promotion of biofuels utilization, to assist its members in the implementarion of European directives and encourage the use of waste materials in the manufacture of biofuels.

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

Galp has recently joined APPB, and is aiming to develop its biofuels business. APPB and Galp believe that biodiesel, as an ecological alternative to fossil fuels, plays a crucial role in renewable energies, especially in the sector of road transport. As such, it is APPB's belief that biofuels are part of the solution in the fight against climate changes and for decarbonisation.

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?

The fast transition to a sustainable development paradigm requires companies to reflect on the commitments they subscribe as well as on the decision to join and participate in associations. Accordingly, Galp carried out an analysis of its main associations regarding their climate positioning, in order to:

- Identify the industry associations aligned with Galp's Purpose, Vision, Mission and Values, with regard to sustainable development, and thus the Paris Agreement and the European Climate Law;
- Promoting transparency about Galp's participation in industry associations;
- Encouraging a sense of commitment and engagement to the challenge of combating climate change.

Please consult the results of this assessment in

<https://www.galp.com/corp/Portals/0/Recursos/Sustentabilidade/SharedResources/Documents/Parceiros%20setoriais/Participation%20in%20Industry%20Associations%20-%20Climate%20Change.pdf>

Galp lays its sustainable energy transition vision on four pillars:

1. Carbon cost internalisation, through adequately designed market mechanisms^[1], to drive an effective reduction of the greenhouse gases (GHG) emissions, guaranteeing an alignment between all industries, products, services, and geographies, while securing technology neutrality.
2. Technological diversity, introducing auxiliary mechanisms which, taking into consideration the dynamics of technological innovation, help minimize the risk of excluding low-carbon alternatives that could prove to be more competitive in the future and promote a more resilient energy policy.
3. Regulatory stability, key to promote the investment necessary for energy transition, as well as the engagement and commitment of both public and private agents in pursuing the defined targets.
4. Transparency, by promoting a plural discussion of all relevant stakeholders and the alignment of coherent and recognised initiatives by all agents, and avoiding overlapping policies and actions, which contribute to reducing market transparency and can give rise to unwanted and contradictory effects.

These principles are paramount in all our engagements; be it in public consultations, direct and indirect contacts with policy makers or in our work with trade associations.

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.

^[1] An efficient carbon market design requires a well-to-wheel approach, a harmonised EU carbon taxation system, and cross-border mechanisms that build a level-playing field between EU and other geographies, thus avoiding carbon leakage.

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_SASB Report 2020.pdf
GALP_NFI_TCFD 2020.pdf
GALP_Integrated Management Report 2020_Part IV_Appendices.pdf
GALP_Integrated Management Report 2020_Part I_IMR.pdf
GALP_NFI_GRI Standards 2020.pdf

Page/Section reference

Please consult IMR 2020 (whole report). Some direct references to TCFD, climate change and GHG emissions can be found at pages: 5, 7, 15-20, 30, 38, 43, 45, 48, 52-53, 70, 76, 88, 94-103, 110, 114, 129. Please also consult attached two complimentary pieces which are Annexes of the IMR 2020 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 2020.

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment

Please consult IMR 2020 (whole report). Some direct references to TCFD, climate change and GHG emissions can be found at pages: 5, 7, 15-20, 30, 38, 43, 45, 48, 52-53, 70, 76, 88, 94-103, 110, 114, 129. Please also consult attached two complimentary pieces which are Annexes of the IMR 2020 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 2020.

Publication

In voluntary sustainability report

Status

Complete

Attach the document

GALP_NFI_TCFD 2020.pdf

Page/Section reference

Please consult Galp's report on the alignment with the Recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD) (full pages - whole report).

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment

Please consult Galp's report on the alignment with the Recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD) (full pages - whole report).

Publication

In voluntary sustainability report

Status

Complete

Attach the document

GALP_NFI_GRI Standards 2020.pdf

Page/Section reference

Please also consult a complimentary piece which is an Annexes of the IMR 2020 but published separately, namely: Galp's Report on Non-Financial information - GRI Standards 2020 (whole report, but more specifically GRI 201-2, GRI 302, GRI 305, other) .

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment

Please also consult a complimentary piece which is an Annexes of the IMR 2020 but published separately, namely: Galp's Report on Non-Financial information - GRI Standards 2020 (whole report, but more specifically GRI 201-2, GRI 302, GRI 305) .

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

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
I am submitting my response	Investors Customers	Public

Please confirm below

I have read and accept the applicable Terms