

## 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 guarantee success, and thrive through the energy transition, 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, towards 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 (the Matosinhos Refinery closed in 2021) with a total processing capacity of 226 thousand barrels of oil per day (kbpd), 76.6 mboe of raw materials processed, c. 1 TWh of electricity sold from cogeneration, 67.2 TWh from sales and trading of NG/LNG , 14.8 mton of oil products sales.

The Commercial pillar integrates a distribution network including approximately 1,480 service stations. Refined products are primarily marketed in the Iberian Peninsula but also in Africa, with total sales to direct clients of 6.5 mton and 4.2 TWh of electricity in 2021.

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 up to 2025 to be allocated to projects that promote the energy transition, and c. 30% to the growth of the renewable electricity business, 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 2021, Galp had 963 MWp of installed capacity under operation from a portfolio of c. 4.7 GWp, of which > 4 GWp are expected to be operational by 2025. 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, having announced the development of Europe's largest and most sustainable lithium conversion plant, to be located in Portugal, with an annual production capacity of up to 35,000 tons of lithium hydroxide and a start of commercial operations in 2026, in a joint venture with Northvolt, capturing an early mover advantage in Europe.

For further information about GALP please visit our corporate website, at: [www.galp.com/corp](http://www.galp.com/corp) and our Annual Integrated Report 2021, at: <https://www.galp.com/corp/Portals/0/Recursos/Investidores/SharedResources/Relatorios/en/2021/AIRGalp2021EN1all.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 2021	December 31 2021	Yes	3 years

### C0.3

#### (C0.3) Select the countries/areas in which you operate.

Brazil  
Cabo Verde  
Eswatini  
Guinea-Bissau  
Mozambique  
Namibia  
Portugal  
Sao Tome and Principe  
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.**  
Other, please specify (Galp is reporting emissions and energy data from the operations it controls, plus the equivalent data from participated Upstream projects where it has an equity stake. This is meant to increase transparency regarding our environmental performance.)

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

C0.8

---

**(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?**

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, an ISIN code	PTGAL0AM0009
Yes, a SEDOL code	B1FW751
Yes, a Ticker symbol	GALP PL
Yes, a Ticker symbol	GALP.LS

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	Galp, is aware of the importance and potential impact climate related risks and opportunities in its operations, revenues and of the materiality of these topics for society, investors and other stakeholders. The Company recognises the importance of a responsible leadership and of the definition of robust and effective governance mechanisms that integrate key climate and energy transition related challenges into our strategy. The Board of Directors (BoD) oversees the Company's strategic formulation process and investment planning, along with the Executive Committee (EC), where the CEO is the designated member responsible for climate strategy. Climate related issues, including the related risks and opportunities are integrated in this strategic planning and evaluated in the short-, medium- and long-terms. The EC is appointed by the BoD and is directly responsible for developing and implementing the company's strategic objectives and guidelines, including the climate related topics. The Sustainability Committee, is the board level committee responsible for climate related issues, being key in assisting the BoD in integrating sustainability principles into the decision-making process and, with the support of the Risk Management Committee, ensuring that the main risks and opportunities that we face are identified and continually managed. The BoD and the Sustainability Committee, Risk Management Committee, Remuneration Committee and Audit Board have oversight on climate related issues, including associated risks and opportunities, which are relevant to the delivery of long-term value in the context of the ongoing energy transition. The board has recently approved the allocation of 50% of the company's net CAPEX in the 2021-25 period to capturing opportunities in the low carbon transition, including allocating approximately 35% of that CAPEX to its Renewables and New Businesses unit to promote the growth of its renewable power generation business, invest in new energies like green hydrogen, and also develop opportunities in the batteries value chain in a recently announced Aurora joint venture with Northvolt.
Chief Executive Officer (CEO)	The Board of Directors oversees the Company's strategic formulation process and investment planning, along with the Executive Committee. The CEO is a member of both and the designated member responsible for climate strategy.
Chief Financial Officer (CFO)	The Chief Financial Officer, a member of the Board of Directors and Executive Committee, ensures that the strategic action plans that minimise financial risks are in place, and that the business plan is implemented accordingly. Since the CFO is present in Risk Management and Sustainability Committees he is able to align climate/water-related topics with Business Plan objectives.

**C1.1b**

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

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Scope of board-level oversight	Please explain
Scheduled – all meetings	<p>Reviewing and guiding strategy</p> <p>Reviewing and guiding major plans of action</p> <p>Reviewing and guiding risk management policies</p> <p>Reviewing and guiding annual budgets</p> <p>Reviewing and guiding business plans</p> <p>Setting performance objectives</p> <p>Monitoring implementation and performance of objectives</p> <p>Overseeing major capital expenditures, acquisitions and divestitures</p> <p>Monitoring and overseeing progress against goals and targets for addressing climate-related issues</p>	<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, monitor the implementation of strategic guidelines and performance against objectives. Annually, the BoD approves strategic investments/divestitures and the Company's annual Budget which is an integral part of the 10-year Business Plan. According to the key long-term variables approved by the BoD to assess investments, valuations must embed a long-term carbon price assumption. In 2021, Galp refreshed its strategy and increased its commitment to drive the energy transition and the ambition and scope of its emission reduction targets. This revision was done under the supervision of the Executive Committee and also included the development of GHG related metrics and targets. It was approved by the BoD, along with the other changes to company strategy. The BoD also regularly exams and approves Galp's risk portfolio and appetite, its short- and long-term incentives, which include climate related KPIs and overviews Galp's consolidated performance as reported in the Integrated Management Report, including environmental and emissions related indicators and performance. Climate related risks have been identified as a significant risk and as such are managed by the Board of Directors and Executive Committee. Regarding the Executive Committee (EC), the respective meetings are held mostly on a weekly basis for reviewing and guiding plans of action, risk management policies, setting performance objectives, among others, including to approve investments between 50-75M€, also considering the same long-term carbon price assumption. The Sustainability Committee, is the board level committee responsible for climate related issues, being key in assisting the BoD in integrating sustainability principles into the decision making process and, with the support of the Risk Management Committee, ensuring that the main risks and opportunities that we face are identified and continually managed. The Sustainability Committee, Executive Committee and Board of Directors, are informed on a quarterly basis on Galp's carbon metrics performance against targets and are updated on the decarbonisation roadmap status or any key climate change related issues via a specialized report, prepared by the corporate Strategy and Sustainability team, with the support of the Risk Management team, when necessary.</p>

**C1.1d**

**(C1.1d) Does your organization have at least one board member with competence on climate-related issues?**

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues	Primary reason for no board-level competence on climate-related issues	Explain why your organization does not have at least one board member with competence on climate-related issues and any plans to address board-level competence in the future
Row 1	Yes	The CEO has extensive experience in the Oil&Gas industry, including in developing energy transition / decarbonisation strategies and in the development of new, low carbon and sustainable energies, such as green hydrogen. The Vice-Chairman of the Board of Directors is also the Chairman of Galp's Sustainability Committee, a member of Galp's Risk Management Committee and the Lead Independent Director of Galp's Board of Directors. He has ample experience in the areas of corporate governance, international business and sustainable value creation. Other members of the board have extensive experience in the renewable energy and energy storage businesses in different geographies, including the risk management, business development and trading areas.	<Not Applicable>	<Not Applicable>

**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).**

Climate related issues integrate the Galp’s strategic formulation process and investment planning. These are overseen by the **Board of Directors (BoD)** and the **Executive Committee (ExCom)**, where the **CEO** is the designated member responsible for climate strategy.

The **Sustainability Committee (SC)**, constituted by 3 non-executive members of the **BoD** and aims to assist the **BoD** in integrating sustainability principles into management process of Galp, promoting industry best practices in its activities, to ensure long-term value creation. The **SC** has the duty of proposing sustainability related objectives and targets to the board, as well as to monitor and report on the performance indicators in the ESG areas, including those related to Climate change (CC), the energy transition and social responsibility, consistent with the stipulated policies, commitments, objectives and targets. It monitors the alignment of Galp’s strategic plan to align sustainability commitments and sustainable value generation and issue appropriate recommendations.

The **Risk Management Committee (RMC)** 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’s internal control and risk management systems; issuing appropriate opinions and recommendations; evaluating compliance with Galp’s risk management policy and help define risk radar and taxonomy, including for relevant developments and regulatory changes, measuring potential impacts and defining risk mitigating actions. The decisions and activities by the **RMC** are reported quarterly to the Audit Board. The **BoD** also regularly exams and approves Galp’s risk portfolio and appetite, the annual budget, its short- and long-term incentives and overviews the Company’s performance as reported in the Integrated Management Report

The **SC**, supported by the **RMC**, is the board level committee responsible for climate related issues, assisting the **BoD** in integrating sustainability principles into the decision-making process, ensuring that the main risks and opportunities faced are identified and continually managed. The **SC**, **ExCoM** and **BoD** are informed quarterly on carbon metrics performance against targets and updated on the decarbonisation roadmap status and key CC related issues via a specialized report, prepared by Strategy and Sustainability team (**S&S**) with the support of the Risk Management team.

The Chairman of the **SC** is a member of the **RMC** and is the Vice-chairman and Lead Independent **BoD** member, ensuring that discussions on risk topics including related to CC are consistent and effective at all levels. The Chairman of the **RMC** is also a member of the Audit Committee

The **Chief Financial Officer**, a member of the **BoD** and **ExCom**, ensures that the strategic action plans that minimise financial risks are in place, and that the business plan is implemented accordingly. Since the **CFO** is present in Risk Management and Sustainability Committees he is able to align climate/water-related topics with Business Plan objectives.

The **Chief Risk Officer**, a member of the **BoD** and the **ExCom**, ensures that the strategic action plans that minimise risks are in place, and that risk management appetite and priorities are considered in decision making.

Galp’s **Chief Sustainability Officer** is the Head of the **S&S** Department, responsible for management of sustainability risks, including CC risks, and can establish and propose assessment and monitoring methodologies, that are implemented with the business units, corporate Risk Management & Internal Control, ensuring that a plan of action is established to mitigate and/or eliminate these risks.

At Galp, climate-related topics are transversal to the organisation at different levels, including strategy definition and policy approval and implementation, business management and implementation, stakeholder management and risk assessment. Galp integrates the risks and opportunities related to CC in the Company’s strategic formulation process, and the definition of the annual strategic guidelines and Business Plan that are discussed by the **BoD**

In the strategic formulation process, the **SC**, the **RMC** and the **S&S** team supports management, along with other business units. Key macro trends and context are considered, including developments on carbon markets and trends in low carbon products/energy. 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. In these analysis and decision processes, several tools are used depending on critical uncertainties for Galp’s business models. Namely, a scenario analysis that includes a Paris aligned scenario, with Medium/Long-term variables aligned with the scenarios, including carbon price, the calculation of the value@risk, the carbon intensity associated to the business plan and/or strategy proposed

**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, ExCom 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	Galp's commitment with decarbonisation and with driving the energy transition is mirrored by the corporate bodies' Remuneration Policy, which aims to reinforce the values, enable skills, abilities, and behaviours, in view of the Company's culture, long-term interest, strategy and sustainability. As from 2019, the indicators defined by the Remuneration Committee to determine the annual variable remuneration, in addition to the economic dimension, which is now evaluated by reference to the generation of cash flow by business, 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 Accident Frequency and the Carbon Intensity Indexes. Thus, the indicators set by the Remuneration Committee for determining the annual variable remuneration are as follows: (i) Cash Flow From Operation (CFFO), with a weight of 75%; (ii) Energy Production Growth with a weight of 10%. (iii) Total Recordable Injury Rate (TRIR), with a weight of 10%; (iv) Carbon Intensity Index (CII - with scope 1, 2 and 3 GHG emissions resulting from energy production, transformation and commercialization), with a weight of 5%. Additionally, since 2021 the CEO remuneration is part of a LTI through the right to a set of Galp shares, attributable to after 3 years. The no.shares effectively attributed, will be calculated by multiplying the no. of provisional shares attributed by a performance factor, graded from 0 to 2.25, based on the following 3 categories, all with the same relative weight: reduction of the sales carbon intensity (climate related KPI category), Total Shareholder Return; and Peer ranking in terms of TSR and growth of Cash Flow From Operations.
All employees	Monetary reward	Emissions reduction target	From 2022 onwards, all incentives will have emissions and energy transition related KPIs, while hydrocarbon production related metrics are no longer featured as weighting factors. The short-term incentive, which represents annual variable remuneration for all employees, has targets for installed renewable electricity generation capacity (15%), reduction of absolute operational emissions (scopes 1 and 2) (7.5%) and reduction of the carbon intensity of downstream sales (7.5%), which materialize emission reductions across all of the Company's operations and value chains and the successful execution of its transition strategy. In total, these correspond to 30% of the weighting of the incentive which materializes Galp's commitment and with the decarbonization of its operations and portfolio and represents a three-fold increase of the weight of energy transition related objectives from 5% in 2019.
Business unit manager	Monetary reward	Emissions reduction target	From 2022 onwards, all incentives will have emissions and energy transition related KPIs, while hydrocarbon production related metrics are no longer featured as weighting factors. In order to strengthen the commitment towards the energy transition and improve performance in the sustainability areas (including climate change) all Galp employees have climate related KPIs in their incentives and performance evaluation. The short-term incentive, which represents annual variable remuneration for all employees, has targets for installed renewable electricity generation capacity (15%), reduction of absolute operational emissions (scopes 1 and 2) (7.5%) and reduction of the carbon intensity of downstream sales (7.5%), which materialize emission reductions across all of the Company's operations and value chains and the successful execution of its transition strategy. In total, these correspond to 30% of the weighting of the incentive which materializes Galp's commitment and with the decarbonization of its operations and portfolio and represents a three-fold increase of the weight of energy transition related objectives from 5% in 2019.
All employees	Monetary reward	Other (please specify) (Renewable energy installed capacity)	The company has also defined the completion of strategic milestones as part of the determination of variable short term incentives. These include several transition and climate change related milestones like FID in HVO and green H2 projects, EV charging points installed; Aurora JV execution (battery value chain) etc. This KPI has a 20% weight on the STI calculation. The other climate change and energy transition related KPI corresponds to the Renewables capacity RTB and has a 15% weight.

**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	5	Strategic budget
Medium-term	5	10	Business plan and General strategy cycle
Long-term	10	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 implements scenario planning and sensitivity analysis, which consider different climate change and environmental contexts, test potential effects and determine value at risk. Galp is aware of the importance of climate change associated risks and opportunities (R&O), and climate-related risks have been identified as a significant risk and as such are managed by the Board of Directors (BoD) and Executive Committee (ExCom). Galp is incorporating carbon into its project investment analysis. We consider an internal carbon pricing (which evolves from the current EU-ETS emission allowance price in the present day to 200\$/tCO<sub>2e</sub> 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 these on Galp's carbon footprint and emission and intensity reduction targets. We model the evolution of 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, ensuring 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 top management representatives ensures 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 (RM) 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 RM 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 10-year period (business plan 2022-2032). The Sustainability Department, in close collaboration with the Risk Management and Planning & Performance departments evaluates the variation of the carbon intensity of the company, taking into account the same 10-year business plan, in order to ensure the alignment of the company's strategy with its emissions and intensity targets. Besides other relevant risks and opportunities, climate-related risks and opportunities are also embedded in the risk analysis. This risk assessment incorporates a quantitative analysis 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 relevant climate-related (or other) risk identified by a business manager is analysed and assessed at a business unit level by the respective Local Risk Officer that 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 RM Committee, the ExCom, the Audit Board and the BoD, 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

Galp is aware of the importance of climate change associated risks and opportunities (R&O), and climate related risk have been identified as a significant risk and as such are managed by the Board of Directors (BoD) and Executive Committee (ExCom). Climate and energy transition related challenges require a responsible leadership that integrates them into its strategy. The climate and energy transition related R&O integrate the Company's strategic formulation process and investment planning. These are overseen by the BoD and the ExCom, where the CEO is responsible for climate strategy. The Sustainability Committee (SC), supported by the Risk Management Committee (RMC), is the board level committee responsible for climate related issues, being key in assisting the Board in integrating sustainability principles into the decision-making process and ensuring that the main risks and opportunities that we face are identified and continually managed. The Board also regularly exams and approves Galp's risk portfolio and appetite, the 10-year business plan that materializes the Company's energy transition strategy, its short- and long-term incentives and overviews the Company's consolidated performance as reported in the Integrated Management Report. The risk analysis and the resulting risk matrix are regularly discussed with the Executive Committee and 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 ten-year period. The variation of the carbon intensity of the businesses is calculated, taking into account the same 10-year business plan and surrounding context, in order to ensure coherence between the company's strategy and climate related targets. 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 analyses 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 identified by a business manager is analysed and assessed at a business unit (BU) 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 RMC, the ExCom, the Audit Board and the BoD, 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. 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, a regulatory, carbon market and strategic analysis 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 BoD and the ExCom, with their members participating actively in specialised committees in these areas such as, the SC, RMC, among others. Strategy formulation supported by Scenario & sensitivity analysis considering climate change 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). It has also conducted an analysis to the chronic and acute physical risks using relevant IPCC physical models, including one 1.5°C aligned model (RCP 1.9/2.6 and RCP 4.5) covering the most relevant geographies and BUs. The extent of the R&O related to physical climate parameters is particularly relevant at asset level – the main intent is to incorporate an assessment of infrastructure exposure (asset level) to the physical risks of CC into the decision-making process, analysing the exposure to this risk and draw up plans or adaptation measures. Furthermore, Galp assesses the CC-related R&O (transitional R&O) that can affect Galp as at company level, such as market risks/opportunities, derived from poor/high performance (e.g. performance of GHG emissions under EU-ETS) related to climate change or development of products with high/low carbon content (e.g. biofuels; Galp Solar; production of renewable energy or green hydrogen); legal risks, derived from international & EU policies (climate-energy policy contexts in relation to carbon fuels and O&G reserves). The strategic guidelines defined reflect the operational chain and are unfolded in targets and actions at BU and site-level. This process allows to identify R&O of CC and set priorities at assets level. Galp has made a strategic commitment to gradually diversify the portfolio by producing and selling low carbon products, energy solutions that lead to lower carbon emissions and develop new business models with lower carbon intensities. Also, in investment analyses an internal carbon price varying between the current ETS EUA and 200E/CO2 in 2050 is applied, incorporating potential global internal carbon price costs. When assessing GHG emissions, we include the entire value chain of the project, ensuring proper management of the risk associated with decarbonisation.

## 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, Energy Taxation Directive, among others) covering the industrial facilities (e.g. Sines Refinery and Cogeneration of are covered by EU-ETS) and Galp Business units (e.g. Enerfuel plant in Sines, is affected by RED and so will be future hydrogen and HVO projects and production). Thus, current legislation (related to climate topics or others) is an integral part of the Risk Assessment carried out by the Risk Management Department, included in the Country Risk Profile (under "Regulatory Risk"). Furthermore, Legal risk is included in the company's risk matrix as a risk with very high impact, and is monitored by the Risk Management Department.
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 and the recent RePowerEU plan) are analysed by a multidisciplinary team – Strategy and Sustainability, Business Units, External Relations and Regulation, 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) 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 entering the Li-on battery value chain through lithium processing and LiOH production. Furthermore, existing and upcoming regulation is included in the Legal risk which is positioned in the company's risk matrix as a risk with very high impact, and is monitored by the Risk Management Department
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 faces strong competition in all its business segments and its competitive position and financial performance may be harmed, specifically if the Company is unable to respond adequately and in time to the new demand paradigm, reshaping its portfolio in accordance with the energy transition, accessing new technologies and keep up with innovation to improve operational efficiency, and recruit and retain talent. The inability to restructure business models through intelligent operational models supported by innovative technologies data analysis and, simultaneously, adopt a new paradigm of work model, while maintaining employee engagement and productivity, would undermine Galp's ability to properly executing its strategy, impacting results and financial performance. Also, the inability to identify and integrate new digital transformation trends, particularly in terms of automation and solving complex industrial challenges or developing new practices that speed up processing times and reduce human labour, would affect Galp's efficiency and its competitive position. Technological risks are incorporated into Galp's strategic risks under Climate change related risks, Market & Competition risks and Performance Management risks. Additionally they integrate the specific Information Technology risks given the increasing importance of cyber risks and technological disruption in the company's businesses.
Legal	Relevant, always included	Galp is subject to a wide range of national and international laws and standards or those of the various countries in which it operates, whether industry-specific, or transversal. Additionally, part of Galp's activity is carried out in emerging or developing economies, with a relatively unstable legal and regulatory framework, which may lead to legislative and regulatory changes that may alter the business context in which Galp 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 , retail stations and commercial hub, decentralized solar PV equipment sold by Galp Solar, given their characteristics) and Group's results. Furthermore, ESG compliance is becoming increasingly regulated and being written into law (e.g. European Sustainable Investment Taxonomy, Corporate Sustainability Reporting Directive, etc) . Therefore Galp also monitors ESG Regulatory Compliance Risk since any failures by the company, its employees, governing bodies, suppliers/service providers or counterparties relating to compliance with ESG laws and standards, may have adverse effects on the Company's investment case and reputation and constitute a risk monitored by Galp's Risk Management team. Thus, Legal and ESG Regulatory Compliance risks (included in the Legal and Governance Risks category) 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 risk matrix monitored by the Risk Management Department (as "Legal").
Market	Relevant, always included	Galp faces strong competition in all its businesses and its competitive position and financial performance may be harmed, specifically if it is unable to respond to the new demand paradigm, reshaping its portfolio in accordance with the energy transition, accessing new technologies and keep up with innovation to improve operational efficiency, and recruit and retain talent. The company's portfolio is exposed to volatility in prices of crude oil, natural gas, LNG, electricity and CO2, and other raw materials, as well as changes in interest and exchange rates. The variability of commodity and financial prices, resulting from macroeconomic, geopolitical or technological factors that affect the dynamics of demand and supply, may have a material adverse effect on the value of Galp's assets, results and financial performance. Market, competition and price risks are considered strategic risks for and are therefore permanently monitored by the Risk Management department. To mitigate this risk Galp is building lower carbon businesses through allocating 50% of its CAPEX to low carbon initiatives: 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 an HVO production unit 270 ktpa capacity in the Sines refinery, 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 electricity by 2x until 2025), development of green H2 solutions with potential to reach 1 GW of electrolyser capacity by 2030 and entering the Li-on battery value chain in a joint venture with Northvolt to produce Lithium hydroxide in Portugal. In 2021 Galp's renewable capacity totalled 963 MW and generated 1288 GWh renewable electricity and its portfolio grew to 4.7 GW. Already in 2022, the company added 4.8 GW of solar PV + wind power projects in Brazil, doubling its portfolio to > 9 GW. 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 risks included in the Risk Matrix monitored by the Risk Management Department (as Market & Competition and Price).
Reputation	Relevant, always included	Actual or perceived failures in governance, regulatory compliance, or a lack of understanding of how our operations affect communities and the environment or how the Company is responding to expectations from customers and the Society, namely on the energy transition and climate related issues, could damage our brand and reputation. 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 to respond to societal and regulatory pressures, there might will 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, hydrogen, RFBNOs) 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, reputational risk, classified as a Legal and Governance Risk is one of the top risks included in the Risk Matrix monitored by the Risk Management Department (as "Reputational").
Acute physical	Relevant, always included	The physical risks (acute or chronic) associated with climate change may have a potential impact on Galp's activities, causing damage or interruptions and delays in its operations. 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 and downstream 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. 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 2021 around 76.6 mmboe of raw materials vital for the supply of fuels in the Iberian market. These events can also cause disruption in the company's renewable projects, compromising the physical integrity of solar panels and electricity generation. Thus, acute physical risks are classified as strategic risks integrate the top risks included in the Risk Matrix monitored by the Risk Management Department (as " Climate Change").
Chronic physical	Relevant, always included	The physical risks (acute or chronic) associated with climate change may have a potential impact on Galp's activities, causing damage or interruptions and delays in its operations. The risk of exposure changing long term climate patterns 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, changes in precipitation, etc) that may cause droughts, 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 2021 76.6 mmboe of raw materials vital for the supply of fuels in the Iberian market. These events can also cause disruption in the company's renewable projects, compromising lowering the productivity of solar panels and reducing renewable electricity generation. Thus, chronic physical risks are classified as strategic risks integrate the top risks included in the Risk Matrix monitored by the Risk Management Department (as " Climate Change").

**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) 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**

Chronic physical	Heat stress
------------------	-------------

**Primary potential financial impact**

Decreased revenues due to reduced production capacity

**Climate risk type mapped to traditional financial services industry risk classification**

&lt;Not Applicable&gt;

**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 an RCP 1.9, which points to a scenario of 1.5°C (less than 2°C), and the Fragmented scenario with an 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 an 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 ( $T_{max} > 30^{\circ}\text{C}$ ), number of cold days ( $T_{min} < 0^{\circ}\text{C}$ ), number of days with extreme wind (wind speed  $> 10$  and  $20\text{m/s}$ ), number of days with extreme precipitation (days with precipitation  $> 100\text{mm}$ ), 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 recommended 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  $35^{\circ}\text{C}$ . 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 considered more relevant by Renewables. For each degree above  $35^{\circ}\text{C}$  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  $35^{\circ}\text{C}$ , and average temperatures on these days) and the expected evolution of the solar power price, 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)**

&lt;Not Applicable&gt;

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

&lt;Not Applicable&gt;

**Explanation of financial impact figure**

It was considered that for each degree above  $35^{\circ}\text{C}$  there is a production decline of 0.5% in our Iberian solar farms. After the aforementioned scenario analysis it was found that according to variables in the RCP4.5 scenario the number of days with temperatures above  $35^{\circ}\text{C}$  in the solar farms operated by the company would impact production negatively, generating losses of approximately 3.77 M€ by 2050, considering the number of days with temperatures above  $35^{\circ}\text{C}$ , sunlight hours and expected evolution of the price of electricity generated from solar PV projects, 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 to 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. The company will continue to quantify this risk in the future, applying the assessment to possible future projects and locations to increase awareness of the impact of physical chronic climate related risks on the economics of solar photovoltaic projects.

**Comment**

Galp is committed to the identification and quantification of climate related risks across its activities and geographies and in 2021 spent 121k€ in specialized study address these issues, using scenario analysis with physical variables compatible with Galp's in house scenarios. This was a first systematic quantification of these risks and the exercise is to be repeated on a yearly basis, following the same methodologies.

**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
--------------------	---------------------------

**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 with the European Climate law and 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 will likely decrease, especially if the refining sector is included in the CBAM mechanism in the future. We estimated the (real) 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 initiatives implemented in the Sines Refinery (energy efficiency projects or replacement of fossil by renewable feedstocks) and prices increased until that year aligned with recent developments and forecasts.

**Time horizon**

Medium-term

**Likelihood**

Virtually certain

**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)**

701100000

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

926900000

**Explanation of financial impact figure**

The impact presented for risks driven by changes in regulation and associated carbon prices corresponds the sum of the cost of paying for refinery CO2 emissions licences per year for the 2022-2030 (EU-ETS phase IV) period, in a scenario where no emission reduction initiatives are implemented at Sines ETS prices continue increasing and the number of free allowances keep decreasing due to updates in the refining benchmark and the triggering of a Cross Sectorial Correction Factor in 2029 and 2030. This potential impact represents a total value between 701 and 927 M€ in real terms, a range obtained using two different scenarios for the evolution of CO2 price.

**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 period and includes efficiency energy projects and business transformation for industrial sites, including the new HVO unit in Sines. The value also considers 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 currently the Sines refinery) 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 29.4 kg CO2/CWT in 2021). 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 will lead to the decarbonisation of the hydrogen used in the refinery through the replacement of grey with green hydrogen in the refining processes and consequential reduction in CO2 emissions. 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 and where the energy efficiency and business transformation projects will be implemented, including the new HVO unit in Sines and the green hydrogen electrolyzers that will produce the green hydrogen that will replace the current grey hydrogen in desulphurization.

**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 (Changes in precipitation patterns and extreme variability in weather patterns)
----------------	---

**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 due to possible equipment destruction. 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) in the RCP 4.5 scenario. 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 refinery logistics parks (e.g. Matosinhos, Mitrena, etc), 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) but possibly sacrificing some production. These mitigation measures have an associated cost of 122.53M€ (considering the reconstruction of all storage tanks – 2M€ by tank).

**Comment**

Galp is committed to the identification and quantification of climate related risks across its activities and geographies and in 2021 spent 121k€ in specialized study address these issues, using scenario analysis with physical variables compatible with Galp's in house scenarios. This was a first systematic quantification of these risks and the exercise is to be repeated on a yearly basis, following the same methodologies.

**Identifier**

Risk 4

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

Downstream

**Risk type & Primary climate-related risk driver**

Reputation	Stigmatization of sector
------------	--------------------------

**Primary potential financial impact**

Decreased revenues due to reduced demand for products and services

**Climate risk type mapped to traditional financial services industry risk classification**

<Not Applicable>

**Company-specific description**

Galp must demonstrate that the Company is committed with driving the energy transition and respond to the challenges posed by climate change and simultaneously look to satisfy future energy needs while decarbonizing its operations and portfolio, decreasing its carbon footprint and providing its customers with low carbon energy and efficiency solutions. If Galp does not deliver what is stated above there will likely be reputational risks associated, regarding negative perception of the company by its customers and other stakeholders. This negative perception about Galp's climate change strategy, management and performance could reduce investors' interest in the company. Furthermore, the increased awareness of society about climate change may lead to a change in consumers behaviour, increasing their preference for renewable

and alternative fuels (e.g. biofuels, SAFs) and energy (renewable electricity, energy efficiency services) leading to lower demand for conventional products. Galp is already facing this risk, and the company's customers are demanding more sustainable solutions and low carbon products and services, these newer demands may affect Galp's reputation. As a consequence, Galp refreshed its strategy in 2021 and committed to drive the energy transition and invest heavily in renewable energy and low carbon products (>50% net CAPEX during the 21-25 period) such as: biofuels with a 270 kpta capacity HVO unit to be built at Sines, renewable electricity with a current installed capacity of approximately 1 GW and a current project portfolio of 9.6 GW, targeting 4 GW in 2025 and 12 GW in 2030 of worldwide installed capacity; investments in improving energy efficiency and the integration of renewable energy in its industrial and retail facilities and investing in new, low carbon value chains such as green H2 targeting 100 MW of electrolyser capacity by 2025 and 0.6-1 GW by 2030 and the battery value chain, through a joint venture with Northvolt (Aurora) to develop a lithium conversion facility with an annual production capacity of up to 35,000 tpa lithium hydroxide. The company will also develop and grow its retail electricity business, expecting to double electricity sales from 2021 to and considerably increase its electric mobility offer and network aiming to reach 10,000 charging points in operation in Iberia by 2025 while simultaneously offering services that will improve the energy efficiency of its customers through Galp Solar, DaLoop and GSE.

**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, an estimated range

**Potential financial impact figure (currency)**

<Not Applicable>

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

15620000

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

156200000

**Explanation of financial impact figure**

The risks are associated with loss of brand value, consequently affecting Galp's operational performance and financial position. If Galp is perceived by stakeholders, as a company not committed with climate change, it is reasonable to assume that the brand could lose up to 1% of its value. According to the last assessment of Brand Finance (2021), Galp's brand is the second most valuable in Portugal, and currently worth €1562 million. Assuming a conservative scenario of around 1-10% of brand depreciation, the financial implication may go from 15.6 up to €156.2 million.

**Cost of response to risk**

2250000000

**Description of response and explanation of cost calculation**

Galp is committed to drive the energy transition and refresh relations with its customers, providing them with low carbon energy and energy efficiency solutions for their activities. This means that the company is investing heavily in renewable energy and low carbon products (> 50% net CAPEX during the 2021-2025 period, i.e, 2250 M€ considering an investment of 50% of an average 900 M€ net CAPEX in that period) such as: biofuels with a 270 kpta capacity HVO unit to be built at Sines, complementing the FAME producing Enerfuel plant, renewable electricity with a current installed capacity of approximately 1 GW and a current project portfolio of 9.6 GW, targeting 4 GW in 2025 and 12 GW in 2030 of worldwide installed capacity; investments in improving energy efficiency and the integration of renewable energy (including hydrogen) in its industrial and retail facilities and investing in new, low carbon value chains such as green hydrogen targeting 100 MW of electrolyser capacity by 2025 and 0.6-1 GW by 2030 and the battery value chain, where Galp formed a joint venture with Northvolt (Aurora) to develop a lithium conversion facility with an annual production capacity of up to 35,000 tons of lithium hydroxide starting commercial operations in 2026, and develop opportunities in the fast-growing battery value chain. The company will also develop and grow its retail electricity business, expecting to double electricity sales from 2021 to and considerably increase its electric mobility offer and network aiming to reach 10,000 charging points in operation in Iberia by 2025 while simultaneously, through Galp owned start-up DaLoop, offer Mobility management systems for companies and for large urban centres. Additionally, Galp Solar will make available decentralized solar PV and battery storage solutions, enabling our customers to lower their energy purchases and carbon footprint.

**Comment**

In 2021 Galp invested 19% of its CAPEX in sustainable, low carbon projects, including 142 M€ in its renewables business among other investments in the battery value chain, and efficiency and CO2 emissions reduction projects in the Refinery.

---

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, medium a long term. 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. One of these key initiatives and opportunities is the increased demand for renewable electricity both within and outside the EU backed by favourable regulatory (e.g. Fit for 55 package within the EU and the recent RePowerEU plan) and changing consumer preferences backgrounds. Therefore, the company created its Renewables and New Businesses unit in 2020 which is developing of an ambitious 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. Galp's renewable projects will contribute to the growth of renewable energy production and usage and its projects in Iberia will be a key contributor to the Portuguese and Spanish decarbonisation targets and to the renewable energy production target in EU's Renewable Energy Directive.

#### Time horizon

Medium-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. By the end of 2021 the company already had 963 MWp in operation and had generated 1288 MWh of renewable electricity. In 2022 the number of projects online has continued increasing, now totalling 1.2 GWp. The project portfolio had by then increased to c. 4.7 GWp between Portugal, Spain and Brazil, which has been effectively doubled to 9.6 GWp with the recent addition of 4.8 GWp of renewable Solar and Wind projects in Brazil. The company is now focused in developing its renewable portfolio while simultaneously adding further high-quality projects, targeting an installed capacity of 4 GW by 2025 and 12 GWp by 2030. This renewable capacity will contribute to the increase of renewable energy in the electric grids where the projects are located, contributing to the decarbonisation of these geographies. The projects in Iberia will be a key contributor to the decarbonization plans of Portugal and Spain who have already pledged to become carbon neutral by 2050 and to the EU's target of 55% reduction of emissions target and 40% of energy from renewable sources in the overall energy mix by 2030. The projects in Brazil will contribute to that country's 48.5% renewable energy in the internal energy offer by 2030. 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 ratio 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, medium a long term. 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. With customers and regulators (e.g. Fit for 55 package and the recent RePowerEU plan) pushing for increased demand of low carbon products, Galp will invest in the diversification of its commercial sales portfolio to offer more low carbon products including low carbon fuels for all modes of transport (including SAFs) renewable electricity,



electricity for mobility, non-fuel offer, decentralized power production equipment (through Galp Solar) and integrated fleet management services (through DaLoop). The supply of decentralized power production will contribute to the EU's targets of energy efficiency and renewable energy production as states in the Energy Efficiency Directive and Renewable Energy Directive, while the supply of low carbon fuels for all modes of transport will contribute positively to the targets and mandates defined by the ReFuelEU and FuelEU regulations as well as in the Renewable Energy Directive and emission reduction targets from national and European climate laws.

**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, in all modes of transport (e.g. SAFs for aviation, electricity for road mobility, etc) 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, we plan to grow businesses that will produce efficiency gains and reduce emissions for our customers like decentralized solar PV panels sold by Galp Solar, and integrated fleet management services provided by DaLoop contributing to their decarbonization. These changes in portfolio are aligned with the EU's climate and energy targets, namely in reducing the carbon intensity of transport as required by RED II, and satisfying the increase in low carbon fuels integrated in aviation and maritime transport as stated in the ReFuelEU and FuelEU regulations. 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**

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€). 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, medium, a long term 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. One of the identified opportunities was related with increasing demand for biofuels due to higher demand for less carbon intensive fuels and increase in ambition of regulation regarding the production of renewable energy and mandates for its integration in several modes of transport (e.g. Fit for 55 package and associated RefuelEU and FuelEU regulations) this lead the company to announce the investment in a HVO production unit with a capacity of 270 ktpa capable of producing both biodiesel and sustainable aviation fuels within the perimeter of its Sines refinery, and continuing investment in its Enerfuel FAME biodiesel producing unit. The emissions reductions achieved by the use of these produced HVO fuels will also contribute decisively to emissions reduction targets enshrined in the European and Portuguese climate laws.

**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 within the perimeter of its Sines Refinery, marking the start of its transformation from a grey to a green energy hub. This new unit that is aligned with the expected increase in Biofuels demand to meet the RED II incorporation targets and other targets within the Fit for 55 Package, designed to deliver 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 (biodiesel) 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) Does your organization's strategy include a transition plan that aligns with a 1.5°C world?**

**Row 1**

**Transition plan**

No, but our strategy has been influenced by climate-related risks and opportunities, and we are developing a transition plan within two years

**Publicly available transition plan**

<Not Applicable>

**Mechanism by which feedback is collected from shareholders on your transition plan**

<Not Applicable>

**Description of feedback mechanism**

<Not Applicable>

**Frequency of feedback collection**

<Not Applicable>

**Attach any relevant documents which detail your transition plan (optional)**

<Not Applicable>

**Explain why your organization does not have a transition plan that aligns with a 1.5°C world and any plans to develop one in the future**

The company has been since working on its Energy Transition Strategy where it will detail more information about climate ambitions, key transition initiatives, capital stewardship, climate policy engagement, just transition and climate-related governance and risk management. Our expectation is to release this document until the end of 2022. We acknowledge and believe we live in a world that needs disruptive changes towards a temperature increase of no more than 1.5 degrees, and we want to have our role on that. We are currently building a set of cases that include credible ways to achieve that goal, which will be considered on our strategy and support a more detailed decarbonisation pathway towards Galp's ambition to achieve net zero by 2050. We are also aware that the alignment with a 1.5° world remains a challenge given the lack of consensus of a methodology to evaluate that alignment and the absence of a finalised Science Based Targets Initiative guidance and methodology for the oil and gas sector to set targets aligned with 1.5°C climate scenarios. During 2021 Galp refreshed its strategy so that it could reshape its Portfolio, refresh Relations and reenergise People and thrive through the energy transition. The current decade will be spent scaling-up the renewables business, expanding our position in the electricity value chain and developing new energies to accelerate our decarbonisation path, with the ambition to become net carbon neutral by 2050. This new strategy, its accompanying targets and main decarbonization initiatives were shared during the latest Capital Markets Day in 2021. Galp' strategy incorporates a commitment to the progressive decarbonisation of its industrial operations, including transforming the Sines site from a grey refinery into a green energy park, and of the energy sales portfolio offered to customers. We are committed to become a net zero emissions Company by 2050, and our decarbonisation path is already underway with intermediate targets by 2030 (set in relation to a 2017 baseline): • Reduce absolute emissions from operations by 40% (scopes 1 & 2, equity) • Reduce Carbon Intensity Index (production-based) by 40% (scopes 1 & 2 & 3) • Reduce Carbon Intensity Index (sales-based) by 20% (scopes 1 & 2 & 3) • Net zero Company by 2050

**Explain why climate-related risks and opportunities have not influenced your strategy**

<Not Applicable>

---

#### C3.2



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

	Use of climate-related scenario analysis to inform strategy	Primary reason why your organization does not use climate-related scenario analysis to inform its strategy	Explain why your organization does not use climate-related scenario analysis to inform its strategy and any plans to use it in the future
Row 1	Yes, qualitative and quantitative	<Not Applicable>	<Not Applicable>

**C3.2a**

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

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Physical climate scenarios	RCP 4.5 Company-wide	<Not Applicable>	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). The RCP 4.5, which points to a scenario between 1.7 and 3.2°C in 2100 and it was paired with Galp's Fragmented scenario which is based on IEA's STEPS. 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.).
Physical climate scenarios	RCP 1.9 Company-wide	<Not Applicable>	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). The RCP 1.9, which points to a 1.5°C temperature increase by 2100 and it was paired with Galp's Committed scenario which is based on IEA's SDS. 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.).Physical variables Due to the possible lack of sufficient projection models aligned with RCP 1.9, variables from RCP 2.6 (which has a wide range of models developed) were used when there were data gaps. This analysis will be more conservative since RCP 2.6 predicts greater climate change when compared to RCP 1.9.
Transition scenarios	IEA SDS Company-wide	<Not Applicable>	Galp used its Committed scenario which is aligned with the IEA's Sustainable development scenario to evaluate its transition strategy and the company's resilience in a low carbon economy. For the scenarios used to evaluate the impact of the energy transition, the influence of market variables on the company's businesses was evaluated, considering variables such as: crude oil brent price (\$/bbl), gas price, CO2 price (\$/ton), basic load (EUR/MWh), refining margin (\$ /bbl) , demand for commodities such as oil, gas and electricity, and the electricity generation mix between coal, oil, gas, nuclear, hydro, bio and other renewable sources (including solar and wind). These variables were considered for the three relevant geographies from the point of view of transition: Iberia, Brazil and Africa.
Transition scenarios	IEA STEPS (previously IEA NPS) Company-wide	<Not Applicable>	Galp used its Fragmented scenario which is aligned with the IEA's Stated Policies scenario to evaluate its transition strategy and the company's resilience in a low carbon economy. For the scenarios used to evaluate the impact of the energy transition, the influence of market variables on the company's businesses was evaluated, considering variables such as: crude oil brent price (\$/bbl), gas price, CO2 price (\$/ton), basic load (EUR/MWh), refining margin (\$ /bbl) , demand for commodities such as oil, gas and electricity, and the electricity generation mix between coal, oil, gas, nuclear, hydro, bio and other renewable sources (including solar and wind). These variables were considered for the three relevant geographies from the point of view of transition: Iberia, Brazil and Africa.

**C3.2b**

**(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.**

Row 1

#### **Focal questions**

Galp used scenario analysis to identify the main risks and opportunities that climate related issues pose to its businesses worldwide. The company sought to learn how its future strategy would adapt to different temperature and accompanying economic scenarios by answering to questions like: • How will chronic climate related risks impact the company's activities in the different businesses and geographies where it operates? • How will acute climate related risks affect the companies operations, and upstream and downstream activities across businesses and geographies? • How will demand for products with different carbon intensities evolve in contrasting climate scenarios? And how will their prices change? • How can future regulation evolve and affect our businesses and which businesses are the most resilient and sensitive to these changes? • How can climate change related physical and transition risks affect the value of our assets? • What variables should be closely analysed and monitored to support informed decision-making? • What forces and developments have the greatest ability to shape future performance? • What technologies will play a major role future energy supply? • How will profits and margins be affected by different climatic and regulatory trends?

#### **Results of the climate-related scenario analysis with respect to the focal questions**

Scenario analysis allowed to identify and quantify the most relevant physical and transition risks. The most relevant physical chronic risk identified was the number of consecutive days with temperatures above 35°C, which will affect the productivity and revenues from solar PV farms. The most relevant acute physical is posed by high wind speed events that might compromise the integrity of structures like storage tanks. Besides the identification of these risks, scenario analysis also allowed for the development of accompanying mitigation plans. Regarding transition risks and opportunities, it allowed the identification of consumer trends and opportunities in different energy related commodities, as well as to quantify the impact of carbon prices and upcoming regulations on the company's performance and value. This led the company to refresh its strategy to thrive through the energy transition, with the goal of achieving carbon neutrality by 2050. This will be done by allocating more 50% net CAPEX to low carbon opportunities while extracting of value from our low carbon intensity, low breakeven and high cash flow Upstream portfolio. The strategy for the next decade will allow Galp to decarbonize the energy it produces and sells, anchored on several key initiatives: Grow our renewable electricity installed capacity from the c. 1 GW in operation by developing the current 9.6GW portfolio across Portugal, Spain and Brazil, targeting of >4GW in operation by 2025 and 12GW of renewable installed capacity by 2030. Reducing emissions from industrial operations and transforming our Sines Refinery into a Green Energy Park by producing green H2 to fuel the plant, replacing fossil based H2, starting with a 2MW pilot electrolyser in 2023, which could be scaled up to 100MW by 2025 and up to 1-0.6GW by 2030. The Sines site will also improve the efficiency of the refinery reducing its emissions, through implementation of a series of projects that will allow energy and emissions savings. Sines will also see investment in advanced renewable biofuels in the form of a 270 ktpa HVO renewable fuel unit capable of producing sustainable road and aviation fuels. Our commercial portfolio will also be adapted to suit a low carbon future: the Electric Mobility network and will reach 10000 charging points in Iberia by 2025. Since 2021 all of Galp's B2C electricity offer is made out of 100% renewable energy, and overall, the company expects to double electricity sales from 2021 to 2025 and adjust our renewable fuel offer for all modes of transport (road, maritime and aviation) and blending to adapt to upcoming regulation and customer demand. Through Galp Solar, we will make available decentralized energy (solar PV) solutions, enabling our customers to lower their energy purchases and carbon footprint. Galp also joined forces with Northvolt and creating Aurora, a joint-venture that aims to develop, in Portugal, Europe's largest and most sustainable lithium conversion plant.

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. The company is committed to supply its customers with low carbon products and providing them with solutions to improve their energy efficiency. In terms of energy efficiency services, Galp now has 2 businesses - Galp Solar and DaLoop (previously GoWithflow). Galp solar sells decentralized power production and monitoring systems catering to the B2C and B2B segments. Galp solar uses advanced technologies, like satellite image analysis, artificial intelligence algorithms and big data, to optimise the acquisition and installation cost, offering a solution that caters to each customer's needs. At the end of 2021, Galp Solar already has an installed capacity of c.13 MW, covering more than 4,000 clients in Iberia. These represent an estimated annual production of about 1 GWh of renewable solar power generated and about 293 tonCO <sub>2e</sub> avoided Galp, through DaLoop, is promoting solutions for its customers' fleets transitioning to EVs, including charging, fleet management and vehicle sharing systems. Through an integrated view of vehicle and energy data, fleet and facilities managers can plan and operate a heterogeneous network of combustion and electric vehicles along with managing fuel and electricity consumption. During 2021, DaLoop already established business development teams in the U.K. and Spain and has secured contracts with more than 8,000 mobility assets (vehicles and charging stations) to Flow Mobility Change Platform. Galp is currently analysing the potential for expanding this business model to new geographies, developing technological partnerships and new sales channels. Along with its regular electricity retail offer, since 2020 Galp started offering its B2C and B2B costumers the possibility to purchase 100% renewable electricity. The company is also committed to deliver sustainable low carbon fuels to all modes of transport, and will build an advance HVO unit in Sines with a 270 ktpa capacity capable of producing sustainable diesel and SAF.
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, the company ended 2021 with 963 MW of renewable projects in operation and a portfolio of 4.7 GWp. The company has also recently announced Aurora, a joint venture with Northvolt that aims to develop, in Portugal, Europe's largest and most sustainable lithium conversion plant along with other opportunities related to the fast-growing battery value chain which will be essential to decarbonize road transport. Galp will also invest in a 270 ktpa capacity HVO unit at Sines which will be able to produce biodiesel and SAF, contributing to the decarbonization of road and aerial transport. This will materialize a c. 200M€ investment with operations estimated to start in 2025. 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 CO <sub>2e</sub> 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 with decarbonisation related projects being one of the priorities of Galp's innovation team, In 2021, Galp has invested €16.9 million in R&D, including 8 clean R&D projects and estimates to invest more than €180 million in R&D until 2025. The goal of innovation is to build a portfolio of opportunities to boost the energy transition and accelerate the path to decarbonisation. In alignment with the Company's strategy, by testing new solutions and increasing the engagement with the innovation ecosystem, Galp will be able to discover, test and validate solutions that may create new profit streams. In 2021, Galp, consolidated its commitment to innovation as a tool towards a low-carbon world, and reorganised its Innovation department in 3 centres (Production & Operations, Commercial and Renewables). Each focuses on building a portfolio of opportunities in the decarbonisation, optimisation, and digitalisation spaces, boosting the energy transition of the Company's different business units, monitoring high-impact trends and opportunities, and identifying ideas and solutions that can lead to new services and products whilst simultaneously boosting the innovation mindset, collaboration and the overall culture. Galp launched the Upcoming Energies platform with the aim of accelerating the innovation ecosystem. It comes as a response to this challenge and will be present in the Portuguese and Brazilian ecosystem, opening doors to future Galp network projects in ten countries. Upcoming Energies will invest up to €180 m in Research, Development, and Innovation (R&D+I) projects during the 2021-25 period. Its concept is to establish an open door to the external community of R&D+I, based on targets, collaborative programmes, materialised projects with start-ups, suppliers, universities and partners, as well as with new stakeholders that will come to integrate the innovation ecosystem in the energy sector. Simultaneously, the Innovation Studio, a pool of innovation experts to boost projects with tools and methodologies, will work across the different innovation centres and initiatives to accelerate the development process of new products/services; conceive, test & validate through innovation methodologies & tools; work with talented entrepreneurs & venture builders.
Operations	Yes	Climate change risks and opportunities have greatly influenced Galp's strategy and operations. The company continues to identify and implement efficiency and emission reduction projects in its activities, which will allow it to decrease 40% of its operational emissions from its 2017 baseline. Galp's strategic goal 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), development of green hydrogen solutions with potential to reach 1 GW of electrolyser capacity by 2030 and entering the Li-on battery value chain through lithium chemical processing in a JV with Northvolt. In 2021, Galp has invested c. 2 million in operational eco-efficiency in refining. The company also identified several projects to be implemented by 2025, with an estimated investment of €32 m which will materialize energy savings of 113 GJ/h and avoid a further 53 ktonCO <sub>2e</sub> /year. In the upstream, Galp continues to ensure the sustainability and low carbon intensity (10.3 kg CO <sub>2e</sub> /boe in 2021) of its Upstream portfolio. In 2021 the Company also made a FID to develop Phase 1 of the Bacalhau field in the Brazilian pre-salt. This project is characterised by an innovative development concept, integrating a Combined-Cycle Gas Turbine system to increase the energy efficiency of the power generation, while decreasing emissions, resulting in an average carbon intensity of less than 9 kgCO <sub>2e</sub> /bbl for the entire field's life cycle. In 2021, around 1288 GWh of renewable energy was generated from solar photovoltaic projects in Spain and from the wind power project in Portugal, avoiding more than 340 kton CO <sub>2e</sub> emissions. The company also had in place 1,146 charging stations in Portugal and 40 in Spain, 197 of which are fast charging stations. Sales of electricity for mobility increased to 3.4 GWh and correspond to an estimated 3.3ktons of avoided CO <sub>2</sub> emissions.

**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. The company has already developed several low carbon businesses with production and sales of low carbon energy and energy efficiency services. By the end of 2021 Galp's low carbon businesses included a gross renewable electricity installed capacity of 963 MW and a renewable portfolio with a further 4.7 GWp under development, consisting in solar and wind energy (e.g. Alcouthim, Ourique, Vale Grande) which rose to 9.6 GWp in 2022, a FAME biodiesel operation (Enerfuel Industrial Plant in Sines), an electric mobility business with c. 1200 charging stations across Iberia and a decentralized solar power commercial business in Iberia through Galp solar as well as DaLoop (previously GoWithFlow) that offers integrated solutions for its customers in transition to electrification, including charging, fleet management and vehicle sharing systems, encompassing more than 8,000 mobility assets. With the strategic decision to strengthen the lower carbon energies in the portfolio (solar energy, wind energy, biofuels, EV, hydrogen, batteries, etc), the expectation is that the contribution of this area of activity to the group's EBITDA will gain importance over the next decade from the approximately 1% of revenues they represented in 2021. Capital expenditure: 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 of 0.8 to 1 bn€ in the 2021-2025 period to low carbon initiatives including: (i) the development of a renewable generation portfolio, with a target gross capacity of 12 GW by 2030, (ii) the development of a 270 kton HVO production unit capable of producing both sustainable biodiesel and SAF (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 electricity by 2x until 2025, provide low carbon fuels for all modes of transport), development of green hydrogen solutions with potential to reach 1 GW of electrolyser capacity by 2030 and developing the Li-on battery value chain through lithium chemical processing in the Aurora joint venture with NorthVolt. Acquisitions and divestments: 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 and with the company's emission and intensity reduction targets by 2030. In this way, we contribute to the sustainability and resilience of our portfolio, which should be competitive, profitable and environmentally efficient and responsible. The Carbon Intensity and absolute CO2 emissions of each Business Plan are also estimated and incorporated in the risk analysis to evaluate the risk of not achieving the proposed reduction targets and identify key variables and risks in its evolution. Assets: In late 2021 Galp discontinued the of refining operations in the Matosinhos site 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 in the process of transforming the former petrochemical complex into a world class innovation district with part of the site being allocated for the construction of an university campus. Climate change related risks and opportunities have factored our financial planning process, namely in terms of our upstream assets. Galp's presents a post-2020 portfolio NPV breakeven forecast of approx. \$27/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 intensity hydrocarbon production portfolio.</p>

**C4. Targets and performance**

**C4.1**

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

- Absolute target
- Intensity target

**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**

2021

**Target coverage**

Company-wide

**Scope(s)**

- Scope 1
- Scope 2

**Scope 2 accounting method**

Market-based

**Scope 3 category(ies)**

<Not Applicable>

**Base year**

2017

**Base year Scope 1 emissions covered by target (metric tons CO2e)**

3886891

**Base year Scope 2 emissions covered by target (metric tons CO2e)**

226658

**Base year Scope 3 emissions covered by target (metric tons CO2e)**

<Not Applicable>

**Total base year emissions covered by target in all selected Scopes (metric tons CO2e)**

4113550

**Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1**

94.5

**Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2**

5.5

**Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)**

&lt;Not Applicable&gt;

**Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes**

100

**Target year**

2030

**Targeted reduction from base year (%)**

40

**Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]**

2468130

**Scope 1 emissions in reporting year covered by target (metric tons CO2e)**

3039156.2

**Scope 2 emissions in reporting year covered by target (metric tons CO2e)**

9404.7

**Scope 3 emissions in reporting year covered by target (metric tons CO2e)**

&lt;Not Applicable&gt;

**Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)**

3048561

**% of target achieved relative to base year [auto-calculated]**

64.7244472535888

**Target status in reporting year**

Underway

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

No, but we anticipate setting one in the next 2 years

**Target ambition**

&lt;Not Applicable&gt;

**Please explain target coverage and identify any exclusions**

Galp established a target of reducing 40% its scope 1 + 2 (market-based) GHG emissions by 2030, compared to 2017 base year, on an equity basis. Target is company wide and includes all operated emissions, even the ones from non-operated upstream assets, on an equity basis. The SBTi organization is currently developing its methodology for the Oil&Gas sector and therefore it is its policy to pause the validation of targets for companies from the fossil fuel sector while simultaneously pausing commitments from these companies. When the SBTi methodology for the sector is developed and approved, Galp will evaluate the possibility of submitting its current or more ambitious targets for validation. In 2021 Galp reduced 12.9% YoY (64.7% of the target) its equity scope 1+2 (market-based) GHG emissions compared to previous year (2020). According to the IEA's Net Zero scenario, global energy-related and industrial process CO2 emissions must be reduced in about 40% by 2030 to comply with a 1.5°C compatible emissions budget. We therefore consider this target to be 1.5°C aligned.

**Plan for achieving target, and progress made to the end of the reporting year**

Galp plans to achieve this target by reconfiguring and rationalizing its industrial assets, implementing a series of energy efficiency and electrification projects in its Sines refine, purchasing and integrating renewable energy in its industrial activities, acquiring renewable power for its operations in Portugal and installing solar panels on its retail fuel stations and refinery. The production and usage of green hydrogen in refining operations will also allow for the saving of significant emissions associated with the production of grey hydrogen from natural gas on a steam methane reformer.

**List the emissions reduction initiatives which contributed most to achieving this target**

&lt;Not Applicable&gt;

---

**Target reference number**

Abs 2

**Year target was set**

2019

**Target coverage**

Country/region

**Scope(s)**

Scope 2

**Scope 2 accounting method**

Market-based

**Scope 3 category(ies)**

&lt;Not Applicable&gt;

**Base year**

2017

**Base year Scope 1 emissions covered by target (metric tons CO2e)**

&lt;Not Applicable&gt;

**Base year Scope 2 emissions covered by target (metric tons CO2e)**

223763

**Base year Scope 3 emissions covered by target (metric tons CO2e)**

&lt;Not Applicable&gt;

**Total base year emissions covered by target in all selected Scopes (metric tons CO2e)**

228035

**Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1**

&lt;Not Applicable&gt;

**Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2**

100

**Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)**

&lt;Not Applicable&gt;

**Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes**

98

**Target year**

2021

**Targeted reduction from base year (%)**

100

**Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]**

0

**Scope 1 emissions in reporting year covered by target (metric tons CO2e)**

&lt;Not Applicable&gt;

**Scope 2 emissions in reporting year covered by target (metric tons CO2e)**

0

**Scope 3 emissions in reporting year covered by target (metric tons CO2e)**

&lt;Not Applicable&gt;

**Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)**

9149

**% of target achieved relative to base year [auto-calculated]**

95.987896594821

**Target status in reporting year**

Achieved

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

No, but we anticipate setting one in the next 2 years

**Target ambition**

&lt;Not Applicable&gt;

**Please explain target coverage and identify any exclusions**

Galp has made the commitment to gradually acquire, until 2021, 100% of the electricity purchased in Portugal from renewable sources. In 2021 this target was achieved as Galp purchased renewable electricity for its activities located in Portugal. The remaining market based scope 2 values reported in 2021 (9149t CO2e) corresponds to emissions from the production of electricity acquired for activities outside of Portugal. This objective was established in 2019, having as reference scope 2 GHG emissions of 2017 (base year). Therefore, from 2021 onwards, Galp will avoid the emission of more than 220 thousand tCO2 per year from purchased electricity. The SBTi organization is currently developing its methodology for the Oil&Gas sector and therefore it is its policy to pause the validation of targets for companies from the fossil fuel sector while simultaneously pausing commitments from these companies. When the SBTi methodology for the sector is developed and approved, Galp will evaluate the possibility of submitting its current or more ambitious targets for validation. In 2021 Galp reduced 12.9% YoY (64.7% of the target) its equity scope 1+2 (market-based) GHG emissions compared to previous year (2020). According to the IEA's Net Zero scenario, global energy-related and industria process CO2 emissions must be reduced in about 40% by 2030 to comply with a 1.5°C compatible emissions budget. We therefore consider this target to be 1.5°C aligned.

**Plan for achieving target, and progress made to the end of the reporting year**

&lt;Not Applicable&gt;

**List the emissions reduction initiatives which contributed most to achieving this target**

This target was achieved by purchasing guarantees of origin for renewable electricity for its operations in Portugal, which represent 98% of electricity purchases.

**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**

2021

**Target coverage**

Company-wide

**Scope(s)**

Scope 1

Scope 2

Scope 3

**Scope 2 accounting method**

Market-based

**Scope 3 category(ies)**

Category 11: Use of sold products

**Intensity metric**

Other, please specify (grams of CO2e (scopes 1, 2 and 3) per megajoule (MJ) of energy produced upstream (oil, gas, electricity, biofuels, hydrogen, etc))

**Base year**

2017

**Intensity figure in base year for Scope 1 (metric tons CO2e per unit of activity)**

**Intensity figure in base year for Scope 2 (metric tons CO2e per unit of activity)**

**Intensity figure in base year for Scope 3 (metric tons CO2e per unit of activity)**

**Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)**

93.42

**% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure**

**% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure**

**% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this Scope 3 intensity figure**

**% of total base year emissions in all selected Scopes covered by this intensity figure**

100

**Target year**

2030

**Targeted reduction from base year (%)**

40

**Intensity figure in target year for all selected Scopes (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 for Scope 1 (metric tons CO2e per unit of activity)**

**Intensity figure in reporting year for Scope 2 (metric tons CO2e per unit of activity)**

**Intensity figure in reporting year for Scope 3 (metric tons CO2e per unit of activity)**

**Intensity figure in reporting year for all selected Scopes (metric tons CO2e per unit of activity)**

81.6

**% of target achieved relative to base year [auto-calculated]**

31.631342324984

**Target status in reporting year**

Underway

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

No, but we anticipate setting one in the next 2 years

**Target ambition**

<Not Applicable>

**Please explain target coverage and identify any exclusions**

This target materialises the reduction in the carbon intensity of the company's direct energy production. It includes operational scope 1 and 2 emissions from the Company's assets and scope 3 emissions from the use of hydrocarbons, biofuels, etc. Its evolution will materialize the transition of Galp's Upstream energy production from an essentially fossil profile into a low carbon focused producer with renewable electricity, biofuels and renewable hydrogen progressively replacing oil and gas. The SBTi organization is currently developing its methodology for the Oil&Gas sector and therefore it is its policy to pause the validation of targets for companies from the fossil fuel sector while simultaneously pausing commitments from these companies. When the SBTi methodology for the sector is developed and approved, Galp will evaluate the possibility of submitting its current or more ambitious targets for validation. In 2021 Galp reduced 1% YoY its production carbon intensity compared to previous year (2020) to 81.6 gCO2/MJ.

**Plan for achieving target, and progress made to the end of the reporting year**

This target will be achieved by growing the renewable energy production, with important investments announced in renewable electricity production, targeting 12 GW installed capacity by 2030, biofuels with the addition of an HVO plant at Sines with a 270 ktpa capacity and green hydrogen, starting with 100 MW electrolyser capacity and growing to 600-1000 MW by 2030. Galp plans to simultaneously reduce operational scope 1+2 by reconfiguring and rationalizing its industrial assets, implementing a series of energy efficiency and electrification projects in its Sines refine, purchasing and integrating renewable energy in its industrial activities, acquiring renewable power for its operations in Portugal and installing solar panels on its retail fuel stations and refinery. The production and usage of green hydrogen in refining operations will also allow for the saving of significant emissions associated with the production of grey hydrogen from natural gas on a steam methane reformer.

**List the emissions reduction initiatives which contributed most to achieving this target**

<Not Applicable>

---

**Target reference number**

Int 2

**Year target was set**

2021

**Target coverage**

Company-wide

**Scope(s)**

Scope 1  
 Scope 2  
 Scope 3

**Scope 2 accounting method**

Market-based

**Scope 3 category(ies)**

Category 1: Purchased goods and services  
 Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2)  
 Category 4: Upstream transportation and distribution  
 Category 9: Downstream transportation and distribution  
 Category 11: Use of sold products

**Intensity metric**

Other, please specify (grams of CO<sub>2</sub>e (scope 1, 2 and 3) per megajoule (MJ) of all products sold)

**Base year**

2017

**Intensity figure in base year for Scope 1 (metric tons CO<sub>2</sub>e per unit of activity)****Intensity figure in base year for Scope 2 (metric tons CO<sub>2</sub>e per unit of activity)****Intensity figure in base year for Scope 3 (metric tons CO<sub>2</sub>e per unit of activity)****Intensity figure in base year for all selected Scopes (metric tons CO<sub>2</sub>e per unit of activity)**

76.3

**% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure****% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure****% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this Scope 3 intensity figure****% of total base year emissions in all selected Scopes covered by this intensity figure**

100

**Target year**

2030

**Targeted reduction from base year (%)**

20

**Intensity figure in target year for all selected Scopes (metric tons CO<sub>2</sub>e 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 for Scope 1 (metric tons CO<sub>2</sub>e per unit of activity)****Intensity figure in reporting year for Scope 2 (metric tons CO<sub>2</sub>e per unit of activity)****Intensity figure in reporting year for Scope 3 (metric tons CO<sub>2</sub>e per unit of activity)****Intensity figure in reporting year for all selected Scopes (metric tons CO<sub>2</sub>e per unit of activity)**

73.7

**% of target achieved relative to base year [auto-calculated]**

17.0380078636959

**Target status in reporting year**

Underway

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

No, but we anticipate setting one in the next 2 years

**Target ambition**

<Not Applicable>

**Please explain target coverage and identify any exclusions**

The all-downstream sales carbon intensity includes all emission scopes (1, 2 and 3) associated with the value chains of all energy products sold by Galp (liquid fuels, gas, electricity, etc) and its future reduction will match the progressive decarbonization of our portfolio, as more renewable and low carbon solutions are made available and adopted by our customers. 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 points in the value chain for each energy product where energy and scope 3 emissions are calculated corresponds to the one where the largest volume of product is traded, according to SBTi and IPIECA recommendations. The SBTi organization is currently developing its methodology for the Oil&Gas sector and therefore it is its policy to pause the validation of targets for companies from the fossil fuel sector while simultaneously pausing commitments from these companies. When the SBTi methodology for the sector is developed and approved, Galp will evaluate the possibility of submitting its current or more ambitious targets for validation. In 2021 Galp reduced its sales carbon intensity 1.6% YoY (64.7% of the target compared to previous year (2020).

**Plan for achieving target, and progress made to the end of the reporting year**

Galp is planning to reduce its carbon intensity by growing its renewable energy production, with important investments announced in renewable electricity production, biofuels and green hydrogen, while other opportunities in the low carbon fuels domain are under analysis. Those same products will be made available for our customers, along with other conventional liquid fuels and natural gas, lowering the intensity of downstream sales. Emissions from our Industrial operations will fall along the next decade due to the reorganization and increase in efficiency of the industrial infrastructure and the acquisition and production of renewable energy to be used in industrial processes, including renewable electricity and hydrogen. The Company has defined a clear strategy for the next decade, which is anchored on several key initiatives,



including expanding our renewable portfolio from the c. 1 GWp already in production, simultaneously diversifying technology-wise, by developing our 9.6 GW portfolio across Portugal, Spain and Brazil, aiming to achieve >4 GWp in operation by 2025 and 12GWp of renewable installed capacity by 2030 and looking into renewable energy storage pilot projects. Simultaneously the company aims to transform our Sines Refinery into a Green Energy Park by pursuing the production of green H2 to fuel the plant and replace grey hydrogen, reducing emissions, starting with a 2MW pilot electrolyser functional in 2023, which could be quickly scaled up, reaching 100MW until 2025 and up to at least 600MW by 2030 and also produce and deliver less carbon intensive fuels at the site from the 270 ktpa capacity HVO unit which will be able to produce biodiesel and SAF. Our commercial offer will also be adapted to a lower carbon intensity portfolio, with a focus on developing our Electric Mobility offer and network with the goal of reaching 10,000 charging points in operation in Iberia by 2025; other low carbon fuels for different means of transport will also be on offer (e.g. SAFs) and there will be a range of solutions available for power costumers (since 2021 all of Galp's B2C electricity offer is made out of 100% renewable energy, while B2B clients are provided with a range of possible solutions, including green electricity to PPA) and overall, the company expects to double electricity sales from 2021 to 2025

**List the emissions reduction initiatives which contributed most to achieving this target**

<Not Applicable>

---

## 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**

Country/region

**Target type: energy carrier**

Electricity

**Target type: activity**

Consumption

**Target type: energy source**

Renewable energy source(s) only

**Base year**

2019

**Consumption or production of selected energy carrier in base year (MWh)**

440991.6

**% share of low-carbon or renewable energy in base year**

58.03

**Target year**

2021

**% share of low-carbon or renewable energy in target year**

100

**% share of low-carbon or renewable energy in reporting year**

100

**% of target achieved relative to base year [auto-calculated]**

100

**Target status in reporting year**

Achieved

**Is this target part of an emissions target?**

Yes, it aligns with target Abs1, Abs2, Int1 and Int2 and was vital to reduce the company's emissions scope 2 emissions (market based) to the reported value of 9149t CO<sub>2</sub>e in 2021 from the 228035 t CO<sub>2</sub>e reported in the baseline year of our targets (2017).

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

No, it's not part of an overarching initiative

**Please explain target coverage and identify any exclusions**

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 tCO<sub>2</sub> 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 CO<sub>2</sub>e, a reduction of approximately 70% in relation to the base year. In 2021 the company acquired 100% renewable electricity for its operations in Portugal, effectively achieving this target and reporting only market based scope 2 emissions of 9149 t CO<sub>2</sub>e from power purchased for operations outside of Portugal.

**Plan for achieving target, and progress made to the end of the reporting year**

<Not Applicable>

**List the actions which contributed most to achieving this target**

Galp acquired guarantees of origin of renewable electricity for the electricity it purchased for its operations in Portugal.

---

**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

Abs2

Int1

Int2

**Target year for achieving net zero**

2050

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

No, but we anticipate setting one in the next 2 years

**Please explain target coverage and identify any exclusions**

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. The SBTi organization is currently developing its methodology for the Oil&Gas sector and therefore it is its policy to pause the validation of targets for companies from the fossil fuel sector while simultaneously pausing commitments from these companies. When the SBTi methodology for the sector is developed and approved, Galp will evaluate the possibility of submitting its current or more ambitious targets for validation.

**Do you intend to neutralize any unabated emissions with permanent carbon removals at the target year?**

Yes

**Planned milestones and/or near-term investments for neutralization at target year**

Galp's current 2030 targets do not require any carbon removals to be achieved. However, the company is aware that there will possibly be residual/hard to abate emissions that will have to be abated by 2050 in order to achieve carbon neutrality. Galp is currently evaluating which would be the technological (e.g. CCUS, DAC) and/or natural solutions (e.g. forestation, ecosystem restoration, etc) that would best fit its decarbonisation strategy and future portfolio.

**Planned actions to mitigate emissions beyond your value chain (optional)**

Galp recently purchased carbon credits to offset the emissions of the Rock in Rio festival, an event to which the company is the main sponsor. The company is committed using this type of products in the future to according to the best practices available in the international market, to guarantee access to the best opportunities and high-quality projects and credits that will provide significant positive social and economic development impacts in the locations where they will be developed.

---

#### 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.**

Targets Abs2, Int1 and Int2 are set in relation to CO2e emissions which include methane in their calculation ( $CO2e = CO2 + CH4 + N2O$ ).

Methane emissions represent a very small fraction of total Galp operational GHG emissions of Galp (<1% of CO2e emissions). Although the Company does not currently have any specific methane emissions reduction targets, it ambitions to reduce methane emissions from its operations in line with industry expectations, aiming for a zero methane future. The Company will also continue to work with operators of participated assets to assist them in identifying and implementing methane emission reduction initiatives, in line with their current commitments.

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.

In the R&D segment, Sines 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 Water is being used.

The company is confident it's methane emissions will decrease significantly in the future as it collaborates with upstream partners, which are all signatories of the OGCI's "Aiming for zero methane emissions by 2030 initiative", to increase efficiency and reduce emissions from its assets. For example, although no routine flaring takes place in Galp's Upstream projects, some of the FPSO units in the Brazilian Pre Salt fields have already started commissioning a closed flare gas recovery system that will allow the recovery of gas that would otherwise be flared, avoiding methane emissions as well as combustion of any flare gas that would be emitted in exceptional situations (e.g. equipment maintenance, emergencies, etc).

---

#### 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	57000
To be implemented*	7	119000
Implementation commenced*	1	34000
Implemented*	2	74000
Not to be implemented		

### 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) or Scope 3 category(ies) where emissions savings occur

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)

46582226

#### 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 m<sup>2</sup> / 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. This project was finished in 2021, when an investment of 1821207€ of the total 46 582 226 € was made. It will allow the avoidance of an estimated 50484 tCO<sub>2</sub>e per year and have a payback period of approximately 6.5 years. Annual savings and payback period based on 2020 prices.

#### Initiative category & Initiative type

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

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

23559

#### Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

#### Voluntary/Mandatory

Voluntary

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

3359270

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

88700017

#### Payback period

1-3 years

#### Estimated lifetime of the initiative

16-20 years

#### Comment

The installation of a gas recovery system for the 3 flares of the Sines Refinery, allows direct savings in natural gas and avoids emissions from combusted products (estimated 23559 t CO<sub>2</sub>e/year). In 2021 an investment of 33454€ was made from a total of 8682002€ invested in the project. Estimated savings from this project are projected at 3359270€ and its payback period is of approximately 2.6 years. Annual savings and payback period based on 2020 prices.

### 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 Industrial and Energy Management business unit to focus on energy efficiency and process optimization of the refining system, guaranteeing cost and energy consumption and emissions reductions and the increase of return on capital employed. The Sines Refinery has a dedicated technology team that identifies, designs and implements energy efficiency projects with the ultimate goal of making that refinery one of the most efficient in Europe. In 2021 the team had identified several projects to be implemented by 2025, with an estimated investment of €32 m which will materialize energy savings of 113 GJ/h and avoid 53 ktonCO <sub>2</sub> e/year and almost 2M€ were invested in projects currently ongoing. To address the challenges of energy efficiency, 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; Galp Solar will install solar PV panels in more than 100 service stations to increase reduce their grid electricity consumption and increase their efficiency and will also continue to supply out customers with decentralized power solutions that will reduce emissions from energy generation; Social projects (UP educational projects); among others.
Dedicated budget for low-carbon product R&D	Aware of the fast pace at which trends and opportunities arise, Galp, in 2021, consolidated its commitment to innovation as a fundamental tool towards a low-carbon world, and reorganised its Innovation department in three centres (Production & Operations, Commercial and Renewables). Each centre focuses on building a portfolio of opportunities in the decarbonisation, optimisation, and digitalisation spaces, boosting the energy transition of the Company's different business units, including monitoring high-impact trends and opportunities, and identifying ideas and solutions that can lead to new services and products whilst simultaneously boosting the innovation mindset, collaboration and the overall culture. Also in 2021 Galp launched the Upcoming Energies platform with the aim of accelerating the innovation ecosystem, redefining the energy business, and helping people's lives. The platform comes as a response to this challenge and will be present in the Portuguese and Brazilian ecosystem, opening doors to future Galp network projects in ten countries, for now. Upcoming Energies will invest up to €180 m in Research, Development, and Innovation projects during the 2021-25 period. The concept of Upcoming Energies is to establish an open door to the external community of research, development and innovation (R&D+I), based on targets, collaborative programmes, materialised projects with start-ups, suppliers, universities and partners, as well as with new stakeholders that will come to integrate the innovation ecosystem in the energy sector. Overall in 2021 Galp invested 16.9 M€ in innovation and R&D, with 78 innovation projects, 18 pilots and 5 technological programs implemented, including 8 clean R&D projects 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	Galp considers a carbon price on GHG emissions in investment analysis and therefore incorporates CO <sub>2</sub> and climate related issues in its decision-making process. The Company considers that carbon cost internalisation mechanisms such as carbon pricing are the most effective and efficient way to promote the decarbonisation of the economy on a global scale. A carbon price is considered when evaluating medium and long-term investments, to mitigate risks and maximize opportunities along the value chain. When evaluating investments in new project developments, expansions or upgrades of existing assets, Galp stress tests the impact of the related CO <sub>2</sub> emissions in its metrics and targets before any investment decision. In making this analysis, the Company considers an internal carbon price that changes with time, varying from a present-day value that correlates with the current price of an EU-ETS allowance and increases in time to prices above 200€/tonCO <sub>2</sub> e in 2050, ensuring the incorporation of a potential global carbon price and its temporal evolution. By using a dynamic carbon price, Galp demonstrates that it is aware of the future potential changes in regulation, consumer and technological patterns and the risks associated with long-term business plan analysis. Galp also considers different carbon prices in its scenario analysis, which are based on the international references and forecasts used in scenario modelling. This allows the Company to stress test its long-term strategy and perform sensitivity analysis on the carbon price variable (for more details about Galp's scenario analysis, please see Risk Management section).
Employee engagement	The company regularly communicates in its weekly newsletter "Energiser" its initiatives and products that will allow for emission reductions and increases in energy efficiency of the company, its costumers and employees. The company has also recently committed to the full electrification of its light duty vehicle fleet up before 2030. This was accompanied by training, information sessions and informational materials on hybrid and electric vehicles for the employees changing from an internal combustion engine to a hybrid or electric vehicle.
Internal incentives/recognition programs	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 to reward safety, environmental sustainability and energy efficiency 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 company's emissions and carbon intensity. As from 2019, several indicators defined by the Remuneration Committee determine the annual variable remuneration. These incorporate objectives and targets related to financial performance, strategy execution, safety and environmental sustainability of the activities material to the company, including the management of their respective carbon intensity, and emissions. In 2021 the evaluation all employees and respective variable remuneration scorecard included a KPI related with the reduction of the company's carbon intensity with a 5 % weight for ExCom members and 10% weight for all other employees. The Long Term Incentive remuneration for the CEO is materialized by the right to a set of Galp shares, attributable after 3 years. The number of shares attributed at the end of the 3-year period will be calculated by multiplying the number of provisional shares attributed by a performance factor, graded from 0 to 2.25, based on 3 categories, one of them being the reduction in the Sales Carbon Intensity of the company. Performance is evaluated, by reference to the CO <sub>2</sub> intensity reduction goals in force. Also, Galp has sustainability related Objective Key Results (OKR) associated to each Business Unit (e.g. Be recognised as one of the most sustainable companies in the world in the Energy sector (includes emission reduction related issues); FID on low carbon projects such as biofuels and green hydrogen projects; 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.

**C4.5**

**(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?**

Yes

**C4.5a**

**(C4.5a) Provide details of your products and/or services that you classify as low-carbon products.**

**Level of aggregation**

Product or service

**Taxonomy used to classify product(s) or service(s) as low-carbon**

The EU Taxonomy for environmentally sustainable economic activities

**Type of product(s) or service(s)**

Power	Solar PV
-------	----------

**Description of product(s) or service(s)**

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. By the end of 2021 the company had 963 MW of installed capacity under operation (951 Solar PV, 12 MW Wind) that generated 1288 GWh of renewable electricity. The company had by then a 4.7 GW project portfolio in Iberia and Brazil that has since doubled to 9.6 GW through the recent acquisition of 4.8 GW of renewable power projects, including 216 MW of wind in Brazil. The company is on track to fulfil its targets of having installed 4 GW of renewable capacity by 2025 and 12 GW by 2030, which should have an equity IRR of > 9% and an estimated proforma OCF of 250-300 M€ by 2030.

**Have you estimated the avoided emissions of this low-carbon product(s) or service(s)**

Yes

**Methodology used to calculate avoided emissions**

Other, please specify (Avoided emissions calculated in comparison to electricity consumed from the electric grid)

**Life cycle stage(s) covered for the low-carbon product(s) or services(s)**

Not applicable

**Functional unit used**

Emissions per GWh of power consumed from a renewable source vs power from the electrical grid whose mix contains fossil fuels

**Reference product/service or baseline scenario used**

Portuguese electrical grid emission factor for 2021 published by local regulator (ERSE) of 273.59 tCO<sub>2</sub>e/GWh (<https://www.erse.pt/eletricidade/rotulagem/rotulagem/>)

**Life cycle stage(s) covered for the reference product/service or baseline scenario**

Not applicable

**Estimated avoided emissions (metric tons CO<sub>2</sub>e per functional unit) compared to reference product/service or baseline scenario**

352382

**Explain your calculation of avoided emissions, including any assumptions**

Renewable energy was assumed to have zero emissions associated with its production. The emission factor for the electricity purchased from the portuguese grid includes emissions from the use of fossil fuels used to produce electricity (natural gas, coal, solid urban waste).

**Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year**

0.58

---

**Level of aggregation**

Group of products or services

**Taxonomy used to classify product(s) or service(s) as low-carbon**

The EU Taxonomy for environmentally sustainable economic activities

**Type of product(s) or service(s)**

Power	Solar PV
-------	----------

**Description of product(s) or service(s)**

In 2020 Galp launched Energia Independente, now rebranded Galp Solar, a company that sells decentralized power production and monitoring systems catering to the B2C and B2B segments. Galp solar uses advanced technologies, like satellite image analysis, artificial intelligence algorithms and big data, to optimise the acquisition and installation cost, offering a solution that caters to each customer's needs. At the end of 2021, Galp Solar already has an installed capacity of c.13 MW, covering more than 4,000 clients in Iberia. These represent an estimated annual production of about 1 GWh of renewable solar power generated and about 293 ton CO<sub>2</sub>e avoided.

**Have you estimated the avoided emissions of this low-carbon product(s) or service(s)**

Yes

**Methodology used to calculate avoided emissions**

Other, please specify (Avoided emissions calculated in comparison to electricity consumed from the electric grid)

**Life cycle stage(s) covered for the low-carbon product(s) or services(s)**

Not applicable

**Functional unit used**

emissions per GWh of power consumed from a renewable source vs power from the electrical grid whose mix contains fossil fuels

**Reference product/service or baseline scenario used**

Portuguese electrical grid emission factor for 2021 published by local regulator (ERSE) of 273.59 tCO<sub>2</sub>e/GWh (<https://www.erse.pt/eletricidade/rotulagem/rotulagem/>)

**Life cycle stage(s) covered for the reference product/service or baseline scenario**

Not applicable

**Estimated avoided emissions (metric tons CO<sub>2</sub>e per functional unit) compared to reference product/service or baseline scenario**

293.7

**Explain your calculation of avoided emissions, including any assumptions**

Renewable energy was assumed to have zero emissions associated with its production. The emission factor for the electricity purchased from the portuguese grid includes emissions from the use of fossil fuels used to produce electricity (natural gas, coal, solid urban waste).

**Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year**

0.05

---

**Level of aggregation**

Product or service

**Taxonomy used to classify product(s) or service(s) as low-carbon**

The EU Taxonomy for environmentally sustainable economic activities

**Type of product(s) or service(s)**

Systems integration	Other, please specify (Fleet management, fleet efficiency and transitioning fleets from combustion to electric vehicles)
---------------------	--

**Description of product(s) or service(s)**

Through GoWithFlow, now DaLoop, Galp is promoting solutions for its customers' fleets transitioning to EVs, including charging, fleet management and vehicle sharing systems. Through an integrated view of vehicle and energy data, fleet and facilities managers can plan and operate a heterogeneous network of combustion and electric vehicles along with managing fuel and electricity consumption. During 2021, GoWithFlow/DaLoop already established business development teams in the U.K. and Spain and has secured contracts with more than 8,000 mobility assets (vehicles and charging stations) to Flow Mobility Change Platform. Galp is currently analysing the potential for expanding this business model to new geographies, developing technological partnerships and new sales channels.

**Have you estimated the avoided emissions of this low-carbon product(s) or service(s)**

No

**Methodology used to calculate avoided emissions**

<Not Applicable>

**Life cycle stage(s) covered for the low-carbon product(s) or services(s)**

<Not Applicable>

**Functional unit used**

<Not Applicable>

**Reference product/service or baseline scenario used**

<Not Applicable>

**Life cycle stage(s) covered for the reference product/service or baseline scenario**

<Not Applicable>

**Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario**

<Not Applicable>

**Explain your calculation of avoided emissions, including any assumptions**

<Not Applicable>

**Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year**

0

---

**Level of aggregation**

Product or service

**Taxonomy used to classify product(s) or service(s) as low-carbon**

The EU Taxonomy for environmentally sustainable economic activities

**Type of product(s) or service(s)**

Biofuels	Fatty acid methyl ester (FAME)
----------	--------------------------------

**Description of product(s) or service(s)**

Galp has in place a facility, Enerfuel, to produce distilled biodiesel (FAME) in Portugal from waste feedstock (animal fats). The Enerfuel plant in 2021 produced approximately c. 24 kton of second generation FAME. As such, we contributed to an 83% reduction in life cycle 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. 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. Additionally, c. 7 kton of HVO were also produced at the Sines refinery by co-processing in an HD unit. The Company continues to explore new ways of producing low-carbon fuels and is currently studying the possibility of integrating products derived from urban and forestry waste in its fuels and evaluating new opportunities in low-carbon maritime fuels. During the year c.290,000 m3 of biofuels were integrated in the diesel (biodiesel and HVO) and gasoline (bioethanol) sold by the Company.

**Have you estimated the avoided emissions of this low-carbon product(s) or service(s)**

Yes

**Methodology used to calculate avoided emissions**

Other, please specify (Life cycle emissions for the produced FAME biodiesel were subtracted from the value obtained for an equivalent amount of mineral diesel)

**Life cycle stage(s) covered for the low-carbon product(s) or services(s)**

Cradle-to-gate + end-of-life stage

**Functional unit used**

kgCO<sub>2</sub>e /ton of product (diesel)

**Reference product/service or baseline scenario used**

Life cycle emissions of 100% mineral diesel of 3954.44 kg CO<sub>2</sub>e/ton (reference values from UK Government GHG Conversion Factors for Company Reporting 2021)

**Life cycle stage(s) covered for the reference product/service or baseline scenario**

Cradle-to-gate + end-of-life stage

**Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario**

77848

**Explain your calculation of avoided emissions, including any assumptions**

Avoided emissions were calculated considering 83% savings from FAME biodiesel in life cycle GHG emissions in relation to a purely mineral diesel

**Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year**

0.23

---

**Level of aggregation**

Product or service

**Taxonomy used to classify product(s) or service(s) as low-carbon**

The EU Taxonomy for environmentally sustainable economic activities

**Type of product(s) or service(s)**

Road	Other, please specify (Electric mobility infrastructure and electricity sales)
------	--

**Description of product(s) or service(s)**

Galp is committed in delivering and accelerating the deployment of infrastructure necessary for the mainstream adoption of electric mobility. The acquisition of Mobiletronic in 2021 gave an extra impulse to rapidly increasing the network of charging points operated by Galp. By the end of the year these totalled 1,146 charging stations in Portugal and 40 in Spain, 197 of which are fast charging stations. Sales of electricity for mobility increased to 3.4 GWh and correspond to an estimated 3.3 ktons of avoided CO<sub>2</sub> emissions.

**Have you estimated the avoided emissions of this low-carbon product(s) or service(s)**

Yes

**Methodology used to calculate avoided emissions**

Other, please specify (Avoided emissions were calculated taking into account life cycle emissions from vehicle making and fuel usage)

**Life cycle stage(s) covered for the low-carbon product(s) or services(s)**

Other, please specify (Life cycle emissions of car manufacture + fuel usage)

**Functional unit used**

gCO2e/kWh

**Reference product/service or baseline scenario used**

Average life cycle emissions from the light duty vehicles with diesel and gasoline internal combustion engines (234 gCO2e/km for diesel and 253 gCO2e/km for a diesel vehicle). Source: <https://www.transportenvironment.org/>

**Life cycle stage(s) covered for the reference product/service or baseline scenario**

Other, please specify (Avoided emissions were calculated taking into account life cycle emissions from vehicle making and fuel usage)

**Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario**

3300

**Explain your calculation of avoided emissions, including any assumptions**

Life cycle emissions per km for internal combustion engine vehicles (avg 241.9 g CO2/km) and battery electric vehicles powered by renewable energy (47 g CO2e/km) sold at Galp charging points were compared for the same amount of energy sold. This resulted in a conservative estimate of 3300 t CO2e avoided by sales of electricity for electric mobility.

**Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year**

0.02

## 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.

The company's methane emissions represent a small part of its total operational emissions, yet it is confident it's methane emissions will decrease significantly in the future as it collaborates with upstream partners, which are all signatories of the OGCI's "Aiming for zero methane emissions by 2030 initiative", to increase efficiency and reduce emissions from its assets. For example, although no routine flaring takes place in Galp's Upstream projects, some of the FPSO units in the Brazilian Pre Salt fields have already started commissioning a closed flare gas recovery system that will allow the recovery of gas that would otherwise be flared, avoiding methane emissions as well as combustion of any flare gas that would be emitted in exceptional situations (e.g. equipment maintenance, emergencies, etc).

In the Industrial and Energy Management fugitive emissions come from the following sources: product storage, process (including the drainage network) and effluent treatment. Galp 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 is 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 Sines refinery has been carrying out annual monitoring of around 14,000 stock parts in the various plants and biannual monitoring of around 150 elements in some process units. 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.**

Although Galp no longer operates any oil and gas field, flaring is relevant in the fields where the company has participations. Galp ensures that the projects where it has participations are developed in accordance with the principle to meet Zero Routine Flaring or venting of hydrocarbons. We monitor the GHG emissions from gas flared in participated projects and our performance is verified by an independent third-party. The Company's current goal is to work with operators 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. 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. From 2022 Galp no longer operates any blocks in production but is still the operator in some exploration blocks (e.g. block 6 at São Tomé e Príncipe)

Current projects are being adapted to reduce emissions and some of the FPSO units in the Brazilian Pre Salt fields have already started commissioning a closed flare gas recovery system that will allow the recovery of gas that would otherwise be flared, avoiding methane emissions as well as combustion of any flare gas that would be emitted in exceptional situations (e.g. equipment maintenance, emergencies, etc).

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, BM-S-11a, BM-S-24, 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.

Additionally, the company expects that flaring, and consequentially methane emissions from its upstream operations will decrease significantly in the future as it collaborates with upstream partners, which are all signatories of the OGC's "Aiming for zero methane emissions by 2030 initiative", to increase efficiency and reduce emissions from its assets.

## C5. Emissions methodology

---

### C5.1

---

**(C5.1) Is this your first year of reporting emissions data to CDP?**

No

### C5.1a

---

**(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?**

Row 1

**Has there been a structural change?**

No

**Name of organization(s) acquired, divested from, or merged with**

<Not Applicable>

**Details of structural change(s), including completion dates**

<Not Applicable>

C5.1b

**(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?**

	Change(s) in methodology, boundary, and/or reporting year definition?	Details of methodology, boundary, and/or reporting year definition change(s)
Row 1	Yes, a change in methodology	In 2021 Galp reviewed its carbon footprint calculation methodology to better align it with the emissions values used in the calculation of the carbon intensity metrics. Therefore, the emissions from non-operated Upstream assets were included in the scope 1 and 2 emissions calculation (they were previously accounted in Scope 3 – Category 15 – Investments). Also the methodology for the calculation of the Scope 3 – Category 11: Use of sold product is aligned with IPIECA's throughput method and now accounts for the emissions from all refined products instead of just the volumes sold by Galp to direct customers. Scope 3 – Category 10: Processing of sold products was changed to solely reflect the processing of sold crude in refineries. Other minor adjustments were made in other categories in order to reflect, for example, the addition of new, third party purchased products to the company's sales portfolio and the import of gas from pipeline and LNG sources. As Galp sold its participation on the natural gas distributor GGND, emissions from gas distribution are now calculated only for the volume of sold gas.

C5.1c

**(C5.1c) Have your organization's base year emissions been recalculated as result of the changes or errors reported in C5.1a and C5.1b?**

	Base year recalculation	Base year emissions recalculation policy, including significance threshold
Row 1	Yes	Emissions from the base year and following years (2018-2020) were recalculated to better align reported values with GHG protocol and IPIECA recommendations, add new products or add detail to some value chains (e.g. gas). This alignment also made reported values more coherent with the emissions values used in the calculation of the carbon intensity metrics. Therefore, the emissions from non-operated Upstream assets were included in the scope 1 and 2 emissions calculation (they were previously accounted in Scope 3 – Category 15 – Investments). Also, the methodology for the calculation of the Scope 3 – Category 11: Use of sold product is aligned with IPIECA's throughput method and now accounts for the emissions from all refined products instead of just the volumes sold by Galp to direct costumers. Scope 3 – Category 10: Processing of sold products was changed to solely reflect the processing of sold crude in refineries.

C5.2

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

**Scope 1**

**Base year start**

January 1 2017

**Base year end**

December 31 2017

**Base year emissions (metric tons CO2e)**

3978216

**Comment**

Base year set for Scope 1 GHG emissions calculated on an operational control basis. Scope 1+2 emissions values used in emission reduction targets calculated on an equity basis.

**Scope 2 (location-based)**

**Base year start**

January 1 2017

**Base year end**

December 31 2017

**Base year emissions (metric tons CO2e)**

181000

**Comment**

Base year set for Scope 2 GHG calculated on an operational control basis. Scope 1+2 emissions values used in emission reduction targets calculated on an equity basis. Market based values are reported and used in intensity and emissions performance monitoring.

### 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 calculated on an operational control basis. Scope 1+2 emissions values used in emission reduction targets calculated on an equity basis. Market based values are reported and used in intensity and emissions performance monitoring.

### Scope 3 category 1: Purchased goods and services

**Base year start**

January 1 2017

**Base year end**

December 31 2017

**Base year emissions (metric tons CO2e)****Comment**

In 2017 Galp did not calculate this scope 3 category. Estimates for the emissions associated with Purchased goods and services started with the revision of the company's carbon footprint in 2018.

### Scope 3 category 2: Capital goods

**Base year start**

January 1 2017

**Base year end**

December 31 2017

**Base year emissions (metric tons CO2e)****Comment**

Galp considers that emissions associated to capital goods are not material (less than 5% of total GHG emissions). As an integrated energy company, the emissions associated with Capital Goods are minimal compared with the ones generated by the production and use of the sold energy products. The Company decided not to report this category 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.

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

**Base year start**

January 1 2017

**Base year end**

December 31 2017

**Base year emissions (metric tons CO2e)****Comment**

In 2017 Galp did not calculate this scope 3 category. Estimates for the emissions associated with Fuel-and-energy-related activities started with the revision of the company's carbon footprint in 2018.

### Scope 3 category 4: Upstream transportation and distribution

**Base year start**

January 1 2017

**Base year end**

December 31 2017

**Base year emissions (metric tons CO2e)****Comment**

In 2017 Galp did not calculate this scope 3 category. Estimates for the emissions associated with Purchased goods and services started with the revision of the company's carbon footprint in 2018.

### Scope 3 category 5: Waste generated in operations

**Base year start**

January 1 2017

**Base year end**

December 31 2017

**Base year emissions (metric tons CO2e)****Comment**

Galp considers that emissions associated to Waste generated in operations are not material (less than 5% of total GHG emissions). As an integrated energy company, the emissions associated with Waste generated in operations are minimal compared with the ones generated by the production and use of the sold energy products. Also, the company already reports fugitive emissions and operational emissions from the treatment of waste-water from its operations as its scope 1 and 2 emissions. The Company decided not to report this category 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.

### Scope 3 category 6: Business travel

**Base year start**

January 1 2017

**Base year end**

December 31 2017

**Base year emissions (metric tons CO2e)**

1396.3

**Comment**

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.

### Scope 3 category 7: Employee commuting

**Base year start**

January 1 2017

**Base year end**

December 31 2017

**Base year emissions (metric tons CO2e)****Comment**

Galp considers that emissions associated to Employee commuting are not material (less than 5% of total GHG emissions). As an integrated energy company, the emissions associated with Employee commuting are minimal compared with the ones generated by the production and use of the sold energy products. Furthermore, the company already reports the emissions from its light duty vehicles fleet as scope 1 emissions. This fleet is used by a considerable amount of employees for their commuting. The Company decided not to report this category 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.

### Scope 3 category 8: Upstream leased assets

**Base year start**

January 1 2017

**Base year end**

December 31 2017

**Base year emissions (metric tons CO2e)****Comment**

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, Galp already reports the emissions from the operation of these assets (fuel combustion, flaring, etc) as Scope 1 emissions.

### Scope 3 category 9: Downstream transportation and distribution

**Base year start**

January 1 2017

**Base year end**

December 31 2017

**Base year emissions (metric tons CO2e)****Comment**

In 2017 Galp did not calculate this scope 3 category. Estimates for the emissions associated with Purchased goods and services started with the revision of the company's carbon footprint in 2018.

### Scope 3 category 10: Processing of sold products

**Base year start**

January 1 2017

**Base year end**

December 31 2017

**Base year emissions (metric tons CO2e)**

1387504

**Comment**

Galp calculates the emissions from processing of the crude it sells to third parties for refining. In 2021 the methodology for the calculation of Category 10 – Processing of Sold product of Scope 3 was reviewed to solely reflect the processing of sold crude in refineries and calculated by applying an emission factor that materialized the global volume-weighted average emissions per barrel refined of 40.7 kg CO2e/boe by Jing et al. (Nature, 2020)

### Scope 3 category 11: Use of sold products

**Base year start**

January 1 2017

**Base year end**

December 31 2017

**Base year emissions (metric tons CO2e)**

57177083

**Comment**

Galp has calculated emissions for this category since 2017. In 2021 the calculation of Category 11: Use of Sold product was reviewed to include all the refined products to reflect the emissions from the part of the oil value chain where the largest volume of product is present. The emissions in this category now includes all products refined, even the ones exported and sold to other operators, and not just the sales to Galp clients. These updates are aligned with best practices for the sector, e.g. the GHG Protocol IPIECA guidelines, as well as the materiality analysis of the emission sources.

### Scope 3 category 12: End of life treatment of sold products

**Base year start**

January 1 2017

**Base year end**

December 31 2017

**Base year emissions (metric tons CO2e)****Comment**

Galp considers that emissions associated to End of life treatment of sold products are not material (less than 5% of total GHG emissions) since the end life of the large majority of the products it sells is combustion meaning these emissions are included in category 11 - Use of sold product. As an integrated energy company, the emissions associated with End of life treatment of sold products are minimal compared with the ones generated by the production and use of the sold energy products. The Company decided not to report this category 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.

### Scope 3 category 13: Downstream leased assets

**Base year start**

January 1 2017

**Base year end**

December 31 2017

**Base year emissions (metric tons CO2e)****Comment**

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. As an integrated energy company, the emissions associated with Downstream leased assets are minimal compared with the ones generated by the production and use of the sold energy products. 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.

### Scope 3 category 14: Franchises

**Base year start**

January 1 2017

**Base year end**

December 31 2017

**Base year emissions (metric tons CO2e)****Comment**

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. As an integrated energy company, the emissions associated with its franchises (service stations) are minimal compared with the ones generated by the production and use of the sold energy products. The Company reassessed the materiality of this category last year and decided not to report it given its nonmateriality 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.

### Scope 3 category 15: Investments

**Base year start**

January 1 2017

**Base year end**

December 31 2017

**Base year emissions (metric tons CO2e)****Comment**

In the past Galp disclosed its emissions from non operated upstream assets under this category. From 2021 onwards the reporting of emissions indicators was reviewed and these emissions have been included in the company's scope 1 and 2 emission reporting. In the past this category also included emissions from the company's participation in the Galp Gás Natural Distribuição (GGND) which was sold in 2021. Emissions from that gas distribution network were calculated using an emission factor that quantified fugitive emissions per network distance per year according to the API compendium. From 2021 onwards the company will report the emissions associated with the distribution of only the gas volumes it sells.

**Scope 3: Other (upstream)**

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

**Comment**

**Scope 3: Other (downstream)**

**Base year start**

**Base year end**

**Base year emissions (metric tons CO2e)**

**Comment**

**C5.3**

---

**(C5.3) 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)

3198740

#### Start date

January 1 2021

#### End date

December 31 2021

#### Comment

Gross global Scope 1 emissions (metric tons CO2e) equals to 3,198,740. Broken down by business unit (metric tons CO2e): Upstream – including non non-operated assets (490,211), Industry&Energy Management – including refining (2,682,605); Commercial (21,244); Others (25,924). In 2021 Galp reviewed its carbon footprint calculation methodology to better align it with the emissions values used in the calculation of the carbon intensity metrics. Therefore, the emissions from non-operated Upstream assets were included in the scope 1 and 2 emissions calculation (they were previously accounted in Scope 3 – Category 15 – Investments).

### Past year 1

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

3591892

#### Start date

January 1 2020

#### End date

December 31 2020

#### Comment

Gross global Scope 1 emissions (metric tons CO2e) equals to 3,591,892. Broken down by business unit (metric tons CO2e): Upstream (496,361), Industrial & Energy Management (3,073,958); Commercial (0); Others (21,573). In 2021 Galp reviewed its carbon footprint calculation methodology to better align it with the emissions values used in the calculation of the carbon intensity metrics. Therefore, the emissions from non-operated Upstream assets were included in the scope 1 and 2 emissions calculation (they were previously accounted in Scope 3 – Category 15 – Investments).

### Past year 2

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

3745540

#### Start date

January 1 2019

#### End date

December 31 2019

#### Comment

Gross global Scope 1 emissions (metric tons CO2e) equals to 3,745,540. Broken down by business unit (metric tons CO2e): Upstream (456,553), Industrial & Energy Management (3,265,510); Commercial (0); Others (23,477). In 2021 Galp reviewed its carbon footprint calculation methodology to better align it with the emissions values used in the calculation of the carbon intensity metrics. Therefore, the emissions from non-operated Upstream assets were included in the scope 1 and 2 emissions calculation (they were previously accounted in Scope 3 – Category 15 – Investments).

### Past year 3

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

3700186

#### Start date

January 1 2018

#### End date

December 31 2018

#### Comment

Gross global Scope 1 emissions (metric tons CO2e) equals to 3,700,186. Broken down by business unit (metric tons CO2e): Upstream (452,643), Industrial & Energy Management (3,222,933); Commercial (0); Others (24,610). In 2021 Galp reviewed its carbon footprint calculation methodology to better align it with the emissions values used in the calculation of the carbon intensity metrics. Therefore, the emissions from non-operated Upstream assets were included in the scope 1 and 2 emissions calculation (they were previously accounted in Scope 3 – Category 15 – Investments).

## C6.2

---

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

#### Row 1

##### Scope 2, location-based

We are reporting a Scope 2, location-based figure

##### Scope 2, market-based

We are reporting a Scope 2, market-based figure

#### Comment

From 2021 Galp started to calculate and report both location-based and market-based scope 2 figures. In some geographies the emission factors for location-based and market-based power production might be equivalent due to the absence of data regarding electricity providers.

**(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?****Reporting year****Scope 2, location-based**

55808

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

9149

**Start date**

January 1 2021

**End date**

December 31 2021

**Comment**

Market based scope 2 emissions reflect the purchasing of renewable electricity for operations in Portugal in 2021 (emission factor of 0 gCO<sub>2</sub>e/kWh) and the remaining emissions (9,149 t CO<sub>2</sub>e) correspond to emissions from other geographies. As the majority of electricity purchased by Galp is consumed in its operations in Portugal (> 90%), the emission factor of purchased electricity has a very high weight on scope 2 emissions. Location based emissions reflect the carbon intensity of the electricity producing systems of the different geographies where Galp operates and purchases electricity.

**Past year 1****Scope 2, location-based**

80286

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

42026

**Start date**

January 1 2020

**End date**

December 31 2020

**Comment**

Market based scope 2 emissions reflect the purchasing of 80% renewable electricity for operations in Portugal in 2020, resulting in an emission factor of 87.5 gCO<sub>2</sub>e/kWh and emissions from other geographies. As the majority of electricity purchased by Galp is consumed in its operations in Portugal (> 90%), the emission factor of purchased electricity has a very high weight on scope 2 emissions. Location based emissions reflect the carbon intensity of the electricity producing systems of the different geographies where Galp operates and purchases electricity.

**Past year 2****Scope 2, location-based**

103343

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

112504

**Start date**

January 1 2019

**End date**

December 31 2019

**Comment**

Market based scope 2 emissions reflect the purchasing electricity for operations in Portugal. In 2019, the electricity purchased by Galp had a relatively high emission factor (251 gCO<sub>2</sub>e/kWh), when compared to the one of the Portuguese grid (233 gCO<sub>2</sub>e/kWh). As the majority of electricity purchased by Galp is consumed in its operations in Portugal (> 90%), the emission factor of purchased electricity has a very high weight on scope 2 emissions. Location based emissions reflect the carbon intensity of the electricity producing systems of the different geographies where Galp operates and purchases electricity.

**Past year 3****Scope 2, location-based**

140199

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

133516

**Start date**

January 1 2018

**End date**

December 31 2018

**Comment**

Market based scope 2 emissions reflect the purchasing electricity for operations in Portugal with the 2018 emission factor for electricity purchased in 2018 being relatively lower (268.8 gCO<sub>2</sub>e/kWh), when compared to the one of the Portuguese grid (287 gCO<sub>2</sub>e/kWh). As the majority of electricity purchased by Galp is consumed in its operations in Portugal (> 90%), the emission factor of purchased electricity has a very high weight on scope 2 emissions. Location based emissions reflect the carbon intensity of the electricity producing systems of the different geographies where Galp operates and purchases electricity.



**(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

**Emissions in reporting year (metric tons CO<sub>2</sub>e)**

5581850

**Emissions calculation methodology**

Average product method

Fuel-based method

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

0

**Please explain**

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 considering 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, 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. Calculated emissions include crude oil (1.2 MtCO<sub>2</sub>e), gasoline (0.35 MtCO<sub>2</sub>e), diesel (1.9 MtCO<sub>2</sub>e), fuel oil (0.01 MtCO<sub>2</sub>e), LPG (0.058MtCO<sub>2</sub>e), jetfuel (0.09 MtCO<sub>2</sub>e), biofuels (0.084 MtCO<sub>2</sub>e) and natural gas (1.8 MtCO<sub>2</sub>e).

### **Capital goods**

**Evaluation status**

Not relevant, explanation provided

**Emissions in reporting year (metric tons CO<sub>2</sub>e)**

<Not Applicable>

**Emissions calculation methodology**

<Not Applicable>

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

<Not Applicable>

**Please explain**

Galp considers that emissions associated to capital goods are not material (less than 5% of total GHG emissions). As an integrated energy company, the emissions associated with Capital Goods are minimal compared with the ones generated by the production and use of the sold energy products. The Company decided not to report this category 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**

Relevant, calculated

**Emissions in reporting year (metric tons CO<sub>2</sub>e)**

1116429

**Emissions calculation methodology**

Average product method

Fuel-based method

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

0

**Please explain**

GHG emissions from the upstream activities to the electricity purchased by Galp for resale, including both the emissions from the lifecycle of the fuels associated to electricity purchased and the emissions resulted from the power generation. The amount of emissions is calculated based on the amount of power sold by Galp in Portugal and Spain and different emission factors for each geography. For the lifecycle emissions of fuels used in power generation a theoretical emission factor from DEFRA is used, while for the emissions calculated for the generation of sold power a market-based emission factor is used that should reflect the mix of different sources (fossil and renewable) of the electricity sold by the provider.

## Upstream transportation and distribution

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO2e)

206795

### Emissions calculation methodology

Average product method  
Fuel-based method

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

100

### Please explain

Galp calculates emissions from primary transportation of crude, chemicals and other oil products using the marine mode of transport. The company gathers information from operations of its own marine fleet, transport made using time charter services and spot charter services. Regarding these different modes of transport, Galp calculates the GHG based on data available for its own fleet (817 tCO2e) time-charter operations (111,164 tCO2e) and chartering-spot operations (94,813 tCO2e).

## Waste generated in operations

### Evaluation status

Not relevant, explanation provided

### Emissions in reporting year (metric tons 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). As an integrated energy company, the emissions associated with Waste generated in operations are minimal compared with the ones generated by the production and use of the sold energy products. Also, the company already reports fugitive emissions and operational emissions from the treatment of wastewater from its operations as its scope 1 and 2 emissions. The Company decided not to report this category 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

Relevant, calculated

### Emissions in reporting year (metric tons CO2e)

504

### Emissions calculation methodology

Distance-based method

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

100

### Please explain

Galp calculates the GHG emissions from business travel, namely air travel and rail travel. In 2021 air travel accounted for 504 tCO2e (including short, medium and long distance flights). Business travel done in the company's vehicle fleet is already included in the Scope 1 calculations.

## Employee commuting

### Evaluation status

Not relevant, explanation provided

### Emissions in reporting year (metric tons 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). As an integrated energy company, the emissions associated with Employee commuting are minimal compared with the ones generated by the production and use of the sold energy products. Furthermore, the company already reports the emissions from its light duty vehicles fleet as scope 1 emissions. This fleet is used by a considerable amount of employees for their commuting. The Company decided not to report this category 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

### Emissions in reporting year (metric tons 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, Galp already reports the emissions from the operation of these assets (fuel combustion, flaring, etc) as Scope 1 emissions.

## Downstream transportation and distribution

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO2e)

18764

### Emissions calculation methodology

Distance-based method

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

100

### Please explain

Galp calculates the GHG emissions from the transport of intermediate and final products in Portugal and Spain, by road (15,231 tCO2e) and rail (3,533 tCO2e). Emissions are calculated from an emission factor that has into consideration emissions per distance travelled.

## Processing of sold products

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO2e)

1447640

### Emissions calculation methodology

Average product method

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

0

### Please explain

Galp calculates the GHG emissions from the processing of crude oil sold by Galp in to downstream companies for refining. For this category we take into account an emission factor that materializes the global volume-weighted average emissions per barrel refined of 40.7 kg CO2e/boe calculated by Jing et al. (Nature, 2020). In this calculation we subtract the volumes of crude from Galp's production that are processed in Galp's own refineries.

## Use of sold products

### Evaluation status

Relevant, calculated

### Emissions in reporting year (metric tons CO2e)

37811953

### Emissions calculation methodology

Fuel-based method

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

0

### Please explain

In 2021 the calculation of Category 11: Use of Sold product was reviewed to include all the refined products to reflect the emissions from the part of the oil value chain where the largest volume of product is present. The emissions in this category now includes all products refined, even the ones exported and sold to other operators, and not just the sales to Galp clients. These updates are aligned with best practices for the sector, e.g. the GHG Protocol IPIECA guidelines, as well as the materiality analysis of the emission sources. Galp has determined GHG emissions associated with combustion of products refined and used by customers (tank-to-wheel): 37,811,953 tCO2e. The products considered were gasoline (6.8 MtCO2e), diesel (14.3 MtCO2e), fuel oil (7.3 MtCO2e), LPG (0.6 MtCO2e), jetfuel (2.1 MtCO2e) and sold and produced natural gas (6.7 MtCO2e). This category comprises the majority of the company's emissions (> 80%).

## End of life treatment of sold products

### Evaluation status

Not relevant, explanation provided

### Emissions in reporting year (metric tons 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 End of life treatment of sold products are not material (less than 5% of total GHG emissions) since the end life of the large majority of the products it sells is combustion, meaning these emissions are included in category 11 - Use of sold product. As an integrated energy company, the emissions associated with End of life treatment of sold products are minimal compared with the ones generated by the production and use of the sold energy products. The Company decided not to report this category 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.

## Downstream leased assets

### Evaluation status

Not relevant, explanation provided

### Emissions in reporting year (metric tons 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. As an integrated energy company, the emissions associated with Downstream leased assets are minimal compared with the ones generated by the production and use of the sold energy products. 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

### Emissions in reporting year (metric tons 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. As an integrated energy company, the emissions associated with its franchises (service stations) are minimal compared with the ones generated by the production and use of the sold energy products. The Company reassessed the materiality of this category last year and decided not to report it given its nonmateriality 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, explanation provided

### Emissions in reporting year (metric tons 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

In the past Galp disclosed its emissions from non-operated upstream assets under this category. From 2021 onwards the reporting of emissions indicators was reviewed and these emissions have been included in the company's scope 1 and 2 emission reporting. In the past this category also included emissions from the company's participation in the Galp Gás Natural Distribuição (GGND), a natural gas distribution network in Portugal which was sold in 2021. From 2021 onwards the company will report the emissions associated with the distribution of only the gas volumes it sells.

**Other (upstream)**

**Evaluation status**

Not relevant, explanation provided

**Emissions in reporting year (metric tons 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

**Emissions in reporting year (metric tons 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.

C6.5a

---

**(C6.5a) Disclose or restate your Scope 3 emissions data for previous years.**

**Past year 1**

**Start date**

January 1 2020

**End date**

December 31 2020

**Scope 3: Purchased goods and services (metric tons CO2e)**

4605750

**Scope 3: Capital goods (metric tons CO2e)**

**Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)**

968125

**Scope 3: Upstream transportation and distribution (metric tons CO2e)**

255354

**Scope 3: Waste generated in operations (metric tons CO2e)**

**Scope 3: Business travel (metric tons CO2e)**

1823

**Scope 3: Employee commuting (metric tons CO2e)**

**Scope 3: Upstream leased assets (metric tons CO2e)**

**Scope 3: Downstream transportation and distribution (metric tons CO2e)**

39046

**Scope 3: Processing of sold products (metric tons CO2e)**

1518489

**Scope 3: Use of sold products (metric tons CO2e)**

39634309

**Scope 3: End of life treatment of sold products (metric tons CO2e)**

**Scope 3: Downstream leased assets (metric tons CO2e)**

**Scope 3: Franchises (metric tons CO2e)**

**Scope 3: Investments (metric tons CO2e)**

242400

**Scope 3: Other (upstream) (metric tons CO2e)**

**Scope 3: Other (downstream) (metric tons CO2e)**

**Comment**

Comments and methodologies from 2021 emissions apply to 2020. The investments category include emissions estimated for the gas distribution network of Galp Gás Natural Distribuição (GGND) a company partly owned by Galp. Emissions from that gas distribution network were calculated using an emission factor that quantified fugitive emissions per network distance per year according to the API compendium.

**Past year 2**

**Start date**

January 1 2019

**End date**

December 31 2019

**Scope 3: Purchased goods and services (metric tons CO2e)**

6466581

**Scope 3: Capital goods (metric tons CO2e)**

**Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)**

935716

**Scope 3: Upstream transportation and distribution (metric tons CO2e)**

669161

**Scope 3: Waste generated in operations (metric tons CO2e)**

**Scope 3: Business travel (metric tons CO2e)**

6204

**Scope 3: Employee commuting (metric tons CO2e)**

**Scope 3: Upstream leased assets (metric tons CO2e)**

**Scope 3: Downstream transportation and distribution (metric tons CO2e)**

64913

**Scope 3: Processing of sold products (metric tons CO2e)**

1604394

**Scope 3: Use of sold products (metric tons CO2e)**

48444791

**Scope 3: End of life treatment of sold products (metric tons CO2e)**

**Scope 3: Downstream leased assets (metric tons CO2e)**

**Scope 3: Franchises (metric tons CO2e)**

**Scope 3: Investments (metric tons CO2e)**

242400

**Scope 3: Other (upstream) (metric tons CO2e)**

**Scope 3: Other (downstream) (metric tons CO2e)**

**Comment**

Comments and methodologies from 2021 emissions apply to 2020. The investments category include emissions estimated for the gas distribution network of Galp Gás Natural Distribuição (GGND) a company partly owned by Galp. Emissions from that gas distribution network were calculated using an emission factor that quantified fugitive emissions per network distance per year according to the API compendium.

### Past year 3

**Start date**

January 1 2018

**End date**

December 31 2018

**Scope 3: Purchased goods and services (metric tons CO2e)**

5953580

**Scope 3: Capital goods (metric tons CO2e)****Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)**

1198895

**Scope 3: Upstream transportation and distribution (metric tons CO2e)**

657970

**Scope 3: Waste generated in operations (metric tons CO2e)****Scope 3: Business travel (metric tons CO2e)**

11149

**Scope 3: Employee commuting (metric tons CO2e)****Scope 3: Upstream leased assets (metric tons CO2e)****Scope 3: Downstream transportation and distribution (metric tons CO2e)**

51917

**Scope 3: Processing of sold products (metric tons CO2e)**

1408450

**Scope 3: Use of sold products (metric tons CO2e)****Scope 3: End of life treatment of sold products (metric tons CO2e)****Scope 3: Downstream leased assets (metric tons CO2e)****Scope 3: Franchises (metric tons CO2e)****Scope 3: Investments (metric tons CO2e)**

195236

**Scope 3: Other (upstream) (metric tons CO2e)****Scope 3: Other (downstream) (metric tons CO2e)****Comment**

Comments and methodologies from 2021 emissions apply to 2020. The investments category include emissions estimated for the gas distribution network of Galp Gás Natural Distribuição (GGND) a company partly owned by Galp. Emissions from that gas distribution network were calculated using an emission factor that quantified fugitive emissions per network distance per year according to the API compendium.

### 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**

0.000199

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

3207889

**Metric denominator**

unit total revenue

**Metric denominator: Unit total**

16117000000

**Scope 2 figure used**

Market-based

**% change from previous year**

28

**Direction of change**

Decreased

**Reason for change**



In 2021, this performance metric decreased 28.0% compared to the previous year (from 0.000276 to 0.000199). Global scope 1+2 GHG emissions decreased 12% (from 3,633,918 tCO<sub>2</sub>e in 2020 to 3,207,889 tCO<sub>2</sub>e in 2021) and total revenues increased 42% (from €11,381,000,000 in 2020 to €16,117,000 in 2021). Thus,  $3,207,889 / 16,117,000,000 = 0.000199$ . In 2021, Galp remains focused on optimising its upstream and refining system processes and maximising energy and processual efficiency. We have several ongoing programmes and projects to optimise the use of resources and materials in our operations in refining with a view to achieving continuous improvements, minimising process variations and reductions in waste and effluents. In 2021, relevant refining activity conversion and energy efficiency improvement projects were implemented, with a total investment of c.€2.1 m.

---

**Intensity figure**

521.44

**Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO<sub>2</sub>e)**

3207889

**Metric denominator**

full time equivalent (FTE) employee

**Metric denominator: Unit total**

6152

**Scope 2 figure used**

Market-based

**% change from previous year**

1.6

**Direction of change**

Increased

**Reason for change**

In 2021, this performance metric increased 1.6% compared to what was calculated in the previous year (from 513.32 to 521.44). This is mostly due to the fact that in the previous year Scope 1+2 emissions reported were lower (3 138 427 tCO<sub>2</sub>e) since they did not include non-operated Upstream projects. If the same criteria for Scope 1+2 emissions reported in 2021 were applied to last year's calculations, then the value obtained would have been higher (3,633,918 tCO<sub>2</sub>e/6,114 FTE = 594.4) and this intensity figure for 2021 would be 12.3% lower than reported last year. Global scope 1+2 GHG emissions decreased 12% (from 3,633,918 tCO<sub>2</sub>e in 2020 to 3,207,889 tCO<sub>2</sub>e in 2021) and total FTE increased (from 6,114 to 6,152). Thus,  $3,207,889 / 6,152 = 521.44$ . Galp remains focused on optimising its upstream and refining system processes and maximising energy and processual efficiency. We have several ongoing programmes and projects to optimise the use of resources and materials in our operations in refining with a view to achieving continuous improvements, minimising process variations and reductions in waste and effluents. In 2021, relevant refining activity conversion and energy efficiency improvement projects were implemented, with a total investment of c.€2.1 m.

---

**Intensity figure**

0.27

**Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO<sub>2</sub>e)**

3207889

**Metric denominator**

Other, please specify (Tonne of feedstock processed)

**Metric denominator: Unit total**

11797050

**Scope 2 figure used**

Market-based

**% change from previous year**

13

**Direction of change**

Increased

**Reason for change**

In 2021, this performance metric increased 13% compared to the previous year (from 0.240 to 0.272) mainly due to an increase in feedstock processed associated with higher processing loads. This is mostly due to the fact that in the previous year Scope 1+2 emissions reported were lower (3 138 427 tCO<sub>2</sub>e) since they did not include non-operated Upstream projects. If the same criteria for Scope 1+2 emissions reported in 2021 were applied to last year's calculations, then the value obtained would have been higher (3,633,918 tCO<sub>2</sub>e/13,099,137ton feedstock = 0.28) and this intensity figure for 2021 would be 2% lower than reported last year. Global scope 1+2 GHG emissions decreased 12% (from 3,633,918 tCO<sub>2</sub>e in 2020 to 3,207,889 tCO<sub>2</sub>e in 2021) and total feedstock processed decreased around 7% (from 13,099,137ton to 11,797,050 ton). Thus,  $3,207,889 / 11,797,050 = 0.272$ . Galp remains focused on optimising its upstream and refining system processes and maximising energy and processual efficiency. We have several ongoing programmes and projects to optimise the use of resources and materials in our operations in refining with a view to achieving continuous improvements, minimising process variations and reductions in waste and effluents. In 2021, relevant refining activity conversion and energy efficiency improvement projects were implemented, with a total investment of c.€2.1 m.

---

C-OG6.12

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

**Unit of hydrocarbon category (denominator)**

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

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

24081.9

**% change from previous year**

12

**Direction of change**

Increased

**Reason for change**

In 2021, this performance metric increased 12% compared to the value what was reported in the previous year (from 32,941 to 36,992). This is mostly due to the fact that in the previous year Scope 1+2 emissions reported were lower (3,072,846 tCO2e) since they did not include non-operated Upstream projects the hydrocarbons produced were also a lower number since they only included operated upstream projects and excluded non-operated upstream produced hydrocarbons. If the same criteria for Scope 1+2 emissions and upstream production reported in 2021 were applied to last year's calculations, then the value obtained would have been higher (3,502.069 tCO2e/140.57mmboe = 24913.3) and this intensity figure for 2021 would be 3% lower than reported last year. Global scope 1 GHG emissions (Upstream+Refining - including biofuels) had a 11% decrease (from 3,591,892 tCO2e to 3,198,740 tCO2e) and total Million Barrels of Oil Equivalent (mmboe) produced had a 6% decrease (from 140.6 mmboe to 132.83 mmboe). Thus, 3,198,740/132.83= 24081.9. Galp remains focused on optimising its refining and Upstream system processes and maximising energy and processual efficiency. We have several ongoing programmes and projects to optimise the use of resources and materials in our operations in refining with a view to achieving continuous improvements, minimising process variations and reductions in waste and effluents. In 2021, relevant refining activity conversion and energy efficiency improvement projects were implemented, with a total investment of c.€2.1 m.

**Comment**

The numerator 3,198,740 tCO2e includes scope 1 GHG emissions of operated and non operated Upstream assets and Refining (including biofuel production) segments. The denominator (132.83 mmboe) includes hydrocarbons produced at upstream oil and natural gas produced & refining intake (feedstock processed).

**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**

0.125

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

0.013

**Comment**

Galp emitted approximately 500 t CH4 from its upstream and refining businesses. This corresponds to approximately 0.125% of total gas production in 2021 (approximately 12.7 kboepd) and 0.013 of total hydrocarbon production (127 kboepd, working interest). These values reflect the high efficiency of the company's projects materialized by their design that exports or reinjects the produced gas therefore avoiding routine flaring and other sources of methane 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	3185900	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	498.8	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	1.24	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)**

79.4

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

1984.75

**Comment**

CH4 fugitive emissions reported are related to fugitive emissions in the Sines refinery. Galp did not have any natural gas fields in production in 2021.

---

**Emissions category**

Flaring

**Value chain**

Upstream

**Product**

Oil

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

171334.33

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

419.5

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

181820.74

**Comment**

Galp's flaring emissions from its efficient upstream projects and refineries totalled 181820.74 tCO2e, including 419.5 tCH4.

---

**Emissions category**

Combustion (excluding flaring)

**Value chain**

Upstream

**Product**

Unable to disaggregate

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

402692.8

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

0.75

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

402711.6

**Comment**

Combustion emissions from fuel consumption (fuelgas, diesel, fuel, etc) in Upstream business.

---

**Emissions category**

Combustion (excluding flaring)

**Value chain**

Midstream  
Downstream

**Product**

Oil

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

2700646

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

116.98

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

2703570.2

**Comment**

Emissions from stationary and mobile combustion (natural gas, fuelgas, fuel, diesel, etc) in the refineries, logistics platforms, biofuel plants and co-generation units.

---

**Emissions category**

Process (feedstock) emissions

**Value chain**

Downstream

**Product**

Oil

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

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

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

819223

**Comment**

Process emissions from the Sines and Matosinhos refineries mostly coming from hydrogen production in steam methane reformer and coke. This number was provided in CO2e and no disaggregation between CO2 and CH4 is possible.

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	2706943.86
Brazil	395796
Angola	90721.6
Cabo Verde	526.76
Guinea-Bissau	352.6
Mozambique	3580.81
Eswatini	10.23
Sao Tome and Principe	371.74
Spain	436.49

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	490211
Industrial and Energy Management	2682605
Commercial	0
Others (includes corporate centers and co-generation business outside refinery)	25924
Renewables and new businesses	0

C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-T07.4/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)	490211	<Not Applicable>	Upstream activities includes exploration, development, and production of oil and gas in Brazil, Angola, São Tomé e Príncipe, Mozambique and Namibia
Oil and gas production activities (midstream)	2476.2	<Not Applicable>	Midstream includes the transportation, storage, and distribution of crude oil and natural gas, namely Galp's logistics and storage parks and owned maritime fleet
Oil and gas production activities (downstream)	2680129	<Not Applicable>	Downstream includes refining, processing, distribution, and marketing of oil and gas products
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)
Portugal	50542.05	0
Spain	4827.04	8710.33
Brazil	8.4	8.4
Cabo Verde	219.45	219.45
Guinea-Bissau	40.29	40.29
Mozambique	33.7	33.7
Eswatini	136.75	136.75

**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	0	0
Industrial and Energy Management	43711	618
Commercial	11586	8498
Others	451	33
Renewables and new businesses	0	0

**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	0	Upstream activities include exploration, development, and production of oil and gas in Brazil, Angola, São Tomé e Príncipe, Mozambique and Namibia. They are all deep to ultradeep offshore and are not connected to the electricity grid.
Oil and gas production activities (midstream)	2563.8	618.3	Midstream includes the transportation, storage, and distribution of crude oil and natural gas, namely Galp's logistics and storage parks and owned maritime fleet
Oil and gas production activities (downstream)	52793.4	8497.8	Downstream includes refining, processing, distribution, and marketing of oil and gas products
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	32878	Decreased	0	In 2022 Galp used 100% renewable energy its operations in Portugal, along with a small decrease in electricity consumption (from 1558 TJ in 2020 to 1494 TJ in 2021) allowed the reduction of 78% of Market based Scope 2 emissions from 42026 in 2020 to 9148 tCO2e in 2021 and of location based Scope 2 from 80 286 t CO2e in 2020 to 55 808 t CO2e from 2020 to 2021.
Other emissions reduction activities	74043	Decreased	2	In 2021 Galp invested 1.8M€ and implemented several energy efficiency projects in its Sines refinery, leading to reductions in its Scope 1 emissions of approximately 74043 tCO2e. These included 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. This project was finished in 2021, when an investment of 1821207€ of the total 46 582 226 € was made. It will allow the avoidance of an estimated 50484 tCO2e per year and have a payback period of approximately 6.5 years. Annual savings and payback period based on 2020 prices. The installation of a gas recovery system for the 3 flares of the Sines Refinery, allows direct savings in natural gas and avoids emissions from combusted products (estimated 23559 t CO2e/year). In 2021 an investment of 33454€ was made from a total of 8682002€ invested in the project. Estimated savings from this project are projected at 3359270€ and its payback period is of approximately 2.6 years. Annual savings and payback period based on 2020 prices. In 2021 the refining technology team had identified several projects to be implemented by 2025, with an estimated investment of €32 m which will materialize energy savings of 113 GJ/h and avoid 53 ktonCO2e/year.
Divestment	0	No change	0	No change
Acquisitions	0	No change	0	No change
Mergers	0	Please select	0	No change
Change in output	447000	Decreased	14	In 2020, Galp decided to discontinue from 2021 onwards refining and co-generation operations in Matosinhos, a 110 kbpd capacity refinery with lower complexity, following the structural changes to the consumption patterns of oil products, driven by the European regulatory context and the effects of the pandemic. The refinery shut down in April 2021 and the company has since concentrated activities in its Sines site. In 2022 the company announced the reconversion of the site into a new city dedicated to innovation and energies of the future, allocating parts of the site on the perimeter of the refinery for a university campus. In 2021 the Matosinhos refinery and co-generation plant emitted 372 kton CO2e, a reduction of 447 kton CO2 when compared to the previous year, an equivalent of 14% of 2021 Scope 1+2 emissions
Change in methodology	27592	Decreased	1	In 2021 the Sines refinery identified several opportunities to improve its operational performance and oil implemented several projects that allowed emissions reductions namely the improvement of combustion in crude furnaces, vacuum 1 and platformer in relation to 2020 (-5253 tCO2e) and the increase in utilization rate of the H2 producing platforming unit that reduced emissions from the steam methane reformer (-22595 tCO2e). These changes in physical operational conditions allowed for the savings of an estimated 27 848 t CO2e.
Change in boundary	490211	Increased	15.3	In 2021 Galp reviewed its GHG emissions reporting and changed its Scope 1+2 to include emissions from its non-operated assets that had been previously reported under scope 3, category 15 – investments. This resulted in an addition of 490 211 t CO2e to these scopes.
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	9513530	9513530
Consumption of purchased or acquired electricity	<Not Applicable>	379633	1985	381664
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>	379633	9515515	9895194

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.

**Sustainable biomass**

Heating value

Please select

Total fuel MWh consumed by the organization

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

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

Comment

**Other biomass**

Heating value

Please select

Total fuel MWh consumed by the organization

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

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

Comment

**Other renewable fuels (e.g. renewable hydrogen)**

Heating value

Total fuel MWh consumed by the organization

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

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

Comment

**Coal**

Heating value

Total fuel MWh consumed by the organization

MWh fuel consumed for self-generation of electricity

<Not Applicable>

MWh fuel consumed for self-generation of heat

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

Comment



**Oil**

**Heating value**

LHV

**Total fuel MWh consumed by the organization**

83452

**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**

15096

**Comment**

Gasoline, diesel and fueloil consumed in refinery, logistics platforms, upstream activities (FPSOs, drilling, etc), fuel transport and by the company's light duty vehicle fleet.

**Gas**

**Heating value**

LHV

**Total fuel MWh consumed by the organization**

10788571

**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**

4379273

**Comment**

Natural Gas and fuelgas consumption; only a part of natural gas is used for co-generation activities, other goes into the steam methane reformer to produce hydrogen. The electricity generated by co-generation is sold to the grid. Remaining fuelgas consumption takes place in the refineries, in the upstream offshore units (FPSOs) and small installations.

**Other non-renewable fuels (e.g. non-renewable hydrogen)**

**Heating value**

**Total fuel MWh consumed by the organization**

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

<Not Applicable>

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

**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**

**Comment**

**Total fuel****Heating value**

LHV

**Total fuel MWh consumed by the organization**

10872023

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

&lt;Not Applicable&gt;

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

&lt;Not Applicable&gt;

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

&lt;Not Applicable&gt;

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

4394369

**Comment**

Sum of gas and oil based fuels consumed by the organization. Oil includes gasoline, diesel and fueloil consumed in refinery, logistics platforms, upstream activities (FPSOs, drilling, etc), fuel transport and by the company's light duty vehicle fleet. Gas includes both natural gas and fuelgas consumption in the refineries, co-generation units and in the upstream offshore units (FPSOs).

**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	2267297	0	1287661	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 or near-zero emission factor in the market-based Scope 2 figure reported in C6.3.**

**Sourcing method**

Green electricity products from an energy supplier (e.g. green tariffs)

**Energy carrier**

Electricity

**Low-carbon technology type**

Renewable energy mix, please specify (The energy mix for Galp's electricity consumption in 2021 was: 44.75% Hydro power, 39.88% Wind power and 15.38% other renewable power sources (solar, biomass, etc) )

**Country/area of low-carbon energy consumption**

Portugal

**Tracking instrument used**

GO

**Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)**

379633

**Country/area of origin (generation) of the low-carbon energy or energy attribute**

Portugal

**Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)**

2021

**Comment**

Galp purchased renewable energy from its electricity provider Galp Power with an energy mix of 44.75% Hydro power, 39.88% Wind power and 15.38% other renewable power (solar, biomass, etc). The mix is considered renewable due to the purchase of Guarantees of Origin which are validated by the local regulator, ERSE. Electricity consumed by Galp in Portugal (379633 MWh) included 100% of renewable energy. This is a result of the target previously set to 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 2021 the co-generations of Sines and Matosinhos produced 979.64 GWh of electricity. Galp's renewable electricity projects totalled 963 MW installed capacity in 2021 and generated approximately 1288 MW of renewable power from a portfolio of mostly solar PV projects, along with the wind farm.

**C8.2g**

(C8.2g) Provide a breakdown of your non-fuel energy consumption by country.

**Country/area**

Portugal

**Consumption of electricity (MWh)**

379633

**Consumption of heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

379633

**Is this consumption excluded from your RE100 commitment?**

<Not Applicable>

---

**Country/area**

Spain

**Consumption of electricity (MWh)**

34479

**Consumption of heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

34479

**Is this consumption excluded from your RE100 commitment?**

<Not Applicable>

---

**Country/area**

Brazil

**Consumption of electricity (MWh)**

135.5

**Consumption of heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

135.5

**Is this consumption excluded from your RE100 commitment?**

<Not Applicable>

---

**Country/area**

Cabo Verde

**Consumption of electricity (MWh)**

390.6

**Consumption of heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

390.6

**Is this consumption excluded from your RE100 commitment?**

<Not Applicable>

---

**Country/area**

Guinea-Bissau

**Consumption of electricity (MWh)**

56.7

**Consumption of heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

56.7

**Is this consumption excluded from your RE100 commitment?**

<Not Applicable>

---

**Country/area**

Mozambique

**Consumption of electricity (MWh)**

482.6

**Consumption of heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

482.6

---

**Is this consumption excluded from your RE100 commitment?**

<Not Applicable>

**Country/area**

Eswatini

**Consumption of electricity (MWh)**

123.5

**Consumption of heat, steam, and cooling (MWh)**

0

**Total non-fuel energy consumption (MWh) [Auto-calculated]**

123.5

**Is this consumption excluded from your RE100 commitment?**

<Not Applicable>

**C9. Additional metrics**

**C9.1**

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

**Description**

Other, please specify (emissions intensity CO2/CWT)

**Metric value**

29.4

**Metric numerator**

kg CO2e Scope 1 emissions from the Sines refinery

**Metric denominator (intensity metric only)**

CWT - Complexity-Weighted Tonne

**% change from previous year**

3

**Direction of change**

Decreased

**Please explain**

CO2/CWT intensity is used to evaluate the efficiency of a refinery. This methodology was developed by Solomon and adopted by the EU as the unit for its refining benchmark used for the EU-ETS compliance. For a given refinery and a given time period, the CWT is calculated by first multiplying the throughput of each refinery process unit by a factor that is characteristic of the typical CO2 emissions for that unit. These products are then summed to give the overall CWT for the refinery. An additional term for 'off-site' operations is added to account for ancillary operations such as blending, storage and others. CWT accounts for all emissions that are related to the energy demand of the process units whether the energy is produced on-site or imported to the refinery in the form of heat or electricity. Galp's Sines refinery is continuously assessing and implementing projects to increase its efficiency and reduce its intensity. The installation has maintained the continuous improvement trend with a 10% reduction in carbon intensity in relation to 2015 and a % reduction year-on-year from 2020 to 29.4 kgCO2e/CWT.

**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	41	Galp produced 41 million barrels in 2021 (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 have any production from oil sands
Natural gas, billion cubic feet	27.8	Galp produced 27.8 billion cubic feet of natural gas in 2021 (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	712	950	7691	Estimated net total resources correspond to 3P reserves plus 3C contingent resources plus mean unrisks prospective resources. Galp's reserves and resources are subject to an independent assessment by DeGolyer and MacNaughton (DeMac).

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	86	89	58	Reserves and Resources data. Net total resource includes reserves + 3C contingent resources. Galp's reserves and resources are subject to an independent assessment by DeGolyer and MacNaughton (DeMac).
Natural gas	14	11	48	Reserves and Resources data. Net total resource includes reserves + 3C contingent resources. Galp's reserves and resources are subject to an independent assessment by DeGolyer and MacNaughton (DeMac).
Oil sands (includes bitumen and synthetic crude)	0	0	0	Reserves and Resources data. Net total resource includes reserves + 3C contingent resources. Galp's reserves and resources are subject to an independent assessment by DeGolyer and MacNaughton (DeMac).

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 2021. In-year net production (%): 0.4%; Net proved reserves (1P) (%): 0%; Net proved + probable reserves (2P) (%): 0%; Net proved + probable + possible reserves (3P) (%): 0%; Net total resource base (%): 0%

**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 (%)**

2

**Comment**

Deepwater represents 2.8% of total O&G production in 2021. In-year net production (%): 2.8; Net proved reserves (1P) (%): 1.2%; Net proved + probable reserves (2P) (%): 1%; Net proved + probable + possible reserves (3P) (%): 1%; Net total resource base (%):1.7%

**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 (%)**

98

**Comment**

Ultra Deepwater represents 96.8% of total O&G production in 2021. In-year net production (%): 96.8%; Net proved reserves (1P) (%): 98.8%; Net proved + probable reserves (2P) (%): 99.0%; Net proved + probable + possible reserves (3P) (%): 99.0%; Net total resource base (%): 98.3%.

**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	226

**C-OG9.3b**

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

	Throughput (Million barrels)	Comment
Oil	65.1	65 million barrels of crude oil
Other feedstocks	11.5	12 million barrels (other feedstocks)
Total	76.6	77 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	2.41
Gasolines	18.25
Naphtha	4.79
Kerosenes	5.27
Diesel fuels	32.6
Fuel oils	15
Lubricants	0.19
Waxes	0.49
Asphalt and tar	0.14
Petroleum coke	0
Still gas	0
Other, please specify (Aromatics, chemicals)	6.71

**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. Also, the Company's strategy originates a value-driven investment case, which relies on a clear capital allocation framework, allocating around 50% of its net investments in the 2021-25 period towards low-to-no-carbon activities.

**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
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.
Other, please specify (Energy efficiency measures in the oil and gas value chain)	Applied research and development	21-40%	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)
Carbon capture and storage/utilisation	Applied research and development	≤20%	0	The PilotStrategy project's goal is to characterize the Lusitanian basin storage complex to assess the safe and permanent storage of CO2.
Carbon capture and storage/utilisation	Pilot demonstration	≤20%	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.
Carbon capture and storage/utilisation	Applied research and development	≤20%	0	The Cat4MetMix project aims the CO2 capture through the conversion of CO2 to Methanol Using Molecular Sieves installed in a NetMIX reactor
Carbon capture and storage/utilisation	Pilot demonstration	≤20%	0	RD&I activities in the domain of carbon capture and utilisation, with the development of an innovative catalytic concept for the Gas-to-Liquid (GtL) applications.
Carbon capture and storage/utilisation	Applied research and development	≤20%	0	Through the Net4CO2 Colab, Galp develop RD&I activities in the domain of carbon capture and utilisation, with focus on the development of disruptive technologies, developing new processes and products that provide competitive solutions for CO2 capture and gas separations, and CO2 valorisation Might be part of the solution for Sines refinery decarbonisation.
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.
Enhanced Oil Recovery (EOR) techniques	Applied research and development	≤20%	0	The SmartH2O project aims to develop enhanced oil recovery technologies, to improve the recovery factor of carbonate fields, through the injection of smart water whose formulation aims at modifying the water/oil wettability, considering the influence of the pH and ionic composition of the injection water in capillary and surface phenomena, adopting as general criteria the reduction of oil production costs and environmental sustainability.
Enhanced Oil Recovery (EOR) techniques	Applied research and development	≤20%	0	The Digital CO2 Cycle project aims to develop an integrated platform for simulation, visualization and optimization of production, processing and reinjection of fluids rich in CO2, contributing to greater energy efficiency of the installations and reduction of emissions.
Hydrogen	Applied research and development	≤20%	0	Study and evaluation of the Green Hydrogen value chain integrating a pre-feasibility study and technical-economic evaluation for a 100MW installation.
Hydrogen	Applied research and development	≤20%	0	Pursue Green Hydrogen scientific and technological advancement throughout the entire value chain. HyLAB operates in the areas of science, research, innovation and social and economical development with Green H2.
Other, please specify (Advanced biofuels)	Applied research and development	≤20%	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	≤20%	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	Production of ethanol, jet and diesel from MSW and Biomass with possible integration with green H2
Smart systems	Applied research and development	≤20%	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)
Energy efficiency in transport	Applied research and development	≤20%	0	Test a new product for trucks – a supercapacitor solution to replace lead-acid batteries, that provides reliability in truck engine start. This solution allows a reduction in fuel consumption. C2C New Cap is a Portuguese startup that develop this technology.

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.



## 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\_2021 IMR - Integrated Management Report (2).pdf

GALP\_NFI\_TCFD 2021.pdf

GALP\_NFI GRI Standards 2021.pdf

**Page/ section reference**

Information about scope 1 GHG emissions is reported in the page 106 of the Galp Integrated Report 2021 and the Independent Assurance Report (that covers scope 1 GHG emissions) is published in the pages 451-452. Also, GRI Content Index 2021 (GALP\_NFI\_GRI Standards 2021) has information about scope 1 GHG emissions (p. 12) and the Independent Assurance Report covering scope 1 GHG emissions is published in p. 39-41.

**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\_2021 IMR - Integrated Management Report (2).pdf

GALP\_NFI\_TCFD 2021.pdf

GALP\_NFI GRI Standards 2021.pdf

**Page/ section reference**

Information about scope 2 GHG emissions is reported in the page 106 of the Galp Integrated Report 2021 and the Independent Assurance Report (that covers scope 2 GHG emissions) is published in the pages 451-452. Also, GRI Content Index 2021 (GALP\_NFI\_GRI Standards 2021) has information about scope 2 GHG emissions (p. 13) and the Independent Assurance Report covering scope 2 GHG emissions is published in p. 39-41.

**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\_2021 IMR - Integrated Management Report (2).pdf

GALP\_NFI GRI Standards 2021.pdf

**Page/section reference**

Information about scope 3 GHG emissions is reported in the page 106 of the Galp Integrated Report 2021 and the Independent Assurance Report (that covers scope 3 GHG emissions) is published in the pages 451-452. Also, GRI Content Index 2021 (GALP\_NFI\_GRI Standards 2021) has information about scope 3 GHG emissions (p. 13) and the Independent Assurance Report covering scope 3 GHG emissions is published in p. 39-41.

**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\_2021 IMR - Integrated Management Report (2).pdf

GALP\_NFI\_TCFD 2021.pdf

GALP\_NFI GRI Standards 2021.pdf

**Page/section reference**

Information about scope 3 GHG emissions is reported in the page 106 of the Galp Integrated Report 2021 and the Independent Assurance Report (that covers scope 3 GHG emissions) is published in the pages 451-452. Also, GRI Content Index 2021 (GALP\_NFI\_GRI Standards 2021) has information about scope 3 GHG emissions (p. 13) and the Independent Assurance Report covering scope 3 GHG emissions is published in p. 39-41.

**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\_2021 IMR - Integrated Management Report (2).pdf

GALP\_NFI\_TCFD 2021.pdf

GALP\_NFI GRI Standards 2021.pdf

**Page/section reference**

Information about scope 3 GHG emissions is reported in the page 106 of the Galp Integrated Report 2021 and the Independent Assurance Report (that covers scope 3 GHG emissions) is published in the pages 451-452. Also, GRI Content Index 2021 (GALP\_NFI\_GRI Standards 2021) has information about scope 3 GHG emissions (p. 13) and the Independent Assurance Report covering scope 3 GHG emissions is published in p. 39-41.

**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\_2021 IMR - Integrated Management Report (2).pdf

GALP\_NFI\_TCFD 2021.pdf

GALP\_NFI GRI Standards 2021.pdf

**Page/section reference**

Information about scope 3 GHG emissions is reported in the page 106 of the Galp Integrated Report 2021 and the Independent Assurance Report (that covers scope 3 GHG emissions) is published in the pages 451-452. Also, GRI Content Index 2021 (GALP\_NFI\_GRI Standards 2021) has information about scope 3 GHG emissions (p. 13) and the Independent Assurance Report covering scope 3 GHG emissions is published in p. 39-41.

**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\_2021 IMR - Integrated Management Report (2).pdf

GALP\_NFI\_TCFD 2021.pdf

GALP\_NFI GRI Standards 2021.pdf

**Page/section reference**

Information about scope 3 GHG emissions is reported in the page 106 of the Galp Integrated Report 2021 and the Independent Assurance Report (that covers scope 3 GHG emissions) is published in the pages 451-452. Also, GRI Content Index 2021 (GALP\_NFI\_GRI Standards 2021) has information about scope 3 GHG emissions (p. 13) and the Independent Assurance Report covering scope 3 GHG emissions is published in p. 39-41.

**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\_2021 IMR - Integrated Management Report (2).pdf

GALP\_NFI\_TCFD 2021.pdf

GALP\_NFI GRI Standards 2021.pdf

**Page/section reference**

Information about scope 3 GHG emissions is reported in the page 106 of the Galp Integrated Report 2021 and the Independent Assurance Report (that covers scope 3 GHG emissions) is published in the pages 451-452. Also, GRI Content Index 2021 (GALP\_NFI\_GRI Standards 2021) has information about scope 3 GHG emissions (p. 13) and the Independent Assurance Report covering scope 3 GHG emissions is published in p. 39-41.

**Relevant standard**

ISAE3000

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

100

---

**Scope 3 category**

Scope 3: Use of sold products

---

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Limited assurance

**Attach the statement**

GALP\_2021 IMR - Integrated Management Report (2).pdf

GALP\_NFI\_TCFD 2021.pdf

GALP\_NFI GRI Standards 2021.pdf

**Page/section reference**

Information about scope 3 GHG emissions is reported in the page 106 of the Galp Integrated Report 2021 and the Independent Assurance Report (that covers scope 3 GHG emissions) is published in the pages 451-452. Also, GRI Content Index 2021 (GALP\_NFI\_GRI Standards 2021) has Information about scope 3 GHG emissions (p. 13) and the Independent Assurance Report covering scope 3 GHG emissions is published in p. 39-41.

**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\_2021 IMR - Integrated Management Report (2).pdf

GALP\_NFI\_TCFD 2021.pdf

GALP\_NFI GRI Standards 2021.pdf

**Page/section reference**

Information about scope 3 GHG emissions is reported in the page 106 of the Galp Integrated Report 2021 and the Independent Assurance Report (that covers scope 3 GHG emissions) is published in the pages 451-452. Also, GRI Content Index 2021 (GALP\_NFI\_GRI Standards 2021) has Information about scope 3 GHG emissions (p. 13) and the Independent Assurance Report covering scope 3 GHG emissions is published in p. 39-41.

**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 Report). GALP_2021 IMR - Integrated Management Report (2).pdf GALP_NFI_TCFD 2021.pdf GALP_NFI GRI Standards 2021.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 Report). GALP_2021 IMR - Integrated Management Report (2).pdf GALP_NFI_TCFD 2021.pdf GALP_NFI GRI Standards 2021.pdf
C6. Emissions data	Year on year emissions intensity figure	ISAE 3000	Progress made on carbon intensity metrics (gCO <sub>2</sub> e/MJ) is verified every year. These metrics 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 CO <sub>2</sub> /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) (CO <sub>2</sub> e/boe) is also verified every year. GALP_2021 IMR - Integrated Management Report (2).pdf GALP_NFI_TCFD 2021.pdf GALP_NFI GRI Standards 2021.pdf
C4. Targets and performance	Emissions reduction activities	ISAE 3000	Emission reduction initiatives reported in the Galp Integrated Report are verified, under the GRI Indicators GRI 302-4, GRI 302-5 and GRI 305-5. The GRI Content Index 2021 is published at Galp's website. GALP_2021 IMR - Integrated Management Report (2).pdf GALP_NFI_TCFD 2021.pdf GALP_NFI GRI Standards 2021.pdf
C8. Energy	Energy consumption	ISAE 3000	Energy consumption reported in the Galp Integrated Report and GRI Content Index is verified, under the GRI Indicators GRI 302-1. GRI Content Index 2021 is published at Galp's website. GALP_2021 IMR - Integrated Management Report (2).pdf GALP_NFI_TCFD 2021.pdf GALP_NFI GRI Standards 2021.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**

83.6

**% of Scope 2 emissions covered by the ETS**

0

**Period start date**

January 1 2021

**Period end date**

December 31 2021

**Allowances allocated**

1837540

**Allowances purchased**

1036994

**Verified Scope 1 emissions in metric tons CO<sub>2</sub>e**

2674058

**Verified Scope 2 emissions in metric tons CO<sub>2</sub>e**

0

**Details of ownership**

Facilities we own and operate

**Comment**

For 2021 (period January 1, 2021 to December 31, 2021) Galp's Sines and Matosinhos refineries were awarded with 1 837 540 free emissions allowances under the carbon leakage protection scheme of phase IV of the EU-ETS. In that same period, Galp purchased 1 036 994 allowances. The final verified emissions for 2021, under the EU-ETS, in metric tons of CO<sub>2</sub> were 2 674 058. Galp continuously works to improve the efficiency and reduce the emissions from its assets under the EU-ETS. 2021 was marked by the closure of the Matosinhos refinery and the continuing execution of efficiency projects at the Sines facility. There was continued focus on improving the energy efficiency of operations in its Sines Refinery, implementing several measures and investing 1.8M€ in these projects, including the excess air control in the furnaces, which reduced Natural Gas consumption and avoided 5.3 ktonCO<sub>2</sub>e/year. The debottlenecking of the catalytic reforming unit allowed the increase of the unit load and the consequential generation of more H<sub>2</sub>, avoiding 22.6 ktonCO<sub>2</sub>e/year. Several other actions to improve overall efficiency took place during 2021, such as the cleaning of the atmospheric distillation unit pre-heating train, which will allow the reduction of fuel consumption and avoid CO<sub>2</sub> emissions. The hydrocracker had a scale catcher installed, which will allow a reduction in pressure drop and may permit longer cycles. Skimming was also performed in the Hydrocracker's first stage reactor, permitting a reduction in the steam consumption and consequentially in CO<sub>2</sub> emissions. Continuous improvement of efficiency in the Sines refinery allowed the installation to maintain a trend of performance improvement materialized by a 10% reduction in carbon intensity in 2021 in relation to 2015 from 32.7 to 29.4 kgCO<sub>2</sub>/CWT.

## 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 dedicated legal and external relations teams that monitor all relevant climate related regulatory issues and a 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 (CO<sub>2</sub>/CWT) in order to maintain or increase the number of long-term free allowances provided.

The increased ambition in emissions reduction announced by the EU commission recently with the European Climate law and accompanying Fit for 55 legislative package will put increased pressure on CO<sub>2</sub> prices which are likely to rise, as well as in the allocation of free emission allowances, which will likely decrease, especially if the refining sector is included in the CBAM mechanism in the future.

Therefore, the costs arising from EU-ETS and the expected associated increase are included in the company's 10-year Business Plan and yearly budget.

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. Our teams are continuously working to identify and implement new efficiency and emissions reduction projects and currently have identified several projects to be implemented by 2025, with an estimated investment of €32 m which will materialize energy savings of 113 GJ/h and avoid 53 ktonCO<sub>2</sub>e/year.

## 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

#### GHG Scope

Scope 1  
Scope 2

#### Application

The Company considers that carbon cost internalisation mechanisms such as carbon pricing are the most effective and efficient way to promote the decarbonisation of the economy on a global scale. These mechanisms can simultaneously cover all different decarbonisation technologies with the potential to drive cost-effective GHG emission reductions and promote a comparable impact assessment of the different available options, while securing technological neutrality. When evaluating investments in new project developments, expansions or upgrades of existing assets, Galp stress tests the impact of the related CO<sub>2</sub> emissions in its economics and CO<sub>2</sub> related metrics and targets before any investment decision. The Company considers an internal carbon value that changes with time, varying from a present-day value that correlates with the price of an EU-ETS allowance and increases to above 200€/tonCO<sub>2</sub>e in 2050, incorporating a potential global carbon price and its temporal evolution.

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

85

#### Variance of price(s) used

The company considers a carbon price on GHG emissions in investment analysis and therefore incorporates CO<sub>2</sub> and climate related issues in its decision-making process. The Company considers that carbon cost internalisation mechanisms such as carbon pricing are the most effective and efficient way to promote the decarbonisation of the economy on a global scale. A carbon price is considered when evaluating medium and long-term investments, to mitigate risks and maximize opportunities along the value chain. When evaluating investments in new project developments, expansions or upgrades of existing assets, Galp stress tests the impact of the related CO<sub>2</sub> emissions in its metrics and targets before any investment decision. 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 full lifecycle of different technologies, 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. In making this analysis, the Company considers an internal carbon price that changes with time, varying from a present-day value that correlates with the current price of an EU-ETS allowance and increases in time to prices above 200€/tonCO<sub>2</sub>e in 2050, ensuring the incorporation of a potential global carbon price and its temporal evolution. By using a dynamic carbon price, Galp demonstrates that it is aware of the future potential changes in regulation, consumer and technological patterns and the risks associated with long-term business plan analysis. Galp also considers different carbon prices in its scenario analysis, which are based on the international references and forecasts used in scenario modelling. This allows the Company to stress test its long-term strategy and perform sensitivity analysis on the carbon price variable. Recognising carbon pricing as an essential and strategic tool to minimize the economy's carbon intensity, Galp submitted its commitment to the We Mean Business Platform..

#### Type of internal carbon price

Shadow price

#### Impact & implication

Galp recognises that putting a price on carbon is an essential and strategic tool to minimising every activity's carbon intensity, and therefore 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 reducing emissions, transitioning to a lower carbon intensity portfolio and limiting future average temperature rises. It is also a way of positively influencing the necessary technological transitions by positively highlighting technological solutions with lower associated GHG emissions, leading to increased energy efficiency and reduced carbon intensity, and overall reductions in the carbon footprint of activities and products. Galp incorporates the impact on CO<sub>2</sub> emissions in investment analysis (mandatory for all investments considered in the relevant standard). We consider carbon pricing when evaluating medium to long term investments to mitigate investment risks and maximize opportunities. This, along with a due diligence analysis of the activity's carbon intensity (CI), ensures the alignment of assets and operations with a low carbon economy. This methodology used in the diligence analysis aims to incorporate: a) The impact of the evolution of CO<sub>2</sub> emissions of projects, and their alignment with a low carbon economy and current GHG related targets; b) The CO<sub>2</sub> variable in the process of assessing projects. The establishment of an internal price on carbon also allows us to improve the efficiency of current operations, considering the overall energy consumption and identifying possible improvement actions to be implemented, namely on the choice of the energy mix for internal consumption which also takes into account the carbon content of each fuel/energy type and its embedded carbon price. The incorporation of a carbon price is also essential to identify monitor climate related risks and opportunities during scenario analysis, strengthening the outcome of that exercise and positively guiding the Company towards a lower carbon intensity future and by using a dynamic carbon price, Galp demonstrates that it is aware and can anticipate the future potential changes in regulation, consumer and technological patterns and the risks associated with long-term business plan analysis.

## C12. Engagement

---

### C12.1

---

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

- Yes, our customers/clients
- 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 & Details of engagement**

Education/information sharing	Run an engagement campaign to education customers about your climate change performance and strategy
-------------------------------	--

**% of customers by number**

87

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

3.2

**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 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, moreover these fuels are sold at most Galp service stations. Since this initiative was launched, Galp has carried out several strong engagement campaigns with this group of customers (Iberian Clients) with the aim of promoting this type of fuels and the environmental benefits associated. Success is measured through the level of sales of these new fuels, which have increased compared to last year, as customers are being engaged and accept the Evologic fuels. In 2021 Evologic fuels represent 19% of the total of diesel and gasoline sales for the Iberian Peninsula.

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

Galp remains focused on selling additive-enhanced fuel and committed to the excellence of the products and services provided, differentiating strategy in the marketing of oil products. With this in mind, Galp has launched a new fuel offering for Iberian clients. These fuels have high performance additives, which allow for greater fuel savings, extended engine life and greater efficiency, with lower GHG emissions associated, consequently benefiting the environment. Galp concentrates its marketing activity in Iberia (downstream), where it is a relevant player. We have a wide distribution network and we are one of the leading operators in the region where Evologic fuels are marketed, moreover these fuels are sold at most Galp service stations. Since this initiative was launched, Galp has carried out several strong engagement campaigns with this group of customers (Iberian Clients) with the aim of promoting this type of fuels and the environmental benefits associated. Success is measured through the level of sales of these new fuels, which have increased compared to last year, as customers are being engaged and accept the Evologic fuels. In 2021 Evologic fuels represent 19% of the total of diesel and gasoline sales for the Iberian Peninsula.

**Type of engagement & Details of engagement**

Education/information sharing	Run an engagement campaign to educate customers about the climate change impacts of (using) your products, goods, and/or services
-------------------------------	---

**% of customers by number**

87

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

0

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

In 2021, Galp continue its strong bet on supplying renewable electricity for mobility and other uses. This offer is aimed at it's road mobility and retail B2C and B2B electricity costumers. The company more than doubled the number of operating charging points, surpassing 1,000 points in Iberia. Currently, the Company owns the largest network in Portugal with 1,146 points, of which 172 are Fast and Ultra-Fast Charging Points. The Company is also developing its network structure in Spain, with 40 charging points already installed. The sales of renewable electricity for mobility also doubled to 3.4 GWh The Company expects to have more than 10,000 operating charging points installed in Iberia by the end of 2025, with this business playing a relevant role in Galp's transition to a lower-carbon portfolio. Galp developed a decentralised renewable energy production solution, Galp Solar, based on smaller scale solar power generation systems and services aiming at maximising energy consumption and efficiency both to B2B and B2C segments. At the end of 2021, Galp Solar already has an installed capacity of c.13 MW, covering more than 4,000 clients in Iberia. 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. All the electricity sold by Galp to new B2C customers during 2021 was of renewable origin, adding to the over 15,000 clients that had already subscribed to the green electricity contracts in the previous year.

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

All the electricity sold by Galp to new B2C customers during 2021 was of renewable origin, adding to the over 15,000 clients that had already subscribed to the green electricity contracts in the previous year. In 2021 sales of electricity in Iberia increased 25% to approximately 4.2 TWh, of which 27% was renewable power, while renewable electricity sold for mobility doubled to 3.4 GWh. In 2021, Galp more than doubled the number of operating charging points, surpassing 1,000 points in Iberia. Currently, the Company owns the largest network in Portugal with 1,146 points, of which 172 are Fast and Ultra-Fast Charging Points. The Company is also developing its network structure in Spain, with 40 charging points already installed. The Company expects to have more than 10,000 operating charging points installed in Iberia by the end of 2025, with this business playing a relevant role in Galp's transition to a lower-carbon portfolio. Galp developed a decentralised renewable energy production solution, Galp Solar, based on smaller scale solar power generation systems and services aiming at maximising energy consumption and efficiency both to B2B and B2C segments. At the end of 2021, Galp Solar already has an installed capacity of c.13 MW, covering more than 4,000 clients in Iberia. The aggregated annual production from these facilities is estimated at approximately 1 GWh and is equivalent to 0.29 ktonCO2e of avoided emissions. % of customer - related Scope 3 emissions as reported in C6.5 is not filled since these are renewable products and do not have any associated scope 3 emissions.

**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, when necessary, we also carry out one to one meetings and written correspondence (documentation exchange, signing protocols, etc.).

**Partners:** Galp launched the Upcoming Energies platform with the aim of accelerating the innovation ecosystem and redefining the energy business. Its concept is to establish an open door to the external R&D+I community, based on targets, collaborative programmes, materialised by projects with start-ups, suppliers, universities and partners, as well as with new stakeholders that will integrate the innovation ecosystem in the energy sector. Overall, in 2021, 77 partners were engaged in projects, culminating in 6 acceleration programs, 18 pilots and 25 projects closed. The main topics covered in these projects were sustainability, digital, production optimisation, operations enhancement and new energies engagement.

**Suppliers:** In 2021 Galp launched a survey to its Tier 1 suppliers to try to raise awareness on climate issues and on the importance of carbon footprint and energy consumption measurement and reporting and to evaluate if they participated or subscribed to any sustainability and climate related initiatives. 839 suppliers from 25 countries were surveyed, representing a 355 M€ billing volume with a 49% response rate. The survey included questions measuring scope 1, 2 and 3 emissions, energy consumptions, the carbon intensity of the products supplied and if the supplier had emission reduction targets and an externally verified report with sustainability data.

**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 targets at Primary School students, aged 6 to 10, as well as their teachers, guardians and parents. These programs address issues such as energy sources, sustainable mobility, energy footprint and energy-related careers. Schools receive play-based educational visits that aim to contribute to changing behaviours towards a more efficient energy consumption. In Future UP projects, students are encouraged to develop projects and solutions based on the following topics: raise awareness in the school community to behavioural changes through education and knowledge, sustainable energy sources, sustainable mobility and ecological footprint, and professions linked to energy. This programme involves more than 38800 students, 824 schools, and 1746 teachers and over 70 energy classes were taught.

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

Additionally, Galp, along with 7 other companies in the energy sector (BP, Eni, Equinor, Repsol, Shell and Total Energies) participated in several working groups that aimed 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:** In order to tackle the challenge posed by the energy transition and other material issues, updated information is necessary to influence the business strategy and adopt best practices and to define ambitious targets towards continuous improvement. Therefore we maintain an active network of cooperation, sharing, and knowledge development, participating in various industry associations in different business segments. These engagements are particularly relevant in areas where technology and regulation are evolving fast such as renewable power generation, improvement of asset efficiency, development of lower to no carbon fuels (e.g. RFNBO, biofuels), CCS, etc.

Galp is a member of WBCSD and the Portuguese division of BCSD and is present on several climate related working groups focused on working towards carbon neutrality by 2050, namely the Carbon Neutrality and Sustainable Finance working groups in BCSD Portugal and SOS 1.5 project and Hydrogen, Policy, Advocacy & Mobilization, Mobility decarbonisation, Carbon Capture, Storage and Removals and Energy Transformation working groups of the WBCSD.

Other organizations that we support to move towards the energy transition and a low carbon economy: CDP, WEF, APREN, Hydrogen Europe, EPRA, Natural & bio gaz vehicle association, Batpower - Battery Cluster Portugal, APPB.

## **C12.2**

---

### **(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?**

No, but we plan to introduce climate-related requirements within the next two years

## **C12.3**

---

**(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?**

**Row 1**

**Direct or indirect engagement that could influence policy, law, or regulation that may impact the climate**

Yes, we engage directly with policy makers  
Yes, we engage indirectly through trade associations

**Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?**

Yes

**Attach commitment or position statement(s)**

Galp signed BCSD Portugal manifesto where companies committed to support the goals of the Paris Agreement, paving the way for robust policies to be adopted towards the COP26. Our ambition is public and can be found in our TCFD 2021 report, Integrated Report 2021 (page33), Corporate Website (<https://www.galp.com/corp/en/sustainability/our-approach/our-approach-to-sustainability/other-initiatives-and-commitments>; <https://www.galp.com/corp/en/sustainability/our-commitments/energy-and-climate/carbon-footprint>; <https://www.galp.com/corp/en/sustainability/our-commitments/energy-and-climate/climate-change-and-energy-transition>) and Galp's Participation in Industry Association: Climate Change Report. GALP\_2021 IMR - Integrated Management Report (2).pdf  
GALP\_NFI\_TCFD 2021.pdf  
Participation in Industry Associations - Climate Change 2022.pdf

**Describe the process(es) your organization has in place to ensure that your engagement activities are consistent with your overall climate change strategy**

The collaboration with relevant stakeholders such as central and local governments, European Union institutions, business associations, industry peers, partners, suppliers, energy users and investors, generates learning opportunities, creates shared value, fosters partnerships and trust, and ultimately paves the way for a more inclusive and informed decision-making process. At Galp, we participate in the climate debate with focus on sustainability and the development of clean and affordable energy solutions that leads us, as a company, to commit ourselves to drive the energy transition and take action to mitigate climate change. In this sense, besides our participation in initiatives and associations focused on fulfilling the objectives of the Paris Agreement, the European and National Climate Laws, and the SDGs, we participate in technical working groups that promote the implementation of these same ambitious targets. We, as participants, are aware that Industry associations play a key role in society, as players for the development of collaborative platforms and to promote the best practices in different sectors of activity. As a result, Galp benefits from a network of cooperation and knowledge-sharing, allowing us to develop the highest standards of performance and to promote relevant debates, within and outside the organization. Additionally, Galp, jointly with Industry Associations, supports the development of strategies aligned with the international community's goals, mainly those regarding the energy transition and carbon neutrality. As for future association membership, Galp focuses its choice on a set of criteria aligned with the Paris Agreement and the European Climate Law in accordance with Galp's strategy for the decade 20-30. All our associations are analyzed according with these criteria and the monitoring report is annually updated and publicly available. 2022 Report: <https://www.galp.com/corp/Portals/0/Recursos/Sustentabilidade/SharedResources/Documents/Parceiros%20setoriais/Participation%20in%20Industry%20Associations%20-%20Climate%20Change%202022.pdf>

**Primary reason for not engaging in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate**

<Not Applicable>

**Explain why your organization does not engage in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate**

<Not Applicable>

**C12.3a**

**(C12.3a) On what policy, law, or regulation that may impact the climate has your organization been engaging directly with policy makers in the reporting year?**

**Focus of policy, law, or regulation that may impact the climate**

Climate-related targets  
Emissions trading schemes  
Renewable energy generation

**Specify the policy, law, or regulation on which your organization is engaging with policy makers**

Fit-For-55 package

**Policy, law, or regulation geographic coverage**

Regional

**Country/region the policy, law, or regulation applies to**

Europe

**Your organization's position on the policy, law, or regulation**

Support with no exceptions

**Description of engagement with policy makers**

Galp participates actively in public consultations and in collaborative groups, conferences and forums created by the European Commission and promote meetings with the European institutions in order to enrich the legislative work with the experience and know-how of the industry. Galp welcomes Fit-For-55 package and the EU's and Iberia's climate laws, from the standpoint of a global integrated energy player committed to be a carbon neutral Company worldwide in 2050. Its advocacy efforts are concentrated on the proposals that more directly impact the company's activities (e.g. revision of the EU-ETS, RED II, FuelEU, REFuelEU, etc) and aim to highlight and reinforce the pivotal role that governments, industry, and society play in designing and implementing a holistic approach to the decarbonization and sustainability of the energy system. Additionally, Galp engages with several national and international policy-makers, such as DGEG, APA, National Portuguese Government and European Commission.

**Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation**

<Not Applicable>

**Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

**C12.3b**

**(C12.3b) Provide details of the trade associations your organization engages with which are likely to take a position on any policy, law or regulation that may impact the climate.**

**Trade association**

Other, please specify (Overall - summary of trade associations in which Galp participates)

**Is your organization's position on climate change consistent with theirs?**

Consistent

**Has your organization influenced, or is your organization attempting to influence their position?**

We publicly promote their current position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

We influence the trade associations where we participate to adopt best practices and to define ambitious targets aligned with the Paris Agreement. Galp is aiming to be a key player in the future of energy, integrating the energy transition across all business units. In order to tackle this challenge and other material issues identified, we maintain an active network of cooperation, knowledge sharing and development, participating in various industry associations in different business segments.

Transparency, together with other Galp values and principles, serves as a cornerstone for good professional conduct and the relationship with our stakeholders. For this reason, Galp publicly informs on its main associations (see doc--

<https://www.galp.com/corp/Portals/0/Recursos/Sustentabilidade/SharedResources/Documents/Parceiros%20setoriais/Participacao%20na%20Industria%20Associacoes%20-%20Climate%20Change%202022.pdf>). In 2021, and with the rapid transition to a paradigm in favour of sustainable development implying that companies reflect on the commitments they sign up to, and also on the associations they join and participate in, we analysed the alignment of the main associations in which Galp participates in relation to its positioning with the climate. This evaluation had the main goals of identifying the sector associations that are aligned with Galp's Purpose, Vision, Mission and Values, with respect to sustainable development and thus to the Paris Agreement and the European Climate Law. We selected 20 organizations that represent about 75% of Galp's contribution to associations in 2021. Of the 20 associations analysed, we concluded that, according to our criteria (Paris Agreement, the European Climate Law and Galp's Purpose, Vision, Mission and Values) 19 are aligned, 1 are partially aligned (ABEP), and none are misaligned.

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)**

**Describe the aim of your organization's funding**

<Not Applicable>

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

**Trade association**

FuelsEurope

**Is your organization's position on climate change consistent with theirs?**

Consistent

**Has your organization influenced, or is your organization attempting to influence their position?**

We publicly promote their current position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

FuelsEurope supports the Green Deal's ambition for climate neutrality in 2050 and will work with the EU institutions, Member States, and stakeholders, to help create the essential enabling policy framework. It recognises that there is no business as usual and is ready to play a full role by developing low-carbon liquid fuels (including net-zero carbon fuels), as well as other products and services needed to achieve this the climate neutrality objective. Moving towards a low carbon economy, we actively and transparently participate in trade associations with global initiatives on climate change, namely: EPRA (European Petroleum Refiners Association – fusion of CONCAWE and Fuels Europe) – which promotes economically and environmentally sustainable refining, supply and use of petroleum products in the EU, by providing input and expert advice to the EU Institutions, Member State Governments and the wider community, thus contributing in a constructive and pro-active way to the development and implementation of EU policies and regulations. Their policy priorities are climate & energy; environmental and quality air, low carbon fuels, among others. 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 and access to affordable 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. This association is aligned with the objectives of the Paris Agreement and the European Climate Law, as well as with Galp's Purpose, Vision, Mission and Values.

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)**

275000

**Describe the aim of your organization's funding**

Membership fee to participate in the association and have access to their views and materials on the evolving regulation and energysystem.

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

**Trade association**

Other, please specify (WBCSD)

**Is your organization's position on climate change consistent with theirs?**

Consistent

**Has your organization influenced, or is your organization attempting to influence their position?**

We publicly promote their current position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

The global network of the World Business Council for Sustainable Development (WBCSD) is the largest international business organization working in the sustainable development domain. A core component of the WBCSD's Climate Policy activities is to foster strong policy signals and economic incentives promoting a race-to-the-top where sustainable solutions can succeed. WBCSD actively calls for policies that are consistent with ambitious action on climate and enable business-led solutions to scale and speed implementation of the Paris Agreement. WBCSD's policy and advocacy work aims to support members in bringing the collective voice of progressive businesses

into global policy events to help shape the international agenda so that it becomes more relevant to business and leads to business success by increasing their sustainability and alignment with the Paris Agreement and 1.5°C scenarios. Businesses have an opportunity to bring solutions to important agenda-setting and decision-making mechanisms in. among others, the energy, food and nature spaces globally by demonstrating insight, sharing knowledge and expertise, and providing solutions. Galp is also a member of BCSD Portugal is part of the global network of the World Business Council for Sustainable Development (WBCSD), WBCSD and BCSD Portugal are fully aligned with the objectives of the Paris Agreement and the European Climate Law, as well as with Galp's Purpose, Vision, Mission and Values. 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%202022.pdf>

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)**

162469.7

**Describe the aim of your organization's funding**

Annual membership fee to participate in the association and working groups and have access to updated information and views on decarbonization of the economy and evolution of low carbon businesses. Galp participates in the following working groups/ projects: • WBCSD Policy, Advocacy & Mobilization, Reporting Matters • Carbon Capture, Storage and Removal • Mobility decarbonisation • SOS 1.5 • Energy transformation • Hydrogen workstream

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

---

**Trade association**

Other, please specify (APPB (Associação Portuguesa de Produtores de Biocombustíveis))

**Is your organization's position on climate change consistent with theirs?**

Consistent

**Has your organization influenced, or is your organization attempting to influence their position?**

We publicly promote their current position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

APPB and Galp believe that biodiesel is a sustainable alternative to fossil fuels, will play a crucial role in the integration of renewable energies and decarbonization of final energy use, especially in the road transport sector. APPB's objectives encompass the promotion of the utilization of biofuels, assisting its members in the implementation of relevant European directives (e.g. RED II) and encouraging the use of waste and advanced materials in the manufacture of biofuels. This association is aligned with the objectives of the Paris Agreement and the European Climate Law, as well as with Galp's Purpose, Vision, Mission and Values. 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%202022.pdf>

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)**

**Describe the aim of your organization's funding**

<Not Applicable>

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

---

**Trade association**

SolarPower Europe

**Is your organization's position on climate change consistent with theirs?**

Consistent

**Has your organization influenced, or is your organization attempting to influence their position?**

We publicly promote their current position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

SolarPower Europe aims to make solar the core of a smart, sustainable, secure and inclusive energy system in order to reach climate neutrality in the EU before 2050 by: - successfully advocating solar energy solutions to European policymakers and influencing at national level helping deliver the enabling environment to maximise solar power growth in Europe; - producing thought-leading energy market analyses to support our members' business objectives and promote solar power to policymakers and the wider energy sector; - actively engaging the finance community to ensuring solar-based energy solutions have the right access to financing and funding across Europe; Effectively and consistently communicating the benefits of solar power across Europe, and globally, through all relevant communication channels to make sure our key arguments gain traction with our stakeholders and the media; and - Efficiently coordinating business opportunities for our members by facilitating their attendance at the best networking and business development platforms in Europe and beyond. SolarPowerEurope is fully aligned with the objectives of the Paris Agreement and the European Climate Law, as well as with Galp's Purpose, Vision, Mission and Values. 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%202022.pdf>

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)**

**Describe the aim of your organization's funding**

<Not Applicable>

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

---

**Trade association**

Other, please specify (AGN - Portuguese Association of Natural Gas Companies )

**Is your organization's position on climate change consistent with theirs?**

Consistent

**Has your organization influenced, or is your organization attempting to influence their position?**

We publicly promote their current position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

Association that integrates companies (inc Galp), entities and individuals interested in the promotion and development of NG as a safe, efficient and sustainable source of energy. Among their main goals, AGN aims to participate and collaborate with community and international organizations dedicated to the development and promotion of scientific, technical, legal and economic progress of the industry. We have a common presence at working groups and discussion forums. Our participation favours the benefits of the role of the NG and the distribution infrastructures in contributing to a lower carbon intensity economy. We believe that the combined potential of NG and renewable gases (hydrogen, biomethane, synthetic methane) will help to achieve climate ambitions and improve people's quality of life by helping to keep the energy transition at a low cost while modernizing the economy, guaranteeing access to affordable energy and strengthening the European industry. AGN is fully aligned with the objectives of the Paris Agreement and the European Climate Law, as well as with Galp's Purpose, Vision, Mission and Values. 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%202022.pdf>

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)**

199589

**Describe the aim of your organization's funding**

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

---

**Trade association**

Other, please specify (ABEP – Brazilian Association of Oil and Gas Companies (Associação Brasileira de Empresas de E&P de Petróleo e Gás))

**Is your organization's position on climate change consistent with theirs?**

Consistent

**Has your organization influenced, or is your organization attempting to influence their position?**

We publicly promote their current position

**State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)**

IBP/ABEP is the main O&G association in Brazil. Petrogal Brasil, as the 3rd largest O&G producer in Brazil, holds a strategic position in such association with a permanent seat in ABEP's BoD influencing the present and future of the O&G Industry in Brazil. Our common participation in the ABEP's forums favours the sharing of privileged knowledge about the applicable regulation and legislation and the best industry practices and industry, thus minimizing legal/ regulatory risk associated with political decision-making processes. In addition, being an affiliate to ABEP is to stand out as a company that follows international quality standards and to assume a key position in the E&P Brazilian market in relation to access to sectorial statistics, bidding schedules and overall information, new regulation clippings, technical work groups and to follow closely all E&P related matters (regulatory, tax, environmental, etc.) which might impact the company's business in Brazil. ABEP is fully aligned with the objectives of the Paris Agreement and the European Climate Law, as well as with Galp's Purpose, Vision, Mission and Values. 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%202022.pdf>

**Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)**

199589

**Describe the aim of your organization's funding**

Membership fee to participate in the association

**Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?**

Yes, we have evaluated, and it is aligned

---

## 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\_2021 IMR - Integrated Management Report (2).pdf

GALP\_NFI\_TCFD 2021.pdf

SASBReporting2021.pdf

Nonfinancialinformation2021GRIstandards.pdf

**Page/Section reference**

Please consult IMR 2021 (whole report). Some direct references to TCFD, climate change and GHG emissions can be found in pages: 6, 7, 18-22, 29-31,33,35,37-39,40,43,66,69-70,75, 95-107,116,120,134. Please also consult complimentary pieces which are Annexes to the IMR 2021 but published separately, namely: Task Force on Climate-related Financial Disclosures (TCFD) 2021 (full pages), GRI Standards 2021.

**Content elements**

Governance

Strategy

Risks & opportunities

Emissions figures

Emission targets

Other metrics

**Comment**

Galp is committed to improve and increase the disclosure of its ESG governance, strategy, climate related risks and opportunities and emissions and other ESG metrics. As such it reports on these topics on its annual Integrated Management Report, as well as a separate TCDF report and discloses information according to the GRI and SASB standards. Please consult IMR 2021 (whole report). Some direct references to TCFD, climate change and GHG emissions can be found in pages: 6, 7, 18-22, 29-31,33,35,37-39,40,43,66,69-70,75, 95-107,116,120,134. Please also consult complimentary pieces which are Annexes to the IMR 2021 but published separately, namely: Task Force on Climate-related Financial Disclosures (TCFD) 2021 (full pages), GRI Standards 2021 and SASB Reporting 2021.

---

**Publication**

In voluntary sustainability report

**Status**

Complete

**Attach the document**

GALP\_NFI\_TCFD 2021.pdf

**Page/Section reference**

Please consult Galp's report: Task Force on Climate-related Financial Disclosures (TCFD) 2021 (full pages) attached to this reply.

**Content elements**

Governance  
Strategy  
Risks & opportunities  
Emissions figures  
Emission targets  
Other metrics

**Comment**

Galp is committed to improve and increase the disclosure of its ESG governance, strategy, climate related risks and opportunities and emissions and other ESG metrics. As such it reports on these topics on its annual Integrated Management Report, as well as a separate TCDF report. Please consult Galp's report: Task Force on Climate-related Financial Disclosures (TCFD) 2021 (full pages) attached to this reply.

---

**Publication**

In voluntary sustainability report

**Status**

Complete

**Attach the document**

Nonfinancialinformation2021GRIstandards.pdf

**Page/Section reference**

Please also consult a complimentary piece which is an Annexes of the IMR 2021 but published separately, namely Galp's report: GRI Standards 2021 (whole report, more specifically 201-2, 302, 305)

**Content elements**

Governance  
Strategy  
Risks & opportunities  
Emissions figures  
Emission targets  
Other metrics  
Other, please specify

**Comment**

Galp is committed to improve and increase the disclosure of its ESG governance, strategy, climate related risks and opportunities and emissions and other ESG metrics. As such it reports on these topics on its annual Integrated Management Report, as well as a separate report following relevant GRI standards.

---

**Publication**

In voluntary sustainability report

**Status**

Complete

**Attach the document**

SASBReporting2021.pdf

**Page/Section reference**

Please also consult a complimentary piece which is an Annexes of the IMR 2021 but published separately, namely Galp's report: SASB Reporting 2021 (whole report, more specifically EM-EP-110a.1, EM-MD-110a.1, EM-RM-110a.1, EM-EP-110a.2, EM-EP-110a.3)

**Content elements**

Governance  
Strategy  
Risks & opportunities  
Emissions figures  
Emission targets  
Other metrics

**Comment**

Galp is committed to improve and increase the disclosure of its ESG governance, strategy, climate related risks and opportunities and emissions and other ESG metrics. As such it reports on these topics on its annual Integrated Management Report, as well as a separate report following relevant SASB standards.

---

## C15. Biodiversity

### C15.1

**(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?**

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity	Scope of board-level oversight
Row 1	Yes, board-level oversight	Galp, is aware of the importance and potential impact Biodiversity related risks and opportunities in its operations, revenues and of the materiality of these topics for society, investors and other stakeholders. The Company recognises the importance of a responsible leadership and of the definition of robust and effective governance mechanisms that integrate key climate and energy transition related challenges (including biodiversity-related topics) into our strategy. The Board of Directors (BoD) oversees the the Company's strategic formulation process and investment planning, along with the Executive Committee (EC), where the CEO is the designated member responsible for climate strategy. The EC is appointed by the BoD and is directly responsible for developing and implementing the company's strategic objectives and guidelines. The Sustainability Committee, is the board level committee responsible for assisting the BoD in integrating sustainability principles (inc biodiversity related topics) into the decision-making process into the Galp Group management process, promoting industry best practices in all of its activities, with a view to long-term value creation. In 2021, the Sustainability Committee met four times and minutes of these meetings were drawn up regarding the following matters: a) analysis of the regulatory context and main ESG trends; b) analysis of Galp's sustainability context and ESG best practices implemented by the peers, for each of the dimensions of the ESG space; c) analysis of Galp's sustainability performance; d) development of an energy transition plan; e) analysis and discussion of Galp's new climate ambitions and decarbonisation performance; f) overview of the physical climate and transition risks assessment process; g) discussion of the most relevant COP 26 outcomes and their impact on Galp's activities; h) overview of the sustainability roadmap for 2022; i) context and organisational response level analysis on the disclosure of nonfinancial information. In all of these meetings the biodiversity-related issues were mentioned/ discussed.	<Not Applicable>

### C15.2

**(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?**

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Biodiversity-related public commitments	Initiatives endorsed
Row 1	Yes, we have made public commitments and publicly endorsed initiatives related to biodiversity	Commitment to No Net Loss Adoption of the mitigation hierarchy approach Commitment to not explore or develop in legally designated protected areas Commitment to respect legally designated protected areas Commitment to avoidance of negative impacts on threatened and protected species Commitment to no conversion of High Conservation Value areas Commitment to no trade of CITES listed species	SDG

### C15.3

**(C15.3) Does your organization assess the impact of its value chain on biodiversity?**

	Does your organization assess the impact of its value chain on biodiversity?	Portfolio
Row 1	Yes, we assess impacts on biodiversity in both our upstream and downstream value chain	<Not Applicable>

### C15.4

**(C15.4) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?**

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity- related commitments
Row 1	Yes, we are taking actions to progress our biodiversity-related commitments	Land/water protection Land/water management Species management Education & awareness

### C15.5

**(C15.5) Does your organization use biodiversity indicators to monitor performance across its activities?**

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	Yes, we use indicators	State and benefit indicators Response indicators

C15.6

**(C15.6) Have you published information about your organization’s response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).**

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
In mainstream financial reports	Content of biodiversity-related policies or commitments Risks and opportunities Biodiversity strategy	Relevant information can be consulted in chapter 5.5 Reducing the ecological footprint (pages 123-126) GALP_2021 IMR - Integrated Management Report (2).pdf
In voluntary sustainability report or other voluntary communications	Content of biodiversity-related policies or commitments Impacts on biodiversity	Relevant information can be consulted in 304-1,304-2,304-3,304-4 (page 11-12) BiodiversityRisks_ScreeningReport_Galp_2021.pdf GALP_NFI GRI Standards 2021.pdf
Other, please specify (Galp's Website)	Content of biodiversity-related policies or commitments Impacts on biodiversity Risks and opportunities Biodiversity strategy	Our website describes our approach, initiatives and other types of response to biodiversity-related issues. <a href="https://www.galp.com/corp/en/sustainability/our-commitments/protection-of-people-environment-assets/environment/biodiversity-and-water">https://www.galp.com/corp/en/sustainability/our-commitments/protection-of-people-environment-assets/environment/biodiversity-and-water</a>

C16. Signoff

C-FI

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

C16.1

**(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.**

	Job title	Corresponding job category
Row 1	Director of Strategy and Sustainability	Chief Sustainability Officer (CSO)

SC. Supply chain module

SC0.0



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

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 mmbœ 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](http://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>

**SC0.1**

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

	Annual Revenue
Row 1	

**SC1.1**

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

**SC1.2**

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

**SC1.3**

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

Allocation challenges	Please explain what would help you overcome these challenges
Customer base is too large and diverse to accurately track emissions to the customer level	Hard to have access to individual customer data

**SC1.4**

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

Yes

SC1.4a

---

**(SC1.4a) Describe how you plan to develop your capabilities.**

Currently developing a tool to calculate emissions for Galp products in the relevant geographies.

SC2.1

---

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

SC2.2

---

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

SC4.1

---

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

No, I am not providing data

Submit your response

---

**In which language are you submitting your response?**

English

**Please confirm how your response should be handled by CDP**

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

The European Climate Pact Submission

---

**Please indicate your consent for CDP to showcase your disclosed environmental actions on the European Climate Pact website as pledges to the Pact.**

Yes, we wish to pledge to the European Climate Pact through our CDP disclosure

**Please confirm below**

I have read and accept the applicable Terms