Welcome to your CDP Climate Change Questionnaire 2019

C0. Introduction

C0.1

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

Grifols is a global healthcare company since 1940 whose mission is to improve the health and wellbeing of people around the world. We accomplish this mission by producing life-saving protein therapies for patients and by providing hospitals, pharmacies and healthcare professionals with the tools they need to deliver expert medical care.

We have three primary divisions -- Bioscience, Diagnostic and Hospital – which develop, produce and market our innovative products and services to medical professionals in more than 90 countries around the world.

Bioscience: Grifols Plasma-Related Companies, in order to produce high quality plasma products, has vertically integrated its productions structure. From plasma donation (Biomat USA and TPR), further plasma testing and inventory hold (Grifols Plasma Operations), to the production stage (Biomat, Instituto Grifols, Grifols Biologicals and Grifols Therapeutics), Grifols closely oversees every step of the process.

Hospital Pharmacy and Blood Bank: A broad range of parenteral solutions for intravenous therapies and clinical nutrition products used in the care of patients. Also offers latest-generation solutions for hospital pharmacy management processes.

Diagnostic Division: Development and manufacture of instruments, reagents and other services for in-vitro diagnostics that allow medical professionals to make more informed decisions. This division’s products are designed for blood banks, transfusion centers and immunohematology labs.

Engineering: Grifols Engineering designs novel engineering solutions for the manufacturing processes in its own plants and offers its services to other companies.

Commercial affiliates over the world (offices and warehouses in some of them)

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

Row 1	January 1, 2018	December 31, 2018	No

C0.3

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

Argentina
Australia
Brazil
Chile
China
China, Hong Kong Special Administrative Region
Czechia
France
Germany
Ireland
Italy
Malaysia
Mexico
Poland
Portugal
Singapore
Spain
Switzerland
Thailand
United Kingdom of Great Britain and Northern Ireland
United States of America

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 consolidation approach to your Scope 1 and Scope 2 greenhouse gas inventory.

Financial control

C1. Governance

C1.1

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

Yes

C1.1a

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

Position of individual(s)	Please explain
Chief Executive Officer (CEO)	CEO's, members of the Strategy Board and Corporate Managing Board and Executive Commitees Members, have the responsibility for approving the Environmental Policy that contain the commitment to minimize the environmental risks involved in company activities, taking into account the effects of climate change. Chief Industrial Officer (CIO) of Global Industrial Division, member of the Corporate Management Board periodically reports directly to the CEOs about the status of the environmental performance, including climate change issues. CEOs oversight climate change related issues
Other, please specify Chief Industrial Officer (CIO)	Chief Industrial Officer (CIO) of Global Industrial Division reports directly to the CEOs. CIO is member of the Corporate Environmental Committee that meets twice a year and is the responsible of the Corporate Environmental Department. CIO of Global Industrial Division approves the three-years Corporate Environmental Program of which includes goals regarding to energy efficiency and GHG and ODS emissions. Monetary and human resources have been allocated to fulfill the accomplishment of the before mentioned goals. He is also responsible of the Global Facilities Department, approving investments related to engineering projects, including issues related to energy efficiency and control of energy expenses.

C1.1b

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

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain

Scheduled – some meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding annual budgets Setting performance objectives Monitoring implementation and performance of objectives Monitoring and overseeing progress against goals and targets for addressing climate-related issues	CIO approves the Grifols Environmental Program and informs CEOs periodically about the status of the actions. Biannual and yearly progress is also reported to the President and CEOs for their review. First half report and the annual Corporate Responsibility report publish the perfomance of climate-related issues with CEOs suppervision. Board of Directors approves the Corporate Risk Policy which includes environmental risks associated to regulatory changes. Board of Directors also approves the Corporate Responsibility Policy that includes the aim to minimize the environmental risks involved in company activities, taking into account the effects of climate change.

C1.2

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

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Other C-Suite Officer, please specify Chief Industrial Officer (CIO)	Both assessing and managing climate-related risks and opportunities	Half-yearly
Other committee, please specify Corporate Environmental Committee	Both assessing and managing climate-related risks and opportunities	Half-yearly

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).

1. Where in the organizational structure this/these position(s) and/or committees lie: The responsibility regarding climate-related issues lies in the Grifols Environmental Committee. Chief Industrial Officer (CIO) reports directly to the CEOs, who are members of the Board of

Directors, Corporate Executive Committee, Bioscience Executive Committee, Hospital Executive Committee and Diagnostic Executive Committee. CIO is member of the Corporate Environmental Committee that meets twice a year and is the final responsible of the Corporate Environmental Department. CIO approves the three-years Corporate Environmental Program of which includes goals regarding to energy efficiency and GHG and ODS emissions. Monetary and human resources have been allocated to fulfill the accomplishment of the before mentioned goals. He is also responsible of the Global Facilities department and Grifols Engineering Company, approving investments related to engineering projects, including issues related to energy efficiency and control of energy expenses.
2. What their associated responsibilities are: His responsibility is to surveil the compliance of Grifols Energy Policy, which was approved in 2017. He proposes and approves objectives and actions aimed to reduce energy consumption and emissions worldwide. CIO participates in the half-yearly follow-up of results and makes new proposals for actions to be implemented. He oversees the capital expenditures for energy savings projects. This responsibility has been assigned to this Committee because it manages the information about climate-related issues at a global company level and has the authority to make decisions. Therefore, it is the most appropriate to evaluate the results and plan improvement goals in the future.
3. How climate-related issues are monitored: Environmental Key Performance Indicators (eKPI), such as energy consumption, are requested to the responsible of each center monthly and annually. The data provided is verified and the equivalent CO2 emissions are calculated by manufacturing plant, division and country. The results are evaluated by the Grifols Environmental Committee. In 2018 has been implemented a new platform for monitoring energy and water consumption: Lucid BuildingOS®. It is a leading building energy management and analytics platform that uncovers savings and improves performance.

C1.3

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

Yes

C1.3a

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

Who is entitled to benefit from these incentives?

Chief Operating Officer (COO)

Types of incentives

Recognition (non-monetary)

Activity incentivized

Energy reduction project

Comment

Indicator: Control and reduction of operating costs (including energy costs)

Who is entitled to benefit from these incentives?
Energy manager

Types of incentives
Recognition (non-monetary)

Activity incentivized
Energy reduction project

Comment

Who is entitled to benefit from these incentives?
Energy manager

Types of incentives
Monetary reward

Activity incentivized
Efficiency project

Comment
Improving energy efficiency implementing the Corporate Energy Policy.

Who is entitled to benefit from these incentives?
Process operation manager

Types of incentives
Monetary reward

Activity incentivized
Efficiency project

Comment
Improving boilers efficiency for reducing fuel consumption.

C2. Risks and opportunities

C2.1

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

	From (years)	To (years)	Comment
Short-term	0	3	
Medium-term	3	6	
Long-term	6	10	

C2.2

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

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

C2.2a

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

	Frequency of monitoring	How far into the future are risks considered?	Comment
Row 1	Six-monthly or more frequently	>6 years	Identification of climate change risks and opportunities is embedded in Corporate Risk Analysis practices, being environmental responsibility one of the corporate operative risks. For example, risks associated to extreme weather events due to climate change, such as tornados, hurricanes, floodings, and droughts are considered in new projects development. In addition, the Environmental Department reports to the Environmental Committee all information related to legal risks related to climate change and carbon footprint on a yearly basis. Both Environmental and Engineering Departments are in charge of initial identification and assessment of environmental risks, including climate change, being annually updated and performed for all new projects, according to Grifols Environmental Policy which explicitly includes “implementation of pollution prevention techniques to minimize environmental risks related to its activities, including those related to climate change”.

C2.2b

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

A Corporate Standard Operational Procedure (EV-SOP-000002) has been edited to identify, evaluate and prioritize the different environmental risks, including climate-related ones. The

procedure is based on HAZOP methodology. A matrix that relates probability and severity of the potential events and impacts is defined for the company activities. In addition, definitions for probability of occurrence enable us to categorize if an event has either a high, medium or low probability of occurrence. Severity can be also evaluated as slight, medium or serious. It is also considered the prevention measures established by Grifols to minimize risk consequences. Depending on the combined analysis of probability, severity and detection mechanisms, the occurrence of events might require from 'improvement actions', 'necessary actions' or 'urgent actions'. Grifols evaluates all environmental and climate change potential events using this methodology. According to this metohodology, the severity criteria establishes that if the remedial cost or the reduction of profit is greater than 250K EUR, it is considered a severe risk. Therefore, all severe risks might be considered substantive financial impacts.
Risk identification is assessed at both corporate and asset level. At corporate level, the Grifols Environmental Policy requires the implementation of pollution prevention techniques considering the effects on climate change. Corporate goals include opportunities related to energy reduction and emission targets at global level. Energy consumption is monitored at asset's level and the information gathered is used to design instructions to minimize along the different project stages. Energy savings goals have to be integrated in the Environmental Program of Goals. Management level is focused on eco-efficiency as an opportunity to reduce our impact on climate change. These opportunities (environmental goals) are approved by the Environmental Committee, which is the máximum level of environmental management. These objectives are obligatory. At asset level, it is required to apply best available technologies in order to ensure energy efficiency criteria in each of the projects developed by the company which serves us to save emissions and take profit from energy savings. This process is performed specifically for each case. Work instructions for the identification of opportunities for improvement in engineering projects that can cause an environmental impact are implemented.

C2.2c

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

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Grifols evaluates the risk of serious non-compliance of a legal requirement as a part of the Corporate Risk Policy. A corporative procedure (EV-SOP-Compliance Obligation) has been developed in order to minimize that risk. The procedure concerns the manufacturing plants in Spain and USA, from the Bioscience, Hospital and Diagnostic divisions. The compliance of this procedure is audited with, at least, a half-yearly frequency. The identification of legal requirements and other requirements that Grifols subscribes, applicable to its environmental aspects, is supported by a specialized external company (Asecorp Consultoría Empresarial in Spain and Dakota in the companies located in USA) that performs both the initial identification and its periodic maintenance through an on-line system restricted access. The identification of requirements includes those deriving from general to local legislation, as well as voluntary

		requirements and those derived from permits and licenses. This system allows direct access to the full legal texts, the summary sheets of each regulation and the requirements applicable to each company. Further legal information can be obtained through other sources, such as Official Bulletins, magazines or industry associations. The Environmental Department is permanently informed, via email, about all changes that may occur in the online system (new legislation published, derogations, modifications, etc.). Yearly external audits carried out by the certification body TÜV Rheinland check the Grifols environmental compliance obligations. Yearly internal audits are also contracted to external companies to ensure the objectivity. The Grifols Internal Audit Department verify main environmental requirements.
Emerging regulation	Relevant, always included	One of the evaluated risks in Grifols is a potential economic fine due to not being aware of a new legal requirement. The standard operational procedure EV-SOP-000004 makes sure that this situation does not happen. The compliance of new regulations is evaluated, at least, half-yearly. This evaluation is especially important for manufacturing plants in Spain and USA, from the Bioscience, Hospital and Diagnostic divisions. Moreover, the Environmental Department is permanently informed, via email, about all changes that may occur in the online system (new legislation published, derogations, modifications, etc.). In some countries, such as China, a legal service is contracted annually to ensure compliance of the regulations related to climate change. It is also evaluated the risk for increasing the pricing of GHG emissions (EUTS) due to a change of regulation, increasing operational cost of manufacturing.
Technology	Relevant, always included	The risk of generating higher emissions due to the unawareness of Best Available Techniques (BAT) that could help to reduce them. In order to avoid it, a document has been developed (EV-RINS-000002-2) which establishes Grifols environmental standards that must be applied during the design of new facilities (building and processes). These standards are aimed to air conditioners, lighting, compressed air, vapor generation, water treatment, electricity and natural gas consumers, etc. Most of Grifols standards are above market standards. For instance, using of motors with IEC IE3 efficiency rating or higher, using inverters, installation of flow regulators connected to temperature probes that adjust the fan functioning. In addition, at the beginning of engineering projects, the environmental aspects are evaluated and BATs are implemented when possible. For instance, using clean in place (CIP) automated rotation ball cleaning systems when washing reactors and hoses. A new document, EV-INS-000018 Environmental consideration in Applied Engineering department ensures that the environmental criteria

		are included in the design and manufacturing of new equipment. For instance, prioritize as far as possible, local suppliers for the components, in cases where a cooling system is required, the refrigerant gases will not be halogenated and it will be taken into consideration that the GWP (Global Warming Potential) is the lowest possible. There are alternatives that allow reducing the electrical consumption during the use of the equipment, for instance, select, among those electric motors that are suitable, even within the same brand, the one with the lowest power, at the programming level, in prolonged stoppages of the machine, a deactivation time is established after which almost all the components of the machine (motors, lighting, screens, etc.) are deactivated, except for the control ones. Try to include the maximum number of components and machined parts in each of the orders, and in order to minimize the number of shipments by suppliers, try to establish a container return system be with the nearest suppliers as far as possible.
Legal	Relevant, always included	The risk of business loss due to a permit or license non-compliance has been evaluated. Grifols has a department in Spain dealing with this specific issue. The compliance of permits and licenses is evaluated, at least, half-yearly.
Market	Not relevant, explanation provided	The market loss risk due to a lack of an appropiate environmental strategy has been evaluated. This risk would affect the comercial and marketing activity of Grifols International. These departments actively participate in the identification of initiatives that come out, mainly, of the European and American markets, that might be implemented by the manufacturing plants from the Bioscience, Hospital and Diagnostic divisions. Therefore, this risk is not considered as relevant.
Reputation	Relevant, always included	The reputational damage due to a loss of the ISO 14001 certificate in the Spain and USA plants has been evaluated. The evaluation frequency is, at least, half-yearly. A Corporate Standard Operation Procedure (EV-SOP-000011 Internal Audit) has been edited in order to prevent this risk.
Acute physical	Relevant, always included	The risk of meteorological phenomena, such as tornadoes and earthquakes, affecting Grifols plants in North Carolina, Los Angeles (Bioscience division) and San Francisco (Diagnostic division) is evaluated. The Earthquake phenomenon is also a risk identified in Murcia (Hospital division). A system for risk assessment is developed in the procedure EV-SOP-000002 Risk Management and Opportunities. The result of the evaluations is a controlled Residual Risk. As a consequence, these conditions are taken into account while building the facilities, emergency plans are developed, employee training and drills are performed. In addition, contingency plans are periodically updated in order to minimize the potential consequences of these risks.

Chronic physical	Relevant, always included	Chronic physical risks, such as the risk of aridization that could lead to water shortages have been evaluated. Grifols Engineering implement different measures aimed to reduce water consumption. For instance: the collection and reuse of clean water in boilers and/or in cooling towers, rejection of distillers, ultra and microfiltration, WFI (Water for Injection) and purified water circuits purge systems, avoid the installation of open water cooling circuits using exchangers with cooling tower or chiller equipment, recovery water from steam condensates and use as feed water in the boilers, etc. There is a catalogue of measures to reduce water consumption that have been implemented in Grifols during the last 20 years (EV-RINS-000002-2). Synergies regarding this aspect are developed between Spain and USA engineering groups. The 2017-2019 Grifols Environmental Program includes objectives to reduce water consumption in Grifols plants in Spain (Hospital and Diagnostic divisions) and USA (Bioscience division). There are contingency plans in all these plants in case a water shortage takes place. The chronic physical risk linked to an increase in global temperature has also been evaluated. An increase in global temperature might cause higher energy demands for keeping low temperatures in plasma warehouses, other raw materials warehouses and production areas. In that sense, high-efficiency cooling systems are installed in both current and new buildings so that they have a smaller contribution to global warming. Refrigerant gases must have the lowest GWP possible depending on required temperatures. In 2018, it has been replaced 3500kg of refrigerant gas R507 (GWP=3985) for ammonia (GWP=0) in a cooling system in the manufacturing plant of the Bioscience Division in Barcelona. Grifols has identified the water risk of all its sites worldwide following the World Research Institute tool (https://www.wri.org/applications/maps/aqueduct-atlas). It has been identified if exists a physical risk quantity, physical risk quality and regulatory and reputational risk. 12 Grifols sites are located in areas with high and extremely high water risk.
Upstream	Relevant, always included	The main raw material of Grifols' Bioscience division is blood plasma, which must be kept at a temperature lower than -30º Celsius. Therefore, a global temperature rise would cause a higher energy demand for transport companies. The risk of having to reject out-of-specs plasma is managed by a continuous monitoring of transport temperature. Specific audits are carried out on transport companies in order to ensure they have the appropriate operational means for controlling temperature during plasma transportation.
Downstream	Not relevant, explanation provided	This risk is not considered as relevant because it would not disrupt the distribution and sale of Grifols' products.

C2.2d

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

Climate-related risks are embedded in the global process of the company for managing the risks. The group's risk management policy identifies and analyzes the risks of the group. The Group's Audit Committee is assisted by the Internal Audit Department, who is the supervisor. Board of Directors approves the Corporate Risk Policy. Environmental risks and opportunities are managed following the corporate Standard Operational Procedure EV-SOP-000002. -Risk management explanation: According to this procedure, the evaluated risks might be classified as acceptable, controlled or non-acceptable. For acceptable risks no action is required but continuous improvement actions may be adopted. For controlled risks, necessary actions to minimize the risk are planned. For non-acceptable risks, actions and/or corrective actions are immediately required. When action is required, a non-conformity is opened following the EV-SOP-000012 Nonconformity and corrective action procedure. The nonconformity includes a description of the risk's root cause, the actions to avoid it, the responsible, the human or economic resources, and the deadline to perform the action. The actions are periodically followed up and are discussed half-yearly in the Environmental Committee, where the CIO participates. Once the action has been implemented, its effectiveness is evaluated in order to verify that the risk has been eliminated. In order to minimize the consequence derived from the risk of drought, different actions have been carried out in the Bioscience Division plants for reducing water consumption. For instance: 10% reduction of the rejection of reverse osmosis in the Hospital plant in Parets del Vallés (Spain), replacing and upgrading of RO system for saving 9% of City Water demand at the Bioscience plant of North Carolina, reduction of 5% water used for landscaping at the Bioscience Division in North Carolina in the new office building using plants with less water demand. -Opportunities management explanation: According to the Standard Operational Procedure EV-SOP-000002, the opportunities are discussed. A plan is established in which the action, the responsible, the human or economic resources, and the deadline to perform the action are defined. The plan is followed up, at least, half-yearly. The actions are approved by the Environmental Committee, where the CIO participates. One example of opportunity is the plan for executing energy efficiency audits. These have been done in the Bioscience division plant in Ireland, Hospital division plant in Murcia (Spain), in the affiliates of Deutschland and Italy (commercial offices and warehouse). The results of the audits will be energy savings opportunities for including in the 2020-2022 Corporate Environmental Program).

C2.3

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

Yes

C2.3a

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

Identifier
Risk 1

Where in the value chain does the risk driver occur?
Direct operations

Risk type
Transition risk

Primary climate-related risk driver
Policy and legal: Increased pricing of GHG emissions

Type of financial impact
Increased operating costs (e.g., higher compliance costs, increased insurance premiums)

Company- specific description
Our facilities in Barcelona participate in the European Union Emissions Trading Scheme, some changes on the credits assignment or the new auctions system may negatively affect the operating account due to the increasing costs for acquiring emissions allowances.

Time horizon
Short-term

Likelihood
Virtually certain

Magnitude of impact
Low

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
350,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure
This is an estimation of the extra cost generated by potential future obligations derived from the EUETS market. This obligations would be triggered by an increase of our production that would require a major use of natural gas in the cogeneration process, thus increasing the total CO2 emissions. In addition, the emission rights cost is expected to rise up to 20 EUR in the next years.

Management method

In 2018 Grifols saved 3158 tCO2/year using the cogeneration plant in Spain. Grifols energy strategy includes the reduction of energy consumption using the cogeneration plant. One example for this purpose has been the recent major overhaul of the cogeneration engines to extend their life-cycle 10 years in Parets del Vallès site.

Cost of management

0

Comment

No annual associated costs.

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Transition risk

Primary climate-related risk driver

Policy and legal: Other

Type of financial impact

Write-offs, asset impairment, and early retirement of existing assets due to policy changes

Company- specific description

Grifols and all its value chain have the commitment to comply with the legal emission limits, the most important being CO and NOx. If these limits change, we would have to invest in new systems to reduce the emission of these gases (factories in Parets del Vallés, Clayton, Los Angeles and San Francisco). However, our current emissions are very low in comparison to the legal limits (at least 40% lower).

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)

1,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

This is the estimated cost in case that some boilers needed to be replaced by new more efficient ones, so that our emissions are within the new legal limits. The estimation is based on the cost of purchasing 2 new high-efficiency boilers with a capacity of generating 10 tonnes of steam per hour.

Management method

2018 maintenance of facilities (preventive and predictive) ensure emissions of our equipment to be under the limit stated by regulation. Current monitoring states that our parameters of emissions are significantly lower than what is established by legal limits. For instance, the legal limits for emissions of the cogeneration plant are 1500 mg/Nm3 for CO and 1000 mg/Nm3 for NO2. Current emissions for CO are under 11.5 mg/Nm3 (which is the lowest level of the detection system), and between 132 and 500 mg/Nm3 for NO2 (depending on the engine). Within the general strategy for energy reduction, the acquisition of energy efficiency boilers is included. In 2018, a new high efficiency boiler has been installed in the Bioscience manufacturing plant in Ireland. It will save 1.121 MWh of energy power in a yearly base.

Cost of management

0

Comment

No annual associated costs.

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Physical risk

Primary climate-related risk driver

Chronic: Other

Type of financial impact

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

Company- specific description

Grifols has its most important production centres in Spain (Barcelona and Murcia) located in a mediterranean climatic area, and USA (Los Angeles and North Carolina). These sites could be affected by drought. Changes in climate could affect increasingly this natural phenomen. It could affect our availability of subsoil water that we are using for production. In Barcelona, water for production comes from wells of Grifols property and city water. A long time without rain could affect the reservoir of these wells. In 2018, we have consumed 861075 m3 in Spain, 23% comes from wells (40% in 2017). Nevertheless, the city water supply is more than enough to meet the needs of these facilities and it is unlikely to run out of supply.

Time horizon

Long-term

Likelihood

Unlikely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

150,000,000

Potential financial impact figure – maximum (currency)

175,000,000

Explanation of financial impact figure

In the unlikely event that production needed to stop for a month due to a lack of water supply, the production value that would not be generated would have a value of 173,000,000 EUR.

Management method

Grifols establishes goals and procedures to reduce water consumption for unit of production in each facility: - A new reverse osmosis equipment has been implemented for the recovery of 50000 m3 of water (Instituto Grifols, Spain). - Water reduction actions for water savings of 28770 m3 have been scheduled in Grifols Biologicals (Los Angeles-USA) for the following years. - A study of water usage has been carried out in order to identify opportunities for savings in irrigation water uses (Grifols Diagnostic Solutions - San Francisco-USA). The execution of these projects started in 2017.
In 2018, the projects have been going on and new projects for saving water have been developed, for instance: At Hospital Division in Parets del Valles (Spain) the reverse osmosis has reduced the rejection from 40% to 25% in 2018 saving 14000 m3/year.

Cost of management

40,000

Comment

Cost of the actions for reduction of water rejection in the Hospital Division in Parets del Vallés in 2018 (Project mentioned in the Management method).

Identifier

Risk 4

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Physical risk

Primary climate-related risk driver

Acute: Increased severity of extreme weather events such as cyclones and floods

Type of financial impact

Increased insurance claims liability arising from climate-related impacts

Company- specific description

Grifols has one of its most important manufacturing plants in North Carolina. This site could be affected by floodings, heavy rains, tornadoes and/or hurricanes. In Barcelona site, Grifols has the packaging facility near to the small river Tenes. A potential flooding could affect this site but the real probability is low and we have not got any historical background. Changes in climate could affect increasingly this natural phenomena.

Time horizon

Short-term

Likelihood

Very unlikely

Magnitude of impact

Low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

2,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

This cost is an estimation of the potential facilities damage that would occur during a tornado or hurricane episode in North Carolina. Since the facilities are purposely built to

resist this kind of extreme weather events, damages would be mostly associated to facades or roofs replacements.

Management method

Emergency and contingency plans are developed in order to ensure facilities in North Carolina are well prepared to face any extrem events such as tornadoes and hurricanes. For instance, during the design stage of the facilities, materials and structures are specially chosen in order to adapt to extreme weather events.

Cost of management

0

Comment

C2.4

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

Yes

C2.4a

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

Identifier

Opp1

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Other

Type of financial impact

Other, please specify

Product efficiency regulations&standards

Company-specific description

Grifols Engineering is the company that sells turnkey biotechnology projects for other companies. Also, it is the responsible for all engineering processes of the manufacturing companies of Grifols. Grifols Engineering is accomplishing internal instructions about environmental aspects in all their new projects. Among environmental aspects we include ecodesign criteria in energy and water consumption. We follow European, US

and Spanish legislation and we also apply some requirements in processes or machinery despite of not being mandatory. If these requirements would be mandatory in the future, Grifols Engineering will be ready and would have already the experience of several years.

Time horizon

Long-term

Likelihood

Very likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

2,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

It is estimated that this could be the cost of one of the projects contracted considering Grifols Engineering environmental initiatives. The impact may be higher.

Strategy to realize opportunity

Grifols has internal procedures to apply eco-efficiency criteria in engineering processes, and building machinery which are designed to go beyond to what it is required by regulation and it provides us with a competitive advantage against competitors. Grifols Engineering works with customers for knowing their needs in these items. Main customers of Grifols Engineering are Instituto Grifols, Diagnostic Grifols, Laboratorios Grifols, Grifols Diagnostic Solutions, Grifols Therapeutics, and some external companies. In 2018, some of the examples are HVAC systems have been installed in the Bioscience manufacturing plant in Ireland isolating pipings to avoid energy losses, fans electronically controlled (EC technology: high speed driver inside is more effective than outside) and more isolation of facades, roofs and windows than the standard requires.

Cost to realize opportunity

0

Comment

No cost of management because it is integrated in our regular engineering practices. The extracost for applying eco-efficiency measures is usually ranged in between 25-30% (e.g. Variable Frequency Drivers and high efficiency motors or high efficiency chillers).

Identifier

Opp2

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Markets

Primary climate-related opportunity driver

Other

Type of financial impact

Increased revenues through access to new and emerging markets (e.g., partnerships with governments, development banks)

Company-specific description

Grifols Bioscience Division produces hemoderivative products for treating human diseases, some of them, rare diseases.
If a high increase of temperatures maybe could affect people with immunodeficiency, this could lead to an increase of the demand for some hemoderivative products, such as gammaglobulines, which are part of Grifols products portfolio.

Time horizon

Long-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)

450,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

It is estimated approximately 10% of total 2018 revenue.

Strategy to realize opportunity

Grifols is developing and implementing new applications for our products and researching in new diseases. Moreover Grifols collaborates with hospitals in order to investigate and develop new applications for existing hemoderivatives. Grifols takes the opportunity of explaining the benefits of using Gammaglobulines for immunodeficiencies treatments. Grifols participates and sponsor Congresses: For example, was the main sponsor of the IV International Congress of Patients with Alpha-1 Deficit and the International Conference on Research in Alpha-1 Antitrypsin
In 2017:
- Grifols participated in the IV International Congress on Controversies in Rheumatology and Autoimmunity (CORA) (Bologna, March 2017).
- Participation in the 18th edition of the ESID Congress (European Society for Immunodeficiencies) (September Edimburgh)

Initiatives for sponsor the R&D:
- Grifols organized a new edition of the Investigator Sponsored Research Forum in Research Triangle Park (North Carolina), Scientists and clinical specialists presented their research in therapeutic areas related to Grifols products.
The program, organized by the Grifols Medical Affairs Bioscience department, provides support to independent researchers who want to increase scientific knowledge in areas strategically aligned with the goals of our company.
ISR studies are important because they can appear in publications or be presented at scientific congresses.

Cost to realize opportunity

224,000,000

Comment

It is estimated approximately 5% of total 2018 revenue.

Identifier

Opp3

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Energy source

Primary climate-related opportunity driver

Use of lower-emission sources of energy

Type of financial impact

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

Company-specific description

Grifols has consumed 4.9 million kWh of renowable energy in Spain, Ireland and Italy through energy companies.

Time horizon

Medium-term

Likelihood

Very likely

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)

90,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

It is estimated taking into consideration the total electricity expense in Spain.

Strategy to realize opportunity

Purchase energy to companies that produce energy from renovable sources.
On-going study of different alternatives for increasing the consumption of renewable energies. As a result, new solar plants in Grifols sites in Spain and USA are scheduled to be constructed during the period 2019 -2022.

Cost to realize opportunity

0

Comment

The study is carried out for a Grifols Engineers. It is an internal study.

Identifier

Opp4

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Energy source

Primary climate-related opportunity driver

Use of lower-emission sources of energy

Type of financial impact

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

Company-specific description

Grifols is prioritizing new photovoltaic plants in those sites with an important solar impact. First plant to be implemented will be located in the manufacturing plant of Laboratorios Grifols located in Murcia (Spain) in 2019.

Time horizon

Short-term

Likelihood

Very likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

30,000

Potential financial impact figure – maximum (currency)

60,000

Explanation of financial impact figure

Around 4 -8% of the site energy demand (30000 - 60000 EUR) depending on the power (300-400 kWh)

Strategy to realize opportunity

Construction of a photovoltaic plant in the top deck of the warehouse - manufacturing building (estimated power 400-800 kwh) for autoconsumption.
Taking profit of high isolation in this area.

Cost to realize opportunity

500,000

Comment

The total cost of the photovoltaic plant depends on the final power installed (400-800 kWh).
It will be between 400,000 - 800,000 EUR.

C2.5

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

	Impact	Description
Products and services	Impacted	Grifols has developed a working methodology integrated in SAP for the implementation of measures aimed to reduce energy consumption during the new facilities projects designed by Grifols Engineering. For instance: air conditioning, compressed air, insulation, lighting, cooling systems, cooling towers, steam generation. There is a catalogue of specific actions suitable for each kind of facility. The application of these actions must be considered at the initial design stage of the project. Later, the efectiveness is evaluated at the closure stage of the project. This methodology is used for both internal and external projects. Regarding the impact, it is estimated that the financial impact is the 10% of Grifols Engineering revenue.
Supply chain and/or value chain	Not impacted	It is not found out a relationship between climate-related risk and plasma quality. It is also thought that despite of the climate change donors will continue donating plasma.
Adaptation and mitigation activities	Impacted	A plan for the reduction of water consumption is being developed at the Bioscience division facilities in Los Angeles. Short-term measures represent a 29,000 m3/year reduction in water consumption. The economic impact of the plan will be a reduction in the water cost of 100,000 EUR/year.
Investment in R&D	Not impacted	Climate-related risks and opportunities don't impact on Grifols R&D investments. These are currently focused on the existing diseases and known proteins.
Operations	Impacted	Water saving measures have been implemented in current and new facilities in order to reduce water consumption in 143,000 m3. These measures have been implemented in manufacturing activities carried out by the Bioscience division in Spain. Current and new production processes were analyzed. The economic impact is around 150,000 EUR.
Other, please specify		

C2.6

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

	Relevance	Description
Revenues	Not impacted	Current marketing and sales activities are not affected by the climate-related risks and opportunities. There is no a direct influence between climate-related risks and the finantial planning

		process because it has not identified a risk by the Audit Committee .
Operating costs	Impacted	The measures implemented for reducing the water consumption in the manufacturing plants of the Bioscience division, have generated a 5% decrease in the cost of water consumption.
Capital expenditures / capital allocation	Impacted	In engineering projects, measures to reduce energy consumption are sistematically evaluated following the EV-INS-000002 procedure. It has been estimated that the cost of including ecoefficiency measures can increase the cost of the facility up to 30%.
Acquisitions and divestments	Not impacted	Identified risks and opportunities not impact on the business decisions related to acquisitions and divestments. For now, the adquisitions are based on business requirements not related to climate change.
Access to capital	Not impacted	The access to capital has not been influenced for climate-related risks and opportunities. Banks and investors don't let us know the consideration or risks related to this issue.
Assets	Not impacted	The identified risks and opportunities do not impact into the financial planning process because it is considered that the increasing of some climate events, such as, tornados, hurricanes or floods won’t affect the existing assets more than it is happening right now. Those new assets that could be affected currently by physical events, such us in North Carolina, are built taking into account preventive measures to reduce the impact on them.
Liabilities	Not impacted	It is considered that no risks nor opportunities may have an impact on Grifols liabilities because climate-related changes haven't had until now any influence on them in the past. It is considered that it will remain being the same in the futur.
Other		

C3. Business Strategy

C3.1

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

Yes

C3.1a

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

No, and we do not anticipate doing so in the next two years

C3.1c

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

Over the course 2017, a Materiality Analysis was done to understand needs and expectations of internal and external stakeholders. Following guidelines such as Global Reporting Initiative (GRI), Sustainability Accounting Standards Board (SASB), KPMG conducted a research for identifying the Grifols audience, knowing Grifols' business model and its value chain. Key stakeholders were identified for each of the phases. After that, a process for material topics identification, prioritization (benchmark and internal assessment) and validation was carried out. Climate Strategy and operational eco-efficiency were identified as two of the material topics of Grifols. The Board of Directors of Grifols approved the Corporate Social Responsibility Policy on May 27th, 2016. The Policy includes as an objective the Commitment with the Environment (3rd point). Through the Policy, group's companies undertake to implement prevention techniques in order to minimize the environmental risks involved in company activities, taking into account the effects on climate change. According to the Materiality assessment and the Corporate Social Responsibility Policy the strategy developed by the company is to approve the Grifols Environmental Program. The most substantial business decision made as a result of the integration of climate-related issues the Grifols Environmental Program, currently in the period 2017-2019 and approved in 2017 is mainly focused in goals for reducing energy and emissions. Apart from the goals developed during 2017 and 2018, to strengthen the commitment of the Board of Directors and stakeholders, new proposals have been included for 2019. - -Some examples are the following: ♣

- Energy audits in sites located in Europe (Ireland (Bioscience manufacturing plant), Frankfurt and Vicopisano (warehouse and offices));
- Reduction of 527 MWh of natural gas power installing O2 control in boilers (Bioscience division in Barcelona), reduction of energy (electricity) of absorption machine for cooling water generation by 778 MWh; ♣
- Decrease natural gas consumption by 1069 MWh/year in the Hospital division in Barcelona, decreasing natural gas consumption by 2500 MWh/year in the Bioscience division in Barcelona,
- Installation of a high efficiency boiler in the Bioscience division in Dublin (estimated savings from an standard design by 1121 MWh),
- Feasibility study of a photovoltaic plant for energy generation in the manufacturing plant of the Bioscience division in North Carolina.

- Some of the examples of the implementation of this Program in 2018 are the following: ♣

- Energy audit in Biomat (Bioscience division in Barcelona),
- Conceptual design of solar panels in the Diagnostic division in California, ♣

- Audit energy of the manufacturing plant of Diagnostic division in California, decreasing of calorific value by 589 MWh yearly by isolation of piping in the manufacturing plant of Hospital division in Barcelona, ♣
- Design the building D230 in accordance with the latest energy efficient standards in the Bioscience Division in North Carolina.

C3.1g

(C3.1g) Why does your organization not use climate-related scenario analysis to inform your business strategy?

The decision to use climate-related scenarios anyalysis has been discussed internally. By the moment, it is considered that the evaluated risks, in general, are not relevant for Grifols operations worldwide. The activities that are expected to be developed at a short and medium-term, will not be significantly affected by climate change consequences. Grifols strategy is to implement the recently approved Energy Policy by carrying out different projects and actions which would be in line with most of the climate-related scenarios in the future. One of the main difficulties that currently prevent Grifols from considering these scenarios is the organization's complexity (wide range of different production activities around different countries). In addition, there is a lack of fully developed guidelines that would help to analyze these scenarios. Therefore, it has been concluded that currently there is not enough available information to carry out an evaluation that would help to make decisions or develop strategies. Nevertheless, in the near future, we do not rule out the possibility to evaluate the feasibility of choosing a especific scenario and start implementing it in some parts of Grifols business.

C4. Targets and performance

C4.1

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

Absolute target

C4.1a

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

Target reference number

Abs 5

Scope

Scope 2 (location-based)

% emissions in Scope

100

Targeted % reduction from base year

0.5

Base year

2016

Start year

2016

Base year emissions covered by target (metric tons CO2e)

122,508

Target year

2019

Is this a science-based target?

No, and we do not anticipate setting one in the next 2 years

% of target achieved

19.9

Target status

Underway

Please explain

Reduction of 2066 MWh of electric energy consumption in existing buildings by year (622 tCO2e) carrying out different actions such as cooling systems optimization, installation of high-efficiency equipments, or lighting system replacements for the manufacturing plants of the Bioscience, Diagnostic and Hospital divisions in Spain and USA.

Target reference number

Abs 6

Scope

Scope 1

% emissions in Scope

72.7

Targeted % reduction from base year

5.33

Base year

2016

Start year

2016

Base year emissions covered by target (metric tons CO2e)

67,369

Target year
2019

Is this a science-based target?
No, and we do not anticipate setting one in the next 2 years

% of target achieved
99.4

Target status
Underway

Please explain
Reduction of 19720 MWh of Natural Gas in existing buildings by year (3592 tCO2e) carrying out different actions such as improving steam generation efficiency, pipeline insulation, cogeneration engines overhaul, or window replacements for the manufacturing plants of the Bioscience and Diagnostic divisions in Spain and USA.

Target reference number
Abs 7

Scope
Scope 2 (location-based)

% emissions in Scope
100

Targeted % reduction from base year
3.66

Base year
2016

Start year
2016

Base year emissions covered by target (metric tons CO2e)
122,508

Target year
2021

Is this a science-based target?
No, and we do not anticipate setting one in the next 2 years

% of target achieved
31.2

Target status
Underway

Please explain

Optimization of 6229 MWh of electric energy demand in new buildings by year (4479 tCO2e) carrying out different actions such as installation of frequency adaptors in engines and pumps, hig-efficiency lihgting systems, recovery of heat, or the inclusion of energy efficiency standards during the new buildings design for the manufacturing plants and centres of the Bioscience divisions in Spain and USA.

Target reference number

Abs 8

Scope

Scope 1

% emissions in Scope

72.7

Targeted % reduction from base year

0.3

Base year

2016

Start year

2016

Base year emissions covered by target (metric tons CO2e)

67,369

Target year

2019

Is this a science-based target?

No, and we do not anticipate setting one in the next 2 years

% of target achieved

25.4

Target status

Underway

Please explain

Optimization of 926 MWh of Natural gas demand in new buildings by year (169 tCO2e) carrying out different actions such as pipelines insulation, installation of cleaning in place (CIP) systems for reactors, or acquiring a high-efficency distiller for the manufacturing plants of the Bioscience and Hospital divisions in Spain.

C4.2

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

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	0	0
To be implemented*	7	777.4
Implementation commenced*	5	2,768
Implemented*	9	469.8
Not to be implemented	0	0

C4.3b

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

Initiative type

Process emissions reductions

Description of initiative

New equipment

Estimated annual CO2e savings (metric tonnes CO2e)

43

Scope

Scope 1

Voluntary/Mandatory

Voluntary

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

6,370

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

50,000

Payback period

4 - 10 years

Estimated lifetime of the initiative

11-15 years

Comment

Implementation of a high-efficiency stage distiller in the Hospital division plant at Murcia (Spain) in order to optimize the natural gas consumption (234 MWh/year). Considering an extra-cost of 50,000 € versus a regular distiller, the payback period would be of almost 8 years (50,000€ / 6,370€/year =7.85 years).

Initiative type

Energy efficiency: Processes

Description of initiative

Cooling technology

Estimated annual CO2e savings (metric tonnes CO2e)

14

Scope

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

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

4,990

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

0

Payback period

No payback

Estimated lifetime of the initiative

6-10 years

Comment

Modelling and control of the cooling system in the offices of the Corporate headquarters at Sant Cugat del Vallès (Spain) in order to reduce the electricity consumption (51 MWh/year).

Initiative type
Energy efficiency: Processes

Description of initiative
Cooling technology

Estimated annual CO2e savings (metric tonnes CO2e)
218

Scope
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
75,280

Investment required (unit currency – as specified in C0.4)
120,000

Payback period
1-3 years

Estimated lifetime of the initiative
11-15 years

Comment
Reconditioning of an absorption machine for cooling in the Bioscience division plant at Parets del Vallès (Spain) in order to reduce the electricity consumption (778 MWh/year).

Initiative type
Energy efficiency: Processes

Description of initiative
Heat recovery

Estimated annual CO2e savings (metric tonnes CO2e)
195

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
28,000

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

280,000

Payback period

4 - 10 years

Estimated lifetime of the initiative

6-10 years

Comment

Replacement steam condensed circuit of the boilers in the Diagnostic and Hospital division plants at Parets del Vallès (Spain) in order to reduce the natural gas consumption (1,069 MWh/year).

Initiative type

Other, please specify

Energy audit

Description of initiative

Estimated annual CO2e savings (metric tonnes CO2e)

0

Scope

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

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

0

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

15,000

Payback period

No payback

Estimated lifetime of the initiative

Ongoing

Comment

Performance of energy audits in different Grifols plants at Spain, Ireland, Deutschland, Italy and USA in order to identify opportunities for improving energy efficiceny.

C4.3c

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

Method	Comment
Financial optimization calculations	When Grifols installs a new product process or build a plant, the possibilities in eco-efficiency are always studied. Sometimes, we can choose between several technologies and we study the use of Best Available Techniques. The Manager studies the options and considers several factors. The eco-efficiency options are taken into account and these are usually approved if the payback period is reasonable. The installation of one autoclave for sterilizations (steam and air mixture) in Laboratorios Grifols plant in Barcelona, Installation Clean in Place Units (CIPs) to optimize the cleaning methods of reactors or installations of speed variable drive and high efficiency motors and pumps when are technically possible are some examples of these investments. In the last started up industrial plant in Barcelona, Prolastine C, it has been included different technologies for reducing emissions.
Employee engagement	Grifols, complying the ISO 14001 standard, has some instructions about the eco-efficiency measures in new products (R+D), design of buildings and engineering projects. It is internally mandatory to study the options of eco-efficiency in the design of a project and the development of a new product. All the engineers have been trained in ecoefficiency technology.
Compliance with regulatory requirements/standards	The compliance to regulatory requirements in energy efficiency is always compulsory in Grifols projects. There is an internal procedure for legal compliance, which allows constant monitoring of existing requirements for Grifols activity and identifiaction of new ones. Assessment of the legal compliance is sistematically carried out in order to detect potential requirements in terms of emission reduction activities that may affect Grifols activity. More specifically, legal requirements are evaluated at three different levels: Catalan and local government regulations; Spanish and States (US) regulations; and European Union and Federal (US) regulations.

C4.5

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

No

C5. Emissions methodology

C5.1

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

Scope 1

Base year start

January 1, 2016

Base year end

December 31, 2016

Base year emissions (metric tons CO2e)

92,643

Comment

Scope 2 (location-based)

Base year start

January 1, 2016

Base year end

December 31, 2016

Base year emissions (metric tons CO2e)

122,508

Comment

Scope 2 (market-based)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

C5.2

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

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)

98,043

Start date

January 1, 2018

End date

December 31, 2018

Comment

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 have no operations where we are able to access electricity supplier emission factors or residual emissions factors and are unable to report a Scope 2, market-based figure

Comment

In most of our sites we have no access to information related to our emissions from the suppliers.

C6.3

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

Reporting year

Scope 2, location-based

120,493

Start date

January 1, 2018

End date

December 31, 2018

Comment

C6.4

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

Yes

C6.4a

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

Source

Grifols Beijing

Relevance of Scope 1 emissions from this source

No emissions from this source

Relevance of location-based Scope 2 emissions from this source

Emissions are not relevant

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

Emissions are not relevant

Explain why this source is excluded

Emissions considered as not relevant as they are originated by energy consumption associated to office's staff which is very low. Total staff Grifols Beijing 2018 = 15 (0,07%). Total staff Grifols 2018= 21230.

Source

Grifols Colombia Ltda

Relevance of Scope 1 emissions from this source

No emissions from this source

Relevance of location-based Scope 2 emissions from this source

Emissions are not relevant

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

Emissions are not relevant

Explain why this source is excluded

Emissions considered as not relevant as they are originated by energy consumption associated to office's staff which is very low. Total staff Grifols Colombia 2018 = 9 (0,04%). Total staff Grifols 2018= 21230.

Source

Grifols India Healthcare

Relevance of Scope 1 emissions from this source

No emissions from this source

Relevance of location-based Scope 2 emissions from this source

Emissions are not relevant

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

Emissions are not relevant

Explain why this source is excluded

Emissions considered as not relevant as they are originated by energy consumption associated to office's staff which is very low. Total staff Grifols India 2018 = 12 (0,06%). Total staff Grifols 2018= 21230.

Source

Grifols Japan KK

Relevance of Scope 1 emissions from this source

No emissions from this source

Relevance of location-based Scope 2 emissions from this source

Emissions are not relevant

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

Emissions are not relevant

Explain why this source is excluded

Emissions considered as not relevant as they are originated by energy consumption associated to office's staff which is very low. Total staff Grifols Japan 2018 = 4 (0,02%). Total staff Grifols 2018= 21230.

Source

Grifols Nordic AB

Relevance of Scope 1 emissions from this source

No emissions from this source

Relevance of location-based Scope 2 emissions from this source

Emissions are not relevant

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

Emissions are not relevant

Explain why this source is excluded

Emissions considered as not relevant as they are originated by energy consumption associated to office's staff which is very low. Total staff Grifols Nordic 2018 = 4 (0,02%). Total staff Grifols 2018= 21230.

Source

Grifols Taiwan

Relevance of Scope 1 emissions from this source

No emissions from this source

Relevance of location-based Scope 2 emissions from this source

Emissions are not relevant

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

Emissions are not relevant

Explain why this source is excluded

Emissions considered as not relevant as they are originated by energy consumption associated to office's staff which is very low. Total staff Grifols Taiwan 2018 = 3 (0,01%). Total staff Grifols 2018= 21230.

Source

Home Address

Relevance of Scope 1 emissions from this source

No emissions from this source

Relevance of location-based Scope 2 emissions from this source

Emissions are not relevant

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

Emissions are not relevant

Explain why this source is excluded

Scope 1 and 2 emissions are not significant. Scope 3 is considered due to business trips.

Source

Home Address USA

Relevance of Scope 1 emissions from this source

No emissions from this source

Relevance of location-based Scope 2 emissions from this source

Emissions are not relevant

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

Emissions are not relevant

Explain why this source is excluded

Scope 1 and 2 emissions are not significant. Scope 3 is considered due to business trips.

C6.5

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

Purchased goods and services

Evaluation status

Relevant, calculated

Metric tonnes CO2e

36,230.7

Emissions calculation methodology

We have used the Life Cycle Assessment Methodology. We have calculated emissions in production of glass and plastic that is the packaging of some of our final products: We know the electricity consumption of packaging of 100 ml and 500 ml of PP and glass material. We have the total units of production of PP and glass but not their corresponding volume, so we have estimated that all units have 100 ml excepting those ones that we are sure are 500 ml.

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

0

Explanation

Grifols uses several raw materials from all over the world. So far we have only calculated emissions related to primary packaging lifecycle, specifically glass vials and plastic bags and bottles. It is included the packaging of all manufacturing plants.

Capital goods

Evaluation status

Not relevant, explanation provided

Explanation

Main capital goods are provided by the same Grifols company, so we include emissions for manufacturing, equipment, machinery, building and facilities are included in total Scope 1+2.

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

Evaluation status

Not relevant, explanation provided

Explanation

It is included in other sources of scope 3 emissions.

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Metric tonnes CO2e

2,980.4

Emissions calculation methodology

Regarding yearly imports, calculation is carried out using data from the total weight transported, total distance and kind of transport. GHG Protocol emission factors are applied for road, air and watercraft transports. More specifically, the Mobile Combustion GHG Emissions Calculation Tool (Version 2.6) is used.

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

0

Explanation

It includes emissions generated by imports managed from Spain (Grifols International) by road, air and watercraft transport.

Waste generated in operations

Evaluation status

Relevant, calculated

Metric tonnes CO2e

16,112

Emissions calculation methodology

Different emission factors are used depending on the final waste treatment: Incineration, recycling, reusing, byproduct, landfill, anaerobic digestion, solid recovered fuel.

Emission factors are getting from the following sources: - Department for Environment, Food and Rural Affairs (DEFRA), UK Government. DEFRA Standard set 2014, Scope 3: Waste disposal and water treatment.
Waste: Construction, glass, industrial waste, electrical ítems, metal, plastic, paper and wastewater. - Catalan climate change office. Catalan Government. GHG emissions calculation methodology for Municipal Solid Waste management for companies. February, 2015. Waste: Municipal Solid Waste (Spain). - IPCC: Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories (2000). Waste: Organic and hazardous waste (incineration). - USA's Environmental Protection Agency (EPA): WARM (Waste Reduction Model), version 13, June 2014. Waste: Municipal Solid Waste (USA).

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

0

Explanation

We calculate emissions by waste type and generating facility. We include data from waste generated by Grifols in all facilities.

Business travel

Evaluation status

Relevant, calculated

Metric tonnes CO2e

12,535

Emissions calculation methodology

The scope is all Grifols' facilities. Conversion factors are applied from World Resources Institute, GHG protocol tool for mobile combustion and IPCC. Aircraft data is provided by the airlines companies. Road data is calculated from expenses related to employees business trips (when using personal vehicle) as well as from the mileage from own fleet (when using copany vehicles).

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

90.4

Explanation

We calculate emissions by distance travelled and facility. We include data from travels in all Grifols facilities.

Employee commuting

Evaluation status

Relevant, calculated

Metric tonnes CO2e

40,076

Emissions calculation methodology

Surveys have been carried out on latest years in Spain, USA facilities and affiliates in order to get employee's commuting choices. Emission factors are appleid from the following sources: Catalan Climate Change Office (March, 2018). World Reources Institute (2015). GHG Protocol tool for mobile combustion (Version 2.6).

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

0

Explanation

We have calculated emissions by means of transport based on total distance covered by all Grifols' employees.

Upstream leased assets

Evaluation status

Not relevant, explanation provided

Explanation

Electrical consumption of rented offices is included in Scope 2.

Downstream transportation and distribution

Evaluation status

Relevant, calculated

Metric tonnes CO2e

8,300.7

Emissions calculation methodology

Regarding yearly exports, calculation is carried out using data from the total weight transported, total distance and kind of transport. GHG Protocol emission factors are applied for road, air and watercraft transports. More specifically, the Mobile Combustion GHG Emissions Calculation Tool (Version 2.6) is used.

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

0

Explanation

It includes emissions generated by exports managed from Spain to the rest of the world (Grifols International) and from USA to Spain (plasma and other goods) by road, air and watercraft transport.

Processing of sold products

Evaluation status

Not relevant, explanation provided

Explanation

Main Grifols' products do not need to be processed after their sale. They are directly given to patients.

Use of sold products

Evaluation status

Not relevant, explanation provided

Explanation

Main Grifols' products (hemoderivatives) are given to patients and do not generate emissions during their use.

End of life treatment of sold products

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

47.7

Emissions calculation methodology

We have considered those products sold by Hospital and Bioscience divisions in the Spanish market. This information is yearly reported in the SIGRE declaration (Spanish Pharmaceutical industries association). Conversion factor for glass recycling: 21kgCO2/t glass. Conversion factor for paper/cardboard recycling: 21kgCO2/t paper and cardboard.

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

0

Explanation

It is considered the products put on the market by companies from the Bioscience and Hospital divisions.

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Explanation

It does not apply because Grifols does not have assets under property.

Franchises

Evaluation status

Not relevant, explanation provided

Explanation

Grifols does not work with franchises.

Investments

Evaluation status

Not relevant, explanation provided

Explanation

Main Grifols investments are in new companies and facilities that are integrated in Grifols holding. Their emissions are included in Scope 1 and 2.

Other (upstream)

Evaluation status

Not relevant, calculated

Metric tonnes CO2e

75.9

Emissions calculation methodology

Plasma transportated from donor centers to Biomat and Instituto Grifols, Total distance 369894 km. Emission factor: 0,204 kgCO2/km. Mobile Combustion GHG Emissions Calculation Tool (Version 2.6) is used.

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

0

Explanation

It is included transport from donor centers (Spain, Czech Republic, Germany and Slovakia) to Biomat and Instituto Grifols. (Spain).

Other (downstream)

Evaluation status

Not relevant, explanation provided

Explanation

There are no other known sources of emissions in scope 3.

C6.7

(C6.7) Are carbon dioxide emissions from biologically sequestered 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

0.00004916

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

218,535

Metric denominator

unit total revenue

Metric denominator: Unit total

4,445,570,000

Scope 2 figure used

Location-based

% change from previous year

1.5

Direction of change

Decreased

Reason for change

Despite the production increased, the emissions by revenue have decreased. The actions for energy savings implemented are resulting effective. Some examples of the actions implemented in 2018 are:

• Reduction of the energy consumption in cooling systems from the headquarters' offices at Sant Cugat del Vallès (Spain). Reduction of 51.6 MWh/year, equivalent to 14.4 TCO2e (Environmental program action SO.1.1.13).

• Reduction of the electricity consumption of the absorbing machine in the Bioscience Division manufacturing site at Parets del Vallès (Spain). Reduction of 778 MWh/year, equivalent to 217.8 TCO2e (Environmental program action SO.1.1.14).

• Reduction of the calorific energy consumption in the Hospital Division manufacturing site at Parets del Vallès (Spain). Reduction of 589 MWh/year, equivalent to 107 TCO2e (Environmental program action SO.1.2.2).

• Reduction of the natural gas consumption in the Diagnostic and Hospital Divisions manufacturing sites at Parets del Vallès (Spain). Reduction of 1069 MWh/year, equivalent to 194.6 TCO2e (Environmental program action SO.1.2.8).

• Implementation of energy efficiency measures aimed to optimize the natural gas consumption in the water plant expansion at the Hospital Division manufacturing site in Murcia (Spain). Reduction of 234 MWh/year, equivalent to 43 TCO2e (Environmental program action SO.1.4.2).

• Performance of an energy audit in the Bioscience Division manufacturing site at Parets del Vallès (Spain). Performance of an energy audit and study design to install photovoltaic solar panels in the Diagnostic Division manufacturing site at Emeryville, CA (USA) (Environmental program actions SO.1.1.2, SO.1.1.8, and SO.1.1.9).

Intensity figure

10.3

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

218,535

Metric denominator

full time equivalent (FTE) employee

Metric denominator: Unit total

21,230

Scope 2 figure used

Location-based

% change from previous year

12.6

Direction of change

Decreased

Reason for change

There has been an increase of 16% in the FTE and 1.4% in Total Scope 1+2. The increase in the number of employees is mainly due to the acquisition of new donor centers in USA (Biotest) and Germany (Haema). Donor centers consume energy but they are not the main contributors to CO2e emissions.

C7. Emissions breakdowns

C7.1

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

No

C7.2

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

Country/Region	Scope 1 emissions (metric tons CO2e)
United States of America	63,490.35
Spain	31,488.57
Germany	1,834.44
Chile	634.63
Ireland	420.87
Czechia	84.85
Australia	76.48
Mexico	12.67

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)
Bioscience division	87,483.61
Diagnostic division	6,427.9
Hospital division	4,131.34

C7.5

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

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
United States of America	101,558.79		281,689.62	
Spain	15,592.11		55,686.08	33,891.45
Germany	2,058.89		4,334.5	
Ireland	0			3,472.29
Brazil	156.47		1,596.65	
Switzerland	28.45		1,014.89	
Australia	549.17		687.32	
Italy	0			546.5
Chile	152.95		316.67	
Mexico	113.29		250.1	
Czechia	63.68		115.36	
Argentina	35.73		90	
Singapore	41.06		87	
Portugal	29.03		79.76	
China	64.39		77.86	

United Kingdom of Great Britain and Northern Ireland	24.82		51.82	
Thailand	12.51		25.03	
France	1.47		21.3	
Poland	6.8		8.99	
Malaysia	3.06		4.56	

C7.6

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

By business division

C7.6a

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

Business division	Scope 2, location-based emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
Bioscience division	108,244.74	
Diagnostic division	7,466.38	
Hospital division	4,781.55	

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?

Remained the same overall

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	308.9	Increased	0.14	4,925,561 kWh from renewable sources were used in 2018. This resulted in

energy consumption				emissions savings equal to 2051.1 TCO2e. 6,020,041 kWh from renewable sources were used in 2017. This resulted in emissions savings equal to 2360.0 TCO2e. The gross global emissions (Scope 1 + 2) of Grifols for this reporting year are 218,535 metric tons of CO2e. Its gross global emissions for the previous reporting year were 215,526 metric tons of CO2e. The emissions value change is equal to 0.14% according to the next formula: ((2360.0 - 2051.1)/218,535)*100 = 0.14%.
Other emissions reduction activities	571.49	Decreased	0.26	2,691.57 MWh saved by energy reduction projects (829.57 MWh savings in electricity projects, equal to 232.28 TCO2e; and 1,862 MWh savings in natural gas projects, equal to 339.21 TCO2e) included in the Corporate Environmental Program 2017-2019. It has been taken into account those actions finished by 2018. The gross global emissions (Scope 1 + 2) of Grifols for this reporting year are 218,535 metric tons of CO2e. Its gross global emissions for the previous reporting year were 215,526 metric tons of CO2e. The emissions value change is equal to 0.26% according to the next formula: ((232.28 + 339.21)/218,535)*100 = 0.26%.
Divestment				
Acquisitions	3,893.32	Increased	1.8	Acquisition of the Haema company, which has around 40 blood donor centers across Germany. The gross global emissions (Scope 1 + 2) of Haema for 2018 were 3,893.32 TCO2e. The gross global emissions (Scope 1 + 2) of Grifols for this reporting year are 218,535 metric tons of CO2e. Its gross global emissions for the previous reporting year were 215,526 metric tons of CO2e. The emissions value change is equal to 1.78% according to the next formula: (3,893.32/218,535)*100 = 1.78%.
Mergers				

Change in output				
Change in methodology				
Change in boundary				
Change in physical operating conditions				
Unidentified				
Other				

C7.9b

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

Location-based

C8. Energy

C8.1

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

More than 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 undertakes this energy-related activity
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	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 MWh
Consumption of fuel (excluding feedstock)	HHV (higher heating value)		414,749.1	414,749.1
Consumption of purchased or acquired electricity		4,925.56	345,230.73	350,156.29
Consumption of self-generated non-fuel renewable energy		0		0
Total energy consumption		4,925.56	759,979.84	764,905.4

C8.2b

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

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

C8.2c

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

Fuels (excluding feedstocks)

Natural Gas

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

414,739.58

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

MWh fuel consumed for self-cogeneration or self-trigeneration

89,417.05

Comment

Fuels (excluding feedstocks)

Diesel

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

8.01

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Comment

Fuels (excluding feedstocks)

Motor Gasoline

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

0.31

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Comment

Fuels (excluding feedstocks)

Propane Gas

Heating value

HHV (higher heating value)

Total fuel MWh consumed by the organization

1.21

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

MWh fuel consumed for self-cogeneration or self-trigeneration

0

Comment

C8.2d

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

Diesel

Emission factor

2.68

Unit

kg CO2e per liter

Emission factor source

World Resources Institute (2015). GHG Protocol tool for stationary combustion (Version 4.1).

Comment

Motor Gasoline

Emission factor

2.21

Unit

kg CO2 per liter

Emission factor source

World Resources Institute (2015). GHG Protocol tool for stationary combustion (Version 4.1).

Comment

Natural Gas

Emission factor

0.182

Unit

kg CO2 per kWh

Emission factor source

World Resources Institute (2015). GHG Protocol tool for stationary combustion (Version 4.1).

Comment

Propane Gas

Emission factor

1.61

Unit

kg CO2 per liter

Emission factor source

World Resources Institute (2015). GHG Protocol tool for stationary combustion (Version 4.1).

Comment

C8.2e

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

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	32,984.68	32,984.68	0	0
Heat	25,266.98	25,266.98	0	0
Steam	0	0	0	0
Cooling	0	0	0	0

C8.2f

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

Basis for applying a low-carbon emission factor

Energy attribute certificates, Guarantees of Origin

Low-carbon technology type

Solar PV
Wind
Hydropower

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

Europe

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

4,905.6

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

0

Comment

Electricity consumption for Grifols sites in Ireland, Italy and some facilities in Spain.

Basis for applying a low-carbon emission factor
Grid mix of renewable electricity

Low-carbon technology type
Solar PV
Wind
Hydropower

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

MWh consumed associated with low-carbon electricity, heat, steam or cooling
55,686.1

Emission factor (in units of metric tons CO2e per MWh)
0.28

Comment
Electricity consumption for Grifols manufacturing plants and other facilities in Spain.

Basis for applying a low-carbon emission factor
Grid mix of renewable electricity

Low-carbon technology type
Solar PV
Wind
Hydropower

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

MWh consumed associated with low-carbon electricity, heat, steam or cooling
1,596.6

Emission factor (in units of metric tons CO2e per MWh)
0.098

Comment
Electricity consumption for Grifols manufacturing plant in Brazil.

C9. Additional metrics

C9.1

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

Description

Energy usage

Metric value

218,536

Metric numerator

metric tonnes CO2e Scope 1 + 2

Metric denominator (intensity metric only)

full time equivalent (FTE) employee

% change from previous year

12.6

Direction of change

Decreased

Please explain

FTE employees 2017 = 18300 ; TOTAL SCOPE 1+2=215525
FTE employees 2018 = 21230 ; TOTAL SCOPE 1+2=218536
There has been an increase of 16% in the FTE and an increasing of 1.4% in Total Scope 1+2.
The increasing of the staff is mainly due to the staff increasing due to acquisitions. CO2e emissions from new assets are also include in the scope 1+2. Some of the companies have already been included in the Corporate Environmental Program for reducing energy consumption, such as Haema located in Deutschland.

C10. Verification

C10.1

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

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

C10.1a

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

Scope
Scope 1

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
CORPORATE RESPONSIBILITY REPORT 2018_EN.pdf

Page/ section reference
The verification report is on pages 151-152. The certified emission values can be found on pages 108-109.

Relevant standard
ISAE 3410

Proportion of reported emissions verified (%)
100

Scope
Scope 2 location-based

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
CORPORATE RESPONSIBILITY REPORT 2018_EN.pdf

Page/ section reference
The verification report is on pages 151-152. The certified emission values can be found on pages 108-109.

Relevant standard
ISAE 3410

Proportion of reported emissions verified (%)

100

C10.1b

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

Scope

Scope 3- all relevant categories

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Attach the statement

CORPORATE RESPONSIBILITY REPORT 2018_EN.pdf

Page/section reference

The verification report is on pages 151-152. The certified emission values can be found on pages 108-109.

Relevant standard

ISAE 3410

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
C4. Targets and performance	Year on year change in emissions (Scope 1 and 2)	ISO 14001:2015.	Changes in emissions are verified as part of ISO 14001 audits carried out by TÜV Rheinland.

C4. Targets and performance	Progress against emissions reduction target	GRI Standard, ISO 14001:2015.	Grifols Environmental Program which includes climate-related targets is audited yearly by TÜV Rheinland and KPMG.
C8. Energy	Change in Scope 1 emissions against a base year (not target related)	GRI Standard.	Energy consumption data and indicators are yearly audited by KPMG.

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 systems in which you participate.

EU ETS

% of Scope 1 emissions covered by the ETS

16.6

Period start date

January 1, 2018

Period end date

December 31, 2018

Allowances allocated

0

Allowances purchased

3,704

Verified emissions in metric tons CO2e

24,103

Details of ownership

Facilities we own and operate

Comment

2018 data verified by the organism TÜV SUD.

C11.1d

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

The Bioscience manufacturing plant at Parets del Vallès (Spain) participates in the European Union ETS. It includes total emissions of all activities, cogeneration plant and auxiliary activities (boilers). Our strategy for the cogeneration plant is to obtain global output (GO) from our facilities of high efficiency cogeneration plant and boilers in Spain. This plant obtained in 2018, 71.6% of global output, and 16.2% of Primary Energy Saving (PES). Without the use of this cogeneration plant we would need to generate heat in conventional boilers. We are also working reducing direct emissions from our complementary boiler improving the utilization of useful heat from cogeneration. We have saved 3158 tonnes of CO2 in 2018 with this high efficiency cogeneration plant instead of producing more steam and hot water with boilers and buying electricity from electric suppliers. Long term strategy of Grifols is to reduce natural gas consumption per unit of production, control of consumption and installing Best Available Techniques in order to reduce it overall for new installations. The specific actions for consumption reduction are approved in the triennial Environmental Programs of goals, and revised yearly.

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?

No, and we do not currently anticipate doing so in the next two years

C12. Engagement

C12.1

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

Yes, our suppliers

C12.1a

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

Type of engagement

Engagement & incentivization (changing supplier behavior)

Details of engagement

Offer financial incentives for suppliers who reduce your upstream emissions (Scopes 3)

% of suppliers by number

1

% total procurement spend (direct and indirect)

2

% Scope 3 emissions as reported in C6.5

14.6

Rationale for the coverage of your engagement

The airlines provide us the CO2 emissions generated by our employees business travels. Grifols 2018 Scope 3 total emissions were 77,388 TCO2e. Aircraft Emissions contribution to Scope 3 was 11,327 TCO2e (11,327*100/77,388 = 14.6%).

Impact of engagement, including measures of success

The employees are provided with the emissions information of their flights in order to promote environmental awareness. In an attempt to minimize emissions generated by transportation, videocall systems have been implemented as an alternative to face-toface meetings. This technology is available in all Grifols sites around the world. In addition, further communication systems via laptop have been implemented. One example of engagement is: there is an agreement between Grifols and Airfrance to promote the use of the flight Paris-Los Angeles, the planes that operate this line are fueled by biodiesel. Biodiesel emissions are almost equal to zero.

Comment

C12.3

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

Other

C12.3e

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

i) Description of the method of engagement: Collaboration directly with local governments. ii) Topic of the engagement: Reduction of carbon footprint via the promotion of public or shared transports. iii) Nature of the engagement: Voluntary engagement or agreed engagement. iv) Actions advocated as part of engagement: Examples are the following. - Mobility plan: Several actions were included in the mobility plan that was presented to the catalan government for reducing emissions in commuting. Some of the actions are the following: an internal application for sharing private cars that can be consulted by all the employees, installation of bike racks in

all Grifols sites in Spain, use of bus financed by the company and installation of electric vehicle charging points in the facilities. The mobility plan is currently under revision - Local working group: The City Council of Parets del Vallés created a workshop where Grifols and other companies of the town discuss about environmental issues that affects the town and the territory. This group called Empresa i Medi Ambient Parets (EMAP) discusses about environmental issues including energy efficiency and emissions.

C12.3f

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

The Environmental Committee of Grifols, S.A. is formed by the Chief Industrial Officer, Chief Human Resources Officer, Chief Information Technology Officer, Corporate Communications VP, Corporate Health & Safety Director and Environment Director. The Committee leads the Environmental Strategy at a Corporate Level and supervises the compliance of the Policies. Manufacturing Grifols companies have also their own Environmental Committee, formed by the President, Manufacturing Director, Technical Director, R&D Director and Environment Director. The Committees guide the climate change strategy at asset level, and evaluate the environmental results and the Policy compliance. Grifols Environmental Policy assures legal compliance about air emissions. Grifols Corporate Environmental Policy includes the committment to implement pollution prevention techniques in order to minimize the environmental risks involved in company activities, taking into account the effects on climate change. In order to strengthen this commitment, an Energy Policy has been approved by the executive committee in 2017. According to this policy, Grifols commits to:

• Achieve an efficient use of energy resources.

• Minimize Grifols energy demand on new and existing facilities, especially in buildings and production processes, by means of design and implementation of energy conservation measures and renewable energy usage.

• Establish corporate objectives within Grifols environmental management framework.

• Optimize supply infrastructures and purchasing strategies to cope with the energy demand, so as to guarantee the operational capacity and economic competitiveness of Grifols.

• Establish procedures in order to continuously track energy demand thus being able to plan required infrastructures, identify and quantify energy saving measures and their energy footprint.

• Involve and raise awareness among all Grifols employees in reducing energy consumption. The Corporate Environmental Program of Objectives 2017-2019 have been included within the Energy Policy framework. This Program is approved by the Corporate Environmental Committee. An Energy Manager is the responsable for implementing the Energy policy at a Corporate level. The Manager belongs to the Global Facilities department. The Corporate Environment department is also included in the Global Facilities department. Energy efficiency measures are implemented in engineering projects, previuosly agreed with the Environment department.

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

Status

Complete

Attach the document

CORPORATE RESPONSIBILITY REPORT 2018_EN.pdf

Page/Section reference

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment

Publication

In mainstream reports

Status

Complete

Attach the document

Informe gestión 2018.pdf

Page/Section reference

Content elements

Governance
Strategy

Risks & opportunities
Other metrics

Comment

Publication
In mainstream reports

Status
Complete

Attach the document

Grifols Environmental Program 2017-2019_EN.pptx

Page/Section reference

Content elements
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Comment

C14. Signoff

C-FI

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

C14.1

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

	Job title	Corresponding job category
Row 1	Corporate Environment Director.	Environment/Sustainability manager

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	Public or Non-Public Submission	I am submitting to
I am submitting my response	Public	Investors

Please confirm below

I have read and accept the applicable Terms