GRIFOLS - Climate Change 2018

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 (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	Select the number of past reporting years you will be providing emissions data for
Row 1	January 1 2017	December 31 2017	No	<Not Applicable>
Row 2	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Row 3	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Row 4	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>

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) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain
Chief Operating Officer (COO)	Chief Industrial Officer (CIO) and Deputy Chief Industrial Officer of Global Industrial Division report directly to the CEOs, who are members of the Board of Directors, Corporate Executive Commitee, Bioscience Executive Committee, Hospital Executive Commitee and Diagnostic Executive Committee. CIOs are members of the Corporate Environmental Committee that meets twice a year and are the final responsibles of the Corporate Environmental Department. CIOs of Global Industrial Division approve 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. They are 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 – all meetings	Reviewing and guiding major plans of action Reviewing and guiding annual budgets Setting performance objectives Monitoring implementation and performance of objectives Overseeing major capital expenditures, acquisitions and divestitures Monitoring and overseeing progress against goals and targets for addressing climate-related issues	Grifols Environmental Program includes goals and specific actions aimed to improve the energy consumption efficiency and reduce the CO2 emissions. The Environmental Program actions are followed up by the Chief Industrial Officers (CIO) during the comittee meetings. Proposals are made by the CIOs in order to fulfill the goals as well as to set new targets (e.g. increase the consumption of energy from renewable sources). CIOs report directly to the CEOs, who are members of the Board of Directors.
Please select	Please select	

C1.2

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

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Chief Operating Officer (COO)	Both assessing and managing climate-related risks and opportunities	Half-yearly
Other committee, please specify (Grifols 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.

1. Where in the organizational structure this/these position(s) and/or committees lie: The responsibility regarding climate-related issues lies in the Grifols Environment Comittee. Chief Industrial Officer (CIO) and Deputy Chief Industrial Officer of Global Industrial Division report directly to the CEOs, who are members of the Board of Directors, Corporate Executive Commitee, Bioscience Executive Committee, Hospital Executive Commitee and Diagnostic Executive Committee. CIOs are members of the Corporate Environmental Committee that meets twice a year and are the final responsibles of the Corporate Environmental Department. CIOs of Global Industrial Division approve 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. They are also responsible of the Global Facilities department, approving investments related to engineering projects, including issues related to energy efficiency and control of energy expenses.

2. What their associated responsibilities are: Their responsibility is to surveil the compliance of Grifols Energy Policy, which was approved in 2017. They propose and approve objectives and actions aimed to reduce energy consumption and emissions worldwide. The CIOs participate in the half-yearly follow-up of results and makes new proposals for actions to be implemented. They overseeing the capital expedires 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 appropiate 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 Environment Committee.

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.

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
Reduction of 590 tCO2e/year by implementing the projects resulting from the energy audits already completed.

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	3 to 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. In addition, energy analysis are performed in case of acquisition of new plants. 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. 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) 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.).
Emerging regulation	Relevant, always included	One of the evaluated is 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 specially 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.
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. 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, using different distribution lines for lighting and power. 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.
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. 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 waters in boilers and/or in cooling towers, rejection of distillers, ultra and microfiltration, API and purified circuits purge systems, avoid the installation of open water cooling circuits, use exchangers with water tower or cooling equipment, recovery water from condensers 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.
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 appropiate 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.

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 efectiveness 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 instance: the remodeling of the refrigeration circuit of the liquid ring pumps, the recovery of clean water for using it in cooling towers and boilers.

-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 installation of charging points for employees' electrical cars in the main manufacturing plants in Spain and USA (Bioscience, Diagnostic and Hospital divisions). This specific action has been carried out during 2018 and its efectiveness will be evaluated in 2019.

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 driver
Policy and legal: 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

Potential financial impact
350000

Explanation of financial impact
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 2017 Grifols saved 3277 tCO2/year using the cogeneration plant in Spain. Grifols energy strategy includes the reduction of energy consumption included the savings on carbon taxes which is converted in GHG emission reduction. One example for this purpose has been the implementation of overhaul of 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 driver
Other, please specify (Air pollution limits (more restrictive))

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

Potential financial impact
1000000

Explanation of financial impact
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
2017 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. The boiler for the new manufacturing building in San Francisco site is energy efficient.

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 driver
Other, please specify (Induced changes in natural resources)

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. We have consumed 814584 m3 in Spain, 40% comes from wells. 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

Potential financial impact
173000000

Explanation of financial impact
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 MEUR. This cost has been estimated based on the 2017 Bioscience revenue in LA and Parets del Vallès (2077 MEUR).

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.

Cost of management
0

Comment

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 driver
Increased capital costs (e.g., damage to facilities)

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

Potential financial impact
2000000

Explanation of financial impact
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 driver
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

Potential financial impact
2000000

Explanation of financial impact
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 2016 they have installed lighting technology and energy saving technology in air conditioning, thermal isolation and water heating. They have also installed centralized controls to regulate the running time and temperature of air conditioning; in the case of air systems, using distribution systems of low speed and lose of maximum load of 50 kg/m2 per meter of pipe. It has been installing sunscreens to prevent solar radiation enter directly into the room. They have installed systems of varying intensity depending on the natural light of the room.

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 driver
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

Potential financial impact

400000000

Explanation of financial impact
It is estimated approximately 10% of total 2017 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
200000000

Comment
It is estimated approximately 5% of total 2017 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 driver
Reduced operational costs (e.g., through use of lowest cost abatement)

Company- specific description
Grifols activities carried on Spain, divisions Bioscience, Hospital and Diagnostic.

Time horizon
Medium-term

Likelihood
Very likely

Magnitude of impact
Medium-low

Potential financial impact
90000

Explanation of financial impact
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.

Cost to realize opportunity
0

Comment
The study is carried out for a Grifols Engineer. 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 driver
Reduced operational costs (e.g., through use of lowest cost abatement)

Company- specific description
Manufacturing plant of Laboratorios Grifols located in Murcia (Spain). It belongs to the Hospital Division.

Time horizon
Short-term

Likelihood
Very likely

Magnitude of impact
Medium

Potential financial impact
60000

Explanation of financial impact
Around 4 -8% of the site energy demand (30000 - 60000 EUR) depending on the power (400 - 800 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
500000

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 has been considered that the main Grifols Bioscience division raw material, blood plasma, is not impacted by climate change. Regarding the other raw materials, their quality is not impacted either.
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	R&D projects to investigate therapeutic applications of plasma proteins (Bioscience divison) if new diseases are detected due to the consequences of climate change. In a period exceeding 10 years. The economic impact would be around 29 MEUR (5% of R&D expenses in 2017). This risk has not impacted because new diseases have not been detected.
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	Please select	

C2.6

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

	Relevance	Description
Revenues	Not impacted	The risks and opportunities related to climate change have not generated any impact on the marketing and sales operations planning.
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 by 30%. For instance, in 2017 a high efficiency cooling system has been installed in Madrid site's warehouse, which is going to reduce the energy consumption in 51,381 kWh/year. The total 2017 investments aimed to decrease the energy consumption have risen to 3.7 MEUR.
Acquisitions and divestments	Not yet impacted	To date, no risks nor opportunities that may have an economic influence on purchasing and investment decisions have impacted.
Access to capital	Not yet impacted	To date, no risks nor opportunities that may influence the financial planning process related to Grifols' access to capital have impacted.
Assets	Not yet impacted	To date, the identified risks and opportunities do not impact on any of Grifols assets.
Liabilities	Not impacted	No risks nor opportunities may have an impact on Grifols liabilities.
Other	Please select	

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.

- What have been the most substantial business decisions made during the reporting year: According to the strategy of the company, it has been approved the Grifols Environmental Program 2017-2019. This program establishes the objectives for emissions reduction and energy efficiency. Energy efficiency studies have been carried out to analyze their feasibility. Goals for energy savings and air emissions reduction have been approved. Total objectives related to energy investments raise 3 million € in energy ecoefficiency worldwide. These objectives allow reduction of electric consumption in 2066 MWh/year in facilities already in operation, natural gas consumption in 19720 MWh/year in facilities already in operation, electric consumption in 6229 MWh/year in facilities under construction, and natural gas consumption in 926 MWh/year in facilities under construction.These objectives are also communicated to the employees in order to promote awareness and participation. In addition, an Energy Policy has been published in order to develop the specific guidelines concerning all Energy issues. All the efforts made in terms of Energy savings have resulted in a reduction of the atmospheric emissions.

- Some of the examples of the implementation of this Program in 2017 are the installation of frequency converters in pumps and engines, the acquisition of a high-efficiency distiller, the installation of a high-efficiency chiller.

C3.1g

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

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. On the other hand, the activities that are expected to be developed at a short and medium-term, will not be significantly affected by climate change consequences. 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

% reduction from base year
0.5

Base year
2016

Start year
2016

Base year emissions covered by target (metric tons CO2e)
122508

Target year
2019

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

% achieved (emissions)
12.2

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
70

% reduction from base year
6.28

Base year
2016

Start year
2016

Base year emissions covered by target (metric tons CO2e)
57221

Target year
2019

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

% achieved (emissions)
96.8

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

% reduction from base year
3.66

Base year
2016

Start year
2016

Base year emissions covered by target (metric tons CO2e)
122508

Target year
2021

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

% achieved (emissions)
18.3

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
69

% reduction from base year
0.3

Base year
2016

Start year
2016

Base year emissions covered by target (metric tons CO2e)
57221

Target year
2019

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

% achieved (emissions)
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 projects at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of projects	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	5	0
To be implemented*	1	21
Implementation commenced*	14	6637
Implemented*	8	3605
Not to be implemented	0	0

C4.3b

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

Activity type
Other, please specify (Optimization of transportation routes)

Description of activity
<Not Applicable>

Estimated annual CO2e savings (metric tonnes CO2e)
88

Scope
Scope 3

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
405407

Investment required (unit currency – as specified in CC0.4)
0

Payback period
Please select

Estimated lifetime of the initiative
11-15 years

Comment
Optimization of the plasma recollection routes in USA. Reduction of 480,000 kilometers by road per year. Reduction of 88 tCO2e of greenhouse gases emissions. The monetary savings calculation method is explained below: average trucking cost per mile in USA is 1.592$ (Source: American Transportation Research Institute, ATRI). 480,000 km* 1.6 = 298,258 miles. 298,258*1.592 = 474,827$. 474,827*0.85= 405,407 EUR.

Activity type
Energy efficiency: Building services

Description of activity
Building controls

Estimated annual CO2e savings (metric tonnes CO2e)
5

Scope
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
1900

Investment required (unit currency – as specified in CC0.4)
0

Payback period
Please select

Estimated lifetime of the initiative
6-10 years

Comment
No investment is required because it consists on a change of automatization. Timetable for switching on and off has been changed.

Activity type
Energy efficiency: Building fabric

Description of activity
Insulation

Estimated annual CO2e savings (metric tonnes CO2e)
173

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
21429

Investment required (unit currency – as specified in CC0.4)
8000

Payback period

1-3 years

Estimated lifetime of the initiative
6-10 years

Comment
Isolation improvement in the factionation process building and destillation tower at Bioscience facilities in Parets del Vallés.

Activity type
Energy efficiency: Building services

Description of activity
Combined heat and power

Estimated annual CO2e savings (metric tonnes CO2e)
2770

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
342868

Investment required (unit currency – as specified in CC0.4)
1200000

Payback period
4 - 10 years

Estimated lifetime of the initiative
6-10 years

Comment
Carry out an overhaul of the cogeneration engines of the manufacturing plant of Bioscience division in Parets del Vallés to prolong their service life by ten years.

Activity type
Energy efficiency: Building services

Description of activity
Other, please specify (Improve efficiency in heat generation.)

Estimated annual CO2e savings (metric tonnes CO2e)
519

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
64287

Investment required (unit currency – as specified in CC0.4)
130000

Payback period
1-3 years

Estimated lifetime of the initiative
6-10 years

Comment
Increasing of efficiency in heat generation in the manufacturing plant of the Bioscience Division in Parets del Vallés. Installation of an air/air economizator in one of the main boilers.

Activity type
Other, please specify (Optimization of maritime transportation)

Description of activity
<Not Applicable>

Estimated annual CO2e savings (metric tonnes CO2e)
7

Scope
Scope 3

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
360000

Investment required (unit currency – as specified in CC0.4)
0

Payback period
Please select

Estimated lifetime of the initiative
11-15 years

Comment
Optimization of the loads in the maritime transport of plasma from USA to Rotterdam. Reduction of 7 tCO2e of greenhouse gases emissions. The monetary savings calculation method is explained below: before implementing the initiative, 202 containers were required to transport a given load of plasma. Now, only 184 containers are required to transport the same load of plasma. That is a 9% reduction. Annually, the initiative allows to transport 18 fewer containers. The cost of each container is 20,000 EUR. Therefore, 18*20,000 = 360,000 EUR.

Activity type
Energy efficiency: Building services

Description of activity
Other, please specify (High-efficiency distiller)

Estimated annual CO2e savings (metric tonnes CO2e)
43

Scope
Scope 3

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)
5112

Investment required (unit currency – as specified in CC0.4)
350000

Payback period
>25 years

Estimated lifetime of the initiative
11-15 years

Comment
Installation of a high-efficiency distiller in the Murcia manufacturing plant (Hospital Division). The efficiency measure will help saving 234 MWh per year. This initiative results into a reduction of 5,112 tCO2e.

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 avoiding 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.

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)
92643

Comment

Scope 2 (location-based)

Base year start
January 1 2016

Base year end
December 31 2016

Base year emissions (metric tons CO2e)
122508

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?

Row 1

Gross global Scope 1 emissions (metric tons CO2e)
103044

End-year of reporting period
<Not Applicable>

Comment
Operational control is the boundary used for Scope 1 and 2 greenhouse gas inventory.

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?

Row 1

Scope 2, location-based
112481

Scope 2, market-based (if applicable)
<Not Applicable>

End-year of reporting period
<Not Applicable>

Comment
Operational control is the boundary used for Scope 1 and 2 greenhouse gas inventory.

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 the 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 2017 = 12 (0,07%) Total staff Grifols 2017= 18174

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 the 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 2017 = 7 (0,04%) Total staff Grifols 2017= 18174

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 the 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 2017 = 4 (0,02%) Total staff Grifols 2017= 18174

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

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 the 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 Nordik 2017 = 9 (0,05%) Total staff Grifols 2017= 18174

Source
Grifols Dubai

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 the 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 Dubai 2017 = 6 (0,04%) Total staff Grifols 2017= 18174

Source
Slovakia

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 the 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 Slovakia 2017 = 3 (0,02%) Total staff Grifols 2017= 18174

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 the 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 2017 = 3 (0,02%) Total staff Grifols 2017= 18174

Source
Grifols India

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 the 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 2017 = 9 (0,05%) Total staff Grifols 2017= 18174

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 the 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 home adress 2017 = 616 (3.4%) Total staff Grifols 2017= 18174

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
30817.6

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

Metric tonnes CO2e
0

Emissions calculation methodology

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

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

Metric tonnes CO2e

Emissions calculation methodology

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Explanation
It is included in other sources of scope 3 emissions.

Upstream transportation and distribution

Evaluation status
Relevant, calculated

Metric tonnes CO2e
0.55

Emissions calculation methodology
It is required the total weight transported yearly, total km and way of transport. GHG Protocol emission factors are applied. For marine transport emissions, the calculator provided for the Port of Barcelona is applied (Maritim: http://planol.portdebarcelona.cat/ecocalc).

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Explanation
It includes emissions caused by imports managed from Spain (Grifols International). Road transport is not included.

Waste generated in operations

Evaluation status
Relevant, calculated

Metric tonnes CO2e
15337.8

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
16788

Emissions calculation methodology
The scope is all Grifols' facilities. Aircraft: 64% we calculated the total miles travelled by aircraft (more tan 27000 trips) we classified those trips in three ranges: <463 km., 463-1107 km. and > 1107 km. After this, we applied conversion factors from World Resources Institute (2008), GHG protocol tool for .mobile combustión and (IPCC 2007), versión 2.2. 36% of emissions were provided by the airlines. Car: Total km. amount is extrapolated from expenses per km. Total expenses are divided by the price per km. driven that Grifols pays to employees for business issues.

Percentage of emissions calculated using data obtained from suppliers or value chain partners
77

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
40069.6

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. It is applied following conversion factors: Transport by car: 0,16 kgCOe/km Transport by train: 0,04 kgCOe/km Transport by bus: 0,08 kgCOe/km Transport by motorbike: 0,11 kgCOe/km Emission factors are getting from following sources: Catalan climate change office. Catalan Government.Guide for calculating GHG emissions calculation. March 2015.

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 Km. done by all Grifols' employees.

Upstream leased assets

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Explanation
Electrical consumption of rented offices is included in Scope 2.

Downstream transportation and distribution

Evaluation status
Relevant, calculated

Metric tonnes CO2e
6959

Emissions calculation methodology
It is required the total weight transported yearly, total distance (km) and way of transport. GHG Protocol emission factors are applied. For marine transport emissions, the calculator provided for the Port of Barcelona is applied (Maritim: http://planol.portdebarcelona.cat/ecocalc)

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Explanation
It includes emissions caused by exports managed from Spain (Grifols International) to the rest of the world.

Processing of sold products

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

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

Metric tonnes CO2e

Emissions calculation methodology

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

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
53.7

Emissions calculation methodology
We have considered those products sold by Hospital and Bioscience divisions in the Spanish market. 2017 SIGRE declaration. 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 those products that companies that belongs to Bioscience and Hospital division put on the market.

Downstream leased assets

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

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

Franchises

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Explanation
Grifols does not work with franchises.

Investments

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

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, explanation provided

Metric tonnes CO2e
121

Emissions calculation methodology
Conversion factor: Guia práctica càlcul emissions 2016 de l'Oficina de Canvi Climàtic. total 655512 km factor 0,1850 kgCO2/km (17 t trucks).

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

Explanation
It is included transport between Biomat and Instituto Grifols. Transports between donor centers and Biomat (from Spain, Check Republic and Slovakia)

Other (downstream)

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

Percentage of emissions calculated using data obtained from suppliers or value chain partners
0

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
0.00004978

Metric numerator (Gross global combined Scope 1 and 2 emissions)
159043

Metric denominator
unit total revenue

Metric denominator: Unit total
4329000000

Scope 2 figure used
Location-based

% change from previous year
6

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 2017 are: • Implementation of a plan for reducing air compressed leaks in the manufacturing plant of Hospital division in Spain. Reduction of 110 MWh/year (43 tCO2e). • Implementation of a high-efficiency cooling system in Madrid site's warehouse. Reduction of 51 MWh/year (20 tCO2e). • Improvement of the cooling system setup to optimize its working time. Reduction of 16 MWh/year (6 tCO2e) • Reduction of calorific energy consumption in the manufacturing plant of Bioscience Division in Spain. Improvement of the efficiency in steam generation. Perform an overhaul to extend 10 years the life cycle of the cogeneration engines. Improvement of the pipelines insulation in the plasma fractionation and ethanol distillers. Reduction of 19,006 MWh/year (3,462tCO2e). • Construction and monitoring of the new fractionation building in the manufacturing plant of Bioscience divison in Nort Carolina. Reduction of 20% in energy usage in comparison to baseline building performance established in appendix G of ANSI/ASHRAE/IESNA Standard 90.1-2007. Reduction of electrical consumption would be 4,333 MWh/year (1,593 tCO2e). Revenue 2016 = 4,049.8 MEUR; 2017= 4,329 MEUR. Increase of 7%.

Intensity figure
8.6

Metric numerator (Gross global combined Scope 1 and 2 emissions)
159043

Metric denominator
full time equivalent (FTE) employee

Metric denominator: Unit total
18300

Scope 2 figure used
Location-based

% change from previous year
40

Direction of change
Decreased

Reason for change
FTE employees 2016 = 14876 ; TOTAL SCOPE 1+2=215151 FTE employees 2017= 18300 ; TOTAL SCOPE 1+2=159043 There has been an increase of 23% in the FTE and a decrease of 26% in Total Scope 1+2. The increase in the employees number is mainly due to the staff increase in donor centers. Donor centers consume energy but they are not the main contributors to CO2e emissions.

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization have greenhouse gas emissions other than carbon dioxide?

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)
Spain	34895
United States of America	66954
Czechia	30.1
Chile	45
Portugal	24.3
Mexico	48.7
Ireland	1013.2
Other, please specify (Rest of locations)	33.7

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	90883
Diagnostic division	11295
Hospital division	866

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)
Spain	18733		86097839	6017304.5
United States of America	92073		259779306	0
Australia	541.89		678.2	
Switzerland	30.99		1105.4	
Germany	242.67		510.9	
Czechia	66.72		120.9	
Italy	202.08		524.9	
Poland	6.99		9.2	
Portugal	29.29		80.5	
United Kingdom of Great Britain and Northern Ireland	31.73		66.2	
Argentina	35.73		90	
Brazil	100.63		1026.9	
Chile	130.9		271	
France	1.95		28.2	
Mexico	141		311.3	
Malaysia	3.33		4.9	
Thailand	13.88		26.2	
Singapore	42.27		89.5	
China	52.95		64	
Ireland	0		2736.5	2736.5

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	103310	
Diagnostic division	8681	
Hospital division	490	

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 energy consumption	10027	Decreased	4.66	Grifols' Scope 2 emissions in 2017 have been equal to 112,481 tCO2e. Grifols' Scope 2 emissions in 2016 were equal to 122,508 tCO2e (10,027 decrease). The gross global emissions (Scope 1 + 2) of Grifols for this reporting year are 215,525 metric tons of CO2e. Its gross global emissions for the previous reporting year were 215,151 metric tons of CO2e. The emissions value change is equal to 4.66% according to the next formula: (10,027/215,152)*100 = 4.66%.
Other emissions reduction activities	4291	Decreased	1.99	Total kwh saved by energy reduction projects (1,965,460 kWh savings in electricity projects (770 tCO2e), 19,328,350 kWh savings in natural gas projects (3,521 tCO2e)) included in Corporate Environmental Program 2017-2019. It has been taken into account those actions finished by 2017. The gross global emissions (Scope 1 + 2) of Grifols for this reporting year are 215,525 metric tons of CO2e. Its gross global emissions for the previous reporting year were 215,151 metric tons of CO2e. The emissions value change is equal to 1.99% according to the next formula: (4,291/215,152)*100 = 1.99%.
Divestment		<Not Applicable>		
Acquisitions	2735	Increased	1.3	New facilities in San Diego (Diagnostic Division): 5,790,357 kwh electrical consumption (1,393 TCO2e)+ 7,368,538 kWh Natural (1,342 tCO2e) gas consumption. The gross global emissions (Scope 1 + 2) of Grifols for this reporting year are 215,525 metric tons of CO2e. Its gross global emissions for the previous reporting year were 215,151 metric tons of CO2e. The emissions value change is equal to 1.3% according to the next formula: (2,735/215,152)*100=1.3%.
Mergers		<Not Applicable>		
Change in output		<Not Applicable>		
Change in methodology		<Not Applicable>		
Change in boundary	1883	Increased	0.8	Number of plasma donor centers has increased in comparison to the previous years. The electrical consumption has increased 5,119,069 kWh (1,883 tCO2e). The gross global emissions (Scope 1 + 2) of Grifols for this reporting year are 215,525 metric tons of CO2e. Its gross global emissions for the previous reporting year were 215,151 metric tons of CO2e. The emissions value change is equal to 0.8% according to the next formula: (1,883/215,152)*100=0.8%.
Change in physical operating conditions		<Not Applicable>		
Unidentified		<Not Applicable>		
Other		<Not Applicable>		

C7.9b

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

Location-based

C8. Energy

C8.1

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

More than 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)	0	399642	399642
Consumption of purchased or acquired electricity	<Not Applicable>	6020	347601	353621
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	0	<Not Applicable>	0
Total energy consumption	<Not Applicable>	6020	747243	753263

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 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
391615

MWh fuel consumed for the self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
85979

Fuels (excluding feedstocks)
Propane Gas

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
893

MWh fuel consumed for the self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Fuels (excluding feedstocks)
Diesel

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
7009

MWh fuel consumed for the self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
0

Fuels (excluding feedstocks)
Motor Gasoline

Heating value
HHV (higher heating value)

Total fuel MWh consumed by the organization
125

MWh fuel consumed for the self-generation of electricity
0

MWh fuel consumed for self-generation of heat
0

MWh fuel consumed for self-generation of steam
0

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
0

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 estationary combustion. Version 4.1 Emission factors for Kg CO2e/liter: CO2 CH4 N2O 2,68 1,08E-04 2,17E-05

Comment

Motor Gasoline

Emission factor
2.2

Unit
kg CO2e per liter

Emission factor source
Oficina de Canvi Climàtic (Generalitat de Catalunya). IPPC considers same emission factor for Diesel than for Gasoline. So, in this case, we don't take IPPC emission factors. Emission factors for Kg CO2e/liter: CO2 CH4 N2O 2,20 1,08E-04 2,17E-05

Comment

Natural Gas

Emission factor
0.00018

Unit
kg CO2e per MWh

Emission factor source
World Resources Institute (2015). GHG Protocol tool for estationary combustion. Version 4.1 Conversion factor (GHG kg/kWh) CO2 CH4 N2O 0,18 3,24E-06 3,24E-07

Comment

Propane Gas

Emission factor
1.61

Unit
kg CO2e per liter

Emission factor source
World Resources Institute (2015). GHG Protocol tool for estationary combustion. Version 4.1 Conversion factor (GHG kg/liter) CO2 CH4 N2O 1,61 2,55E-05 2,55E-06

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	35024	35024	0	0
Heat	23134	23134	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
No purchases or generation of low-carbon electricity, heat, steam or cooling accounted with a low-carbon emission factor

Low-carbon technology type
<Not Applicable>

MWh consumed associated with low-carbon electricity, heat, steam or cooling
<Not Applicable>

Emission factor (in units of metric tons CO2e per MWh)
<Not Applicable>

Comment
No low carbon electricity, heat, steam or cooling are provided.

C9. Additional metrics

C9.1

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

Description
Energy use

Metric value
11.78

Metric numerator
metric tonnes CO2e

Metric denominator (intensity metric only)
full time equivalent (FTE) employee

% change from previous year
14.5

Direction of change
Decreased

Please explain
There were 14876 FTE employees in 2016, and 18300 FTE employees in 2017. There has been an increase of 23%. There are three main production buildings that are under validation process. It means that they are producing some batches but it is not a complete production. Energy consumption, mainly for climating areas, has to be the working completely. Necessary employees for doing this process are much less than will be during the final process. These three builindings are: Prolastine C in Parets del Vallés (Spain), New Fractionation Building in North Carolina (USA) and CMF building in Emeryville (USA).

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
2017 Corporate Responsibility Report.PDF

Page/ section reference
Pages 148-149.

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
2017 Corporate Responsibility Report.PDF

Page/ section reference
Pages 148-149.

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
2017 Corporate Responsibility Report.PDF

Page/section reference
Pages 148-149.

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.	Grifols Environmental Program which includes climate-realted 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
22.7

Period start date
January 1 2017

Period end date
December 31 2017

Allowances allocated
0

Allowances purchased
2573

Verified emissions in metric tons CO2e
23405

Details of ownership
Facilities we own and operate

Comment
2017 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 manufacturing plant of Barcelona 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 67.6% of global output, and 17.4% 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 on reducing direct emission from our complementary boiler improving the utilization of useful heat from cogeneration. We have saved 3277 tonnes of CO2 in 2017 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 for 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

Information collection (understanding supplier behavior)

Details of engagement

Collect climate change and carbon information at least annually from suppliers

% of suppliers by number

1

% total procurement spend (direct and indirect)

2

% Scope 3 emissions as reported in C6.5

10

Rationale for the coverage of your engagement

The airlines provide us the CO2 emissions generated by our employees business travels. Scope 3 Emissions: 110,145 tCO2e Aircraft Emissions: 10,989 tCO2e

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-to-face 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, responding to requirements of catalan law. 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 and use of bus financed by the company. 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?

Grifols Environmental Policy assures legal compliance about air emissions. 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 Steering Committee. An Energy Specialist has been hired in order to implement the Energy policy at a Corporate level. This professional 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
2017 Corporate Responsibility Report.PDF

Content elements
Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets
Other metrics

Publication
In mainstream reports

Status
Complete

Attach the document
CNMV 2H 2017.pdf

Content elements
Governance
Strategy

Publication
In mainstream reports

Status
Complete

Attach the document
CNMV 1H 2017.pdf

Content elements
Strategy
Emission targets

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

SC. Supply chain module

SC0.0

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

SC0.1

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

	Annual Revenue
Row 1	

SC0.2

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

Please select

SC1.1

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

SC1.2

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

SC1.3

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

Allocation challenges	Please explain what would help you overcome these challenges
Please select	

SC1.4

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

Please select

SC2.1

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

SC2.2

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

Please select

SC3.1

(SC3.1) Do you want to enroll in the 2018-2019 CDP Action Exchange initiative?

Please select

SC3.2

(SC3.2) Is your company a participating supplier in CDP's 2017-2018 Action Exchange initiative?

Please select

SC4.1

(SC4.1) Are you providing product level data for your organization's goods or services, if so, what functionality will you be using?

Yes, I will provide data

SC4.1a

(SC4.1a) Give the overall percentage of total emissions, for all Scopes, that are covered by these products.

SC4.2a

(SC4.2a) Complete the following table for the goods/services for which you want to provide data.

SC4.2b

(SC4.2b) Complete the following table with data for lifecycle stages of your goods and/or services.

SC4.2c

(SC4.2c) Please detail emissions reduction initiatives completed or planned for this product.

Name of good/ service	Initiative ID	Description of initiative	Completed or planned	Emission reductions in kg CO2e per unit

SC4.2d

(SC4.2d) Have any of the initiatives described in SC4.2c been driven by requesting CDP Supply Chain members?

Please select

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

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

Please confirm below

I have read and accept the applicable Terms