Ferrovial - Climate Change 2019

C0. Introduction

C0.1

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

Ferrovial is one of the world's leading infrastructure operators and municipal services companies, committed to developing sustainable solutions.

The company has 92,113 employees and a presence in over 15 countries. It is a member of Spain's blue-chip IBEX 35 index and is also included in prestigious sustainability indices such as the Dow Jones Sustainability Index, FTSE4Good and CDP. In Poland, Budimex is included in RESPECT Index that includes socially responsible companies listed on the WSE (Warsaw Stock Exchange) Main List.

The company's activity is carried out through four business lines:

- Services: efficient provision of urban and environmental services and maintenance of infrastructures and facilities. The services division features the following companies:

a) In the United Kingdom: via Amey.

b) In Spain: via Ferrovial Servicios España

c) Internationally: Via Ferrovial Servicios Internacional and Broadspectrum.

- Toll Roads: promotion, investment and operation of toll roads and other infrastructures. The Toll Roads division features by Cintra.

- Construction: the design and construction of infrastructures in the areas of civil engineering work, building and industrial construction. The construction division features the following companies:

a) In United States : Webber and Pepper Lawson

b) In Spain and internationally: via Ferrovial-Agroman and Cadagua.

c) In Poland: Budimex.

- Airports: airport investment and operation.

Also, in Chile through its subsidiary Transchile Charrúa Transmisión, it owns 100% of the ownership of an electric transmission line in Chile

A commitment to society is one of Ferrovial's distinguishing characteristics. Accordingly, we are committed to Corporate Responsibility, best practices in Quality and the Environment, and the advancement of Innovation. We provide services to large communities to promote socio-economic development, helping improve people's life.

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 2018	December 31 2018	Yes	3 years

C0.3

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

Australia
Canada
Chile
Colombia
France
Morocco
New Zealand
Oman
Poland
Portugal
Puerto Rico
Saudi Arabia
Slovakia
Spain
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.

Operational control

C1. Governance

C1.1

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

Yes

C1.1a

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

Position of individual(s)	Please explain
Chief Executive Officer (CEO)	CEO of Ferrovial is the person of maximum responsibility in the company on issues related to climate change. As part of the board of directors is the spokeperson for all issues related to climate change. Ferrovial has a system called Ferrovial Risk Management (FRM) to identify the risks and opportunities. The identification of the risk and opportunities is done in a bottom up manner from a contract/asset to company/corporate level until CEO. As the same with other climate change issues, since 2008 Ferrovial has a Steering Committee formed by directors of Q&E business units whose responsibilities are to discuss, make decisions, establish requirements and review results on behalf of the Group. Through the president of the Steerging committee, the CEO is informed and takes decisions on everything related to climate change as the maximum responsible for these issues at Ferrovial.
Other, please specify (Steering Committee.)	Ferrovial's climate strategy forms part of the company's wider business strategy. Issues relating to climate change has been analyzed and discussed by the Board of Directors and the Management Committee. The task of implementing the climate strategy is entrusted to the Quality and Environment Committee.The way to articulate the climate change strategy across all business areas is via Ferrovial´s Q&E Steering Committee. In 2008 Ferrovial founded the Quality & Environment Steering Committee whose responsibilities are to discuss, make decisions, establish requirements and review results on behalf of the Group,as well as the Q & E policy implementation group wide. The Committee is formed by directors that form part of the Board of Directors in each business division. The director of HSQE of Ferrovial is the president of the Steering committee and he is the person in charge to transmit to the CEO and the Board of Ferrovial issues related to climate change

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 strategy Reviewing and guiding major plans of action Reviewing and guiding annual budgets Setting performance objectives Monitoring implementation and performance of objectives	Ferrovial's climate strategy forms part of the company's wider business strategy. Issues relating to climate change, such as strategy, plans of action, targets, etc.. are analyzed and discussed by the Board of Directors and the Management Committee. The task of implementing the climate strategy is entrusted to the Quality and Environment Committee, Committee whose responsibilities are to discuss, make decisions, establish requirements and review results on behalf of the Group,as well as the Q & E policy implementation group wide. The Committee is formed by directors that form part of the Board of Directors in each business division. The director of HSQE of Ferrovial is the president of the Steering committee and he is the person in charge to transmit to the CEO and the Board of Ferrovial issues related to climate change.

C1.2

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

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Other, please specify (Steering Committee.)	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly

C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).

Ferrovial's climate strategy forms part of the company's wider business strategy.

CEO of Ferrovial is the person of maximum responsibility in the company on issues related to climate change. As part of the board of directors is the spokeperson for all issues related to climate change. Ferrovial has a system called Ferrovial Risk Management (FRM) to identify the risks and opportunities. The identification of the risk and opportunities is done in a bottom up manner from a contract/asset to company/corporate level until CEO. As the same with other climate change issues, since 2008 Ferrovial has a Steering Committee formed by directors of Q&E business units whose responsibilities are to discuss, make decisions, establish requirements and review results on behalf of the Group. Through the president of the Steerging committee, the CEO is informed and takes decisions on everything related to climate change as the maximum responsible for these issues at Ferrovial. In 2008 especially for that, Ferrovial founded the Q&E Steering Committee whose responsibilities are to discuss, make decisions, establish requirements and review results on behalf of the Group, related to projects, initiatives and practices in terms of climate change mainly, as well as the Q & E policy implementation group wide. The Committee is formed by directors that form part of the Board of Directors in each business division.

Their participation is essential, as they are acquainted with business environment and stakeholders related to their business areas. Occasionally, these members invite other participants whose knowledge is important in decision making process.

The Committee meets quarterly or more frequently if necessary, making full use of video conference facilities with the aim of reducing CO2 emissions arising from traveling of its participant. Members of Q & E Steering Committee are managing all environmental issues of their business, including climate change, on daily basis.

The decisions and actions of the Q & E Steering Committee arise from the implementation of the Corporate Responsibility policy that is determined by the Board of Directors to the implementation of decisions agreed.

The director of HSQE of Ferrovial is the president of the Steering committee and he is the person in charge to transmit to the CEO and the Board of Ferrovial issues related to climate change.

In the decision-making process following aspects are taken into account:assetments of the climate change related risk, requirements of countries in which Ferrovial operates, recommendations of governmental bodies and organizations, emission reduction commitment, mitigation and adaptation measures, the success of measures taken, analysis of new contracts and new business opportunities, etc. The Q &E Steering Committee has the power to implement decisions agreed. If these decisions require further investment by the business unit, each business unit is in charge of its implementations.

Some of these principles of the Corporate Responsibility policy are:

- Eco-efficiency. We minimize the environmental impact of our activities, on the basis of the available scientific knowledge by acting responsibly and efficiently in using natural resources, reducing as much as possible waste and emissions we produce as well as, in particular, green-house gases.

- Mutual benefit in our relations with suppliers and partners. We encourage mutual benefit in the relationship with our partners and suppliers, in order to achieve the most competitive level in terms of quality and environmental behaviour.

- The value of commitment. We are an organization that carries out its commitments. We fulfil our legal obligations and comply with the law. We meet the agreements endorsed with our customers and users ensuring the quality and safety, as well as the environmental behaviour of our products and services.

- Continuous improvement. We pursue excellence in our business, measuring the key aspects of our activities and implementing management systems for the continuous improvement of our processes, technical skills and performance. We establish open communication channels among different areas and divisions of our company in order to create synergies and opportunities

C1.3

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

C1.3a

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

Who is entitled to benefit from these incentives?
Chief Executive Officer (CEO)

Types of incentives
Monetary reward

Activity incentivized
Emissions reduction project

Comment
CEO of Ferrovial is the person of maximum responsibility in the company on issues related to climate change. As part of the board of directors is the spokeperson for all issues related to climate change. Within your salary there is a part as a variable (incentives) where reference is made to compliance with the strategic plan of the company where they are included, for example, the establishment of the objectives endorsed by SBTi, emission reduction projects, review of objectives, stay In the main sustainability indexes.

Who is entitled to benefit from these incentives?
Chief Executive Officer (CEO)

Types of incentives
Monetary reward

Activity incentivized
Emissions reduction target

Comment
CEO of Ferrovial is the person of maximum responsibility in the company on issues related to climate change. As part of the board of directors is the spokeperson for all issues related to climate change. Within your salary there is a part as a variable (incentives) where reference is made to compliance with the strategic plan of the company where they are included, for example, the establishment of the objectives endorsed by SBTi, emission reduction projects, review of objectives, stay In the main sustainability indexes.

Who is entitled to benefit from these incentives?
Chief Executive Officer (CEO)

Types of incentives
Monetary reward

Activity incentivized
Behavior change related indicator

Comment
CEO of Ferrovial is the person of maximum responsibility in the company on issues related to climate change. As part of the board of directors is the spokeperson for all issues related to climate change. Within your salary there is a part as a variable (incentives) where reference is made to compliance with the strategic plan of the company where they are included, for example, the establishment of the objectives endorsed by SBTi, emission reduction projects, review of objectives, stay In the main sustainability indexes.

Who is entitled to benefit from these incentives?
Chief Sustainability Officer (CSO)

Types of incentives
Monetary reward

Activity incentivized
Emissions reduction target

Comment
CSO as part of the top executive levels at the corporate and business units have part of their salary set as a variable (incentives) and this is linked to the objectives achieved (individual and collective performance indicator). The objectives depend on the level at the corporate and business unit. In particular, one of the objectives is to achieve Ferrovial's emission reduction targets. Other objectives related to climate change are: -Establishment of reduction objectives supported by SBTi - Stay in the main sustainability indexes - Contracting of energy efficiency contracts - Classification and reduction of waste - Reduction of water consumption; Promotion of the Carbon Pricing program, Compliance of the QE policy.

Who is entitled to benefit from these incentives?
Chief Sustainability Officer (CSO)

Types of incentives
Monetary reward

Activity incentivized
Emissions reduction project

Comment
CSO as part of the top executive levels at the corporate and business units have part of their salary set as a variable (incentives) and this is linked to the objectives achieved (individual and collective performance indicator). The objectives depend on the level at the corporate and business unit. In particular, one of the objectives is to achieve Ferrovial's emission reduction targets. Other objectives related to climate change are: -Establishment of reduction objectives supported by SBTi - Stay in the main sustainability indexes - Contracting of energy efficiency contracts - Classification and reduction of waste - Reduction of water consumption; Promotion of the Carbon Pricing program, Compliance of the QE policy.

Who is entitled to benefit from these incentives?
Chief Sustainability Officer (CSO)

Types of incentives
Monetary reward

Activity incentivized
Behavior change related indicator

Comment
CSO as part of the top executive levels at the corporate and business units have part of their salary set as a variable (incentives) and this is linked to the objectives achieved (individual and collective performance indicator). The objectives depend on the level at the corporate and business unit. In particular, one of the objectives is to achieve Ferrovial's emission reduction targets. Other objectives related to climate change are: -Establishment of reduction objectives supported by SBTi - Stay in the main sustainability indexes - Contracting of energy efficiency contracts - Classification and reduction of waste - Reduction of water consumption; Promotion of the Carbon Pricing program, Compliance of the QE policy.

Who is entitled to benefit from these incentives?
Chief Operating Officer (COO)

Types of incentives
Monetary reward

Activity incentivized
Energy reduction project

Comment
Top and medium executive levels at the corporate and business units have part of their salary set as a variable (incentives) and this is linked to the objectives achieved (individual and collective performance indicator). The objectives depend on the level at the corporate and business unit. In particular, one of the objectives is to achieve Ferrovial's energy reduction targets and projects- Contracting of energy efficiency contracts - Classification and reduction of waste - Reduction of water consumption

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Who is entitled to benefit from these incentives?
Chief Operating Officer (COO)

Types of incentives
Monetary reward

Activity incentivized
Energy reduction target

Comment
Top and medium executive levels at the corporate and business units have part of their salary set as a variable (incentives) and this is linked to the objectives achieved (individual and collective performance indicator). The objectives depend on the level at the corporate and business unit. In particular, one of the objectives is to achieve Ferrovial's energy reduction targets and projects- Contracting of energy efficiency contracts - Classification and reduction of waste - Reduction of water consumption

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Who is entitled to benefit from these incentives?
All employees

Types of incentives
Monetary reward

Activity incentivized
Emissions reduction project

Comment
Annually Ferrovial evaluates the performance of its employees. This process aims to assess and communicate to employees how they are carrying out their work. All Ferrovial employees units have part of their salary set as a variable (incentives) and this is linked , among other things, related with climate change issues, such as position in ratings, which implies aspects related to climate change. Personal performance is valued in relation to these aspects. This is the starting point for defining Individual Development Plan in order to promote the professional growth. The development planning that accompanies this process permits the establishment of training and development actions aligned with the strengths and improvement areas identified during the assessment

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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	2	the period corresponds with years 2018 to 2020
Medium-term	2	10	the period corresponds with years 2020 to 2030
Long-term	10	30	the period corresponds with years 2030 to 2050

C2.2

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

C2.2a

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

	Frequency of monitoring	How far into the future are risks considered?	Comment
Row 1	Six-monthly or more frequently	>6 years	Ferrovial has a risk and opportunities management system called Ferrovial Risk Management (FRM). Risks are classified into five areas: strategic, operating, regulatory, financial risks and climate change. So, the climate change risks category is in turn split into Regulation, Physical climate and other climate-related developments sub-groups. Ferrovial has infrastructures with a concession period of more than 50 years. So, it is very important to consider the long-term risks. However, Ferrovial identify and manage risks in the short and medium term. Twice a year, the risks and opportunities are reviewed because the market conditions change continuously (legislation changes, new trends, ...). Also in the day to day business, an analysis of risks and opportunities associated with new situations and new business acquisition. In real-time, the Board of Directors is informed of these analysis through the application FRM Tool or regular meetings with the Corporate Risk Department

C2.2b

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

Ferrovial has a system called Ferrovial Risk Management (FRM) to identify the risks and opportunities. The identification of the risk and opportunities is done in a bottom up manner from a contract/asset to company/corporate level.

So the managers in a contract/asset identify the risks which threaten theirs activity, business target and infrastructures. These risks go on to the up level until the CEO with the idea to consolidate the risks from the contract/asset level to the corporate/company level. Then, the most important of identified risks will go up to next level of responsibility in where the person in charge will assess them and identify others news and so on until the CEO level.

Under the principle of continuous improvement, the risks identified through the corporate risk identification and assessment system (FRM) are revalued twice a year, and the status of achievement of the established reduction targets and deviations that could exist are reviewed in order to establish the appropriate corrective measures. Ferrovial has long-term infrastructure. For this reason, risks and opportunities are analyzed in the short, medium and long term.

The identified risks are classified into groups according to their nature in order to facilitate their control, monitoring and assurance. Thus, the main groups are:

- Regulatory: Risk of non-compliance with the regulatory framework applicable to the company's activities.

- Financial: Economic impact of the new regulation on climate change, due to the increase in operating costs due to the increase in rates on fossil fuels and the appearance of new markets for emission rights. The implementation of efficiency measures and the electrification of demand reduce the exposure to this risk.

- Operational: Catastrophic events derived from weather changes that may cause damage to the company's infrastructure and operation, causing temporary loss of revenue.

- Reputational: Loss of credibility due to non-compliance with the established objectives and communicated to the stakeholders

With the aim to identify risks relevant to the business, there is an evaluation to identify if the risk is applicable, significant and concerning:

- Applicable: Risks may materialize in the business.

- Significant: Risk materialization would lead to a relevant negative impact on meeting business objectives.

- Concerning: Having taken into account the controls applied, risk requires special attention and monitoring.

Regarding the substantial financial impact of the identified risk in the different climate scenarios (considering as a substantial financial impact that is considered relevant by the business in such a way that it is analyzed by the FRM first and CEO) it is considered that the diversification of our activity towards "low carbon" activities will facilitate us the acquisition of new types of financing. In order to quantify those financial impacts Ferrovial define and assess the risk potential impacts and translate to monetary fed up.

Simultaneously to this risk identification process associated with climate change, Ferrovial has identified market opportunities for every identified climate change risk that can offer the company a competitive advantage. The risks identified as applicable and significant, regardless of whether at present it is concerning or not, should be assessed. The scale used is designed to perform two risk assessments: inherent and residual, in accordance with the following definition:

- Inherent risk: risk without taking into account management action to reduce the impact or likelihood of such risk.

- Residual risk: risk that remains after the adoption of preventive measures.

Assessment involves three components:

- Impact: The possible impact on objectives, should risk occur. Could be on one, two or three of the mentioned objectives

- Likelihood: The probability of risk occurring. in accordance with the following scale: High, Medium, Low and Remote.

- Exposure: Exposure understood as risk regularity (frequent or infrequent).

In order to assess the Impact, three objectives could be influenced:

- Business continuity and growth (long term business plan).

- Profitability and cash flow.

- Corporate reputation

In the evaluation of risks and opportunities, the value chain is considered. Aspects such as emission policy restrictions, carbon taxation, water restrictions, land use restrictions or incentives, and changes in the demand and supply of services or interruption of operations are considered.

Associated to the risks there are measures of management and reduction of the same. The contracting of risk insurance is part of these measures.

Following the recommendations of the TFCD a global review of risks and opportunities is being carried out considering several climate scenarios. This revision supposes a redefinition of the risks in Transition and Physics

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	Most of the Ferrovial UK subsidiaries and Heathrow Airport Holdings (HAH) are directly involved in the Carbon Reduction Commitment (CRC).CRC involves any activity consuming more than 6,000 MWh/year of electricity. This scheme based on purchasing allowances to offset emissions. Allowances can either be bought at annual fixed-price sales, or traded on the secondary market. One allowance must be surrendered for each tonne of CO2 emitted. Ferrovial is exposed to a range of risk factors arising in countries where it carries out its activities and inherent to the sectors in which it operates. The company seeks to detect and assess risks, and implement timely control measures to mitigate their probability of occurrence and/or potential impact according to the strategic objectives. Ferrovial permanently monitors the regulatory and legislative processes that may affect its activities, as well as the political movements that may occur , in order to anticipate possible changes in time for proper management. Ferrovial has a Risk Control and Management Policy that was approved by the Board of Directors to establish the acceptable risk and tolerance level per risk factor. The Ferrovial Risk Management (FRM) is the company´s risk and opportunities identification and assessment process, which is supervised by the Board of Directors and Management Committee, and implemented in all business areas In order to manage transition R&O the FRM included them as strategic type (such as, cap &trade schemes, changes in the regulatory framework like CRC).
Emerging regulation	Relevant, always included	Ferrovial knows than Fuel/energy taxes and regulations will increase emissions costs and price. This situation could derive in higher operating costs in the company. Ferrovial permanently monitors the regulatory and legislative processes that may affect its activities, as well as the political movements that may occur , in order to anticipate possible changes in time for proper management. Ferrovial has a Risk Control and Management Policy that was approved by the Board of Directors to establish the acceptable risk and tolerance level per risk factor. The Ferrovial Risk Management (FRM) is the company´s risk and opportunities identification and assessment process, which is supervised by the Board of Directors and Management Committee, and implemented in all business areas In order to manage transition R&O the FRM included them as strategic type such as, cap &trade schemes, changes in the regulatory framework, market situation).
Technology	Not relevant, explanation provided	Ferrovial doesn´t have a specific business where risks associated with technological improvements or innovations that support the transition to a lower-carbon, energy-efficient economic system because we don't have own technology research.
Legal	Relevant, always included	Ferrovial considers the legal risks associated with climate change are relevant and always are include in our analysis. While it is true, in recent years, being transparent in the communication of claims , we have not had any associated with climate change in any of the cases. Therefore, it is considered that the probability of occurrence is low and in case of occurrence it would be communicated in the usual way. However, this risk is included in the risk matrix of the company and within the FRM system. It could be considered a legal risk claims associated with a possible breach within the law of energy transition. Ferrovial is exposed to a range of risk factors arising in countries where it carries out its activities and inherent to the sectors in which it operates. The Ferrovial Risk Management (FRM) is the company´s risk and opportunities identification and assessment process, which is supervised by the Board of Directors and Management Committee, and implemented in all business areas In order to manage transition R&O the FRM included them as strategic type
Market	Relevant, always included	Ferrovial could face cost increases in energy inputs due to existing fixed price in contracts, and this fact will reduce margins over the medium term for the company. For example, long term demand forecasts impacted by Traffic Scenarios Emerging from UK's Air-Travel Emissions Reductions Plans. The company is exposed to a range of risk factors arising in countries where it carries out its activities and inherent to the sectors in which it operates. . Some Ferrovial's business areas (Cintra) could be impacted by the progressive modal shifts to reduce emissions. Toll roads managed by Cintra could be reduced its traffic levels by users switching to railway and other low emissions transport modes. The company seeks to detect and assess risks, and implement timely control measures to mitigate their probability of occurrence and/or potential impact according to the strategic objectives. The company seeks to detect and assess risks, and implement timely control measures to mitigate their probability of occurrence and/or potential impact according to the strategic objectives. Moreover, new business opportunities can be identified because of the effective and efficient management of certain risks. Ferrovial permanently monitors the regulatory and legislative processes that may affect its activities, as well as the political movements that may occur , in order to anticipate possible changes in time for proper management. Ferrovial has a Risk Control and Management Policy that was approved by the Board of Directors to establish the acceptable risk and tolerance level per risk factor. The Ferrovial Risk Management (FRM) is the company´s risk and opportunities identification and assessment process, which is supervised by the Board of Directors and Management Committee, and implemented in all business areas In order to manage transition R&O the FRM included them as strategic type (such as, cap & trade schemes, changes in the regulatory framework, market situation).
Reputation	Relevant, always included	We estimate more than 90% of SRI analyst and research agencies covering Ferrovial are considering Climate Change as a key driver of the performance of the company. We believe that efforts to fight climate change is appreciated by investors, analysts and customers. Trends on sustainable investing are not just related to stock markets, but increasingly focused on particular projects (i.e. large infrastructure projects).Most of the infrastructure investors and funds are increasingly considering these drivers for making decisions around their portfolios of projects. Ferrovial´s CO2 emissions performance has improved over last years, positioning the firm as one of the most sustainable companies within our activity sectors. In this context, Ferrovial performance on CO2 should be considered as key for improving our reputation, and the ability to attract capital within SRI markets. Ferrovial believes that a noncompliance with our targets in order to combat climate change and continue improving day by day may have a negative impact on Ferrovial reputation, ratings, share value and revenues.The company seeks to detect and assess risks, and implement timely control measures to mitigate their probability of occurrence and/or potential impact according to the strategic objectives. Moreover, new business opportunities can be identified because of the effective and efficient management of certain risks. Ferrovial is exposed to reputational and ethical risk. To mitigate the company has a Compliance Model that is developed under the current legislation.
Acute physical	Relevant, always included	Adverse weather events increase in frequency, in airports in which Ferrovial (HAH airports) is the major shareholder. Recent history shows the incredibly severe reputational and economic impacts of adverse weather events to airport activity and management in the UK The Ferrovial Risk Management (FRM) is the company´s risk and opportunities identification and assessment process, which is supervised by the Board of Directors and Management Committee, and implemented in all business areas. In order to manage physical R&O the FRM included them as operational type (such as, changes in precipitation patterns and extreme variability in weather patterns, rising mean temperatures).
Chronic physical	Relevant, always included	Adverse weather events increase in frequency, Science has pointed to an increase in the frequency and volatility of extreme weather conditions are real .The set of extremes sustained temperatures, snow, ice, extreme precipitation, flooding and tropical cyclones can impact the operating performance of our infrastructuresThese losses can cause physical damage on assets and infrastructure closure either because they have to be repaired or because they cannot operate. The company seeks to detect and assess risks, and implement timely control measures to mitigate their probability of occurrence and/or potential impact according to the strategic objectives. Moreover, new business opportunities can be identified because of the effective and efficient management of certain risks.F errovial assesses and monitors the status of emerging risks that could negatively affect its ability to meet strategic targets or risks that, despite their low likelihood of occurence, could nevertheless have negative effects on its business targets. Some of the more prominent risk include natural disaster. Enviromental risk are monitored, mainly those related to the effects of climate change. Ferrovial has a Risk Control and Management Policy that was approved by the Board of Directors to establish the acceptable risk and tolerance level per risk factor. In order to manage physical R&O the FRM included them as operational type.
Upstream	Relevant, sometimes included	The Ferrovial Risk Management (FRM) is the company´s risk and opportunities identification and assessment process, which is supervised by the Board of Directors and Management Committee, and implemented in all business areas. In the evaluation of risks and opportunities, the value chain is considered. Aspects such as emission policy restrictions, carbon taxation, water restrictions, land use restrictions or incentives, and changes in the demand and supply of services or interruption of operations are considered.
Downstream	Relevant, sometimes included	The Ferrovial Risk Management (FRM) is the company´s risk and opportunities identification and assessment process, which is supervised by the Board of Directors and Management Committee, and implemented in all business areas. In the evaluation of risks and opportunities, the value chain is considered. Aspects such as emission policy restrictions, carbon taxation, water restrictions, land use restrictions or incentives, and changes in the demand and supply of services or interruption of operations are considered.

C2.2d

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

Ferrovial has a Risk Control and Management Policy that was approved by the Board of Directors to establish the acceptable risk and tolerance level per risk factor. These policies sets the general engagement framework for controlling and managing risk of diverse sorts that the managing team could encounter when attempting to attain business objectives.

The Ferrovial Risk Management (FRM) is the company´s risk and opportunities identification and assessment process, which is supervised by the Board of Directors and Management Committee, and implemented in all business areas.

This process was created for the early detection and assessment of risk events based on their likelihood of occurrence and potential impact on strategic objectives, including corporate reputation. This enables Ferrovial to roll out the most suitable management and protective measures according to the nature and location of the risk.

The identified risk events are assessed using common metrics, one inherent, before the specific control implemented to mitigate the risk, whether impact or likelihood, and one residual, considering specific control measures. Furthermore, both assessments make it possible to determine the relative importance of each risk event in the risk matrix, assessing the effectiveness of the implemented measures for the managing them.

Simultaneously to this risk identification and management process associated with climate change, Ferrovial has identified market opportunities for every identified climate change risk that can offer the company a competitive advantage. Therefore, Ferrovial has some business activities to help others to combat climate change.

As the same with the identification, the management of the risk and opportunities is done in a bottom up manner from a contract/asset to company/corporate level.

So the managers in a contract/asset identify the risks which threaten theirs activity, business target and infrastructures. These risks go on to the up level until the CEO with the idea to consolidate the risks from the contract/asset level to the corporate/company level. Then, the most important of identified risks will go up to next level of responsibility in where the person in charge will assess them and identify others news and so on until the CEO level.

- In order to manage transition R&O the FRM included them as strategic type (such as, cap & trade schemes, changes in the regulatory framework, market situation). For example in the case of risk of emerging regulation such as increase in the taxes or prices of the fuels, Ferrovial research new business models like “carbon neutral highway concession” what adds solutions to the traffic congestion.

- In order to manage physical R&O the FRM included them as operational type (such as, changes in precipitation patterns and extreme variability in weather patterns, rising mean temperatures). For example, Heathrow develops “Winter Resilience Program” The aim of the program is to examine how the airport could respond more effectively to future severe events.

In the case of the opportunities is at the business level where are departments of developed business in charge of study , following the strategy of the company , which are the next steps.

Also, Ferrovial has a Compliance directorate with a policy that was approved by the Board of Directors that the main objective of the Compliance Policy is to erect a common and standard framework for monitoring, controlling and managing compliance risks. The policy also develops the different phases of the Compliance Model in place at the company and stipulates the competencies and remit of its governance and management bodies and those of its employees in relation to regulatory compliance.

C2.3

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

C2.3a

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

Identifier
Risk 1

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

Risk type
Transition risk

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

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

Company- specific description
Most of the Ferrovial UK subsidiaries and Heathrow Airport Holdings (HAH) are directly involved in the Carbon Reduction Commitment (CRC). Ferrovial has 25 % share of HAH. CRC involves any activity consuming more than 6,000 MWh/year of electricity. This scheme based on purchasing allowances to offset emissions. Allowances can either be bought at annual fixed-price sales, or traded on the secondary market. One allowance must be surrendered for each tonne of CO2 emitted. The allowance price in Phase 1 has been set at £12 per tonne of CO2. This scheme came into force in 2013 and has financial implications for Ferrovial in terms of cash-flow. Currently the allowance price is £18.30 Ferrovial staff has been taking part in several taskforces in order to help the UK government on the CRC implementation and we are improving the energy efficiency of our infrastructures.

Time horizon
Short-term

Likelihood
Virtually certain

Magnitude of impact
Low

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

Potential financial impact figure (currency)
167702

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
Considering the emissions from airports with a correction factor of 25% (which is the share that Ferrovial has on airports in the UK) and taking as the price of carbon 18.30 GBP for electricity emissions (which are 8233 tCO2e) we obtain a financial impact of 150664 GBP. We have used 1 euro = 0.8984 GBP

Management method
Ferrovial and HAH staff have been taking part in several workshops and taskforces. In 2017, the most important are: - Carbon Reduction Commitment (CRC). Ferrovial is ready to leader this trading scheme, and has been supporting the Government expectations on such matter. - HAH is leading the "Green Aviation" initiative and has been working with airlines to publish the road carbon footprint roadmap for sustainable aviation too. Trends within aviation sector are aimed at making aircrafts more efficient and fuels less polluting (Singapore Airlines, Airbus, NATs). On the other hand there is ambitious environmental planning, focused on reducing the carbon footprint and improving the energy efficiency of airport terminals and facilities. Investment in energy efficient technology and sourcing more renewable energy as well as demand management. Group staff resources dedicated to taking part in the mentioned committees, taskforces and CRC monitoring: 190,000£ per year Investment in energy efficient technology and energy from renewable sources 117,786,522 £. Cost total = 190,000 + 117,786,522 = 117,976,522£ (131,318,479 €) 1 euro = 0.8984 GBP

Cost of management
131318479

Comment
The management costs have been calculated based on the actions that the company has already taken, and may change in the future based on the needs detected.

Identifier
Risk 2

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

Risk type
Transition risk

Primary climate-related risk driver
Market: Changing customer behavior

Type of financial impact
Reduced demand for goods and/or services due to shift in consumer preferences

Company- specific description
Fuel/energy taxes and regulations will increase emissions costs and price. This situation could reduce demand for road travel and increase modality switching. Some Ferrovial's business areas (Cintra) could be impacted by the progressive modal shifts to reduce emissions. Toll roads managed by Cintra could be reduced its traffic levels by users switching to railway and other low emissions transport modes.

Time horizon
Long-term

Likelihood
More likely than not

Magnitude of impact
Medium-high

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

Potential financial impact figure (currency)
48400000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
Financial implications of the reduction on road traffic consists in lower capital streams in Cintra.The financial implications for Cintra, and therefore, for Ferrovial has been estimated around 10% of EBITDA of this business area wich has been evaluated for 2018 by 48.4 M€.

Management method
Cintra is building a new business model based on a “Carbon neutral Highway Concession” scheme; several R&D projects are currently on-going with the aim of developing the technologies needed to make this business model real. In USA, Cintra operates the first toll road (NTE - North Tarrant Express) that is "carbon neutral", based on tolls without barrier and dynamic rate, guarantee speed, safety and environmental improvement to drivers. This alternative adds a solution to the traffic congestion of previously existing roads.The study of comparison of scenarios "before (previously existing route)" and "the after (existing route and NTE)" concludes that the new scenario is lower emitter as a whole to avoid emissions from congestion. These projects have received awards that recognize the contribution to improving the local economy and the quality of life of people who use this highway daily, and for its advocacy of environmental protection.Ferrovial R&D investment in “Intelligent infrastructures”, as the “Carbon neutral Highway Concession” scheme lauched by Cintra, raised to 48 M€, in 2018, and 284.8 M€ since 2011.

Cost of management

284800000

Comment
The management costs have been calculated based on the actions that the company has already taken, and may change in the future based on the needs detected.

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: Changes in precipitation patterns and extreme variability in weather patterns

Type of financial impact
Increased operating costs (e.g., inadequate water supply for hydroelectric plants or to cool nuclear and fossil fuel plants)

Company- specific description
Adverse weather events increase in frequency, in airports in which Ferrovial (HAH airports) is the major shareholder. Recent history shows the incredibly severe reputational and economic impacts of adverse weather events to airport activity and management in the UK. Science has pointed to an increase in the frequency and volatility of extreme weather conditions.

Time horizon
Long-term

Likelihood
Likely

Magnitude of impact
Medium

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

Potential financial impact figure (currency)
4897596

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
Financial implications are related to (a) increase of costs related to operating the airports (b) claims of passenger due to delays and other inconveniences, and (c) reputational impact on HAH's license to operate the airports. We estimate the cost related to problems caused by the weather, such as snow, is 4.4 million £ /day. 1euro = 0.8984 GBP

Management method
Since 2011, Heathrow airport (managed by Ferrovial - HAH) implements a programme called "Winter Resilience Programme" to examine how the airport could respond more effectively to future severe weather events. In 2018, HAH has continued investing in new vehicles and equipment, in aircraft deicer storage and facilities, in IT improvements and improving operational centers with the idea to avoid delays and airport closure due to snow. Furthermore, HAH continued working on: 1 Enhance snow plan 2 Review aircraft de-icing processes 3 Regular snow plan review 4 Early collaboration on contingency planning 5 Dynamic management of consumables 6 Strengthen crisis management process 7 Define clear escalation triggers 8 Strengthen capacity constraints group 9 Sustainable crisis resourcing 10 Enhance flight information and passenger communications 11 Establish a single airport command/control centre 12 Improve situational awareness 13 Jointly strengthen current welfare arrangements with airlines and CAA 14 Routinely plan and test welfare arrangements. Winter Resilience Programme.Such effort has focused on different fields: - 11 m£ in new vehicles and equipment - 10 m£ in aircraft de-icer storage and facilities - 8 m£ in IT improvements - 7 m£ improving operational centers - further resources were made available for maintenance, equipment upgrades and training purposes.total = 11+10+8+7 = 36 million GBP

Cost of management
40071237

Comment
The management costs have been calculated based on the actions that the company has already taken, and may change in the future based on the needs detected.

Identifier
Risk 4

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

Risk type
Physical risk

Primary climate-related risk driver
Acute: Increased severity of extreme weather events such as cyclones and floods

Type of financial impact
Increased operating costs (e.g., inadequate water supply for hydroelectric plants or to cool nuclear and fossil fuel plants)

Company- specific description
The set of extremes temperatures, snow, ice, extreme precipitation, flooding and tropical cyclones can impact the operating performance of our infrastructures (Toll Roads managed by the Ferrovial's subsydiary Cintra). These losses can cause physical damage on assets and infrastructure closure either because they have to be repaired or because they cannot operate.

Time horizon

Short-term

Likelihood
More likely than not

Magnitude of impact
Medium

Are you able to provide a potential financial impact figure?
Please select

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
For financial estimates Ferrovial calculate an average price of road construction cost in 15.30 M€ (this calculation has been based in the toll road D4 R7 in Slovakia). This estimate contemplates, the worst case scenario , the total replacement of the average price of km built by toll road.

Management method
Ferrovial has a system called FRM to identify the risks. So the managers in a contract/asset identify the risks which threaten theirs activity, business target and infrastructures. These risks go on to the up level until the CEO with the idea to consolidate the risks. Twice a year, the risks and opportunities are reviewed because the market conditions change continuously (legislation changes, new trends, ...).In 2018, toll roads managers identified risks could impact to the operating performance of the infrastructures. So, in a toll road physical risks could cause physical damage on assets and infrastructure closure because they have to be repaired or because they cannot operate. As an ex., the toll road in Colombia called “Ruta del Cacao” has identified risks related to physical risks like floodings and cyclones. Ferrovial’s Corporate Risk Department hired the best insurance protection to cover property damage and business interruption. Policies cover these risks for an average of 75 m€ by highway a year. Furthermore, Ferrovial's Corporate Risk Department established control measures based on the set of procedures and emergency plans that describe how to act in the event of risk. Also, Ferrovial is covering the impact over environment from this kind of events with a limit around 60M€/claim. Control measures based on procedures and emergency plans are valued at 16,498 € and the annual insurance premium is around 3,4 m€. Total cost = 16,498 + 3,400,000 = 3,416,498

Cost of management
3416498

Comment
The management costs have been calculated based on the actions that the company has already taken, and may change in the future based on the needs detected.Control measures based on procedures and emergency plans are valued at 16,498 € and the annual insurance premium is around 3,4 million €. Total cost = 16,498 + 3,400,000 = 3,416,498

Identifier
Risk 5

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

Risk type
Transition risk

Primary climate-related risk driver
Reputation: Increased stakeholder concern or negative stakeholder feedback

Type of financial impact
Other, please specify (Inhability to do business)

Company- specific description
SRI players take into account several environmental-related issues of the companies under research. According to our own assessment, global investment according to SRI criteria amounted to €7.9 tr. in European markets, assets under management implementing core SRI criteria total around €1.2 tr. We believe that efforts to fight climate change is appreciated by investors, analysts and customers. Trends on sustainable investing are not just related to stock markets, but increasingly focused on particular projects (i.e. large infrastructure projects). We estimate more than 90% of SRI analyst and research agencies covering Ferrovial are considering Climate Change as a key driver of the performance of the company. Moreover, most of the infrastructure investors and funds are increasingly considering these drivers for making decisions around their portfolios of projects. Ferrovial´s CO2 emissions performance has improved over last years, positioning the firm as one of the most sustainable companies within our activity sectors. In this context, Ferrovial performance on CO2 should be considered as key for improving our reputation, and the ability to attract capital within SRI markets. Ferrovial believes that a noncompliance with our targets in order to combat climate change and continue improving day by day may have a negative impact on Ferrovial reputation, ratings, share value and revenues.

Time horizon
Long-term

Likelihood
Unlikely

Magnitude of impact
Medium-low

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

Potential financial impact figure (currency)
794200000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
The financial repercussions associated with this risk are: - The loss of share value: 260 million€. Whereas share value decrease by 2% due to reputational issues. - The loss of business: 534.2 million €. The business offered by Ferrovial is "Low Carbon" infrastructures. Ferrovial performance on CO2 should be considered as key for improving our reputation, and the ability to attract capital within SRI markets and new contracts. We consider annual business loss can represent 5 % of annual turnover. total estimation = 794,2 M€

Management method
Since 2008 Ferrovial has developed and implemented an outstanding climate strategy based on:- Measuring and managing Ferrovial's carbon footprint . We use a "Carbon Footprint tool" to report and calculate GHG- Setting up reliable reduction targets-Implementing GHG reduction measures- Improving the ability to manage climate change driven risks, as well as anticipating opportunities in this area-permanently monitoring and updating the climate strategy of Ferrovial-participation in forums and analyses and evaluates new trends day by day in relation Climate Change to develop them in the company.-Ferrovial maintains channels of communication with the above mentioned stakeholders (investors, analysts, research agencies, etc.), managing their inputs and expectations, and incorporating some of them into its strategy and action plans.-Ferrovial has been listed in DJSI, FTSE4Good ratings and is in a leader position in CDP- Since 2017, Ferrovial becomes a member and core-partner of Climate-KIC.In 2017, Ferrovial is the first Spanish company, to achieve its emission reduction targets certified by the SBTi. The costs estimated per year: - 1,015,000 €: staff who work on Climate Change- 4.2 €: staff who development new business related Climate Change - 590.71 m€: To implement emission reduction measures - 30,000€: to maintain Carbon Footprint software - 40,000 €: to verify Carbon footprint by a third party - 20,000 €to be member and core-partner. 25,000€ : Climate-Kic Total = 596,040,000

Cost of management
596040000

Comment
The management costs have been calculated based on the actions that the company has already taken, and may change in the future based on the needs detected.

Identifier
Risk 6

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

Risk type
Transition risk

Primary climate-related risk driver
Market: Increased cost of raw materials

Type of financial impact
Increased production costs due to changing input prices (e.g., energy, water) and output requirements (e.g., waste treatement)

Company- specific description
Ferrovial could face cost increases in energy inputs due to existing fixed price in contracts, and this fact will reduce margins over the medium term for the company.

Time horizon
Long-term

Likelihood
Likely

Magnitude of impact
Medium

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

Potential financial impact figure (currency)
2800000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
Financial implications are mainly related to the reduction of margins over the medium term, in fixed-price contracts in Ferrovial. An extra cost in electricity and fuels has been evaluated by 2,8 million € per year for all Ferrovial

Management method
Ferrovial has implemented measures to reduce electricity and fuel consumption and reduce emissions. Some of these measures are: - Incorporation of energy efficiency criteria in procurement. In 2018, 44.01 % of the electricity purchased is renewable. 51,076 tCO2e were avoided thanks to the purchase of renewable electricity. In 2018, 5,026 t CO2 eq were avoided thanks to the use of alternative vehicles. - To improve vehicle fleets and training programmes, and specific training to promote efficient driving (especially in the activities of Construction and Services). In 2018, Ferrovial Agroman continued working to reduce emissions focusing on reducing earth transport distances within sites using trucks or tubs. - Development of technology and processes to generate electricity and other fuel from renewable sources. The landfills generated 1,224,455 GJ of energy. The biogas collection process not only avoided the emission of GHG into the atmosphere but also generated energy from renewable sources. - Inclusion of energy efficiency measures in buildings used and infraestructures Between 2009 and 2018 there was a 16 % of reduction in tonnes of CO2 equivalent emitted by the headquarters.The implementation of these measures involves investments around 116,9 Million €.

Cost of management
116900000

Comment
The management costs have been calculated based on the actions that the company has already taken, and may change in the future based on the needs detected.

Identifier
Risk 7

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

Risk type
Transition risk

Primary climate-related risk driver
Policy and legal: Other

Type of financial impact
Reduced demand for goods and/or services due to shift in consumer preferences

Company- specific description
Long term demand forecasts impacted by Traffic Scenarios Emerging from UK's Air-Travel Emissions Reductions Plans. Meeting the UK aviation emissions reductions roadmap 2050 is likely to result in changes to the air travel intensities of different airports in different ways. Balance between long-haul and domestic flights could change under this approach, penalizing less passengers in AGS airports of Ferrovial.

Time horizon
Long-term

Likelihood
About as likely as not

Magnitude of impact
Medium-high

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

Potential financial impact figure (currency)
24000000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
Financial implications are related to the decrease on the number of flights and passengers in AGS airports. According to the UK aviation emissions reductions roadmap 2050 (35% below in 2050), AGS airports (less than 15% of the Ferrovial's airport assets in UK) could reduce the number of passengers until 40% in 2050 which will mean a lost of 24 million€ of revenues.

Management method
FFerrovial Airports are working with many air sector leaders (aircraft manufacturers, airlines) in order to support new technologies and air traffic management techniques to reduce GHG emissions. According to that, Ferrovial is leading the "Green Aviation" and "Green Heathrow" initiatives. In specific, in 2017, we maintained monthly meetings dedicated to this topic.Forecast analysis have been implemented under several traffic and regulatory framework scenarios. Cost of advisory experts and consulting has been evaluated by 951,600£ since 2011 1euro = 0.8984 GBP

Cost of management
1059216

Comment
The management costs have been calculated based on the actions that the company has already taken, and may change in the future based on the needs detected.

Identifier
Risk 8

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
Reduction in capital availability

Company- specific description
The current low price of carbon discourages investment in rehabilitation. Ferrovial is promoting actions to establish real carbon prices in the market that encourages energy efficiency initiatives and guarantees the company's future investments. Ferrovial has developed a strategy on R&D focused on energy efficiency in order to position Ferrovial technology and know-how as a leading player in the emerging energy-efficiency market.

Time horizon
Medium-term

Likelihood
Likely

Magnitude of impact
Medium-high

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

Potential financial impact figure (currency)
300000000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
The expectative on energy efficiency refitting of buildings and homes has been evaluated around 10,000 M€ in 2020 in the global market. Ferrovial construction and ESCO subsidiaries has been assessed around 3% of this market. Thus, low carbon prices can influence seriously on an decrease of Ferrovial construction and ESCO sales around 300 M€ in 2020 .

Management method
Ferrovial is promoting actions to establish real carbon prices in the market that encourages energy efficiency initiatives and guarantees the company's future investments.Has developed strategy on R&D focused on energy efficiency in order to position our technology and know-how as a leading player in the emerging energy-efficiency market.Ferrovial's statements, on this issue,have been focused on asking for a certain future on carbon prices, as well as a reliable and strong carbon market at a global scale. As a part of Ferrovial lobbying on this particular matter, Ferrovial has endorsed the statements of the Prince of Wales's Corporate Leaders Group on Climate Change, amongst other initiatives.Ferrovial experts are involved in several taskforces dedicated to advise Governments and regulatory bodies on those issues. Since 2015Ferrovial presides Spanish Green Growth Group that is collaborating with the Spanish Government in the next roadmap towards an economy with low emissions. As a part of this strategy there is a long-term agreement with the MIT (USA) and since 2017, Ferrovial becomes a member and core-partner of Climate-KIC, public-private innovation partnership focused to mitigate and adapt to climate change. Investments in the Ferrovial R&D strategy on this matter rose up to 48 € million in 2018 .Cost of the Ferrovial's experts involved in taskforces, as well as the external advisory on this particular matter has been around 1€ million in 2018. Total=49M€

Cost of management
49000000

Comment
The management costs have been calculated based on the actions that the company has already taken, and may change in the future based on the needs detected.

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
Energy source

Primary climate-related opportunity driver
Use of lower-emission sources of energy

Type of financial impact
Reduced exposure to GHG emissions and therefore less sensitivity to changes in cost of carbon

Company-specific description
ENERGY FROM WASTE. Ferrovial Servicios division is a leading company in technologies on management and production of energy from waste. Biogas recovered at landfills is used at co-generation plants to produce electricity. The recovery process not only avoids discharging GHGs into the atmosphere (methane) but also generates energy from renewable sources. Fossil fuel dependency is thus reduced, with the avoidance of methane emissions, which have a bigger effect on global warming than CO2. So, in case fuel or energy taxes or regulations were increased Ferrovial Services offers to the owner of the landfills (cities and others) the possibility to reduce methane emissions and produce electricity from renewable sources. A reduction of the methane emissions means to decrease costs related to future emissions taxes and compliance with reduction emissions target. On the other hand, there is an opportunity for self-sufficiency on energy consumption, by using this source of electricity from renewable sources at own treatment and industrial plants, as a way to reduce the use of fossil fuel and operating expenses . In 2017, Ferrovial Servicios and Amey generated 604,089 GJ from biogas recovered at landfills. The electricity generated is used for own consumption or sold to third parties. In 2017, there was a 22.64 % increased in energy production and consumption of energy from renewable sources compared to 2009. The consumption of this energy avoids 49,262 TnCO2eq.

Time horizon
Current

Likelihood
Virtually certain

Magnitude of impact
High

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

Potential financial impact figure (currency)
213300000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure

In 2018, Ferrovial Servicios and Amey generated 604,089 GJ from biogas recovered at landfills. The electricity generated is used for own consumption or sold to third parties. Consumption of this energy from renewable sources avoids 49,262 tCO2eq. The annual landfill activities turnover is around 187 million €. Furthermore if the company sell the generated electricity to third parties receive around 26.3 millon € every year.

Strategy to realize opportunity
Ferrovial Services has invested in technology for the recovery and use of landfill biogas from waste decomposition to produce energy. This will reduce dependence on fossil fuels and the emissions from their combustion avoiding emissions of methane Also, it has increased sealed surface in some landfills. Ferrovial Services has developed an innovative project involving the installation of the first microturbine in Spain using biogas from landfill. Ferrovial Servicios division has several agreements with R&D institutions.Moreover, Ferrovial team is lobbying regulations on energy and waste treatment, in order to anticipate future trends impacting on this emerging business area. Costs associated: - Ferrovial will invest around 79 million€ in technology for the recovery and use of landfill biogas from waste decomposition to produce energy. - Ferrovial has invested more than €2 million in the CIE initiative, as a part of the programs led by CI3. - Investments in the Ferrovial R&D strategy on waste treatment amounted by 500,000 € a year - Group staff resources dedicated to lobbying the regulatory framework on energy and waste treatment total around €70,000 a year

Cost to realize opportunity
81570000

Comment
The management costs have been calculated based on the actions that the company has already taken, and may change in the future based on the needs detected.

Identifier
Opp2

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Resource efficiency

Primary climate-related opportunity driver
Move to more efficient buildings

Type of financial impact
Increased production capacity, resulting in increased revenues

Company-specific description
ENERGY EFFICIENCY IN BUILDINGS Energy efficiency in buildings (both residential and non-residential buildings). Ferrovial Services division has been positioned as a leading company in providing energy efficiency services (as ESCO). Moreover, Ferrovial Construction division is currently developing a new business model for the building sector in Spain, UK and other EU countries, based on financing big scale projects on energy efficiency retrofit of buildings, under PPP schemes. So, in case fuel or energy taxes or regulations were increased or new ones were developed, Ferrovial offers to clients to reduce significantly the energy consumption and GHG emissions. A reduction of the energy consumption means a reduction of the costs because although the fuel or energy taxes rise the costs in energy will reduce because there is less energy consumption. On the other hand, a reduction of the GHG emissions means a reduction of the costs related to emissions taxes and compliance with reduction emissions target.

Time horizon
Short-term

Likelihood
Very likely

Magnitude of impact
High

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

Potential financial impact figure (currency)
300000000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
The emerging market on energy efficiency of buildings has been evaluated around €10bn in 2020 according to the figures reported by GTR (Refurbishment of Buildings Working Group). The market share for Ferrovial construction and ESCO subsidiaries has been assessed 3% of the whole business. Thus, this new activity could increase the sales of Ferrovial construction and ESCO around €300 million in 2020.

Strategy to realize opportunity
Ferrovial experts are taking part in key forums at Spanish and European levels, where decisions on the regulatory framework are made An appropriate regulatory scheme is key to provide certainty and low-cost financing to the energy efficiency market. Ferrovial is a very active member of taskforce of the Spanish Government Department of Housing and the Green Building Council.Moreover,Company is lobbying with several institutions at the European Commission,particular on the implementation of the European Energy Efficiency Directive, partnering institutions as the European Climate Foundation,WWF or the ITO (Spanish Section), amongst others.Ferrovial has been developing a strategy on R&D focused on energy efficiency of buildings and cities, starting in 2010, in order to position Ferrovial technology and know-how as a leading player in the emerging energy-efficiency market. As a part of this strategy there is a long-term agreement with the MIT.Cost of staff dedicated to take part in the committee is estimated around €663,400 since 2010. Investments in the Ferrovial R&D strategy on this matter amounted up to 6 € million (total multiannual investment in the projects ongoing). Moreover, Ferrovial is supporting the partnership with GTR (Refurbishment of Buildings Working Group) and European Climate Foundation for this purpose. The total amount invested in such partnership has amounted up to 276,000 € since 2010.

Cost to realize opportunity
6663000

Comment
The management costs have been calculated based on the actions that the company has already taken, and may change in the future based on the needs detected.

Identifier

Opp3

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Products and services

Primary climate-related opportunity driver
Development and/or expansion of low emission goods and services

Type of financial impact
Increased revenue through demand for lower emissions products and services

Company-specific description
INTELLIGENT CITIES Ferrovial Services division has implemented a very new business model based on integrating all kind of municipality services into only one PPP (Public Private Partnership) contract. This scheme involves relevant cost reduction for the customer (up to 30% of prior expenses), energy savings and carbon reduction (by 20% less, according to our own estimates). So, in case fuel or energy taxes or regulations were increased or new ones were developed, Ferrovial Servicios division offer better services for cities at a lower cost due mainly to reduction significantly the energy consumption and GHG emissions. A reduction of the energy consumption means a reduction of the costs because although the fuel or energy taxes rise the costs in energy will reduce because there is less energy consumption. On the other hand, a reduction of the GHG emissions means a reduction of the costs related to emissions taxes and compliance with reduction emissions target.

Time horizon
Short-term

Likelihood
Virtually certain

Magnitude of impact
High

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

Potential financial impact figure (currency)
5600000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
A Spanish city of 100,000 inhabitants spend about 25M€ (1/3 of averagebudget) on provision of services which are generally outsourced (waste collection, cleaning, maintenance of public highways, lighting, energy consumption. Studies undertaken by Ferrovial show that a smart integration of those services can reduce around 30% the overall cost, and 20% of the GHG emissions. Currently, the business value of the contracts operated by Ferrovial under this scheme rises to €5.600 million.

Strategy to realize opportunity
Ferrovial has developed a model for Intelligent cities and has created a Cities Division(focus on Spain and Europe)with the aim of facilitating this model to emerge as an alternative to the traditional management of cities and services for cities. In Spain, Ferrovial holds this kind of initiatives with several medium size (Torrejon de Ardoz) and larger cities (Guadalajara) in researching ways to improve the energy management of the city an public buildings by applying new technologies This model is based on Information Technologies, that allows the operator to integrate all city services and optimize the resources and to facilitate participation of the citizenship in the management of city services. Ferrovial holds R&D programs in partnership with MIT, dedicated to providing smart technologies solutions to make this emerging business model possible, specifically "Building IR Scanning and Retrofit Prioritization Based on Energy Return on Investment" and "City Light Scanning Optimization and Remediation", aimed at improving energy efficiency and reducing emissions in municipal services.Every year, Ferrovial invests in lobbying, as well as sponsoring forums on Intelligent Cities around 150,000€ and Ferrovial has invested 5m€ in the MIT partnership.Cost of the projects carried out by MIT was 831,808 €.We have invested around 3.8 m€ on a new fleet of operational vehicles and have been awarded a four star rating in the ECO Stars Fleet Recognition Scheme-Total =4,781,808

Cost to realize opportunity
4781808

Comment
The management costs have been calculated based on the actions that the company has already taken, and may change in the future based on the needs detected.

Identifier
Opp4

Where in the value chain does the opportunity occur?
Customer

Opportunity type
Products and services

Primary climate-related opportunity driver
Other

Type of financial impact
Increased revenue through new solutions to adaptation needs (e.g., insurance risk transfer products and services)

Company-specific description
Water transport and water / wastewater treatment plants in core geographies in municipal space is an opportunity. The consequences of climate change in regard to water (changes in runoff), increased demand for supplying water to populations without access to it and for wastewater treatment for populations with no access to sanitation would lead to investment in new hydraulic infrastructures. Furthermore, if existing hydraulic infrastructures became obsolete there would be investment in maintenance and/or renovation and remodelling projects. We believe there are two aspects that could augment this opportunity: - An increase in the price of water would mean increased investment in construction of hydraulic infrastructures. - An increase in the price of water would mean increased investment in renovation and maintenance of current hydraulic infrastructures An example of this type of project is The BAWA project in USA that cost 46 millons of dollars

Time horizon

Long-term

Likelihood
Likely

Magnitude of impact
Medium

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

Potential financial impact figure (currency)
203286283

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
Financial Implications: Globally this opportunity is quantified as being worth 142.25 billion € over the next 5 years.Ferrovial estimates that this opportunity is quantified with the aid of those companies within the group whose purpose is the construction of treatment plants

Strategy to realize opportunity
Ferrovial has extensive experience and expertise in design, building and maintenance of all types of water transportation and wastewater/water treatment plants. The strategy being applied is to contribute and offer said expertise in the form of innovative solutions to municipalities with a need for this type of infrastructures. This strategy is implemented by intensifying our marketing work in our target countries, which include the USA, Colombia, Mexico, Spain, the United Kingdom, Poland, Saudi Arabia and Qatar. This opportunity was identified as part of the “Water Footprint” project carried out recently. Ferrovial developed a project that is applicable to all operations throughout the Ferrovial Group over which we exercise operational control. The project’s aim is to identify Ferrovial’s main water management-linked risks and opportunities.. It was necessary to hold working meetings to identify the risks which affect - or might affect – execution of activities, as well as the opportunities for action, all of this in relation to water. An example is that in USA, the Baytown Area Water Authority project will help the City of Baytown meet new surface water usage rules by treating up to six million gallons of surface water from the CIWA canal to clean, potable water for residents.PLW was selected by the Baytown Area Water Authority (BAWA) to construct a new 6 MGD Surface Treatment Plant for the community. The completed project will cost about $46 million. 1euro = 1.2022 USD

Cost to realize opportunity
38263184

Comment
The management costs have been calculated based on the actions that the company has already taken, and may change in the future based on the needs detected.

Identifier
Opp5

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Markets

Primary climate-related opportunity driver
Access to new markets

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

Company-specific description
Water business drivers have been considerably accelerated by Global Change. It is clear that water distribution and availability is a core theme in the climate sector, which will be exacerbated by climate change, and the amount of global investment required in this industry is enormous. Moreover, experts on water supply, as well as the conclusions of the IPCC and other research institutions, are pointing out that countries located in sensitive areas to water scarcity (for example, Middle East and some regions in Asia and America), will be asked to invest significant budgets in water use efficiency, recycling and desalinization, amongst other services and facilities. According to the US National Intelligence Council, more than 1,4bn people will be affected by water scarcity in 2025. That involves a global market estimated to be worth from 480 billion $ per annum in 2010, to $1 tr in 2030. A broader market associated to the increase of water scarcity in several regions should represent a real opportunity for expanding the business of the water division of Cadagua (Ferrovial subsidiary). Cadagua is a well-placed “niche” player with 105 Million € of revenue, 35 years of experience working in more 340 distinct projects and existing assets processing over 14 million m3 water per day in several countries in Asia, Africa, Europe and America.Extreme climate events such as drought trigger investment in new desalination plants in geographies with the world’s most severe water stress in order to address the demand for supply of water for human consumption or irrigation. Projects of this type are already up and running in the United Arab Emirates, India, Morocco, Oman and Poland. We think that the existence of funding sources for in relation to climate change may offer an opportunity for new concession projects to help third-parties adapt to the effects of climate change, thereby responding to an increased demand for water.

Time horizon
Medium-term

Likelihood
Likely

Magnitude of impact
Medium

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

Potential financial impact figure (currency)
17500000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure
This opportunity is quantified as being worth 15.73 billion € in the next 5 years (worldwide). In 2017, Cadagua´s revenue was 75 Million € and sales in countries with water scarcity represents 80.8 % of total sales. As a result of this strategy Cadagua has progressively increased its sales in countries with water scarcity from 8 million € in 2011 to 72.05 million € in 2018. We estimate Cadagua´s strategy will increase the revenue in emerging markets a 17.5 million per year. So Cadagua will increase its sales in emerging markets from 8 million €, in 2011, to 165.51 million €, in 2020. We think that the existence of funding sources for in relation to climate change may offer an opportunity for new concession projects to help third-parties adapt to the effects of climate change, thereby responding to an increased demand for water.

Strategy to realize opportunity
Ferrovial has with extensive experience and expertise in design, construction and maintenance of water treatment plants,including SWPD .The strategy being applied is to contribute and offer said expertise in the form of innovative solutions to public and private customers in other geographies with a need for supply of water for human consumption or irrigation.Technology has become into a key driver for improving competitiveness in the water sector. Some issues as energy efficiency and desalinization technologies are becoming more relevant.This strategy is being implemented by intensifying our marketing work in our target countries. Projects of this type are already up and running in many countries.This opportunity was identified in as part of the Water Footprint project that was carried out.Ferrovial developed a project that is applicable to all operations throughout the Ferrovial Group over which we exercise operational control.Along the last months,Ferrovial has successfully completed the start-up of four SWDP totalling, among them, a production of potable water of more than 1,2 Mm3/day. The cost associated with these actions:-External advisory on business strategy has amounted to € 200,000.-Staff resources dedicated to re-defining Cadagua's portfolio are 125,000 €/year.-R&D programs on water amounted 463,790€ in 2018 and 2,492,282 € since 2013. The cost of the staff and resources dedicated to design the new project activity and the pilot950,000€/year.Total cost =1,763,790

Cost to realize opportunity
1763790

Comment
The management costs have been calculated based on the actions that the company has already taken, and may change in the future based on the needs detected.

Identifier
Opp6

Where in the value chain does the opportunity occur?
Customer

Opportunity type
Products and services

Primary climate-related opportunity driver
Development of new products or services through R&D and innovation

Type of financial impact
Increased revenue through demand for lower emissions products and services

Company-specific description
Ferrovial developed its "Ferrovial 2015-20" project in order to analyse risks and opportunities around climate change. As result of this project, Ferrovial detected that society and consumers are looking for alternative fuels to reduce the consumption of fossil fuels. Thanks to the experience we had in landfill and waste treatment we identified a new opportunity. This opportunity was to produce a new fuel called SRF (solid recovered fuel) that it is an alternative fuel to heating diesel. To get SRF fuel from processed waste, i.e. waste previously subjected to processes of characterization, selection, selective sorting, elimination of metals and contaminants and processes of grinding and refining, as raw material. The main product resulting is a bioliquid fuel similar to heating diesel "C" that ii will be sell to third parties, thus minimizing the impact of human activity on ecosystems, and considerably reducing the carbon footprint as well as the environmental footprint of materials and waste. The SRF (solid recovered fuel) comes from: - Biomass from the organic part of urban waste. This biomass is mainly made up of cardboard, wood and vegetable waste, remains of food, cellulose and other organic materials. - Mixture of plastics from urban waste. This mixture is made up of various packaging plastics used and other plastic materials from post-consumer objects. To sum up, the development of this technology leads to numerous environmental objectives, among them the following: - Reduction of greenhouse gas emissions. - Saving in fossil fuels for future generations. - Recovery of energy in materials destined for the landfill. - Reduction in the volume of waste destined for the landfill and thus increase in the useful life of landfill containers. - Reduction of investment for establishing and managing new landfill containers. - Reduction of methane gas emissions derived from landfills. - Generation of a local industry with high technological value. - Reduction of energy costs and energy diversification in the country.

Time horizon
Short-term

Likelihood
Virtually certain

Magnitude of impact
Medium-low

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

Potential financial impact figure (currency)
48000000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
The construction of one of this plant costs around 27,5 million € and the incomes per year will be 2,4 million €. The incomes estimated during the project life cycle will be 47.9 million € (15 years). The project model will be replicate and we estimate that the incomes will be 48 million per year.

Strategy to realize opportunity
We have develop a new activity for processing solid urban waste and turning it into bioliquid similar to Heating Diesel. We have designed and implemented the first project"Plant for Processing Solid Urban Waste and turning it into bioliquid similar to heating Diesel". Consists of the installation of technology to recover 16,000 t/year in biomass and plastic waste from the waste classification and composting plant, in Toledo. This processing plant uses processed waste. The main product is a bioliquid fuel similar to diesel "C", thus minimizing the impact of human activity on ecosystems, and considerably reducing the carbon footprint as well as the environmental footprint of materials and waste. The SRF (solid recovered fuel) comes from:-Biomass from the organic part of urban waste. It accounts for 60% of the SRF to be used.-Mixture of plastics from urban waste. Makes up 40% of the SRF to be used. The plant will produce more than 3,8 Mlitres of heating diesel/year and with an annual average reduction

of 7,277.92tCO2e,6,223tCO2e come from the replacement of diesel C and 1,236 tCO2e from waste not dumped in landfills.Total of 57M of diesel will be produced and 109,168.8 tCO2e will be cut during the life cycle of this plant.The cost associated with these actions: - The investment of building the plant is 27.52 M€. This quantity includes all the equipment-The cost of the staff resources dedicated to design the new project activity and the pilot project 189,000€.TOTAL=27,709,000

Cost to realize opportunity
27709000

Comment
The management costs have been calculated based on the actions that the company has already taken, and may change in the future based on the needs detected.

Identifier
Opp7

Where in the value chain does the opportunity occur?
Customer

Opportunity type
Products and services

Primary climate-related opportunity driver
Development of new products or services through R&D and innovation

Type of financial impact
Increased revenue through demand for lower emissions products and services

Company-specific description
Ferrovial developed its “Ferrovial 2015-20” project in order to analyze risks and opportunities around climate change. As result of this project, Ferrovial detected that society and consumers are looking for alternative fuels to reduce the consumption of fossil fuels, to reduce the GHG emissions to the atmosphere. Consumers think fossil fuel will increase price and are looking for an alternative fuel. On the other hand they think is a necessity to maintain the forest like a way to capture CO2 from the atmosphere and preserve biodiversity. Thanks to the experience Ferrovial Servicios division had maintaining parks and forest we identified a new business opportunity called “Smart Forest”. This opportunity consists in an integral services. It includes from the management of biomass in the forest until the production of the energy in boiler by using that biomass. Fossil fuel boilers will be replace by biomass boilers like an alternative clean fuel (biomass) and reducing GHG emissions due to the balance of carbon capture that wood has. In summary, the Smart Forest is an innovative project focused on: - changing the current management of forest by introducing sustainable practices, guaranteed by the FSC certification, - maintaining ecosystems functionality and preserving biodiversity, - generating economic streams to support the maintenance of the forest, - creating green jobs on a local basis, contributing to retain rural population, - attracting private investment to support the maintenance and conservation of natural capital and biodiversity, - enhancing forest resources by managing woodlands currently unmanaged, and - promoting renewable energies by introducing biomass boilers and replacing fossil fuelled heating systems.

Time horizon
Medium-term

Likelihood
Virtually certain

Magnitude of impact
Medium-high

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

Potential financial impact figure (currency)
48000000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
We have designed the first pilot project “Smart Forest” and it can be applied to any scale. For this first project, the incomes per year will be 3.2 million € and the life cycle estimated will be 15 years. So, the total incomes will be 48 million €. The 85 % of the incomes come from providing renewable energies and the 15 % from leisure activities in the forest. After this phase, the project will be replicate. We estimate that the incomes will be 640 million per year in medium-term.

Strategy to realize opportunity
Smart Forest is a innovative approach based on a PPP scheme to provide funding solutions for forest conservation and maintenance in long term.Are based on an approach combining sustainable forest management and energy services, by creating an operator that works as an Energy Services Company.This player operates the woodland,provides biomass fueled energy, invests in boilers renovation of final customers and creates economic streams needed to support the conservation and maintenance of the forest (as well as other economic activities related to the woodland).We have carried out the first pilot project in Spain with a life cycle of 15 years.It can be applied to any scale where the possibility of the mountains make the project viable.The project aims at:-Maintaining the population in rural areas.Create 27 new direct local jobs,30 indirect local jobs, just considering the first project.-Replace fossil fuel systems by biomass boilers, promote renewable energies, contribute to reduce CO2 emissions (8,000 tCO2e/year) and a reduction of a minimum of 10% in the economic cost born by replacing them with biomass boilers.40,1Gw of energy produced by biomass.-Another innovative aspect is the certification of the SFM by third party.-Decrease fire and erosion risks.The cost of the project (all life cycle) is 3,233.5M€: 879,6M€ comes from investment and 2,353.9M€ from operational cost.The cost of the staff resources dedicated to design the new project activity and the pilot project 165,000€

Cost to realize opportunity
3233500000

Comment
The management costs have been calculated based on the actions that the company has already taken, and may change in the future based on the needs detected.

Identifier
Opp8

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Products and services

Primary climate-related opportunity driver
Ability to diversify business activities

Type of financial impact
Increased revenue through new solutions to adaptation needs (e.g., insurance risk transfer products and services)

Company-specific description
Ferrovial's concession business experience in motorway management (investment, relationship with public administrations and management of collection of payment from end users) ensures we are equipped to take on new concession projects for hydraulic infrastructures covering the whole water cycle: design, investment, building, operation and maintenance. An example of this type of projects is a concession for the supply of water to farmers in Peru. We think that the existence of funding sources for in relation to climate change may offer an opportunity for new concession projects to help third-parties adapt to the effects of climate change. For such projects, an increase in the price of water and unregulated metering for private customers would mean increased profitability.

Time horizon
Short-term

Likelihood
Virtually certain

Magnitude of impact
Medium-high

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

Potential financial impact figure (currency)
6289469

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
Globally this opportunity is quantified as being worth 20.07 billion € over the next 5 years. Ferrovial quantified in 6.289.469 € this opportunity.

Strategy to realize opportunity
The strategy being followed is that of harnessing the added value of partnerships between different group companies.Cintra contributes its experience in the concession business;Cadagua brings to the table its experience in management of water treatment plants;Ferrovial Services and Amey contribute their experience of maintenance and repair of existing infrastructure and Ferrovial-Agromán offers its experience of building new hydraulic infrastructures. This strategy is being implemented by signing agreements for new concession projects. An example of this type of projects is a concession for the supply of water to farmers in Peru. This opportunity was identified as part of the "Water Footprint" project. The project's aim is to identify Ferrovial's main water management-linked risks and opportunities via benchmarking and assessment of the current situation and trends, and execution of a series of in-house interviews. It was necessary to hold working meetings with the key figures in each of Ferrovial's business areas, so as to identify the risks which affect - or might affect – execution of activities, as well as the opportunities for action, all of this in relation to water.The cost associated with these actions: - External advisory on business strategy has amounted to € 200,000. - The cost of the staff and resources dedicated to design the new project activity and the pilot project 630,000€/year total cost = 200,000 + 630,000 = 830,000

Cost to realize opportunity
830000

Comment
The management costs have been calculated based on the actions that the company has already taken, and may change in the future based on the needs detected.

C2.5

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

	Impact	Description
Products and services	Impacted	Ferrovial is working continuously to provide solutions to the risks and opportunities that their products and services may generate. Such as Develop a model for Intelligent cities, develop a new activity for processing solid urban waste into heating diesel or through it´s expertise in design and construction of civil works and water treatment plants offers solutions to the climate change. The magnitude of impact could be quantify as the cost of implementing all these measures
Supply chain and/or value chain	Impacted for some suppliers, facilities, or product lines	Ferrovial´s suppliers and facilities are exposed to a range of risk factors. In order to manage, for example Ferrovial contemplate how the R&O have been impacted in passengers in the UK airports or users of toll roads managed by Cintra . The set of extremes temperatures, snow, ice, extreme precipitation, flooding and tropical cyclones can impact the operating performance of our infrastructures. These losses can cause physical damage on assets and infrastructure closure either because they have to be repaired or because they cannot operate.The magnitude of the described impact could be quantify as a maximum of 40,499,493 €
Adaptation and mitigation activities	Impacted	Ferrovial developed its “Ferrovial 2015-20” project in order to analyse risks and opportunities around climate change. As result of this project, Ferrovial detected that society and consumers are looking for alternative fuels to reduce the consumption of fossil fuels. Ferrovial Works in new business models that involves relevant cost reduction for the customer , energy savings and carbon reduction. In the recent years also, ferrovial is working on management and production of energy from wasteThe magnitude of the described impact could be quantify as the cost of implementing emission reduction initiatives
Investment in R&D	Impacted	In the field of climate innovation Ferrovial has been a co-partner of the Climate-KIC focused on mitigation and adaptation by carrying out innovation projects.The magnitude of the described impact could be quantify as part of the investment of Ferrovial in R&D, 48,000,000 €
Operations	Impacted	Ferrovial is exposed to a range of risk factors arising in countries where it carries out its activities and inherent to the sectors in which it operates. The company seeks to detect and assess risks, and implement timely control measures to mitigate their probability of occurrence and/or potential impact according to the strategic objectives. Moreover, new business opportunities can be identified because of the effective and efficient management of certain risks. Ferrovial assesses and monitors the status of emerging risks that could negatively affect its ability to meet strategic targets or risks that, despite their low likelihood of occurence, could nevertheless have negative effects on its business targets. Some of the more prominent risk include natural disaster. Enviromental risk are monitored, mainly those related to the effects of climate change. In order to manage operations R&O the FRM included them as operational type (such as, changes in precipitation patterns and extreme variability in weather patterns, rising mean temperatures. The magnitude of the described impact could be quantify as 3,416,498 €
Other, please specify	Please select	

C2.6

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

	Relevance	Description
Revenues	Impacted	All new acquisitions in Ferrovial have been previously and exhaustive study of R&O so how can impacted on the company. It´s the same when Ferrovial has a divestments. For example, since 2017 Ferrovial began operate service of electrical car sharing with the benefits to the climate change such as of low emissions in the zity, low traffic . Climate change trends were considered when forecasting the income that this business would provide The magnitude of the described impact could be quantify as part of the revenues, this magnitude could be classify as minimum medium in the case of opportunities , such as increase of revenues could be around 15%. In the case of risk, lost of revenues could be classify as low, such as lost of maximum 3% in the most unfavorable scenarios
Operating costs	Impacted	Ferrovial is impacted in its activities and therefore in its operations cost, of the increase of fuels and materials necessary to carry out a service line. It is one of the inputs that in the new acquisitions of the company have been previously and exhaustive study of R&O so how can impacted on the company The magnitude of the described impact could be quantify as part of the revenues, this magnitude could be classify as minimum medium in the case of opportunities , such as increase of revenues could be around 15%. In the case of risk, lost of revenues could be classify as low, such as lost of maximum 3% in the most unfavorable scenarios
Capital expenditures / capital allocation	Impacted	All new acquisitions in Ferrovial have been previously and exhaustive study of R&O so how can impacted on the company. It´s the same when Ferrovial has a disvestments. When the company acquires a new company or activity, human capital dedicated to climate change issues has been increased, for example when in 2017 Ferrovial purchase Transchile , a company subsidary of Ferrovial Airports or in 2018 Amey purchase 2 waste treatment plants .TThe magnitude of the described impact could be quantify as part of the revenues, this magnitude could be classify as minimum medium in the case of opportunities , such as increase of revenues could be around 15%. In the case of risk, lost of revenues could be classify as low, such as lost of maximum 3% in the most unfavorable scenarios depending on the specific actions to develop with in the study
Acquisitions and divestments	Impacted	All new acquisitions in Ferrovial have been previously and exhaustive study of R&O so how can impacted on the company. It´s the same when Ferrovial has a divestments. In 2018, Ferrovial began operate 2 new waste treatment plants in the UK which helps in the improvement of recycling instead of burnt waste on landfills with the consequence of increase diffuse emissions. The magnitude of the described impact could be quantify as part of the revenues, this magnitude could be classify as minimum medium in the case of opportunities , such as increase of revenues could be around 15%. In the case of risk, lost of revenues could be classify as low, such as lost of maximum 3% in the most unfavorable scenarios
Access to capital	Not yet impacted	Access to capital by Ferrovial has not yet been impacted. However, there is a large percentage of the company's investors who are increasingly concerned about the aspects related to climate change. That is why it is estimated that access to capital could be impacted by the identified R&O within a period of 10 years.
Assets	Impacted	Ferrovial has a system called Ferrovial Risk Management (FRM) to identify the risks. So the managers in a contract/asset identify the risks which threaten theirs activity, business target and infrastructures. These risks go on to the up level until the CEO with the idea to consolidate the risks. Twice a year, the risks and opportunities are reviewed because the market conditions change continuously (legislation changes, new trends, ...). An example, in 2018, toll roads managers identified risks could impact to the operating performance of the infrastructures. So, in a toll road physical risks (flooding and cyclones) could cause physical damage on assets and infrastructure closure because they have to be repaired or because they cannot operate. As an example, the toll road in Colombia called “Ruta del Cacao” has identified risks related to physical risks like floodings and cyclones. Ferrovial’s Corporate Risk Department hired the best insurance protection to cover property damage and business interruption. Policies cover these risks for an average of 75 million € by highway a year. Furthermore, Ferrovial's Corporate Risk Department established control measures based on the set of procedures and emergency plans that describe how to act in the event of risk. Also, Ferrovial is covering the impact over environment from this kind of events with a limit around 60Million € per claim. With these methods established by Ferrovial, the severity of risks is reduced to moderate and minor.
Liabilities	Not impacted	In terms of liabilities none of its have been impacted by the R & O of the climate change since up to now the climate change has not supposed specific needs of financing or indebtedness
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?

Yes, qualitative and quantitative

C3.1c

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

HOW THE BUSINESS STRATEGY AND ASPECTS HAS BEEN INFLUENCED:

Ferrovial's climate strategy forms part of the company's wider business strategy. Matters relating to climate change are analyzed and discussed by the Board of Directors and the Management Committee.

Climate change, energy transition, concentration in cities, changes in mobility and technological advances are all transforming the way infrastructure is built and operated. Key considerations include:

The global migration towards a low-emission economy is channeling investment and financing towards businesses that help meet the climate change goals set out in the Paris Agreement. These commitments are generating new opportunities for sustainable infrastructure, mobility and energy efficiency, among others.

Technology developments and digitalization improves infrastructure efficiency and productivity.

Autonomous driving, connected infrastructure, vehicle sharing and electrification will impact not only transportation infrastructure but also mobility services, opening up new business opportunities.
To continue working on our commitment and remain leaders, as part of the company's strategy, on the subject of climate change, within the company's strategy it is mandatory to meet the objectives of reducing emissions by Science Based Targets Iniciative (SBTi)

SHORT TERMS STRATEGY

Climate Change has influenced our short-term strategy. We have developed new business in low-carbon solutions, energy efficiency, water infrastructure such as smart cities, smart forest, energy services efficiency or energy rehabilitation of buildings. Internally, the company has identified opportunities to be more efficient and to reduce energy consumption. To do this, we have implemented energy efficiency measures, allowing a reduction of GHG.

LONG TERMS STRATEGY:

Ferrovial is committed to a sustainable growth, operating regularly in countries that have emission reduction commitments and infrastructure adaptation plans, offering them innovative solutions. Climate Change has influenced our long-term strategy. Ferrovial has made a firm commitment to long-term investment in R&D, new business of mobility where digitalization and connectivity are key focused on developing low-emission solutions. Some of this projects are : HEFESTO (software developed to optimization of energy efficiency) ZITY (one of the principles car sharing solutions in Madrid) ZEN ROBOTICS (use of arm-robots in the improve of waste
that derives less diffuse emissions in our landfills)

Ferrovial is involved in various think tanks and influence groups at European level to discuss and predict the future of the economic and environmental agenda for the 2030 and 2050 horizons. These include the Corporate Leaders Group and the EU Green Growth Group. In the realm of climate innovation, Ferrovial has been a co-partner of Climate-KIC, the largest European initiative focused on mitigating and adapting to climate change. In Spain, Ferrovial chairs the Spanish Green Growth Group, which promotes public-private partnerships to make further progress in mitigating and adapting to climate change, decarbonizing the economy and championing the circular economy. A manifesto was signed in 2018, together with 35 other Spanish companies, to activate the energy transition and a conference titled "Opportunities of the energy transition for the Spanish and European economy" was organized in collaboration with the European Alliance to Save Energy.

ADVANTAGE OVER COMPETITORS The transport and building sectors are affected by an increasingly restrictive regulatory framework related to climate change and energy efficiency. This scenario generates great opportunities for the company, above all in those countries that have made public commitments to reduce emissions. In line with this, Ferrovial´s business strategy has been influenced developing business in low-carbon solutions: energy efficiency, smart cities, smart forest, energy services efficiency, rehabilitation of buildings and we have a great experience. Clients identify us with this type of contract and hire us; the industry recognizes us and evaluate well in the sustainability indices and administration bodies invite us to participate in working groups on issues related to climate change or to pilot projects, which is an advantage over ours competitors. We are part of the prestigious group: Corporate Leaders Group, UE Green Growth Group and the Spanish Green Growth Group, that Ferrovial chair since 2015, in order to gather their input and perspectives on how to proceed to transform the current economy into a low-carbon economy that contributes to the fight against climate change while and guarantees a sustainable job-creating economic growth. Since 2016 Ferrovial becomes a member and core-partner of Climate-KIC.

SUBSTANTIAL BUSINESS DECISION. Following the TFCD recommendations Ferrovial integrate climate change risk inside of the FRM system. Also Ferrovial adapts to the new environment scenario related to climate change day by day. As a result, the company has established mechanisms to identify climate change-related legislation that may affect our businesses or that can offer us business opportunities and create new products that bring something innovative to the business "as-usual" such as new business, "Zity", car sharing business created in 2017 seeking to respond to the mobility needs of Madrid . Ferrovial is the first Spanish company, as well as the first in terms of infrastructure and services, to achieve its emission reduction targets certified by the SBTi.HOW THE PARIS AGREEMENT HAS INFLUENCED THE BUSINESS STRATEGY We have consider the Paris Agreement to establish the longer-term strategy. To get this input we make a detailed assessment of the business unit risks and opportunities associated with climate change, and linked policies and regulations, in the short and long-term. In this sense, Ferrovial´s Strategy has been influenced by Climate Change.

2ºC SCENARIO ANALYSES Since 2017 we conducted a revision of the objectives for scope 1&2&3 in line with a 2°C decarbonization scenario based on SBTi. These objectives have been approved by SBTi

C3.1d

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

Climate-related scenarios	Details
IEA Sustainable development scenario	Ferrovial understands the importance of scenario analysis.Used 3 IEA-led scenarios to assess climate-issues and their financial implications without changes from the references which were considered based on statistical methods of trend studies. Current Policies Scenario(CPS):3-4º.Takes into account the impact of only policies and measures enshrined in legislation as of mid-2017.Under CPS, policies in place aim for a set of outcomes :It therefore expects for the lower end of these policies to be accomplished.CPS offers a rather prudent assessment of where policies in place could drive the energy sector without the additional push from governments.CPS stands as a reference point to crosscheck the impact of new and or future policies New Policies Scenario (NPS): 2-3º.Designed to show where existing policies as well as announced policy intentions might lead the energy sector.NPS integrates: Current global government policies as well as measures,Effects of announced targets and plans.For instance the NDC found in the Paris Agreement present key guidance for policy objectives, nevertheless a few have been either replaced or overruled by later announcements.As new policies are not yet fully echoed in regulation,NPS bases the prospects and timeframe for their complete implementation on the evaluation of a series of constraints in:politics,regulation,markets ,infrastructure and Finance Sustainable Development Scenario (SDS):well below 2º.Examines what it would take to achieve the main energy-related components of the "2030 Agenda for Sustainable Development" adopted in 2015 by member states of the UN integrating the sustainable development goals (SDG) below:SDG 7.1to ensure universal access to affordable, reliable and modern energy services by 2030.SDG 3.9to substantially reduce the air pollution which causes deaths and illness.SDG 13, to take effective action to combat climate change.The SDS aims provide an integrated strategy to attain the policy objectives above in consonance with energy security. TCFD recognizes that the 2°C or lower scenario as a key area of focus, referenced by Ferrovial through the IEA's SDS Ferrovial sees the gradual emergence,and importance, of climate-related R&O in the context of its businesses,risk management and strategic planning processes.In the beginning of 2018,Ferrovial had well integrated its climate change strategy within the group's business philosophy and collective strategy we worked in"Horizon 2030 Project",based upon Ferrovial understands that emerging climate change regulation and mobilization towards a low carbon economy is effectively directing investment and financing towards business opportunities that can enable achieving the targets set in the Paris Agreement.Time horizon considered is 2030 due to the Ferrovial strategy.All the business units are involved in the scenario analysis With the results of this project Ferrovial will enable further transparency in its operations and support long-term decision-making and therefore provide investors and other stakeholders the key information they need to understand the company's overall climate-related risks and opportunities.Ending the project the magnitude of the described impact could be quantify as part of the revenues,could be oscillate depends on the scenario,country or services we are.The magnitude could be classify as medium in the case of opportunities ,such as increase of revenues could be around 15%.In the case of risk,loss of revenues could be classify as low,such as loss of max 3% in the most unfavorable scenarios.As a result of the analysis of climatic scenarios directly affecting the company's strategy,Ferrovial works by providing less energy-intensive solutions such as sustainable mobility, energy from renewable sources, energy efficiency..achieving a 54% reduction in 2018 in intensity terms.This evolution reflects the decoupling between emissions and growth.

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?
Both absolute and intensity targets

C4.1a

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

Target reference number
Abs 1

Scope
Scope 1 +2 (market-based)

% emissions in Scope
100

Targeted % reduction from base year
32

Base year
2009

Start year
2016

Base year emissions covered by target (metric tons CO2e)
1070232

Target year
2030

Is this a science-based target?
Yes, this target has been approved as science-based by the Science-Based Targets initiative

% of target achieved
43.51

Target status
Underway

Please explain
In absolute terms the target is to reduce 32% by 2030 from 2009 base-year. In 2018 Ferrovial achieved a reduction of 149,021 tCO2e (149,021 tCO2e reduction of emissions in 2018 divided by 1,070,232 tCO2e emissions in 2009 base year = 13.92 %), in other words 43.51 % of the target was achieved (13.92 % of reduction divided by 32 % of target = 43.51 % target achieved). This is evidence that a growth in business no longer necessarily entails extra emissions. Each division has established reduction measures for achievement of the targets: 1) Vehicle fleets and machinery. Initiatives here consist of improving the energy efficiency of these assets, via measures including improvements to criteria used in procurement, renting or leasing, courses to promote efficient driving, the use of alternative fuels, and alternatives with hybrid engines. In this sense, the number of cars powered by alternative energies have increased. 2) Company mobility plans. 3) Energy efficiency in buildings. Implementation of proactive energy efficiency measures in buildings used as corporate headquarters 4) Green procurement. Purchase of electricity from renewable sources reduces GHG

emissions because the CO2/kwh emission factor is zero. In 2018, Ferrovial Group consumed 44 % of its electricity from renewable sources (purchased with a certificate or origin and produced by the company. 5) Current economic situation. Our estimate is that once the economic situation improves, emissions in absolute terms will increase a little. Ferrovial is the first Spanish company, as well as the first in terms of infrastructure and services, to achieve its emission reduction targets certified by the Science Based Target Initiative (SBTi), indicating that they are supported by scientific criteria. The company has committed to reduce by 32% the emissions of scopes 1 and 2 (those generated by its own activity) until 2030, using 2009 as its base year.

Target reference number
Abs 2

Scope
Other, please specify (Scope 3)

% emissions in Scope
67

Targeted % reduction from base year
20

Base year
2012

Start year
2016

Base year emissions covered by target (metric tons CO2e)
2352942

Target year
2030

Is this a science-based target?
Yes, this target has been approved as science-based by the Science-Based Targets initiative

% of target achieved
65.1

Target status
Underway

Please explain
The company also commits to reduce all relevant scope 3 emissions (excluding capital goods and purchased goods and services) 20 % by 2030 from 2012 base-year. Scope 3 categories covered by the target represent around 67% of yearly scope 3 emissions. In 2018, Ferrovial has reduced by 306,362 tCO2e (306,362 tCO2e reduction of emissions in 2018 divided by 2,352,942 tCO2e emissions in 2012 base year= 13.02 %) compared to 2012 that is the 46.6% of the fulfillment of the target (9.32 % of reduction in 2017 from 2012 divided by 20% target = 65.10 % target achieved). The categories included in the 67% of scope 3 emissions: - Investments - Fuel and energy related activities - End of life treatment of sold products - Upstream transportation and distribution - Waste generated in operations - Employee commuting - Business travel - Use of sold products - Upstream leased Some reduction initiatives that we have been implemented and we will carry out: - Incorporation of energy efficiency criteria in procurement and sub-contracting of services. - Development of technology and processes geared towards optimizing the avoidance of emissions. - Inclusion of energy efficiency measures - Workshop with company's in which we are the investors. - The relationship with regulatory bodies and governments are key as a way to influence on regulatory trends which are in charge of developing new legal requirements that affect to the company and third party (fuel and energy related activities, used of sold product, purchased goods and services…). Ferrovial is the first Spanish company, as well as the first in terms of infrastructure and services, to achieve its emission reduction targets certified by the Science Based Target Initiative (SBTi), indicating that they are supported by scientific criteria. The company has committed to reduce scope 3 emissions (indirect, excluding capital goods, purchased goods and services) by 20% until 2030, using 2012 as the base year.

C4.1b

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

Target reference number
Int 1

Scope
Scope 1 +2 (market-based)

% emissions in Scope
100

Targeted % reduction from base year
42.9

Metric
Other, please specify (metrictonnesCO2e per million€ ofturnover)

Base year
2009

Start year
2017

Normalized base year emissions covered by target (metric tons CO2e)
162.36

Target year
2030

Is this a science-based target?
Yes, this target has been approved as science-based by the Science Based Targets initiative

% of target achieved
100

Target status
Achieved

Please explain
In 2018, Ferrovial has reduced by 54 % the scope 1&2 in intensity terms (t CO2e / turnover) compared to 2009 that is the 100 % of the fulfillment of the target by 2030 . Ferrovial commits to reduce scope 1 and 2 in intensity terms (emissions per million € of turnover by 42.9 % by 2030, from a 2009 base-year. Each business area has established reduction measures for achieve the targets: 1) Vehicle fleets and machinery. Initiatives here consist of improving the energy efficiency of these assets, via measures including improvements to criteria used in procurement, renting or leasing, courses to promote efficient, the use of alternative fuels, and alternatives with hybrid engines. In this sense, the number of cars powered by alternative energies have increased. 2) Company mobility plans. 3) Energy efficiency in buildings. Incorporation of proactive energy efficiency measures in buildings used for corporate headquarters 4) Green procurement. Purchase of electricity from renewable sources reduces GHG emissions because the emission factor of CO2/kwh is zero. In 2018, Ferrovial Group consumed by 44 % of electricity from renewable sources (purchased with certificate or origin and produced by the company). Our estimation is that once the economic situation improves, emissions in absolute terms will increase a little. Ferrovial is the first Spanish company, as well as the first in terms of infrastructure and services, to achieve its emission reduction targets certified by the Science Based Target Initiative (SBTi), indicating that they are supported by scientific criteria. The company has committed to reduce in intensity terms by 42.9% for every million euros of revenue.

% change anticipated in absolute Scope 1+2 emissions
32

% change anticipated in absolute Scope 3 emissions
0

C4.2

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

Target
Renewable energy target including electricity, heat, steam and cooling

KPI – Metric numerator
Consumption of renewable electricity purchased and consumed (Mwh) by Ferrovial

KPI – Metric denominator (intensity targets only)

Base year
2009

Start year
2016

Target year
2040

KPI in baseline year
5101

KPI in target year
428697

% achieved in reporting year
44

Target Status

Underway

Please explain
The target is to get the 100 % of the electricity purchased and consumed by Ferrovial Group in 2040. In 2018, Ferrovial Group consumed by 44 % of electricity from renewable sources (purchased with certificate or origin and produced by the company) (188995 Mwh renewable electricity consumed by Ferrovial in 2018 divided by 428,697 Mwh renewable and non-renewable electricity consumed by Ferrovial in 2018 = 44 %. We asume that in the target we are going to have the same consumption that in 2018 but all are going to be renewable

Part of emissions target
It´s part of the reduction target validated for SBTi, that´s to reduce in absolute terms 32% emissions of Scope 1&2 by 2030 from 2009 base year

Is this target part of an overarching initiative?
No, it's not part of an overarching initiative

Target
Renewable energy target including electricity, heat, steam and cooling

KPI – Metric numerator
Consumption of renewable electricity (Mwh) by Cadagua

KPI – Metric denominator (intensity targets only)

Base year
2009

Start year
2016

Target year
2040

KPI in baseline year
166

KPI in target year
153190

% achieved in reporting year
76

Target Status
Underway

Please explain
The target is to get the 100 % of the electricity purchased and consumed by Cadagua in 2040. In 2018, Cadagua consumed by 76 % of electricity from renewable sources (purchased with certificate or origin and produced by the company) (116737 Mwh renewable electricity consumed by Cadagua in 2018 divided by 153190 Mwh renewable and non-renewable electricity consumed by Cadagua in 2018 = 76 %. We asume that in the target we are going to have the same consumption that in 2018 but all are going to be renewable

Part of emissions target
It´s part of the reduction target validated for SBTi, that´s to reduce in absolute terms 32% emissions of Scope 1&2 by 2030 from 2009 base year

Is this target part of an overarching initiative?
No, it's not part of an overarching initiative

Target
Renewable energy target including electricity, heat, steam and cooling

KPI – Metric numerator
Consumption of renewable electricity (Mwh) by Amey

KPI – Metric denominator (intensity targets only)

Base year
2009

Start year
2016

Target year
2040

KPI in baseline year
7159

KPI in target year
26180

% achieved in reporting year
66

Target Status
Underway

Please explain
The target is to get the 100 % of the electricity purchased and consumed by Amey in 2040. In 2018, Amey consumed by 66 % of electricity from renewable sources (purchased with certificate or origin and produced by the company) (17264 Mwh renewable electricity consumed by Amey in 2018 divided by 26180 Mwh renewable and non-renewable electricity consumed by Amey in 2018 = 66 %. We asume that in the target we are going to have the same consumption that in 2018 but all are going to be renewable

Part of emissions target
It´s part of the reduction target validated for SBTi, that´s to reduce in absolute terms 32% emissions of Scope 1&2 by 2030 from 2009 base year

Is this target part of an overarching initiative?
No, it's not part of an overarching initiative

Target
Renewable energy target including electricity, heat, steam and cooling

KPI – Metric numerator
Consumption of renewable electricity (Mwh) by Ferrovial Servicios

KPI – Metric denominator (intensity targets only)

Base year
2009

Start year
2016

Target year
2040

KPI in baseline year
0

KPI in target year
85918

% achieved in reporting year
53

Target Status
Underway

Please explain
The target is to get the 100 % of the electricity purchased and consumed by Ferrovial Servcios in 2040. In 2018, Ferrovial Services consumed by 53 % of electricity from renewable sources (purchased with certificate or origin and produced by the company) (45941 Mwh renewable electricity consumed by Ferrovial Services in 2018 divided by 85918 Mwh renewable and non-renewable electricity consumed by Ferrovial Services in 2018 = 53 %. We asume that in the target we are going to have the same consumption that in 2018 but all are going to be renewable

Part of emissions target
It´s part of the reduction target validated for SBTi, that´s to reduce in absolute terms 32% emissions of Scope 1&2 by 2030 from 2009 base year

Is this target part of an overarching initiative?
No, it's not part of an overarching initiative

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.
Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	0	0
To be implemented*	0	0
Implementation commenced*	5	59069
Implemented*	15	63956.89
Not to be implemented	2	8797

C4.3b

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

Initiative type
Other, please specify (Energy efficiency: Street Aguilas)

Description of initiative
<Not Applicable>

Estimated annual CO2e savings (metric tonnes CO2e)
2211

Scope
Scope 2 (market-based)

Voluntary/Mandatory
Mandatory

Annual monetary savings (unit currency – as specified in C0.4)
584404

Investment required (unit currency – as specified in C0.4)
1190000

Payback period
1-3 years

Estimated lifetime of the initiative
6-10 years

Comment
Ferrovial Services has installed Led technology in the street lighting all over Águilas city. This technology, in addition to reduce the energy consumption and the CO2 emissions, provides more brightness and allows to adjust the intensity according to the moment in each streetlight.

Initiative type
Other, please specify (Energy efficiency: street lighting)

Description of initiative
<Not Applicable>

Estimated annual CO2e savings (metric tonnes CO2e)
1096

Scope
Scope 2 (market-based)

Voluntary/Mandatory
Mandatory

Annual monetary savings (unit currency – as specified in C0.4)
355103

Investment required (unit currency – as specified in C0.4)
1789386

Payback period
4 - 10 years

Estimated lifetime of the initiative
11-15 years

Comment
Ferrovial Services has installed Led technology in the street lighting all over Miranda de Ebro city. This technology, in addition to reduce the energy consumption and the CO2 emissions, provides more brightness and allows to adjust the intensity according to the moment in each streetlight.

Initiative type
Other, please specify (Energy efficiency: street lighting)

Description of initiative
<Not Applicable>

Estimated annual CO2e savings (metric tonnes CO2e)
450

Scope
Scope 2 (market-based)

Voluntary/Mandatory
Mandatory

Annual monetary savings (unit currency – as specified in C0.4)
185341

Investment required (unit currency – as specified in C0.4)
608602

Payback period
1-3 years

Estimated lifetime of the initiative
6-10 years

Comment
Ferrovial Services has installed Led technology in the street lighting all over Sant Andreu de la Barca city. This technology in addition to reduce the energy consumption and the CO2 emissions, provides more brightness and allows to adjust the intensity according to the moment.

Initiative type
Other, please specify (Energy efficiency: street lighting)

Description of initiative
<Not Applicable>

Estimated annual CO2e savings (metric tonnes CO2e)
615

Scope
Scope 2 (market-based)

Voluntary/Mandatory
Mandatory

Annual monetary savings (unit currency – as specified in C0.4)
142077

Investment required (unit currency – as specified in C0.4)
832066

Payback period
4 - 10 years

Estimated lifetime of the initiative
11-15 years

Comment
Ferrovial Services has installed Led technology in the street lighting all over Felanitx city. This technology in addition to reduce the energy consumption and the CO2 emissions, provides more brightness and allows to adjust the intensity according to the moment.

Initiative type
Energy efficiency: Processes

Description of initiative
Other, please specify (Car Sharing)

Estimated annual CO2e savings (metric tonnes CO2e)
1100

Scope
Scope 2 (market-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
5000000

Investment required (unit currency – as specified in C0.4)
9355000

Payback period
4 - 10 years

Estimated lifetime of the initiative
6-10 years

Comment
Car Sharing free floating.New generation of electric carsharing towards cleaner cities. The Alliance of Ferrovial and Renault "Zity" carsharing service reached 162,000 users, Zity manages 500 electric vehicles powered by renewable energy. The 9.5 million kilometers traveled by users in 2018 were enough to prevent more than 1,100tCO2.

Initiative type
Process emissions reductions

Description of initiative
Other, please specify (Optimization biogas)

Estimated annual CO2e savings (metric tonnes CO2e)
5308.02

Scope
Scope 3

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
51490

Investment required (unit currency – as specified in C0.4)
217460

Payback period
<1 year

Estimated lifetime of the initiative
11-15 years

Comment
NATURE OF ACTIVITY The Project known as " Optimization of biogas produced at La Vega (Sevilla) Landfill to supply the heat for the facility's lixiviate processing " was selected by the Spanish Climate Change Office (OECC) to be a Climate Project. The Project consists of using the biogas generated at the landfill itself in order to generate the heat required for the drying treatment of lixiviates. Emissions are thereby reduced due to the replacement of a traditional gasoil burning system with an alternative system based on a biogas boiler. Thus, there is a reduction in the CO2 emissions produced in burning a fossil fuel. SCOPE TYPE: Scope 3: There is avoidance of emissions produced by burning gasoil, a fossil fuel. REGULATIONS: This initiative is VOLUNTARY.

Initiative type
Other, please specify (Biogas)

Description of initiative
<Not Applicable>

Estimated annual CO2e savings (metric tonnes CO2e)
15850.52

Scope
Scope 3

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
153750

Investment required (unit currency – as specified in C0.4)
6888614

Payback period
1-3 years

Estimated lifetime of the initiative
11-15 years

Comment
The project known as " Expansion of the enrichment plant at Parque Tecnológico de Valdemingómez : biomethane production from anaerobic digestion of biogas for its injection into the natural gas grid " The Project aims to enlarge the current biogas processing plant at Parque Tecnológico de Valdemingómez (Valdemingómez Technological Park) so as to increase the amount of biomethane injected into the gas grid. Processing at Parque Tecnológico de Valdemingómez includes 2 biomethanation plants, Las Palomas and Las Dehesas,which annually generate over 34,2 MNm3/year of biogas. Now 55% of this biogas is being treated for injection into the natural gas grid. The remainder (45%), which cannot be optimized due to lack of processing capacity at the plant, is flare-burned. This project generates an aditional injection of 10.377,85 t/y of biomethane. In energy terms, this is equivalent to substitution of 300,305 GJ/year of energy from fossil sources. Of this, 72,8% (7.555,42 t / y) will be used in activities excluded from the greenhouse gas emission allowance trading scheme, so that they are included within the scope of the projects. Climate for the calculation of emissions. This means a reduction of greenhouse gas emissions of 20,563 tCO2eq /y , due to the substitution of fossil source natural gas for a renewable fuel

Initiative type
Process emissions reductions

Description of initiative
Changes in operations

Estimated annual CO2e savings (metric tonnes CO2e)
4358

Scope
Scope 2 (market-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
1359383

Investment required (unit currency – as specified in C0.4)
8324508

Payback period
4 - 10 years

Estimated lifetime of the initiative
16-20 years

Comment
NATURE OF ACTIVITY Ferrovial Services is undertaking the operation of the Public Lightning and Traffic Lights service in Guadalajara (Spain). This contract covers supply, service and maintenance of lighting installations in public spaces, traffic control signals, traffic CCTV camera system, access control in urban roads and control center of the city. The main sources of GHG in this activity are the luminaires and traffic lights. As for the actions that are being applied to reduce emissions, two are mainly highlighted. First, the substitution of sodium vapor light spots, which have now become LED technology. Second, the remote management system for control centers and luminaires allows to configure both the operating hours and the intensity of luminosity, together with the access to the energy consumption of each point. SCOPE TYPE Scope 2 and 3 REGULATIONS This initiative is VOLUNTARY.

Initiative type
Low-carbon energy installation

Description of initiative
Other, please specify (Valorization)

Estimated annual CO2e savings (metric tonnes CO2e)
8064

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
78221

Investment required (unit currency – as specified in C0.4)
4565600

Payback period
16-20 years

Estimated lifetime of the initiative
16-20 years

Comment
NATURE OF ACTIVITY It is intended to expand the current Ecopark's installation of Toledo to valorize 9,500 annual tons of solid recovered fuel (SRF), coming from the Ecopark's activity. The development of this project reduces the greenhouse gas emissions, due to the valorization of this waste sent to landfill, as well as the acquisition of second generation biofuel, avoiding the fossil fuel consumption. Thus, the annual average reduction of emissions come from: - 2,681 t CO2 eq from SRF biomass not placed at landfill - 5,402 t CO2 eq from the substitution of diesel oil C SCOPE TYPE Scope 1 and 3 REGULATIONS This initiative is VOLUNTARY.

Initiative type
Energy efficiency: Building services

Description of initiative
Lighting

Estimated annual CO2e savings (metric tonnes CO2e)
2380

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
792000

Investment required (unit currency – as specified in C0.4)
4850000

Payback period
4 - 10 years

Estimated lifetime of the initiative
16-20 years

Comment
NATURE OF ACTIVITY As an energy services Company, Ferrovial will holistically manage the municipality of Torrejón de Ardoz (Spain) for 20 years, during which it will assume the operational risks. This management includes energy management for buildings (cultural centres, schools, sports centres administrative buildings and social centres), public street lighting. Proposals for reducing energy consumption include the changeover to LED lamps, regulation of lighting in accordance with need, reduction of natural gas consumption via the introduction of energy efficiency measures, changing boilers, installing solar power equipment. Taken as a whole, these measures will achieve annual electricity savings of 8.6 GWh/year, and a 30 % total energy saving. SCOPE TYPE Scope 1 and 2 REGULATIONS This initiative is VOLUNTARY

Initiative type
Other, please specify (Behavorial change)

Description of initiative
<Not Applicable>

Estimated annual CO2e savings (metric tonnes CO2e)
453.12

Scope
Scope 3

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
5460323

Investment required (unit currency – as specified in C0.4)
0

Payback period
<1 year

Estimated lifetime of the initiative
<1 year

Comment
NATURE OF ACTIVITY Ferrovial Agromán has worked on reducing Scope 3 emissions by focusing on work site, reduction of earth transportation distances made by trucks. So, there is a decrease of the fuel consumption. SCOPE TYPE Scope 3: Purchased goods and services REGULATIONS The implementation of these practices are VOLUNTARY. These practices are implanted annually. It consists in improve a process and it does not require any investment.

Initiative type
Other, please specify (Fleet vehicules)

Description of initiative

<Not Applicable>

Estimated annual CO2e savings (metric tonnes CO2e)
5026.23

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
1824456

Investment required (unit currency – as specified in C0.4)
12827040

Payback period
4 - 10 years

Estimated lifetime of the initiative
6-10 years

Comment
NATURE OF ACTIVITY 1) Ferrovial provides its contractors with a fleet of cars to carry out their activities in the cities. They have a target it is to increase the fleet of the company cars powered by alternative energies annually. So, when they have to change old cars or to by news cars in a contract they buy alternative vehicles. In 2016, 632 vehicles that use alternative fuels were acquired. The fuel used is biodiesel, natural gas, liquefied natural gas, electric and bimodal. 2) Both companies have sophisticated system for monitoring and designing routes to optimize resources in urban services contracts, which have a particular impact on the industrial fleet. In 2016, 4,030 tonnes of CO2e has been avoided by the use of these 632 vehicles that use alternative fuels. SCOPE TYPE Scope 1: Vehicles owned or controlled by the company. REGULATIONS Incorporating alternative vehicles to our fleet is VOLUNTARY, as well as software development that helps optimizing routes within the city and thus to be more efficient.It is estimated that the lifetime of a vehicle is a little more tan 5 years

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Initiative type
Other, please specify (Training& awarnerss)

Description of initiative
<Not Applicable>

Estimated annual CO2e savings (metric tonnes CO2e)
10045

Scope
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
68224

Investment required (unit currency – as specified in C0.4)
34112

Payback period
<1 year

Estimated lifetime of the initiative
<1 year

Comment
Green driver training initiatives - safer greener driving provided to drivers across the company during 2017 has contributed to a reduction in our scope 1 and 3 emissions. Includes driver training and awareness of Skype usage instead of travelling to meetings

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Initiative type
Other, please specify (Energy efficiency : street lighting)

Description of initiative
<Not Applicable>

Estimated annual CO2e savings (metric tonnes CO2e)
7000

Scope
Scope 2 (market-based)

Voluntary/Mandatory
Mandatory

Annual monetary savings (unit currency – as specified in C0.4)
2268170

Investment required (unit currency – as specified in C0.4)
0

Payback period
4 - 10 years

Estimated lifetime of the initiative
3-5 years

Comment

New energy-efficient LED street lights in Manchester to save GBP 2m each year . 56000 new Led luminaries. The LED lighting solutions will be over 60% more energy-efficiente

C4.3c

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

Method	Comment
Compliance with regulatory requirements/standards	The emerging policy environment around emissions and climate change is one of the defining drivers of Grupo Ferrovial's business sectors over the coming decades So, in 2010 Ferrovial started "Ferrovial Positioning 2015 Project" focused on our Strategic Positioning by 2015-2020, under a likely "post-Copenhagen" market environment. This project and the analysis of the Paris Agreement provide a relevant input in or strategy after the analysis of Climate Change policies worldwide, incluiding trends on regulation and investments at both national and global levels.
Financial optimization calculations	The evolution on prices of raw materials (for instance: steel, wood…) and energy (in particular fossil fuels and electricity) has an impact on operating costs and thus on the profit & lost accounts.
Internal incentives/recognition programs	Ferrovial is committed to fight climate change. Its attitude requires to provide results and a commitment of improvement.
Lower return on investment (ROI) specification	In energy efficiency measures implemented in offices the amortization period is important issue when assessing what measures can be implemented. This study is important especially in those offices where we are renting.
Internal incentives/recognition programs	Top executive levels at the corporate and top and medium levels in business units have part of their salary set as a variable (incentives) and this is linked to the objectives achieved (individual and collective performance indicator).
Other	Ferrovial has signed some voluntary agreements.For Ferrovial is very important the communication related to climate change and the positioning of the company within the most important indexes worldwide
Financial optimization calculations	Ferrovial has announced the signature with 16 financial entities of its liquidity line where the ESG criteria (Environment, Social and Governance) are introduced. It is the first financing in which the company is linked to the margin to its results in terms of sustainability. Fruit of the commitment of all areas of the company The agreement closed with the bank union allows to transfer the improvement of the company in the environmental, social and governance qualifications in the next five years, to the costs of financing.

C4.5

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

Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products or that enable a third party to avoid GHG emissions.

Level of aggregation
Product

Description of product/Group of products
Ferrovial offers to the third parties an option to reduce their emissions by the use of our products or services. “Integrated City Management” is an example: (i) Ferrovial, carries out innovatives project in cities of UK. This is an integrated management project of all city’s assets, including roads, lighting, traffic management, sidewalks, sewers, ... The aim is to optimize processes by increasing efficiency and reducing environmental impact. This allows for 20% improvements in efficiency and 30% in the productivity of the services. A good example is a street lighting that includes LED technology, enabling centralized control of lighting, depending on activities in each urban space. There were installed around 8,000 points. The fleet vehicles have an intelligent software installed, allowing route optimization, minimizing traffic congestion and reduce fuel consumption. In addition, green vehicles are been used as an alternative to fossil fuels.In this way, Ferrovial helps to reduce scope 1&2 of our clients. (ii) This contract was signed for 25 years and only in the first year all objectives have been achieved. In the first year of its operation, monetary savings of 2,400,000 € in energy were achieved distributed as follows: - 1,568,000 € in electricity street lighting. Electricity savings represents 11,495 MWh and 3,345 t CO2e - 832,000 € in fossil fuel (diesel) used by fleet vehicles. Assumes a diesel savings of 1,361,267 l and 3628.592 t CO2e. The contract will last 25 years and because it is estimated that annually we are going to obtain the same results compared to the base year, we can say that we help to reduce energy consumption in the city - 287,375 MWh of electricity in the street lighting. This equates to the cost savings of 39,200,000 € and 83,629 t CO2e. - 34,031,675 l diesel used by fleet vehicles. This equates to the cost savings of 20,800,000 € and 90,714.8 t CO2e.

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

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

% revenue from low carbon product(s) in the reporting year
20

Comment
To calculate avoided emissions, we have used “GHG emissions from transport or mobile sources” of “The Greenhouse Gas Protocol Initiative” for diesel and “GHG emissions from purchased electricity” for electricity. These emission factors used include total CO2, CH4 and N2O emissions in units of CO2e (CO2 equivalent). The GWP used for CO2 is 1, for CH4 is 21 and N2O is 310. We have estimated that 1€ = 1.38 British Pounds. Regarding fleet vehicles, we estimate that the new alternative vehicles replace vehicles that use diesel and in the case of traffic management we also consider that the fuel savings refer to savings in diesel. The legislation applicable to Ferrovial business does not include the generation of ERUs and CERs.

Level of aggregation
Company-wide

Description of product/Group of products
Ferrovial offers to the third parties an option to reduce their emissions by the use of our products or Ferrovial works to ensure that its products and services are low emission and that they contribute to the transition to the low carbon economy Search efficiency in services and products such as: optimization of service routes, reduction of transport distance in works, reuse of materials to avoid burning in landfills, improvement of technology for the capture of biogas, avoiding own diffuse emissions. Optimizacion of routes : 74967 tCO2e Distance and transport reduction: 453 tCO2e Improvement of the technology for the capture of biogas: 67901 tCO2e

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

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

% revenue from low carbon product(s) in the reporting year
55

Comment
To calculated avoided emissions, we have used “GHG emissions from Stationary combustion tool” of “The Greenhouse Gas Protocol Initiative” for gas and “GHG emissions from purchased electricity” for electricity. These emission factors used are include total CO2, CH4 and N2O emissions in units of CO2e (CO2 equivalent). The GWP used for CO2 is 1, for CH4 is 21 and N2O is 310. The legislation apllicable to Ferrovial business does not include the generation of ERUs and CERs.

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 2009

Base year end
December 31 2009

Base year emissions (metric tons CO2e)
911740

Comment
Ferrovial will recalculate its emissions whenever there is a structural change, a change to calculation methodology (emission factors, approach …) or changes in annual consumption levels

Scope 2 (location-based)

Base year start
January 1 2009

Base year end
December 31 2009

Base year emissions (metric tons CO2e)
161975

Comment
Ferrovial will recalculate its emissions whenever there is a structural change, a change to calculation methodology (emission factors, approach …) or changes in annual consumption levels

Scope 2 (market-based)

Base year start
January 1 2009

Base year end
December 31 2009

Base year emissions (metric tons CO2e)
158492

Comment
Ferrovial will recalculate its emissions whenever there is a structural change, a change to calculation methodology (emission factors, approach …) or changes in annual consumption levels

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.
Defra Voluntary 2017 Reporting Guidelines
ISO 14064-1
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
US EPA Climate Leaders: Direct Emissions from Municipal Solid Waste Landfilling

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)
798175

Start date
January 1 2018

End date
December 31 2018

Comment

Past year 1

Gross global Scope 1 emissions (metric tons CO2e)
861251

Start date
January 1 2017

End date
December 31 2017

Comment

Past year 2

Gross global Scope 1 emissions (metric tons CO2e)
806243

Start date
January 1 2016

End date
December 31 2016

Comment

Past year 3

Gross global Scope 1 emissions (metric tons CO2e)
911740

Start date
January 1 2009

End date
December 31 2009

Comment

C6.2

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

Row 1

Scope 2, location-based
We are reporting a Scope 2, location-based figure

Scope 2, market-based
We are reporting a Scope 2, market-based figure

Comment
We have used GHG Protocol Scope 2 to calculate Ferrovial scope 2. The method used by Ferrovial to calculate its scope 2 is "market based". Thus, in calculating emissions we have used an emissions factor of 0 metric tons of CO2 equivalent/Kwh contributed by suppliers for purchased electricity from renewable sources with a guarantee of origin (GO). For electricity which does not come from renewable sources we have used the country mix because not all of the countries in which we operate have available a residual mix. Emissions included under the "location based" section are higher than those under the "market based" method, because the emissions factor contributed by suppliers for renewable electricity are not taken into account in that approach"

C6.3

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

Reporting year

Scope 2, location-based
186543

Scope 2, market-based (if applicable)
123036

Start date
January 1 2018

End date
December 31 2018

Comment

Past year 1

Scope 2, location-based
187213

Scope 2, market-based (if applicable)
129052

Start date
January 1 2017

End date
December 31 2017

Comment

Past year 2

Scope 2, location-based
164580

Scope 2, market-based (if applicable)
116168

Start date
January 1 2016

End date
December 31 2016

Comment

Past year 3

Scope 2, location-based
161975

Scope 2, market-based (if applicable)
158492

Start date
January 1 2009

End date
December 31 2009

Comment

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?
No

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
489189

Emissions calculation methodology
(i) This category includes all upstream (i.e., cradle-to-gate) emissions from the production of products purchased by the reporting year. Ferrovial considered the most relevant materials from the environment and total purchases side (Timber, paper, steal, asphalt, concrete and water) that are used in products that we supply. Enablon is the platform used to gather the data required to obtain the quantity of materials purchased and to write the The Annual Report. To calculate emissions, we use 2015 DEFRA Conversion Factors: Annex 14 "Indirect emissions resulting from Material Consumption and Waste Disposal" for materials and waste and Annex 9 "Bioenergy & Water Conversion Factor Tables" for water. These emission factors used are in line with GHG Protocol Scope 3 Guidance and include total CO2, CH4 and N2O emissions in units of CO2e (CO2 equivalent). The GWP used for CO2 is 1, for CH4 is 21 and N2O is 310. (ii) We considered quantity of the most relevant materials from the environment and total purchases. These data are reported annually by businesses for compiling the Annual Report and are audited and verified in accordance with ISAE 3000 "Assurance Engagements other than Audits or Reviews of Historical Financial Information" by Deloitte. Furthermore, data, methodology and emissions of this section have been audited and verified in accordance with ISAE 3410 "Assurance Engagements on Greenhouse Gas Statements" PwC. Therefore the quality of data and emissions reported is high. (iii) The calculation methodology consist of multiplying the amount of materials, reported (Tons) by the conversion factor of each material purchased (Tneq.CO2/Tons of material). We used 2015 DEFRA Conversion Factors: Annex 14 "Indirect emissions resulting from Material Consumption and Waste Disposal" for materials and waste and Annex 9 "Bioenergy & Water Conversion Factor Tables" for water. So we get the total number of life cycle Tneq CO2 for all materials (extraction, primary processing, manufacturing and transportation. It excludes the use phase). These emission factors include the transportation part that are included in section "Upstream transportations and distribution". So for not doubling the emissions the emissions in the section "Upstream transportations and distribution" are subtracted from the obtained in that section.

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Explanation

Capital goods

Evaluation status
Relevant, calculated

Metric tonnes CO2e
313290

Emissions calculation methodology
(i) This category includes all upstream (i.e., cradle-to-gate) emissions from the production of capital goods purchased or acquired by the reporting company in the reporting year. Capital goods are final products that have an extended life and are used by the company to manufacture a product; provide a service; or sell, store, and deliver merchandise. In this category, Ferrovial has considered the total capital goods purchased. The capital goods include "Equipment and machinery", "Construction projects" and "Facilities, office equipment and furniture". To calculate emissions, we used 2015 DEFRA Conversion Factors: in Annex 13 "– Indirect emissions from the supply chain". The emission factors presented in this Annex cover indirect emissions from the supply chain. Indirect emissions are those which are generated by other organizations as part of the process of providing goods and services to our company. These emission factors used are in line with GHG Protocol Scope 3 Guidance and include total CO2, CH4 and N2O emissions in units of CO2e (CO2 equivalent). The GWP used for CO2 is 1, for CH4 is 21 and N2O is 310. (ii) In this category we considered the total investment in capital goods. These data are reported annually by businesses for compiling the Annual Report and are audited and verified in accordance with ISAE 3000 "Assurance Engagements other than Audits or Reviews of Historical Financial Information" by Deloitte. Furthermore, data, methodology and emissions of this section have been audited and verified in accordance with ISAE 3410 "Assurance Engagements on Greenhouse Gas Statements" by PwC. Therefore the quality of data and emissions reported is high. (iii) The calculation methodology consist of multiplying the investment by the conversion factor. We have used 2015 DEFRA Conversion Factors (Annex 13 " Indirect emissions from the supply chain").

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Explanation

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

Evaluation status
Relevant, calculated

Metric tonnes CO2e
178901

Emissions calculation methodology
(i) Includes emissions from: 1) For upstream emissions of purchased fuels. The conversions factors used are collected in the appendix 2 of WTW ("Well-to-Wheels analysis of future automotive fuels and powertrains in the European context WELL-TO-TANK Report. Version 3.0"). 2) For upstream emissions of purchased electricity. The conversion factors used are collected in the appendix 2 OF WTW. 3) For T&D losses. GHG protocol conversion factors for electricity are used. In this category, Ferrovial has considered data used to calculate scope 1&2 (purchased fuels and electricity). In this category we incluide Transchile emissions. These data include purchased fuel and electricity. These emission factors used are in line with GHG Protocol Scope 3 Guidance and include total CO2, CH4 and N2O emissions in units of CO2e (CO2 equivalent). The GWP used for CO2 is 1, for CH4 is 21 and N2O is 310. (ii) Date considered are quantity of fuel and electricity purchased. These data are reported annually by businesses for compiling the Annual Report and are audited and verified in accordance with ISAE 3000 "Assurance Engagements other than Audits or Reviews of Historical Financial Information" by Deloitte. Furthermore, data, methodology and emissions of this section have been audited and verified in accordance withISAE 3410 "Assurance Engagements on Greenhouse Gas Statements" by PwC. Therefore the quality of data and emissions reported is high. (iii) 1) For upstream emissions of purchased fuels. To calculate the emissions the conversion factors used are collected in the appendix 2 of WTW. Concretely, conversion factors used correspond to diesel, petrol and LPG. 2) For upstream emissions of purchased electricity: - Stage 1: The source used is the data from the electric system's generation by source type (IEA, 2011) - Stage 2: To the previous result applies the conversion factors collected in the appendix 2 of WTW. Concretely, conversion factors used, in the electricity section tables but without considering the electricity generation stage. 3) For T&D losses. The source used comes from the "Total production" and "Losses" data for the generation of the electric system by country (last data available from the International Energy Agency, 2011) and the GHG protocol conversion factors for electricity by country.

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Explanation

Upstream transportation and distribution

Evaluation status
Relevant, calculated

Metric tonnes CO2e
434112

Emissions calculation methodology
(i) This category includes emissions from transportation and distribution of products purchased in the reporting year. This included third-party transportation and distribution services purchased. Ferrovial considered the most relevant materials from the environment and total purchases side. These materials were used in products that we supply. These materials were: Timber, paper, steal, asphalt, water and concrete. The Enablon application is the source we used to obtain the quantity of materials purchased. To know the origin of the materials purchased we have used sectorial reports. To calculated emissions, we have used “GHG emissions from transport or mobile sources” of “The Greenhouse Gas Protocol Initiative”. These emission factors used are in line with GHG Protocol Scope 3 Guidance and include total CO2, CH4 and N2O emissions in units of CO2e (CO2 equivalent). The GWP used for CO2 is 1, for CH4 is 21 and N2O is 310. (ii) In this category we have considered quantity of the most relevant materials. These data are reported annually by businesses through Enablon application to write the Annual Report that are audited and verified in accordance with ISAE 3000 “Assurance Engagements other than Audits or Reviews of Historical Financial Information” by Deloitte. To know the origin of the materials purchased we renowned sectorial reports. Furthermore, data, methodology and emissions of this section have been audited and verified in accordance with ISAE 3410 “Assurance Engagements on Greenhouse Gas Statements” by PwC. Therefore the quality of data and emissions reported is high. (iii) To calculate the emissions in this section we used the following calculation tool: “GHG emissions from transport or mobile sources” provided by “The Greenhouse Gas Protocol Initiative”. The information required are: - Quantity of the most relevant materials purchased: Timber, paper, steal, asphalt and concrete. - Origin of these materials purchased and quantity of materials purchased in every country. To know the origin of the materials purchased we have renowned sectorial reports. - The type of transport used. We have considered road and marine transport depend on the origin of the materials. - Distance. To know distances from the origin of material and the point of consumption we have used specific webs to calculate distances.

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Explanation

Waste generated in operations

Evaluation status
Relevant, calculated

Metric tonnes CO2e
232326

Emissions calculation methodology
(i) This category includes emissions from third-party disposal and treatment of waste generated in the reporting company´s owned or controlled operations in the reporting year. This category includes emissions from disposal of both solid waste and wastewater. In this category, Ferrovial considered the total of solid waste (Construction and Demolition Waste (CDW); Urban or similar waste; Wood; Garden waste, Hazardous waste, Total reused soil from excavation and Soil from excavation sent to landfill) and wastewater generated in our operations. We used 2015 DEFRA Conversion Factors: Annex 14 "Indirect emissions resulting from Material Consumption and Waste Disposal” for solid waste and Annex 9 “Bioenergy & Water Conversion Factor Tables” for wastewater. These emission factors include total CO2, CH4 and N2O emissions in units of CO2e (CO2 equivalent). The GWP used for CO2 is 1, for CH4 is 21 and N2O is 310. (ii) We considered quantity of the total of solid waste and wastewater generated in our operations. These data are reported annually by businesses though Enablon application to write the Annual Report and are audited and verified in accordance with ISAE 3000 “Assurance Engagements other than Audits or Reviews of Historical Financial Information” by Deloitte. Furthermore, data, methodology and emissions of this section have been audited and verified in accordance with ISAE 3410 “Assurance Engagements on Greenhouse Gas Statements” by PwC. Therefore the quality of data and emissions reported is high. (iii) The calculation methodology consist on multiply the amount of waste reported (Tons) by the conversion factor of each waste (Tneq.CO2/Tons of waste). We used 2015 DEFRA Conversion Factors in Annex 14 for waste and Annex 9 for wastewater. In order to avoid double-counting, the emissions associated with recycling are attributed to the user of the recycled materials, and the same attribution approach was also applied to the emissions from energy generation from waste . Only transportation and minimal preparation emissions are attributed to the entity disposing of the waste. Emissions in that scope are not directly involved with the emissions comes from the management of waste in the landfill management for Ferrovial, which are part of our scope 1.

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

Explanation

Business travel

Evaluation status
Relevant, calculated

Metric tonnes CO2e
8334

Emissions calculation methodology
(i) This category includes emissions from the transportation of employees for business related activities in vehicles owned or operated. In this category, Ferrovial emissions from business travel arised from air travel, rail travel, taxi travel and automotive travel. We had distance travelled by air, rail and automotive and expense of taxi travel. To calculated Ferrovial emissions, we have used “GHG emissions from transport or mobile sources” of “The Greenhouse Gas Protocol Initiative” except Amey that use 2015 DEFRA conversion factor. These emission factors used are in line with GHG Protocol Scope 3 Guidance and include total CO2, CH4 and N2O emissions in units of CO2e (CO2 equivalent). The GWP used for CO2 is 1, for CH4 is 21 and N2O is 310. (ii) In this category we considered data provided by the travel agency through which Ferrovial purchases train and plane tickets; data provided by our accounting department on taxi expenditure and data supplied by the business on the use of vehicles. Data, methodology and emissions of this section had been audited and verified are audited and verified in accordance with ISAE 3000 “Assurance Engagements other than Audits or Reviews of Historical Financial Information” by Deloitte. Furthermore, data, methodology and emissions of this section have been audited and verified in accordance with ISAE 3410 “Assurance Engagements on Greenhouse Gas Statements” by PwC. Therefore the quality of data and emissions reported is high. (iii) To calculate the emissions in this section we used the following calculation tool: “GHG emissions from transport or mobile sources” provided by “The Greenhouse Gas Protocol Initiative”. The information required were: - The type of transport used by passenger - Distance In the case of Amey, we have used 2015 DEFRA Conversion Factors (Annex 6 “Passenger Transport Conversion Tables”. Assumtions: We consider that business travel are made in diesel driven cars and train trips are made in conventional train not a high speed.

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Explanation

Employee commuting

Evaluation status
Relevant, calculated

Metric tonnes CO2e
1821

Emissions calculation methodology
(i) This category includes emissions from the employee's commuting from their homes to work places. Ferrovial carried out a mobility survey to the group's employees, which has been the source to know the mode of transport and distance traveled from home to work place. Other source used is the number of people working in offices. This data is provided by the human resources department. To calculate emissions, we used the calculation tool "GHG emissions from transport or mobile sources emitted" provided by "The Greenhouse Gas Protocol Initiative" (GHG PI). These emission factors used were in line with GHG Protocol Scope 3 Guidance and include total CO2, CH4 and N2O emissions in units of CO2e (CO2 equivalent). The GWP used for CO2 is 1, for CH4 is 21 and N2O is 310. (ii) In this category, data, methodology and emissions of this section have been audited and verified in accordance with ISAE 3000 "Assurance Engagements other than Audits or Reviews of Historical Financial Information" by Deloitte. Furthermore, data, methodology and emissions of this section have been audited and verified in accordance with ISAE 3410 "Assurance Engagements on Greenhouse Gas Statements" by PwC. Therefore the quality of data and emissions reported is high (iii) To calculate the emissions in this section we used the following calculation tool: "GHG emissions from transport or mobile sources" provided by "The Greenhouse Gas Protocol Initiative". The information required are: - Number of employee - Distance from home to work - Type of transport: car, motorbike, subway, bus and train. Assumptions: Ferrovial within this section calculates the emissions of employees from construction, services, infrastructures and Ferrovial group that work at offices. As we do not know the type of motorbike and train used we have chosen in column "vehicle type": "Control unknown for motorbike" and "Average Light rail and Train" for train. Ferrovial does not have operational control over airports because it only has a 25% share of the company. In this case, this category is calculated but it is included within the "investments" section. In that section there are more details about the calculation procedure.

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Explanation

Upstream leased assets

Evaluation status
Not relevant, calculated

Metric tonnes CO2e
0

Emissions calculation methodology
(i) This category includes emissions from the operation of assets are leased by the company and not included in scope 1 or 2 inventory. Due to the type of rental agreement Ferrovial has, the emissions from the operation of assets are included within the Scope 1&2. However, we consider important to include in this group emissions related to electricity consumption of our customers' buildings in which we provide maintenance and cleaning services. This requires knowing the number of buildings in which we carry on this type of activity and the surface of these buildings in order to estimate the kWh consumed, based on consumption information in similar buildings we have. To calculated emissions, we have used 2015 DEFRA Conversion Factors (Annex 3 "Converting from purchased electricity, heat and stream use to carbon dioxide equivalent emissions"). These emission factors used are in line with GHG Protocol Scope 3 Guidance and include total CO2, CH4 and N2O emissions in units of CO2e (CO2 equivalent). The GWP used for CO2 is 1, for CH4 is 21 and N2O is 310. ii) In this category we considered the number of buildings in which we carry on this type of activity and the surface of these buildings in order to estimate the kWh consumed, based on consumption information in similar buildings we have. Furthermore, data, methodology and emissions of this section have been audited and verified in accordance withwith ISAE 3000 "Assurance Engagements other than Audits or Reviews of Historical Financial Information" by Deloitte. Furthermore, data, methodology and emissions of this section have been audited and verified in accordance with ISAE 3410 "Assurance Engagements on Greenhouse Gas Statements" by PwC. Therefore the quality of data and emissions reported is high. (iii) The calculation methodology consist of multiplying the amount of electricity estimated (Kwh) by the conversion factor for electricity (Tneq.CO2/kwh). We have used 2015 DEFRA Conversion Factors in Annex 3 "Converting from purchased electricity, heat and stream use to carbon dioxide equivalent emissions"). Assumptions: An estimate of power consumption (kwh) is performed. KWh are estimated with information on building type and m2 area based on data we have in similar buildings.

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

Explanation

Downstream transportation and distribution

Evaluation status
Not relevant, calculated

Metric tonnes CO2e
0

Emissions calculation methodology
This category includes emissions that occur from transportation and distribution of sold products in vehicles and facilities not owned or controlled by the reporting company. Ferrovial's activity consists on providing services or construct and manage infrastructures in situ. Ferrovial does not sell any product that has to be transported or stored in other facility. Therefore, the emissions in this category are zero.

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Explanation

Processing of sold products

Evaluation status
Not relevant, calculated

Metric tonnes CO2e
0

Emissions calculation methodology
This category includes emissions from processing of sold intermediate products by third parties (e.g., manufacturers) subsequent to sale by company. Intermediate products are products that require further processing, transformation, or inclusion in another product before use and therefore result in emissions from processing subsequent to sale and before use by the end consumer. Ferrovial's activity consists on providing services or to construct and to manage infrastructures in situ. Ferrovial does not sell intermadiate products that require futher processing, transformation or inclusion in another product before use by the end consumer. So, the emissions in this category are zero.

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Explanation

Use of sold products

Evaluation status
Relevant, calculated

Metric tonnes CO2e
587563

Emissions calculation methodology
(i) This category includes emissions from the use of transport infrastructures of Cintra. The tool used to calculate emission in European toll roads is called COPERT IV. This is done by using global warming potential proposed by IPCC. The tool used to calculate GHG emissions in the USA toll road is called MOVES. MOVES is a simulator of emissions from motor vehicles developed by the Environmental Protection Agency of the United States. The data necessary to introduce in these tools come from Enablon that it is the application used to gather data for the Annual Report of Ferrovial. These emission factors used are in line with GHG Protocol Scope 3 Guidance and include total CO2, CH4 and N2O emissions in units of CO2e. The GWP used for CO2 is 1, for CH4 is 21 and N2O is 310. (ii) In this category we considered for European highways: highway length, IMD (average daily traffic),% of light and heavy vehicles. In American highways, in addition to the previous data, speed, the state, county and type of the highway. These data are reported annually by businesses to write the Annual Report and were audited and verified in accordance with ISAE 3000 by Deloitte. Furthermore, data, methodology and emissions of this section were audited and verified in accordance with ISAE 3410 "Assurance Engagements on Greenhouse Gas Statements" by PwC. Therefore the quality of data and emissions reported is high. (iii) 1) The methodology used for European toll roads is a spread sheet to estimate GHG emissions generated by vehicles on one or more sections of road. The final result is presented in units of CO2 equivalent. This is done by using global warming potential proposed by IPCC for the realization of Greenhouse Gases inventories. The methodology is based on "COPERT IV Computer Programme to Calculate Emissions from Road Transport". 2) American Highways. The tool used is called MOVES and is a simulator of emissions from motor vehicles developed by the Environmental Protection Agency of the United States (US-EPA). Regarding input data, the calculation tool requires the following input data: Length, IMD, % of light and heavy vehicles and the speed they reach on the highway, the state, county and type of highway.

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Explanation

End of life treatment of sold products

Evaluation status
Relevant, calculated

Metric tonnes CO2e
37456

Emissions calculation methodology
(i) This category includes emissions from the waste disposal and treatment of products sold in the reporting year at the end of their life. Regarding products sold, those are infrastructures' construction. The purchased goods are included in these infrastructures. Therefore, at the end of infrastructures' useful life the waste produced correspond to those ones. To calculated emissions, we used 2015 DEFRA Conversion Factors: Annex 14 "Indirect emissions resulting from Material Consumption and Waste Disposal" for solid waste . These emission factors used are in line with GHG Protocol Scope 3 Guidance and include total CO2, CH4 and N2O emissions in units of CO2e (CO2 equivalent). The GWP used for CO2 is 1, for CH4 is 21 and N2O is 310. (ii) In this category we considered the most relevant materials from the environment and volume point of view are included in the infrastructures' construction, being timber, paper, barrier, asphalt and concrete. Therefore, at the end of infrastructures' useful life the waste produced correspond to those ones. These data are reported annually by businesses to write the Annual Report and are audited and verified in accordance with the standards and procedures included in the International Standards on Assurance Engagements (ISAE 3000) by Deloitte. Furthermore, data, methodology and emissions of this section have been audited and verified in accordance with ISAE 3410 "Assurance Engagements on Greenhouse Gas Statements" by PwC. Therefore the quality of data and emissions reported is high. (iii) Regarding products sold, those are infrastructures' construction. The purchased goods are included in these infrastructures. Therefore, at the end of infrastructures' useful life the waste produced correspond to those ones. In this case the most relevant materials from the environment and volume point of view are included in the infrastructures' construction, being timber, paper, barrier, asphalt and concrete. The calculation methodology consists of multiplying the amount of material used (Tons) by the conversion factor of each waste (Tneq.CO2/Tons of waste). We have used 2015 DEFRA Conversion Factors in Annex 14 "Indirect emissions resulting from Material Consumption and Waste Disposal" for waste. It is considered that all waste goes to the landfill.

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Explanation

Downstream leased assets

Evaluation status
Not relevant, calculated

Metric tonnes CO2e
0

Emissions calculation methodology
This category includes emissions from the operation of assets that are owned by the reporting company (acting as lessor) and leased to other entities in the reporting year. Ferrovial does not have rented assets. Then, emissions in this category are zero.

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Explanation

Franchises

Evaluation status
Not relevant, calculated

Metric tonnes CO2e
0

Emissions calculation methodology
This category includes emissions from the operation of franchises not included in scope 1 or scope 2. A franchise is a business operating under a license to sell or distribute another company's goods or services within a certain location. This category is applicable to franchisors (i.e., companies that grant licenses to other entities to sell or distribute its goods or services in return for payments, such as royalties for the use of trademarks and other services). Franchisors should account for emissions that occur from the operation of franchises (i.e., the scope 1 and scope 2 emissions of franchisees) in this category. Ferrovial is not a franchisor. So, emissions in this category are zero.

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Explanation

Investments

Evaluation status
Relevant, calculated

Metric tonnes CO2e
566067

Emissions calculation methodology
"Data for 2018 is not available as of the questionnaire release date, and therefore emissions figures for 2017 are used. (i) This category is applicable to Ferrovial that is investors in HAH (Heathrow Airport Holdings) (25 % share of HAH). Ferrovial considerer 25% of scope 1&2&3. To calculated emissions, HAH uses 2015 DEFRA Conversion Factors. These emission factors are in line with GHG Protocol Scope 3 Guidance and include total CO2, CH4 and N2O emissions in units of CO2e (CO2 equivalent). The GWP used for CO2 is 1, for CH4 is 21 and N2O is 310. (ii) HAH publish every year the "Sustainability performance summary" with the scope 1&2&3 emissions. An external consulting carried out an independent verification of these emissions in accordance with the requirements of the Airport Carbon Accreditation Scheme and ISO14064-3. Furthermore, data, methodology and emissions of this section have been audited and verified in accordance with ISAE 3410 "Assurance Engagements on Greenhouse Gas Statements" by PwC. Therefore the quality of data and emissions reported is high. (iii) Ferrovial considerer 25 % of total scope 1&2 and the most relevant items of Scope 3 (Air traffic movements, Employee Commuting and Passenger transport): - Scope 1&2. DEFRA emission's factors were used. Date used was compiled at the airports in invoices, meters and other type of registers generated due to the airport's activity. - Air traffic movements. Emissions from the LTO cycle cover all aircraft movements below an altitude of 3000ft (1000m), including approach, landing, taxi-in, taxi-out, take-off, and climb-out. Emissions were calculated based on UNFCCC reporting methodology developed by AEA Technology plc. Data was obtained for airport specific times in mode, as well as aircraft movements by type and engine fit. - Employee Commuting. A staff survey was done for each airport recording the locations of staff residences, usual travel modes and information on days worked. This includes all HAH staff and third party company staff. Defra emission factors were used to calculate emissions. - Passenger transport. CAA (Civil Aviation Authority) passenger survey was done for London airports together with HAH survey data for other airports, setting out the origin of passengers and final mode of travel."

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Explanation

Other (upstream)

Evaluation status

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation

Other (downstream)

Evaluation status

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Explanation

C6.7

(C6.7) Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?
Yes

C6.7a

(C6.7a) Provide the emissions from biologically sequestered carbon relevant to your organization in metric tons CO2.

Row 1

Emissions from biologically sequestered carbon (metric tons CO2)
788777

Comment

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
10

Metric numerator (Gross global combined Scope 1 and 2 emissions)
921211

Metric denominator
Other, please specify (number of employee)

Metric denominator: Unit total
92113

Scope 2 figure used
Market-based

% change from previous year
3.1

Direction of change
Decreased

Reason for change
In 2018 Ferrovial decreases its emissions in relative terms by 3% compared to 2017. The GHG emissions (tCO2e/number of employees) were 10.32 in 2017 and 10.00 in 2018 (0.32 tCO2e /number of employees reduce divide by 10.32 = 3.1% decreased). In 2018 Ferrovial´s decreased it´s emissions due to implementation of energy efficiency measures in fixes and mobiels sources, the most important is the change on the fleet and the important increase of renewable electricity.

Intensity figure
433.1

Metric numerator (Gross global combined Scope 1 and 2 emissions)
921211

Metric denominator
Other, please specify (millons of euros pay by taxes by Ferrovial)

Metric denominator: Unit total
2127

Scope 2 figure used
Market-based

% change from previous year
9.25

Direction of change
Decreased

Reason for change
In 2018 Ferrovial decreases its emissions in relative terms by 9.25 % compared to 2017. The GHG emissions (tCO2e/taxes) were 477.25 in 2017 and 433.10 in 2018 (44.15 tCO2e /taxes reduce divide by 477.25 = 9.25 % decreased). In 2018 Ferrovial´s decreased it´s emissions due to implementation of energy efficiency measures in fixes and mobiels sources, the most important is the change on the fleet and the important increase of renewable electricity. In addition Ferrovial increased it´s taxes largely.

C7. Emissions breakdowns

C7.1

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

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	571091	IPCC Second Assessment Report (SAR - 100 year)
CH4	225498	IPCC Second Assessment Report (SAR - 100 year)
N2O	1586	IPCC Second Assessment Report (SAR - 100 year)

C7.2

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

Country/Region	Scope 1 emissions (metric tons CO2e)
Australia	39456
Canada	9727
Chile	23698
Colombia	1824
France	121
New Zealand	14740
Oman	12096
Poland	83637
Portugal	72811
Puerto Rico	859
Saudi Arabia	260
Slovakia	962
Spain	255240
United Kingdom of Great Britain and Northern Ireland	223068
United States of America	59676

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By business division
By activity

C7.3a

(C7.3a) Break down your total gross global Scope 1 emissions by business division.

Business division	Scope 1 emissions (metric ton CO2e)
Airports (Transchile)	30
Construction (Ferrovial Agroman, Budimex, Webber, Cadagua)	199804
Corporation (Ferrovial Corporacion)	260
toll roads (Cintra)	2220
Services (Amey, Ferrovial Services, Broadspectrum)	595861

C7.3c

(C7.3c) Break down your total gross global Scope 1 emissions by business activity.

Activity	Scope 1 emissions (metric tons CO2e)
Infraestructure maintenance and facility management and waste treatment (Amey, Ferrovial Services, Broadspectrum)	595861
Water treatment plants (Cadagua)	720
Infraestructure management (Cintra)	2220
Construction (Ferrovial Agroman, Budimex,Webber)	199084
Corporation	260
Electric transmission line (Transchile)	30

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)
Australia	42188	42188	52808	0
Canada	487	487	3224	0
Chile	299	299	620	0
Colombia	22	22	183	0
Slovakia	9	9	44	0
Spain	77339	26856	253274	165323
New Zealand	336	336	1937	0
Oman	4420	4420	7342	0
Poland	23193	18446	30685	6280
Portugal	2339	2339	6554	0
Puerto Rico	91	91	150	0
United Kingdom of Great Britain and Northern Ireland	12829	4552	30411	17264
United States of America	22991	22991	41465	0
Morocco	0	0	0.1	0

C7.6

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

By business division
By facility
By activity

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)
Construction (Ferrovial Agroman, Budimex,Webber, Cadagua)	87312	46412
Corporation (Ferrovial Corporacion)	345	345
Toll roads (Cintra)	6284	5944
Services (Amey, Ferrovial Services, Broadspectrum)	92602	70335
Airports (Transchile)	0	0

C7.6b

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

Facility	Scope 2 location-based emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
toll roads	6209	5869
Construction sites	49391	13740
Offices and contracts	130943	103427

C7.6c

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

Activity	Scope 2, location-based emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
Infraestructure maintenance and facility management and waste treatment (Amey, Ferrovial Services, Broadspectrum)	92602	70335
Water treatment plants (Cadagua)	46778	11131
Infraestructure management (Cintra)	6284	5944
Construction (Ferrovial Agroman, Budimex,Webber)	40534	35281
Corporation	345	345
Electric transmission line (Transchile)	0	0

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Decreased

C7.9a

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

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	6016	Decreased	1	In 2018 we implemented measures in electricity and reduced emissions by 6.106 tCO2e or 1% (6.106 tCO2e in reduced emissions divided by 990.303 tCO2e that were Scope 1&2 emissions in 2017 = 1%) The reduction is due to an increase of 20,523 MWH In electricity from renewable sources in Budimex, Cadagua, Ferrovial Agroman, Amey, Cintra and Ferrovial Services
Other emissions reduction activities	63076	Decreased	6.37	In 2018, a reduction of 63,076tCO2e or 6.37% (63,076 tCO2e in reduced emissions divided by 990,303 tCO2e that were Scope 1&2 emissions in 2017 = 6.37%) due to implementation of energy efficiency measures in fixed and mobiles sources in Cadagua, Corporation , Broadspectrum , Broadspectrum, Ferrovial Services and Ferrovial Agroman.
Divestment	0	No change	0	Ferrovial in its procedure for calculation and reporting of carbon footprint establishes that when new acquisitions, disinvestments, mergers, changes in methodology or boundary occurs we will recalculate emissions from the base year. Therefore these causes do not affect the evolution of emissions.
Acquisitions	0	No change	0	In its procedure for calculation and reporting of its carbon footprint, Ferrovial has a policy of recalculating emissions from the base year when new acquisitions, disinvestments, mergers, or changes in methodology or boundary occur. Emissions performance is not, therefore, affected by such changes. Thus, in 2018 we recalculated emissions to include since the base year: North Allerton and Milton keynes as part of Amey This practice means that acquisition of a new company does not alter emissions performance.
Mergers	0	No change	0	Ferrovial in its procedure for calculation and reporting of carbon footprint establishes that when new acquisitions, disinvestments, mergers, changes in methodology or boundary occurs we will recalculate emissions from the base year. Therefore these causes do not affect the evolution of emissions
Change in output	0	No change	0	Ferrovial in its procedure for calculation and reporting of carbon footprint establishes that when new acquisitions, disinvestments, mergers, changes in methodology or boundary occurs we will recalculate emissions from the base year. Therefore these causes do not affect the evolution of emissions.
Change in methodology	0	No change	0	Ferrovial in its procedure for calculation and reporting of carbon footprint establishes that when new acquisitions, disinvestments, mergers, changes in methodology or boundary occurs we will recalculate emissions from the base year. Therefore these causes do not affect the evolution of emissions.
Change in boundary	0	No change	0	Ferrovial in its procedure for calculation and reporting of carbon footprint establishes that when new acquisitions, disinvestments, mergers, changes in methodology or boundary occurs we will recalculate emissions from the base year. Therefore these causes do not affect the evolution of emissions.
Change in physical operating conditions	0	No change	0	There are not changes in Scope 1&2 because there are not changes in physical operating conditions.
Unidentified	0	No change	0	There are not changes in Scope 1&2 because there are not unidentified matters.
Other	0	No change	0	There are not changes in Scope 1&2 because there are not others matters..

C7.9b

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

Market-based

C8. Energy

C8.1

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

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

C8.2

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

	Indicate whether your organization 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)	LHV (lower heating value)		1846482	1846482
Consumption of purchased or acquired electricity	<Not Applicable>	157606	239702	397308
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>	31388	<Not Applicable>	31388
Total energy consumption	<Not Applicable>	188994	2086184	2275178

C8.2b

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

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

C8.2c

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

Fuels (excluding feedstocks)
Diesel

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
1443382

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

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

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

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

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Comment
Total consumption of diesel includes : 1015975 MWH of diesel vehicles , represents 70% of diesel consumption 419423 MWH of red diesel, represent 29% of diesel consumption 7984 MWH of heating diesel, represent 1% of diesel consumption

Fuels (excluding feedstocks)
Residual Fuel Oil

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
27418

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

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

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

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

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Comment

Fuels (excluding feedstocks)
Motor Gasoline

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
129004

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

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

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

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

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Comment

Fuels (excluding feedstocks)
Natural Gas

Heating value
Unable to confirm heating value

Total fuel MWh consumed by the organization
73028

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

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

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

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

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Comment
Total consumption of Natural Gas includes: natural gas for installations 47248 MWH , represents of 65% of consumptions CNG for vehicles 25780 MWH, represents 35% of consumption.

Fuels (excluding feedstocks)
Coking Coal

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
158488

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

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

MWh fuel consumed for self-generation of steam

<Not Applicable>

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

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Comment

Fuels (excluding feedstocks)
Kerosene

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
5624

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

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

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

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

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Comment

Fuels (excluding feedstocks)
Propane Liquid

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
7703

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

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

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

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

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Comment

Fuels (excluding feedstocks)
Liquefied Petroleum Gas (LPG)

Heating value
LHV (lower heating value)

Total fuel MWh consumed by the organization
1833

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

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

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

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

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Comment

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

Coking Coal

Emission factor
2.03227

Unit
kg CO2e per Mg

Emission factor source
GHG protocol

Comment

Diesel

Emission factor
2.67633

Unit
kg CO2e per liter

Emission factor source
Vehicles diesel: GHG Protocol : 2.67633 kgCO2e/liter DEFRA : 2.62694 kgCO2e/liter Red Diesel : GHG Protocol : 2.67633 kgCO2e/liter DEFRA : 2.62694 kgCO2e/liter Heating diesel: GHG Protocol : 2.68527 kgCO2e/liter DEFRA : 2.97049 kgCO2e/liter

Comment
“The Greenhouse Gas Protocol Initiative” (GHG PI) shall be used for calculation of emissions from fossil fuel consumption in stationary equipment, mobile equipment, fugitive, biomass and electricity. Except in the case of Amey, a company located in the United Kingdom, which will use DEFRA’s conversion factors. In 2018 Ferrovial has diesel consumption with differents types of diesel as we explain in 8.2C. we report the different types of conversion factor for each

Kerosene

Emission factor
2.49945

Unit
kg CO2e per liter

Emission factor source
GHG Protocol : 2.49945 tCO2/liter DEFRA : 2.53279 tCO2e/l

Comment
“The Greenhouse Gas Protocol Initiative” (GHG PI) shall be used for calculation of emissions from fossil fuel consumption in stationary equipment, mobile equipment, fugitive, biomass and electricity. Except in the case of Amey, a company located in the United Kingdom, which will use DEFRA’s conversion factors.

Liquefied Petroleum Gas (LPG)

Emission factor
1.61145

Unit
kg CO2e per liter

Emission factor source
GHG Protocol : 1.61145 kgCO2e/liter DEFRA : 1.51906 kgCO2e/liter

Comment
“The Greenhouse Gas Protocol Initiative” (GHG PI) shall be used for calculation of emissions from fossil fuel consumption in stationary equipment, mobile equipment, fugitive, biomass and electricity. Except in the case of Amey, a company located in the United Kingdom, which will use DEFRA’s conversion factors.

Motor Gasoline

Emission factor
2.27155

Unit
kg CO2e per liter

Emission factor source
GHG Protocol : 2,27155 kgCO2e/liter DEFRA : 2,30531 kgCO2e/liter

Comment
“The Greenhouse Gas Protocol Initiative” (GHG PI) shall be used for calculation of emissions from fossil fuel consumption in stationary equipment, mobile equipment, fugitive, biomass and electricity. Except in the case of Amey, a company located in the United Kingdom, which will use DEFRA’s conversion factors.

Natural Gas

Emission factor
0.20214

Unit
kg CO2e per kWh

Emission factor source
Natural Gas GHG Protocol : 0.20214 kgCO2e/kwh DEFRA : 0.20437 kgCO2e/kwh CNG GHG Protocol : 1,87168 kgCO2e/m3

Comment
“The Greenhouse Gas Protocol Initiative” (GHG PI) shall be used for calculation of emissions from fossil fuel consumption in stationary equipment, mobile equipment, fugitive, biomass and electricity. Except in the case of Amey, a company located in the United Kingdom, which will use DEFRA’s conversion factors. In 2018 Ferrovial has diesel consumption with differents types of natural gas as we explain in 8.2C. we report the different types of conversion factor for each

Propane Liquid

Emission factor
1.61309

Unit
kg CO2e per liter

Emission factor source
GHG Protocol : 1.61309 kgCO2e/liter DEFRA : 1.50938 kgCO2e/liter

Comment
The Greenhouse Gas Protocol Initiative” (GHG PI) shall be used for calculation of emissions from fossil fuel consumption in stationary equipment, mobile equipment, fugitive, biomass and electricity. Except in the case of Amey, a company located in the United Kingdom, which will use DEFRA’s conversion factors.

Residual Fuel Oil

Emission factor
2.94857

Unit
kg CO2e per liter

Emission factor source
GHG protocol

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	500892	31388	469504	31388
Heat	0	0	0	0
Steam	0	0	0	0
Cooling	0	0	0	0

C8.2f

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

Basis for applying a low-carbon emission factor
Energy attribute certificates, Guarantees of Origin

Low-carbon technology type
Other low-carbon technology, please specify (Energy attribute certificates, GOF)

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

MWh consumed associated with low-carbon electricity, heat, steam or cooling
188867

Emission factor (in units of metric tons CO2e per MWh)
0

Comment
In 2018, 44% of the electricity purchased and consumed by Ferrovial comes from Electricity from renewable sources.

C9. Additional metrics

C9.1

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

Description
Waste

Metric value
18419

Metric numerator
tonnes of hazardous waste

Metric denominator (intensity metric only)

% change from previous year
66

Direction of change
Decreased

Please explain
In 2018 Ferrovial implemented measures to reduce the production of hazardous waste achieving a reduction of 66% (18,419 tonnes produce in 2018 divided by 27943 tonnes produce in 2017 = 66%).

Description
Other, please specify (Wood)

Metric value
48131

Metric numerator
m3

Metric denominator (intensity metric only)

% change from previous year
10.96

Direction of change
Decreased

Please explain
In 2018 Ferrovial implemented measures to reducir wood consumption achieving a reduction of 10.96% (48,131 m3 consume in 2018 divided by 54,059 in 2017) Wood is one of the materials that Ferrovial considers relevant. it´s one of which takes into account for the calculation of Scope 3, therefore it carries out measures to reduce it consumption which would imply a reduction of emissions in our value chain

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
FERROVIAL_2018_EN.PDF

Page/ section reference
In 2018 the 100% of the consumptions and GHG emisions (Scope 1, 2,3 and Biogenic CO2) for Ferrovial have been verified under limited assurance by PwC, according ISAE 3410. The document attached includes verification letter.

Relevant standard
ISAE 3410

Proportion of reported emissions verified (%)
100

Scope
Scope 2 market-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
FERROVIAL_2018_EN.PDF

Page/ section reference
In 2018 the 100% of the consumptions and GHG emisions (Scope 1, 2,3 and Biogenic CO2) for Ferrovial have been verified under limited assurance by PwC, according ISAE 3410. The document attached includes verification letter.

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
FERROVIAL_2018_EN.PDF

Page/section reference
In 2018 the 100% of the consumptions and GHG emisions (Scope 1, 2,3 and Biogenic CO2) for Ferrovial have been verified under limited assurance by PwC, according ISAE 3410. The document attahced includes verification letter and calculation and report method.

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
C6. Emissions data	Year on year change in emissions (Scope 1 and 2)	ISAE 300 by Deloitte ISAE 3410 by PwC	In 2018, Ferrovial´s GHG emissions included in the Integrated Annual Report were verified by Deloitte in accordance with ISAE 3000 and GRI. In this verification process, Deloitte checks: - Year on year change in emissions (scope 1 &2 &3) and against our basic year - Year on year figure and Emissions intensity against our target - Year on year Emissions in absolute terms and against our target. In addition, a double check was made because in the verification of the Carbon Footprint by PwC all these points were checked
C6. Emissions data	Year on year change in emissions (Scope 3)	ISAE 300 by Deloitte ISAE 3410 by PwC	In 2018, Ferrovial´s GHG emissions included in the Integrated Annual Report were verified by Deloitte in accordance with ISAE 3000 and GRI. In this verification process, Deloitte checks: - Year on year change in emissions (scope 1 &2 &3) and against our basic year - Year on year figure and Emissions intensity against our target - Year on year Emissions in absolute terms and against our target. In addition, a double check was made because in the verification of the Carbon Footprint by PwC all these points were checked
C6. Emissions data	Year on year emissions intensity figure	ISAE 300 by Deloitte ISAE 3410 by PwC	In 2018, Ferrovial´s GHG emissions included in the Integrated Annual Report were verified by Deloitte in accordance with ISAE 3000 and GRI. In this verification process, Deloitte checks: - Year on year change in emissions (scope 1 &2 &3) and against our basic year - Year on year figure and Emissions intensity against our target - Year on year Emissions in absolute terms and against our target. In addition, a double check was made because in the verification of the Carbon Footprint by PwC all these points were checked
C6. Emissions data	Progress against emissions reduction target	ISAE 300 by Deloitte ISAE 3410 by PwC	In 2018, Ferrovial´s GHG emissions included in the Integrated Annual Report were verified by Deloitte in accordance with ISAE 3000 and GRI. In this verification process, Deloitte checks: - Year on year change in emissions (scope 1 &2 &3) and against our basic year - Year on year figure and Emissions intensity against our target - Year on year Emissions in absolute terms and against our target. In addition, a double check was made because in the verification of the Carbon Footprint by PwC all these points were checked
C8. Energy	Other, please specify (Consumptions)	ISAE 300 by Deloitte ISAE 3410 by PwC	In 2018, Ferrovial´s energy consumption included in the Integrated Annual Report were verified by Deloitte in accordance with ISAE 3000 and GRI. In this verification process, Deloitte checks: Year on year change in energy and against our basic year In addition, a double check was made because in the verification of the Carbon Footprint by PwC all these points were checked

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)?

No, and we do not anticipate being regulated in the next three years

C11.2

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

Yes

C11.2a

(C11.2a) Provide details of the project-based carbon credits originated or purchased by your organization in the reporting period.

Credit origination or credit purchase
Credit purchase

Project type
Forests

Project identification
In relation to CER, in 2018, Ferrovial bought 260 CER (Certified Emission Reductions) accredited by VCS (Verified Carbon Standard), CCBS Gold (Climate Community and Biodiversity Standard) and FSC. This CER has been used to offset the emissions generated by the executive´s vehicles of Ferrovial. The CERs are based on the project "Conservation of the Amazon in Madre de Dios" in Perú. Also, in 2018 Ferrovial bought 28 CER (Certified Emission Reductions) accredited by VCS (Verified Carbon Standard), CCBS Gold (Climate Community and Biodiversity Standard) and FSC. This CER has been used to offset the emissions generated by the Q&E Global meeting in Ferrovial.The project consists on a sustainable forest management in the certified timber concessions. The project area is located less than 30 km to the side of the new inter-oceanic road that will unite Brazil with the Peruvian port. The area of influence of the Interoceanic road is characterized for still having areas of forests of great importance for their biodiversity and the environmental services they offer. Deforestation and forest degradation are a result of these activities. The forest where the project is located is very important in terms of biodiversity conservation since it provides the habitat to four endangered rainforest species and eleven endangered wildlife species, as follows: Cedar (Cedrela odorata), Mahogany (Swietenia macrophylla), Wild fig tree (Ficus anthelmintica), Leche caspi (Galactodendron utilisima), Jaguar (Panthera onca), Red howler monkey (Alouatta seniculus), Giant anteater (Myrmecophaga tridactyla), Giant armadillo (Priodontes maximus), Lowland tapir (Tapirus terrestris), Red-and-green macaw (Ara chloropterus), Scarlet macaw (Ara macao), Blue-throated Piping-guan (Pipile cumanensis), Razor-billed Curassow (Mitu tuberosum), Sanborn's squirrel (Sciurus sanborni), Amazon dwarf squirrel (Sciurus ignitus). Benefits associated with the project: - 12,850 t CO2e captured from the atmosphere - 207 hectares protected from deforestation - 609,246 endangered trees protected - Creation of local employment

Verified to which standard
VCS (Verified Carbon Standard)

Number of credits (metric tonnes CO2e)
288

Number of credits (metric tonnes CO2e): Risk adjusted volume
288

Credits cancelled
Yes

Purpose, e.g. compliance
Voluntary Offsetting

C11.3

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

C11.3a

(C11.3a) Provide details of how your organization uses an internal price on carbon.

Objective for implementing an internal carbon price
Drive low-carbon investment
Identify and seize low-carbon opportunities

GHG Scope
Scope 1
Scope 2
Scope 3

Application
Ferrovial commissioned Trucost and Climate Strategy to create a Shadow Carbon Pricing Methodology and Shadow Carbon Price Grid that can be readily applied to project evaluation in selected sectors and geographies.The Carbon Pricing Methodology follows an evidence based approach, to forecast future changes in Effective Carbon Prices.The grid will enable Ferrovial to incorporate carbon prices into project planning and business decision making, as well as supporting the communication of Ferrovial's carbon emissions mitigation efforts to external stakeholders The output of this analysis is presented in the form of a 'grid', with Shadow Carbon Prices specified for the parameters, Project type and 15 geographies where the company operates In addition,carbon prices for four time horizons were estimated (2020, 2030, 2040 and 2050), allowing Ferrovial to take into account short but also middle to long term risks.

Actual price(s) used (Currency /metric ton)
66

Variance of price(s) used
The figure reported in the chart above is an average of the estimated prices from Ferrovial different project types in the 15 countries considered for 2030. We consider the 2030 horizon for being the one that best fits with our investment payback period

Type of internal carbon price
Shadow price

Impact & implication
In 2017 a tool was developed to implement a carbon price in the most relevant investments of Ferrovial in the shadow pricing modality with the aim of quantifying the associated risks and opportunities and guiding the asset portfolio to decarbonized business models. The methodology establishes the evolution of the long-term carbon price (from 2020 to 2050), in the main sectors and in the 15 most relevant geographies, making it possible to quantify the risks and opportunities of new investments.Regarding carbon pricing, this is taken into consideration as a factor to assess in due diligence processes, mainly in the processes of investment / divestment or in the development of specific business lines.Ferrovial commissioned Trucost and Climate Strategy to create a Shadow Carbon Pricing Methodology and Shadow Carbon Price Grid that can be readily applied to project evaluation in selected sectors and geographies.An initial scoping phase revealed that Ferrovial required a Shadow Carbon Price setting methodology capable of estimating the exposure of different project types in different geographies to increasing carbon prices, along with the time horizon in which increased prices are expected to materialise. The output of this analysis is presented in the form of a 'grid', with Shadow Carbon Prices specified for the parameters, Project type (5 main types: airports, highways & toll roads, Waste management facilities, Landfills or Energy assets (Natural gas) and 15 geographies where the company operates. Those geographies comprise 13 countries, one sub-national jurisdiction (California) and one region (the Middle East). California was included in addition to the USA in recognition of the more robust climate change policies in effect in that state. The Middle East was added as a single location as Ferrovial operates in several Middle East countries (such as Saudi Arabia or Oman), and Ferrovial wanted to have a more high-level estimate applicable to all of those. In addition, carbon prices for four time horizons were estimated (2020, 2030, 2040 and 2050), allowing Ferrovial to take into account short but also middle to long term risks.

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?
Yes, our customers
Yes, other partners in the value chain

C12.1b

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

Type of engagement
Education/information sharing

Details of engagement
Share information about your products and relevant certification schemes (i.e. Energy STAR)

% of customers by number
27

% Scope 3 emissions as reported in C6.5
60

Please explain the rationale for selecting this group of customers and scope of engagement
Ferrovial works together with some of its clients to offer energy efficiency improvements and emission reductions within its activities and its value chain. In some of its contracts in Spain, Ferrovial Services offers the possibility of calculating the carbon footprint and the water footprint of its services in order to jointly carry out these improvements. The contracts where these services are offered are those where we have a considerable margin of improvement.

Impact of engagement, including measures of success
In recent times Ferrovial has been working on some of its contracts with the client to offer the calculation of carbon footprint and water footprint, specific to its contract, in such a way that improvements in energy efficiency and value chain can be offered. The metric use for the successful of the program is the percentage of the clients we have with this service and The calculations are made with direct measurements of consumption and following the same procedure as at company-wide level. Ferrovial offers this service to all new clients and also already customers, with which a relationship already exists.

Type of engagement
Education/information sharing

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

% of customers by number
28

% Scope 3 emissions as reported in C6.5
55

Please explain the rationale for selecting this group of customers and scope of engagement
Ferrovial has been working for years in the search for solutions to urban congestion, offering more efficient options, favoring the mobility of users.The transformation of urban mobility opens up opportunities for Ferrovial Services to promote new business models, technologically focused and interactive with citizens, which improve the efficiency and sustainability of cities. Ferrovial Services is developing these new capabilities through practical experimental methodologies, knowledge of other Ferrovial divisions and alliances with external agents with complementary capabilities. A good example of Ferrovial Services' commitment to urban mobility is Zity, a carsharing service that operates in Madrid . Madrid was chosen as the starting point of the Project because it is one of the best cities to start up a carsharing model. The agreements with the town councils facilitate the success of the project.

Impact of engagement, including measures of success
Since 2017, Ferrovial has created a carsharing service in partnership with Renault, which is being launched in the city of Madrid with the aim of providing its customers, the users, with a low carbon option for their transport. It is a fleet of 650 electric vehicles. During 2018, more than 162,000 users will use ZIty, traveling more than 9.5 million km, thus avoiding 1,100 tCO2e0

C12.1c

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

Ferrovial is committed to transparency in the information it reports to the market by making continuous improvements to its communication channels with all stakeholders on the basis of innovative corporate information that addresses not only financial aspects but also environmental and social variables.

Ferrovial consider as “other partners in the value chain” : The company stakeholders that form part of the company’s value chain (governments and public authorities, universities, analysts, the business sector, labor unions, the tertiary sector and society in general)

(i) Methods company uses to engage with the value chain.

Ferrovial has strong relationship with regulatory bodies and governments by taking part in workshops, task forces and workgroups.

(ii) Strategy for prioritizing engagements and how success is measured.

Relationships with regulatory bodies and governments are key as a way to influence on regulatory trends which are in charge of developing new legal requirements that affect to the company and third party (fuel and energy related activities, used of sold product, purchased goods and services…).

So, the Ferrovial Strategy for prioritizing engagements depends on if we can play an active rol in them, the engagement can bring value to the company and provide the recognition from the industry, analysts and public bodies for good practice and the knowledge that Ferrovial has in this field

The way to Measure the Success of the engagement is mainly to analyze in how many relevant workshop Ferrovial is; how the analysts considerer this type of engagement, in how many rating of sustainability we are and the position the company reach in them; the number of requests by the government bodies, industries and universities to participate in new projects such as:

- Ferrovial has endorsed the statements of the Prince of Wales’s Corporate Leaders Group on Climate Change as a part of Ferrovial lobbying on carbon prices as well as a reliable and strong carbon market at a global scale.

- We are also members of the EU Green Growth Group, organization where civil society, Academy and business world representatives give advice to the European Commission about the future of the economic and environmental agenda for the horizons 2030 and 2050.

- In 2014, Ferrovial joined the Spanish Green Growth Group that consider that a roadmap towards an economy with low emissions contains big opportunities for the Spanish economy which only will become a reality with a long term collaboration between the Government and the business network. This collaboration takes place through the adhesion to the Spanish Green Growth Group. Since 2015, Ferrovial presides Spanish Green Growth Group.

- In 2016, Ferrovial becomes a member and core-partner of Climate-KIC, the largest public-private innovation partnership focused on climate innovation to mitigate and adapt to climate change.

- In 2016, Ferrovial joined the Climate Change Cluster, which is organized by Forética. In this group, large companies work side by side to lead up the strategic positioning of climate change in the management of organizations. Their role is to discuss and exchange opinions and good practices, ensuring they form part of the global debate and are key to decisions taken in Spain at an administrative level.

- In 2016, Ferrovial became a strategic partner of the #PorElClima community, organized by ECODES with the aim of developing communicative actions to raise awareness and embed a range of good practices throughout society as whole.

- In line with its open innovation strategy, Ferrovial continues its commitment to the Massachusetts Institute of Technology (MIT) in order to assist in research projects aimed at transforming the cities and developing the infrastructures of the future and get a reduction of consumption and emissions

- The agreement with the Biodiversity Foundation, Ministry of Agriculture, Food and the Environment to renew the "Global Change Monitoring in National Parks" Project. The main objective of this pioneering project is to develop a system for evaluating and monitoring the impact that can be generated in the ecosystems present in Spanish national parks as a result of climate change.

- Another example is the project "Plan Adapta". Ferrovial was chosen by the Spanish Climate Change Office (SCCO) within the Adapta Plan for a pilot project on the development of a methodology to analyze the vulnerability of one of its infrastructures to the impact of climate change.

- We support the UK Government’s commitment to a high speed national rail network linking London and the airports

- Trends within aviation sector are aimed at making aircrafts more efficient and fuels less polluting

- Carbon Reduction Commitment (CRC). Ferrovial is ready to leader this trading scheme, and has been supporting the Government expectations on such matter

C12.3

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

Direct engagement with policy makers
Trade associations
Other

C12.3a

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

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Other, please specify (Climate Change Legislation)	Neutral	In Spain, Ferrovial chairs the Spanish Green Growth Group, which promotes public-private partnerships to make further progress in mitigating and adapting to climate change, decarbonizing the economy and championing the circular economy. A manifesto was signed in 2018, together with 35 other Spanish companies, to activate the energy transition and a conference titled “Opportunities of the energy transition for the Spanish and European economy” was organized in collaboration with the European Alliance to Save Energy.	With a focus on the 2050 horizon, the group requests clear and stable policies enabling companies to change their strategies and policies to align them with the fight against climate change. The group is also asking for a communications and awareness-raising policy for society at large on climate change.
Mandatory carbon reporting	Neutral	The company through its airport division – HAH (Heathrow Airport Holdings), where Ferrovial owns a 25.00% of share, supports the Government expectations on “Impact on air traffic limits” although we do not have control over emissions from aircraft we use our influence to encourage the airline industry and policy makers to tackle climate change.	With the idea of to reduce the “Impact on air traffic limits”, HAH: a) Trends within aviation sector are aimed at making aircrafts more efficient and fuels less polluting (Singapore Airlines, Airbus, NATs). According to that, HAH is leading the "Green Aviation" initiative. b) HAH has been working with airlines to publish the road carbon footprint roadmap for sustainable aviation.
Mandatory carbon reporting	Support	The company through its airport division – HAH (Heathrow Airport Holdings), where Ferrovial owns a 25.00% of share, participate in UK Government’s emissions trading scheme called CRC (Carbon Reduction Commitment).	HAH is ready to leader this trading scheme, and has been supporting the Government on such matter. We expect to simplify the trading scheme and to facilitate the implementation. We support the UK legislation on mandatory carbon scheme with no exception.
Climate finance	Support	Ferrovial is currently providing solutions to the Spanish Government in order to spread urban renovation and refitting as a way to drive the Spanish construction sector toward a sustainable business. This product is named “Green refitting” and offers building refurbishment solutions to householders with the aim of improving the energy efficiency and cutting GHG emissions in premises. Ferrovial's proposal is mainly based on a) a relevant change in the current legal framework regulating building refurbishment, and b) a public-private partnership with private equity to invest in buildings, with the aim of reducing energy consumption significantly. According to our proposal, big-scale urban renovation and building refitting would result in savings by more than 13 million CO2 tones.	Ferrovial has extensive experience in construction and technical solutions implemented in the houses that enable make them more efficient by demanding less power and energy consumption in the user phase. Ferrovial has quantified what investment should be made to apply these technical solutions in order to improve energy efficiency of existing houses and obtain energy savings. We have also advised in various public-private project so this projects can be carried out and offered solutions on what changes have to be made to guarantee restoration projects in neighbourhoods. Thanks to that advice, in 2014 the Spanish Government approved “Energy Saving and Emission Reduction Plan in Buildings for energy rehabilitation of buildings in the residential and tertiary sector”. So, there will be a co-finance energy efficiency investments in buildings

C12.3b

(C12.3b) Are you on the board of any trade associations or do you provide funding beyond membership?

Yes

C12.3c

(C12.3c) Enter the details of those trade associations that are likely to take a position on climate change legislation.

Trade association

Corporate Leaders Group

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association’s position

The EU Corporate Leaders Group (EU CLG) was set up in 2007 and brings together business leaders from a cross-section of EU and international businesses who believe there is an urgent need to develop new and longer-term policies for tackling climate change. The mission of the EU Corporate Leaders Group is: “To communicate the support of business for the European Union to move to a low carbon society and low climate risk economy and to work in partnership with the institutions of the EU to secure the policy interventions that are needed to make this a practical reality” The vision of the EU Corporate Leaders Group is that, by 2020, the European Union will have: - Demonstrated that tackling climate change is the pro-growth option; - Fully met the targets committed to at the 2007 Spring Council Summit. Adopted and implemented a package of policies to accelerate investment in the development, demonstration and deployment of low carbon and energy efficient technologies and practices; - Adopted and will be implementing policies to address and adapt to the impacts of climate change; - Played a leadership role in securing and implementing a sufficiently ambitious and comprehensive international agreement to avoid dangerous climate change and deploy international adaptation strategies; - Adopted the necessary targets for emission reductions beyond 2020 to ensure Europe becomes a low carbon economy within the timescale that science suggests is necessary to avoid dangerous climate change; - Developed a comprehensive climate and energy strategy for delivering the post-2020 emission reduction targets; - Developed the EU policy beyond 2020 to give the right long term signals for investments in low carbon and energy efficient technologies and more innovative competitive industrial development; - Adopted a clear and robust 2030 Climate and Energy Framework. Key EU activities in 2013: - IPCC Science & Business Roundtable - Launch of The Polish Business & Science Climate Coalition - European Green Growth Summit in Brussels - EU CLG response to the European Commission’s green paper consultation - High level Conference on “The Business Case for a 2030 Energy & Climate Framework” - ETS Backloading Roundtable discussion at the European Parliament - Meeting with Commissioner Potocnik - Business support for ETS Backloading with EU Permanent representations

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

Ferrovial’s role is focused on providing know-how and expertise on energy efficiency, particularly on transport infrastructures, cities and energy efficiency in buildings. The main goal is to support the strategy of the CLG about influencing the Climate Package and the 2030 European Agenda, introducing energy efficiency as a major topic in the EU long term strategy for reducing emissions and energy dependence. Just to give an example about the importance of this topic, the potential of energy efficiency in buildings at the European level could reduce the energy demand around the total amount of gas currently imported from Russia.

Trade association

UE Green Growth Group

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association’s position

The European Green Growth Group is a platform for dialogue between the different stakeholders and policy actors at the European level which intends to improve the design of EU policies on climate change and transition to a low carbon economy with the cooperation of the business community. The Green Growth Group has three subgroups: one at Ministerial level, another at EU Parliamentary level and a last one made up of European companies (Ferrovial is integrated in it).

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

Ferrovial´s role is focused on advising to the European Unión in relation to the Climate Change roadmap by 2030

Trade association
Spanish Green Growth Group

Is your position on climate change consistent with theirs?
Consistent

Please explain the trade association's position
Taking as a precedent the European Green Growth group the Spanish Minister of Agriculture, Food and Environment forms the Spanish Green Growth with a group of Spanish companies, representing a wide range of sectors of the Spanish economy, in order to gather their input and perspectives (Ferrovial is integrated in it). One of the outcomes of this group was the initiative to set up a permanent forum between the Administration and the private sector with the aim to collect the input and advice of the private sector on how to proceed to transform the current economy into a low-carbon economy that contributes to the fight against climate change while, at the same time, guarantees a sustainable job-creating economic growth. The initiative took shape as a Declaration, signed by 34 companies, in which these companies undertook to take the necessary steps to support EU decarbonisation policies and recognized the importance of a permanent dialogue between the Administration and the business community in order to achieve this goal. This Declaration represented the founding document of the Spanish Green Growth Group whose main objectives are the following: - Reinforcing involvement of the private sector in the fight against climate change and the achievement of a low carbon economy. - Exchanging and sharing information related to climate change and low carbon economy with a view to contribute to improve the design of the public policies in order for them to be more efficient and realistic. - Contributing to the adaptation of business plans to climate change. - Exploring business opportunities for Spanish companies that may arise as a result of climate change. - Support the Spanish participation in international fora. - Participate in working groups with the Ministry of Agriculture (Spain) to provide advice on the new climate change and energy transition bill, currently being drafted since Marrakesh COP.

How have you influenced, or are you attempting to influence their position?
Ferrovial's role is focused on: - Advicing on how to proceed to transform the current economy into a low-carbon economy that contributes to the fight against climate change while, at the same time, guarantees a sustainable job-creating economic growth. - Exchanging and sharing information related to climate change and low carbon economy with a view to contribute to improve the design of the public policies in order for them to be more efficient and realistic. - Contributing to the adaptation of business plans to climate change. - Exploring business opportunities for companies that may arise as a result of climate change. - Support the Spanish participation in international fora. - Participate in working groups with the Ministry of Agriculture (Spain) to provide advice on the new climate change and energy transition bill, currently being drafted in the wake of the Marrakesh COP. Ferrovial has chaired the Spanish Green Growth Group since 2015.

Trade association
Foretica´s Cluster of Climate Change

Is your position on climate change consistent with theirs?
Consistent

Please explain the trade association's position
As a member of Forética, Ferrovial participates in the Climate Change Cluster. Forética, Spain's sole representative on the World Business Council for Sustainable Development (WBCSD), and therefore, the Spanish Sustainable Development Council (CEEDS), has launched in Spain projects and initiatives that the WBCSD carried out on a global scale. One of the main issues it is working on in relation to climate change is the upcoming Spanish Climate Change and Energy Transition Act.

How have you influenced, or are you attempting to influence their position?
Ferrovial will attend meetings of the Climate Change Cluster in order to advise the government on climate change issues.

C12.3e

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

In 2013, the Spanish Office for Climate Change (OECC) carried out the "ADAPT Initiative". The OECC aims to develop a methodology for analyzing the vulnerability of businesses located in Spain, to the impacts of climate change. The OECC has selected Ferrovial as a pilot organization in which to apply this methodology in one of its infrastructure. From this study we will draw conclusions and experiences that will be shared with other companies. After previous analysis, it was decided to apply this methodology in one of the desalination plant managed by Ferrovial in the community of Alicante (Spain). Ferrovial, selected as a pilot company, provides the OECC with knowledge and technical information related to desalination. In 2014, Ferrovial was chosen again by the OECC to continue with the second part of the "Plan Adapta" to evaluate the vulnerability analysis conducted for the installation and select adaptation measures to climate change based on it, to quantifying and prioritizing these measures, making use of cost benefit analysis. This second phase was completed in 2016. In 2016, Ferrovial became a strategic partner of the #PorElClima community, organized by ECODES with the aim of developing communicative actions to raise awareness and embed a range of good practices throughout society as whole. - In line with its open innovation strategy, Ferrovial continues its commitment to the Massachusetts Institute of Technology (MIT) in order to assist in research projects aimed at transforming the cities and developing the infrastructures of the future and get a reduction of consumption and emissions. In 2016, Ferrovial in collaboration with the MIT has continued developing software to optimize the design and operation of mechanical waste treatment plants to improve the efficiency of facilities currently in operation.
In the realm of climate innovation, since 2017 Ferrovial has been a co-partner of Climate-KIC, the largest European initiative focused on mitigating and adapting to climate change.

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?

Ferrovial´s Quality & Enviroment Steering Committee have the purpose of articulate climate strategy across all the company. The decisions and actions of the Steering Committee are derived from the application of the influence of Corporate Responsibility policy that is determined by the Board of Directors. Therefore, the issues related to climate change strategy are discussed in company´s committee. Any direct and indirect activities , including those to influence policy , are carried out pass through Ferrovial´s Quality & Environment Steering Committee to ensure that is consistent with overall climate change strategy

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, in line with the CDSB framework (as amended to incorporate the TCFD recommendations)

Status
Complete

Attach the document
2018-Integrated-Annual-Report-Ferrovial.pdf

Page/Section reference

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

Comment

Publication
In voluntary sustainability report

Status
Complete

Attach the document

Page/Section reference

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

Comment

Publication
In voluntary communications

Status
Complete

Attach the document
FileCambioClimatico.pdf
I66.pdf
Zity_parís.pdf
Amey galardonada en los premios ICE West Midlands - Ferrovial.pdf
Amey cambio de LED.pdf
Alumbrado publico Edimburgo.pdf
Bicing.pdf
Edificio LEED Ferrovial Agroman.pdf
Financiación_criterios ambientales.pdf
LBJ energia solar.pdf
Zity.pdf
oportunidad Agua PLW.pdf
green Friday.pdf
Residuos.pdf
www.budimex.pl - the-opening-of-the.pdf
Obras mas sostenibles.pdf
GECV statement (002)_IBE.pdf
La hora del Planeta Sala de Prensa.pdf
Heathrow_innovate Climate change.pdf

Page/Section reference

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

Comment

C14. Signoff

C-FI

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

C14.1

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

	Job title	Corresponding job category
Row 1	CEO of Ferrovial and member of the Board of Ferrovial	Chief Executive Officer (CEO)

SC. Supply chain module

SC0.0

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

In construction area, Ferrovial Agromán is the flagship company of the construction division operative in all areas of civil works and building, both in Spain and abroad.

Ferrovial Agroman is a Ferrovial subsidiary engaged in the construction of civil works, building and industrial works. It is a reference internationally for its technical capacity in the execution of large transport infrastructures. Its international position continues to improve, and it is noteworthy that the international portfolio outweighs domestic work in the main operational aggregates.

In the field of civil works, it designs and builds all types of infrastructures: roads, railways, hydraulic works, maritime works, hydro-electric works and industrial and works. The division also has a significant experience in home building and in non-residential building.

In Spain, Ferrovial Agromán also has the support of its auxiliary companies in executing part of its business:

- The structure pre-tensing business is operated via the company Tecpresa.

- Ditecpesa: is a company specializing in development, manufacture and sale of asphalt products.

- Edytesa: specializing in sliding formwork technology and lifting, movement and placement of large loads (heavy lifting).

Beyond Spain, business is carried out by subsidiaries like Budimex in Poland or Webber in the United States, and by stable delegations in countries deemed to be of strategic interest, such as the United Kingdom, Ireland, Italy, Portugal, Chile, Puerto Rico, Australia and the United States.

The base year for the calculation and reporting of Ferrovial-Agroman emissions is 2009.

In services area, Amey in the UK and Ferrovial Services Portugal are one of the largest and most diverse companies working for the public and regulated sectors, with the ultimate aim of creating better places for people to live, work and travel. they offer a wide-ranging catalogue of innovative solutions complying with the most demanding quality and commitment standards for all types of public and private customers. They work to improve infrastructures and cities, optimizing their efficiency, functionality, sustainability and contribution to society. The division executes its business via an integrated offering of value-added services:

- Maintenance of transport infrastructures, ensuring the most demanding quality and safety levels. The whole of the process is covered end-to-end, from needs-planning for vehicles and persons right up to the solution of all incidents.

-Environmental services to convert cities into sustainable environments: collection, recycling, treatment and transformation of waste into energy and new materials, management of green zones, street cleaning and conservation.

-Management of services and energy efficiency for buildings and facilities, optimizing costs and investments via the execution of bespoke, holistic solutions, from diagnostics to energy management itself.

During 2018, Endesa, Vodafone group, National Grid and Naturgy have requested the completion of this module, but we dont have any contract with Endesa during 2018 so we can´t report data from our carbon footprint

SC0.1

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

	Annual Revenue
Row 1	12427

SC0.2

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

Yes

SC0.2a

(SC0.2a) Please use the table below to share your ISIN.

	ISIN country code (2 letters)	ISIN numeric identifier and single check digit (10 numbers overall)
Row 1	ES	0118900010

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.

Requesting member
Naturgy Energy Group SA

Scope of emissions
Scope 1

Allocation level
Business unit (subsidiary company)

Allocation level detail
Ferrovial Agroman Spain

Emissions in metric tonnes of CO2e
1.174

Uncertainty (±%)
5

Major sources of emissions
Scope 1: 1.174 Fuel combustion in vehicles owned or controlled by the company

Verified
Yes

Allocation method
Allocation based on the energy content of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
Main Sources: Fuel combustion in stationary equipment (boilers, furnaces, turbines...) to produce electricity, heat or steam. Fuel combustion in vehicles owned or controlled by the company. Assumptions: Regarding the calculation tools used, GHG described that in the case of "GHG Emissions from transport or mobile sources" is based on the assumption that carbon burned as fuels is emitted mostly as carbon dioxide (CO2). This emission factor is developed based on the fuel's heat content, the fraction of carbon in the fuel that is oxidized (generally approximately 99% but assumed to be 100% in this tool), except USA and UK. However in the case of "GHG emissions from Stationary combustion" calculates CO2, N2O and CH4 as well

Requesting member
Naturgy Energy Group SA

Scope of emissions
Scope 2

Allocation level
Business unit (subsidiary company)

Allocation level detail
Ferrovial Agroman Spain

Emissions in metric tonnes of CO2e
0.454

Uncertainty (±%)
5

Major sources of emissions
Scope 2: 0.454 tCO2e Main sources: electricity purchased

Verified
Yes

Allocation method
Allocation based on the energy content of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

Indirect GHG emissions are emissions resulting from the consumption of electricity bought from other companies which produce or control it

Requesting member
National Grid PLC

Scope of emissions
Scope 1

Allocation level
Business unit (subsidiary company)

Allocation level detail
Amey, Ferrovial subsidiary in UK

Emissions in metric tonnes of CO2e
788

Uncertainty (±%)
5

Major sources of emissions
Scope 1: 788 tCO2e Main Sources: Fuel combustion in stationary equipment (boilers, furnaces, turbines...), Fuel combustion in vehicles owned or controlled by the company.

Verified
Yes

Allocation method
Allocation based on the energy content of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
Main Sources: Fuel combustion in stationary equipment (boilers, furnaces, turbines...) to produce electricity, heat or steam. Fuel combustion in vehicles owned or controlled by the company. Assumptions: Regarding the calculation tools used, GHG described that in the case of "GHG Emissions from transport or mobile sources" is based on the assumption that carbon burned as fuels is emitted mostly as carbon dioxide (CO2). This emission factor is developed based on the fuel's heat content, the fraction of carbon in the fuel that is oxidized (generally approximately 99% but assumed to be 100% in this tool), except USA and UK. However in the case of "GHG emissions from Stationary combustion" calculates CO2, N2O and CH4 as well

Requesting member
Vodafone Group

Scope of emissions
Scope 1

Allocation level
Business unit (subsidiary company)

Allocation level detail
Ferrovial Services Portugal

Emissions in metric tonnes of CO2e
26.763

Uncertainty (±%)
5

Major sources of emissions
Scope 1: 26.763 tCO2e Main Sources: Fuel combustion in stationary equipment (boilers, furnaces, turbines...), Fuel combustion in vehicles owned or controlled by the company.

Verified
Yes

Allocation method
Allocation based on the energy content of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
Main Sources: Fuel combustion in stationary equipment (boilers, furnaces, turbines...) to produce electricity, heat or steam. Fuel combustion in vehicles owned or controlled by the company. Assumptions: Regarding the calculation tools used, GHG described that in the case of "GHG Emissions from transport or mobile sources" is based on the assumption that carbon burned as fuels is emitted mostly as carbon dioxide (CO2). This emission factor is developed based on the fuel's heat content, the fraction of carbon in the fuel that is oxidized (generally approximately 99% but assumed to be 100% in this tool), except USA and UK. However in the case of "GHG emissions from Stationary combustion" calculates CO2, N2O and CH4 as well

Requesting member
Vodafone Group

Scope of emissions
Scope 2

Allocation level
Business unit (subsidiary company)

Allocation level detail
Ferrovial Services Portugal

Emissions in metric tonnes of CO2e
146.585

Uncertainty (±%)

5

Major sources of emissions
Scope 2: 146.585 tCO2e Main sources: electricity purchased

Verified
Yes

Allocation method
Allocation based on the energy content of products purchased

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made
Indirect GHG emissions are emissions resulting from the consumption of electricity bought from other companies which produce or control it

SC1.2

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

Ferrovial has implanted in a corporate level an IT application called “carbonfootprint” to collect energy purchased data . Also in most of the subsidiaries are IT apps for make more easy the way of collect data. For example, Ferrovial Agroman has implanted in all its offices and works an IT application called “Insite”. It was developed to introduce bills in the system by client and contract. In addition to the invoiced amount the app request consumptions of electricity and fuels, which will calculate CO2 emissions, reducing the uncertainty in the data collection into.

An advantage of the application is the easy way to identify the invoices assigned by client and contract. Then carried out a financial audit so the reliability of the data is high Ferrovial ´s GHG (Scope 1&2&3&Biogenic) have been verified under limited assurance by PwC, according to ISAE 3410. The document attached includes inventory of emissions and verification letter. In addition, other specific verifications have been made. So, in 2018 the 100 % of Ferrovial´s GHG emissions (Scope 1&2%3&Biogenic CO2) included in Integrated Annual Report were verified by Deloitte in accordance with ISAE 3000 and GRI. In the attached document are included verification letter

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
Other, please specify (IT sistems)	One of the challenges is to identify different customer contracts and invoices assigned to each resource. For this, Construction companies carry out continuous improvements of IT applications used, since 2015 Ferrovial Agroman developed a new version of the IT solution called “insite” is used for the management of each contract. The applications allows to enter fuel costs, the quantities consumed for mobile and fixed equipment and cost or energy consumption. This will reduce the uncertainty in the estimation of data. Then financial audit is conducted so the reliability of the data is high Services companies doesn’t have an specific IT applications. We still working on it.

SC1.4

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

SC1.4a

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

One of the challenges is to identify different customer contracts and invoices assigned to each resource. For this, Construction companies carry out continuous improvements of IT applications used, since 2015 Ferrovial Agroman developed a new version of the IT solution called “insite” is used for the management of each contract. The applications allows to enter fuel costs, the quantities consumed for mobile and fixed equipment and cost or energy consumption. This will reduce the uncertainty in the estimation of data. Then financial audit is conducted so the reliability of the data is high

Services companies doesn’t have an specific IT applications. We still working on it.

In order to improve data quality, Ferrovial annually conducts audits where expenditure / consumption per contract / work that are used to obtain carbon footprint are revised with the idea of reducing uncertainty. The verification is carried out by an external company.

SC2.1

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

Requesting member
Naturgy Energy Group SA

Group type of project
Other, please specify (Energy efficiency)

Type of project
Other, please specify (Actions to reduce customers operational emissions (Customer Scope 1&2))

Emissions targeted
Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized
1-3 years

Estimated lifetime CO2e savings

Estimated payback
1-3 years

Details of proposal
To carry out our emissions reductions measures, during the design phase of the project can be carried out improvements for energy efficiency in buildings. Ferrovial has extensive experience in this field, we can talk about savings up to 20% in energy consumption. Incorporation of energy buildings measures in the buildings of the corporate headquarters. As an example of these actions, Ferrovial´s head office building in Principe de Vergara has been renovated with the inclusion of energy efficiency and lighting measures resulting in a 55% saving in electricity consumption compared with 2008. During 2018 Ferrovial headquarters have begun to renew, adding to this building new energy efficiency and lighting measures

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Requesting member
Naturgy Energy Group SA

Group type of project
Other, please specify (Sustanability movility plan)

Type of project
Please select

Emissions targeted
Actions that would reduce our own operational emissions (our scope 1 & 2)

Estimated timeframe for carbon reductions to be realized
0-1 year

Estimated lifetime CO2e savings
5026

Estimated payback
1-3 years

Details of proposal
Ferrovial's commitment is to lessen the environmental impact of its activities, by maintaining a preventive focus which benefits the environment and reduces the company's global carbon footprint. As a potential supplier of low-emission infrastructures and services, Ferrovial's proposals would have no credibility if they failed to include ambitious commitments to reduce its own carbon footprint. This aim covers 100% of activities, companies and subsidiaries on a global scale. To achieve this commitment, Ferrovial has developed and implemented emission-reducing actions, both specific to each business area and of a general nature: Incorporation of energy efficiency criteria in procurement and sub-contracting of services, electricity procurement from certified renewable sources, use of alternative fuels and increased use of alternative vehicles. Ferrovial initiated its Sustainable Mobility Strategy for employees in 2008 and it has been steadily extended to the main corporate offices. It is a groundbreaking experience in the business world. These plans have also included actions to improve vehicle fleets and training programmes, and specific training to promote efficient driving. In 2018 5026 tCO2eq was avoided to the atmosphere in relation with the use of vehicles with alternative fuels. Development of technology and processes geared towards optimizing the avoidance of emissions. Inclusion of energy efficiency measures in buildings used as corporate headquarters

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Requesting member
Naturgy Energy Group SA

Group type of project
Change to supplier operations

Type of project
Implementation of energy reduction projects

Emissions targeted
Actions that would reduce both our own and our customers' emissions

Estimated timeframe for carbon reductions to be realized
0-1 year

Estimated lifetime CO2e savings
2007

Estimated payback
0-1 year

Details of proposal
Ferrovial calculated the total figure for emissions in line with the guidelines included in the Corporate Value Chain (Scope 3) Accounting and Reporting Standard published by the Greenhouse Gas Protocol Initiative, the WRI and the WBCSD. In parallel, a specific reporting and calculation methodology scope 3 emissions was developed and included in a technical instruction. Ferrovial Agromán has worked on reducing Scope 3 emissions by focusing on work site, Ferrovial-Agromán has measures to reduce the emissions such as: - fleet intensity indicators for Spain. The company calculates the consumption of diesel in fleet vehicles (litres / number of vehicles). In 2018 the indicator has decreased by 1 % due to the measures implemented such as: efficient driving, proper maintenance of the fleet and including performance criteria in buying and leasing new vehicles. - intensity indicators in order to measure machinery performance. The company calculates the theoretical average fleet emissions per kilometre (gr. CO2 / km).

SC2.2

(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?
No

SC3.1

(SC3.1) Do you want to enroll in the 2019-2020 CDP Action Exchange initiative?
No

SC3.2

(SC3.2) Is your company a participating supplier in CDP's 2018-2019 Action Exchange initiative?
No

SC4.1

(SC4.1) Are you providing product level data for your organization's goods or services?
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.
100

SC4.2a

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

Name of good/ service
Civil Works and Building Construction

Description of good/ service
Building construction is the process of preparing for and forming buildings and building systems. Construction starts with planning, design, and financing and continues until the structure is ready for occupancy. Ferrovial Agroman performs the following activities: The design and construction of the types of works of: earthworks and perforating ; bridges, viaducts and large structures; buildings; railways; hydraulic works ; maritime works; roads and runways; crude and gaseous transporting works; electrical installations; mechanical installations; special construction work, The conservation and maintenance or roads, runways, motorways, highways, carriageways and railways.

Type of product
Final

SKU (Stock Keeping Unit)
Turnover (million €)

Total emissions in kg CO2e per unit
25628

±% change from previous figure supplied
5

Date of previous figure supplied
December 31 2018

Explanation of change
In 2011, we conducted a project called "Carbon Footprint Target Project 2009-2020". It involved all Quality & Environment Departments in the different business areas. The main line of action was to analyse where we could reduce emissions in each business area. Therefore, it was important for us to analyse the growth of each business area until 2020. After analysing each business area, the emission reduction targets were set in absolute and relative terms, depending on compliance with a business scenario and various premises. Ferrovial's targets are developed bottom-up because they combine all targets for each business area thus help to achieve the goals for the whole Ferrovial group. In Ferrovial Agroman in relative terms, (t CO2eq/ turnover), the target is to reduce the indicator 10.6 % for the 2020 compared to 2009. Each business area has established reduction measures for achieve the targets and we have identified reduction proposals common for all business areas, with the aim of provide a standardized treatment at a corporate level and to make a better use of synergies: - Vehicle fleets and machinery. Initiatives here consist of improving the energy efficiency of these assets, via measures including improvements to criteria used in procurement, renting or leasing, courses to promote efficient, the use of alternative fuels, and alternatives with hybrid engines. - Company mobility plans. - Energy efficiency in buildings. Incorporation of proactive energy efficiency measures in buildings used for corporate headquarters

Methods used to estimate lifecycle emissions
GHG Protocol Product Accounting & Reporting Standard

Name of good/ service

Description of good/ service

Type of product
Please select

SKU (Stock Keeping Unit)

Total emissions in kg CO2e per unit

±% change from previous figure supplied

Date of previous figure supplied

Explanation of change

Methods used to estimate lifecycle emissions
Please select

SC4.2b

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

Name of good/ service
Fuel and Energy consumption that are necessary to carry out the contracts.

Please select the scope
Scope 1 & 2

Please select the lifecycle stage
Energy/Fuel

Emissions at the lifecycle stage in kg CO2e per unit
104263

Is this stage under your ownership or control?
Yes

Type of data used
Primary

Data quality
The calculation methodology is based on the Greenhouse Gas (GHG) Protocol (WRI & WBCSD) as the most internationally accepted, maintaining compliance with the ISO14064-1.The data are reported annually by businesses for compiling the Annual Report and are audited and verified by Deloitte. Furthermore, data, methodology and emissions of this section have been verified by. Therefore the quality of data and emissions reported is high

If you are verifying/assuring this product emission data, please tell us how
In 2018, the 100 percent of Ferrovial ´s GHG (Scope 1&2&3) have been verified under limited assurance by PwC, according to ISAE 3410. The document attached includes inventory of emissions and verification letter. In addition, other specific verifications have been made. So, in 2018 the 100 % of Ferrovial´s GHG emissions (Scope 1&2%3&Biogenic CO2) included in the Integrated Annual Report were verified by Deloitte in accordance with ISAE 3000 and GRI.

Name of good/ service
Purchased goods and services. This category includes all upstream (i.e., cradle-to-gate) emissions from the production of products purchased by the reporting year. Ferrovial considered the most relevant materials from the environment and total purchases side (Timber, paper, steal, asphalt, concrete and water) that are used in products that we supply. Enablon is the platform used to gather the data required to obtain the quantity of materials purchased and to write Integrated Annual Report

Please select the scope
Scope 3

Please select the lifecycle stage
Cradle to grave

Emissions at the lifecycle stage in kg CO2e per unit
285099

Is this stage under your ownership or control?
No

Type of data used
Primary

Data quality
The data quality is high because the methodology and calculation were verified by PwC and Deloitte. Enablon is the platform used to gather the data required to obtain the quantity of materials purchased and to write the Integrated Annual Report. To calculate emissions, we use 2015 DEFRA Conversion Factors: Annex 14 "Indirect emissions resulting from Material Consumption and Waste Disposal" for materials and waste and Annex 9 “Bioenergy & Water Conversion Factor Tables” for water. These emission factors used are in line with GHG Protocol Scope 3 Guidance and include total CO2, CH4 and N2O emissions in units of CO2e (CO2 equivalent). The GWP used for CO2 is 1, for CH4 is 21 and N2O is 310. We considered quantity of the most relevant materials from the environment and total purchases. These data are reported annually by businesses for compiling the Integrated Annual Report and are audited and verified in accordance with ISAE 3000 “Assurance Engagements other than Audits or Reviews of Historical Financial Information” by Deloitte. Furthermore, data, methodology and emissions of this section have been audited and verified in accordance with ISAE 3410 “Assurance Engagements other than Audits or Reviews of Historical Financial Information” PwC. Therefore the quality of data and emissions reported is high. We get the total number of life cycle Tneq CO2 for all materials (extraction, primary processing, manufacturing and transportation. It excludes the use phase). These emission factors include the transportation part that are included in section “Upstream transportations and distribution”. So for not doubling the emissions the emissions in the section “Upstream transportations and distribution” are subtracted from the obtained in that section

If you are verifying/assuring this product emission data, please tell us how
In 2018, the 100 percent of Ferrovial ´s GHG (Scope 1&2&3) have been verified under limited assurance by PwC, according to ISAE 3410. The document attached includes inventory of emissions and verification letter. In addition, other specific verifications have been made. So, in 2018 the 100 % of Ferrovial´s GHG emissions (Scope 1&2%3&Biogenic CO2) included in the Integrated Annual Report were verified by Deloitte in accordance with ISAE 3000 and GRI.

Name of good/ service
Upstream transportation and distribution This category includes emissions from transportation and distribution of products purchased in the reporting year. This included third-party transportation and distribution services purchased. Ferrovial considered the most relevant materials from the environment and total purchases side. These materials were used in products that we supply. These materials were: Timber, paper, steal, asphalt, water and concrete.

Please select the scope
Scope 3

Please select the lifecycle stage
Transportation

Emissions at the lifecycle stage in kg CO2e per unit
253000

Is this stage under your ownership or control?
No

Type of data used
Primary

Data quality
The data quality is high because the methodology and calculation were verified by PwC and Deloitte. This category includes emissions from transportation and distribution of products purchased in the reporting year. This included third-party transportation and distribution services purchased. Ferrovial-Agromán considered the most relevant materials from the environment and total purchases side. These materials were used in products that we supply. These materials were: Timber, paper, steal, asphalt, water and concrete. The Enablon application is the source we used to obtain the quantity of materials purchased. To know the origin of the materials purchased we have used sectorial reports. To calculated emissions, we have used “GHG emissions from transport or mobile sources” of “The Greenhouse Gas Protocol Initiative

If you are verifying/assuring this product emission data, please tell us how
In 2018, the 100 percent of Ferrovial ´s GHG (Scope 1&2&3) have been verified under limited assurance by PwC, according to ISAE 3410. The document attached includes inventory of emissions and verification letter. In addition, other specific verifications have been made. So, in 2018 the 100 % of Ferrovial´s GHG emissions (Scope 1&2%3&Biogenic CO2) included in the Integrated Annual Report were verified by Deloitte in accordance with ISAE 3000 and GRI.

Name of good/ service
Business travel This category includes emissions from the transportation of employees for business related activities in vehicles owned or operated. In this category, Ferrovial emissions from business travel arised from air travel, rail travel, taxi travel and automotive travel. We had distance travelled by air, rail and automotive and expense of taxi travel

Please select the scope
Scope 3

Please select the lifecycle stage
Transportation

Emissions at the lifecycle stage in kg CO2e per unit
4857

Is this stage under your ownership or control?
No

Type of data used
Primary

Data quality
The data quality is high because the metholodogy and calculation were verified by PwC and Deloitte. To calculated Ferrovial emissions, we have used “GHG emissions from transport or mobile sources” of “The Greenhouse Gas Protocol Initiative” These emission factors used are in line with GHG Protocol Scope 3 Guidance and include total CO2, CH4 and N2O emissions in units of CO2e (CO2 equivalent). The GWP used for CO2 is 1, for CH4 is 21 and N2O is 310. (ii) In this category we considered data provided by the travel agency through which Ferrovial purchases train and plane tickets; data provided by our accounting department on taxi expenditure and data supplied by the business on the use of vehicles. Data, methodology and emissions of this section had been audited and verified in accordance with ISAE 3000 “Assurance Engagements other than Audits or Reviews of Historical Financial Information” issued by the International Auditing and Assurance Standards Board (IAASB) of the International Federation of Accountants (IFAC)” by PwC. Therefore the quality of data and emissions reported is high. (iii) To calculate the emissions in this section we used the following calculation tool: “GHG emissions from transport or mobile sources” provided by “The Greenhouse Gas Protocol Initiative”. The information required were: - The type of transport used by passenger Assumptions: We consider that business travel are made in diesel driven cars and train trips are made in conventional train not a high speed.

If you are verifying/assuring this product emission data, please tell us how
In 2018, the 100 percent of Ferrovial ´s GHG (Scope 1&2&3) have been verified under limited assurance by PwC, according to ISAE 3410. The document attached includes inventory of emissions and verification letter. In addition, other specific verifications have been made. So, in 2018 the 100 % of Ferrovial´s GHG emissions (Scope 1&2%3&Biogenic CO2) included in the Integrated Annual Report were verified by Deloitte in accordance with ISAE 3000 and GRI.

Name of good/ service
Employee commuting This category includes emissions from the employee’s commuting from their homes to work places.

Please select the scope
Scope 3

Please select the lifecycle stage
Other, please specify (employee commuting)

Emissions at the lifecycle stage in kg CO2e per unit
1060

Is this stage under your ownership or control?
No

Type of data used
Primary

Data quality
The data quality is high because the metholodogy and calculation were verified by PwC and Deloitte. In 2016, Ferrovial carried out a mobility survey to the group’s employees, which has been the source to know the mode of transport and distance traveled from home to work place. Other source used is the number of people working in offices. This data is provided by the human resources department. To calculate emissions, we used the calculation tool “GHG emissions from transport or mobile sources emitted” provided by “The Greenhouse Gas Protocol Initiative” (GHG PI). These emission factors used were in line with GHG Protocol Scope 3 Guidance and include total CO2, CH4 and N2O emissions in units of CO2e (CO2 equivalent). The GWP used for CO2 is 1, for CH4 is 21 and N2O is 310. (ii) In this category, data, methodology and emissions of this section have been audited and verified in accordance with ISAE 3410 “Assurance Engagements other than Audits or Reviews of Historical Financial Information” issued by the International Auditing and Assurance Standards Board (IAASB) of the International Federation of Accountants (IFAC)” by PwC. Therefore the quality of data and emissions reported is high. (iii) To calculate the emissions in this section we used the following calculation tool: “GHG emissions from transport or mobile sources” provided by “The Greenhouse Gas Protocol Initiative”. The information required are: - Number of employee - Distance from home to work - Type of transport: car, motorbike, subway, bus and train. Assumptions: Ferrovial within this section calculates the emissions of employees from construction, services, infrastructures and Ferrovial group that work at offices. As we do not know the type of motorbike and train used we have chosen in column “vehicle type”: “Control unknown for motorbike” and “Average Light rail and Train” for train.

If you are verifying/assuring this product emission data, please tell us how
In 2018, the 100 percent of Ferrovial ´s GHG (Scope 1&2&3) have been verified under limited assurance by PwC, according to ISAE 3410. The document attached includes inventory of emissions and verification letter. In addition, other specific verifications have been made. So, in 2018 the 100 % of Ferrovial´s GHG emissions (Scope 1&23&Biogenic CO2) included in the Integrated Annual Report were verified by Deloitte in accordance with ISAE 3000 and GRI. In the attached document are included verification letter and some indicators have been verified

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Name of good/ service
End of life treatment of sold products This category includes emissions from the waste disposal and treatment of products sold in the reporting year at the end of their life. Regarding products sold, those are infrastructures’ construction. The purchased goods are included in these infrastructures. Therefore, at the end of infrastructures’ useful life the waste produced correspond to those ones.

Please select the scope
Scope 3

Please select the lifecycle stage
End of life/Final disposal

Emissions at the lifecycle stage in kg CO2e per unit
21829

Is this stage under your ownership or control?
Yes

Type of data used
Primary

Data quality
The data quality is high because the metholodogy and calculation were verified by PwC and Deloitte. To calculated emissions, we used 2015 DEFRA Conversion Factors: Annex 14 "Indirect emissions resulting from Material Consumption and Waste Disposal” for solid waste . These emission factors used are in line with GHG Protocol Scope

3 Guidance and include total CO2, CH4 and N2O emissions in units of CO2e (CO2 equivalent). The GWP used for CO2 is 1, for CH4 is 21 and N2O is 310. In this category we considered the most relevant materials from the environment and volume point of view are included in the infrastructures' construction, being timber, paper, barrier, asphalt and concrete. Therefore, at the end of infrastructures' useful life the waste produced correspond to those ones. These data are reported annually by businesses to write the Annual Report and are audited and verified in accordance with the standards and procedures included in the International Standards on Assurance Engagements (ISAE 3000) by Deloitte. Furthermore, data, methodology and emissions of this section have been audited and verified in accordance with ISAE 3410 "Assurance Engagements other than Audits or Reviews of Historical Financial Information" by PwC. Therefore the quality of data and emissions reported is high. Regarding products sold, those are infrastructures' construction. The purchased goods are included in these infrastructures. Therefore, at the end of infrastructures' useful life the waste produced correspond to those ones. In this case the most relevant materials from the environment and volume point of view are included in the infrastructures' construction, being timber, paper, barrier, asphalt and concre

If you are verifying/assuring this product emission data, please tell us how

In 2018, the 100 percent of Ferrovial ´s GHG (Scope 1&2&3) have been verified under limited assurance by PwC, according to ISAE 3410. The document attached includes inventory of emissions and verification letter. In addition, other specific verifications have been made. So, in 2018 the 100 % of Ferrovial´s GHG emissions (Scope 1&2&3&Biogenic CO2) included in the Integrated Annual Report were verified by Deloitte in accordance with ISAE 3000 and GRI.

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
Reduction measures	Initiative 1	Ferrovial calculated the total figure for emissions in line with the guidelines included in the Corporate Value Chain (Scope 3) Accounting and Reporting Standard published by the Greenhouse Gas Protocol Initiative, the WRI and the WBCSD. In parallel, a specific reporting and calculation methodology scope 3 emissions was developed and included in a technical instruction. Ferrovial Agromán has worked on reducing Scope 3 emissions by focusing on work site, Ferrovial-Agromán has measures to reduce the emissions such as: - fleet intensity indicators for Spain. The company calculates the consumption of diesel in fleet vehicles (litres / number of vehicles). In 2017 the indicator has decreased by 3.8 % due to the measures implemented such as: efficient driving, proper maintenance of the fleet and including performance criteria in buying and leasing new vehicles. - intensity indicators in order to measure machinery performance. The company calculates the theoretical average fleet emissions per kilometre (gr. CO2 / km).	Completed	453

SC4.2d

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

No

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