

Ferrovial Climate Strategy 2018

Sustainability Direction

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IN TRO DUC TION

Alignment with the recommendations of the TCFD (Task Force on Climate-related Financial Disclosures) and CDSB

This report includes information regarding the governance, strategy, risk management and opportunities, objectives, metrics and evolution related to climate change, in compliance with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) and Climate Disclosure Standards Board (CDSB).

Consumption and emissions data have been verified according to the ISAE 3410 “International Standard Assurance Engagements on Greenhouse Gas Statements” by PwC.



TCFD

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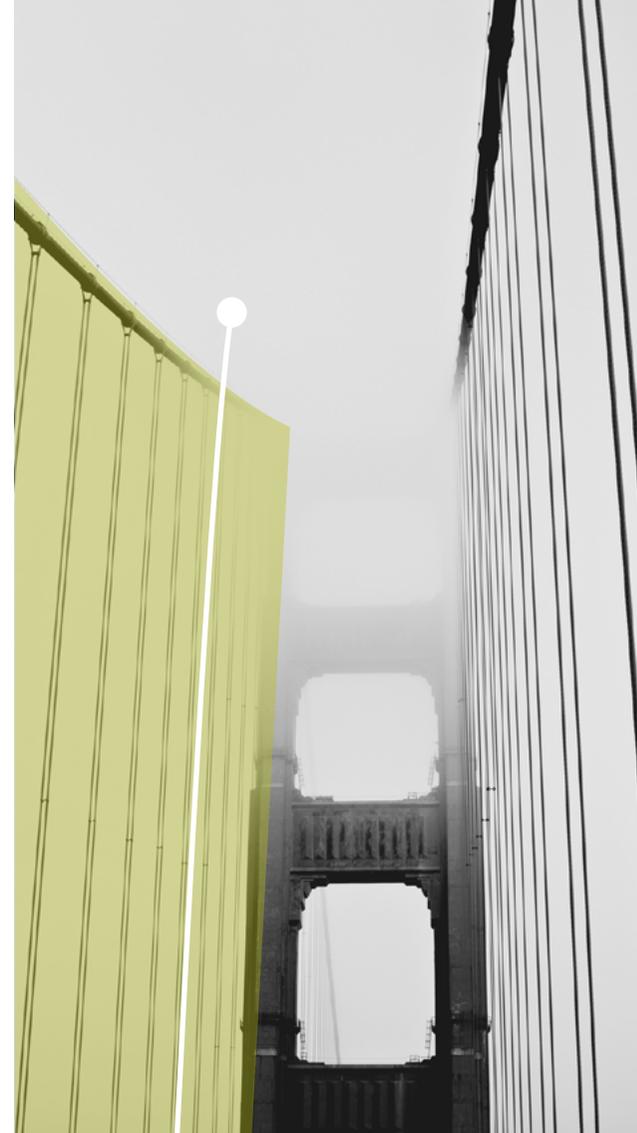
Ferrovial contributes to the fight against climate change, aligning itself with SDG 13 and achieving ambitious reduction targets in emissions

Ferrovial participated in the **2018 United Nations Climate Change Conference (COP 24)**, held in Katowice, Poland, which emphasised the need to act immediately so as not to reach an irreversible scenario described in results in the preliminary report of the Evaluation Report of the IPCC (Intergovernmental Panel on Climate Change).

Together with other recent studies, this report emphasises existing evidence of the effects of climate change and highlights the extent to which estimated thresholds are being exceeded, with certain events occurring more rapidly than previously estimated. More ambitious global goals are therefore being defined and **strict measures are being taken to achieve Sustainable Development Goal (SDG) 13, Climate Action**, set by the United Nations in the 2030 Agenda. This is also leading to an ever greater part of the public demanding urgent action.

Ferrovial accepts this commitment and has been working to contribute to the fight against climate change for years. In doing so, Ferrovial strives to progressively reduce its carbon footprint, by setting **emission reduction targets based on scientific research** and by implementing measures to adapt to this global phenomenon. This climate policy has also allowed Ferrovial to discover new business opportunities.

An ambitious target has been achieved in 2018 – this year’s **emission reduction targets were exceeded**, both in absolute and relative terms with respect to the base year. The most relevant data obtained by Ferrovial in this context show **greenhouse gas emissions derived from Scope 1&2 have**



dropped by 54% in terms of intensity since 2009, a value which complies with the roadmap.

As stated in the annual report, Ferrovial is also aligned with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), attaching importance to the analysis and quantification of risks and opportunities related to climate change.

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GOVERNANCE

For Ferrovial, its climate change strategy is part of the company's corporate strategy and it is therefore discussed regularly in Management Committee meetings and Board of Directors meetings.

Strategies are coordinated throughout the company through the Q&E Steering Committee whose responsibilities are to discuss, make decisions, establish requirements and review the results related to projects, initiatives and practices concerning climate change and the implementation of the Quality and Environment Policy throughout the company. Decisions made and actions taken by the Q&E Steering Committee are derived from the implementation of the Corporate Responsibility Policy determined by the Board of Directors.

In the decision-making process the Committee takes into consideration aspects such as the new emerging legislation related to climate change, the technical needs in response to new legislative challenges and trends in the countries where Ferrovial operates, as well as the recommendations from the governmental agencies and organisations, the commitment to reduce emissions, the implementation of mitigation measures, the risks and opportunities, the environmental evolution indicators, etc.

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The Q&E Steering Committee is responsible for the Quality and Environment policy throughout the company

Committee meetings take place quarterly or more frequently if necessary

The **Q&E Steering Committee** consists of the Directors from the Quality and Environment Departments and the Representatives from the Steering Committee of all Ferrovial's businesses. The Committee meets quarterly or more frequently if necessary and its objective is to establish environmental objectives.



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STRATEGY

Ferrovial is one of the leading global infrastructure operators and managers of services for cities. Its business model focuses on the development of the complete infrastructure cycle: design, financing, construction, operation and maintenance.

The climate strategy is integrated into the company's strategy and climate change is considered in all areas, activities and departments. Its vision is to improve the future through the development and operation of sustainable infrastructures and cities, whilst being committed to the highest levels of safety, operational excellence and innovation. It seeks to create value for society as well as for customers, investors and employees.

The global trend towards a low-emission economy is directing investment and financing towards businesses that help to combat climate change and meet the objectives of the Paris Agreement. The commitments adopted by the company generate new opportunities in the areas of sustainable infrastructures, the mobility of people, energy efficiency, water management,

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For another consecutive year, Ferrovial has been given the Carbon Disclosure Project (CDP) award, having been included in the leadership category CDP Climate A List in the Climate Change edition

the integral management of cities, the use of renewable energies instead of fossil fuels and the conservation of biodiversity. These are key elements to facing up to the environmental commitment to reduce the company's emissions and those of the customers and the users of products and services without forgetting to adapt to the impact of climate change.

In this context, Ferrovial becomes a strategic partner in achieving the objectives related to emission mitigation and adaptation to the impact of climate change, by providing solutions through their "low-carbon" business models.

For another consecutive year, Ferrovial has been given the Carbon Disclosure Project (CDP) award, having been included in the leadership category **CDP Climate A List** in the Climate Change edition.

Company Overview

Since its foundation in 1952, Ferrovial has been a global leader in the infrastructure and services sector, developing solutions characterised by **innovation** and **sustainability**.

Ferrovial's activities are focussed on **four lines of business**:

- **Motorways**: promotion, investment and operation of motorways and other infrastructures.
- **Services**: efficient provision of urban and environmental

services and the maintenance of infrastructures and facilities.

- **Construction**: design and construction of infrastructures in the areas of civil, construction and industrial works.
- **Airports**: investment in and operation of airports.



Cintra contributes to reducing the existing infrastructure investment deficit, mainly focusing on increasingly congested urban environments, through concession models using 100% private financing. The projects implemented by Cintra are technologically innovative and of high quality, offering sustainable solutions that improve congestion in big cities, reduce pollution, increase user satisfaction, and contribute substantially to improving quality of life. **Big Data** techniques are used in order to better understand congestion problems and driver behaviour.

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Services

Ferrovial Services is one of the largest and most diverse multinational services companies for **infrastructure and cities**. It offers state-of-the-art solutions in the areas of consulting, waste treatment, energy efficiency, maintenance of transport infrastructure and of urban mobility. The difference lies in the design of innovative solutions, as well as in the operational excellence of the provision of the same. This is achieved through the collaboration of clients (public and private) and the integral vision of the life cycle. This proposal is in line with the growing demand for infrastructures and more efficient and sustainable cities.

The service area is represented by:

- **Amey**, present in the United Kingdom.
- **Broadspectrum**, present in Australia and New Zealand.
- **Ferrovial Services**, present in Spain, Portugal, Chile, United States, Canada and Poland.



Construction

Ferrovial Agroman is the entity responsible for civil, construction and industrial works. The company is internationally recognized for its ability to design and build unique infrastructures of all kinds, although it mainly focuses on large transport infrastructures.

The projects developed by Ferrovial Agroman contribute to mitigating the impacts of climate change through sustainable infrastructure and buildings and waste management based on the model of a circular economy.

The construction area is represented by:

- **Ferrovial Agroman**, present in Spain as well as internationally, it concentrates on complex projects in countries with stable economies that are committed to modernizing their infrastructure.
- **Budimex**, present in Poland.
- **Webber**, in the United States.

Cadagua, specialists in the design, construction and operation of all types of water treatment plants, also plays an important role in the area of construction projects.

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Ferrovial addresses the future of the economic and environmental agenda in the 2030 and 2050 time horizons



Airports

Currently Ferrovial is an investor in the following British airports, playing no role in the management of their operations: Heathrow, Southampton, Glasgow and Aberdeen.

Through its subsidiary **Transchile Charrúa Transmission**, it has 100% ownership of an electricity power supply line in Chile.

Sustainable Development Goals

Ferrovial – a member of the private sector advisory group of the UNDP (United Nations Development Programme) for the SDGs (Sustainable Development Goals) – focuses on goals number 6, 9 and 11, without disregarding the other SDGs. **Sustainability and responsibility** are the key factors that are always considered by Ferrovial and the company complies with the most demanding standards in the world in these areas.

This support for the Global Compact together with the efforts made to combat climate change result from Ferrovial's commitment to fulfilling the **Sustainable Development Goals** (SDGs) – an intergenerational mission for the conservation of the planet.

Collaboration with Stakeholders

The company participates in many groups of influence at European level to address the future of the economic and environmental agenda in the 2030 and 2050 time horizons. They include the Corporate Leaders Group (University of Cambridge Institute for Sustainability Leadership) and the EU Green Growth Group, a platform formed by representatives of the business world, members of the European Parliament, Governments and Commissioners.

Since 2017, in the field of climate innovation, Ferrovial **has been co-partner of Climate-KIC**, the largest European initiative focused on mitigation and adaptation to climate change. In Spain, **Ferrovial presides over the Spanish Group for Green Growth (GECV)** that promotes public-private partnerships to advance in terms of mitigation and adaptation to climate change, the decarbonisation of the economy and the development of 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 organised in collaboration with the European Alliance to Save Energy.

Ferrovial is also a member of the Fundación Empresa y Clima (Spanish Enterprise and Climate Foundation), a strategic partner in the #PorElClima (#ForTheClimate) Community, which promotes

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the public-private partnership Plataforma Española de Acción Climática (Spanish Platform for Climate Action). It is also an observer member of the United Nations Framework Convention on Climate Change (UNFCCC) and participates in the Spanish Climate Change Cluster promoted by Forética.

Regarding the value chain, the company maintains a fluent relationship with the Spanish Enterprise and Climate Foundation with the aim of raising awareness of environmental issues and thus acting as a driving force for change towards a low-emission economy. In this respect, energy suppliers and agreements signed for the purchase of renewable electricity will have a great impact globally as well as on the company's roadmap. They are also considered strategic partners in certain initiatives.

To put it briefly, the stakeholders mentioned above are considered strategic partners in several environmental initiatives.

Awards and Recognitions

Ferrovial is concerned about maintaining a fluid and proactive relationship with analysts and investors, anticipating their expectations and responding to key issues on the global agenda for sustainable development.

In 2018, Ferrovial was once more given an award by the Carbon Disclosure Project (CDP) for its climate strategy. It was included in the leadership category Climate A list, in which it has been included every year since 2010. In addition, Ferrovial has been on the DJSI for 17 consecutive years, the FTSE4Good Index for 15 years and has been a member of VIGEO since 2018, whilst also retaining an AAA rating by MSCI.



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Task Force on Climate-related Financial Disclosures

During 2018, the company carried out a review of the risks and opportunities associated with climate change across all the business that make up Ferrovial Services worldwide, following the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). Ferrovial was one of the first companies to implement the TCFD recommendations, considered to be a turning point that will accelerate development towards a low emission economy.

The analysis carried out considered three different scenarios depending on the degree of implementation of policies to combat climate change:

CURRENT POLICIES SCENARIO (CPS): This considers the impact of the policies and measures that are firmly established at present. This scenario would result in an increase in the global temperature of 3-4°C by 2100.

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THE NEW POLICIES SCENARIO (NPS): This scenario incorporates announced policies and measures and their effects. It would result in an increase in the global temperature of 2-3°C by 2100.

SUSTAINABLE DEVELOPMENT SCENARIO (SDS): This scenario considers the degree of decarbonisation of the economy needed in order to achieve the targets laid out in the Paris Agreement. It represents a peak in emissions reached as soon as possible followed by a decrease. Here, an increase in temperatures of 2°C or less with respect to pre-industrial levels is expected.

After the review was conducted, it was concluded that the **short, medium and long-term risks** for Ferrovial are the following:

TRANSITIONAL RISKS:

An increase in operational costs due to an increase in the cost of raw materials, an increase in taxes on fossil fuels, the need to pay charges on emissions produced and the need to incorporate an activity into the emission market. The following aspects are considered: policy restrictions on emissions, carbon taxation, water restrictions, land use restrictions or incentives on the use of land and changes in the demand and offer of services or interruption of operations.



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Ferrovial is implementing service business models that help to reduce energy consumption and emissions and represent a great economic saving

162,000

users

In 2018, the number of users of the car-sharing service Zity reached 162,000



PHYSICAL RISKS:

Some of the identified risks are physical damage to infrastructure and temporary interruption of activity, a decrease in productivity under extreme weather conditions, an increase in risk premium, and a delay in the delivery of services and products.

These physical risks and financial impacts are more likely to occur in the CPS scenario and this likelihood decreases progressively from the NPS scenario to the more sustainable SDS scenario. However, where transitional risks are concerned, the effects are reversed. Associated with these risks are management and risk reduction measures. One possible measure is the acquisition of risk insurance.



The business opportunities identified relate to solutions provided in the following areas:



Water

The occurrence of problems related to the quality and quantity (excess and lack) of water and the investment required to respond to them are on the increase. As managers of water treatment plants and construction companies, Ferrovial can provide innovative solutions to these problems, by **adapting infrastructures and making them more resistant.**



Energy efficiency and urban mobility

Cities pose a significant management challenge that will require innovative and efficient solutions. Ferrovial is implementing service business models that help to **reduce energy consumption and emissions** and represent a great economic management saving. In 2018, the number of users of the car-sharing service Zity reached 162,000. Together, they travelled 5.9 million miles during 2018. Other examples include contracts for energy efficiency within buildings or for lighting, the optimization of waste collection routes, and the valorisation of or increase in capturing of biogas from landfill sites.

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As part of the Ferrovial, Natural Capital programme, the company is implementing different projects for the conservation of biodiversity



Circular economy

Ferrovial Services has implemented the **Zero Waste to Landfill** project, an initiative that has managed to ensure that no waste generated in a plant ends up in landfill, meaning the waste generated has a second life. Ferrovial has managed to prevent more than 15,000 tons of waste from going to landfill.



Conservation of biodiversity

As part of the **Ferrovial, Natural Capital** programme, the company is implementing different projects for the conservation of biodiversity, the goal being to achieve a zero net loss of biodiversity on its projects.

Shadow Carbon Pricing

Ferrovial has developed a tool to quantify the climate risk of its most relevant investments called “shadow pricing”, in order to accelerate investment towards decarbonised business models.

This tool considers **variable prices for a ton of carbon for different time horizons**, regions and project types, thereby quantifying the potential economic risks of projects for which the tool is used.

Carbon prices

Time horizon 		Geographies 	Project Type 
2020	2030	Australia Brazil Canada Chile Germany Ireland Mexico Middle East Peru	<ul style="list-style-type: none"> • Airports • Motorways • Waste management • Water management • Energy assets (natural gas)
2040	2050	Poland Portugal Spain United Kingdom USA (in general) USA (California)	

An approximation of average carbon prices in future

2030	2040	2050
€ 66	€ 79	€ 134

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Ferrovial works to provide solutions based on, among others, sustainable mobility and the model of a circular economy

Sustainable Business Models

Since the ratification of the Paris Agreement in 2015, policies are clearly steering towards supporting business that promotes the **decarbonisation of the economy** and fulfils the mitigation and adaptation objectives of the Agreement, in this way achieving a mobilisation towards a low-emission economy.

Ferrovial has been working to achieve this for years by providing solutions based on sustainable mobility, a circular economy, promoting the use of renewable energy as opposed to petroleum products, energy efficiency, improving the quality and optimizing the use of water resources, biodiversity and adapting infrastructures.

The majority of these solutions refer to cities in which more than half of the world's population is currently concentrated. By 2050, there will be more people living in cities than there were people living on the entire planet at the start of the century and these people will all demand services, a circumstance that will represent a considerable challenge in terms of management. Currently, they are responsible for 60% of global emissions.

Sustainable mobility

In the future, autonomous driving, interconnected infrastructure, vehicle sharing, and electrification will affect both transport infrastructures and mobility services, which will open up new business opportunities.



Carbon Neutral Mobility

In the United States, Cintra has been operating the **first carbon neutral motorway, NTE, for several years**. It is based on tolls without barriers and with dynamic toll rates, guaranteeing speed, safety and an improved environment for drivers. This option provides a solution to traffic congestion on existing roads. The comparative analysis of the before (existing road) and after (existing road and NTE) scenarios concluded that the new scenario emits lower emissions, as it reduces emissions from congestion.

The transformation of urban mobility opens up opportunities for Ferrovial to promote new business models focused on using high technology and interacting with citizens that improve the efficiency and sustainability of cities. **Zity**, a car-sharing service that uses 5-seater 100% electric vehicles, was launched in this context, with an initial fleet of 500 vehicles available for use in Madrid recharged entirely **with renewable energy and zero emissions**.

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W o N D o , connecting services

Wondo is Ferrovial's new start-up dedicated to **providing citizens with access to the main urban mobility services** in Madrid. The application allows users to select, compare and plan the routes through the city, find motorbikes, bicycles and car-sharing vehicles nearby and book shared taxis. This mobile platform brings together all different types of urban mobility services. It combines car-sharing, motorcycle-sharing, BiciMAD, electric scooters and ride-sharing taxis with bus companies offering non-regular transport services within the Autonomous Community of Madrid, as well as all general public transport (namely bus, metro and commuter train information). Wondo offers users the opportunity to use transport comfortably, efficiently and sustainably.

Self-driving cars

Cintra is working on different projects relating to the use of self-driving cars in different areas: the company analyses the technology needed to allow connected and self-driving cars to operate on motorways. Cintra studies the impact on traffic during the transition period from conventional to self-driving vehicles and analyses the impact that the development of other forms of transport, such as high-occupancy vehicles, car sharing services and other new means of transport, has on the motorway business.

Cintra has been collaborating with the Spanish Automotive Technology Centre of Galicia (CTAG) on the **Viriato project**. In the near future, multiple sensors will be incorporated into the autonomous vehicle giving it the ability to sense its

surroundings whilst it operates, resulting in improved road safety on motorways.

Currently, Cintra is also collaborating on other research projects with MIT, the Centre for Transportation Research of the University of Texas, Austin, and with the Technical University of Madrid to anticipate the impacts on mobility and congestion of current trends such as a **collaborative economy, new technologies** (e.g. driverless cars) and **changes in social behaviour**.

Circular economy

The **circular economy** is considered to be an important element as a new economic model in the fight against climate change. Ferrovial has supported the **Circular Economy Action Plan** promoted by the Spanish Ministries of Agriculture Fisheries and Food, the Environment, and the Economy, Industry and Competitiveness. This Action Plan promotes mainly a reduction in the use of non-renewable natural resources, the reuse of waste as raw material, recycling, the incorporation of eco-design criteria, and public awareness. Ferrovial works to incorporate these principles into all its processes, products and services. Examples are the **Zero Waste to Landfill project**, developed in collaboration with Ford, which reduces waste for landfill to zero; the use of biomethane as a renewable fuel; **the development of more durable pavements**, through the improvement of bitumen and asphalt binders; the procurement of recycled fibres from building material waste through the **HorBran Project**, which encourages the use of recycled materials in construction, as well as the procurement of plastic biopolymers of renewable

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Ferrovial seeks to improve energy efficiency in buildings

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buildings

In the course of 2018, 8 buildings with LEED Certifications were erected

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contracts

In the course of 2018, 17 contracts with an energy certification were agreed

origin gained from sludge from wastewater treatment operations within the scope of the **DEMO B-PLAS project**.

Energy efficiency in buildings

Ferrovial seeks to **improve energy efficiency in buildings** both via the design and construction phases, as well via their management and maintenance.

By applying **bioclimatic design criteria** in addition to innovative techniques and materials, we work continuously to offer innovative and tailored solutions to customers.

Consideration is given to aspects such as the **physical location and orientation of the building** to allow for cross-ventilation; air conditioning with **underfloor heating and use of low-enthalpy geothermal energy** for heating; greywater reuse systems from sinks and showers; use of **recycled concrete** throughout the structure advocating sustainable materials by taking advantage of inert waste and avoiding the extraction of new aggregates from quarries or channels; **separation system for sanitation networks**, as well as the collection and reuse of rainwater in water tanks; **vegetable plantations with low water demands**; pre-installation of charging points for electric cars in garages or use of LED lighting and low-consumption light bulbs.

A clear example is the **Fraternidad-Muprespa Habana hospital**. The various measures implemented in its construction allowed for an economic saving in energy expenditure of 43%

compared to a similar building. This hospital aims to be one of the four LEED Platinum certified hospitals in the world.

In the course of 2018, 8 buildings with **LEED (5), BREEAM (2) and CES (1) Certifications were erected** and 17 contracts with an energy certification of A (5) or B (12) were agreed.



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POSITIVE CONTRIBUTION

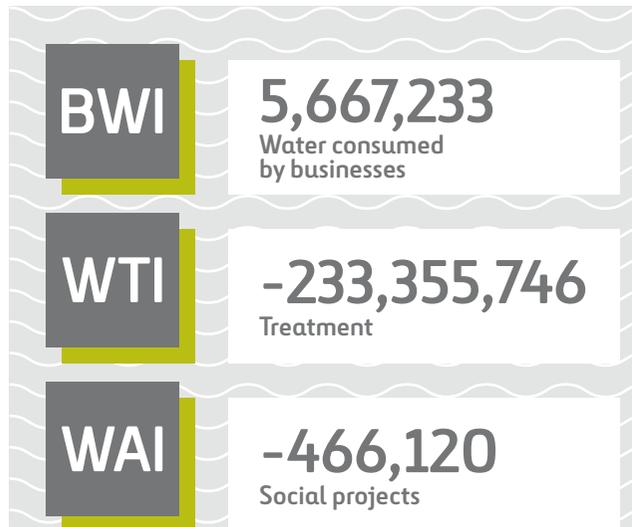
The water treatment activity together with the social action projects help to offset the impact of water consumption and discharges from the business units

Water

Through its subsidiary Cadagua, a leading company in the water treatment sector, Ferrovial helps **offset the effects that climate change will have on water as a resource**, in awareness of water having been identified as one of the three most important worldwide challenges by the World Economic Forum.

In addition, to **quantify the impact that the company causes**, a methodology has been developed which considers aspects such as the water source, the country's water stress and the quality of water and waste.

The methodology is made up of three indices:



BWI Business Water Index (BWI)

The Business Water Index (BWI) is defined as the **water footprint related to water consumption and disposal** carried out through activities undertaken by each of Ferrovial's businesses.

WTI Water Treatment Index (WTI)

The Water Treatment Index (WTI) is defined as the **impact on Ferrovial's water footprint of water treatment processes** in the Cadagua treatment plants and leachate-treatment plants in landfill sites belonging to Ferrovial Services and Amey.

WAI Water Access Index (WAI)

The Water Access Index (WAI) is defined as the **impact on Ferrovial's water footprint of the projects supplying water** to communities in developing countries, carried out as part of the Social Action projects in which the company participates.

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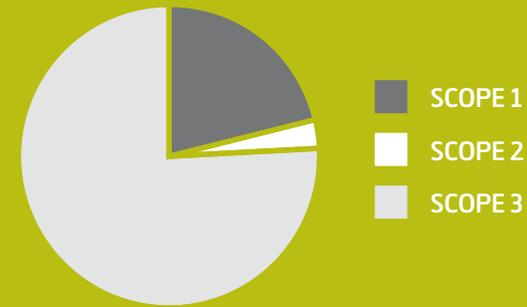
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2018 greenhouse gas emissions (Scope 1&2&3)

In absolute terms, by source type



798,175 Scope 1 (tCO ₂ eq)			
287,278 Stationary	307,211 Mobile	203,549 Diffuse	
123,036 Scope 2 (tCO ₂ eq)			
2,849,059 Scope 3 (tCO ₂ eq)			
566,067 Investment	587,563 Use of sold product	489,189 Purchased, goods and services	1,206,240 Others

*Data verified according to ISAE 3410

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Since 2009, Ferrovial has been measuring 100% of greenhouse-gas emissions produced by its activities around the world

Methodology

Since 2009, Ferrovial has been measuring 100% of greenhouse-gas emissions produced by its activities around the world. The calculation methodology is mainly based on GHG Protocol (WRI & WBCSD) for being the most widely accepted on an international level, also complying with ISO14064-1. However, other methods have been used to consider specific aspects of the business, for example the DEFRA and DECC methodology for operations in the United Kingdom, and the

EPER methodology for estimating emissions released from landfills.

Operational control is considered as the organizational limit in the calculation. Using this approach, a company accounts for the emissions of those sources on which it has full authority to introduce and implement its operating policies, regardless of their shareholding in the company.

The GHG emissions generated in Ferrovial activities are classified into:

<p>DIRECT EMISSIONS SCOPE 1</p>	<p>They mainly originate from:</p> <ul style="list-style-type: none"> • Combustion of fuels In stationary equipment (boilers, furnaces, turbines, etc.) to produce electricity, heat or steam. Combustion of fuels in vehicles that are owned or controlled by the company. • Emissions released Emissions not associated with a particular source, such as biogas emitted by landfill sites. • Channelled emissions Emissions from greenhouse gases through a focus, excluding those that come from fuel combustion. • Fugitive emissions Refrigerants.
<p>These are emissions from sources that are owned or controlled by the company.</p>	
<p>INDIRECT EMISSIONS SCOPE 2</p>	<p>Emissions from consumption of electricity bought from other companies that produce or control it. The “GHG Protocol Scope 2 Guidance”, published in January of 2015, and the market-based method have been followed to calculate Scope 2 emissions.</p>

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Ferrovial calculates Scope 3 emissions following the guidelines contained in the Corporate Value Chain Accounting and Reporting Standard

INDIRECT EMISSIONS SCOPE 3

Ferrovial calculates all of Scope 3 emissions following the guidelines contained in the Corporate Value Chain (Scope 3) Accounting and Reporting Standard published by GHG Protocol Initiative, WRI and WBCSD.

In parallel it has developed a specific methodology for reporting and calculating Scope 3 emissions that has been included in a technical guideline.

Ferrovial calculates 11 of the 15 categories listed in the Corporate Value Chain (Scope 3) Accounting and Reporting Standard document. The remaining categories do not apply to the activity of Ferrovial:

- **Downstream transportation and distribution** | Ferrovial does not sell products that are transported or stored.
- **Processing of sold products** | Ferrovial has no products which are to be processed or included in another process for obtaining another product.
- **Downstream leased assets** | Ferrovial has no assets that are leased to other companies.
- **Franchises** | Ferrovial does not act as a franchisor.

The activities, products and services, with respect to which Scope 3 has been calculated, are now described:

Purchased goods and services

This section includes the emissions related to the materials bought by Ferrovial, which have been used in products or services that the company offers. It includes **emissions coming from the different phases of the life cycle**: extraction, pre-processing, and manufacturing. It excludes the phase of use and transport. The most relevant materials from an environmental perspective are considered in this category as well as the purchase volume such as paper, wood, water, concrete, asphalt and tarmac.

The methodology consists of applying a specific Defra conversion factor to the purchased amount of these materials.

Capital goods

This category includes all **upstream emissions** (i.e. from cradle-to-gate) of the production of capital goods purchased or acquired by the company in the year. The methodology consists of applying a Defra-specific conversion factor to the amount invested in equipment, machinery, construction projects and equipment and office furniture.

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

Within this section the **energy which is needed to produce fuels and electricity** that the company consumes, as well as the losses of electricity in transport and distribution are considered.

To calculate emissions from **fuels** (gasoline, diesel, natural gas, propane, LPG, etc.) and **purchased electricity** some conversion factors are applied, according to the “Well-to-tank” source by Defra. Regarding the **loss of electricity due to transport**, the conversion factor to be applied is specific to each country and comes from the International Energy Agency.

Upstream transportation and distribution

It includes the **emissions coming from the transport and distribution** of products reported in the category of purchased goods and services. The GHG Protocol sheet is used for the calculation.

The information required to calculate this category is:

- **Quantity of the most relevant products** and materials from an environmental point of view.
- **Origin** of materials and quantity purchased in each country.

- **Type of transport** used.

- **Distance**.

Waste generated in operations

Emissions in this section are **related to the waste generated** by the activity of the company which have been reported in the financial year. A Defra conversion factor is applied to each amount of the foregoing waste. This section includes:

- **Construction and Demolition Waste.**
- **Non-hazardous waste:** recyclable urban, wood, vegetable waste.
- **Hazardous waste.**
- **Excavated earth** taken to landfills.

Business travel

This includes the **emissions associated with business travel:** train, aeroplane, taxi and hired vehicles used for travel. For this category we use data provided by the Travel or Accounting Agency such as trip types, itineraries, or expenses. To this data we apply some conversion factors to obtain the emissions related to each displacement type. The source of these varies by country.

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Employee commuting

This category includes **emissions from the movement of employees** from their homes to their jobs. In this section, Ferrovial calculates the emissions of employees working in construction, services and infrastructures as well as of those who work at the Ferrovial Group Headquarters.

The information required is:

- **Number of workers.**
- **Distance** from the homes of the employees to the office.
- **Type of transport** used in case of not being within walking distance to the office: car, motorcycle, subway/tube/metro, bus or train.

Surveys were conducted to get information on the type of transport used and distances. To this data, we apply several conversion factors, using the GHG Protocol sheet, to obtain the emissions related to each displacement type.

Investments

Ferrovial calculates the **emissions related to investments in British airports**, considering the participation in the same for the following sources:

- **Scope 1&2.**
- **The most important records of Scope 3, these being:** air traffic movements, employee commuting and passenger transport.

All airports carry out an external independent verification of their emissions. Once data (consumption and emissions) is verified, it is provided to Ferrovial to be included in this inventory.

Use of sold products

Ferrovial calculates the emissions coming from the use of the **transport infrastructures** by users managed by Cintra.

The methodology used depends on the location of the motorways:

- **In terms of data entry on European motorways**, the calculation tool requires the following input data: length, IMD, % of light and heavy vehicles and the maximum speed of circulation allowed on the motorway.
- **In terms of data entry on American motorways**, the calculation tool requires the following input data: length, IMD, % of light and heavy vehicles and the maximum speed of circulation allowed on the motorway, the state, the county and the type of motorway.

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End of life treatment of sold products

This category includes **emissions from the disposal of waste** generated at the end of the useful life of products sold by Ferrovia in the reporting year.

Ferrovia offers services and products. Workforce services do not generate emissions associated with this category. In terms of the products sold, these correspond to the **construction of infrastructures**. In this case, the most relevant materials from an environmental point of view and by volume that are included in the construction of infrastructures are wood, paper, barriers, asphalt and concrete. Therefore, at the end of the useful life of the infrastructures, the waste that must be managed corresponds to the same.

A Defra conversion factor is applied to these products to calculate the emissions coming from the **disposal of waste generated at the end of the useful life of the infrastructures**.

Upstream leased assets

This includes the **emissions related to the electricity consumption of the buildings of the customers** for whom Amey manages maintenance and cleaning.

A Defra conversion factor is applied to these energy consumptions to calculate these consumption-related emissions.

In its **Calculation and Reporting of the Carbon Footprint** procedure, Ferrovia uses the year 2009 as its benchmark and recalculates its inventory whenever there is a structural change, a change in the calculation methodology (emission factors, focus, etc.) or changes in annual consumption, with the aim of ensuring the comparability of information across the years.

In 2018, the changes were due to the start-up of two incineration plants in the United Kingdom within the Amey company.

The greenhouse gas emissions (GHE) described in this report have been **verified** under limited assurance by PwC, in compliance with the NIEA 3410 regulation of the Assurance Engagements on Greenhouse Gas Statements. This review has also verified that the internal Calculation and Report on the Carbon Footprint procedure, approved by Ferrovia management, has been prepared according to what is indicated in the international standard ISO 14064-1.

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Greenhouse Gas Emissions

Scope 1&2 (Absolute terms) (tCO₂eq)

Company	2009	2016	2017	2018	2018 vs 2009	2018 vs 2017
CONSTRUCTION	251,375	245,981	264,407	246,216	-2.05%	-6.88%
Budimex	47,665	60,011	72,162	95,540	100.44%	32.40%
Cadagua	63,221	18,467	15,098	11,852	-81.25%	-21.50%
Ferrovial Agroman	74,934	121,040	134,266	92,049	22.84%	-31.44%
Webber	65,555	46,463	42,882	46,775	-28.65%	9.08%
CORPORATION	896	703	680	605	-32.45%	-10.99%
Ferrovial Corporation	896	703	680	605	-32.45%	-10.99%
INFRASTRUCTURES	15,684	13,739	10,091	8,164	-47.94%	-19.09%
Cintra	15,684	13,739	10,091	8,164	-47.94%	-19.09%
SERVICES	802,232	661,944	715,080	666,195	-16.96%	-6.84%
Amey	267,290	226,845	217,944	219,240	-17.98%	0.59%
Broadspectrum	125,961	125,961	142,399	117,974	-6.34%	-17.15%
Ferrovial Services	408,982	309,138	354,737	328,982	-19.56%	-7.26%
AIRPORTS	45	45	45	30	-32.16%	-32.20%
Transchile	45	45	45	30	-32.16%	-32.20%
Total	1,070,232	922,412	990,303	921,211	-13.92%	-6.98%

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Scope 1 (Absolute terms) (tCO₂eq)

Company	2009	2016	2017	2018	2018 vs 2009	2018 vs 2017
CONSTRUCTION	163,232	194,009	208,764	199,804	22.40%	-4.29%
Budimex	27,744	42,687	55,008	77,094	177.87%	40.15%
Cadagua	18,669	803	1,010	720	-96.14%	-28.69%
Ferrovial Agroman	61,287	110,315	116,525	81,326	32.70%	-30.21%
Webber	55,532	40,204	36,221	40,664	-26.77%	12.26%
CORPORATION	375	317	298	260	-30.79%	-12.89%
Ferrovial Corporation	375	317	298	260	-30.79%	-12.89%
INFRASTRUCTURES	3,145	2,633	2,171	2,220	-29.41%	2.27%
Cintra	3,145	2,633	2,171	2,220	-29.41%	2.27%
SERVICES	744,947	609,243	649,976	595,861	-20.01%	-8.33%
Amey	252,999	221,644	215,380	216,716	-14.34%	0.62%
Broadspectrum	98,015	98,015	98,294	62,539	-36.19%	-36.37%
Ferrovial Services	393,932	289,585	336,302	316,606	-19.63%	-5.86%
AIRPORTS	41	41	41	30	-26.26%	-26.26%
Transchile	41	41	41	30	-26.26%	-26.26%

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44%
of electricity
consumed originates
from renewable
sources

Scope 2 (Absolute terms) (tCO₂eq)

Company	2009	2016	2017	2018	2018 vs 2009	2018 vs 2017
CONSTRUCTION	88,143	51,971	55,643	46,412	-47.34%	-16.59%
Budimex	19,921	17,323	17,154	18,446	-74.0%	7.53%
Cadagua	44,552	17,665	14,087	11,131	-75.02%	-20.98%
Ferrovial Agroman	13,647	10,725	17,741	10,723	-21.43%	-39.56%
Webber	10,023	6,259	6,661	6,112	-39.02%	-8.25%
CORPORATION	521	386	382	345	-33.65%	-9.51%
Ferrovial Corporation	521	386	382	345	-33.65%	-9.51%
INFRASTRUCTURES	12,538	11,106	7,920	5,944	-52.59%	-24.94%
Cintra	12,538	11,106	7,920	5,944	-52.59%	-24.94%
SERVICES	57,286	52,701	65,104	70,334	22.78%	8.03%
Amey	14,291	5,202	2,563	2,524	-82.34%	-1.53%
Broadspectrum	27,946	27,946	44,106	55,434	98.36%	25.69%
Ferrovial Services	15,049	19,553	18,435	12,376	-17.76%	-32.87%
AIRPORTS	4	4	4	0	-92.73%	-92.78%
Transchile	4	4	4	0	-92.73%	-92.78%

- The market-based method has been applied to calculate Scope 2 emissions.

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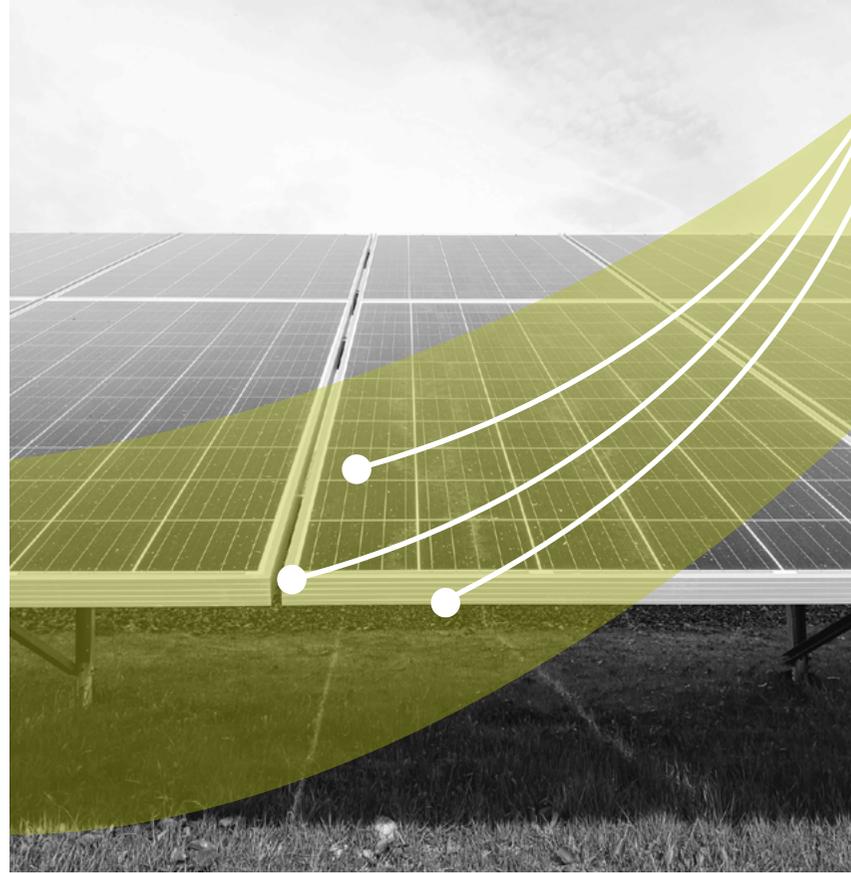
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Comparative emissions Scope 2 (tCO₂eq)

	2009	2018
Market Based (MB)	158,492	123,036
Local Based (LB)	161,975	186,543
LBvsMB	2%	52%

The difference between the two methods is higher in 2018 than in the base year because in 2018 44.90% of electricity **originated from renewable sources with a guarantee of origin certificate** and the conversion factor provided by the supplier is zero.

Scope 1&2 by intensity (tCO₂eq/million €)

	2009	2016	2017	2018	2018 vs 2009	2018 vs 2017
Construction	46.22	56.19	55.48	47.59	3%	-14%
Corporation	10.43	133.68	128.69	175.56	1583%	36%
Infrastructures	60.26	29.74	22.94	17.36	-71%	-24%
Services	230.75	77.20	82.11	98.36	-57%	20%
Airports	6.29	6.29	6.29	4.69	-25%	-25%
Ferrovial	162.36	66.30	69.62	74.13	-54%	6%

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Scope 1&2 by GHG type (t)

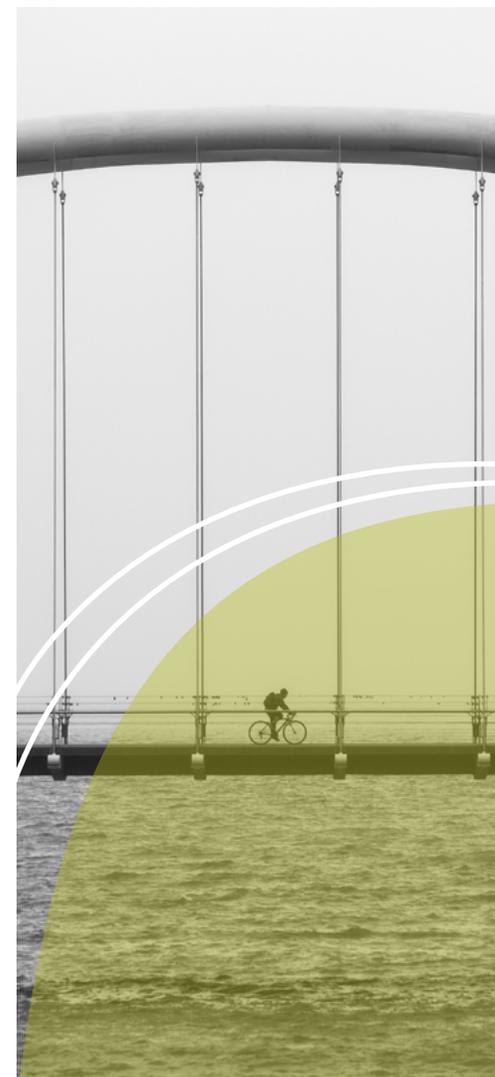
	2009	2016	2017	2018
CO ₂	635,337	640,446	658,623	580,925
CH ₄	267	9,609	11,970	10,758
N ₂ O	316	1,570	1,569	1,607
CO ₂ eq	1,070,232	922,412	990,303	921,211

Scope 1&2 by business area

	2009	2016	2017	2018
Construction	23%	27%	27%	27%
Infrastructures	1%	1%	1%	1%
Services	75%	72%	72%	72%
Total	100%	100%	100%	100%

Scope 1&2 by country

	2009	2016	2017	2018
Spain	50%	32%	34%	31%
UK	25%	27%	24%	25%
Poland	4%	7%	8%	11%
USA	8%	9%	8%	9%
Others	12%	25%	26%	25%



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Energy consumption associated with Scope 1&2

		2009	2016	2017	2018	Reduction 2018 vs 2009	Reduction 2018 vs 2017
Fuels used in Stationary and Mobile Resources (GJ)	Diesel	5,485,811	6,029,033	6,085,079	5,196,171	-5%	-15%
	Fuel	344,405	37,269	78,994	98,703	-71%	25%
	Petrol	698,774	558,854	472,599	464,416	-34%	-2%
	Natural Gas	872,477	2,224,776	3,039,568	262,901	-70%	-91%
	Coal	0	276,998	390,225	570,558	-	46%
	Kerosene	15,590	15,116	21,434	20,246	30%	-6%
	Propane	17,229	19,458	18,467	27,732	61%	50%
	LPG	11,792	16,945	11,540	6,600	-44%	-43%
	Total	7,446,077	9,178,449	10,117,906	6,647,328	-11%	-34%
Non-renewable Energy Consumption (GJ)	Services	438,741	425,063	456,571	465,574	6%	2%
	Construction	761,769	424,230	421,327	342,583	-55%	-19%
	Motorways	117,415	90,602	66,489	50,693	-57%	-24%
	Corporation	5,359	4,549	4,501	4,073	-24%	-10%
	Airports	30	30	30	2	-93%	-93%
	Total	1,323,314	944,474	948,918	862,925	-35%	-9%
Renewable Energy Consumption (GJ)	Services	25,772	173,015	154,964	227,536	783%	47%
	Construction	599	356,723	447,483	448,834	74,768%	0%
	Motorways	0	4,090	4,049	4,009	-	-1%
	Corporation	0	0	0	0	0%	0%
	Airports	0	0	0	0	0%	0%
	Total	26,371	533,829	606,496	680,380	2,480%	12%

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GHG emissions. Scope 3 (tCO₂eq)

Category	2012	2016	2017	2018	2018 vs 2012	2018 vs 2017
Investments*	805,044	641,053	566,067	566,067	-29.68%	0.00%
Fuel and energy related activities	191,927	200,325	219,335	178,901	-6.79%	-18.43%
Capital Goods	569,407	354,953	288,004	313,290	-44.98%	8.78%
End of life treatment of sold products	52,703	44,605	39,245	37,456	-28.93%	-4.56%
Purchased goods and services	743,192	503,274	461,150	489,189	-34.18%	6.08%
Upstream transportation and distribution	461,487	418,962	407,580	434,112	-5.93%	6.51%
Waste generated in operations	191,948	198,621	224,205	232,326	21.04%	3.62%
Employee commuting	792	3,183	3,221	1,821	129.89%	-43.47%
Business travel	6,606	9,117	8,181	8,334	26.15%	1.86%
Use of sold products	641,031	622,625	555,585	587,563	-8.34%	5.76%
Upstream leased	1,405	0	0	0	-100.00%	0.00%
Total	3,665,541	2,996,717	2,772,574	2,849,059	-22.27%	2.76%

*As of the date of publication of this report, the data corresponding to 2018 was not available and for this reason data from 2017 has been used.

Biogenic CO₂ emissions (tCO₂eq)

	2009	2016	2017	2018	2018 vs 2009	2018 vs 2017
Construction	768	59,288	50,717	51,935	6661.19%	2.40%
Services	729,776	740,990	733,487	736,842	0.97%	0.46%
Total	730,544	800,278	784,205	788,777	7.97%	0.58%

The company has ambitious reduction targets for 2030 approved and endorsed by the Science Based Targets initiative

32%

reduction goal
in absolute terms

The aim is to reduce Scope 1&2 emissions by 32% in absolute terms by 2030

42.9%

reduction goal
in terms of intensity

The aim is to reduce Scope 1&2 emissions by 42.9% in terms of intensity in comparison with 2009

According to the IPCC (Intergovernmental Panel on Climate Change) and the standard “Protocol for the quantification of greenhouse gas emissions from waste management activities”, the CO₂ derived from the combustion of captured and channelled biogas that is flare-burned or in processes of cogeneration should be reported as zero. This is because this gas comes from the decomposition of products containing organic matter of animal or vegetable origin which was previously captured by living organisms, and therefore belongs to a neutral carbon cycle. Incineration of organic matter in incineration plants is also included in these emissions.



Reduction Targets (SBTi)

The company has **ambitious reduction targets for 2030**, approved and endorsed by the Science Based Targets initiative (SBTi). The aim is to **reduce Scope 1&2 emissions by 32% in absolute terms and by 42.9% in terms of intensity** in comparison with 2009, which is the base year. It is also committed to **reducing Scope 3 emissions** (indirect emissions, excluding capital goods, purchased goods and services) by 20% up to 2030, using 2012 as the reference year. Ferrovial has been the first company in its sector in the world to establish its emission-reducing targets and have them endorsed by **the Science Based Targets Initiative**.

To achieve this objective, an analysis of the necessary measures to comply with the established objectives was carried out in 2018. The **necessary roadmap** for reaching the objective is based on:

- **Energy efficiency criteria** progressively being incorporated into the purchasing and subcontracting of services, the purchasing of electricity with a renewable energy guarantee of origin certificate, the change of fleet and the use of alternative fuels. During 2018, 44% of the electricity consumed carried a renewable energy certificate. The company’s tendency is to increase this type of consumption annually.
- Action has been taken to **renew the vehicle fleet** in all business areas.
- Improvements in the **development of technologies** and processes aimed at maximising the amount of emissions avoided.
- Incorporation of **measures for energy efficiency** in buildings and processes.
- The **application of the Carbon Pricing tool** allows analysis of the impact of new investments and directs the portfolio of activities towards those that are more sustainable.
- In relation to Scope 3 related to emissions from indirect sources, Ferrovial has strong relationships with governmental institutions and participates in workshops and working

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44%

of electricity consumed originates from renewable sources

groups with respect to the **reduction of these emission sources**. These relationships allow the company to exercise a certain degree of influence on the regulations that are responsible for developing new legal requirements for companies.

Renovable electricity consumed	With respect to the total company	With respect to the total Group
Cadagua	76%	26%
Amey	66%	4%
Ferrovial Services	53%	11%
Cintra	7%	0%
Ferrovial Agroman	7%	1%
Budimex	20%	2%
		44%



Ferrovial promotes **#LaHoradelPlaneta (#TheHourofthePlanet)**. This is a global environmental event organised by WWF that has taken place on the last Saturday of March for the past 11 years. In an attempt to raise awareness of the threat of climate change, the campaign encourages citizens to demonstrate their support for action by turning lights off for an hour.

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14%

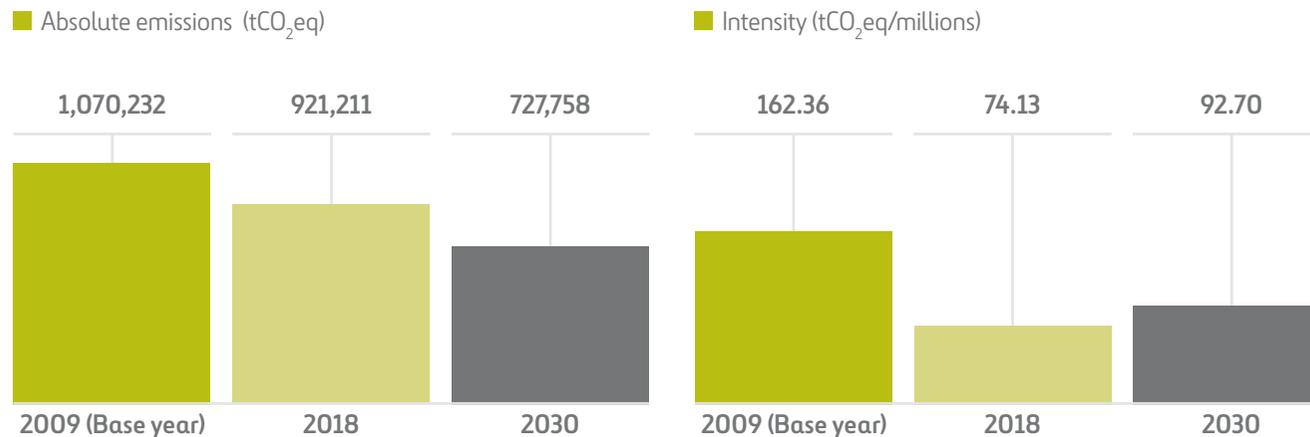
Reduction in absolute emissions

54%

Reduction in intense emissions

Evolution of Greenhouse Gas Emissions

Evolución Scope 1&2



In 2018, Ferrovial's Scope 1&2 emission reduction targets were 13.71% in absolute terms and 14.09% in terms of intensity compared to the base year. The reductions achieved this year have been higher than the objectives established. To be more specific, the reductions in 2018 were **14% in absolute terms and 54% in terms of intensity**. This shows that Ferrovial is complying with the roadmap established for the compliance

with reduction targets established for 2030. The reduction per business type is as follows:

MOTORWAYS

Global emissions in absolute terms from motorways **decreased by 47.9% in 2018** compared to the base year and

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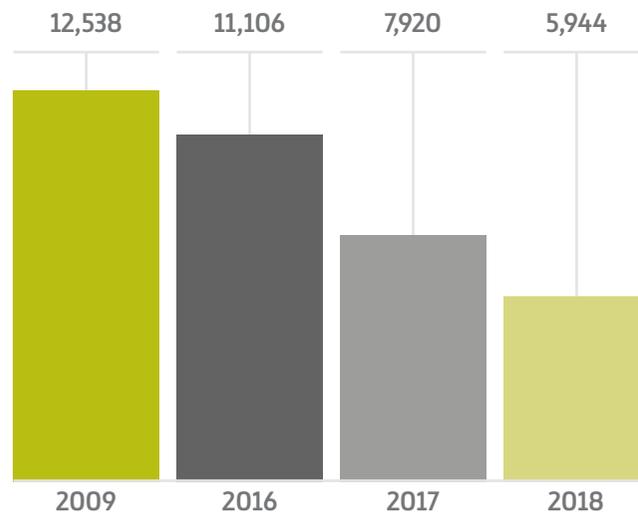
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by 19% compared to the previous year, even though activity increased by 58% and 7% respectively. This evolution reflects the decoupling of emissions from growth.

These positive results have been achieved due to the implementation of energy efficiency measures in lighting, the purchase of renewable electricity and, most importantly, the start-up of new (carbon neutral) motorways, which are less intensive from an energy point of view.

The electricity consumption for motorway lighting is the main source of consumption. This is the reason why energy efficiency in lighting and the purchase of renewable energy is so important.

■ Electricity (tCO₂eq)



SERVICES (FERROVIAL SERVICES, AMEY AND BROADSPECTRUM)

In 2018, emissions in absolute terms in the services area **have decreased by 16%** in comparison with the base year and by 7% in comparison with the previous year. In terms of intensity, **reductions of 57% have been achieved** in comparison with the base year.

This development is the result of the implementation of energy efficiency measures, the increase in the electric or alternative vehicle fleet, the purchase of electricity from renewable sources, an increased capture of diffuse emissions in landfills and a reduction of waste destined for landfill.



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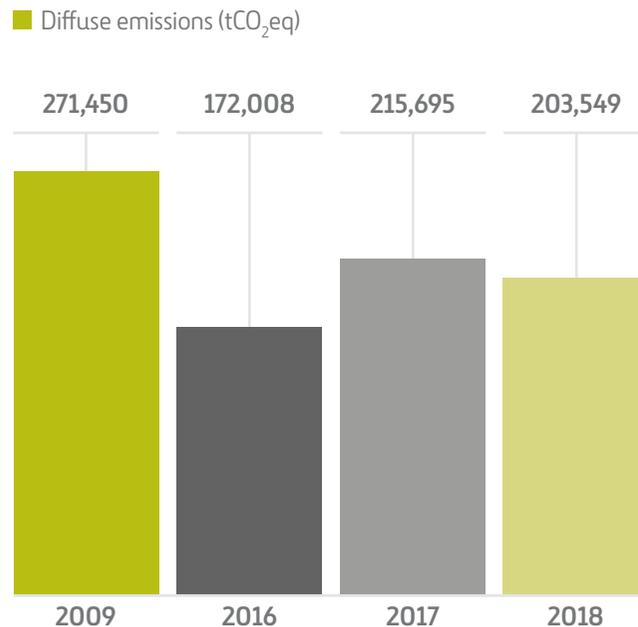
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25%

Reduction in biogas emissions versus the base year

Within the services division, it is worth mentioning the emissions associated with landfill sites owned by Ferrovial. As it is known, the increase in this biogas emission flow (diffuse emissions) has a high impact on the overall footprint since emissions of CH₄ have a greater warming potential than CO₂. Thanks to the use of technology and improvements in the process of capturing biogas this year, landfill emissions have been reduced by 6% compared to the previous year and by 25% compared to the base year.



It is important to point out that both Ferrovial Services and Amey have extensive knowledge in the field of waste. For this reason, the activity of waste management, is committed to the model of the **circular economy**, both to the aspect of waste recovery as a source for new raw materials and to the use of biogas produced in landfills for energy. The services area employs the latest technologies to **generate clean energy through captured biogas** and to minimise environmental impact. In this way, the work of the company becomes a commitment to the environment and the challenges and needs of the cities it serves.

CONSTRUCTION (FERROVIAL AGROMAN, BUDIMEX, WEBBER, CADAGUA)

In the area of construction, emissions **have decreased by 2% in absolute terms** in comparison with the base year and by 16% in comparison with the previous year. **In terms of intensity, no signs of decoupling are detected** between growth and emissions from some geographical areas.

- **Budimex** | Polish construction company. The growth of emissions is aligned with the increase in activity. They are strongly committed to continue using renewable electricity. In 2018 this consumption represents 20% of total electrical energy consumed.
- **Ferrovial Agroman** | Emissions have decreased considerably with respect to the previous year, due to the type of work carried out being less intensive from an energy point of view.

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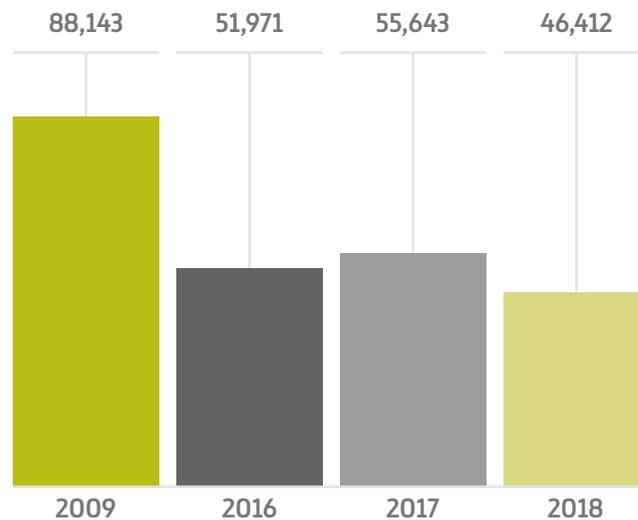
76%

Of electricity consumed in Cadagua originates from renewable sources

- **Webber** | Emissions are in line with the invoicing.
- **Cadagua** | The company is strongly committed to implementing **energy-efficiency measures and to purchasing renewable electricity**. All in all, this has caused a reduction in emissions in both absolute terms and in terms of intensity. 76% of electricity consumed originates from renewable sources.

In general, the construction sector is where the disparity in the demand for energy is most reflected year-on-year, depending on the activities that are carried out in construction, the type of work and the degree of subcontracting.

■ Electricity (tCO₂eq)



AIRPORTS

During 2018 the company's emissions have remained stable.

Scope 3 Evolution

2018 saw a global drop in Scope 3 emissions by 22.27% in **absolute terms compared to the base year (2012)** and by 2.76% when compared with the previous year.

Evolution by category from the base year:

Investments | The decrease in emissions is due to the implementation of energy-efficiency measures and mobility in airports in which Ferrovial is a stakeholder. The data collected in this category is based on information externally verified by airports. As of the date of publication of this report, the data corresponding to 2018 was not available and for this reason data from 2017 has been used. As for investments in investees, emissions related to investments in airports are accounted for.

Fuel and energy related activities | The implementation of energy efficiency measures has led to a reduction in energy consumption and emissions compared to the base year even though invoicing has increased.

Capital Goods | A decrease in emissions of 44.98% compared to the base year is due to a decrease in investment in equipment, machinery and office supplies.

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22.27%

Global decrease in Scope 3 emissions in absolute terms versus the base year (2012)

End of life treatment of sold products | A decrease in emissions of 28.93% is due to a decrease in the volume of materials used in the construction of infrastructures.

Purchased goods & services | A decrease in emissions of 34.18% is due to a decrease in the volume of materials purchased.

Upstream transportation & distribution | Decrease associated with the purchase of goods and services.



Waste generated in operations | Annual increase in the generation of non-hazardous waste. To reduce this impact, Ferrovial works on the incorporation of circular economy principles in all its processes, products and services, through the reduction of the use of non-renewable natural resources, the reuse of waste as raw material, recycling, the incorporation of eco-design criteria, and public awareness.

Employee commuting | Company growth implies an increase in the number of employees and, therefore, of these emissions.

Business travel | Investment in new companies implies an increase in the number of employees and, in turn, an increase in the number of international trips.

Use of sold products | The increase in emissions compared to the previous year is associated with an increase in motorway traffic.

Upstream leased | Operational control over the electricity used by our customers has changed.

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1,333,522

t CO₂ eq

Reduced Scope 1&2 emissions

Avoided emissions

Since 2009, and thanks to the internal plans, **Scope1&2 emissions have been reduced by 1,333,522 tCO₂eq**, a similar figure to the yearly emissions of a city of 192,027 inhabitants.

It is considered that where Ferrovial really does have leverage is on the emissions associated with the products and services offered.

Emissions avoided by the purchase of vehicles powered by alternative fuels

The initiative to buy **vehicles powered by alternative fuels** consists of improving the energy efficiency of these assets, through improvements in the criteria for purchasing, renting or leasing, courses on efficient driving, the use of alternative fuels and alternatives with hybrid engines, amongst others. Electric cars have also recently been incorporated into this series of improvements.

Emissions avoided by the purchase of electricity from renewable sources

	Electricity purchased from renewable sources (MWh)				Avoided emissions (tCO ₂ eq)			
	2009	2016	2017	2018	2009	2016	2017	2018
Budimex	0	0	6,737	6,261	0	0	5,092	4,732
Cadagua	0	90,260	106,872	85,368	0	19,998	22,882	26,068
Ferrovial Agroman	0	0	2,327	1,659	0	0	1,455	1,013
Cintra	0	1,136	1,125	1,114	0	347	343	340
Amey	7,159	17,988	21,140	17,264	4,543	9,735	11,437	4,887
Ferrovial Services	0	13,340	21,906	45,941	0	4,073	5,551	14,036
	7,159	122,724	160,107	157,606	4,543	34,153	46,760	51,076

1,895,197

t CO₂eq

Emissions avoided in 2018 thanks to the triage activity and biogas capture

Emissions avoided in triage activity and uptake of biogas

		Avoided Emissions (tCO ₂ eq)			
		2009	2016	2017	2018
Ferrovial Services	GHG emissions avoided by the capture of biogas in landfills	520,075	749,514	685,900	775,838
	GHG emissions avoided by the triage activity	189,981	444,226	550,817	501,751
Amey	GHG emissions avoided by the capture of biogas in landfills	-	46,073	3,772	39,940
	GHG emissions avoided by the triage activity	-	149,895	148,681	157,308
Cadagua	Emissions avoided by the capture of biogas in water treatment plants	-	532,313	432,248	420,360
		710,056	1,922,021	1,821,418	1,895,197

Regarding the management of waste through triage activity, **recovery is valued against elimination**, in order to reduce the rejection volume that is deposited in landfill and, in turn, the generation of GHG emissions. When the final residues are deposited in landfill, biogas emissions are produced by the process of decomposition. This biogas is captured through net collectors to avoid the direct emission of methane (CH₄) in the atmosphere and facilitate its exploitation through the production of energy. This generation of electricity from biogas allows a traditional landfill site to partially become an energy

recovery plant, which, at the same time, avoids GHG emissions into the atmosphere of gases that continuously originate from these types of facilities ([see following section](#)).

The company's tendency is to carry out constant investment in technologies both in triage activity and in the capture of biogas, which has allowed GHG emissions to be reduced in recent years. In 2018, GHG emissions avoided by triage activity and capture of biogas have been 170% higher than the base year.

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161%

In 2018, 161% more electricity was generated from renewable sources

1,224,455

GJ

Generated in landfills in 2018

Emissions avoided by power generation in landfills

	Power generated in landfills (GJ)				Emissions avoided by power generation in landfills (tCO ₂ eq)			
	2009	2016	2017	2018	2009	2016	2017	2018
Ferrovial Services								
Recovery of Biogas	308,959	369,675	354,039	329,473	30,020	33,509	27,256	25,000
Valorisation of Biogas	146,666	197,104	202,812	261,406	14,251	16,719	17,203	17,311
Amey								
Recovery of Biogas	-	37,310	36,064	34,740	-	4,969	4,803	4,627
Incineration plants	-	-	-	598,836	-	-	-	56,560
Total amount	455,625	604,089	592,915	1,224,455	44,271	55,197	49,262	103,498

The biogas captured in landfills, primarily methane, is used in **cogeneration plants** for the production of electricity and thermal energy.

In 2018, out of the landfills owned by Ferrovial Services and Amey, **1,224,455 GJ of energy has been generated**. This capture process not only avoids the emission of GHG, but it also generates energy from renewable sources. As a result, 161% more energy has been generated in 2018 than in our base year.

Since this energy originates from renewable sources, its consumption implies avoiding the purchase of electricity from the network, therefore **avoiding 103,498 tCO₂eq of emissions**. This will reduce the dependence on fossil fuels and avoid methane emissions, which have a greater effect on global warming than CO₂.

In 2018, **two Amey incineration plants** have been commissioned in which energy is generated and emissions to the atmosphere are avoided, hence the large increase compared to previous years.

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143%

Increase in energy generated in water treatment plants

465,759

GJ

Generated in water treatment plants in 2018

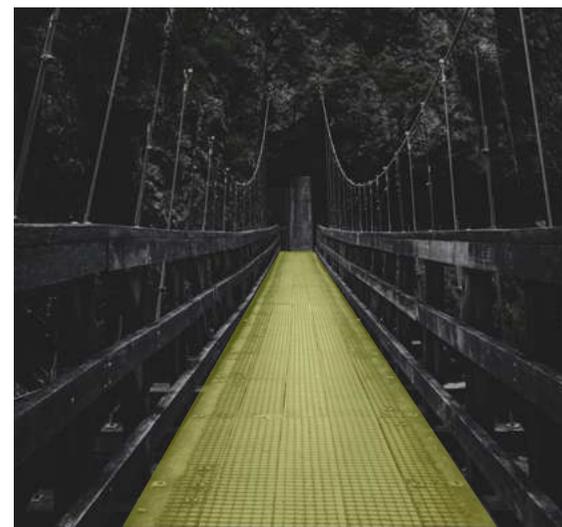
Increase in emissions avoided by power generation in water treatment plants

	Energy generated in water treatment plants (GJ)			
	2009	2016	2017	2018
Generated in EDAR	21,640	41,405	110,464	113,380
Generated in thermal drying	169,816	262,051	286,659	352,379
	191,456	303,456	397,123	465,759

	Emissions avoided by power generation in water treatment plants (tCO ₂ eq)			
	2009	2016	2017	2018
Generated in EDAR	2,103	3,512	9,370	9,621
Generated in thermal drying	16,500	22,227	24,315	29,889
	18,603	25,739	33,684	39,511

In the **thermal sludge-drying processes of water-waste treatment plants** managed by Cadagua, cogeneration plants have been implemented that produce thermal energy used for drying and that also produces electricity. This is another way of generating energy sustainably that results in avoiding emissions in these installations.

At the same time, the WWTP (Waste-Water Treatment Plant) **generates electricity with the combustion of generated biogas**. Through these processes, the company generated a total of 465,759 GJ in 2018 and avoided 39,511 tCO₂eq of emissions.



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Offsetting emissions

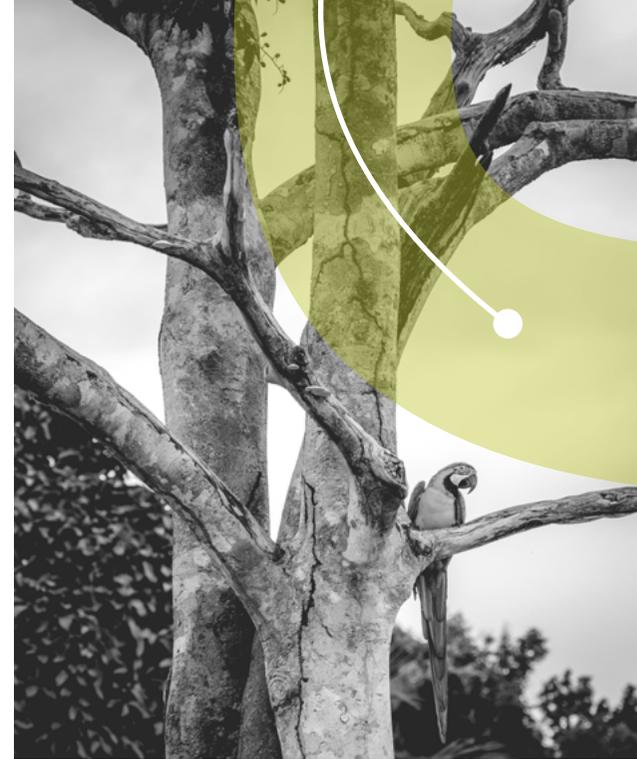
In 2018, Ferrovial offset emissions through the use of corporate vehicles that are controlled by the company and the displacement of the attendees at the H&S global meeting in the “Conservation of the Amazon” project in Madre de Dios in Peru. These emissions totalled **260 tCO₂eq** and **28 tCO₂eq** respectively.

PROJECT FOR THE CONSERVATION OF THE AMAZON IN MADRE DE DIOS IN PERU

The “**Conservación de la Madre de Dios en la Amazonía**” project will drastically reduce deforestation through surveillance, sustainable management of the forest (in accordance with the FSC annual certification) and actions beneficial to the local communities. This project has been endorsed by two prestigious standards of the Voluntary Carbon Market (VCM): the Verified Carbon Standard (VCS) (having validated the number of CO₂ carbon credits generated by the project) and the Climate Community and Biodiversity Standard (CCBS) (validating the project’s contribution to the improvement of the social and environmental aspects). The project has also guaranteed its transparency through the Market Environmental Registry.

It covers 100,000 hectares of protected Peruvian Amazon rainforest. **More than 30 endangered species are being monitored.**

Finally, the project will contribute to the **sustainable development**



of rural producers and indigenous communities (the Yine tribe, indigenous peoples in voluntary isolation from the Mashco Piro tribe and other not yet identified tribes) that are in its area of influence.

By participating in this project, Ferrovial is contributing to the fulfilment of the **Sustainable Development Goals**:



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Verification report



Free translation from the original in Spanish, in the event of a discrepancy, the Spanish language version prevails.

INDEPENDENT LIMITED ASSURANCE REPORT ON GREENHOUSE GAS (GHG) STATEMENT 2018

To the Management of Ferrovial Corporación S.A.:

Scope of work

We have undertaken a limited assurance engagement of the Greenhouse Gas Statement (hereinafter GHG Statement) of Ferrovial Corporación S.A. and its subsidiary companies Budimex, Cadagua, Ferrovial Agromán, Webber, PLW, Cintra, Amey, Broadpectrum, Ferrovial Servicios and Transchile (hereinafter referred to as Ferrovial) for the financial year ended December 31st, 2018, included in the Appendix of this report. This engagement was conducted by a team of sustainability and climate change assurance practitioners.

Responsibility of Ferrovial's Management

Ferrovial's Management is responsible for the preparation of the 2018 GHG Statement in accordance with the procedure 'Calculation and Report of Carbon Footprint' of Ferrovial, which is described in the report 'Ferrovial Climate Strategy 2018', available on the following website link <https://www.ferrovial.com/en/our-commitment/environment/carbon-footprint/>. This responsibility includes the design, implementation and maintenance of internal control relevant to the preparation of a GHG statement that is free from material misstatement, whether due to fraud or error.

GHG quantification is subject to inherent uncertainty because of incomplete scientific knowledge used to determine emissions factors and the values needed to combine emissions of different gases.

Our responsibility

Our responsibility is to express a limited assurance conclusion on the GHG Statement based on the procedures we have performed and the evidence obtained. We conducted our limited assurance engagement in accordance with the International Standard on Assurance Engagements 3410 (ISAE 3410), 'Assurance Engagements on Greenhouse Gas Statements' issued by the International Auditing and Assurance Standards Board (IAASB) of the International Federation of Accountants (IFAC). That standard requires that we plan and perform this engagement to obtain limited assurance about whether Ferrovial's 2018 GHG Statement is free from material misstatement.

A limited assurance engagement undertaken in accordance with ISAE 3410 involves assessing the suitability in the circumstances of Ferrovial's use of applicable criteria as the basis for the preparation of the GHG statement, assessing the risks of material misstatement of the GHG statement whether due to fraud or error, responding to the assessed risks as necessary in the circumstances, and evaluating the overall presentation of the GHG statement. A limited assurance engagement is substantially less in scope than a reasonable assurance engagement in relation to both the risk assessment procedures, including an understanding of internal control, and the procedures performed in response to the assessed risks.

The procedures we performed were based on our professional judgment and included inquiries, observation of processes performed, inspection of documents, analytical procedures, evaluating the appropriateness of quantification methods and reporting policies, and agreeing or reconciling with underlying records.

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Inscrita en el R.O.A.C. con el número 50242 - CIF: B-79 031290



Given the circumstances of the engagement, in performing the procedures listed above we:

- Through inquiries and meetings with personnel of Ferrovial's various departments who have been involved in the preparation of the GHG Statement, obtained an understanding of Ferrovial's control environment and information systems relevant to emissions quantification and reporting, but did not evaluate the design of particular control activities, obtain evidence about their implementation or test their operating effectiveness.

- Evaluated whether Ferrovial's methods for developing estimates are appropriate and had been consistently applied. However, our procedures did not include testing the data on which the estimates are based or separately developing our own estimates against which to evaluate Ferrovial's estimates.

- Verification, through analytical and substantive tests based on the selection of a sample of the quantitative information (activity data, calculations and information generated) used to determine Ferrovial's 2018 GHG Statement and the correct compilation of information based on the internal procedure applied by Ferrovial.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained if we had performed a reasonable assurance.

Independence and Quality Control

We have complied with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants (IESBA), which includes independence and other ethical requirements founded on fundamental principles of integrity, objectivity, professional competence and diligence, confidentiality and professional behaviour.

The firm applies the International Standard on Quality Control 1 (ISQC 1) and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Limited Assurance Conclusion

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention which may lead us to believe that Ferrovial's GHG Statement for the financial year ended December 31st, 2018 is not prepared, in all material aspects, in accordance with the procedure applied 'Calculation and Report of Carbon Footprint' of Ferrovial, which is described in the report 'Ferrovial Climate Strategy 2018'.

Use and distribution

Our report is only issued to the Management of Ferrovial in accordance with the terms and conditions of our engagement letter. We do not assume any liability to third parties other than Ferrovial's Management. This report shall have to be read jointly with the report 'Ferrovial Climate Strategy 2018' of Ferrovial.

PricewaterhouseCoopers Auditores, S.L.

Pablo Bascones

3rd July 2019

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GREENHOUSE GAS (GHG) STATEMENT CORRESPONDING TO THE YEAR ENDED DECEMBER 31, 2018	
Of Ferrovial Corporación S.A. and its subsidiaries Budimex, Cadagua, Ferrovial Agromán, Webber, PLW, Cintra, Amey, Broadspectrum, Ferrovial Servicios and Transchile	
2018 GHG Statement	tCO₂-e
Scope 1	798.175
Scope 2	123.036
Scope 3	2.849.039
1. Purchased goods & services	489.189
2. Capital goods	313.290
3. Activities related to fuel and energy not included in Scopes 1 and 2	178.901
4. Upstream transportation & distribution	434.112
5. Waste generated in operations	232.326
6. Business travel	8.334
7. Employee commuting	1.821
8. Upstream leased assets	N/A ¹
9. Downstream transportation & distribution	N/A ¹
10. Processing of sold products	N/A ¹
11. Use of sold products	587.563
12. End of life treatment of sold products	37.456
13. Downstream leased assets	N/A ¹
14. Franchises	N/A ¹
15. Investments ²	566.067
Biogenic CO₂	788.777
<p>1: Ferrovial only measures the GHG Protocol categories described in the 'Corporate Value Chain (Scope 3) Accounting and Reporting Standard' document that apply to its activities.</p> <p>2: This calculates emissions linked to investments in British airports. Data for 2018 is not available as of the report release date, and therefore emission figures for 2017 are used</p>	
<p>Ferrovial's 2018 GHG Inventory has been calculated with the following energy consumptions:</p>	
Energy consumptions 2018	
<i>Energy consumption in absolute terms</i>	
Fuels used in stationary and mobile sources	6.647.329 GJ
Non-renewable electricity consumption	862.926
Renewable electricity consumption	680.381
Criterion of quantification	
<p>Ferrovial's 2018 GHG Statement has been prepared in accordance with the internal procedure 'Calculation and Report of Carbon Footprint', which is described in the report 'Ferrovial Climate Strategy 2018'.</p> <p>The report is available on the following website link https://www.ferrovial.com/en/our-commitment/environment/carbon-footprint/.</p>	

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Conclusions

- The **results and objectives associated with climate change** have been analysed in line with the recommendations of the Task Force.
- Significant **business opportunities associated with climate change have been detected**.
- The **company's responsibility in the fight against climate change** is being fulfilled, this being the reason for developing the reduction targets based on scientific research, which have been approved and endorsed by the Science Based Targets initiative.
- A great number of **have been implemented** in order these reduction targets.
- The roadmap to achieving the objectives is being met, meaning it has been **fulfilled in absolute terms and in terms of intensity** in the year 2018.

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