

Greenhouse Gas Emissions Report 2019

1. FCC Construcción's commitment

FCC Construcción, operating in 23 countries and with the accumulated experience of 120 years of activity, is the construction company of FCC Group. Its business activities cover every field of engineering and construction, being a benchmark company in the construction of transport infrastructures and buildings, both on the national market as well as internationally. The Infrastructures area of FCC Group has a proven track record in the development of concession projects and has a group of companies dedicated to the industrial sector, as well as other construction-related activities (engineering, prefabrication, installations, etc.).

Railway renovation
(Romania)



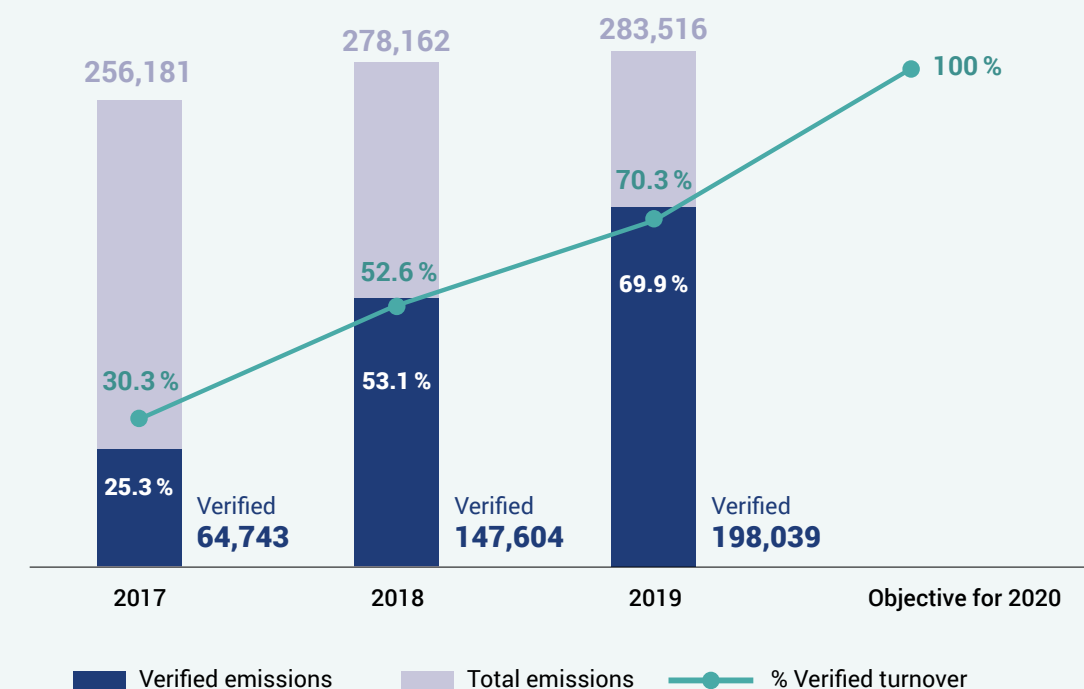
The COVID-19 sanitary and economic crisis, which will inevitably be related with all the events of 2020, has revealed how fragile we are in the face of nature, and, at the same time, our ability to make an impact on it. The World Economic Forum already warned in its report "Global Risks Report 2019" on the increasing risk of the spread of viral diseases, classifying this risk as the tenth most important in terms of impact; this report also indicated that two of the most probable risks with the biggest impact are related to climate change ("extreme weather events" and "the failure to mitigate and adapt to climate change").

It seems clear that we must learn from this sanitary crisis to successfully manage the next upcoming global crisis: climate change. Like COVID-19, climate change is an invisible and complex crisis, with threatening effects that will be persistent over time. Efforts should not only focus on mitigating the effects of climate change, which is what we are currently doing after the pandemic struck the world; the key is to act with determination to avoid them. Therefore, we must transform the crisis into an opportunity to complete a fair ecological transition, which mitigates new global and interconnected crises, and to activate the economy, according to the European Green Deal.

In the current context, in which climate change has become one of the main environmental challenges, we firmly believe that a responsible and committed company such as FCC Construcción must position itself as a key agent in the definition and implementation of solutions to address climate change. For this reason, FCC Construcción established a specific objective related to climate change in its 2017-2020 **Management Objectives**. Specifically, the expansion of the greenhouse gas (GHG) emissions report verification to the international area was proposed, so that **100 % of the company activity** would be verified according to the ISO 14064-1 Standard by **2020**. This will enable us to continue to calculate our carbon footprint, to track down the most carbon intensive activities in order to establish actions to reduce them, and to continue to communicate sector-based Good Practices' examples among the stakeholders of all the countries in which we operate. The external verification reinforces our management transparency and credibility.

Aiming to fulfil this goal, the current report quantifies and verifies the GHG emissions in Spain, Portugal, Romania, United Kingdom, Nicaragua, Costa Rica, Panama, El Salvador, Mexico, Colombia, Chile and Peru during the 2019 business year, which entails the verification of 70.3 % of FCC Construcción's activity and 69.6 % of the organisation's GHG emissions. The broadening of the verification scope has involved carrying out different actions, such as the spreading of the organisation's quantification methodology among its own staff, aiming to raise their awareness about the annual GHG emissions report and the climate change strategy of the company; the collection of emission factors that are specific to the different countries and inventory GHG sources; or the establishment of internal monitoring to ensure the activity data quality.

GHG emissions, emitted and verified (tCO₂e)



As a global company, FCC Construcción is aware of the importance of tackling climate change and that the transition to a low-carbon economy is a process that offers no room for turning back. The challenges posed by climate change extend to all agents and are closely related to the achievement of the **Sustainable Development Goals**. Therefore, in 2010, FCC Construcción started to integrate the concept of climate change into its organisation with the design and implementation of a protocol for the quantification of Greenhouse Gas emissions in the construction sector, becoming the first Spanish construction company to have its emissions verified by AENOR, an external party. Since then, the company prepares and verifies annually its Greenhouse Gas emissions report, having, in addition, since 2012 **AENOR's Environmental certificate "CO₂ verified"**, which guarantees both the accuracy of the organisation's Carbon Footprint calculation and the inclusion of the GHG management in the organisation's system and strategy. This initiative was awarded by the organization "Fundación Entorno" in 2012 with a prize in the category "Management for Sustainable Development" of the European Business Awards for the Environment.

SUSTAINABLE DEVELOPMENT GOALS

Likewise, in the interest of promoting transparency, FCC Construcción has been registering its verified carbon footprints every year, since its outset, in the "Carbon footprint, offsetting and carbon sequestration project Register", created in 2014 by the Spanish Ministry for the Ecological Transition. With this action, FCC Construcción was the first construction company to appear on said public list. With the carbon footprint of financial year 2015, 2016 2017 and 2018, we obtained the "Calculate and Reduce" label of the government, which, in addition to granting recognition and acknowledging the fact of being able to quantify and verify our Greenhouse Gases Emissions, it also identifies the company as an organisation which reduces its carbon footprint effectively. The company's commitment for reducing emissions is also reflected in the "**#PorElClima Community**" platform, to which we adhered in 2016, after the Paris Agreement.

As a further step in the management improvement, in 2017, FCC Construcción published its **strategy to combat climate change**, which establishes the lines of action to face both the challenges and opportunities that arise. The strategy structures in 4 main areas (mitigation, adaptation, communication and innovation) the work carried out and the results obtained since 2010. Also since this year, FCC Construcción reports the information related to climate change according to the recommendations of the task force on climate-related financial disclosures from the **Financial Stability Board (TFCD)**¹ working group on the climate change. The TFCD report develops a framework to help companies understand and quantify the risks and opportunities related to climate change, structuring progress on climate change into four main blocks: "Governance", "Strategy", "Risk Management" and "Metrics and Targets".

¹ Task Force on Climate Related Financial Disclosures (TFCD).

Climate change is a reality with unavoidable implications, and not only at the environmental level, since it is estimated that, in 2030, the losses derived from the increase in natural disasters caused by climate change will amount to 314,000 million dollars every year. FCC Construcción has come a long way, but this is just the beginning, the establishment of a starting point. **We need to go one step further** and promote a respectful business model that increases efficiency in the resources use, reduces energy demand, proposes a progressive replacement of fossil fuels with alternative energies and designs climate-resilient infrastructures that prepare for, and adapt to climate change conditions and additionally promote resilience of the environment. It will be essential to build infrastructures that respond to the requirements of the coming years, but it is also necessary to adapt the existing ones to make them capable of withstanding pressures that were not foreseen in their design. It is a challenge, but also an opportunity of enormous significance on a global scale, supported by different investment entities and multilateral agencies.



Doha metro project
(Qatar)

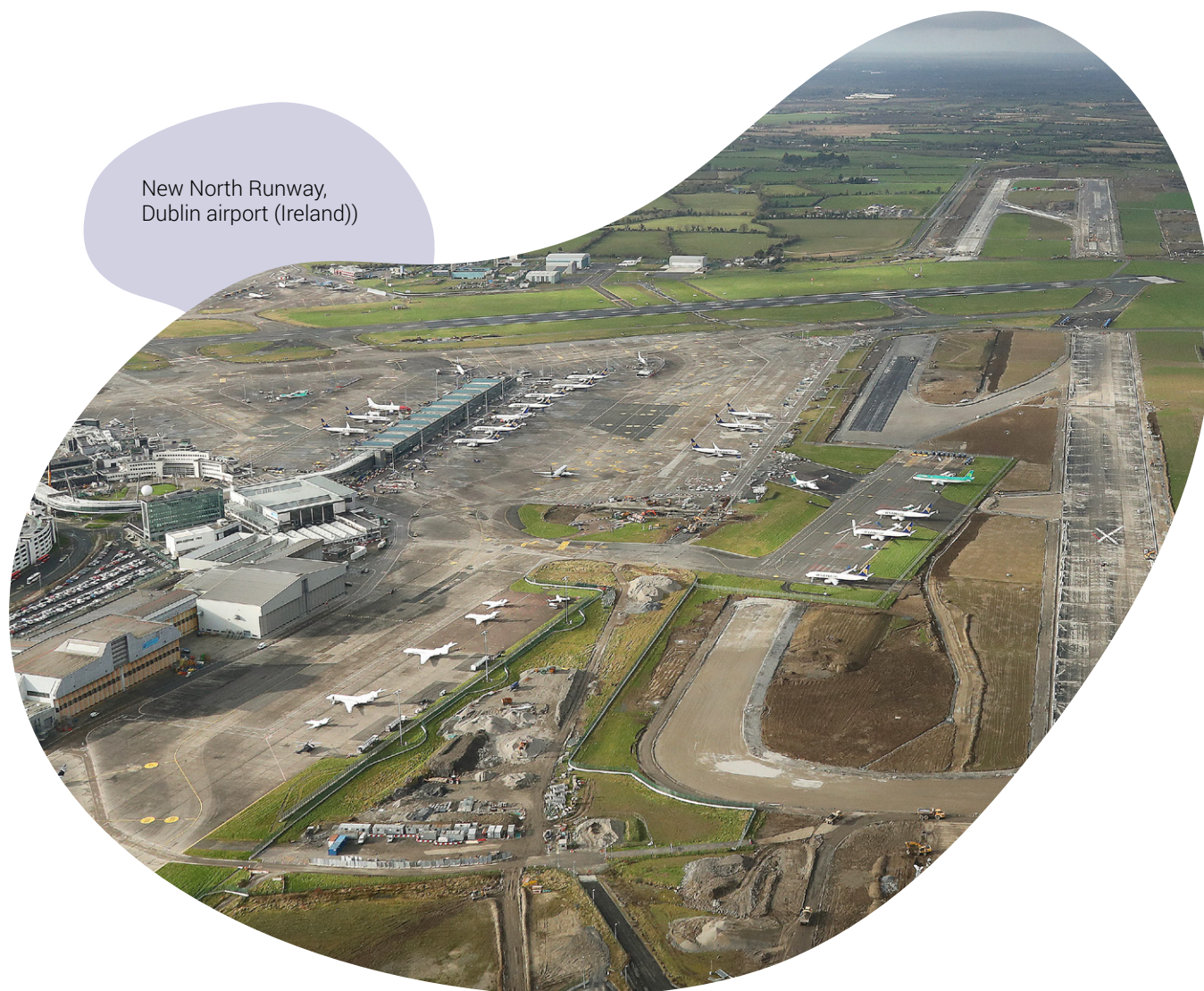
Our short-mid challenges are being able to set ambitious reduction targets that are approved by the Science Based Target Initiative² and, particularly, working in the adaptation to climate change, by assessing the impacts and analysing the vulnerability and opportunities of our company in our different locations.

This report includes the GHG inventory for **2019** reporting period, recording all emissions from the activities carried out at construction sites and premises of FCC Construcción located in **Spain, Portugal, Romania, United Kingdom, Nicaragua, Costa Rica, Panama, El Salvador, Mexico, Colombia, Chile and Peru**. This report is the responsibility of the Quality, CSR and R&D Director.

² SBTi, founded by CDP, United Nations Global Compact, WRI, WWF and We Mean Business, aims to help companies to set climate targets based on the science for reducing greenhouse gas emissions and limiting global warming to below 2°C, taking advantage of the opportunities thrown up by the transition to a low-carbon economy.

The report has been prepared according to the requirements of ISO Standard 14064-1:2012: "Greenhouse Gases. Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals" and of the sector guidelines of the European Network of Construction Companies for Research and Development (henceforth, ENCORD), May 2012 edition: "Construction CO₂ Measurement Protocol". Said document has obtained the logo "Built on GHG Protocol", making it the sector guidance of GHG Protocol for construction companies.

The verification of the Greenhouse Gas inventory has been carried out with a limited level of assurance by AENOR (see annex).

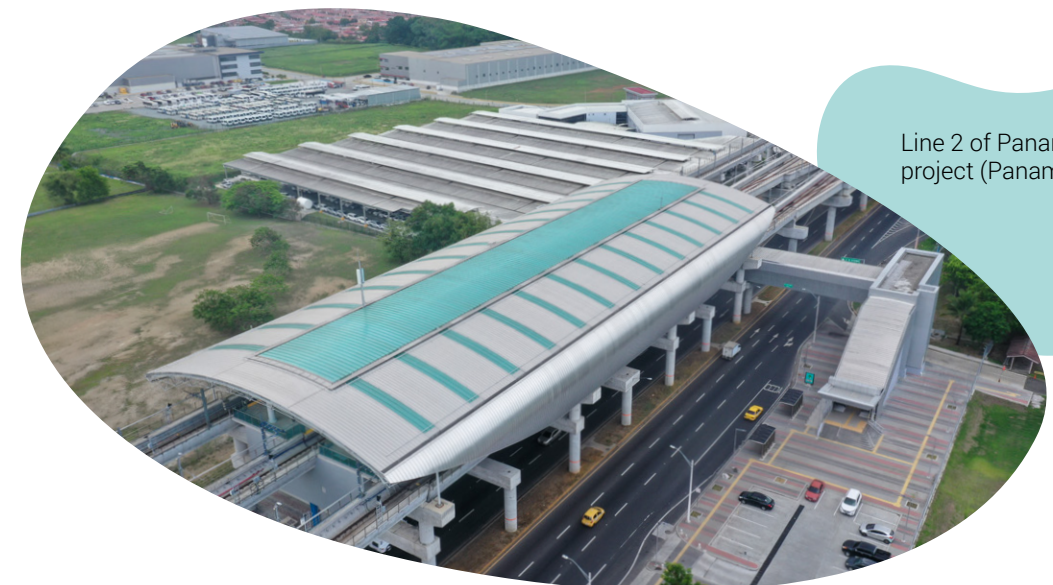


2. Organisational boundaries, operational boundaries and exclusions

2.1. Organisational boundaries

FCC Construcción uses the operational control approach for GHG emissions recording and for consolidation of GHG emissions data. This approach is recommended best practice, since it is the most appropriate for the activities of the construction sector. For the quantification of scope 1 and scope 2 emissions (emissions associated with the consumption of fuel and electricity), the GHG inventory does only consider those emissions over which the company has financial control, that is, the emissions deriving from consumption whose costs are assumed by FCC Construcción.

The information included in the GHG inventory for 2019 reporting period contains data of all centres located in Spain, Portugal, Romania, the United Kingdom, Nicaragua, Costa Rica, Panama, El Salvador, Mexico, Colombia, Chile and Peru, taking centres to mean construction sites and premises (offices, warehouses and plant storage /maintenance facilities).



2.2. Operational boundaries

The emissions of the centres within the organisational boundaries of FCC Construcción are quantified, assuming the following scopes:

Scope 1: Direct GHG emissions

These are emissions from sources that are owned or controlled by the company. They include emissions deriving from the burning of fuel used by FCC Construcción. They can be broken down into:

- Emissions associated with fuel used at projects (construction sites).
- Emissions associated with fuel used at premises (offices, warehouses, plant storage / maintenance facilities).

Scope 2: Indirect GHG emissions

Scope 2 emissions are a consequence of the organisation's activities, but they occur at the facility where electricity is generated. They include emissions from the generation of purchased electricity consumed by FCC Construcción. They can be broken down into:

- Emissions associated with electricity used at projects.
- Emissions associated with electricity used at premises.

Scope 3: Other indirect GHG emissions

These emissions are a consequence of the company's activities, but they occur from sources not owned or controlled by FCC Construcción. It has been decided to include the following emissions under scope 3:

- Emissions associated with the production and transport of purchased materials. They include emissions from the manufacture and transport to site of concrete, bituminous products (asphalt), steel, non-ferrous metals, brick and glass and emissions from transport to site of earth and graded aggregates.
- Emissions associated with the subcontracted work units. They include earth-moving works.
- Emissions associated with the transport and management of surplus waste and materials. They include emissions from the transport of surplus earth and surplus clean rubble and emissions from the transport and disposal in landfill of municipal waste and wood waste.
- Emissions associated with employee business travel. They include emissions associated with business travel of employees located in all the countries considered in the emissions report.
- Emissions deriving from losses due to electricity transport and distribution.

2.3. Exclusions

FCC Construcción has decided to exclude from quantification any fugitive emissions from air-conditioning leaks from equipment controlled by the company, given its low representativeness (approximately 1%) with regard to the total emissions released by the company.

3. Uncertainty and maximum relative importance

The emissions' estimation uncertainty is a combination of the uncertainty in emission factors and in activity data.

The emission factors deployed to draw up FCC Construcción greenhouse gas inventory are obtained from official sources and they are specific to each emission source category. The selection of these emission factors is carried out aiming to reduce uncertainty, as far as proves possible. Unless there is clear evidence otherwise, it is assumed that the probability density functions are normal and hence that the uncertainty in emission factors is low.

The activity data derive from billing data, delivery notes, measurements and data from the construction project. Based on the supplementary guidance document about uncertainty assessment (*"Guidance on uncertainty assessment in GHG inventories and calculating statistical parameter uncertainty"*) drawn up by ECCR under the "GHG Protocol", we can assume that the origin of the FCC Construcción activity data guarantees the maximum achievable certainty for the various GHG emission sources.

A maximum relative importance level of 7 % has been established with regard to the total reported Greenhouse Gas emissions.



Line 2 and line 4 of Lima metro project (Peru)

4. Quantification of GHG emissions

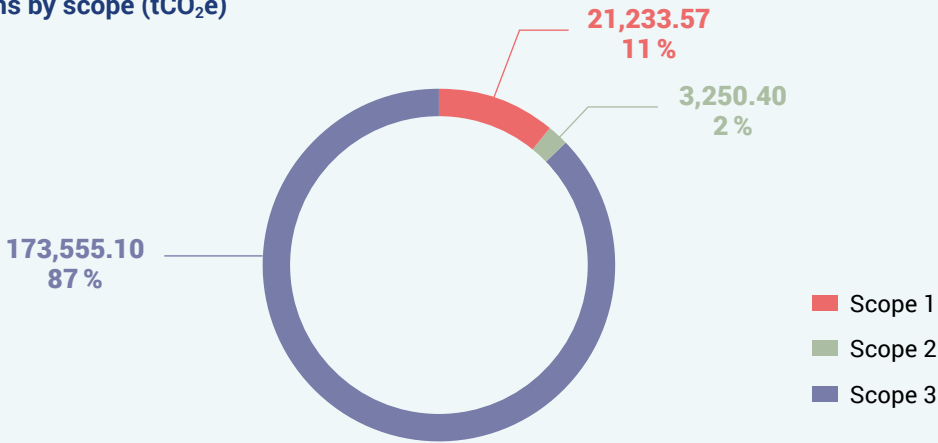
This section contains the GHG emissions' quantification of FCC Construcción in 2019, specifying the GHG emissions of Spain, Portugal, Romania, United Kingdom, Nicaragua, Costa Rica, Panama, El Salvador, Mexico, Colombia, Chile and Peru.

Firstly, the emissions are classified by scopes as defined in the Standard ISO 14064-1.

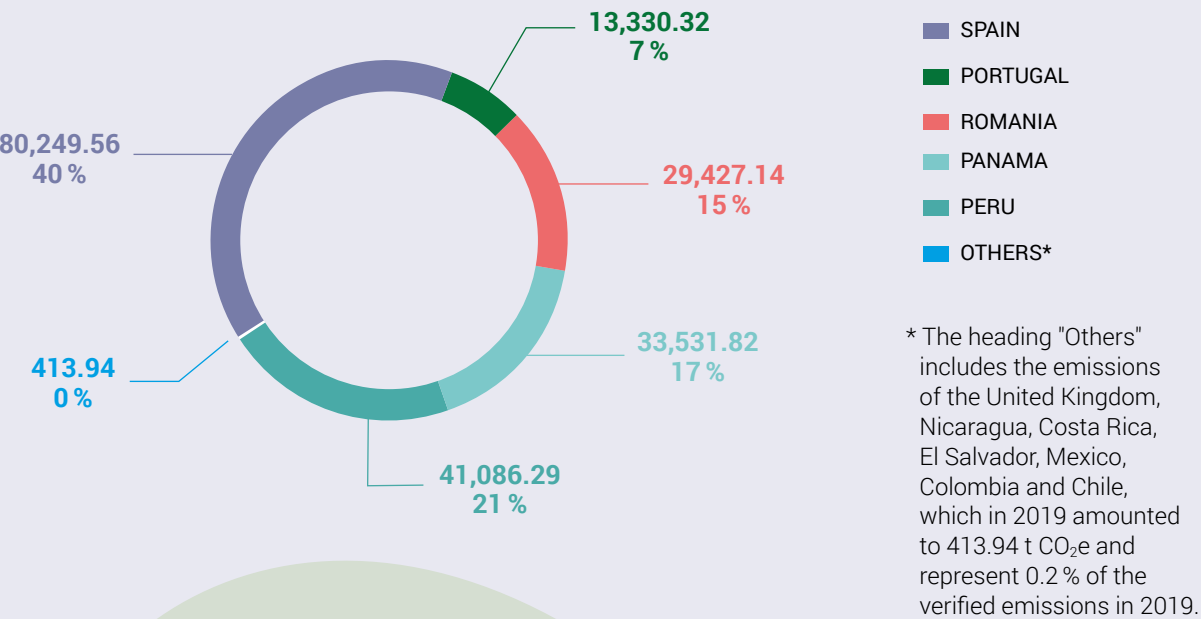
Emissions classified by scopes (according to ISO 14064-1:2012)

	t CO ₂ e 2019													
	SPAIN	PORTUGAL	ROMANIA	UNITED KINGDOM	NICARAGUA		COSTA RICA	PANAMA	EL SALVADOR	MEXICO	COLOMBIA	CHILE	PERU	TOTAL FCC Construcción
Scope 1: Direct GHG emissions	5,319.14	1,246.99	6,089.95	5.02	13.95		10.59	8,258.71	2.20	2.24	0.00	0.00	284.78	21,233.57
Associated with fuel used at projects	5,012.50	1,190.47	5,814.37	0.00	0.00		0.00	1,064.75	0.00	0.00	0.00	0.00	260.60	13,342.69
Associated with fuel used at premises	306.64	56.52	275.58	5.02	13.95		10.59	7,193.96	2.20	2.24	0.00	0.00	24.18	7,890.88
Scope 2: Indirect GHG emissions	1,666.60	151.79	292.74	11.16	14.45		19.22	476.52	0.16	8.65	1.07	4.27	603.77	3,250.40
Associated with electricity used at projects	1,262.09	135.28	280.43	0.00	0.00		0.00	11.39	0.00	0.00	0.00	0.00	600.68	2,289.87
Associated with electricity used at premises	404.51	16.51	12.31	11.16	14.45		19.22	465.13	0.16	8.65	1.07	4.27	3.09	960.53
Scope 3: Other indirect emissions	73,263.82	11,931.54	23,044.45	52.83	25.03		9.76	24,796.59	0.03	17.93	60.29	155.09	40,197.74	173,555.10
Associated with the production and transport of purchased materials	64,203.78	11,307.79	19,401.29	0.00	0.00		0.00	20,708.44	0.00	0.00	0.00	0.00	37,113.74	152,735.04
Associated with the subcontracted work units	3,444.54	416.78	1,334.77	0.00	0.00		0.00	3,315.81	0.00	0.00	0.00	0.00	967.73	9,479.63
Associated with the transport and management of surplus waste and materials	4,008.01	192.12	2,122.62	0.00	1.00		0.24	261.04	0.01	0.46	0.02	0.54	1,627.62	8,213.68
Associated with employee business travel	1,460.72	2.31	153.85	51.88	20.88		8.79	448.27	0.00	16.32	60.19	154.30	424.88	2,802.39
Deriving from losses due to electricity transport and distribution	146.77	12.54	31.92	0.95	3.15		0.73	63.03	0.02	1.15	0.08	0.25	63.77	324.36
TOTAL EMISSIONS	80,249.56	13,330.32	29,427.14	69.01	53.43		39.57	33,531.82	2.39	28.82	61.36	159.36	41,086.29	198,039.07

2019 GHG emissions by scope (tCO₂e)



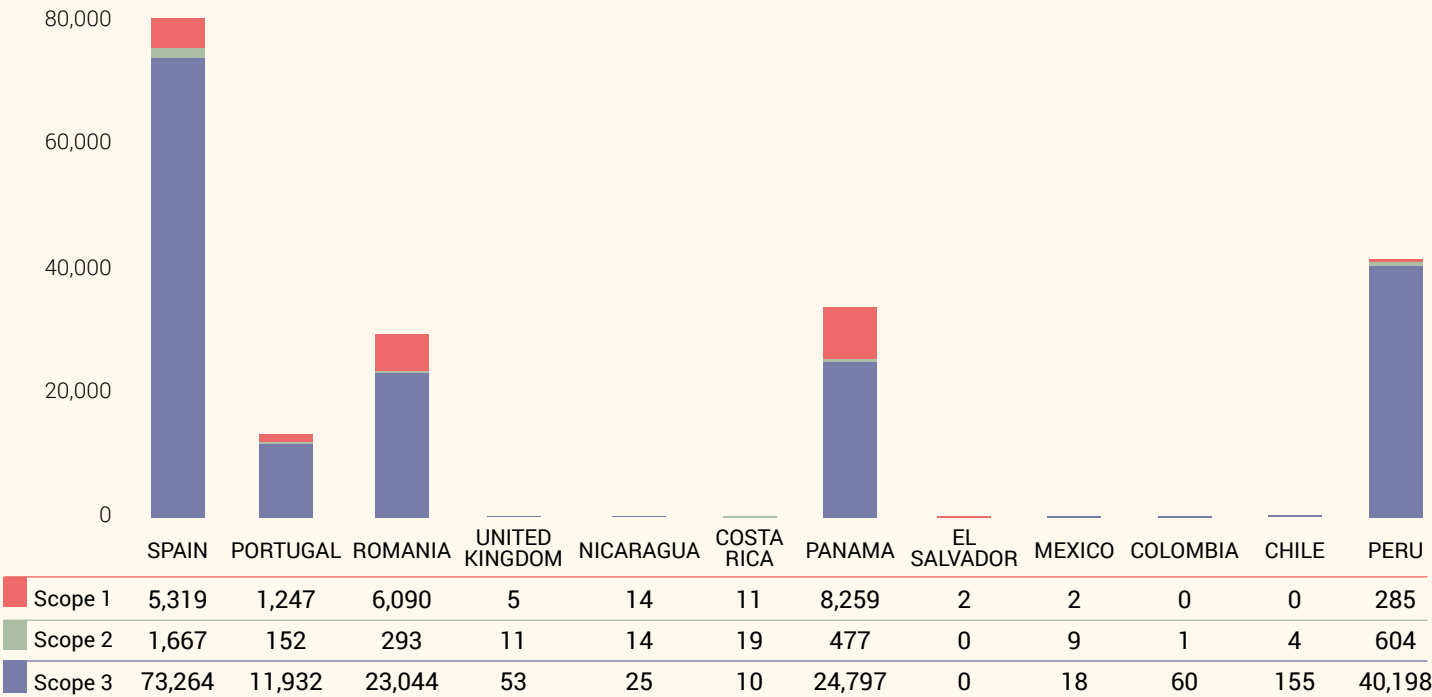
2019 GHG emissions by geographic area (tCO₂e)



FCC Construcción broadens the scope of the verified GHG inventory

FCC Construcción has calculated its Greenhouse Gas emissions since 2010, but these have only been verified in Spain. In 2019, the emissions of Portugal, Peru and Panama for the 2018 financial year were also verified. The addition of GHG emissions for the year 2019 in Nicaragua, Mexico, El Salvador, Colombia, Chile, Costa Rica, Romania and the United Kingdom in the verification process adds transparency and credibility to the organisation and entails the verification of 70.3 % of FCC Construcción's activity.

2019 GHG emissions by country (tCO₂e)



Specifically for Scope 1, the GHG emissions of financial year 2019 are reported by Greenhouse Gas type.

Scope 1 emissions, classified by GHG type

	t CO ₂ e 2019			
	CO ₂	CH ₄	N ₂ O	All GHGs
Spain	5,301.09	6.24	11.81	5,319.14
Portugal	1,242.91	1.41	2.67	1,246.99
Romania	6,070.20	6.84	12.91	6,089.95
United Kingdom	4.95	0.00	0.07	5.02
Nicaragua	13.9	0.02	0.03	13.95
Costa Rica	10.55	0.01	0.03	10.59
Panama	8,231.68	9.34	17.69	8,258.71
El Salvador	2.19	0.00	0.01	2.20
Mexico	2.18	0.04	0.02	2.24
Colombia	0.00	0.00	0.00	0.00
Chile	0.00	0.00	0.00	0.00
Peru	283.80	0.34	0.64	284.78
TOTAL FCC CONSTRUCCIÓN	21,163.45	24.24	45.88	21,233.57
Projects	13,298.52	15.28	28.90	13,342.70
Premises	7,864.93	8.96	16.98	7,890.87

In addition, the emissions are also classified and reported according to the emission blocks of the ENCORD sector guidelines.

Emissions classified by emission blocks (according to ENCORD guidelines)

	t CO ₂ e 2019													
	SPAIN	PORTUGAL	ROMANIA	UNITED KINGDOM	NICARAGUA	COSTA RICA		PANAMA	EL SALVADOR	MEXICO	COLOMBIA	CHILE	PERU	TOTAL FCC Construcción
Construction ³														
1. Fuel (projects)	5,012.50	1,190.47	5,814.37	0.00	0.00	0.00		1,064.75	0.00	0.00	0.00	0.00	260.60	13,342.69
2. Fuel (premises)	306.64	56.52	275.58	5.02	13.95	10.59		7,193.96	2.20	2.24	0.00	0.00	24.18	7,890.88
3. Process and fugitive emissions ⁴	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00
4. Electricity (projects)	1,262.09	135.28	280.43	0.00	0.00	0.00		11.39	0.00	0.00	0.00	0.00	600.68	2,289.87
5. Electricity (premises)	404.51	16.51	12.31	11.16	14.45	19.22		465.13	0.16	8.65	1.07	4.27	3.09	960.53
6. Heat	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00
7. Vehicle fuel ⁵	258.48	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	9.21	267.69
8. Public transport	1,202.24	2.31	153.85	51.88	20.88	8.79		448.27	0.00	16.32	60.19	154.30	415.67	2,534.70
9. Subcontractor	3,444.54	416.78	1,334.77	0.00	0.00	0.00		3,315.82	0.00	0.00	0.00	0.00	967.73	9,479.64
10. Waste	4,008.01	192.12	2,122.62	0.00	1.00	0.24		261.04	0.01	0.46	0.02	0.54	1,627.62	8,213.68
11. Materials	64,203.78	11,307.79	19,401.29	0.00	0.00	0.00		20,708.44	0.00	0.00	0.00	0.00	37,113.74	152,735.04
TOTAL EMISSIONS	80,102.79	13,317.78	29,395.22	68.06	50.28	38.84		33,468.79	2.37	27.67	61.28	159.11	41,022.52	197,714.71 ⁶

³ The ENCORD sector protocol divides the construction sector into three key areas of operation: the materials manufacture stage (off-site production and transport of materials used for construction); the construction stage (project design, execution of the works, including demolition and refurbishment and on-site materials manufacture); and the operation stage (management or use of the final product). All FCC Construcción activities are included in the construction stage.

⁴ See section "2.3. Exclusions".

⁵ The emission block 7 only considers emissions associated to the use of vehicles powered by electricity and emissions associated to leased or privately owned vehicles used for business travel. Emissions associated to the business travel in company owned vehicles are included under the quantification of emissions associated with fuel consumption at construction sites and premises, corresponding to emission blocks 1 and 2, respectively.

⁶ The total emissions quantified in accordance with ENCORD guidelines do not coincide with the total emissions quantified according to the Standard ISO 14064-1. This is due to the fact that ENCORD guidelines do not include a category to classify "emissions deriving from losses due to electricity transport and distribution" which in 2019 stand at 324.36 t CO₂ eq. verified.

5. Avoided emissions

This section sets out a quantification of the avoided Greenhouse Gas emissions in the twelve countries due to the implementation of environmental good practices on site. The report details the emissions which are no longer produced by implementing the following directed actions, as defined according to the terminology of Standard ISO 14064:

Avoided emissions

	t CO ₂ e 2019				
	By reusing surplus material on site and not taking it to landfill	By pH neutralization with CO ₂	By suitable maintenance of the machinery operating on site	Due to vehicle speed control on site	TOTAL EMISSIONS
Spain	2,009.26	46.74	169.15	15.28	2,240.43
Portugal	1,197.09	0.00	0.00	6.37	1,203.46
Romania	275.29	0.00	300.71	1.46	577.46
United Kingdom	0.00	0.00	0.00	0.00	0.00
Nicaragua	0.00	0.00	0.73	0.00	0.73
Costa Rica	0.00	0.00	0.00	0.00	0.00
Panama	486.35	0.00	221.21	2.56	710.12
El Salvador	0.00	0.00	0.00	0.00	0.00
Mexico	0.00	0.00	0.00	0.00	0.00
Colombia	0.00	0.00	0.00	0.00	0.00
Chile	0.00	0.00	0.00	0.00	0.00
Peru	528.64	0.00	10.25	0.00	538.89
Total FCC Construcción	4,496.63	46.74	702.05	25.67	5,271.09

6. Base year

Due to the inclusion of the construction sites and premises of Romania, United Kingdom, Nicaragua, Costa Rica, El Salvador, Mexico, Colombia and Chile in the verified GHG emissions report of FCC Construcción, according to Standard ISO 14064-1:2012 and ENCORD's sector guidelines, **2019** is selected as historic base year for GHG emissions to be compared over time⁷.

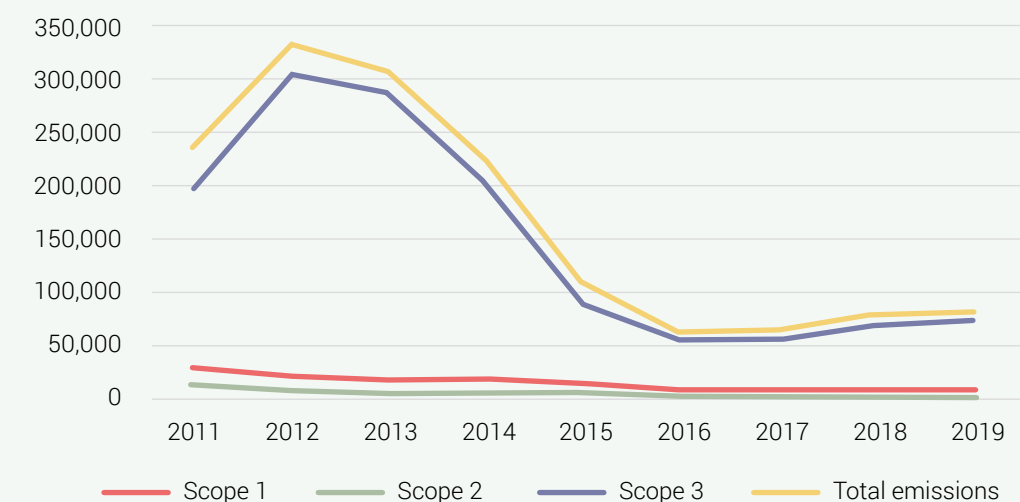
The change of base year from 2018 to 2019 is due to the change of the organisational boundaries, since, as a consequence of FCC Construcción's Management Objectives for 2017-2020, it has been decided to broaden the scope of the verified GHG emissions report, by including other countries in addition to Spain, Portugal, Peru and Panama, that had their 2018 emissions already verified. The addition of these new countries represents 15.1 % of the verified emissions in the 2019 financial year.

⁷ A meaningful and consistent comparison of the emissions over time requires setting an historical reference with which current emissions can be compared; this is known as base year emissions.

FCC Construcción has defined that the recalculation of the base year emissions will be carried out when any of the following aspects occurs:

- Changes in the operational boundaries that result in a significant change in the GHG emissions.
- Structural changes at FCC Construcción that have a significant impact on the company's base year GHG emissions.
- Changes in the GHG quantification methodologies and/or improvement in the accuracy of the emission factors that result in a significant change in the quantified GHG emissions data.
- Discovery of significant errors or of an accumulation of an important number of non-significant errors which, in an aggregate figure, have relevant consequences on the total quantified GHG emissions.

Verified GHG emissions in Spain (tCO₂e)



A committed company: we verify our GHG emissions in Spain since 2010

FCC Construcción has been voluntarily quantifying and verifying its GHG emissions at its Spanish construction sites and premises since 2010, being the first Spanish construction company to achieve this. The ambitious objective of expanding the verification of the GHG emission inventory to the international level has led to the modification of the historical base year in 2018 and 2019, as countries have been added to the scope of the inventory. The company aims to have 100 % of the activity verified under the ISO 14064-1 Standard by 2020.

7. Quantification methodologies

FCC Construcción determines its Greenhouse Gas emissions using a calculation approach, multiplying the activity data compiled at each construction site or premise by the documented GHG emission factors which are selected and updated periodically at corporate level.

FCC Construcción uses a centralised approach, consolidating the activity data gathered at each construction site or premise and quantifying the GHG emissions at corporate level, though being able to create GHG emission reports at different levels (by project, business area, client type, geographical distribution, etc.)

Railway renovation,
Line Covilha-Guarda
(Portugal)



Reference is made below to the quantification methodologies and GHG emission factors used to draw up this report.

Scope 1: Direct GHG emissions

Emissions associated with fuel consumption

To calculate these emissions, fuel consumption (at construction sites or at premises), according to FCC Construcción billing, is multiplied by the emission factors, which have been calculated based on specific official sources for each fuel and countries. Specifically:

- For Spain, the data from the spreadsheet "*Huella de Carbono de organización - Alcance 1+2 para organizaciones (2010-2019)*" ("*Organisation's carbon footprint - Scope 1 + 2 (2010-2019)*") of the Ministry for the Ecological Transition (MITECO) in its 19th version (10/06/2020) have been used, in addition to the data from Table 2.3. of the "*2006 IPCC Guidelines for National Greenhouse Gas Inventories*".
- For Portugal, the data from the Net Calorific Values tables, "*Fator de Emissao e Fator de Oxidacao e Valores de densidade*" ("*Emission and oxidation factors and density values*"), and the "*Tabela de densidades combustiveis 2013*" ("*Table of fuel densities 2013*"), from the Portuguese Environment Agency and the data from Table 2.3. of the "*2006 IPCC Guidelines for National Greenhouse Gas Inventories*" have been used.

- For Romania, Nicaragua, Panama and El Salvador, the data from Table 2.3. of the "*2006 IPCC Guidelines for National Greenhouse Gas Inventories*" have been used.
- For the United Kingdom, data from Annexes to the report by the UK Department for Environment, Food and Rural Affairs (DEFRA) "*2019 Government GHG Conversion Factors for Company Reporting*" have been used.
- For Costa Rica, the data gathered from the publication "*Factores Emisión GEI, novena edición/2019*" ("*GHG Emission Factors, ninth edition/2019*") of the National Meteorological Institute have been used.
- For Mexico, the data from the "*Acuerdo DOF 03/09/2015, que establece las particularidades técnicas y las fórmulas para la aplicación de metodologías para el cálculo de emisiones de gases o compuestos de efecto invernadero*" and "*Lista de combustibles 2020*" ("*DOF Agreement 03/09/2015, which establishes the technical characteristics and formulas for the application of methodologies for calculating greenhouse gas emissions*" and the "*2020 fuel list*") published by the National Registry of Emissions (RENE) of SEMARNAT have been used.
- For Colombia, the data from the carbon calculator of the Ministry of Environment and Sustainable Development of the Republic of Colombia have been used.
- For Chile, the data from the "*Informe del Inventario Nacional de GEI de Chile, serie 1990-2016*" ("*Report of the National GHG Inventory of Chile, series 1990-2016*"), prepared by the MINENERGIA Technical Energy Team have been used, based on the 2006 IPCC Guidelines.
- For Peru, data from the "Infocarbono" spreadsheet, developed by the Peruvian Environment Ministry, based on the 2006 IPCC Guidelines have been used.

Scope 2: Indirect GHG emissions

Emissions associated with electricity consumption

To calculate these emissions, electricity consumption (at construction sites or at premises), according to FCC Construcción billing, is multiplied by the emission factor of the corresponding country's energy-mix.

The emission factors for Portugal, Romania, Nicaragua, Costa Rica, Panama, El Salvador, Colombia and Peru have been obtained from the report "*Statistics - Emissions Factors (2019 Edition)*" of the International Energy Agency. For all other countries, specific emission factors have been used from the following local sources:

- For Spain, the emission factor was obtained from the spreadsheet "*Huella de Carbono de organización - Alcance 1+2 para organizaciones (2010-2019)*" ("*Organisation's carbon footprint - Scope 1 + 2 (2010-2019)*") of the Ministry for the Ecological Transition (MITECO) in its 19th version (10/06/2020).
- For the United Kingdom, the emission factor was obtained from the Annexes to the report by the UK Department for Environment, Food and Rural Affairs (DEFRA) "*2019 Government GHG Conversion Factors for Company Reporting*".

Greenhouse Gas Emissions Report 2019



Greenhouse Gas Emissions Report 2019



- For Mexico, the emission factor was obtained from the annual publication "*Factor de Emisión del Sistema Eléctrico Nacional*" ("*Emission Factor of the National Electric System*") of the National Registry of Emissions (RENE) of the Government of Mexico.
- For Chile, the emission factor was obtained from the "*Anuario Estadístico de Energía 2019*" ("*2019 Statistical Yearbook of Energy*") of the Ministry of Energy of the Government of Chile.

Scope 3: Other indirect emissions

Emissions associated with the production and transport of purchased materials

The quantification methodology is based on activity data (materials' production and consumption data and the distance travelled from their production site to the construction site) and on the emission factors associated with the production and transport of said materials.

The emission factor for asphalt (bituminous products) has been obtained from the verified emissions of FCC Construcción's own premises, the emission factors for steel, non-ferrous metals, brick and glass have been obtained from a study of Cantabria University and the emission factor for concrete has been obtained from historical data of FCC Construcción plants' electricity consumption.

The emission factors associated with transport have been obtained from the Annexes to the report by the UK Department for Environment, Food and Rural Affairs (DEFRA) "*2019 Government GHG Conversion Factors for Company Reporting*".

Castrovido dam (Spain)



Emissions associated with the subcontracted work units

To calculate emissions associated with earth-moving works, the methodology uses an emission factor which is calculated based on a study of the Machinery Directorate of FCC Construcción that determines the amount and type of fuel required to carry out earth-moving of a certain size and using the fuel emission factors from specific official sources of each country, as has been specified previously (see Scope 1).

Emissions associated with the transport and management of surplus waste and materials

The emissions associated with the transport and management of wastes and surplus materials are calculated, considering as activity data both the volumes of surplus rubble and earth and the weight of municipal waste and wood waste generated on site, as well as the distances from the construction site or premise to its final destination.

The emission factors associated with transport and landfill disposal have been obtained from the Annexes to the report by the UK Department for Environment, Food and Rural Affairs (DEFRA) "*2019 Government GHG Conversion Factors for Company Reporting*".

Emissions associated with employee business travels

The activity data required for calculating these emissions, in other words, the kilometres travelled by FCC Construcción employees in business travels, are supplied by the corporate area, when tickets are obtained through the company's corporate platform, or by the Administration Departments of the different countries, when the purchase is made locally. This information is obtained from the reports provided by the different suppliers.

The emission factors associated with the different means of transport (car, coach, local train and plane) come from the Annexes to the report by the UK Department for Environment, Food and Rural Affairs (DEFRA) "*2019 Government GHG Conversion Factors for Company Reporting*". The emission factors associated with employee business travels by train in Spain are obtained from the "*Practical Guide for the calculation of Greenhouse Gas emissions (GHG)*" of the Catalan Office for Climate Change.

Emissions deriving from losses due to electricity transport and distribution

These emissions are obtained as a product of the electricity consumption multiplied by an electricity distribution losses factor which is to be found in the report "*Statistics - Emissions Factors (2019 Edition)*" of the International Energy Agency, except for the United Kingdom, where the factor comes from the spreadsheet "Transmission and distribution" of the Annexes to the report by the UK Department for Environment, Food and Rural Affairs (DEFRA) "*2019 Government GHG Conversion Factors for Company Reporting*".

Report completion date: 10 July 2020

Legal deposit: M-21093-2020

**AENOR Verification Statement for
FCC CONSTRUCCIÓN, S.A.
for the Inventory of greenhouse gas emissions for 2019**

FILE: 1994/0112/GEN/01

Introduction

FCC CONSTRUCCIÓN, S.A. (hereinafter the company) has engaged AENOR INTERNACIONAL, S.A.U. (AENOR) to perform a limited review of the Greenhouse Gas Emissions Inventory (GHG) for 2019 of its activities included in the GHG report dated 10 July 2020, which is part of this Statement.

AENOR is accredited by the Mexican Accreditation Body, with OVVGHG number 004/14 (valid from 31/10/2014; revision date 27/11/2018), pursuant to standard ISO 14065: 2013, to verify greenhouse gas emissions in accordance with the requirements established in the ISO 14064-3: 2006 standard for the energy and waste sectors.

Inventory of GHG emissions issued by the Organisation: FCC CONSTRUCCIÓN S.A., with registered office at AV CAMINO DE SANTIAGO, 40. 28050-MADRID

Representatives of the Organisation:

Director of Quality and CSR at FCC CONSTRUCCIÓN S.A.

FCC CONSTRUCCIÓN S.A., was responsible for reporting its GHG emissions in accordance with the reference standard UNE-EN ISO 14064-1:2012

Objective

The objective of the verification is to provide interested parties with a professional and independent opinion on the information and data contained in the aforementioned FCC CONSTRUCTION, S.A. GHG Report.

Scope of the Verification

The scope of the verification is for the activities provided by the company at its facilities in **Spain, Portugal, Romania, United Kingdom, Nicaragua, Costa Rica, Panama, El Salvador, Mexico, Colombia, Chile and Peru**. Facilities are defined as fixed works and centres, which include offices, warehouses and machinery depots.

All greenhouse gases emitted by the organisation have been considered. The FCC Construcción emissions inventory includes CO₂, CH₄ and N₂O emissions.

During the verification process, the information was analysed in accordance with the operational control approach established by the UNE-EN ISO 14064-1:2012 standard. In other words, the company reports all the GHG emissions that are attributable to the operations it controls.

Direct and indirect activities and verification exclusions

The activities subject to verification are studied under three scopes (following ISO 14064-1 guidelines), which are:

Scope 1: Direct GHG emissions:

These are the emissions from sources that are owned or controlled by the company. They include emissions resulting from the combustion of fuels consumed by FCC Construcción.

They are broken down into:

- Emissions associated with fuel consumption on site.
- Emissions associated with fuel consumption at fixed centres.

Scope 2: Indirect GHG emissions from the generation of energy

Scope 2 emissions are caused by the organisation's activity, but they occur at the plant where electricity is generated. They include the emissions generated by the electricity purchased by FCC Construcción.

They are broken down into:

- Emissions associated with the consumption of electricity on site.
- Emissions associated with the consumption of electricity at fixed centres.

Scope 3: Other indirect GHG emissions

These emissions are a consequence of the company's activities, but they are produced at sources that are not owned or controlled by FCC Construcción.

A decision has been made to include the following emissions in scope 3:

- Emissions associated with the production and transport of consumed materials: Emissions from the manufacture and transport of concrete, asphalt agglomerate, steel, non-ferrous metals, bricks and glass and emissions from transporting earth and graded aggregates are considered.
- Emissions associated with the activities performed by subcontracted works units: Earthmoving is considered.
- Emissions associated with the transport and management of waste and surplus materials: Emissions associated with the transport of surplus land, surplus clean waste and transportation and landfill of MSW and wood are considered.
- Emissions associated with travel undertaken by company personnel for business trips.
- Emissions from losses incurred during the transportation and distribution of electricity.

Exclusions

FCC Construcción has decided to exclude emissions from its air conditioning equipment, as these have low representativity (<1%) with respect to total emissions.

Targeted actions

The company has presented the quantification of greenhouse gas emissions avoided in 2019 due to the implementation of good practices on site.

The actions that have been considered are as follows:

- reusing materials on site and not taking them to landfill
- neutralising pH with CO₂
- proper maintenance of machinery used on site
- controlling the speed of vehicles on site

Base year

The organisation's base year is **2019**.

Relative importance

The verification process considered as material discrepancies any omissions, distortions or errors that can be quantified and that result in a difference of more than 7% with respect to the total declared emissions.

Criteria

The criteria and information taken into account to perform the verification were:

- 1) The UNE-ISO 14064-1:2012 standard: Specification with guidance, at organisational level, for the quantification and reporting of greenhouse gas emissions and removals.
- 2) The UNE-ISO 14064-3:2012 standard: Specification with guidance for the validation and verification of greenhouse gas statements
- 3) ENCORD - European Network of Construction Companies for Research and Development directives.
- 4) Basic guide for quantifying greenhouse gas emissions, version 7.
- 5) Guide for calculating greenhouse gas emissions in fcc construction, version 18.

Finally, the Emission Report prepared by the organisation and dated July 2020 was verified. AENOR is expressly held harmless from any responsibility with respect to investment decisions or other decisions based on this statement.

Conclusion

There is no evidence to suggest that the information on emissions reported in the Greenhouse Gas Report 2019 of FCC CONSTRUCCIÓN, S.A., is not a faithful representation of the emissions of its activities.

In accordance with this Statement, the data on emissions/removals finally verified are listed below.

TOTAL FCC DATA

TOTAL FCC	t CO ₂ e
Scope 1: Direct GHG emissions	21,233.57
associated with on-site fuel consumption	13,342.69
associated fuel consumption at fixed centres	7,890.88
Scope 2: Indirect GHG emissions	3,250.40
associated with on-site electricity consumption	2,289.87
associated electricity consumption at fixed centres	960.53
Scope 3: Other indirect emissions	173,555.10
associated with the production and transport of consumed materials	152,735.04
associated with the activities performed by subcontracted works units	9,479.63
associated with the transport and management of waste and surplus materials	8,213.68
associated with the travel undertaken company personnel for business trips	2,802.39
caused by losses incurred during the transportation and distribution of electricity	324.36
Total Emissions	198,039.07

TOTAL FCC	t CO ₂ e
Construction	
1. Fuel (site)	13,342.69
2. Fuel (fixed centres)	7,890.88
3. Fugitive and process emissions (excluded emissions)	0.00
4. Electrical energy (site)	2,289.87
5. Electrical energy (fixed centres)	960.53
6. Heat	0.00
7. Vehicle fuel	267.69
8. Travel undertaken by company personnel	2,534.70
9. Subcontractors	9,479.63
10. Waste	8,213.68
11. Materials	152,735.04
Total Emissions	197,714.71

AVOIDED EMISSIONS (TARGETED ACTIONS AND QUANTIFIED EMISSIONS)

TOTAL FCC	t CO ₂ e
reusing materials on site and not taking them to landfill	4,496.63
neutralising pH with CO ₂	46.74
proper maintenance of machinery used on site	702.05
controlling the speed of vehicles on site	25.67
Total Emissions	5,271.09

FCC SPAIN VERIFIED DATA

FCC SPAIN	t CO ₂ e
Scope 1: Direct GHG emissions	5,319.14
associated with on-site fuel consumption	5,012.50
associated fuel consumption at fixed centres	306.64
Scope 2: Indirect GHG emissions	1,666.60
associated with on-site electricity consumption	1,262.09
associated electricity consumption at fixed centres	404.51
Scope 3: Other indirect emissions	73,263.82
associated with the production and transport of consumed materials	64,203.78
associated with the activities performed by subcontracted works units	3,444.54
associated with the transport and management of waste and surplus materials	4,008.01
associated with the travel undertaken company personnel for business trips	1,460.72
caused by losses incurred during the transportation and distribution of electricity	146.77
Total Emissions	80,249.56

FCC SPAIN	t CO ₂ e
Construction	
1. Fuel (site)	5,012.50
2. Fuel (fixed centres)	306.64
3. Fugitive and process emissions (excluded emissions)	0.00
4. Electrical energy (site)	1,262.09
5. Electrical energy (fixed centres)	404.51
6. Heat	0.00
7. Vehicle fuel	258.48
8. Travel undertaken by company personnel	1,202.24
9. Subcontractors	3,444.54
10. Waste	4,008.01
11. Materials	64,203.78
Total Emissions	80,102.79

AVOIDED EMISSIONS (TARGETED ACTIONS AND QUANTIFIED EMISSIONS)

FCC SPAIN	t CO ₂ e
reusing materials on site and not taking them to landfill	2,009.26
neutralising pH with CO ₂	46.74
proper maintenance of machinery used on site	169.15
controlling the speed of vehicles on site	15.28
Total Emissions	2,240.43

FCC PERU VERIFIED DATA

FCC PERU	t CO ₂ e
Scope 1: Direct GHG emissions	284.78
associated with on-site fuel consumption	260.60
associated fuel consumption at fixed centres	24.18
Scope 2: Indirect GHG emissions	603.77
associated with on-site electricity consumption	600.68
associated electricity consumption at fixed centres	3.09
Scope 3: Other indirect emissions	40,197.74
associated with the production and transport of consumed materials	37,113.74
associated with the activities performed by subcontracted works units	967.73
associated with the transport and management of waste and surplus materials	1,627.62
associated with the travel undertaken company personnel for business trips	424.88
caused by losses incurred during the transportation and distribution of electricity	63.77
Total Emissions	41,086.29

FCC PERU	t CO ₂ e
Construction	
1. Fuel (site)	260.60
2. Fuel (fixed centres)	24.18
3. Fugitive and process emissions (excluded emissions)	0.00
4. Electrical energy (site)	600.68
5. Electrical energy (fixed centres)	3.09
6. Heat	0.00
7. Vehicle fuel	9.21
8. Travel undertaken by company personnel	415.67
9. Subcontractors	967.73
10. Waste	1,627.62
11. Materials	37,113.74
Total Emissions	41,022.52

AVOIDED EMISSIONS (TARGETED ACTIONS AND QUANTIFIED EMISSIONS)

FCC PERU	t CO ₂ e
reusing materials on site and not taking them to landfill	528.64
neutralising pH with CO ₂	0.00
proper maintenance of machinery used on site	10.25
controlling the speed of vehicles on site	0.00
Total Emissions	538.89

FCC PORTUGAL VERIFIED DATA

FCC PORTUGAL (RAMALHO ROSA COBETAR, SOCIEDADE DE CONSTRUÇÕES, S.A.)	t CO₂e
Scope 1: Direct GHG emissions	1,246.99
associated with on-site fuel consumption	1,190.47
associated fuel consumption at fixed centres	56.52
Scope 2: Indirect GHG emissions	151.79
associated with on-site electricity consumption	135.28
associated electricity consumption at fixed centres	16.51
Scope 3: Other indirect emissions	11,931.54
associated with the production and transport of consumed materials	11,307.79
associated with the activities performed by subcontracted works units	416.78
associated with the transport and management of waste and surplus materials	192.12
associated with the travel undertaken company personnel for business trips	2.31
caused by losses incurred during the transportation and distribution of electricity	12.54
Total Emissions	13,330.32

FCC PORTUGAL (RAMALHO ROSA COBETAR, SOCIEDADE DE CONSTRUÇÕES, S.A.)	t CO₂e
Construction	
1. Fuel (site)	1,190.47
2. Fuel (fixed centres)	56.52
3. Fugitive and process emissions (excluded emissions)	0.00
4. Electrical energy (site)	135.28
5. Electrical energy (fixed centres)	16.51
6. Heat	0.00
7. Vehicle fuel	0.00
8. Travel undertaken by company personnel	2.31
9. Subcontractors	416.78
10. Waste	192.12
11. Materials	11,307.79
Total Emissions	13,317.78

AVOIDED EMISSIONS (TARGETED ACTIONS AND QUANTIFIED EMISSIONS)

FCC PORTUGAL (RAMALHO ROSA COBETAR, SOCIEDADE DE CONSTRUÇÕES, S.A.)	t CO₂e
reusing materials on site and not taking them to landfill	1,197.09
neutralising pH with CO ₂	0.00
proper maintenance of machinery used on site	0.00
controlling the speed of vehicles on site	6.37
Total Emissions	1,203.46

FCC PANAMA VERIFIED DATA

FCC PANAMA	t CO₂e
Scope 1: Direct GHG emissions	8,258.71
associated with on-site fuel consumption	1,064.75
associated fuel consumption at fixed centres	7,193.96
Scope 2: Indirect GHG emissions	476.52
associated with on-site electricity consumption	11.39
associated electricity consumption at fixed centres	465.13
Scope 3: Other indirect emissions	24,796.59
associated with the production and transport of consumed materials	20,708.44
associated with the activities performed by subcontracted works units	3,315.81
associated with the transport and management of waste and surplus materials	261.04
associated with the travel undertaken company personnel for business trips	448.27
caused by losses incurred during the transportation and distribution of electricity	63.03
Total Emissions	33,531.82

FCC PANAMA	t CO₂e
Construction	
1. Fuel (site)	1,064.75
2. Fuel (fixed centres)	7,193.96
3. Fugitive and process emissions (excluded emissions)	0.00
4. Electrical energy (site)	11.39
5. Electrical energy (fixed centres)	465.13
6. Heat	0.00
7. Vehicle fuel	0.00
8. Travel undertaken by company personnel	448.27
9. Subcontractors	3,315.81
10. Waste	261.04
11. Materials	20,708.44
Total Emissions	33,468.79

AVOIDED EMISSIONS (TARGETED ACTIONS AND QUANTIFIED EMISSIONS)

FCC PANAMA	t CO₂e
reusing materials on site and not taking them to landfill	486.35
neutralising pH with CO ₂	0.00
proper maintenance of machinery used on site	221.21
controlling the speed of vehicles on site	2.56
Total Emissions	710.12

FCC ROMANIA VERIFIED DATA

FCC ROMANIA	t CO₂e
Scope 1: Direct GHG emissions	6,089.95
associated with on-site fuel consumption	5,814.37
associated fuel consumption at fixed centres	275.58
Scope 2: Indirect GHG emissions	292.74
associated with on-site electricity consumption	280.43
associated electricity consumption at fixed centres	12.31
Scope 3: Other indirect emissions	23,044.45
associated with the production and transport of consumed materials	19,401.29
associated with the activities performed by subcontracted works units	1,334.77
associated with the transport and management of waste and surplus materials	2,122.62
associated with the travel undertaken company personnel for business trips	153.85
caused by losses incurred during the transportation and distribution of electricity	31.92
Total Emissions	29,427.14

FCC ROMANIA	t CO₂e
Construction	
1. Fuel (site)	5,814.37
2. Fuel (fixed centres)	275.58
3. Fugitive and process emissions (excluded emissions)	0.00
4. Electrical energy (site)	280.43
5. Electrical energy (fixed centres)	12.31
6. Heat	0.00
7. Vehicle fuel	0.00
8. Travel undertaken by company personnel	153.85
9. Subcontractors	1,334.77
10. Waste	2,122.62
11. Materials	19,401.29
Total Emissions	29,395.22

AVOIDED EMISSIONS (TARGETED ACTIONS AND QUANTIFIED EMISSIONS)

FCC ROMANIA	t CO₂e
reusing materials on site and not taking them to landfill	275.29
neutralising pH with CO ₂	0.00
proper maintenance of machinery used on site	300.71
controlling the speed of vehicles on site	1.46
Total Emissions	577.46

FCC NICARAGUA VERIFIED DATA

FCC NICARAGUA	t CO₂e
Scope 1: Direct GHG emissions	13.95
associated with on-site fuel consumption	0.00
associated fuel consumption at fixed centres	13.95
Scope 2: Indirect GHG emissions	14.45
associated with on-site electricity consumption	0.00
associated electricity consumption at fixed centres	14.45
Scope 3: Other indirect emissions	25.03
associated with the production and transport of consumed materials	0.00
associated with the activities performed by subcontracted works units	0.00
associated with the transport and management of waste and surplus materials	1.00
associated with the travel undertaken company personnel for business trips	20.88
caused by losses incurred during the transportation and distribution of electricity	3.15
Total Emissions	53.43

FCC NICARAGUA	t CO₂e
Construction	
1. Fuel (site)	0.00
2. Fuel (fixed centres)	13.95
3. Fugitive and process emissions (excluded emissions)	0.00
4. Electrical energy (site)	0.00
5. Electrical energy (fixed centres)	14.45
6. Heat	0.00
7. Vehicle fuel	0.00
8. Travel undertaken by company personnel	20.88
9. Subcontractors	0.00
10. Waste	1.00
11. Materials	0.00
Total Emissions	50.28

AVOIDED EMISSIONS (TARGETED ACTIONS AND QUANTIFIED EMISSIONS)

FCC NICARAGUA	t CO₂e
reusing materials on site and not taking them to landfill	0.00
neutralising pH with CO ₂	0.00
proper maintenance of machinery used on site	0.73
controlling the speed of vehicles on site	0.00
Total Emissions	0.73

FCC COSTA RICA VERIFIED DATA

FCC COSTA RICA	t CO₂e
Scope 1: Direct GHG emissions	10.59
associated with on-site fuel consumption	0.00
associated fuel consumption at fixed centres	10.59
Scope 2: Indirect GHG emissions	19.22
associated with on-site electricity consumption	0.00
associated electricity consumption at fixed centres	19.22
Scope 3: Other indirect emissions	9.76
associated with the production and transport of consumed materials	0.00
associated with the activities performed by subcontracted works units	0.00
associated with the transport and management of waste and surplus materials	0.24
associated with the travel undertaken company personnel for business trips	8.79
caused by losses incurred during the transportation and distribution of electricity	0.73
Total Emissions	39.57

FCC COSTA RICA	t CO₂e
Construction	
1. Fuel (site)	0.00
2. Fuel (fixed centres)	10.59
3. Fugitive and process emissions (excluded emissions)	0.00
4. Electrical energy (site)	0.00
5. Electrical energy (fixed centres)	19.22
6. Heat	0.00
7. Vehicle fuel	0.00
8. Travel undertaken by company personnel	8.79
9. Subcontractors	0.00
10. Waste	0.24
11. Materials	0.00
Total Emissions	38.84

AVOIDED EMISSIONS (TARGETED ACTIONS AND QUANTIFIED EMISSIONS)

FCC COSTA RICA	t CO₂e
reusing materials on site and not taking them to landfill	0.00
neutralising pH with CO ₂	0.00
proper maintenance of machinery used on site	0.00
controlling the speed of vehicles on site	0.00
Total Emissions	0.00

FCC EL SALVADOR VERIFIED DATA

FCC EL SALVADOR	t CO₂e
Scope 1: Direct GHG emissions	2.20
associated with on-site fuel consumption	0.00
associated fuel consumption at fixed centres	2.20
Scope 2: Indirect GHG emissions	0.16
associated with on-site electricity consumption	0.00
associated electricity consumption at fixed centres	0.16
Scope 3: Other indirect emissions	0.03
associated with the production and transport of consumed materials	0.00
associated with the activities performed by subcontracted works units	0.00
associated with the transport and management of waste and surplus materials	0.01
associated with the travel undertaken company personnel for business trips	0.00
caused by losses incurred during the transportation and distribution of electricity	0.02
Total Emissions	2.39

FCC EL SALVADOR	t CO₂e
Construction	
1. Fuel (site)	0.00
2. Fuel (fixed centres)	2.20
3. Fugitive and process emissions (excluded emissions)	0.00
4. Electrical energy (site)	0.00
5. Electrical energy (fixed centres)	0.16
6. Heat	0.00
7. Vehicle fuel	0.00
8. Travel undertaken by company personnel	0.00
9. Subcontractors	0.00
10. Waste	0.01
11. Materials	0.00
Total Emissions	2.37

AVOIDED EMISSIONS (TARGETED ACTIONS AND QUANTIFIED EMISSIONS)

FCC EL SALVADOR	t CO₂e
reusing materials on site and not taking them to landfill	0.00
neutralising pH with CO ₂	0.00
proper maintenance of machinery used on site	0.00
controlling the speed of vehicles on site	0.00
Total Emissions	0.00

FCC MEXICO VERIFIED DATA

FCC MEXICO	t CO₂e
Scope 1: Direct GHG emissions	2.24
associated with on-site fuel consumption	0.00
associated fuel consumption at fixed centres	2.24
Scope 2: Indirect GHG emissions	8.65
associated with on-site electricity consumption	0.00
associated electricity consumption at fixed centres	8.65
Scope 3: Other indirect emissions	17.93
associated with the production and transport of consumed materials	0.00
associated with the activities performed by subcontracted works units	0.00
associated with the transport and management of waste and surplus materials	0.46
associated with the travel undertaken company personnel for business trips	16.32
caused by losses incurred during the transportation and distribution of electricity	1.15
Total Emissions	28.82

FCC MEXICO	t CO₂e
Construction	
1. Fuel (site)	0.00
2. Fuel (fixed centres)	2.24
3. Fugitive and process emissions (excluded emissions)	0.00
4. Electrical energy (site)	0.00
5. Electrical energy (fixed centres)	8.65
6. Heat	0.00
7. Vehicle fuel	0.00
8. Travel undertaken by company personnel	16.32
9. Subcontractors	0.00
10. Waste	0.46
11. Materials	0.00
Total Emissions	27.67

AVOIDED EMISSIONS (TARGETED ACTIONS AND QUANTIFIED EMISSIONS)

FCC MEXICO	t CO₂e
reusing materials on site and not taking them to landfill	0.00
neutralising pH with CO ₂	0.00
proper maintenance of machinery used on site	0.00
controlling the speed of vehicles on site	0.00
Total Emissions	0.00

FCC COLOMBIA VERIFIED DATA

FCC COLOMBIA	t CO₂e
Scope 1: Direct GHG emissions	0.00
associated with on-site fuel consumption	0.00
associated fuel consumption at fixed centres	0.00
Scope 2: Indirect GHG emissions	1.07
associated with on-site electricity consumption	0.00
associated electricity consumption at fixed centres	1.07
Scope 3: Other indirect emissions	60.29
associated with the production and transport of consumed materials	0.00
associated with the activities performed by subcontracted works units	0.00
associated with the transport and management of waste and surplus materials	0.02
associated with the travel undertaken company personnel for business trips	60.19
caused by losses incurred during the transportation and distribution of electricity	0.08
Total Emissions	61.36

FCC COLOMBIA	t CO₂e
Construction	
1. Fuel (site)	0.00
2. Fuel (fixed centres)	0.00
3. Fugitive and process emissions (excluded emissions)	0.00
4. Electrical energy (site)	0.00
5. Electrical energy (fixed centres)	1.07
6. Heat	0.00
7. Vehicle fuel	0.00
8. Travel undertaken by company personnel	60.19
9. Subcontractors	0.00
10. Waste	0.02
11. Materials	0.00
Total Emissions	61.28

AVOIDED EMISSIONS (TARGETED ACTIONS AND QUANTIFIED EMISSIONS)

FCC COLOMBIA	t CO₂e
reusing materials on site and not taking them to landfill	0.00
neutralising pH with CO ₂	0.00
proper maintenance of machinery used on site	0.00
controlling the speed of vehicles on site	0.00
Total Emissions	0.00

FCC CHILE VERIFIED DATA

FCC CHILE	t CO ₂ e
Scope 1: Direct GHG emissions	0.00
associated with on-site fuel consumption	0.00
associated fuel consumption at fixed centres	0.00
Scope 2: Indirect GHG emissions	4.27
associated with on-site electricity consumption	0.00
associated electricity consumption at fixed centres	4.27
Scope 3: Other indirect emissions	155.09
associated with the production and transport of consumed materials	0.00
associated with the activities performed by subcontracted works units	0.00
associated with the transport and management of waste and surplus materials	0.54
associated with the travel undertaken company personnel for business trips	154.30
caused by losses incurred during the transportation and distribution of electricity	0.25
Total Emissions	159.36

FCC CHILE	t CO ₂ e
Construction	
1. Fuel (site)	0.00
2. Fuel (fixed centres)	0.00
3. Fugitive and process emissions (excluded emissions)	0.00
4. Electrical energy (site)	0.00
5. Electrical energy (fixed centres)	4.27
6. Heat	0.00
7. Vehicle fuel	0.00
8. Travel undertaken by company personnel	154.30
9. Subcontractors	0.00
10. Waste	0.54
11. Materials	0.00
Total Emissions	159.11

AVOIDED EMISSIONS (TARGETED ACTIONS AND QUANTIFIED EMISSIONS)

FCC CHILE	t CO ₂ e
reusing materials on site and not taking them to landfill	0.00
neutralising pH with CO ₂	0.00
proper maintenance of machinery used on site	0.00
controlling the speed of vehicles on site	0.00
Total Emissions	0.00

FCC UNITED KINGDOM VERIFIED DATA

FCC UNITED KINGDOM	t CO ₂ e
Scope 1: Direct GHG emissions	5.02
associated with on-site fuel consumption	0.00
associated fuel consumption at fixed centres	5.02
Scope 2: Indirect GHG emissions	11.16
associated with on-site electricity consumption	0.00
associated electricity consumption at fixed centres	11.16
Scope 3: Other indirect emissions	52.83
associated with the production and transport of consumed materials	0.00
associated with the activities performed by subcontracted works units	0.00
associated with the transport and management of waste and surplus materials	0.00
associated with the travel undertaken company personnel for business trips	51.88
caused by losses incurred during the transportation and distribution of electricity	0.95
Total Emissions	69.01

FCC UNITED KINGDOM	t CO ₂ e
Construction	
1. Fuel (site)	0.00
2. Fuel (fixed centres)	5.02
3. Fugitive and process emissions (excluded emissions)	0.00
4. Electrical energy (site)	0.00
5. Electrical energy (fixed centres)	11.16
6. Heat	0.00
7. Vehicle fuel	0.00
8. Travel undertaken by company personnel	51.88
9. Subcontractors	0.00
10. Waste	0.00
11. Materials	0.00
Total Emissions	68.06

AVOIDED EMISSIONS (TARGETED ACTIONS AND QUANTIFIED EMISSIONS)

FCC UNITED KINGDOM	t CO ₂ e
reusing materials on site and not taking them to landfill	0.00
neutralising pH with CO ₂	0.00
proper maintenance of machinery used on site	0.00
controlling the speed of vehicles on site	0.00
Total Emissions	0.00

Chief verifier: ASIER TORRES

ASIER
TORRES
GONZALEZ

Firmado
digitalmente por
ASIER TORRES
GONZALEZ

Technical reviewer: FERNANDO SEGARRA

FERNANDO
SEGARRA
ORERO

Firmado
digitalmente por
FERNANDO
SEGARRA ORERO

Place and date, Madrid, 10 July 2020

