



Greenhouse Gas Emissions Report

2020





New North Runway, Dublin Airport (Ireland)

1. FCC Construcción's commitment

With a history of activity and service of more than 120 years indicative of its sustainable nature, FCC Construcción, operating in 23 countries, 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 building, both in the domestic and international markets. The Infrastructure area of FCC Group has proven experience 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.).

2020 has been a year marked definitively by the pandemic, highlighting the weaknesses, vulnerability and fragility of the human balance in nature and its dependence on the environment. Confinements, changes in routines, activities, processes and priorities have led us to reflect on our role in the world and our behavioural patterns. A health and economic

crisis that requires a different, more powerful and more urgent recovery strategy than ever before. The need to set a clear path has led to reflection and has led to the conclusion that there is only one possible path: a much more responsible and conscious behaviour with respect to nature. Circular economy, respect for biodiversity, nature-based solutions and the fight against climate change.

In this report, FCC Construcción details some of its results in the fight against climate change, taking into account the two main fronts. The adaptation front, which is the main one and therefore, it is the one on which the company is making the greatest efforts and obtaining the greatest results. On the mitigation front, FCC Construcción has undertaken various initiatives, including this report. It is said that what cannot be measured cannot be managed or improved. This report quantifies the company's emissions and verifies for the first time, and in a pioneering manner in the sector, the total GHG emissions throughout its operations, in all its

activities and in all the countries in which the company is located.

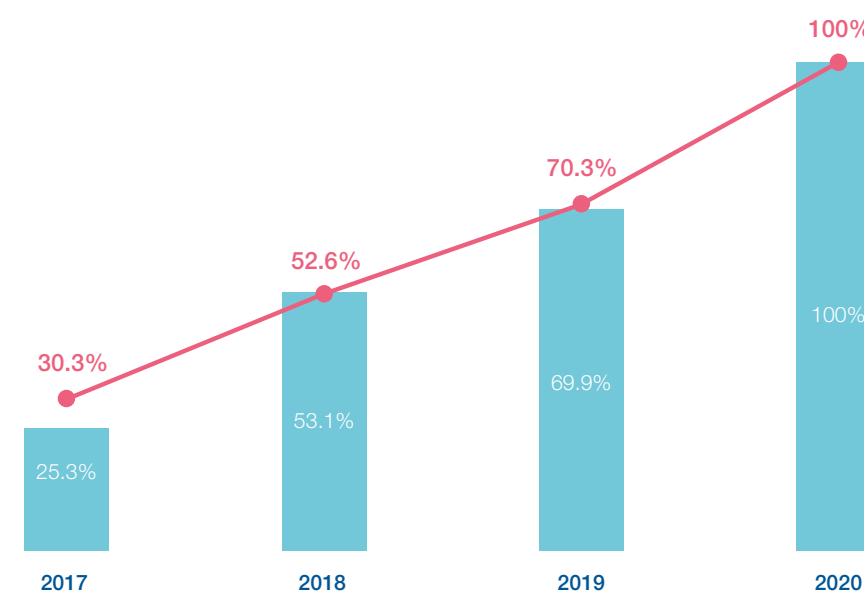
FCC Construcción established among its 2017-2020 **Management Objectives** a specific objective related to climate change. Specifically, the expansion of the Greenhouse Gas (GHG) emissions inventory verification to the international area, so that **100% of the company activity** would be verified according to the ISO 14064-1 Standard, by **2020**. This would enable us to continue calculating our carbon footprint, to continue tracking 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, but this time with the added bonus of external recognition, which reinforces our management transparency and credibility. This year we have achieved this objective and we are providing all our stakeholders, collaborators, customers, society, in general, with full information on everything

we do and in all the places in the world where we carry out our work.

The fulfilment of this objective, through this report, involves quantifying and verifying the GHG emissions in Spain, Portugal, Bulgaria, Romania, United Kingdom, Ireland, Belgium, Netherlands, Norway, Nicaragua, Costa Rica, Panama, El Salvador, Mexico, Colombia, Chile, Peru, United States, Canada, Qatar and Saudi Arabia during the 2020 financial year.

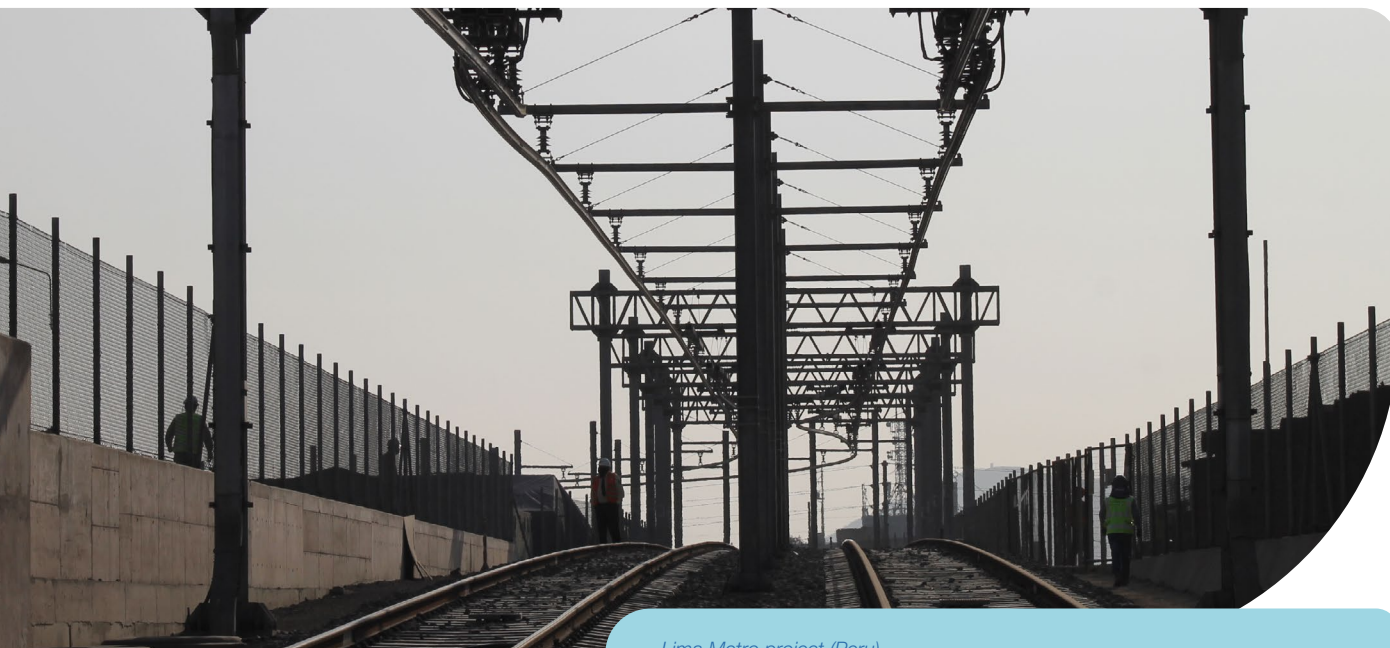
The absolute extension of the verification scope has involved carrying out different actions, such as the dissemination of the organisation's emissions quantification methodology among its own staff, to raise awareness of the importance of the annual GHG Emissions report and the company's climate change strategy; the collection of specific emission factors that are specific to the different countries and GHG sources in the inventory; and the establishment of internal controls to ensure the activity data quality.

Verified GHG emissions



% Verified emissions

% Verified turnover



Lima Metro project (Peru)



Playa Blanca Port (Spain)

This achievement represents the culmination of a journey that began in 2010, when FCC Construcción began to integrate the concept of climate change into its organisation with the design and implementation of an innovative protocol for the quantification of Greenhouse Gas emissions in construction, becoming the first Spanish construction company to have its emissions verified by AENOR, an external party. Since then, the company has been drawing up and verifying its Greenhouse Gas emissions report annually, progressively extending its scope in successive years and its geographical limits in recent years, until it has been fully completed. In addition, FCC Construcción holds 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 "Management for Sustainable Development" category of the European Business Awards for the Environment.



But the culmination of an achievement is not so much the end of one road as the beginning of another. 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 not only offers no possibility of going backwards, but also of stopping, and there is no viable rest. The challenges that arise are urgent, their response cannot be delayed, they extend to all agents and are closely related to the achievement of the Sustainable Development Goals.

Likewise, in the permanent exercise of transparency to which we are committed, FCC Construcción has been registering its verified carbon footprints every year since its creation in the "Carbon footprint, off-setting and carbon sequestration project Register", created in 2014 by the Spanish Ministry for the Ecological Transition, being the first construction company to appear on said public list. For the carbon footprints of financial years 2015, 2016, 2017, 2018 and 2019 we obtained the "Calculate and Re-

duce" label of the government, which, in addition to granting recognition and acknowledging the fact of being able to quantify and verify our Greenhouse Gas emissions, it also distinguishes the company as one of the organisations that effectively reduce its carbon footprint. The company's commitment to reducing emissions is also reflected in the "[#PorElClima Community](#)" platform, to which we adhered in 2016, after the Paris Agreement.

In addition, since 2017, FCC Construcción has reported climate change-related information according to the recommendations Task Force on Climate-related Financial Disclosures (TCFD⁽¹⁾) from the Financial Stability Board's. The TCFD 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".

The impact of the coronavirus has changed the world and it is still present. It is not over yet. The epidemic, like climate change, is a problem of enormous consequence. But COVID-19 is expected to have a limited impact over time, whereas the effects of climate change are ongoing and will last for decades. And not only environmentally (from a climate perspective, 2020 was the second warmest year in the world since 1880). The economic losses due to climate disasters in the 416 natural catastrophes recorded in the world in 2020 exceeded 220 billion, and more than 8,000 people lost their lives due to these catastrophes. At FCC Construcción we are perfectly aware (in the broadest sense of the term) and, although we have come a long way, this is just the beginning. We need **to go one step further** and promote a respectful business model that increases efficiency in the use of resources, reduces energy demand, proposes a progressive substitution of fossil fuels with alternative energies and designs resilient infrastructures that withstand the expected effects of climate change and, in turn, increase the resilience of their environment. We are

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



Renewal of Covilhã and Guarda Railway Line. (Portugal)

Our new short-mid challenges are being able to set ambitious reduction targets that are approved by the Science Based Target Initiative⁽²⁾ and, particularly, to work along the lines of adaptation to climate change, the connatural way for construction to face climate change, assessing the impacts and analysing the vulnerability and opportunities of our company in our different locations, building defences, adapting the environment to the consequences of the global warming that it makes no sense to deny but against which, in spite of everything, we must continue to fight.

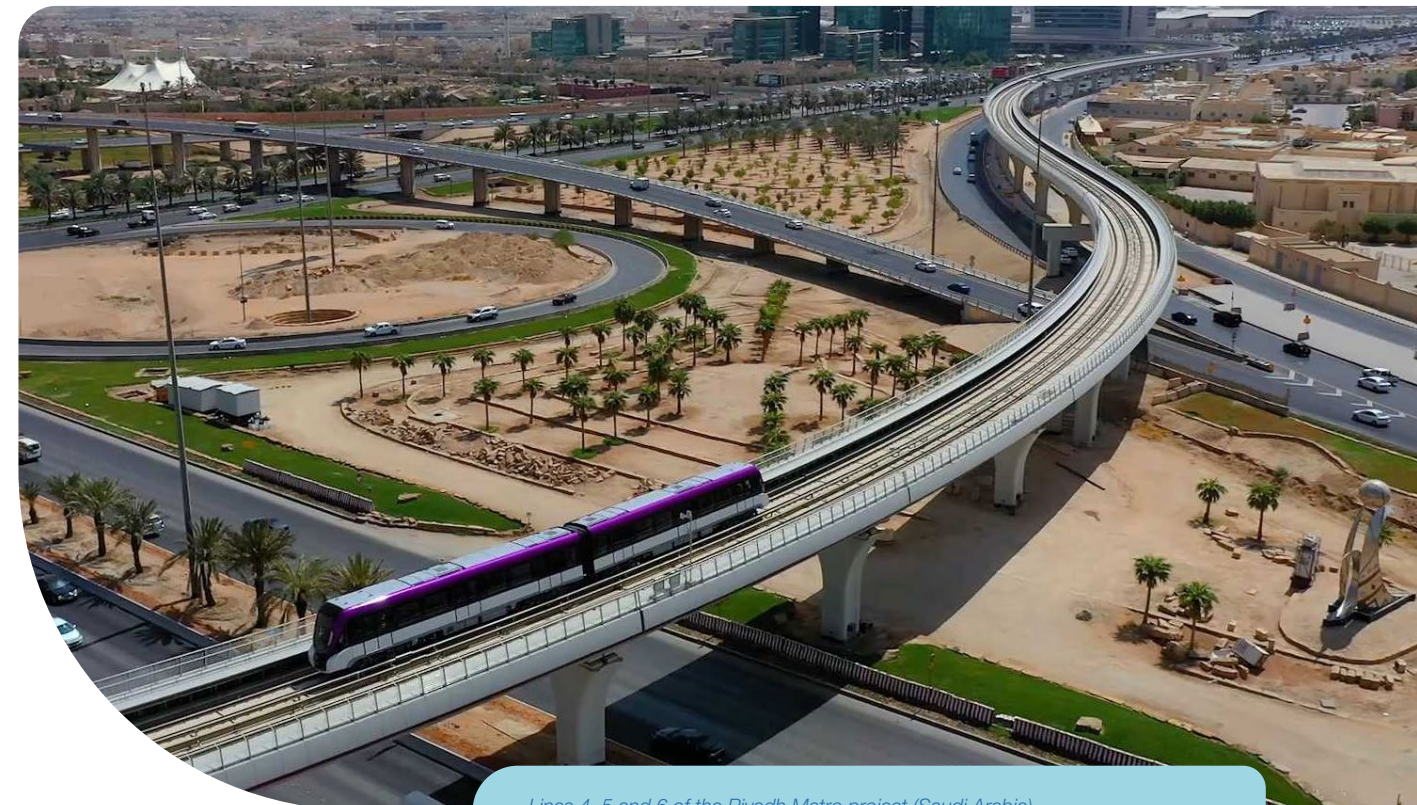
This report includes the Greenhouse Gas Inventory for 2020 reporting period for the activities carried out at construction sites and premises of FCC Construcción located in **Spain, Portugal, Bulgaria, Romania, United Kingdom, Ireland, Belgium, Norway, Netherlands, Nicaragua, Costa Rica, Panama, El Salvador, Mexico, Colombia, Chile, Peru, Canada, United States, Qatar and Saudi Arabia**, not considering the industrial activities carried out by the subsidiary companies of FCC Industrial (Area V), nor by the company Áridos de Melo. This report is the responsibility of the Quality, CSR and R&D Director.

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).

in a process of decarbonising our activity, because we must reach carbon neutrality by 2050. And, in terms of adaptation, it will be essential to build infrastructures that respond to the requirements of the coming years, but it is also necessary to adapt existing ones to make them capable of withstanding pressures that were not foreseen in their design. This is a challenge, but also a huge opportunity on a global scale, supported by different investment entities and multilateral organisations. The taxonomy exercise is a clear step forward and a major push to guide the activity of the company, the sector and the global economy in this direction, in the right direction.

⁽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.



Lines 4, 5 and 6 of the Riyadh Metro project (Saudi Arabia)

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 2020 reporting period contains data of all centres located in Spain, Portugal, Bulgaria, Romania, the United Kingdom, Ireland, Belgium, Norway, Netherlands, Nicaragua, Costa Rica, Panama, El Salvador, Mexico, Colombia, Chile, Peru, Canada, United States, Qatar and Saudi Arabia, with centres being understood as 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 of purchased materials.
- They include emissions from the manufacture of concrete, bituminous products (asphalt), steel, non-ferrous metals, bricks glass and cement.

- Emissions associated with the transport of purchased materials.

They include emissions from the transport to site of concrete, bituminous products (asphalt), steel, non-ferrous metals, bricks, glass, cement, 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 associated with company staff commuting to the workplace.

They include emissions associated with staff commuting for all 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 0.5%) with regard to the total emissions released by the company.



Airbus Futura Campus (Spain)

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.

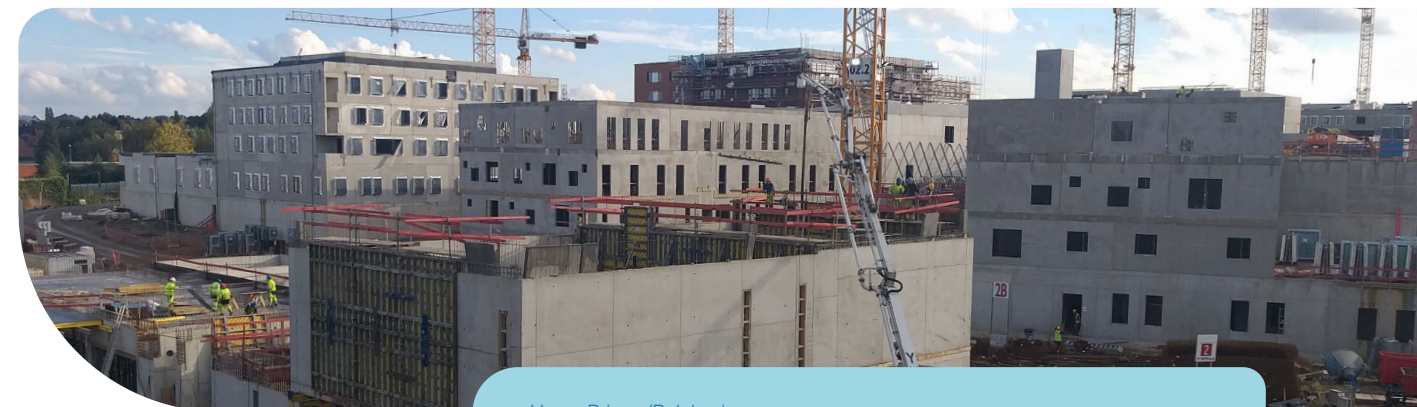
The activity data derive from billing data, delivery notes, measurements and data from the construction project. Based on the supplementary guidance document about uncertainty assessment ("*Guidance on uncertainty assessment in GHG inventories and calculating statistical parameter uncertainty*") drawn 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.

4. Quantification of GHG emissions

This section contains the GHG emissions' quantification of FCC Construcción in 2020, specifying the GHG emissions from Spain, Portugal, Bulgaria, Romania, the United Kingdom, Ireland, Belgium, Norway, the Netherlands, Nicaragua, Costa Rica, Panama, El Salvador, Mexico, Colombia, Chile, Peru, Canada, the United States, Qatar and Saudi Arabia.

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



Haren Prison (Belgium)

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

2020

t CO₂ eq

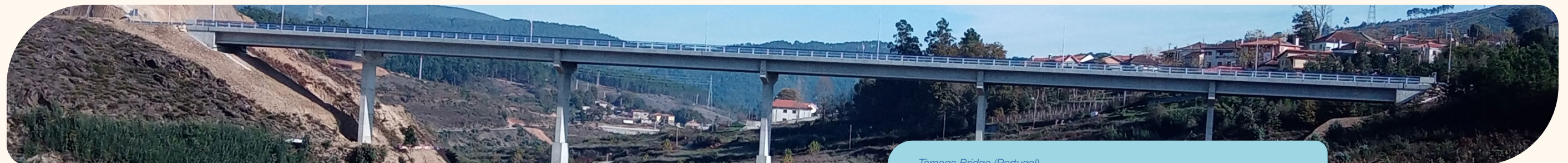
	AREA I		AREA II							AREA IV	
	Spain	Portugal	Bulgaria	Romania	United Kingdom	Ireland	Belgium	Norway	Netherlands	Qatar	Saudi Arabia
Scope 1: Direct GHG emissions	8,905.11	1,314.47	2.09	8,861.42	5.67	0.00	1,010.21	12.30	46.45	14.42	31,094.61
Associated with fuel used at projects	8,463.42	799.34	0.00	8,583.07	0.00	0.00	1,010.21	12.30	46.45	0.00	31,094.61
Associated with fuel used at premises	441.69	515.13	2.09	278.35	5.67	0.00	0.00	0.00	0.00	14.42	0.00
Scope 2: Indirect GHG emissions	1,188.43	340.57	3.83	398.97	4.21	0.00	131.42	0.03	43.41	5.57	175.86
Associated with electricity used at projects	831.42	327.00	0.00	387.57	0.00	0.00	131.42	0.03	43.41	0.00	175.86
Associated with electricity used at premises	357.01	13.57	3.83	11.40	4.21	0.00	0.00	0.00	0.00	5.57	0.00
Scope 3: Other indirect emissions	309,931.63	11,761.09	7.91	143,273.13	82.16	41.34	15,744.07	53.10	90.39	11.97	26,822.37
Associated with the production of purchased materials	287,820.28	10,541.76	0.43	126,710.10	0.00	0.00	14,975.60	0.00	0.00	0.00	23,631.17
Associated with the transport of purchased materials	6,884.32	480.10	0.01	13,203.83	0.00	0.00	116.47	0.00	0.00	0.00	565.96
Associated with the subcontracted work units	8,648.17	380.72	0.00	1,201.95	0.00	0.00	61.76	0.00	0.00	0.00	793.11
Associated with the transport and management of surplus waste and materials	4,674.46	191.26	0.00	1,214.03	0.00	0.00	321.10	0.00	16.45	0.00	1,280.07
Associated with employee business travel	587.25	3.96	0.22	90.10	29.92	37.08	52.19	45.74	72.27	8.21	446.95
Associated with company staff commuting to the workplace	1,206.62	135.99	6.99	808.92	51.88	4.26	8.06	7.36	0.00	3.54	89.28
Deriving from losses due to electricity transport and distribution	109.34	27.30	0.26	44.20	0.36	0.00	5.36	0.00	1.67	0.22	15.83
Total emissions	320,023.98	13,416.13	13.83	152,533.52	92.04	41.34	16,682.17	65.43	180.25	31.96	58,092.84

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

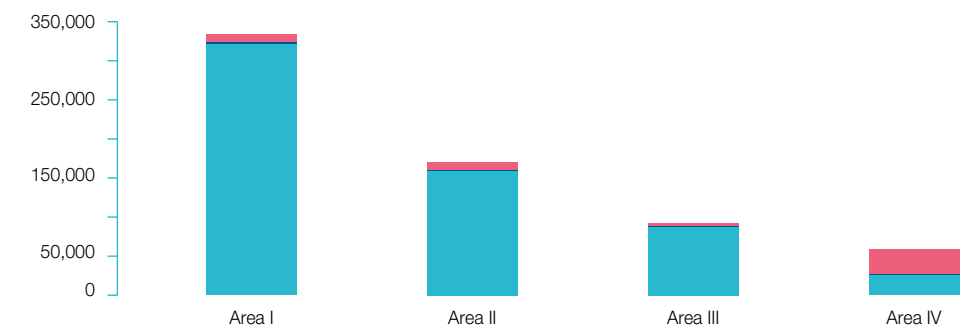
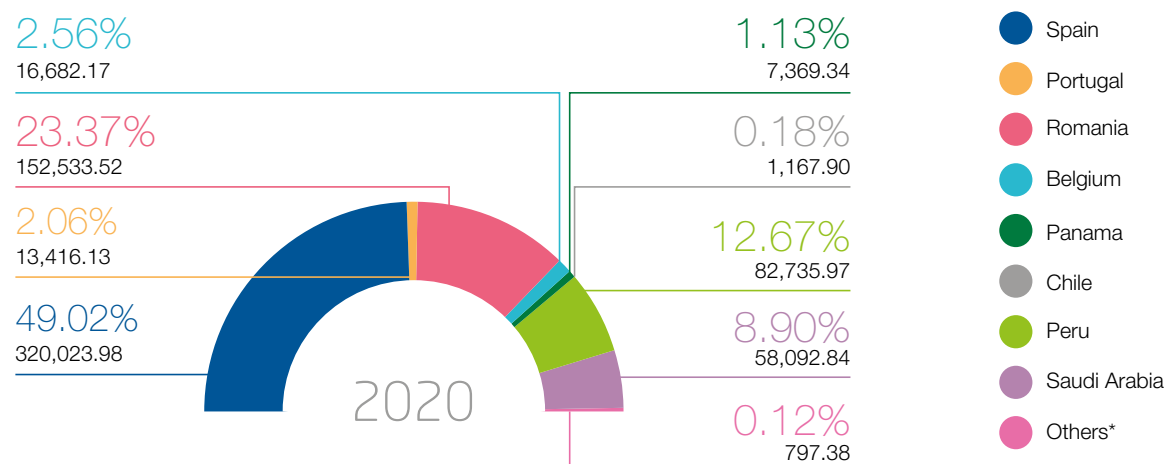
2020

t CO₂ eq

	AREA III										TOTAL FCC Construcción
	Nicaragua	Costa Rica	Panama	El Salvador	Mexico	Colombia	Chile	Peru	United States	Canada	
Scope 1: Direct GHG emissions	18.30	11.96	2,295.31	0.00	3.29	0.00	21.44	1,274.93	0.00	0.00	54,891.98
Associated with fuel used at projects	0.00	0.00	159.09	0.00	0.00	0.00	17.00	1,266.55	0.00	0.00	51,452.04
Associated with fuel used at premises	18.30	11.96	2,136.22	0.00	3.29	0.00	4.44	8.38	0.00	0.00	3,439.94
Scope 2: Indirect GHG emissions	11.45	0.31	179.97	0.15	7.32	1.10	12.47	442.80	11.82	0.61	2,960.30
Associated with electricity used at projects	0.00	0.00	12.88	0.00	0.00	0.00	5.83	441.40	0.00	0.00	2,356.82
Associated with electricity used at premises	11.45	0.31	167.09	0.15	7.32	1.10	6.64	1.40	11.82	0.61	603.48
Scope 3: Other indirect emissions	38.39	3.46	4,894.06	1.28	58.85	77.37	1,133.99	81,018.24	85.77	41.10	594,966.95
Associated with the production of purchased materials	0.00	0.00	1,666.70	0.00	0.00	0.00	762.13	78,084.36	0.00	0.00	544,192.53
Associated with the transport of purchased materials	0.00	0.00	19.26	0.00	0.00	0.00	1.27	415.41	0.00	0.00	21,686.63
Associated with the subcontracted work units	0.00	0.00	2,452.53	0.00	0.00	0.00	224.58	767.30	0.00	0.00	14,530.12
Associated with the transport and management of surplus waste and materials	0.47	0.27	54.46	0.01	0.12	0.01	66.53	1,506.89	0.00	0.00	9,326.13
Associated with employee business travel	1.22	0.00	168.12	0.00	52.94	17.73	49.15	177.21	31.83	32.09	1,904.18
Associated with company staff commuting to the workplace	34.23	3.16	509.99	1.25	4.82	59.52	29.79	18.49	53.36	8.98	3,046.49
Deriving from losses due to electricity transport and distribution	2.47	0.03	23.00	0.02	0.97	0.11	0.54	48.58	0.58	0.03	280.87
Total emissions	68.14	15.73	7,369.34	1.43	69.46	78.47	1,167.90	82,735.97	97.59	41.71	652,819.23



Tâmega Bridge (Portugal)

2020 GHG emissions by scope (t CO₂e)2020 GHG emission by Area of FCC Construcción (t CO₂e)2020 GHG emissions by geographic area (t CO₂e)

* The heading "Others" includes the emissions from Bulgaria, United Kingdom, Ireland, Netherlands, Norway, Nicaragua, Costa Rica, El Salvador, Mexico, Colombia, Canada, United States and Qatar, which in 2020 amounted to 413.94 t CO₂e and represent 0.12% of the verified emissions in 2020.

FCC Construcción meets its objective
of verifying GHG emissions in all countries

Although FCC Construcción has been calculating its Greenhouse Gas emissions since 2010, these have been only verified in Spain. As a result of one of the Management Objectives for the 2017-2020 period, since 2018, the company has started to verify GHG emissions from other additional countries. In 2020, the total GHG emissions have been includ-

ed in the verification process. The inclusion and verification of emissions from the 21 countries in which FCC Construcción operates adds transparency and credibility to the organisation and means entails the verification of 100% of FCC Construcción's activity.

Specifically, for Scope 1, the GHG emissions of financial year 2020 are reported by Greenhouse Gas type.

Scope 1 emissions, classified by GHG type (t CO₂e)

2020

	CO ₂	CH ₄	N ₂ O	All GHGs
Spain	8,875.14	10.36	19.61	8,905.11
Portugal	1,310.18	1.49	2.80	1,314.47
Bulgaria	2.08	0.00	0.01	2.09
Romania	8,832.53	10.00	18.89	8,861.42
United Kingdom	5.59	0.00	0.08	5.67
Ireland	0.00	0.00	0.00	0.00
Belgium	1,006.90	1.14	2.17	1,010.21
Norway	12.25	0.01	0.04	12.30
Netherlands	46.39	0.03	0.03	46.45
Nicaragua	18.24	0.02	0.04	18.30
Costa Rica	11.92	0.02	0.02	11.96
Panama	2,287.80	2.60	4.91	2,295.31
El Salvador	0.00	0.00	0.00	0.00
Mexico	3.19	0.07	0.03	3.29
Colombia	0.00	0.00	0.00	0.00
Chile	21.37	0.02	0.05	21.44
Peru	1,270.72	1.46	2.75	1,274.93
United States	0.00	0.00	0.00	0.00
Canada	0.00	0.00	0.00	0.00
Qatar	14.37	0.02	0.03	14.42
Saudi Arabia	30,992.92	35.15	66.54	31,094.61
TOTAL FCC Construcción	54,711.59	62.39	118.00	54,891.98

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

GHG emissions classified by Emission Blocks (according to ENCORD guidelines)

Construction⁽³⁾. 2020

t CO₂e

	1. Fuels (Projects)	2. Fuels (Premises)	3. Process and fugitive emissions ⁽⁴⁾	4. Electricity (Projects)	5. Electricity (Premises)	6. Heat	7. Vehicle fuel ⁽⁵⁾	8. Public transport	9. Subcontractors	10. Waste	11. Materials	Total emissions
Spain	8,463.42	441.69	0.00	831.42	357.01	0.00	1,361.45	432.42	8,648.17	4,674.46	294,704.60	319,914.64
Portugal	799.34	515.13	0.00	327.00	13.57	0.00	133.24	6.71	380.72	191.26	11,021.86	13,388.83
Bulgaria	0.00	2.09	0.00	0.00	3.83	0.00	7.21	0.00	0.00	0.00	0.44	13.57
Romania	8,583.07	278.35	0.00	387.57	11.40	0.00	809.29	89.73	1,201.95	1,214.03	139,913.93	152,489.32
United Kingdom	0.00	5.67	0.00	0.00	4.21	0.00	52.11	29.69	0.00	0.00	0.00	91.68
Ireland	0.00	0.00	0.00	0.00	0.00	0.00	34.01	7.33	0.00	0.00	0.00	41.34
Belgium	1,010.21	0.00	0.00	131.42	0.00	0.00	8.72	51.53	61.76	321.10	15,092.07	16,676.81
Norway	12.30	0.00	0.00	0.03	0.00	0.00	7.93	45.17	0.00	0.00	0.00	65.43
Netherlands	46.45	0.00	0.00	43.41	0.00	0.00	1.47	70.80	0.00	16.45	0.00	178.58
Nicaragua	0.00	18.30	0.00	0.00	11.45	0.00	0.00	35.45	0.00	0.47	0.00	65.67
Costa Rica	0.00	11.96	0.00	0.00	0.31	0.00	3.16	0.00	0.00	0.27	0.00	15.70
Panama	159.09	2,136.22	0.00	12.88	167.09	0.00	510.09	168.02	2,452.53	54.46	1,685.96	7,346.34
El Salvador	0.00	0.00	0.00	0.00	0.15	0.00	1.25	0.00	0.00	0.01	0.00	1.41
Mexico	0.00	3.29	0.00	0.00	7.32	0.00	0.11	57.65	0.00	0.12	0.00	68.49
Colombia	0.00	0.00	0.00	0.00	1.10	0.00	0.00	77.25	0.00	0.01	0.00	78.36
Chile	17.00	4.44	0.00	5.83	6.64	0.00	27.36	51.58	224.58	66.53	763.40	1,167.36
Peru	1,266.55	8.38	0.00	441.40	1.40	0.00	15.61	180.09	767.30	1,506.89	78,499.77	82,687.39
United States	0.00	0.00	0.00	0.00	11.82	0.00	72.24	12.95	0.00	0.00	0.00	97.01
Canada	0.00	0.00	0.00	0.00	0.61	0.00	8.98	32.09	0.00	0.00	0.00	41.68
Qatar	0.00	14.42	0.00	0.00	5.57	0.00	3.54	8.21	0.00	0.00	0.00	31.74
Saudi Arabia	31,094.61	0.00	0.00	175.86	0.00	0.00	92.02	444.21	793.11	1,280.07	24,197.13	58,077.01
Total FCC Construcción	51,452.04	3,439.94	0.00	2,356.82	603.48	0.00	3,149.75	1,800.88	14,530.12	9,326.13	565,879.16	652,538.36⁽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⁾ Emission block 7 only considers emissions associated to the use of cars leased or privately owned vehicles used for business travel and emissions associated to the use of cars owned by employees for commuting from home to the workplace. 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 according to the 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 2020 amount to a value of 280.87 t CO₂ eq. verified.

5. Avoided emissions

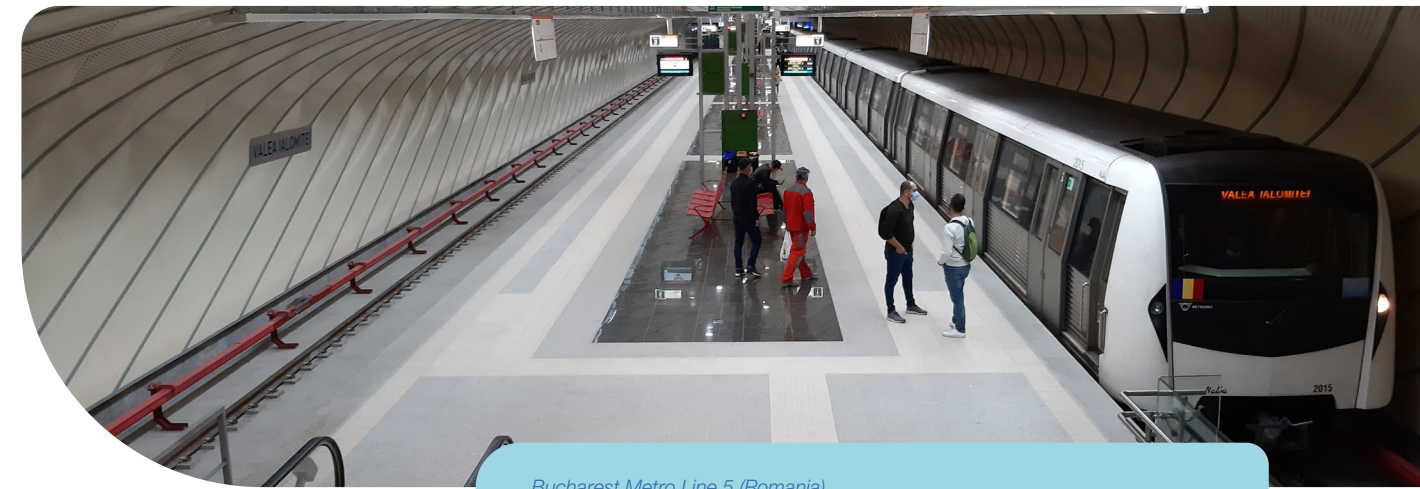
This section sets out a quantification of the avoided Greenhouse Gas emissions in the four countries due to the implementation of environmental good practices on site. The report details the emissions

which are no longer produced by implementing the following directed actions, as defined according to the terminology of Standard ISO 14064:

Avoided emissions

t CO₂e

	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	5,156.19	45.58	321.40	29.75	5,552.92
Portugal	329.94	0.01	0.39	1.66	332.00
Bulgaria	0.00	0.00	0.00	0.00	0.00
Romania	898.57	0.00	448.93	4.43	1,351.93
United Kingdom	0.00	0.00	0.00	0.00	0.00
Ireland	0.00	0.00	0.00	0.00	0.00
Belgium	0.00	0.00	0.00	0.00	0.00
Norway	0.00	0.00	0.00	0.00	0.00
Netherlands	0.00	0.00	0.00	0.00	0.00
Nicaragua	0.00	0.00	0.00	0.00	0.00
Costa Rica	0.00	0.00	0.00	0.00	0.00
Panama	0.55	0.00	61.35	0.00	61.90
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	0.89	0.00	0.89
Peru	0.00	0.00	66.66	0.00	66.66
United States	0.00	0.00	0.00	0.00	0.00
Canada	0.00	0.00	0.00	0.00	0.00
Qatar	0.00	0.00	0.00	0.00	0.00
Saudi Arabia	0.00	0.00	0.00	0.73	0.73
Total FCC Construcción	6,385.25	45.59	899.62	36.57	7,367.03



Bucharest Metro Line 5 (Romania)

6. Base year

Due to the inclusion of the construction sites and premises located in Bulgaria, Ireland, Belgium, the Netherlands, Norway, the United States, Canada, Qatar and Saudi Arabia in the verified GHG emissions report of FCC Construcción, in accordance with Standard ISO 14064-1:2012 and ENCORD's sector guidelines, 2020 is selected as historic base year for GHG emissions to be compared over time.

The change of the base year from 2019 to 2020 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, Romania, the United Kingdom, Nicaragua, Costa Rica, Panama, El Salvador, Mexico, Colombia, Chile and Peru, that had their 2019 emissions already verified. The addition of these new countries accounts for 11.5% of the verified emissions in 2020.

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.

⁽⁷⁾ With the inclusion of these 9 additional countries in the 2020 inventory, the emissions of all the countries in which FCC Construcción is present are verified, so that in future inventories the geographical scope of the operational boundaries of the inventory will be all the construction sites and premises of FCC Construcción, regardless of the country in which they are located.

⁽⁸⁾ A meaningful and consistent comparison of emissions over time requires setting an historical reference against which to compare current emissions; this is known as base year emissions.



Castrovido Dam (Spain)

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.)

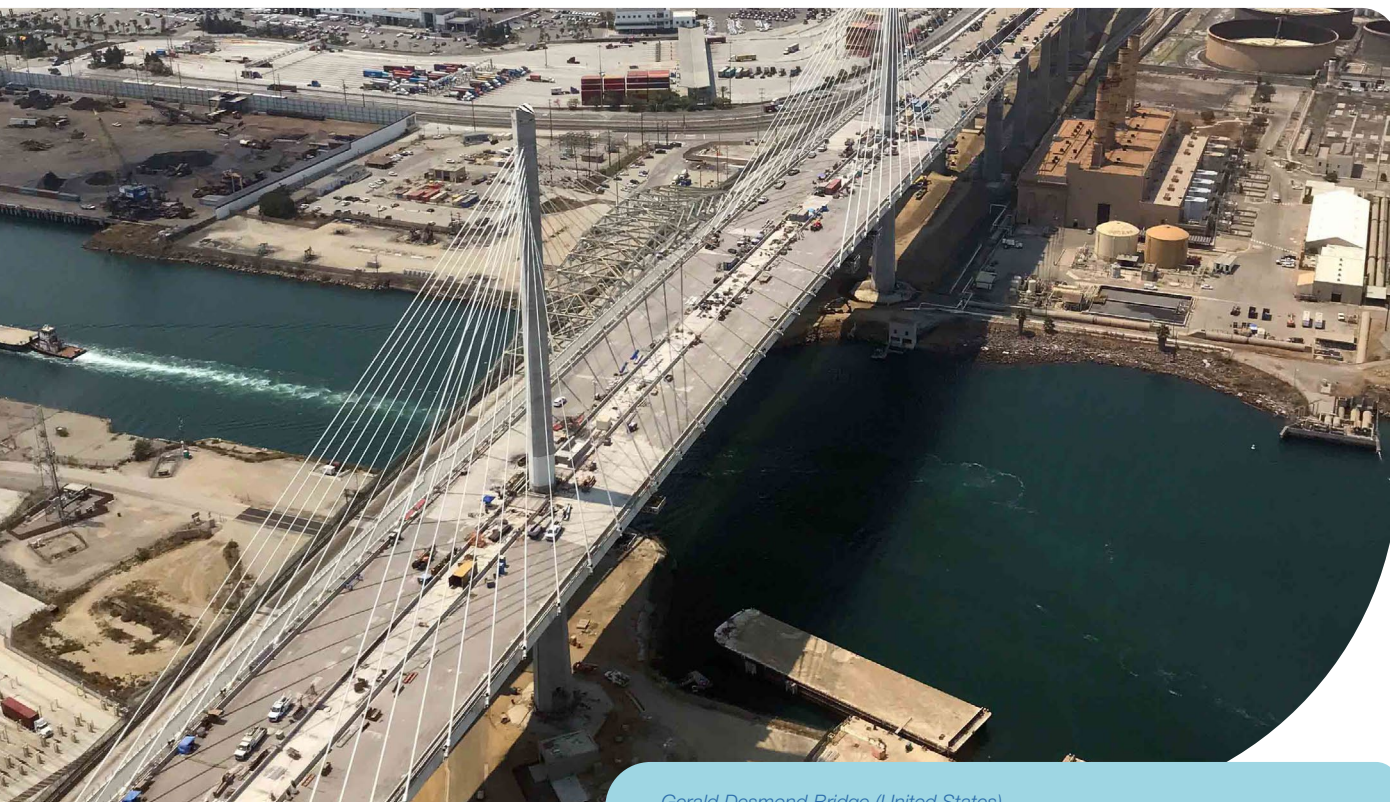
Reference is made below to the quantification methodologies and GHG emission factors used to draw up this report.

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**, data from the “Organisation’s Carbon Footprint - Scope 1+2 (2011-2020)” spreadsheet of the Ministry for Ecological Transition (MITECO), version 21 (23/04/2021), data from the CRF (Common Reporting Form) tables of the 2020 GHG inventory submitted to the UNFCCC by Spain and data from Table 2.3. of the “2006 IPCC Guidelines for National Greenhouse Gas Inventories” have been used.
- For **Portugal** data from the Net Calorific Values tables, “Fator de Emissao e Fator de Oxidacao e Valores de densidade”, and “Tabela de densidades combustiveis 2013” of the Portuguese Environment Agency, data from the CRF (Common Reporting Form) tables of the 2020 GHG inventory submitted to UNFCCC by Portugal and data from Table 2.3. of the “2006 IPCC Guidelines for National Greenhouse Gas Inventories” have been used.
- For **Bulgaria, Romania, Ireland, Belgium, Norway and Canada**, data from the CRF (Common Reporting Form) tables of the 2020 GHG inventory submitted to UNFCCC by each of the countries and data from Table 2.3. of the “2006 IPCC Guidelines for National Greenhouse Gas Inventories” have been used.
- For the **United Kingdom**, data from the report by the UK Department for Environment, Food and Rural Affairs (DEFRA) “2020 UK Government GHG Conversion Factors for Company Reporting” and data from the CRF (Common Reporting Form) tables of the 2020 GHG inventory submitted to UNFCCC by United Kingdom have been used.
- For the **Netherlands**, emission factor data published in “CO₂ emissiefactoren”, the “list of fuels and emission factors” of the Netherlands Enterprise Agency, data from the CRF (Common Reporting Form) tables of the GHG inventory 2020 submitted to UNFCCC by the Netherlands and data from Table 2.3. of the “2006 IPCC Guidelines for National Greenhouse Gas Inventories” have been used.
- For **Nicaragua, Panama, El Salvador, Qatar and Saudi Arabia**, data from Table 2.3. of the “2006 IPCC Guidelines for National Greenhouse Gas Inventories” have been used.
- For **Costa Rica**, data obtained from the publication “GHG Emission Factors, ninth edition/2020” of the National Meteorological Institute and data from Table 2.3. of the “2006 IPCC Guidelines for National Greenhouse Gas Inventories” have been used.
- For **Mexico**, the data from the “DOF Agreement 03/09/2015, which establishes the technical characteristics and formulas for the application of methodologies for calculating greenhouse gas emissions” and the “2021 fuel list” published by the National Registry of Emissions (RENE) of SEMARNAT have been used.
- For **Colombia**, data from the carbon calculator of the Ministry of Environment and Sustainable Development of the Republic of Colombia and data from Table 2.3. of the “2006 IPCC Guidelines for National Greenhouse Gas Inventories” have been used.
- For **Chile**, data from the “Report of the National GHG Inventory of Chile, series 1990-2016”, prepared by the MINENERGIA Technical Energy Team based on the 2006 IPCC Guidelines, have been used.
- For **Peru**, data from the spreadsheet “Infocarbon”, developed by the Peruvian Ministry of Environment, based on the 2006 IPCC Guidelines, have been used.
- For the **United States**, data from the document “Emission Factors for Greenhouse Gas Inventories” of the US Environmental Protection Agency (EPA), version 26/03/2020, data from the CRF (Common Reporting Form) tables of the 2020 GHG inventory submitted to the UNFCCC by the United States and data from Table 2.3. of the “2006 IPCC Guidelines for National Greenhouse Gas Inventories” have been used.



Gerald Desmond Bridge (United States)

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, Bulgaria, Romania, Ireland, Belgium, the Netherlands, Norway, Nicaragua, Costa Rica, Panama, El Salvador, Colombia, Peru, the United States, Canada, Qatar and Saudi Arabia have been obtained from the report *"Statistics - Emissions Factors (2020 Edition)"* of the International Energy Agency. For the remaining countries, specific emission factors from the following local sources have been used:

- For **Spain**, the emission factor has been obtained from the "Organisation's Carbon Footprint - Scope 1+2 (2011-2020)" spreadsheet of the Spanish Ministry for Ecological Transition (MITECO), version 21 (23/04/2021).
- For the **UK**, the emission factor has been obtained from the UK Department for Environment, Food and Rural Affairs (DEFRA) report *"2020 UK Government GHG Conversion Factors for Company Reporting"*.
- For **Mexico**, the emission factor was obtained from the annual publication *"Emission Factor of the National Electric System 2020"* of the National Registry of Emissions (RENE) of the Government of Mexico.
- For **Chile**, the emission factor was obtained from the *"2019 Statistical Yearbook of Energy"* of the Ministry of Energy of the Government of Chile.



Wastewater treatment plant and sludge incinerator in Gila, Bucharest (Romania)

Scope 3: Other indirect emissions

Emissions associated with the production of purchased materials

The quantification methodology is based on activity data (consumption data for the different construction materials in the reporting period) and emission factors associated with the production of these materials.

The emission factor for asphalt (bituminous products) has been obtained from verified emissions from FCC Construcción's own premises, the emission factors for concrete, steel and cement (not including concrete) are extracted from the Ecoinvent 3 database using the SimaPro software, developed by PRé Sustainability, and the emission factors for non-ferrous metals, bricks and glass have been obtained from a study of the University of Cantabria.

Emissions associated with the transport of purchased materials

The quantification methodology is based on activity data (consumption data for the different construction materials, the distance travelled from the production site to the construction site and the type of transport used) and on the emission factors associated with the transport of these materials.

The emission factors associated with transport have been obtained from the Annexes of the UK Department of Environment, Food and Rural Affairs (DEFRA) report *"2020 UK Government GHG Conversion Factors for Company Reporting"*, except for the Netherlands and the United States, for which specific emission factors from the following local sources have been used:

- For the **Netherlands**, the emission factors published in "CO₂ emissiefactoren" are used for rail, air and maritime transport types.
- For the **United States**, the factors of the document "Emission Factors for Greenhouse Gas Inventories" of the US Environmental Protection Agency (EPA), version 26/03/2020, are used.

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 waste and surplus 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 of the UK Department of the Environment, Food and Rural Affairs (DEFRA) report *"2020 UK Government GHG Conversion Factors for Company Reporting"*, except for the United States, where specific emission factors from the local sources (detailed previously in the section of transport of purchased materials) have been used.

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. In the case of the Netherlands and the United States, specific emission factors for the local sources (detailed above in the section of transport of purchased materials) have been used.

Emissions associated with company staff commuting to the workplace

The activity data necessary to calculate these emissions, i.e. the kilometres travelled by FCC Construcción employees to get from their homes to the work centre, have been obtained by extrapolating the results of a mobility survey of all the organisation's employees. Based on the answers to the survey, the number of employees per country without a company vehicle and the days of travel in the reporting period, the kilometres travelled in each country and for each type of vehicle used are calculated.

The emission factors associated with the different modes of transport are taken from the Annexes of the UK Department of Environment, Food and Rural Affairs (DEFRA) report *"2020 UK Government GHG Conversion Factors for Company Reporting"*. In the case of the Netherlands and the United States, specific emission factors have been used for the local sources (previously detailed in the section of transport of purchased materials).

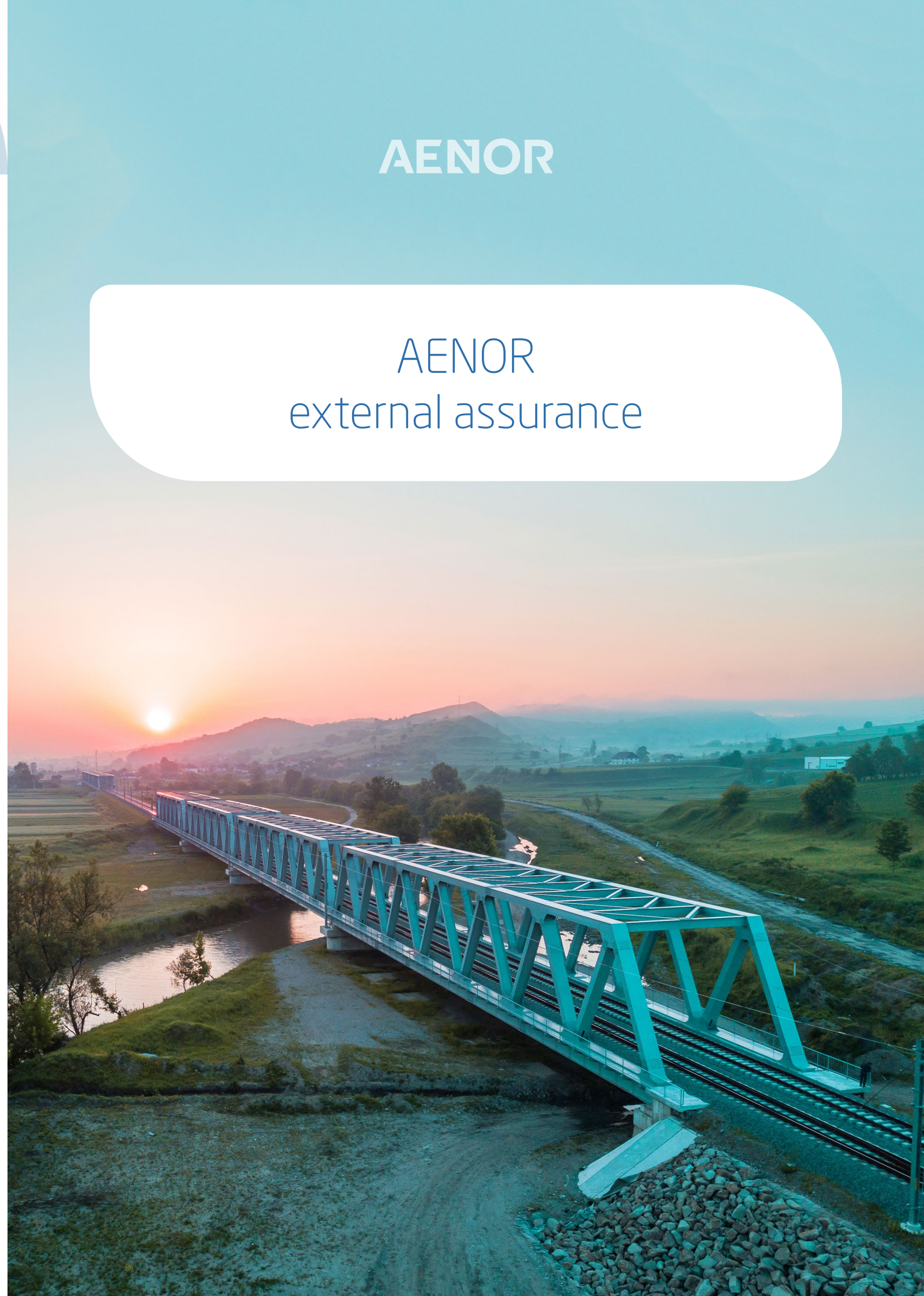
Emissions deriving from losses due to electricity transport and distribution

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 (2020 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) *"2020 Government GHG Conversion Factors for Company Reporting"*.

Report completion date:
25 June 2021

AENOR

AENOR external assurance





**AENOR Verification Statement for
FCC CONSTRUCCIÓN, S.A.
for the Inventory of greenhouse gas emissions for 2020**

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 2020 of its activities included in the GHG report dated 25 June 2021, 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, Bulgaria, Romania, United Kingdom, Ireland, Belgium, Norway, Netherlands, Nicaragua, Costa Rica, Panama, El Salvador, Mexico, Colombia, Chile, Peru, United States, Canada, Qatar and Saudi Arabia.**

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.

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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 of used materials. Emissions from the manufacture of concrete, asphalt agglomerate, steel, non-ferrous metals, bricks, glass and cement are considered.
- Emissions associated with the transport of used materials. This includes the transport to the site of concrete, asphalt agglomerate, earth, graded aggregate, soil, steel, non-ferrous metals, bricks, glass and cement.
- Emissions associated with the performance of subcontracted work units. Considered to be earthmoving works.
- Emissions associated with transport and management of waste and excess materials. Considered to be emissions linked to transporting excess earth, excess clean rubble and transportation and landfill of municipal solid waste and wood.
- Emissions associated with employee business travel
- Emissions associated with company staff commuting to the workplace.
- Emissions caused by loss during transport 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 2020 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 **2020**.

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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 8.
- 5) Guide for calculating greenhouse gas emissions in fcc construction, version 19.

Finally, the Emission Report prepared by the organisation and dated June 2021 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 2020 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.

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TOTAL FCC CONSTRUCCIÓN VERIFIED DATA

TOTAL FCC CONSTRUCCIÓN	t CO ₂ e
Scope 1: Direct GHG emissions	54,891.98
associated with on-site fuel consumption	51,452.04
associated fuel consumption at fixed centres	3,439.94
Scope 2: Indirect GHG emissions	2,960.30
associated with on-site electricity consumption	2,356.82
associated electricity consumption at fixed centres	603.48
Scope 3: Other indirect emissions	594,966.95
associated with the production of used materials	544,192.53
associated with the transport of used materials	21,686.63
associated with the performance of subcontracted work units	14,530.12
associated with transport and management of waste and excess materials	9,326.13
associated with employee business travel	1,904.18
associated with company staff commuting to the workplace	3,046.49
caused by loss during transport and distribution of electricity	280.87
Total Emissions	652,819.23

TOTAL FCC CONSTRUCCIÓN	t CO ₂ e
Construction	
1. Fuel (site)	51,452.04
2. Fuel (fixed centres)	3,439.94
3. Fugitive and process emissions (excluded emissions)	0.00
4. Electrical energy (site)	2,356.82
5. Electrical energy (fixed centres)	603.48
6. Heat	0.00
7. Vehicle fuel	3,149.79
8. Travel undertaken by company personnel	1,800.88
9. Subcontractors	14,530.12
10. Waste	9,326.13
11. Materials	565,879.16
Total Emissions	652,538.36

AVOIDED EMISSIONS (TARGETED ACTIONS AND QUANTIFIED EMISSIONS)

TOTAL FCC CONSTRUCCIÓN	t CO ₂ e
reusing materials on site and not taking them to landfill	6,385.25
neutralising pH with CO ₂	45.59
proper maintenance of machinery used on site	899.62
controlling the speed of vehicles on site	36.57
Total Emissions	7,367.03

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FCC CONSTRUCCIÓN SPAIN VERIFIED DATA

TOTAL FCC CONSTRUCCIÓN SPAIN	t CO ₂ e
Scope 1: Direct GHG emissions	8,905.11
associated with on-site fuel consumption	8,463.42
associated fuel consumption at fixed centres	441.69
Scope 2: Indirect GHG emissions	1,188.43
associated with on-site electricity consumption	831.42
associated electricity consumption at fixed centres	357.01
Scope 3: Other indirect emissions	309,930.44
associated with the production of used materials	287,820.28
associated with the transport of used materials	6,884.32
associated with the performance of subcontracted work units	8,648.17
associated with transport and management of waste and excess materials	4,674.46
associated with employee business travel	587.25
associated with company staff commuting to the workplace	1,206.62
caused by loss during transport and distribution of electricity	109.34
Total Emissions	320,023.98

TOTAL FCC CONSTRUCCIÓN SPAIN	t CO ₂ e
Construction	
1. Fuel (site)	8,463.42
2. Fuel (fixed centres)	441.69
3. Fugitive and process emissions (excluded emissions)	0.00
4. Electrical energy (site)	831.42
5. Electrical energy (fixed centres)	357.01
6. Heat	0.00
7. Vehicle fuel	1,361.45
8. Travel undertaken by company personnel	432.42
9. Subcontractors	8,648.17
10. Waste	4,674.46
11. Materials	294,704.60
Total Emissions	319,914.64

AVOIDED EMISSIONS (TARGETED ACTIONS AND QUANTIFIED EMISSIONS)

TOTAL FCC CONSTRUCCIÓN SPAIN	t CO ₂ e
reusing materials on site and not taking them to landfill	5,156.19
neutralising pH with CO ₂	45.58
proper maintenance of machinery used on site	321.40
controlling the speed of vehicles on site	29.75
Total Emissions	5,552.92



FCC CONSTRUCCIÓN PORTUGAL VERIFIED DATA

(RAMALHO ROSA COBETAR, SOCIEDADE DE CONSTRUÇÕES, S.A.)

FCC CONSTRUCCIÓN PORTUGAL (RAMALHO ROSA COBETAR, SOCIEDADE DE CONSTRUÇÕES, S.A.)	t CO ₂ e
Scope 1: Direct GHG emissions	1,314.47
associated with on-site fuel consumption	799.34
associated fuel consumption at fixed centres	515.13
Scope 2: Indirect GHG emissions	340.57
associated with on-site electricity consumption	327.00
associated electricity consumption at fixed centres	13.57
Scope 3: Other indirect emissions	11,761.09
associated with the production of used materials	10,541.76
associated with the transport of used materials	480.10
associated with the performance of subcontracted work units	380.72
associated with transport and management of waste and excess materials	191.26
associated with employee business travel	3.96
associated with company staff commuting to the workplace	135.99
caused by loss during transport and distribution of electricity	27.30
Total Emissions	13,416.13

FCC CONSTRUCCIÓN PORTUGAL (RAMALHO ROSA COBETAR, SOCIEDADE DE CONSTRUÇÕES, S.A.)	t CO ₂ e
Construction	
1. Fuel (site)	799.34
2. Fuel (fixed centres)	515.13
3. Fugitive and process emissions (excluded emissions)	0.00
4. Electrical energy (site)	327.00
5. Electrical energy (fixed centres)	13.57
6. Heat	0.00
7. Vehicle fuel	133.24
8. Travel undertaken by company personnel	6.71
9. Subcontractors	380.72
10. Waste	191.26
11. Materials	11,021.86
Total Emissions	13,388.83

AVOIDED EMISSIONS (TARGETED ACTIONS AND QUANTIFIED EMISSIONS)

FCC CONSTRUCCIÓN PORTUGAL (RAMALHO ROSA COBETAR, SOCIEDADE DE CONSTRUÇÕES, S.A.)	t CO ₂ e
reusing materials on site and not taking them to landfill	329.94
neutralising pH with CO ₂	0.01
proper maintenance of machinery used on site	0.39
controlling the speed of vehicles on site	1.66
Total Emissions	332.00



FCC CONSTRUCCIÓN BULGARIA VERIFIED DATA

FCC CONSTRUCCIÓN BULGARIA	t CO ₂ e
Scope 1: Direct GHG emissions	2.09
associated with on-site fuel consumption	0.00
associated fuel consumption at fixed centres	2.09
Scope 2: Indirect GHG emissions	3.83
associated with on-site electricity consumption	0.00
associated electricity consumption at fixed centres	3.83
Scope 3: Other indirect emissions	7.91
associated with the production of used materials	0.43
associated with the transport of used materials	0.01
associated with the performance of subcontracted work units	0.00
associated with transport and management of waste and excess materials	0.00
associated with employee business travel	0.22
associated with company staff commuting to the workplace	6.99
caused by loss during transport and distribution of electricity	0.26
Total Emissions	13.83

TOTAL FCC CONSTRUCCIÓN BULGARIA	t CO ₂ e
Construction	
1. Fuel (site)	0.00
2. Fuel (fixed centres)	2.09
3. Fugitive and process emissions (excluded emissions)	0.00
4. Electrical energy (site)	0.00
5. Electrical energy (fixed centres)	3.83
6. Heat	0.00
7. Vehicle fuel	7.21
8. Travel undertaken by company personnel	0.00
9. Subcontractors	0.00
10. Waste	0.00
11. Materials	0.44
Total Emissions	13.57

AVOIDED EMISSIONS (TARGETED ACTIONS AND QUANTIFIED EMISSIONS)

TOTAL FCC CONSTRUCCIÓN BULGARIA	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

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FCC CONSTRUCCIÓN ROMANIA VERIFIED DATA

FCC CONSTRUCCIÓN ROMANIA	t CO ₂ e
Scope 1: Direct GHG emissions	8,861.42
associated with on-site fuel consumption	8,583.07
associated fuel consumption at fixed centres	278.35
Scope 2: Indirect GHG emissions	398.97
associated with on-site electricity consumption	387.57
associated electricity consumption at fixed centres	11.40
Scope 3: Other indirect emissions	143,273.13
associated with the production of used materials	126,710.10
associated with the transport of used materials	13,203.83
associated with the performance of subcontracted work units	1,201.95
associated with transport and management of waste and excess materials	1,214.03
associated with employee business travel	90.10
associated with company staff commuting to the workplace	808.92
caused by loss during transport and distribution of electricity	44.20
Total Emissions	152,533.52

TOTAL FCC CONSTRUCCIÓN ROMANIA	t CO ₂ e
Construction	
1. Fuel (site)	8,583.07
2. Fuel (fixed centres)	278.35
3. Fugitive and process emissions (excluded emissions)	0.00
4. Electrical energy (site)	387.57
5. Electrical energy (fixed centres)	11.40
6. Heat	0.00
7. Vehicle fuel	809.29
8. Travel undertaken by company personnel	89.73
9. Subcontractors	1,201.95
10. Waste	1,214.03
11. Materials	139,913.93
Total Emissions	152,489.32

AVOIDED EMISSIONS (TARGETED ACTIONS AND QUANTIFIED EMISSIONS)

TOTAL FCC CONSTRUCCIÓN ROMANIA	t CO ₂ e
reusing materials on site and not taking them to landfill	898.57
neutralising pH with CO ₂	0.00
proper maintenance of machinery used on site	448.93
controlling the speed of vehicles on site	4.43
Total Emissions	1,351.93

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FCC CONSTRUCCIÓN UNITED KINGDOM VERIFIED DATA

FCC CONSTRUCCIÓN UNITED KINGDOM	t CO ₂ e
Scope 1: Direct GHG emissions	5.67
associated with on-site fuel consumption	0.00
associated fuel consumption at fixed centres	5.67
Scope 2: Indirect GHG emissions	4.21
associated with on-site electricity consumption	0.00
associated electricity consumption at fixed centres	4.21
Scope 3: Other indirect emissions	82.16
associated with the production of used materials	0.00
associated with the transport of used materials	0.00
associated with the performance of subcontracted work units	0.00
associated with transport and management of waste and excess materials	0.00
associated with employee business travel	29.92
associated with company staff commuting to the workplace	51.88
caused by loss during transport and distribution of electricity	0.36
Total Emissions	92.04

TOTAL FCC CONSTRUCCIÓN UNITED KINGDOM	t CO ₂ e
Construction	
1. Fuel (site)	0.00
2. Fuel (fixed centres)	5.67
3. Fugitive and process emissions (excluded emissions)	0.00
4. Electrical energy (site)	0.00
5. Electrical energy (fixed centres)	4.21
6. Heat	0.00
7. Vehicle fuel	52.11
8. Travel undertaken by company personnel	29.69
9. Subcontractors	0.00
10. Waste	0.00
11. Materials	0.00
Total Emissions	91.68

AVOIDED EMISSIONS (TARGETED ACTIONS AND QUANTIFIED EMISSIONS)

TOTAL FCC CONSTRUCCIÓN 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

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FCC CONSTRUCCIÓN IRELAND VERIFIED DATA

FCC CONSTRUCCIÓN IRELAND	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	0.00
associated with on-site electricity consumption	0.00
associated electricity consumption at fixed centres	0.00
Scope 3: Other indirect emissions	41.34
associated with the production of used materials	0.00
associated with the transport of used materials	0.00
associated with the performance of subcontracted work units	0.00
associated with transport and management of waste and excess materials	0.00
associated with employee business travel	37.08
associated with company staff commuting to the workplace	4.26
caused by loss during transport and distribution of electricity	0.00
Total Emissions	41.34

TOTAL FCC CONSTRUCCIÓN IRELAND	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)	0.00
6. Heat	0.00
7. Vehicle fuel	34.01
8. Travel undertaken by company personnel	7.33
9. Subcontractors	0.00
10. Waste	0.00
11. Materials	0.00
Total Emissions	41.34

AVOIDED EMISSIONS (TARGETED ACTIONS AND QUANTIFIED EMISSIONS)

TOTAL FCC CONSTRUCCIÓN IRELAND	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

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FCC CONSTRUCCIÓN BELGIUM VERIFIED DATA

FCC CONSTRUCCIÓN BELGIUM	t CO₂e
Scope 1: Direct GHG emissions	1,010.21
associated with on-site fuel consumption	1,010.21
associated fuel consumption at fixed centres	0.00
Scope 2: Indirect GHG emissions	131.42
associated with on-site electricity consumption	131.42
associated electricity consumption at fixed centres	0.00
Scope 3: Other indirect emissions	15,540.54
associated with the production of used materials	14,975.60
associated with the transport of used materials	116.47
associated with the performance of subcontracted work units	61.76
associated with transport and management of waste and excess materials	321.10
associated with employee business travel	52.19
associated with company staff commuting to the workplace	8.06
caused by loss during transport and distribution of electricity	5.36
Total Emissions	16,682.17

TOTAL FCC CONSTRUCCIÓN BELGIUM	t CO₂e
Construction	
1. Fuel (site)	1,010.21
2. Fuel (fixed centres)	0.00
3. Fugitive and process emissions (excluded emissions)	0.00
4. Electrical energy (site)	131.42
5. Electrical energy (fixed centres)	0.00
6. Heat	0.00
7. Vehicle fuel	8.72
8. Travel undertaken by company personnel	51.53
9. Subcontractors	61.76
10. Waste	321.10
11. Materials	15,092.07
Total Emissions	16,676.81

AVOIDED EMISSIONS (TARGETED ACTIONS AND QUANTIFIED EMISSIONS)

TOTAL FCC CONSTRUCCIÓN BELGIUM	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

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FCC CONSTRUCCIÓN NORWAY VERIFIED DATA

FCC CONSTRUCCIÓN NORWAY	t CO ₂ e
Scope 1: Direct GHG emissions	12.30
associated with on-site fuel consumption	12.30
associated fuel consumption at fixed centres	0.00
Scope 2: Indirect GHG emissions	0.03
associated with on-site electricity consumption	0.03
associated electricity consumption at fixed centres	0.00
Scope 3: Other indirect emissions	53.10
associated with the production of used materials	0.00
associated with the transport of used materials	0.00
associated with the performance of subcontracted work units	0.00
associated with transport and management of waste and excess materials	0.00
associated with employee business travel	45.74
associated with company staff commuting to the workplace	7.36
caused by loss during transport and distribution of electricity	0.00
Total Emissions	65.43

TOTAL FCC CONSTRUCCIÓN NORWAY	t CO ₂ e
Construction	
1. Fuel (site)	12.30
2. Fuel (fixed centres)	0.00
3. Fugitive and process emissions (excluded emissions)	0.00
4. Electrical energy (site)	0.03
5. Electrical energy (fixed centres)	0.00
6. Heat	0.00
7. Vehicle fuel	7.93
8. Travel undertaken by company personnel	45.17
9. Subcontractors	0.00
10. Waste	0.00
11. Materials	0.00
Total Emissions	65.43

AVOIDED EMISSIONS (TARGETED ACTIONS AND QUANTIFIED EMISSIONS)

TOTAL FCC CONSTRUCCIÓN NORWAY	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

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FCC CONSTRUCCIÓN NETHERLANDS VERIFIED DATA

FCC CONSTRUCCIÓN NETHERLANDS	t CO ₂ e
Scope 1: Direct GHG emissions	46.45
associated with on-site fuel consumption	46.45
associated fuel consumption at fixed centres	0.00
Scope 2: Indirect GHG emissions	43.41
associated with on-site electricity consumption	43.41
associated electricity consumption at fixed centres	0.00
Scope 3: Other indirect emissions	90.39
associated with the production of used materials	0.00
associated with the transport of used materials	0.00
associated with the performance of subcontracted work units	0.00
associated with transport and management of waste and excess materials	16.45
associated with employee business travel	72.27
associated with company staff commuting to the workplace	0.00
caused by loss during transport and distribution of electricity	1.67
Total Emissions	180.25

TOTAL FCC CONSTRUCCIÓN NETHERLANDS	t CO ₂ e
Construction	
1. Fuel (site)	46.45
2. Fuel (fixed centres)	0.00
3. Fugitive and process emissions (excluded emissions)	0.00
4. Electrical energy (site)	43.41
5. Electrical energy (fixed centres)	0.00
6. Heat	0.00
7. Vehicle fuel	1.47
8. Travel undertaken by company personnel	70.80
9. Subcontractors	0.00
10. Waste	16.45
11. Materials	0.00
Total Emissions	178.58

AVOIDED EMISSIONS (TARGETED ACTIONS AND QUANTIFIED EMISSIONS)

TOTAL FCC CONSTRUCCIÓN NETHERLANDS	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

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FCC CONSTRUCCIÓN NICARAGUA VERIFIED DATA

FCC CONSTRUCCIÓN NICARAGUA	t CO₂e
Scope 1: Direct GHG emissions	18.30
associated with on-site fuel consumption	0.00
associated fuel consumption at fixed centres	18.30
Scope 2: Indirect GHG emissions	11.45
associated with on-site electricity consumption	0.00
associated electricity consumption at fixed centres	11.45
Scope 3: Other indirect emissions	38.39
associated with the production of used materials	0.00
associated with the transport of used materials	0.00
associated with the performance of subcontracted work units	0.00
associated with transport and management of waste and excess materials	0.47
associated with employee business travel	1.22
associated with company staff commuting to the workplace	34.23
caused by loss during transport and distribution of electricity	2.47
Total Emissions	68.14

TOTAL FCC CONSTRUCCIÓN NICARAGUA	t CO₂e
Construction	
1. Fuel (site)	0.00
2. Fuel (fixed centres)	18.30
3. Fugitive and process emissions (excluded emissions)	0.00
4. Electrical energy (site)	0.00
5. Electrical energy (fixed centres)	11.45
6. Heat	0.00
7. Vehicle fuel	0.00
8. Travel undertaken by company personnel	35.45
9. Subcontractors	0.00
10. Waste	0.47
11. Materials	0.00
Total Emissions	65.67

AVOIDED EMISSIONS (TARGETED ACTIONS AND QUANTIFIED EMISSIONS)

TOTAL FCC CONSTRUCCIÓN 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	0.00
controlling the speed of vehicles on site	0.00
Total Emissions	0.00

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FCC CONSTRUCCIÓN COSTA RICA VERIFIED DATA

FCC CONSTRUCCIÓN COSTA RICA	t CO₂e
Scope 1: Direct GHG emissions	11.96
associated with on-site fuel consumption	0.00
associated fuel consumption at fixed centres	11.96
Scope 2: Indirect GHG emissions	0.31
associated with on-site electricity consumption	0.00
associated electricity consumption at fixed centres	0.31
Scope 3: Other indirect emissions	3.46
associated with the production of used materials	0.00
associated with the transport of used materials	0.00
associated with the performance of subcontracted work units	0.00
associated with transport and management of waste and excess materials	0.27
associated with employee business travel	0.00
associated with company staff commuting to the workplace	3.16
caused by loss during transport and distribution of electricity	0.03
Total Emissions	15.73

UNIDOTOTAL FCC CONSTRUCCIÓN COSTA RICA	t CO₂e
Construction	
1. Fuel (site)	0.00
2. Fuel (fixed centres)	11.96
3. Fugitive and process emissions (excluded emissions)	0.00
4. Electrical energy (site)	0.00
5. Electrical energy (fixed centres)	0.31
6. Heat	0.00
7. Vehicle fuel	3.16
8. Travel undertaken by company personnel	0.00
9. Subcontractors	0.00
10. Waste	0.27
11. Materials	0.00
Total Emissions	15.70

AVOIDED EMISSIONS (TARGETED ACTIONS AND QUANTIFIED EMISSIONS)

TOTAL FCC CONSTRUCCIÓN 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

AENOR
Confía

FCC CONSTRUCCIÓN PANAMA VERIFIED DATA

FCC CONSTRUCCIÓN PANAMA	t CO ₂ e
Scope 1: Direct GHG emissions	2,295.31
associated with on-site fuel consumption	159.09
associated fuel consumption at fixed centres	2,136.22
Scope 2: Indirect GHG emissions	179.97
associated with on-site electricity consumption	12.88
associated electricity consumption at fixed centres	167.09
Scope 3: Other indirect emissions	4,894.06
associated with the production of used materials	1,666.70
associated with the transport of used materials	19.26
associated with the performance of subcontracted work units	2,452.53
associated with transport and management of waste and excess materials	54.46
associated with employee business travel	168.12
associated with company staff commuting to the workplace	509.99
caused by loss during transport and distribution of electricity	23.00
Total Emissions	7,369.34

TOTAL FCC CONSTRUCCIÓN PANAMA	t CO ₂ e
Construction	
1. Fuel (site)	159.09
2. Fuel (fixed centres)	2,136.22
3. Fugitive and process emissions (excluded emissions)	0.00
4. Electrical energy (site)	12.88
5. Electrical energy (fixed centres)	167.09
6. Heat	0.00
7. Vehicle fuel	510.09
8. Travel undertaken by company personnel	168.02
9. Subcontractors	2,452.53
10. Waste	54.46
11. Materials	1,685.96
Total Emissions	7,346.34

AVOIDED EMISSIONS (TARGETED ACTIONS AND QUANTIFIED EMISSIONS)

TOTAL FCC CONSTRUCCIÓN PANAMA	t CO ₂ e
reusing materials on site and not taking them to landfill	0.55
neutralising pH with CO ₂	0.00
proper maintenance of machinery used on site	61.35
controlling the speed of vehicles on site	0.00
Total Emissions	61.90

AENOR
Confía

FCC CONSTRUCCIÓN EL SALVADOR VERIFIED DATA

FCC CONSTRUCCIÓN EL SALVADOR	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	0.15
associated with on-site electricity consumption	0.00
associated electricity consumption at fixed centres	0.15
Scope 3: Other indirect emissions	1.28
associated with the production of used materials	0.00
associated with the transport of used materials	0.00
associated with the performance of subcontracted work units	0.00
associated with transport and management of waste and excess materials	0.01
associated with employee business travel	0.00
associated with company staff commuting to the workplace	1.25
caused by loss during transport and distribution of electricity	0.02
Total Emissions	1.43

UNIDO TOTAL FCC CONSTRUCCIÓN EL SALVADOR	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)	0.15
6. Heat	0.00
7. Vehicle fuel	1.25
8. Travel undertaken by company personnel	0.00
9. Subcontractors	0.00
10. Waste	0.01
11. Materials	0.00
Total Emissions	1.41

AVOIDED EMISSIONS (TARGETED ACTIONS AND QUANTIFIED EMISSIONS)

TOTAL FCC CONSTRUCCIÓN EL SALVADOR	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

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FCC CONSTRUCCIÓN MEXICO VERIFIED DATA

FCC CONSTRUCCIÓN MEXICO	t CO ₂ e
Scope 1: Direct GHG emissions	3.29
associated with on-site fuel consumption	0.00
associated fuel consumption at fixed centres	3.29
Scope 2: Indirect GHG emissions	7.32
associated with on-site electricity consumption	0.00
associated electricity consumption at fixed centres	7.32
Scope 3: Other indirect emissions	58.85
associated with the production of used materials	0.00
associated with the transport of used materials	0.00
associated with the performance of subcontracted work units	0.00
associated with transport and management of waste and excess materials	0.12
associated with employee business travel	52.94
associated with company staff commuting to the workplace	4.82
caused by loss during transport and distribution of electricity	0.97
Total Emissions	69.46

TOTAL FCC CONSTRUCCIÓN MEXICO	t CO ₂ e
Construction	
1. Fuel (site)	0.00
2. Fuel (fixed centres)	3.29
3. Fugitive and process emissions (excluded emissions)	0.00
4. Electrical energy (site)	0.00
5. Electrical energy (fixed centres)	7.32
6. Heat	0.00
7. Vehicle fuel	0.11
8. Travel undertaken by company personnel	57.65
9. Subcontractors	0.00
10. Waste	0.12
11. Materials	0.00
Total Emissions	68.49

AVOIDED EMISSIONS (TARGETED ACTIONS AND QUANTIFIED EMISSIONS)

TOTAL FCC CONSTRUCCIÓN MEXICO	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

AENOR
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FCC CONSTRUCCIÓN COLOMBIA VERIFIED DATA

FCC CONSTRUCCIÓN COLOMBIA	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	1.10
associated with on-site electricity consumption	0.00
associated electricity consumption at fixed centres	1.10
Scope 3: Other indirect emissions	77.37
associated with the production of used materials	0.00
associated with the transport of used materials	0.00
associated with the performance of subcontracted work units	0.00
associated with transport and management of waste and excess materials	0.01
associated with employee business travel	17.73
associated with company staff commuting to the workplace	59.52
caused by loss during transport and distribution of electricity	0.11
Total Emissions	78.47

TOTAL FCC CONSTRUCCIÓN COLOMBIA	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)	1.10
6. Heat	0.00
7. Vehicle fuel	0.00
8. Travel undertaken by company personnel	77.25
9. Subcontractors	0.00
10. Waste	0.01
11. Materials	0.00
Total Emissions	78.36

AVOIDED EMISSIONS (TARGETED ACTIONS AND QUANTIFIED EMISSIONS)

TOTAL FCC CONSTRUCCIÓN COLOMBIA	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

AENOR
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FCC CONSTRUCCIÓN CHILE VERIFIED DATA

FCC CONSTRUCCIÓN CHILE	t CO ₂ e
Scope 1: Direct GHG emissions	21.44
associated with on-site fuel consumption	17.00
associated fuel consumption at fixed centres	4.44
Scope 2: Indirect GHG emissions	12.47
associated with on-site electricity consumption	5.83
associated electricity consumption at fixed centres	6.64
Scope 3: Other indirect emissions	1,133.99
associated with the production of used materials	762.13
associated with the transport of used materials	1.27
associated with the performance of subcontracted work units	224.58
associated with transport and management of waste and excess materials	66.53
associated with employee business travel	49.15
associated with company staff commuting to the workplace	29.79
caused by loss during transport and distribution of electricity	0.54
Total Emissions	1,167.90

UNIDO TOTAL FCC CONSTRUCCIÓN CHILE	t CO ₂ e
Construction	
1. Fuel (site)	17.00
2. Fuel (fixed centres)	4.44
3. Fugitive and process emissions (excluded emissions)	0.00
4. Electrical energy (site)	5.83
5. Electrical energy (fixed centres)	6.64
6. Heat	0.00
7. Vehicle fuel	27.36
8. Travel undertaken by company personnel	51.58
9. Subcontractors	224.58
10. Waste	66.53
11. Materials	763.40
Total Emissions	1,167.36

AVOIDED EMISSIONS (TARGETED ACTIONS AND QUANTIFIED EMISSIONS)

TOTAL FCC CONSTRUCCIÓN 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	0.89
controlling the speed of vehicles on site	0.00
Total Emissions	0.89

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FCC CONSTRUCCIÓN PERU VERIFIED DATA

FCC CONSTRUCCIÓN PERU	t CO ₂ e
Scope 1: Direct GHG emissions	1,274.93
associated with on-site fuel consumption	1,266.55
associated fuel consumption at fixed centres	8.38
Scope 2: Indirect GHG emissions	442.80
associated with on-site electricity consumption	441.40
associated electricity consumption at fixed centres	1.40
Scope 3: Other indirect emissions	81,018.24
associated with the production of used materials	78,084.36
associated with the transport of used materials	415.41
associated with the performance of subcontracted work units	767.30
associated with transport and management of waste and excess materials	1,506.89
associated with employee business travel	177.21
associated with company staff commuting to the workplace	18.49
caused by loss during transport and distribution of electricity	48.58
Total Emissions	82,735.97

TOTAL FCC CONSTRUCCIÓN PERU	t CO ₂ e
Construction	
1. Fuel (site)	1,266.55
2. Fuel (fixed centres)	8.38
3. Fugitive and process emissions (excluded emissions)	0.00
4. Electrical energy (site)	441.40
5. Electrical energy (fixed centres)	1.40
6. Heat	0.00
7. Vehicle fuel	15.61
8. Travel undertaken by company personnel	180.09
9. Subcontractors	767.30
10. Waste	1,506.89
11. Materials	78,499.77
Total Emissions	82,687.39

AVOIDED EMISSIONS (TARGETED ACTIONS AND QUANTIFIED EMISSIONS)

TOTAL FCC CONSTRUCCIÓN PERU	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	66.66
controlling the speed of vehicles on site	0.00
Total Emissions	66.66

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FCC CONSTRUCCIÓN UNITED STATES VERIFIED DATA

FCC CONSTRUCCIÓN UNITED STATES	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	11.82
associated with on-site electricity consumption	0.00
associated electricity consumption at fixed centres	11.82
Scope 3: Other indirect emissions	85.77
associated with the production of used materials	0.00
associated with the transport of used materials	0.00
associated with the performance of subcontracted work units	0.00
associated with transport and management of waste and excess materials	0.00
associated with employee business travel	31.83
associated with company staff commuting to the workplace	53.36
caused by loss during transport and distribution of electricity	0.58
Total Emissions	97.59

TOTAL FCC CONSTRUCCIÓN UNITED STATES	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)	11.82
6. Heat	0.00
7. Vehicle fuel	72.24
8. Travel undertaken by company personnel	12.95
9. Subcontractors	0.00
10. Waste	0.00
11. Materials	0.00
Total Emissions	97.01

AVOIDED EMISSIONS (TARGETED ACTIONS AND QUANTIFIED EMISSIONS)

TOTAL FCC CONSTRUCCIÓN UNITED STATES	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

AENOR
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FCC CONSTRUCCIÓN CANADA VERIFIED DATA

FCC CONSTRUCCIÓN CANADA	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	0.61
associated with on-site electricity consumption	0.00
associated electricity consumption at fixed centres	0.61
Scope 3: Other indirect emissions	41.10
associated with the production of used materials	0.00
associated with the transport of used materials	0.00
associated with the performance of subcontracted work units	0.00
associated with transport and management of waste and excess materials	0.00
associated with employee business travel	32.09
associated with company staff commuting to the workplace	8.98
caused by loss during transport and distribution of electricity	0.03
Total Emissions	41.71

TOTAL FCC CONSTRUCCIÓN CANADA	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)	0.61
6. Heat	0.00
7. Vehicle fuel	8.98
8. Travel undertaken by company personnel	32.09
9. Subcontractors	0.00
10. Waste	0.00
11. Materials	0.00
Total Emissions	41.68

AVOIDED EMISSIONS (TARGETED ACTIONS AND QUANTIFIED EMISSIONS)

TOTAL FCC CONSTRUCCIÓN CANADA	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

AENOR
Confía**FCC CONSTRUCCIÓN QATAR VERIFIED DATA**

FCC CONSTRUCCIÓN QATAR	t CO₂e
Scope 1: Direct GHG emissions	14.42
associated with on-site fuel consumption	0.00
associated fuel consumption at fixed centres	14.42
Scope 2: Indirect GHG emissions	5.57
associated with on-site electricity consumption	0.00
associated electricity consumption at fixed centres	5.57
Scope 3: Other indirect emissions	11.97
associated with the production of used materials	0.00
associated with the transport of used materials	0.00
associated with the performance of subcontracted work units	0.00
associated with transport and management of waste and excess materials	0.00
associated with employee business travel	8.21
associated with company staff commuting to the workplace	3.54
caused by loss during transport and distribution of electricity	0.22
Total Emissions	31.96

TOTAL FCC CONSTRUCCIÓN QATAR	t CO₂e
Construction	
1. Fuel (site)	0.00
2. Fuel (fixed centres)	14.42
3. Fugitive and process emissions (excluded emissions)	0.00
4. Electrical energy (site)	0.00
5. Electrical energy (fixed centres)	5.57
6. Heat	0.00
7. Vehicle fuel	3.54
8. Travel undertaken by company personnel	8.21
9. Subcontractors	0.00
10. Waste	0.00
11. Materials	0.00
Total Emissions	31.74

AVOIDED EMISSIONS (TARGETED ACTIONS AND QUANTIFIED EMISSIONS)

TOTAL FCC CONSTRUCCIÓN QATAR	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

AENOR
Confía**FCC CONSTRUCCIÓN SAUDI ARABIA VERIFIED DATA**

FCC CONSTRUCCIÓN SAUDI ARABIA	t CO₂e
Scope 1: Direct GHG emissions	31,094.61
associated with on-site fuel consumption	31,094.61
associated fuel consumption at fixed centres	0.00
Scope 2: Indirect GHG emissions	175.86
associated with on-site electricity consumption	175.86
associated electricity consumption at fixed centres	0.00
Scope 3: Other indirect emissions	26,822.37
associated with the production of used materials	23,631.17
associated with the transport of used materials	565.96
associated with the performance of subcontracted work units	793.11
associated with transport and management of waste and excess materials	1,280.07
associated with employee business travel	446.95
associated with company staff commuting to the workplace	89.28
caused by loss during transport and distribution of electricity	15.83
Total Emissions	58,092.84

TOTAL FCC CONSTRUCCIÓN SAUDI ARABIA	t CO₂e
Construction	
1. Fuel (site)	31,094.61
2. Fuel (fixed centres)	0.00
3. Fugitive and process emissions (excluded emissions)	0.00
4. Electrical energy (site)	175.86
5. Electrical energy (fixed centres)	0.00
6. Heat	0.00
7. Vehicle fuel	92.02
8. Travel undertaken by company personnel	444.21
9. Subcontractors	793.11
10. Waste	1,280.07
11. Materials	24,197.13
Total Emissions	58,077.01

AVOIDED EMISSIONS (TARGETED ACTIONS AND QUANTIFIED EMISSIONS)

TOTAL FCC CONSTRUCCIÓN SAUDI ARABIA	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	0.73
Total Emissions	0.73

Chief verifier: ASIER TORRES

Technical reviewer: FERNANDO SEGARRA

**AENOR**
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por 16295080V ASIER
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Place and date, Madrid, 25 June 2021

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