

# CARBON FOOTPRINT REPORT



**EUIPO**

**2019**



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## 1. INTRODUCTION

The EUIPO is the European Union Intellectual Property Office, which is responsible for managing EU trade marks and registered Community designs. To that end, the EUIPO carries out examination, registration, opposition and cancellation procedures for European Union trade marks.

In line with the European Union's CO<sub>2</sub> emissions reduction commitments and in accordance with its environmental policy objectives of reducing pollution and setting up programmes to achieve a dynamic and continuous improvement in its environmental performance, in 2012 the Office decided to calculate its carbon footprint every year, and so began measuring the CO<sub>2</sub>-equivalent emissions generated by its operations.

Continuing in that vein, this year **we are calculating the carbon footprint for 2019**.

Please see the **explanations** given below, which have been provided to make this 2019 Carbon Footprint Calculation report easier to follow and understand:

1. **HEADQUARTERS:** the EUIPO headquarters are the EUIPO's premises at Avenida de Europa nº 4 in Alicante, including buildings AA1, AA2 and AA3. Number of employees taken into account for the calculation: 1 782.
2. **NOTATION SYSTEM USED:** the notation system used to indicate the quantities of each of the sources corresponds to the system used in English-speaking countries, as English is the official language used for the Office's indicators. Thus, a comma indicates units of a thousand, whilst a full stop indicates a decimal point.

## 2. PURPOSE AND BACKGROUND

The carbon footprint of organisations, also known as the corporate greenhouse gas (GHG) emissions inventory, is a measurement of the GHG emissions generated by an organisation's operations. A measurement is taken of the quantity of greenhouse gases (GHGs), expressed as CO<sub>2</sub> equivalent (CO<sub>2</sub>e), emitted both directly and indirectly by an organisation, or during the life cycle of a product or service.

Calculating a company's carbon footprint provides an understanding of what its emissions are and which operations are generating them, making it possible to implement measures to reduce or offset those emissions.

Since it is not always possible to find ways to reduce emissions within the organisation itself, it must be assumed that the emissions generated by business operations are contributing to climate change. Nevertheless, the fact that greenhouse gases are dispersed throughout the atmosphere means that it is possible to achieve this reduction in emissions elsewhere in the world. This is the premise on which the concept of offsetting emissions is based. An organisation may reduce its emissions through 'offset mechanisms' that allow organisations to invest in emissions reduction projects (renewable energy or reforestation projects, etc.) in any part of the world. That investment is made by means of the voluntary purchase of a number of carbon credits (corresponding to the number of tonnes of CO<sub>2</sub>e emitted) from a specific project based in a developing country.

Since 2007, EUIPO has been operating an environmental management system in line with Regulation (EC) No 1221/2009 of the European Parliament and of the Council of 25 November 2009 on the voluntary participation by organisations in a Community eco-management and audit scheme (EMAS), Annexes I, II and III of which were subsequently amended in accordance with Commission Regulation (EU) 2017/1505 of 28 August 2017. The EUIPO is a participant in the [Eco-Management and Audit Scheme \(EMAS\)](#), a management tool which enables companies to assess, improve and report on their environmental performance.

Every year, the EUIPO publishes its Environmental Statement, which is validated by an accredited verifier. One of the indicators used in that statement is the carbon footprint calculation. In 2012, EUIPO decided to calculate its carbon footprint for that year, have the calculation verified and offset the emissions by means of an emissions reduction project.

Continuing in that endeavour, we are calculating the carbon footprint for 2019 (from 1 January to 31 December 2019). This document sets out the data and the calculations used to obtain the inventory of greenhouse gas (GHG) emissions generated by the Office's operations. The 2019 results are also compared with the results based on data obtained in previous years.

### 3. METHODOLOGY

Although various methodologies can be used for carbon footprint calculation, EUIPO is using the **Greenhouse Gas Protocol ('GHG Protocol') method**, as it is one of the most widely used standards and the actions defined therein correspond most closely to the types of CO<sub>2</sub>-emitting operations that will be assessed and quantified in the present study.

The Greenhouse Gas Protocol Initiative is a multi-stakeholder partnership of businesses, non-governmental organisations (NGOs), governments and other bodies, convened by the World Resources Institute (WRI) and the World Business Council for Sustainable Development, a Geneva-based coalition of 170 international companies. The initiative was launched in 1998 with the mission to develop internationally accepted accounting and reporting standards for business and to promote their widespread adoption.

The Greenhouse Gas Protocol Initiative comprises two separate but linked standards:

- ✓ GHG Protocol Corporate Accounting and Reporting Standard: this document provides a step-by-step guide for companies to use in quantifying and reporting their GHG emissions.
- ✓ GHG Protocol Project Quantification Standard: a guide for quantifying GHG reductions from specific projects.

The calculation of the EUIPO's carbon footprint in 2019 will be based on the Corporate Accounting and Reporting Standard, as it has the advantage of providing a verifiable standard. There are five steps to calculating the carbon footprint:

1. **Defining the scope:** includes organisational and operational boundaries, and an indication of the calculation period.
2. **Identifying emissions:** all the emissions generated by the Office need to be identified, differentiating between scope 1, scope 2 and scope 3 emissions.
3. **Calculating emissions**
4. **Verifying the results**
5. **Communicating the results**

This report on the EUIPO's Greenhouse Gas Inventory is independently verified by AENOR [the Spanish Association for Standardisation and Certification].

#### 3.1. Carbon footprint calculation

To calculate the greenhouse gas emissions associated with an organisation's operations, 'activity data' (distance travelled, litres of fuel used or tonnes of waste generated) must be converted into the

carbon emissions associated with those operations. In order to do this, ‘emission factors’ are used. To calculate the emissions from various sources, the various specific activity data are multiplied by the corresponding emission factor for each activity, using the following formula:

$$\text{Carbon footprint} = \text{activity data} \times \text{emission factor}$$

A detailed calculation of the emissions from each of the sources analysed is attached in Annex I.

### 3.2. Source and reliability of data. Level of uncertainty

With a view to establishing a practical reference framework to collect the emissions inventory information (including performance indicators) required to calculate the Office’s carbon footprint, the EUIPO has used the integrated management system to develop a methodology for proposing, validating and reporting **performance indicators**.

The objective is also to integrate performance improvement across the various management systems in place (quality, environment, accessibility, health and safety, information security) and to be able to have sustainability indicators.

The EUIPO has also created an operational dashboard which shows how the indicators for each objective evolve, facilitates decision-making and adopts a coherent set of indicators that provide information on the monitoring of objectives and strategy: *New IBD Dashboard*. The Office has used this to:

- ✓ establish an inventory quality team;
- ✓ develop a quality management plan that describes the steps for the implementation of its quality management system;
- ✓ achieve generic quality assurance and quality assurance for specific categories of emission sources;
- ✓ review estimates and final inventory reports;
- ✓ institutionalise formal feedback processes;
- ✓ establish reporting, documentation and archiving procedures.

The sources of the data used for this calculation are as follows:

- **EUIPO’s vehicle fleet and the external transport service.** Petrol and diesel consumption. Information gathered from fuel supplier invoices and external transport service provider invoices, and checked by the Head of Transport.
  - **Indicator:** QSD.0034.03
- **Boilers.** Data gathered from invoices issued by the supplier. Data is collected through the Facilities Management department.

- **Indicator:** BSC 1.3.7. partial data on natural gas consumption. Indicator BSC 1.3.7 is the sum of gas consumption and electricity consumption on the premises.
- **Generators.** The maintenance service provider supplies information on the number of hours the generators operate to the EUIPO's Head of Maintenance.
  - **Indicator:** QSD.0023.06
- **Refrigerant gases.** Information based on the leakage check records supplied by the maintenance service provider to the EUIPO's Head of Maintenance.
- **Electricity.** Data gathered from invoices issued by the supplier. Data is collected through the Facilities Management department.
  - **Indicator:** BSC 1.3.7. partial data on electricity consumption. Indicator BSC 1.3.7 is the sum of gas consumption and electricity consumption on the premises.
- **Business travel.** Missions Office. Human Resources Department.
- **Travel to and from work.** EUIPO Mobility Plan.
- **Waste disposal.** Quantities of each type of waste generated every month provided by the waste management and cleaning service provider.
  - **Indicators:** QSD.0304.01 and QSD.0304.02
- **Paper purchased.** Paper use monitoring records: *Stationery* (invoices issued by the supplier) and *Reprography* (data provided by the supplier).
  - **Indicator:** BSC1.3.4. Differentiating between non-recycled and recycled paper.

All the equipment used to take the various measurements is calibrated/tested. Moreover, all the emission factors taken into account for the calculation are from officially recognised sources, which helps to minimise the uncertainty of the reported data.

### 3.3. Identification of emission sources. Activity data

Quantitative indicators of the activity of each of the emission sources and their respective emission factors are used to calculate emissions. For the purposes of this calculation, no emission sources are excluded.

The emission sources analysed and the activity data used for the carbon footprint calculation are set out in the table below.

Scope	Emission source	Aspect considered	Unit
1	EUIPO-owned vehicle fleet (*)	Fuel used (petrol and diesel)	Litres
	Boilers	Fuel used (natural gas)	kWh
	Generators	Operating hours (diesel)	Litres

	Refrigerant gases	Gas recharging	kg
2	Electricity	Consumption	kWh
3	Business travel by plane	Distance travelled	km
	Business travel by train	Distance travelled	km
	Business travel by bus	Distance travelled	km
	Travel to and from work: including by car, motorcycle and bus (urban bus services and the EUIPO <-> European School bus service)	Mobility plan (mode of transport and distance travelled)	km per employee and mode of transport
	Outsourced transport	Fuel used (petrol and diesel)	Litres
	Waste disposal	Final destination of each type of waste	kg of waste generated by type
	Paper	Paper purchased (non-recycled and recycled)	kg

Table 1. Emission sources included in the calculation. Activity data

(\*) With effect from 2019: for 'vehicles' in scope 1, only the fuel consumed by the EUIPO-owned fleet is taken into account.

The diesel consumed by the external transport service provider is now accounted for under scope 3, as it is considered to be an indirect emission, according to the [definition given by MITECO](#) [Spanish Ministry for the Ecological Transition and the Demographic Challenge]: *'Indirect GHG emissions are emissions that are a consequence of the organisation's actions but which occur in sources that are owned or controlled by another organisation. Some examples of scope 3 activities are the extraction and production of materials purchased by your organisation, business travel using external transport providers (...).'*

The emissions generated by the European School<-> EUIPO bus service no longer fall under scope 1 because that bus line is covered by scope 3 'Travel to and from work'. If they were retained within scope 1, this would result in them being counted twice.

### 3.4. Gases included

The gases taken into account for calculating the Office's carbon footprint, expressed as tonnes of CO<sub>2</sub> equivalent, are:

- CO<sub>2</sub>
- CH<sub>4</sub>
- N<sub>2</sub>O



- HFCs, PFCs and SF<sub>6</sub>.

### 3.5. Emission factors (EF)

The emission factors (EF) used to calculate GHG emissions in this document are set out below.

#### **DEFRA:** for scope 1 and 3 emission sources

The 'Guidelines to Defra/DECC's GHG Conversion Factors', published by the Department for Business, Energy and Industrial Strategy (BEIS) and the Department for Environment, Food and Rural Affairs (DEFRA) in the UK, were used for both the scope 1 emission sources of the Office's carbon footprint (EUIPO-owned vehicle fleet, boilers, generators and refrigerant gases) and the scope 3 emission sources. As well as being recognised internationally, these guidelines have a tool which provides the emission factors that were updated in 2019 and are valid until 31 July 2020 (version 1.0).

#### **SUPPLIER:** for scope 2 emission sources

To calculate the emissions relating to electricity consumption, we apply the emission factor attributable to the supplier to which the Office allocated the electricity supply contract for the year of calculation, 2019. The source of this data is the document entitled '*Mix Comercial y Factores de Impacto Medio Ambiental*', which is available on the CNMC (National Commission on Markets and Competition) website, and which provides the 'CO<sub>2</sub> emissions (kg CO<sub>2</sub>/kWh)' data, according to the supplier, for the selected year. The figure must be reported to two decimal places.

The origin of the electricity must also be taken into account. Electricity produced from renewable energy sources has been regulated by Order ITC/1522/2007 of 24 May since December 2007. The origin of electricity can be confirmed by means of a Guarantee of Origin (Spanish initials: GdO) granted by the CNMC, which is an accreditation in electronic format issued in response to a request from the interested party guaranteeing that a certain number of megawatt hours of electricity generated by a power station over a given period of time have been generated from renewable energy sources or from high efficiency cogeneration.

## 4. SCOPE

The *GHG Protocol* states that, as a first step in carbon footprint calculation, the organisation compiling its emissions inventory must set organisational boundaries.

### 4.1. Data on the Office

<b>Registered name:</b>	<b>European Union Intellectual Property Office</b>
<b>Centre:</b>	Alicante Office
<b>Address</b>	Avenida de Europa, 4, 03008 Alicante, Spain
<b>Tax ID</b>	V03965324
<b>Built surface area</b>	89,318 m <sup>2</sup>
<b>Number of employees</b>	1,782

Table 2. Information on the EUIPO

Since 1994, the EUIPO headquarters have been located in Alicante. The building which houses the Office's headquarters is situated on the outskirts of the city of Alicante, in the area known as Agua Amarga. It is located on land classified as commercial land, which belongs entirely to the organisation.

As well as the offices, the EUIPO headquarters has an auditorium, a landscaped area of 10,643 m<sup>2</sup>, meeting rooms, conference rooms, car parks, a kitchen, a gymnasium, multi-purpose courts, a self-service restaurant and cafeteria, a medical service, commercial premises (bakery, pharmacy and shop) and technical facilities.

The built surface area of the **EUIPO headquarters** is 89,318 m<sup>2</sup>.

The EUIPO headquarters are located in Alicante, but the Office's investment in e-Business tools allows it to work with companies all over the world via the internet. The EUIPO has no other peer organisations.

In 2019, the EUIPO received 160,381 applications for trade mark registration (5.24 % more than in 2018), 153,525 publications and 140,767 registrations. With regard to designs, 96,833 applications were received in 2019<sup>1</sup>. In 2019, the EUIPO had an average staff of approximately 1,782 employees.

<sup>1</sup> Source: Data obtained from Business Objects reports [SSC009](#) for EUTM and [SSC007](#) for RCD on 13/01/2020. This information was subsequently published on <https://euipo.europa.eu/ohimportal/en/the-office>.

## 4.2. Organisational boundaries

The GHG Protocol's control criterion establishes that a company must include all the activities over which it has financial or operational control, in other words, where it has full authority to introduce and implement its operating policies.

Using this approach, the following emission sources are within the organisational boundaries set:

- ✓ **Stationary combustion:** including generators and boilers.
- ✓ **Refrigerants:** from the air conditioning units, refrigeration chambers, cold-storage rooms, processing plants.
- ✓ **Mobile combustion:** including all the vehicles in the Office's fleet, where they are owned by the EUIPO.
- ✓ **Electricity:** power consumed by the air conditioning system and the lighting of the two buildings.
- ✓ **Business travel:** business travel by EUIPO employees and invited staff, managed through the Missions Office. This includes journeys made by aeroplane, train and bus (urban bus services and EUIPO <-> European School bus service).
- ✓ **Waste disposal:** including the emissions produced from the processing of waste generated at the EUIPO offices. This consists of paper and cardboard, toner, fluorescent tubes, alkaline batteries, electric and electronic equipment, bulky waste (mainly obsolete furniture) and rubble, and other waste.
- ✓ **Employees' travel to and from work:** includes all travel by employees from their home to the EUIPO and vice versa. This covers travel undertaken using various means of transport.
- ✓ **Outsourced transport:** including all the vehicles owned by the transport service provider.
- ✓ **Paper purchased:** including all the recycled and non-recycled paper purchased for EUIPO activities throughout 2019.

**The site occupied by the EUIPO headquarters** at Avenida de Europa nº 4 in Alicante **is taken into consideration.**

To calculate the relative environmental indicators, the **total number of office employees (employees in active employment + support staff)** has been used: **1,782.**

Employees in active employment: employees in a post that is physically located at the Office and who work permanently on the premises.

Support staff: staff from external maintenance, gardening, cleaning and waste management providers, and catering, security, home help and news stand operation services who perform their work at the Office.

Total workforce: this term encompasses the total number of employees in active employment and the total number of support staff, including subcontractors.

### 4.3. Operational boundaries

An operational boundary defines the scope of direct and indirect emissions for operations that fall within a company's established organisational boundary.

The GHG Protocol defines three scopes; scope 1 and scope 2 emissions must be reported, but scope 3 is optional. Nevertheless, sources of emissions which fell under scope 3 and hence did not need to be reported, have been included in the Office's carbon footprint calculation because they were considered to be significant in terms of their contribution to the overall amount of CO<sub>2</sub> emissions generated by the EUIPO.

The emissions generated by the EUIPO's business activity are listed below, under the three scopes defined in the GHG Protocol:

- ❖ **Scope 1. Direct GHG emissions.** These occur from sources that are owned or controlled by the Office and include:
  - ✓ Emissions from mobile combustion (EUIPO-owned vehicles).
  - ✓ Emissions from stationary combustion (boilers and generators).
  - ✓ Emissions from recharging air conditioning systems, refrigeration chambers and/or processing plants with refrigerant gases.
- ❖ **Scope 2. Indirect GHG emissions relating to electricity.** These include emissions from the generation of electricity purchased and consumed by the Office.
- ❖ **Scope 3. Other indirect emissions.** These are a consequence of the activities of the Office, but occur from sources not owned or controlled by the organisation:
  - ✓ Emissions from business travel by EUIPO employees and invited staff, managed through the Missions Office, including journeys made by air, rail and bus (urban bus services and the EUIPO <-> European School bus service).
  - ✓ Emissions from the disposal of waste generated by the EUIPO's operations.
  - ✓ Emissions generated by travel to and from work, i.e. employees' commutes from their home to their place of work and vice versa.
  - ✓ Emissions from mobile combustion (vehicles owned by the transport service provider).
  - ✓ Emissions associated with paper purchased.

All the categories of emissions described in the scopes are considered to be relevant for the purposes of calculating the EUIPO's carbon footprint.

## 5. Calculation period for the report. Time limit

This report contains the CO<sub>2</sub>e emissions inventory of EUIPO operations in 2019 (1 January 2019 to 31 December 2019).

In addition, it shows the results obtained in previous years for each emission source.

BASE PERIOD: Q2, Q3 and Q4 2015 and Q1 2016.

Base year emissions may need to be recalculated and adjusted in the event of:

- 1- Structural changes that have a significant impact on emissions
- 2- Changes in calculation methodology

Neither of the above arose in 2019, so there was no adjustment of the base period.

## 6. Calculation and analysis of results

### 6.1. Scope 1

#### 6.1.1. Vehicle fleet

Emissions from the fossil fuel consumption of the six vehicles owned by the EUIPO plus two scooter-type motorcycles, are calculated using the data provided by the Transport Team. The calculation takes into account the litres of fuel (petrol and diesel) consumed by the vehicle fleet, which includes three petrol-run vehicles, three diesel-run vehicles and one hybrid vehicle.

Type of vehicle	Model	Fuel
Van	VW CARAVELLE	Diesel
Van	VW COMBI	Diesel
Van	MERCEDES VIANO	Diesel
Car	AUDI A6 3.0 TFSI	Petrol
Car	AUDI A4 2.0 TFSI	Petrol
Car	RENAULT FLUENCE	Electric
Scooter	PIAGGIO 350CC	Petrol
Scooter	PIAGGIO 200CC	Hybrid

Table 3. EUIPO-owned vehicle fleet

Emission source	Fuel type	Annual consumption (l)	t CO <sub>2</sub> e
Vehicle fleet	Petrol	2,208.08	4.8777
	Diesel	183.87	0.4770
			<b>5.3547</b>

Table 4. Emissions in tonnes of CO<sub>2</sub> equivalent. Mobile combustion - EUIPO-owned vehicle fleet (scope 1)

*EF: DEFRA 2019 'Liquid fuels'.*

Diesel emissions are slightly higher than petrol emissions in the year in question.

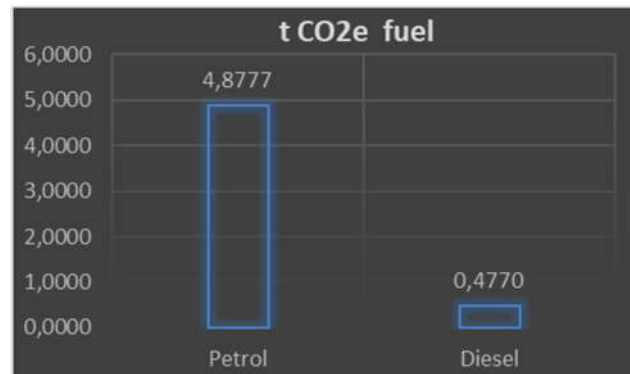


Figure 1. Emissions by fuel type

### 6.1.2. Boilers

AA1		AA2		AA3	
No	Characteristics	No	Characteristics	No	Characteristics
4	Heating: 250 kW	2	Heating: 400 kW	1	750 l storage heater
2	DHW: 25 kW	1	DHW: 45 kW	1	400 l DHW storage cylinder
2	1,000 l DHW storage cylinder				
2	1,500 l storage heaters				

Table 5. Boilers

Emission source	Annual consumption (kWh)	t CO <sub>2</sub> e
Boilers	539,017.84	110.1106

Table 6. Emissions in tonnes of CO<sub>2</sub> equivalent. Stationary combustion - boilers (scope 1)

*EF: DEFRA 2019 'Gaseous fuels'.*

*Before applying the correction factor, consumption (based on gross calorific value (GCV)) is corrected on the basis of the following factor:*

*1 kWh based on GCV = 0.901 kWh based on NCV*

### 6.1.3. Generators

Since 2015, the consumption data have been based on the actual operating hours of the generators, with loads of 5 % in units located in Buildings AA1, AA2 and AA3 and of 30 % in units located in the Data Processing Centre (DPC).

Please see below for information on the generators in use at the EUIPO facilities, along with the characteristics of the fuel storage tanks for each building.

AA1		AA2		AA3		DPC	
No	Characteristics	No	Characteristics	No	Characteristics	No	Characteristics
<b>Generators</b>							
2	1.250 kVA	1	2.500 kVA	1	800 kVA	2	1,400 kVA
<b>Fuel tanks</b>							
2	3.000 LITRES	1	15.000 LITRES	1	4.990 LITRES	1	8.000 LITRES
2	1.000 LITRES	1	1.500 LITRES	1	140 LITRES	2	1.000 LITRES
1	440 LITRES (future diesel generator array)						

Table 7. Generators and fuel tanks

Emission source	Annual consumption (l)	t CO <sub>2</sub> e
<b>Generators</b>	2,244.79	<b>5.8232</b>

 Table 8. Emissions in tonnes of CO<sub>2</sub> equivalent. Stationary combustion - generators (scope 1)

*EF: DEFRA 2019 'Liquid fuels'.*

#### 6.1.4. Refrigerant gases

The group of GHGs covered by the Kyoto Protocol includes gases used as refrigerants in refrigeration equipment, air conditioning systems and heat pumps.

In this case, fugitive emissions are measured based on the amount of each gas (in kg) recharged in the year in question. The table below shows the amounts of refrigerant gases (in kg) required for recharging purposes during the course of 2019:

Refrigerant	Recharge (kg)	TOTAL t CO <sub>2</sub> e
<b>R 134A</b>	0.32	0.4576
<b>R 404A</b>	13.90	54.5158
<b>R 410A</b>	7.40	15.4512
<b>R-32</b>	1.30	0.8775
<b>SF6</b>	0.00	0.0000
		<b>71.3021</b>

Table 9. Calculation of fugitive emissions of fluorinated gases (scope 1)

*EF: DEFRA 2019 'Refrigerant & Other – Kyoto protocol – standard and blends'.*



## 6.2. Scope 2

### 6.2.1. Electricity

It should be pointed out that CO<sub>2</sub> emissions from electricity consumption are zero, since the EUIPO uses green energy from renewable energy sources, according to the certificate issued by the electricity company Iberdrola S.A.U. and the data reported on the CUPS [universal electricity supply point code] redemption information certificate provided by the National Commission on Markets and Competition. The EUIPO purchases electricity generated exclusively from renewable energy sources for the buildings at its headquarters. See Annex II. Consequently, there are zero CO<sub>2</sub> emissions from this source.

Emission source	Annual consumption (MWh)	t CO <sub>2</sub> e
Electricity	8,327.471	0.00

Table 10. Emissions calculation. Emissions from the generation of electricity purchased and consumed (scope 2)

### 6.2.2. Electricity emissions avoided

Next, the CO<sub>2</sub> emissions avoided by the EUIPO as a result of the Office purchasing green energy were calculated.

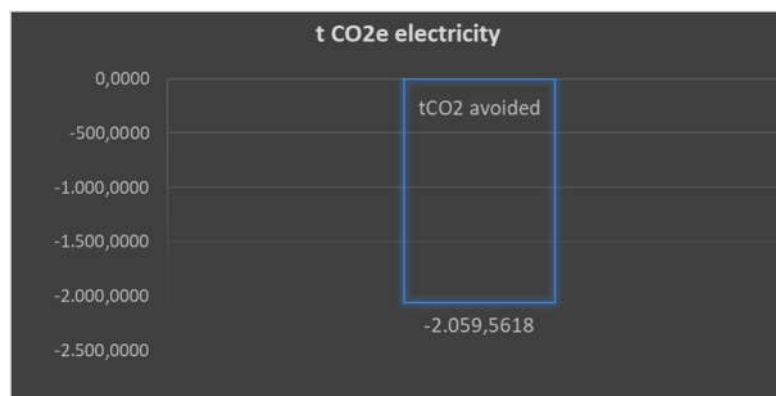


Figure 2. Electricity consumption emissions (scope 2) avoided by the EUIPO

CF: IBERDROLA CLIENTES, S.A.U. (Factor Mix 2018): 0.270 kg CO<sub>2</sub>e/kWh according to the document 'Factores de emisión – Registro de Huella de Carbono, compensación y proyectos de absorción de Dióxido de Carbono' published by the Ministry of Agriculture and Fisheries, Food and Environment in April 2019 (version 12).

### 6.3. Scope 3

#### 6.3.1. Business travel

The EUIPO's business activity involves a significant amount of travel every year, all over the world. Emissions from business trips (by aeroplane, train and bus) made by EUIPO employees and invited staff, managed through the Missions Office, are reported under scope 3.

##### 6.3.1.1. **Aeroplane**

To calculate the emissions from business travel by plane, the number of kilometres travelled by employees on each flight is counted.

The flights taken are categorised according to distance travelled, in accordance with the different types of flights identified in the DEFRA 2019 conversion factors. Thus, three different types of flight are taken into account:

- ✓ **Domestic:** routes shorter than 500 km.
- ✓ **Short-haul:** routes longer than 500 km and shorter than 3,700 km.
- ✓ **Long-haul:** routes longer than 3,700 km.

Emission source	Distance travelled (km)	t CO <sub>2</sub> e
Business travel - plane	11,474,558.35	1,931.1483

Table 11. Emissions calculation. Indirect emissions – plane (scope 3)

*EF: DEFRA 2019 'Business travel - air' for business travel by aeroplane.*

*The calculations take into account radiative forcing (RF), which is a measure of the environmental impact of aviation, including emissions of nitrous oxides and water vapour emitted at high altitude. DEFRA 2019 states that organisations should include RF when calculating their air travel emissions, in order to cover the full climate impact of aviation.*

##### 6.3.1.2. **Train**

Business travel by train covers much shorter distances than business travel by plane. To calculate the amount of business travel by train, the distance travelled by employees (in km) is taken into account.

Emission source	Distance travelled (km)	t CO <sub>2</sub> e
Business travel - train	246,869.40	10.1587

Table 12. Emissions calculation. Indirect emissions – train (scope 3)

*EF: DEFRA 2019 'Business travel - land' for business travel by train.*

*Train journeys taken by EUIPO employees are considered to be national.*

### 6.3.1.3. Bus

As with rail travel, emissions from bus travel are calculated based on the number of kilometres travelled by employees.

Emission source	Distance travelled (km)	t CO <sub>2</sub> e
Business travel - bus	983.00	<b>0.0273</b>

Table 13. Emissions calculation. Indirect emissions – bus (scope 3)

*EF: DEFRA 2019 'Business travel - land - bus - coach' for business travel by bus.*

### 6.3.1.4. Total business travel

The total amount of business travel undertaken by the Office is calculated below:

Emission source	Mode of transport	t CO <sub>2</sub> e
Business travel	Aeroplane	1,931.1483
	Train	10.1587
	Bus	0.0273
		<b>1,941.3343</b>

Table 14. Emissions calculation. Indirect emissions – business travel: by plane, train and bus (scope 3)

The emissions produced by air travel are significantly higher than those produced by train travel. One of the reasons for this is that the distances covered by plane journeys are longer.

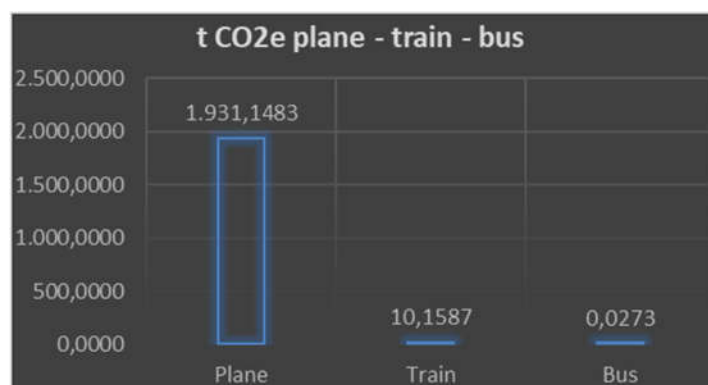


Figure 3. GHG emissions from business travel by mode of transport (scope 3)

### 6.3.2. Travel to and from work

This section contains a calculation of the emissions from travel by employees from their home to EUIPO buildings and vice versa, i.e. commuting by Office staff. The data used for the calculation, such

as the mode of transport used by employees, the distances travelled, the type of fuel in the vehicles used and the number of journeys made per week, were obtained from the information gathered by the Sustainable Mobility survey carried out by the EUIPO in 2018.

Those data have been extrapolated to the number of employees in 2019: 1,782 employees.

Mode of transport	Rate of use (%)
Car	74.45
Motorcycle	5.69
Bus	14.89
Bicycle	3.07
On foot	1.31
Scooter	0.58

Table 15. Usual mode of transport to the EUIPO used by employees

The average number of journeys made by EUIPO employees over the course of a week is **10**.

### 6.3.2.1. Cars

The data used to calculate the GHG emissions from cars used by the Office's employees are set out below:

<b>Vehicle occupancy rate (employee/car)</b>	1.26
--	------

Table 16. Car occupancy rate

Car fuel	
Diesel	54.71%
Petrol	38.82%
Hybrid	4.51%
Electric	1.96%

Table 17. Type of fuel used by cars

Distance travelled per car journey	< 5 km	5-10 km	10-15 km	15-30 km	> 30 km
%	11.76%	23.33%	29.61%	24.51%	10.78%

Table 18. Distance travelled per journey - cars

Emission source	t CO <sub>2</sub> e
Travel to and from work - by car	1,232.6772

Table 19. Emissions calculation. Indirect emissions – travel to and from work: by car (scope 3)

*EF: DEFRA 2019 'Passenger vehicles'*

### 6.3.2.2. Motorcycles

The data used to calculate the GHG emissions from motorcycles used by the Office's employees are set out below:

Motorcycle fuel	
Petrol	97.44%
Electric	2.56%

Table 20. Type of fuel used by motorcycles

Distance travelled per motorcycle journey	< 5 km	5-10 km	10-15 km	15-30 km	> 30 km
	12.82%	41.03%	23.08%	17.95%	5.13%

Table 21. Distance travelled per motorcycle journey

Emission source	t CO <sub>2</sub> e
Travel to and from work - by motorcycle	62.1330

Table 22. Emissions calculation. Indirect emissions – travel to and from work: by motorcycle (scope 3)

*EF: DEFRA 2019 'Passenger vehicles'*

### 6.3.2.3. Bus

The data used to calculate the GHG emissions from buses used by the Office's employees are set out below. The annual statistics of the Dirección General de Tráfico (DGT) [Directorate-General of Traffic] were referred to in order to obtain information on the fuel used by the fleet of buses operating in the province of Alicante (base year 2013).

Bus fuel	
Diesel	100.00%

Table 23. Type of fuel used by buses

Distance travelled per bus journey									
< 1 km	1 km	2 km	3 km	4 km	5 km	5-10 km	10-15 km	15-30 km	> 30 km
0.00%	0.98%	0.98%	3.92%	2.94%	24.51%	32.35%	28.43%	5.88%	0.00%

Table 24. Distance travelled per journey – by bus

Emission source	t CO <sub>2</sub> e
Travel to and from work – by bus	107.4943

Table 25. Emissions calculation. Indirect emissions – Travel to and from work: by bus (scope 3)

*EF: DEFRA 2019 'Passenger vehicles'*

#### 6.3.2.4. Total travel to and from work

The total amount of travel to and from work by Office staff is calculated below:

Emission source	Mode of transport	t CO <sub>2</sub> e
Travel to and from work	Cars	1,232.6772
	Motorcycle	62.1330
	Bus	107.4943
		<b>1,402.3044</b>

Table 26. Emissions calculation. Indirect emissions – travel to and from work: by car, motorcycle and bus (scope 3)

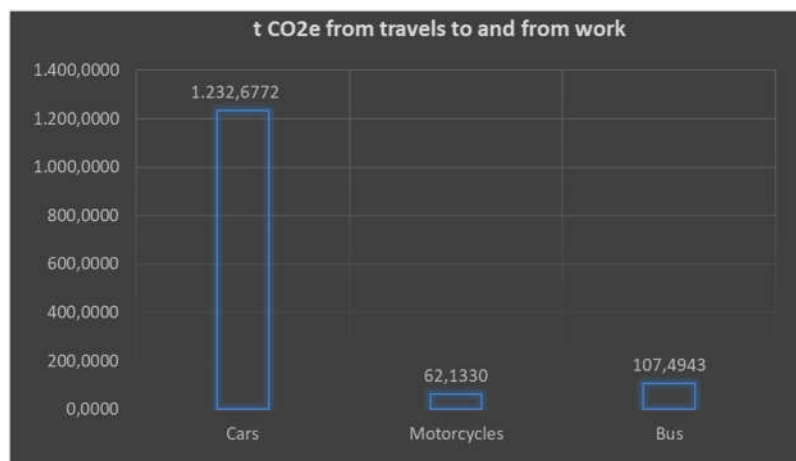


Figure 4. GHG emissions from travel to and from work by mode of transport

### 6.3.3. Outsourced transport

The calculation takes into account the litres of fuel (petrol and diesel) consumed by the vehicle fleet of the external transport service provider.

Emission source	Fuel type	Annual consumption (l)	t CO <sub>2</sub> e
Vehicle fleet of the external transport service provider	Petrol	0.00	0.0000
	Diesel	635.22	1.6478
			<b>1.6478</b>

Table 27. Emissions in tonnes of CO<sub>2</sub> equivalent. Mobile combustion - vehicle fleet of the external transport provider (scope 1)

*EF: DEFRA 2019 'Liquid fuels'.*

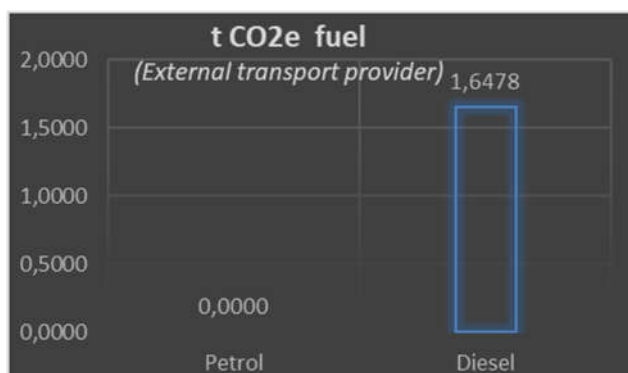


Figure 5. Emissions by fuel type

### 6.3.4. Waste disposal

This category includes emissions from the processing of waste generated by the EUIPO's operations. They have been calculated on the basis of the waste managed through EUIPO's recycling centre.

Waste processing methods include:

- ✓ Burying in landfills
- ✓ Combustion of biogas to generate electricity
- ✓ Recovery for recycling
- ✓ Incineration
- ✓ Composting

Waste	LoW code	Total (t)	TOTAL t CO <sub>2e</sub>
NP toner	08 03 18	0,405	0.0086
Clean rubble	17 01 07	25,140	0.0254
Dirty rubble	17 09 04	5,940	0.0060
Paper	20 01 01	37,856	0.8084
Cardboard	21 01 01	12,100	0.2584
Glass	20 01 02	3,060	0.0653
Biodegradable waste from kitchens and restaurants	20 01 08	1,219	0.0124
Edible oil and fats	20 01 25	1,360	0.0290
Other batteries and accumulators	16 06 05	0,124	0.0080
NP WEEE	20 01 36	1,924	0.0411
Wood	20 01 38	4,860	0.1038
Wooden pallets	20 01 38	2,330	0.0498
Coloured plastic	20 01 39	0,720	0.0154
Plastic film	20 01 39	0,060	0.0013
Metals	20 01 40	5,560	0.0056
Pruning	20 02 01	19,280	0.1967
Solid industrial waste	20 03 01	13,800	0.2947
Bulky waste	20 03 07	2,580	0.0551
Confidential documents	20 01 01	6,075	0.1297
Sanitary bins	20 01 99	1,900	1.1144
Paint sludge	08 01 13*	0,610	0.0130
Toner	08 03 17*	0,168	0.0168
Mineral-based non-chlorinated engine, gear and lubricating oils	13 02 05*	0,168	0.0036
Oily water	13 05 07*	0,629	0.0134
Contaminated paper containers	15 01 10*	0,383	0.0082
Contaminated plastic containers	15 01 10*	0,607	0.0130
Contaminated metal containers	15 01 10*	0,481	0.0005
Contaminated cloths (absorbent materials)	15 02 02*	0,433	0.0092
Contaminated oil filters	16 01 07*	0,012	0.0012
Aerosol containers	16 05 04*	0,062	0.0013
Lead batteries	16 06 01*	0,217	0.0140
NiCd batteries	16 06 02*	0,021	0.0014
Batteries containing mercury	16 06 03*	0,003	0.0002
Fluorescent tubes	20 01 21*	0,216	0.0046
WEEE	20 01 35*	2,119	0.0452



Sanitary waste	18 01 03*	0,022	0.0022
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Table 28. Emissions calculation. Emissions per type of waste

*EE: DEFRA 2019 'Waste disposal' for waste*

Emission source	t CO <sub>2</sub> e
<b>Waste disposal</b>	<b>3.3769</b>

Table 29. Emissions calculation. Indirect emissions – waste disposal (scope 3)

### 6.3.5. Paper purchased

In the course of its operations, the EUIPO consumes a significant amount of paper, as detailed below:

Emission source	Type of paper	Total t	t CO <sub>2</sub> e
Paper	Non-recycled	1.4874	1.4170
	Recycled	17.4469	13.8569
			<b>15.2739</b>

Table 30. Emissions calculation. Indirect emissions – paper purchased (scope 3)

*EE: DEFRA 2019 'Material use' for paper purchased*

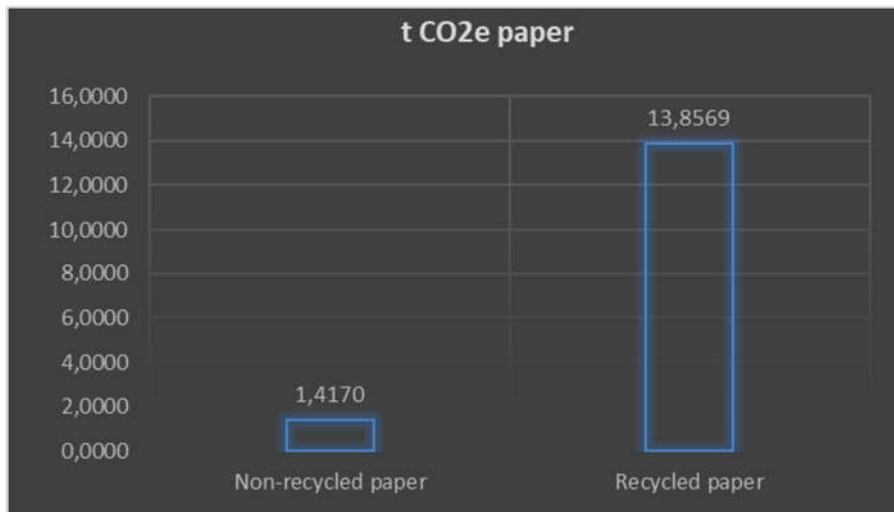


Figure 6. GHG emissions from paper purchased

## 7. OVERALL RESULTS – INFORMATION ON EMISSIONS

The Office's total emissions for 2019 were **3,556.5280 t CO<sub>2</sub>e**.

Emission source	t CO <sub>2</sub> e	t CO <sub>2</sub> e by scope	Scope	
Vehicle fleet	5.3547	<b>192.5906</b>	Scope 1	5.42%
Boilers	110.1106			
Generators	5.8232			
Refrigerant gases	71.3021			
Electricity	0.0000	<b>0.0000</b>	Scope 2	0.00%
Air travel	1,931.1483	<b>3,363.9374</b>	Scope 3	94.58%
Train travel	10.1587			
Bus travel	0.0273			
Travel to and from work	1,402.3044			
Outsourced transport	1.6478			
Waste	3.3769			
Paper	15.2739			
<b>TOTAL</b>	<b>3,556.5280</b>			

Table 31. Total emissions per emission source

The figure below shows the percentages of total emissions produced by the EUIPO, expressed in tonnes of Co2e,2e, taking into account the boundaries set in this document.

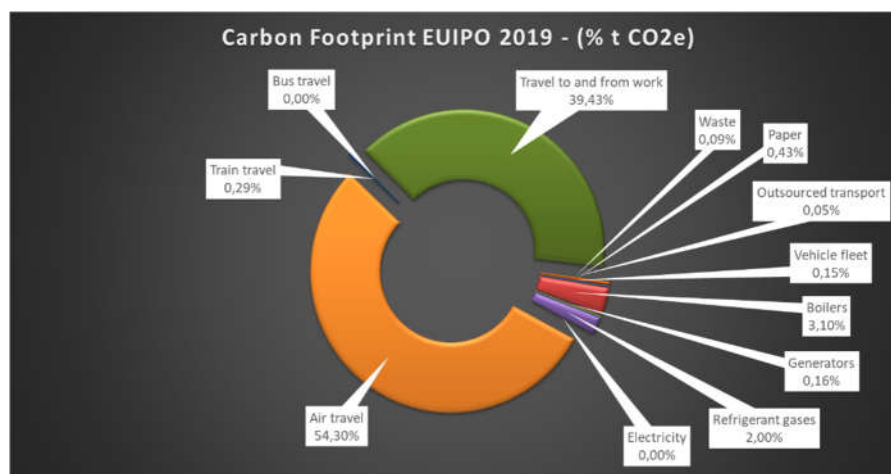


Figure 7. Breakdown of emissions by emission source

It can be seen that business travel by plane is the main source of GHG emissions, followed by travel

to and from work, which means that **scope 3** activities generate the most t CO<sub>2</sub>e, that is **94.58 %** of the Office's total emissions.

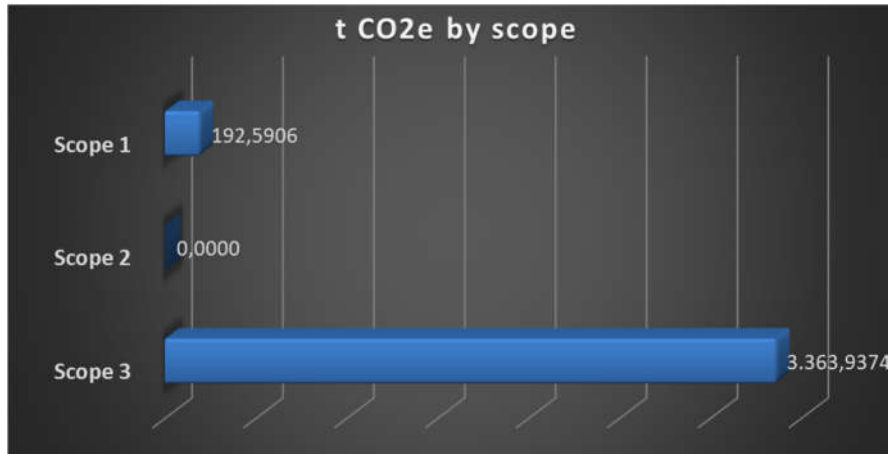


Figure 8. Total emissions by scope

## 8. CONCLUSIONS

The emissions generated by the European Union Intellectual Property Office in 2019 were down **21.6 % (979.74 t CO<sub>2</sub>e)** compared to the base year.

The sources that generated the fewest GHG emissions in absolute terms in 2019, in comparison to the base year, were:

- ✓ Mobile combustion (EUIPO-owned fleet and transport carried out by external provider both by car and by bus): 60.2 % reduction
- ✓ Boilers: 70.9 % reduction
- ✓ Air travel: 29.9 % reduction
- ✓ Waste: 33.7 % reduction
- ✓ Paper: 70.5 % reduction

Emission source	2019 (t CO <sub>2</sub> e)	%
Vehicle fleet	5.3547	0.15%
Boilers	110.1106	3.10%
Generators	5.8232	0.16%
Refrigerant gases	71.3021	2.00%
Electricity	0.0000	0.00%
Air travel	1,931.1483	54.30%
Train travel	10.1587	0.29%
Bus travel	0.0273	0.00%
Travel to and from work	1,402.3044	39.43%
Outsourced transport	1.6478	0.05%
Waste	3.3769	0.09%
Paper	15.2739	0.43%
<b>TOTAL</b>	<b>3,556.5280</b>	

Table 32. Emissions in 2019. Totals and percentages

By scope, both direct GHG emissions (scope 1) and indirect GHG emissions (scope 3) have fallen in comparison to the base year (-54.11 % and -18.28 % respectively).

### SCOPE 1

Emissions in this scope are down by 54.11 % compared with absolute emissions in the base year. Within this scope, there has been a significant increase in GHG emissions associated with the

operation of generators (+76.37 % compared with the base year). This increase is due primarily to the expansion of the fleet of generators and to the maintenance tasks and power cuts which give rise to the need to use generators.

However, this increase is offset by significant reductions in emissions from boilers (-70.88 %, in line with the Office's reduced gas consumption) and from the vehicle fleet in comparison to the base year.

## **SCOPE 2**

Emissions in this scope continue to be zero, on account of the purchasing of green energy, which means that the Office has managed to avoid the emission of 2,059.5618 t CO<sub>2</sub> into the atmosphere.

## **SCOPE 3**

The percentage decrease in emissions under this scope, which are 18.28 % lower than in the base year, was driven by the contribution of emissions associated with:

- Business air travel (29.87 % less than the base year, in t CO<sub>2e</sub>): 11,474,558.35 km in 2019, representing a reduction of 3,468,460.85 km in the distance travelled.
- Waste disposal (33.73 % less than the base year, in t CO<sub>2e</sub>): As a result of the continuation of the waste management improvement plan, there has been an overall decline in the amount of waste, and in particular the amount of waste from clean rubble, dirty rubble, glass, biodegradable waste from kitchens and restaurants, wood, plastics, metals, solid industrial waste, bulky waste, lead batteries, potassium hydroxide, toner (hazardous waste), contaminated oil filters and WEEE, all of which have dropped by more than 50 % compared with the relative amount in tonnes per employee generated in the base year.
- Paper purchased (70.50 % less than the base year, in t CO<sub>2e</sub>): 18,934.21 kg in 2019, representing a reduction of 40,663.44 kg in the amount of paper purchased.

## 9. EMISSIONS REDUCTION MEASURES

Until December 2019, there was a Reduction of the EUIPO's Environmental Impact project, which was part of the Office's SP2020 Strategic Plan. That project enabled the achievement of objectives relating to the reduction of emissions through the implementation of measures aimed at:

- ✓ improving the energy efficiency of buildings and services,
- ✓ lowering the demand for natural resources,
- ✓ establishing a green procurement process,
- ✓ measuring, offsetting and reducing the negative impact of CO<sub>2</sub> emissions.

Although that project was formally completed at the end of 2019, some initiatives within it are still relevant to the management system and to the organisation, and will continue to have a positive impact on emissions reduction.

Furthermore, in its 2025 Strategic Plan, and specifically as part of Strategic Driver 3 (*Dynamic organisational skillsets and an innovative workplace of choice*), Goal 3.3 (*Towards the future sustainable workplace*), EUIPO undertakes to invest in minimising the environmental impact of its operations, with a particular focus on waste generation, resource consumption and greenhouse gas emissions.

Specifically, it will implement the following measures that will have a positive impact on emissions reduction:

### **Scope 1:**

- ▶ Continue to implement energy efficiency measures in order to further reduce emissions from stationary combustion (boilers).

### **Scope 3:**

- ▶ Reduce paper consumption by 2.5 % less than 2019 by monitoring printing by remote workers and setting quotas per print job and per period of time on multifunction printers.
- ▶ Mitigate the environmental impact of catering activities by implementing at least three initiatives focused on reducing both food waste and the use of plastic.
- ▶ Complete the installation of new waste collection and separation points in the office ('mini recycling centres').

**Overall:**

▶ Continue to implement Green Public Procurement (GPP) criteria by reviewing all the tenders launched by the Office which could potentially have a significant environmental impact. The Office will create a database for the management of GPP criteria, serving as a repository for the preparation of proposals for criteria and a tool for monitoring them during performance of contracts.

These measures will be supplemented by briefings on GPP for stakeholders involved in the procurement process.

Lastly, the possibility of joining the interinstitutional contract for a helpdesk on the subject of GPP criteria will be explored. The purpose of that contract is to provide an efficient, direct and practical service to help the staff involved in public procurement and support them with the effective inclusion of GPP at all stages of the procedure.

▶ Compile a report on the organisation's carbon footprint, modelled on the existing 'Paper Footprint Report', in order to increase employee awareness.

▶ Conduct a study to identify new initiatives for reducing the Office's environmental impact as a basis for possible approval of a project in the 2025 Strategic Plan.

▶ Compile a study on energy efficiency, renewable energy sources, energy saving and use of alternative sources of water.

▶ Propose offsetting of greenhouse gas emissions through projects certified abroad as a possible service shared between EU agencies.

## 10. OFFSETTING INITIATIVES

As well as taking action to reduce its carbon footprint, the Office decided to offset its residual carbon emissions.

After exploring the offsetting of residual carbon emissions through local reforestation projects (restoring vegetation in the zones to the north-east of the Office site in 2017; stage one of an urban park in the Sierra del Porquet in 2018), in the end the Office reoriented its strategy towards the selection of national or international offsetting projects.

The Office therefore decided to take part in the Madre de Dios Peruvian Amazon Forest Conservation Project, a project linked to forest conservation. This project is endorsed by VCS (Verified Carbon Standard) and CCB (Climate, Community and Biodiversity) emission certifications, and the offsets are recorded under these international standards.

In token of its commitment to reduce its environmental impact, EUIPO decided retrospectively to offset its emissions for 2016, 2017 and 2018, thereby becoming a 'carbon-neutral' organisation.



The Office intends to continue fully offsetting its residual emissions in the future on a yearly basis.



## 11. TRENDS BY EMISSION SOURCE 2012-2019

When comparing emission sources individually, the number of years under comparison is increased. For many of those sources, the period taken into consideration is 2012 to 2019.

### 11.1. Scope 1

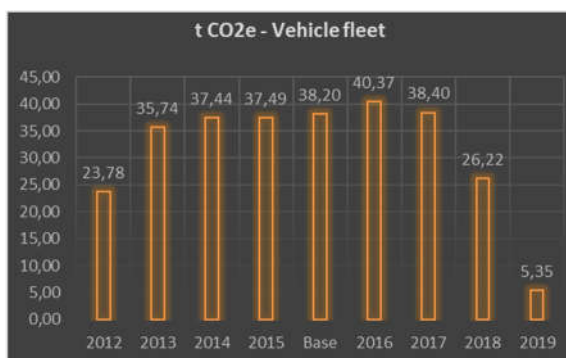


Figure 9. Vehicle fleet (\*)

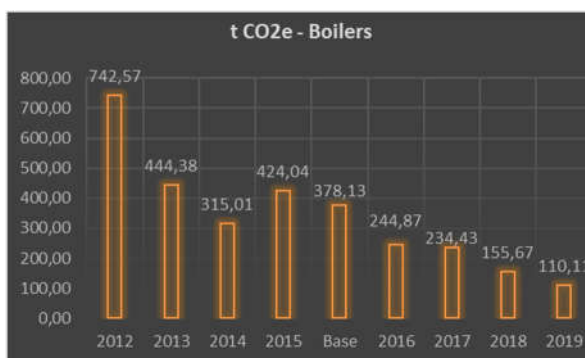


Figure 10. Boilers

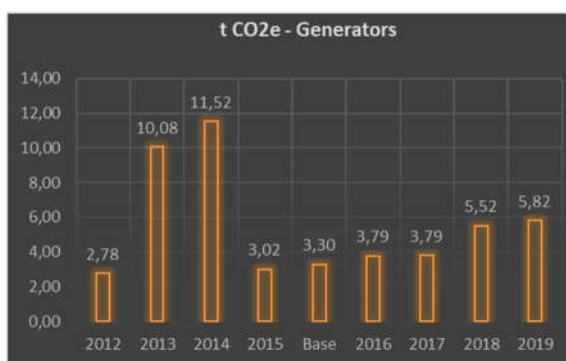


Figure 11. Generators

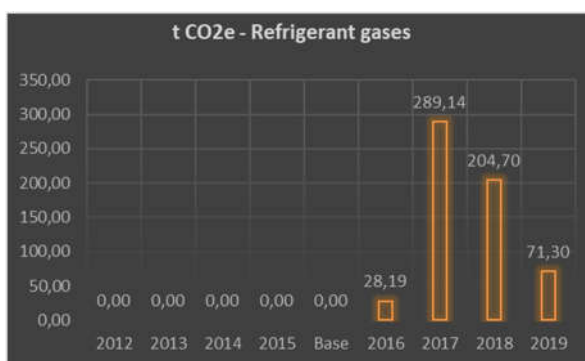


Figure 12. Refrigerant gases

(\*) *With effect from 2019: in 'Scope 1 – Vehicle fleet', only the fuel consumed by the EUIPO-owned fleet is taken into account.*

*The diesel consumed by the external transport service provider is accounted for under scope 3.*

*The emissions generated by the European School<-> EUIPO bus service no longer fall under scope 1 because that bus line is covered by scope 3, 'Travel to and from work'.*

### 11.2. Scope 2

Emissions from electricity consumption are zero for the purposes of carbon footprint calculation, because all of the electricity consumed by the Office since 2012 comes from green energy sources.

### 11.3. Scope 3

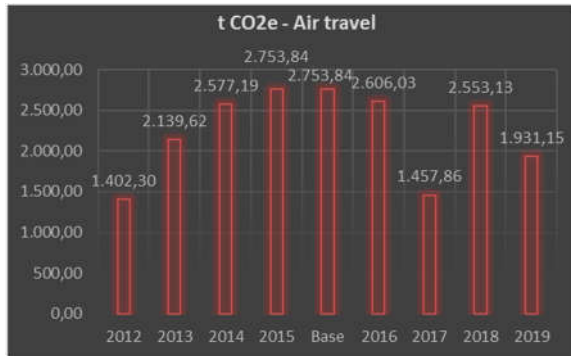


Figure 13. Business travel by plane



Figure 14. Business travel by train (\*)

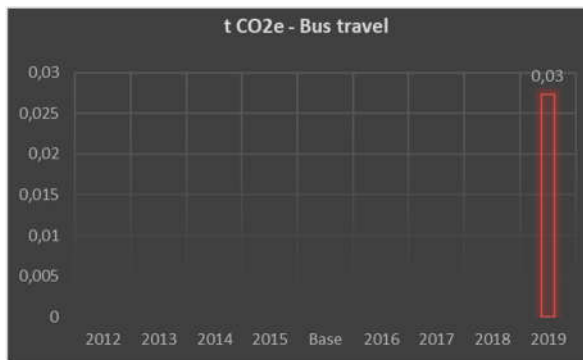


Figure 15. Business travel by bus (\*\*)

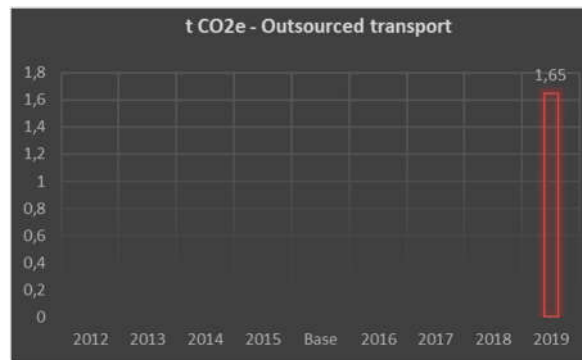


Figure 16. Outsourced transport (\*\*\*)

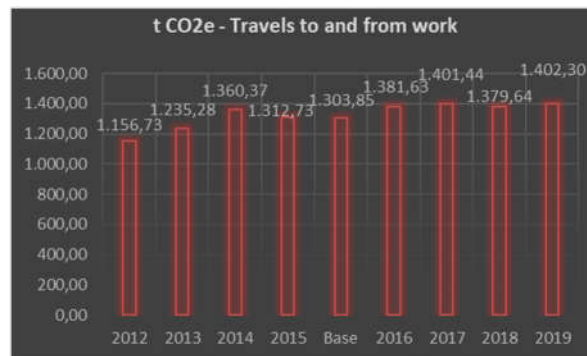


Figure 17. Travel to and from work

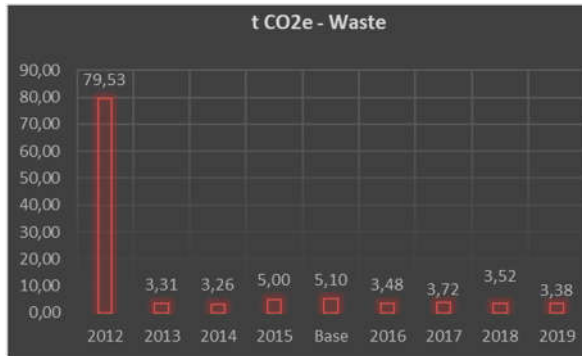


Figure 18. Waste disposal

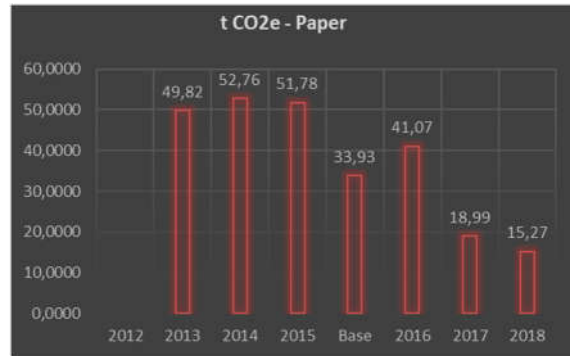


Figure 19. Paper purchased (\*\*\*\*)

(\*) These emissions were first calculated in 2013. With effect from 2018, DEFRA's equivalent factor for international rail travel was no longer applied, and instead, the factor for national rail travel was applied, which explains the significant increase in comparison to previous years.

(\*\*) These emissions were first calculated in 2019.

(\*\*\*) The diesel consumed by the external transport service provider (which previously fell under scope 1) is accounted for under scope 3 with effect from 2019.

(\*\*\*\*) These emissions were first calculated in 2013.

## 12. INDICATORS

The ability to compare the trend in the carbon footprint over a number of years relies on the use of indicators which show how CO<sub>2</sub>e emissions have varied depending on the changes in the EUIPO's activity over the years.

Three indicators were used for previous carbon footprints:

- ✓ CO<sub>2</sub>e emissions per EUIPO employee
- ✓ CO<sub>2</sub>e emissions per m<sup>2</sup> of the buildings.
- ✓ CO<sub>2</sub>e emissions for all products (including applications for trade mark registration, publications, registrations completed and applications for registration of designs).

These three indicators have been calculated for 2019<sup>2</sup>. The results obtained are as follows:

	No of employees	m <sup>2</sup> building	Total products	t CO <sub>2</sub> e	t CO <sub>2</sub> e (relative)		
					Employee	m <sup>2</sup> building	Product
<b>2019</b>	1,782	89,318.00	551,506.00	3,556.5280	<b>1.9953</b>	<b>0.0398</b>	<b>0.0064</b>
<b>2018</b>	1,732	89,318.00	518,196.00	4,356.6745	<b>2.5154</b>	<b>0.0488</b>	<b>0.0084</b>
<b>2017</b>	1,655	81,052.00	507,126.00	3,471.2954	<b>2.0975</b>	<b>0.0428</b>	<b>0.0068</b>
<b>2016</b>	1,594	81,052.00	478,337.00	4,344.5617	<b>2.7250</b>	<b>0.0536</b>	<b>0.0091</b>
<b>Base</b>	1,517	81,052.00	446,820.00	4,536.2696	<b>2.9896</b>	<b>0.0560</b>	<b>0.0102</b>
<b>2015</b>	1,528	81,052.00	446,820.00	4,590.9434	<b>3.0045</b>	<b>0.0566</b>	<b>0.0103</b>
<b>2014</b>	1,566	38,606.00	418,170.00	4,357.0100	<b>2.7823</b>	<b>0.1129</b>	<b>0.0104</b>
<b>2013</b>	1,422	38,606.00	351,215.00	3,869.8300	<b>2.7214</b>	<b>0.1002</b>	<b>0.0110</b>
<b>2012</b>	1,325	38,606.00	324,656.00	3,407.6900	<b>2.5718</b>	<b>0.0883</b>	<b>0.0105</b>

Table 33. Comparison of indicators (2012 to 2019)

<sup>2</sup> Source: Data obtained from Business Objects reports [SSC009](#) for EUTM and [SSC007](#) for RCD on 13/01/2020 This information is subsequently published at <https://euiipo.europa.eu/ohimportal/en/the-office>.

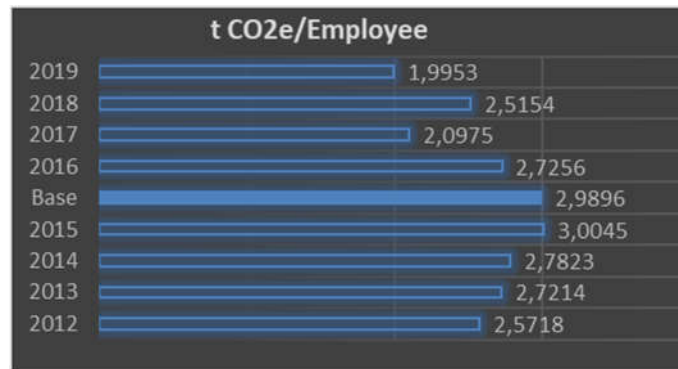


Figure 20. t CO<sub>2</sub>e / employee

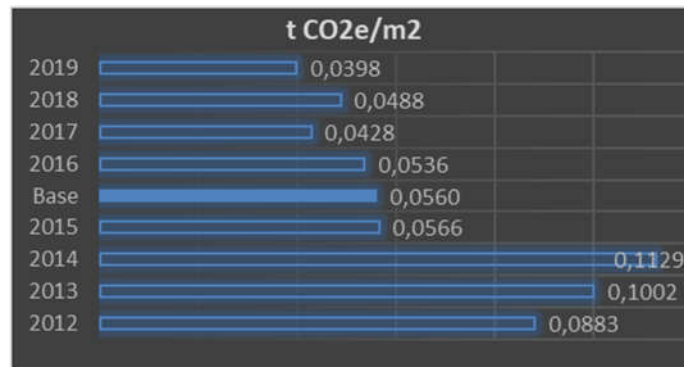


Figure 21. t CO<sub>2</sub>e / m<sup>2</sup>

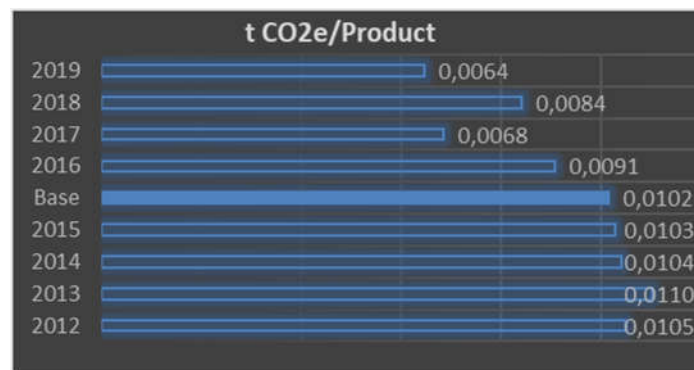
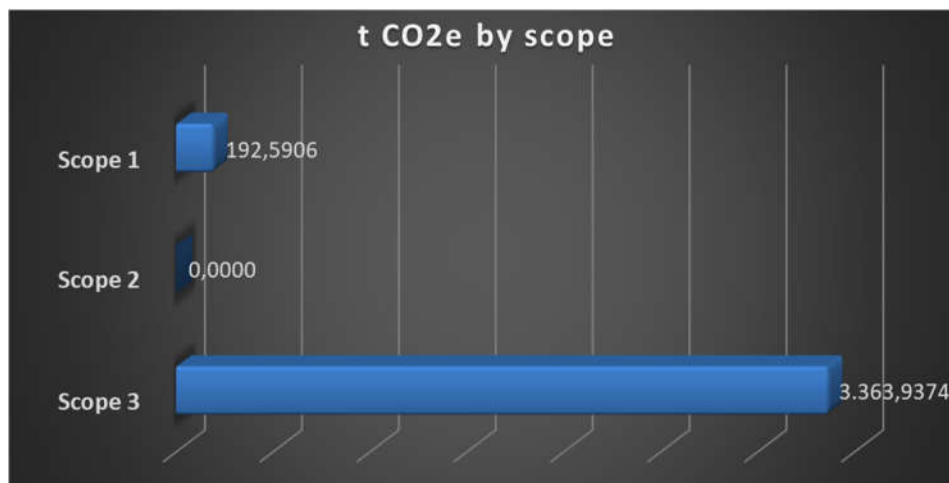
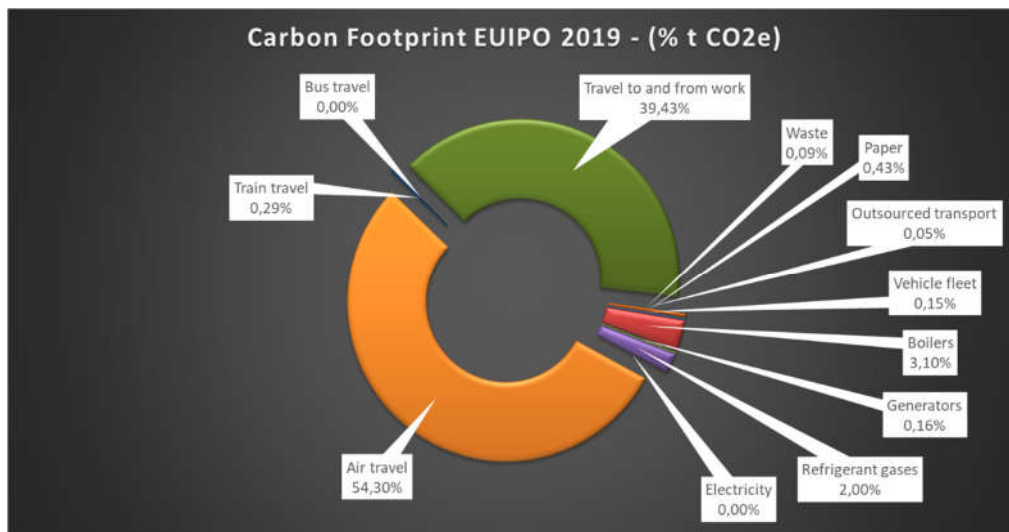


Figure 22. t CO<sub>2</sub>e / product

As can be observed from the above figures, relative CO<sub>2</sub>e emissions have generally decreased across all indicators in comparison to the base year.

## ANNEX I – CALCULATIONS

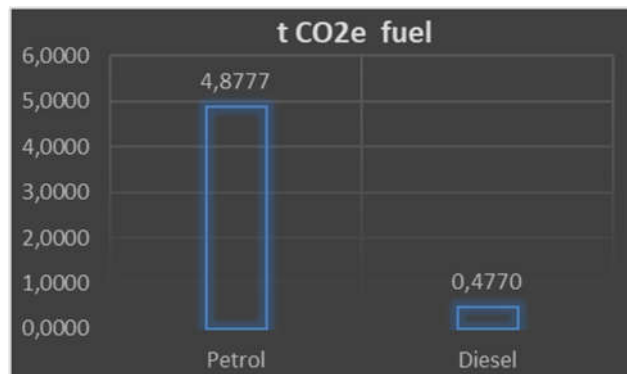
Concepto	t CO <sub>2</sub> e	t CO <sub>2</sub> e por alcance	Alcance	%
Vehicle fleet	5,3547	<b>192,5906</b>	Alcance 1	5,42%
Boilers	110,1106			
Generators	5,8232			
Refrigerant gases	71,3021	<b>0,0000</b>	Alcance 2	0,00%
Electricity	0,0000			
Air travel	1.931,1483	<b>3.363,9374</b>	Alcance 3	94,58%
Train travel	10,1587			
Bus travel	0,0273			
Travel to and from work	1.402,3044			
Outsourced transport	1,6478			
Waste	3,3769			
Paper	15,2739			
<b>TOTAL</b>	<b>3.556,5280</b>			



**CALCULATIONS 2019. TOTAL CONSUMPTION - HEADQUARTERS (QSD.0034.03)**

Month	Petrol (litres) (EUIPO fleet only)	Diesel (litres) (EUIPO fleet only)
J	101,10	0,00
F	143,14	71,07
M	201,60	0,00
A	210,58	50,13
My	152,68	0,00
J	76,34	0,00
Jl	149,45	0,00
Ag	217,20	0,00
S	180,75	0,00
O	281,99	0,00
N	302,67	0,00
D	190,58	62,67
	<b>2.208,0800</b>	<b>183,8700</b>

	FE	TOTAL Kg CO <sub>2</sub> e	TOTAL t CO <sub>2</sub> e
Petrol	2,20904	4.877,737	4,8777
Diesel	2,59411	476,979	0,4770
			<b>5,3547</b>



Activity	Fuel	Unit	DEFRA			
			kg CO <sub>2</sub> e	kg CO <sub>2</sub>	kg CH <sub>4</sub>	kg N <sub>2</sub> O
Liquid fuels	Diesel (average biofuel blend)	tonnes				
		litres	2.59411	2.55956	0.0003	0.03425
		kWh (Net CV)				
		kWh (Gross CV)				
	Petrol (average biofuel blend)	tonnes				
		litres	2.20904	2.19585	0.00688	0.00631
		kWh (Net CV)				
		kWh (Gross CV)				

**DATA 2019. TOTAL CONSUMPTION - HEADQUARTERS (BSC 1.3.7)**

Month	AA1 (Kwh)	AA2 (Kwh)	AA3 (Kwh)
J	186.933,00	15.118,00	0,00
F	141.658,00	8.777,00	0,00
M	111.040,00	3.096,00	0,00
A	69.488,00	2.090,00	0,00
My	15.415,00	93,00	0,00
J	465,00	12,00	0,00
Jl	256,00	9,00	0,00
Ag	720,00	8,00	0,00
S	595,00	38,00	0,00
O	7.148,00	1.037,00	0,00
N	295,00	1.815,00	0,00
D	15.390,00	16.748,00	0,00
	549.403,00	48.841,00	0,00
		<b>598.244</b>	

Kwh PCI equivalent: 495012,103      44005,741      0  
539017,844

► PCS-Gross CV/PCI-Net CV **0,901**

	FE	TOTAL Kg CO <sub>2</sub> e	TOTAL t CO <sub>2</sub> e
AA1	0.20428	101,121.072	101.1211
AA2	0.20428	8,989.493	8.9895
		110,110.565	<b>110.1106</b>

		DEFRA				
Activity	Fuel	Unit	kg CO <sub>2</sub> e	kg CO <sub>2</sub>	kg CH <sub>4</sub>	kg N <sub>2</sub> O
Gaseous fuels	Natural gas	tonnes				
		cubic metres				
		kWh (Net CV)	0.20428	0.2039	0.00027	0.00011
		kWh (Gross CV)	0.18385	0.18351	0.00024	0.0001



**CALCULATIONS 2019. TOTAL CONSUMPTION - HEADQUARTERS (QSD.0023.06)**

Month	Diesel (litres)
J	138,23
F	119,97
M	135,22
A	356,14
My	121,42
J	178,17
Jl	109,74
Ag	109,97
S	205,06
O	427,12
N	149,45
D	194,30
	<b>2.244,7879</b>

	FE	TOTAL Kg CO <sub>2</sub> e	TOTAL t CO <sub>2</sub> e
Diesel (litres)	2,59411	5.823,227	5,8232

Activity	Fuel	Unit	DEFRA			
			kg CO <sub>2</sub> e	kg CO <sub>2</sub>	kg CH <sub>4</sub>	kg N <sub>2</sub> O
Liquid fuels	Diesel (average biofuel blend)	tonnes				
		litres	2.59411	2.55956	0.0003	0.03425
		cubic metres				
		kWh				

**CALCULATIONS 2019. TOTAL CONSUMTION - HEADQUARTERS**

Refrigerant gas	Refill (kg)	TOTAL Kg CO <sub>2</sub> e	TOTAL t CO <sub>2</sub> e
R 134A	0,32	457,6000	0,4576
R 404A	13,90	54.515,8000	54,5158
R 410A	7,40	15.451,2000	15,4512
R-32	1,30	877,5000	0,8775
SF6	0,00	0,0000	0,0000
			<b>71,3021</b>

Activity	Emission	Unit	DEFRA
			kg CO <sub>2</sub> e
Kyoto protocol- blends	R404A	kg	3922.0
	R407A	kg	2107.0
	R407C	kg	1774.0
	R407F	kg	1825.0
	R408A	kg	3152.0
	R410A	kg	2088.0
	R507	kg	3985.0
	R508B	kg	13396.0
	R403A	kg	3124.0

Activity	Emission	Unit	kg CO <sub>2</sub> e
Kyoto protocol - standard	Carbon dioxide	kg	1
	Methane	kg	25
	Nitrous oxide	kg	298
	HFC-23	kg	14800
	HFC-32	kg	675
	HFC-41	kg	92
	HFC-125	kg	3500
	HFC-134	kg	1100
	HFC-134a	kg	1430
	HFC-143	kg	353
	HFC-143a	kg	4470
	HFC-152a	kg	124
	HFC-227ea	kg	3220
	HFC-236fa	kg	9810
	HFC-245fa	kg	1030
	HFC-43-10mee	kg	1640
	Perfluoromethane (PFC-14)	kg	7390
	Perfluoroethane (PFC-116)	kg	12200
	Perfluoropropane (PFC-218)	kg	8830
	Perfluorocyclobutane (PFC-318)	kg	10300
	Perfluorobutane (PFC-3-1-10)	kg	8860
	Perfluoropentane (PFC-4-1-12)	kg	9160
	Perfluorohexane (PFC-5-1-14)	kg	9300
	Sulphur hexafluoride (SF6)	kg	22800
	HFC-152	kg	53
	HFC-161	kg	12
	HFC-236cb	kg	1340
	HFC-236ea	kg	1370
	HFC-245ca	kg	693
	HFC-365mfc	kg	794

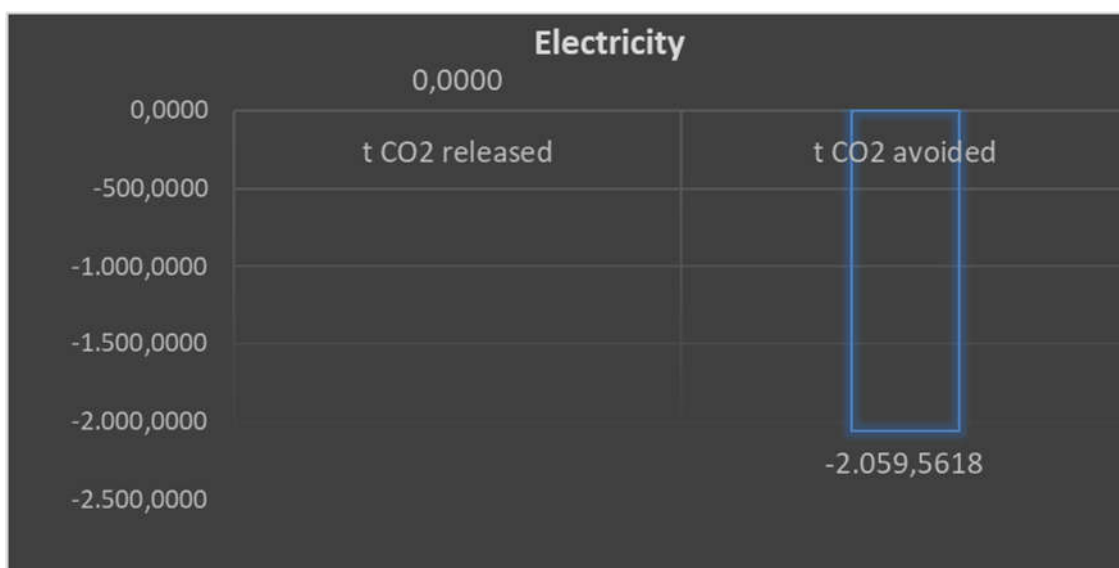
DATA 2019. TOTAL CONSUMPTION - HEADQUARTERS (BSC 1.3.7)

Month	AA1 (Kwh)	AA2 (Kwh)	AA3 (Kwh)
J	280.157,00	338.280,64	62.267,36
F	254.776,00	301.321,16	53.721,84
M	268.971,00	323.187,00	55.278,00
A	258.155,00	313.089,56	53.819,44
My	268.610,00	328.423,91	57.807,09
J	291.213,00	317.637,97	58.522,03
Jl	404.068,00	386.769,24	65.285,76
Ag	357.199,00	368.426,34	60.842,66
S	340.549,00	354.461,31	60.672,69
O	330.803,00	352.495,15	60.424,95
N	291.760,00	341.889,56	56.808,34
D	244.358,00	311.405,77	54.014,23
	3.590.619,00	4.037.387,61	699.464,39

"Green" energy  
Total (KWh)  
Total (MWh)

3.590.619,00	4.037.387,61	699.464,39
<b>8.327.471,000</b>		
<b>8.327,471</b>		

	FE	TOTAL Kg CO2	ELECTRICAL MIX		
			TOTAL t CO2	t CO <sub>2</sub> released	t CO <sub>2</sub> avoided
AA1	0,27	969.467,1300	969,4671	0,0000	-969,4671
AA2	0,27	1.090.094,6547	1.090,0947	0,0000	-1.090,0947
AA3	0,27	188.855,3853	188,8554	0,0000	-188,8554
		<b>2.059.561,7847</b>	<b>2.059,5618</b>	<b>0,0000</b>	<b>-2.059,5618</b>



**DATA 2019 Missions Office - AIR TRAVEL**

Air travel classification
D (<500km)
S (500km-3700km)
L (>3700km)

**Number of travel**

Air travel classification	Number of travel
D	1535
S	6134
L	230
<b>Total</b>	<b>7899</b>

**Total km**

Air travel classification	Sum Km
D	554847,5001
L	1632505,355
S	9287205,499
<b>Total</b>	<b>11474558,35</b>

**Total t CO2e**

Air travel classification	Sum Emissions tCO2e
D	141,4473
L	319,3507
S	1470,3504
<b>Total</b>	<b>1931,1483</b>

**CONVERSION FACTORS 2019\_v1.0 - Business travel- air**

Activity	Haul	Class	Unit	kg CO2e
Flights	Domestic, to/from UK	Average passenger	passenger.km	0.25493
		Average passenger	passenger.km	0.15832
	Short-haul, to/from UK	Economy class	passenger.km	0.15573
		Business class	passenger.km	0.2336
		Average passenger	passenger.km	0.19562
	Long-haul, to/from UK	Economy class	passenger.km	0.14981
		Premium economy class	passenger.km	0.2397
		Business class	passenger.km	0.43446
		First class	passenger.km	0.59925

**DATA 2019 Missions Office - TRAIN TRAVEL**

Number of travel	Total Km	Total tCO <sub>2</sub> e
774	246869,4	10,1587

**CONVERSION FACTORS 2019\_v1.0 - Business travel- land**

Activity	Type	Unit	kg CO <sub>2</sub> e	kg CO <sub>2</sub>	kg CH <sub>4</sub>	kg N <sub>2</sub> O
Rail	National rail	passenger.km	0.04115	0.04077	0.00007	0.00031
	International rail	passenger.km	0.00597	0.00592	0.00002	0.00003
	Light rail and tram	passenger.km	0.03508	0.0348	0.00009	0.00019
	Underground	passenger.km	0.03084	0.03059	0.00008	0.00017

**DATA 2019 Missions Office - BUS TRAVEL**

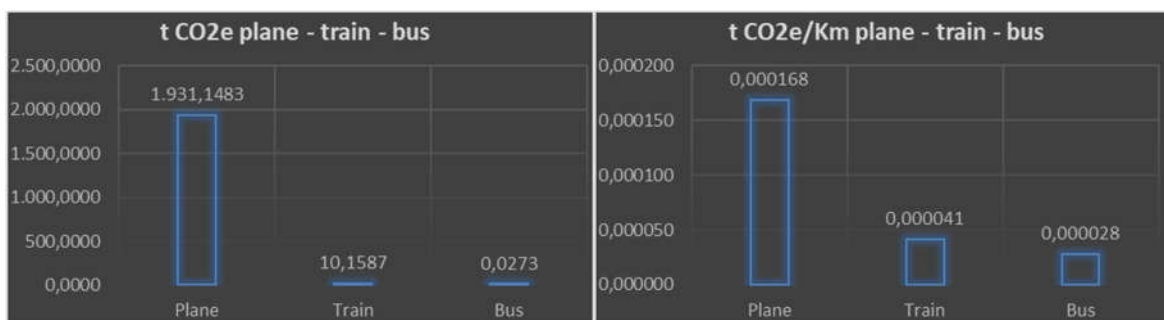
Number of travel	Total Km	Total tCO <sub>2</sub> e
7	983	0.0273

**CONVERSION FACTORS 2019\_v1.0 - Business travel- land**

Activity	Type	Unit	kg CO <sub>2</sub> e
Bus	Local bus (not London)	passenger.km	0.12076
	Local London bus	passenger.km	0.08208
	Average local bus	passenger.km	0.10471
	Coach	passenger.km	0.02779

**DATA 2019 Missions Office - TOTAL TRAVEL**

	TOTAL t CO <sub>2</sub> e	Total Km	t CO <sub>2</sub> e/Km
Air travel	1.931,1483	11.474.558,35	0,000168
Train travel	10,1587	246.869,40	0,000041
Bus travel	0,0273	983,00	0,000028
	<b>1.941,3343</b>		



**CALCULATIONS 2019. Total consumption - HEADQUARTERS (QSD.0077)**  
**DATA OBTAINED VIA EUIPO SUSTAINABLE MOBILITY PLAN**

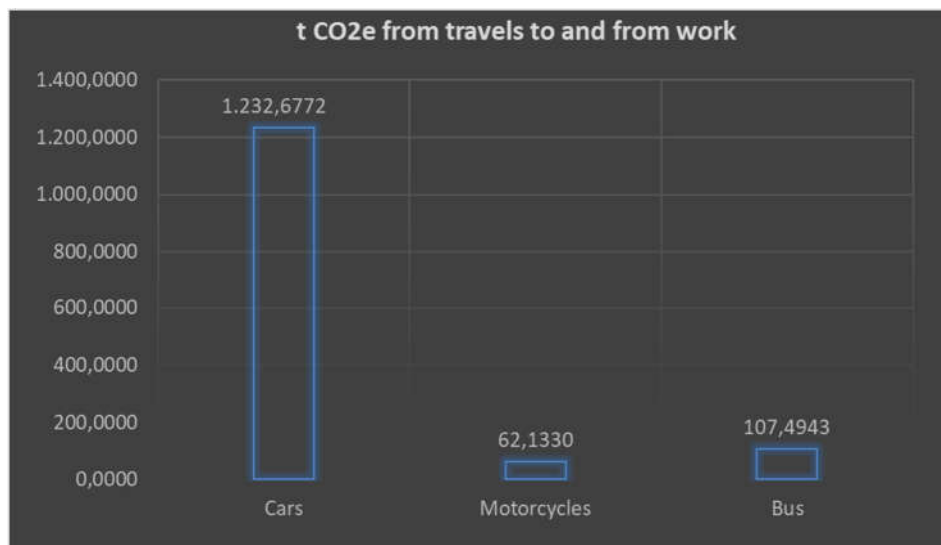
Total employees	1.782
Vehicle occupancy rate (employee/car)	1,26

Number of travel to EUIPO per week	2	4	6	8	10	12	14	16	18	20
% of employees	5,84%	6,13%	10,80%	9,93%	64,23%	1,02%	1,31%	0,44%	0,00%	0%

Transportation mode		Nº of employee per transportation mode	Vehicles - bus users, bicycle and by walk
<b>Car</b>	74,45%	1327	1053
<b>Motorcycle</b>	5,69%	101	101
<b>Bus</b>	14,89%	265	265
<b>Bicycle</b>	3,07%	55	55
<b>Walking</b>	1,31%	23	23
<b>Scooter</b>	0,58%	10	10

1782

TOTAL t CO <sub>2</sub> e	
Cars	1.232,6772
Motorcycles	62,1330
Bus	107,4943
<b>Total</b>	<b>1.402,3044</b>



**CARS**

Fuel	
Diesel	54,71%
Petrol	38,82%
Hybrid	4,51%
Electric	1,96%

Distance per travel	< 5 Km	5-10 Km	10-15 Km	15-30 Km	> 30 Km
	11,76%	23,33%	29,61%	24,51%	10,78%

Type of car	%	Number of vehicles	Fuel	Number of vehicles per fuel type	Number of vehicles per distance per travel					Average distance per travel (km)					Average distance per week for the total of cars			Yearly distance	FE	TOTAL Kg CO <sub>2</sub> e	TOTAL t CO <sub>2</sub> e
					< 5 Km	5-10 Km	10-15 Km	15-30 Km	>30 Km	2,5	7,5	12,5	22,5	40	total Km all cars per travel	X 10 weekly travel	44 labour weeks: yearly Km				
Medium	51,76%	545	Petrol	298	35	70	88	73	32	87,66	521,72	1.103,60	1.644,33	1.285,71	4.643,02	46.430,17	2.042.927,42	0,17061	348.543,85	348,5438	
			Diesel	212	25	49	63	52	23	62,20	370,19	783,07	1.166,75	912,28	3.294,50	32.944,97	1.449.578,55	0,19228	278.724,96	278,7250	
			Hybrid	25	3	6	7	6	3	7,23	43,01	90,97	135,55	105,99	382,75	3.827,45	168.408,02	0,10895	18.348,05	18,3481	
			Electric	11	1	2	3	3	1	3,14	18,69	39,54	58,91	46,06	166,34	1.663,37	73.188,41	0	0,00	0,0000	
Large / Minivan / SUVs	14,51%	153	Petrol	84	10	20	25	20	9	24,57	146,26	309,37	460,96	360,42	1.301,59	13.015,88	572.698,55	0,20947	119.963,17	119,9632	
			Diesel	59	7	14	18	15	6	17,44	103,78	219,52	327,08	255,74	923,55	9.235,54	406.363,69	0,28295	114.980,61	114,9806	
			Hybrid	7	1	2	2	2	1	2,03	12,06	25,50	38,00	29,71	107,30	1.072,96	47.210,21	0,13177	6.220,89	6,2209	
			Electric	3	0	1	1	1	0	0,88	5,24	11,08	16,51	12,91	46,63	466,30	20.517,07	0	0,00	0,0000	
Small	33,73%	355	Petrol	194	23	45	58	48	21	57,13	339,99	719,17	1.071,55	837,84	3.025,68	30.256,75	1.331.297,18	0,14208	189.150,70	189,1507	
			Diesel	138	16	32	41	34	15	40,53	241,24	510,30	760,33	594,50	2.146,90	21.468,97	944.634,55	0,15371	145.199,78	145,1998	
			Hybrid	16	2	4	5	4	2	4,71	28,03	59,28	88,33	69,07	249,42	2.494,21	109.745,02	0,1052	11.545,18	11,5452	
			Electric	7	1	2	2	2	1	2,05	12,18	25,76	38,39	30,02	108,40	1.083,96	47.694,07	0	0,00	0,0000	
																	<b>TOTAL CARS</b>		1.232.677,18	1.232,6772	

1053

1.053

**CONVERSION FACTORS 2019\_v1.0 - Business travel- land**

Activity	Type	Unit	Diesel	Petrol	Hybrid
			kg CO <sub>2</sub> e	kg CO <sub>2</sub> e	kg CO <sub>2</sub> e
Cars (by size)	Small car	km	0.14208	0.15371	0.1052
		miles	0.22868	0.24736	0.1693
	Medium car	km	0.17061	0.19228	0.10895
		miles	0.27459	0.30945	0.17534
	Large car	km	0.20947	0.28295	0.13177
		miles	0.33713	0.45536	0.21207
	Average car	km	0.17336	0.18084	0.11473
		miles	0.27901	0.29103	0.18464

**MOTOS**

**Fuel**

<b>Petrol</b>	97,44%
<b>Electric</b>	2,56%

Distance per travel	< 5 Km	5-10 Km	10-15 Km	15-30 Km	> 30 Km
	12,82%	41,03%	23,08%	17,95%	5,13%

Type of vehicle	%	N° of vehicles	Fuel	n° of vehicle per fuel type	Number of vehicles per distance per travel					Average distance per travel (km)					Average distance per week for the total of cars		Yearly distance	FE	TOTAL Kg CO <sub>2</sub> e	TOTAL t CO <sub>2</sub> e
					< 5 Km	5-10 Km	10-15 Km	15-30 Km	>30 Km	2,5	7,5	12,5	22,5	40	total Km all motorcycles per travel	X 10 weekly travel	44 labour weeks: yearly Km			
Moto	5,69%	101	Petrol	99	13	41	23	18	5	31,67	304,03	285,04	399,03	202,74	1.222,50	12.225,03	537.901,16	0,11551	62.132,96	62,1330
			Electric	3	0	1	1	0	0	10,54	323,80	170,76	185,92	27,00	718,02	7.180,24	315.930,41	0,0	0,00	0,0000

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**CONVERSION FACTORS 2019\_v1.0 - Business travel- land**

Activity	Type	Unit	kg CO <sub>2</sub> e
Motorbike	Small	km	0.08445
		miles	0.13591
	Medium	km	0.10289
		miles	0.16559
	Large	km	0.13501
		miles	0.21729
Average	km	0.11551	
	miles	0.18589	



**BUS**

Fuel	
Diesel	100,00%

Distance per travel	< 1 Km	1 Km	2 Km	3 Km	4 Km	5 Km	5-10 Km	10-15 Km	15-30 Km	> 30 Km
	0,00%	0,98%	0,98%	3,92%	2,94%	24,51%	32,35%	28,43%	5,88%	0,00%

Total time spent for each travel	< 15 min	15-30 min	30-45 min	> 45 min
	24,66%	52,06%	8,22%	15,07%

Type of vehicle	%	Number of traveler	Fuel	Number of traveler per distance of each travel										Average distance (Km)									
				< 1 Km	1 Km	2 Km	3 Km	4 Km	5 Km	5-10 Km	10-15 Km	15-30 Km	> 30 Km	0,5	1	2	3	4	5	7,5	12,5	22,5	40
Autobus	14,89%	265	Diesel	0	3	3	10	8	65	86	75	16	0	0,00	2,60	5,20	31,20	31,20	325,17	643,78	942,95	351,04	0,00

Average distance per week for the total of travelers		Distancia recorrida al año		FE	TOTAL Kg CO <sub>2</sub> e	TOTAL t CO <sub>2</sub> e
total Km all travelers per travel	X 10 weekly travel	44 labour weeks: yearly Km				
2.333,16	23.331,59	1.026.590,13	0,10471	107.494,25	107,4943	

**CONVERSION FACTORS 2019\_v1.0 - Business travel- land**

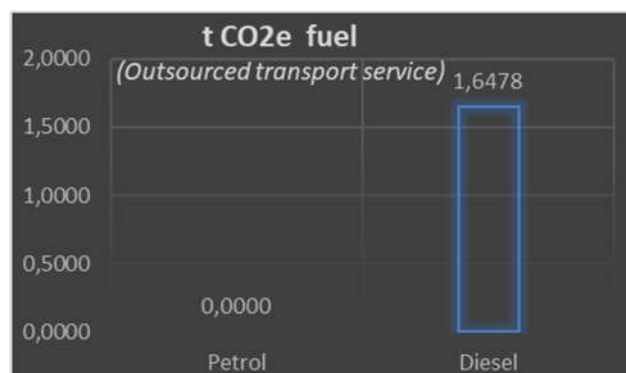
Activity	Type	Unit	kg CO <sub>2</sub> e
Bus	Local bus	passenger.km	0,12076
	Local Lor	passenger.km	0,08208
	Average l	passenger.km	0,10471
	Coach	passenger.km	0,02779

**CALCULATIONS 2019. Total consumption - HEADQUARTERS (QSD.0034.03)**

Month	Petrol Outsourced transport service (litres)	Diesel Outsourced transport service (litres)
J	0,00	13,76
F	0,00	25,73
M	0,00	47,45
A	0,00	35,77
My	0,00	52,47
J	0,00	96,22
Jl	0,00	54,16
Ag	0,00	41,02
S	0,00	61,71
O	0,00	66,17
N	0,00	75,76
D	0,00	65,00
	<b>0,0000</b>	<b>635,2160</b>

Activity	Fuel	Unit	DEFRA			
			kg CO <sub>2</sub> e	kg CO <sub>2</sub>	kg CH <sub>4</sub>	kg N <sub>2</sub> O
Liquid fuels	Diesel (average biofuel blend)	tonnes				
		litres	2.59411	2.55956	0.0003	0.03425
		kWh (Net CV)				
	Diesel (100% mineral diesel)	tonnes				
		litres				
		kWh (Net CV)				
	Petrol (average biofuel blend)	tonnes				
		litres	2.20904	2.19585	0.00688	0.00631
		kWh (Net CV)				
			kWh (Gross CV)			

	FE	TOTAL Kg CO <sub>2</sub> e	TOTAL t CO <sub>2</sub> e
Petrol	2,20904	0,000	0,0000
Diesel	2,59411	1.647,820	1,6478
			<b>1,6478</b>



**CALCULATION 2019: Total consumption - HEADQUARTERS (QSD.0304.01 y QSD.0304.2)**

Waste	LER Code	FE	Sum (t)	TOTAL t CO <sub>2</sub>
Non-Hazardous toner	08 03 18	21,3538	0,405	0,0086
Clean rubble	17 01 07	1,0091	25,140	0,0254
Cables other than 17 04 10	17 04 11	1,0091	0,000	0,0000
Dirty rubble	17 09 04	1,0091	5,940	0,0060
Water softener resin	19 09 05	99,7592	0,000	0,0000
Paper	20 01 01	21,3538	37,856	0,8084
Cardboard	21 01 01	21,3538	12,100	0,2584
Glass	20 01 02	21,3538	3,060	0,0653
Biodegradable waste from kitchens and restaurants	20 01 08	10,2039	1,219	0,0124
Edible oil and fats	20 01 25	21,3538	1,360	0,0290
Other batteries and accumulators	16 06 05	64,6365	0,124	0,0080
Non-hazardous WEEE	20 01 36	21,3538	1,924	0,0411
Wood	20 01 38	21,3538	4,860	0,1038
Wooden pallets	20 01 38	21,3538	2,330	0,0498
Coloured plastic	20 01 39	21,3538	0,720	0,0154
Plastic film	20 01 39	21,3538	0,060	0,0013
PVC	20 01 39	21,3538	0,000	0,0000
Mixed packaging	15 01 06	21,3538	0,000	0,0000
Confidential plastic	20 01 39	21,3538	0,000	0,0000
Metals	20 01 40	1,0091	5,560	0,0056
Prunings	20 02 01	10,2039	19,280	0,1967
Solid industrial waste	20 03 01	21,3538	13,800	0,2947
Bulky waste	20 03 07	21,3538	2,580	0,0551
Confidential documents	20 01 01	21,3538	6,075	0,1297
Sanitary bins	20 01 99	586,5138	1,900	1,1144
Potassium hydroxide	06 02 04*	10,2039	0,000	0,0000
Paint sludge	08 01 13*	21,3538	0,610	0,0130
Hazardous toner	08 03 17*	99,7592	0,168	0,0168
Mineral-based non-chlorinated engine, gear and lubricating oils	13 02 05*	21,3538	0,168	0,0036
Oily water	13 05 07*	21,3538	0,629	0,0134
Contaminated paper containers	15 01 10*	21,3538	0,383	0,0082
Contaminated plastic containers	15 01 10*	21,3538	0,607	0,0130
Contaminated metal containers	15 01 10*	1,0091	0,481	0,0005
Contaminated cloths (absorbent materials)	15 02 02*	21,3538	0,433	0,0092
Contaminated oil filters	16 01 07*	99,7592	0,012	0,0012
Aerosol containers	16 05 04*	21,3538	0,062	0,0013
Lead batteries	16 06 01*	64,6365	0,217	0,0140
NiCd batteries	16 06 02*	64,6365	0,021	0,0014
Batteries containing mercury	16 06 03*	64,6365	0,003	0,0002
Fluorescent tubes	20 01 21*	21,3538	0,216	0,0046
Acids	20 01 14*	10,2039	0,000	0,0000
Hazardous WEEE	20 01 35*	21,3538	2,119	0,0452
Sanitary waste	18 01 03*	99,7592	0,022	0,0022
			<b>152,4440</b>	<b>3,3769</b>

CONVERSION FACTORS 2019\_v1.0 - Waste disposal

Activity	Waste type	Unit	Re-use	Open-loop	Closed-loop	Combustion	Composting	Landfill
			kg CO2e	kg CO2e	kg CO2e	kg CO2e	kg CO2e	kg CO2e
Construction	Aggregates	tonnes	1.0091	1.0091	1.0091			1.2643
	Average construction	tonnes	1.0091	1.3700	1.0091			1.2643
	Asbestos	tonnes						1.2643
	Asphalt	tonnes	1.0091	1.3700	1.0091			1.2643
	Bricks	tonnes		1.0091				1.2643
	Concrete	tonnes		1.0091	1.0091			1.2643
	Insulation	tonnes			1.0091			1.2643
	Metals	tonnes			1.0091			1.2643
	Soils	tonnes			1.0091			17.6077
	Mineral oil	tonnes			21.3538	21.3538		
	Plasterboard	tonnes			21.3538			71.9500
	Tyres	tonnes	21.3538	21.3538	21.3538			
	Wood	tonnes	62.4401	21.3538	21.3538	21.3538	10.2039	828.1166

Activity	Waste type	Unit	Re-use	Open-loop	Closed-loop	Combustion	Composting	Landfill
			kg CO2e	kg CO2e	kg CO2e	kg CO2e	kg CO2e	kg CO2e
Other	Books	tonnes			21.3538	21.3538	10.2039	1,041.8881
	Glass	tonnes		21.3538	21.3538	21.3538		8.9864
	Clothing	tonnes	21.3538		21.3538	21.3538		445.0278

Activity	Waste type	Unit	Open loop	Closed-loop	Combustion	Anaerobic digestion	Composting	Landfill
			kg CO2e	kg CO2e	kg CO2e	kg CO2e	kg CO2e	kg CO2e
Refuse	Municipal waste	tonnes	21.4	21.4	21.4	10.2		586.5
	Organic: food and drink waste	tonnes			21.4	10.2		627.0
	Organic: garden waste	tonnes			21.4	10.2	10.2	579.0
	Organic: mixed food and garden waste	tonnes			21.4	10.2	10.2	587.4
	Commercial and industrial waste	tonnes		21.4	21.4	10.2		99.8

Activity	Waste type	Unit	Re-use	Open-loop	Combustion	Landfill
			kg CO2e	kg CO2e	kg CO2e	kg CO2e
Electrical items	WEEE - fridges and freezers	tonnes		21.3538		8.9864
	WEEE - large	tonnes		21.3538	21.3538	8.9864
	WEEE - mixed	tonnes		21.3538	21.3538	8.9864
	WEEE - small	tonnes		21.3538	21.3538	8.9864
	Batteries	tonnes		64.6365		75.4919

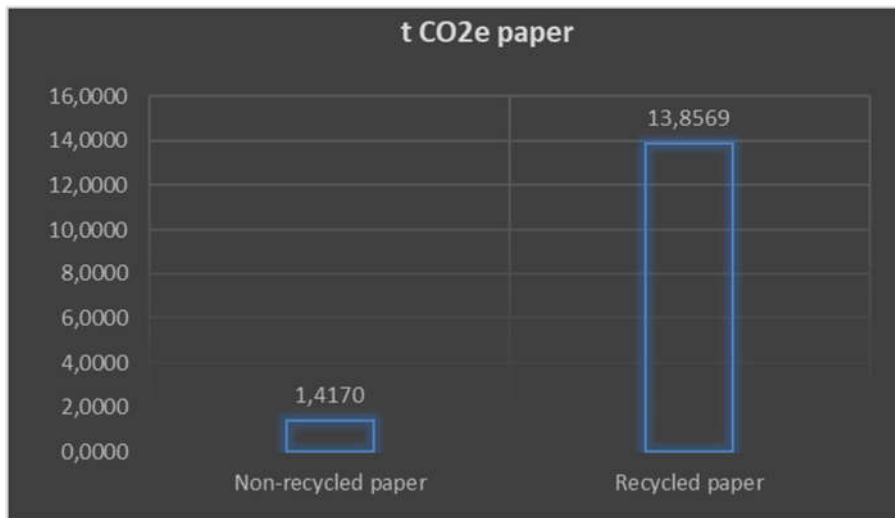
Activity	Waste type	Unit	Closed-loop	Combustion	Landfill
			kg CO2e	kg CO2e	kg CO2e
Metal	Metal: aluminium cans and fragments	tonnes	21.3538	21.3538	8.9864
	Metal: mixed cans	tonnes	21.3538	21.3538	8.9864
	Metal: scrap metal	tonnes	21.3538	21.3538	8.9864
	Metal: steel cans	tonnes	21.3538	21.3538	8.9864

Activity	Waste type	Unit	Open-loop	Closed-loop	Combustion	Landfill
			kg CO2e	kg CO2e	kg CO2e	kg CO2e
Plastic	Plastics: average plastics	tonnes	21.3538	21.3538	21.3538	9.0
	Plastics: average plastic film	tonnes	21.3538	21.3538	21.3538	9.0
	Plastics: average plastic rigid	tonnes	21.3538	21.3538	21.3538	9.0
	Plastics: HDPE (incl. forming)	tonnes	21.3538	21.3538	21.3538	9.0
	Plastics: LDPE and LLDPE	tonnes	21.3538	21.3538	21.3538	9.0
	Plastics: PET (incl. forming)	tonnes	21.3538	21.3538	21.3538	9.0
	Plastics: PP (incl. forming)	tonnes	21.3538	21.3538	21.3538	9.0
	Plastics: PS (incl. forming)	tonnes	21.3538	21.3538	21.3538	9.0
	Plastics: PVC (incl. forming)	tonnes	21.3538	21.3538	21.3538	9.0

Activity	Waste type	Unit	Open-loop	Closed-loop	Combustion	Composting	Landfill
			kg CO2e	kg CO2e	kg CO2e	kg CO2e	kg CO2e
Paper	Paper and board: board	tonnes		21.3538	21.3538	10.2039	1,041.8881
	Paper and board: mixed	tonnes		21.3538	21.3538	10.2039	1,041.8881
	Paper and board: paper	tonnes		21.3538	21.3538	10.2039	1,041.8881

**CALCULATIONS 2019. Total consumption - HEADQUARTERS (QSD.0035.01)**

	Total Kg	Total t	FE	TOTAL kg CO <sub>2</sub> e	TOTAL t CO <sub>2</sub> e
Non-recycled paper	1.487,35	1,4874	952.682	1.416,971	1,4170
Recycled paper	17.446,86	17,4469	794,235	13.856,905	13,8569
				<b>15.273,876</b>	<b>15,2739</b>



CONVERSION FACTORS 2019\_v1.0 - Material use

Activity	Material	Unit	Primary material production	Open-loop source	Closed-loop source
			kg CO <sub>2</sub> e	kg CO <sub>2</sub> e	kg CO <sub>2</sub> e
Paper	Paper and board: board	tonnes	842.5763		794.2350
	Paper and board: mixed	tonnes	870.1027		794.2350
	Paper and board: paper	tonnes	952.6819		794.2350

### CARBON FOOTPRINT 2019

Source	t CO <sub>2</sub> e	t CO <sub>2</sub> e per scope	Scope
Vehicle fleet	5,35	<b>192,59</b>	Scope 1
Boilers	110,11		
Generators	5,82		
Refrigerant gases	71,30		
Electricity	0,00	<b>0,00</b>	Scope 2
Air travel	1.931,15	<b>3.363,94</b>	Scope 3
Train travel	10,16		
Bus travel	0,03		
Travel to and from work	1.402,30		
Outsourced transport	1,65		
Waste	3,38		
Paper	15,27		
<b>TOTAL</b>	<b>3.556,53</b>		

### CARBON FOOTPRINT 2018

Source	t CO <sub>2</sub> e	t CO <sub>2</sub> e per scope	Scope
Vehicle fleet	26,22	<b>392,12</b>	Scope 1
Boilers	155,67		
Generators	5,52		
Refrigerant gases	204,70		
Electricity	0,00	<b>0,00</b>	Scope 2
Air travel	2.553,13	<b>3.964,56</b>	Scope 3
Train travel	9,27		
Travel to and from work	1.379,64		
Waste	3,52		
Paper	18,99		
<b>TOTAL</b>	<b>4.356,67</b>		

### CARBON FOOTPRINT 2017

Source	t CO <sub>2</sub> e	t CO <sub>2</sub> e per scope	Scope
Vehicle fleet	38,40	<b>565,77</b>	Scope 1
Boilers	234,43		
Generators	3,79		
Refrigerant gases	289,14		
Electricity	0,00	<b>0,00</b>	Scope 2
Air travel	1.457,86	<b>2.905,53</b>	Scope 3
Train travel	1,44		
Travel to and from work	1.401,44		
Waste	3,72		
Paper	41,07		
<b>TOTAL</b>	<b>3.471,30</b>		

### CARBON FOOTPRINT 2016

Source	t CO <sub>2</sub> e	t CO <sub>2</sub> e per scope	Scope
Vehicle fleet	40,37	<b>317,22</b>	Scope 1
Boilers	244,87		
Generators	3,79		
Refrigerant gases	28,19		
Electricity	0,00	<b>0,00</b>	Scope 2
Air travel	2.606,03	<b>4.027,34</b>	Scope 3
Train travel	2,27		
Travel to and from work	1.381,63		
Waste	3,48		
Paper	33,93		
<b>TOTAL</b>	<b>4.344,56</b>		

### CARBON FOOTPRINT BASELINE

Source	t CO <sub>2</sub> e	t CO <sub>2</sub> e per scope	Scope
Vehicle fleet	38,20	<b>419,63</b>	Scope 1
Boilers	378,13		
Generators	3,30		
Refrigerant gases	0,00		
Electricity	0,00	<b>0,00</b>	Scope 2
Air travel	2.753,84	<b>4.116,64</b>	Scope 3
Train travel	2,06		
Travel to and from work	1.303,85		
Waste	5,10		
Paper	51,78		
<b>TOTAL</b>	<b>4.536,27</b>		

### CARBON FOOTPRINT 2015

Source	t CO <sub>2</sub> e	t CO <sub>2</sub> e per scope	Scope
Vehicle fleet	37,49	<b>464,55</b>	Scope 1
Boilers	424,04		
Generators	3,02		
Refrigerant gases	0,00		
Electricity	0,00	<b>0,00</b>	Scope 2
Air travel	2.753,84	<b>4.126,39</b>	Scope 3
Train travel	2,06		
Travel to and from work	1.312,73		
Waste	5,00		
Paper	52,76		
<b>TOTAL</b>	<b>4.590,94</b>		

### CARBON FOOTPRINT 2014

Source	t CO <sub>2</sub> e	t CO <sub>2</sub> e per scope	Scope
Vehicle fleet	37,44		
Boilers	315,01		
Generators	11,52	<b>363,97</b>	Scope 1
Refrigerant gases	0,00		
Electricity	0,00	<b>0,00</b>	Scope 2
Air travel	2.577,19		
Train travel	2,40		
Travel to and from work	1.360,37	<b>3.993,04</b>	Scope 3
Waste	3,26		
Paper	49,82		
<b>TOTAL</b>	<b>4.357,01</b>		

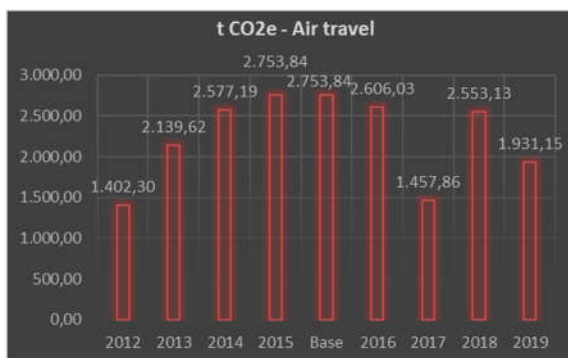
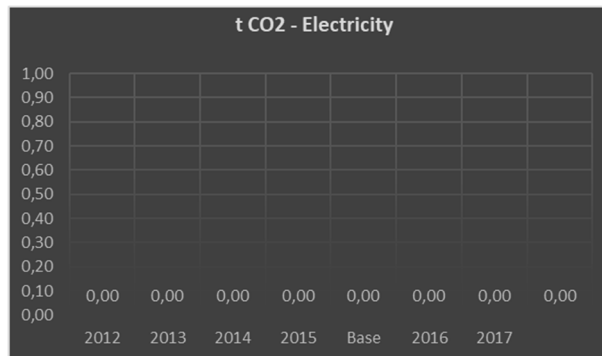
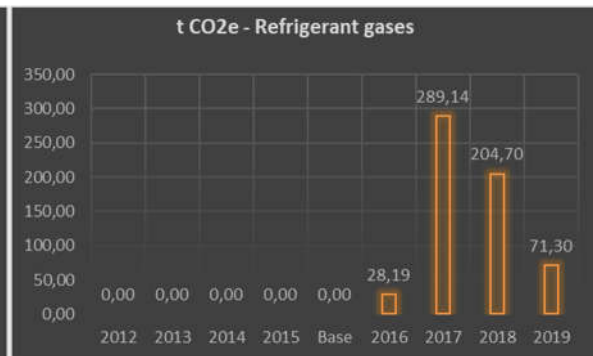
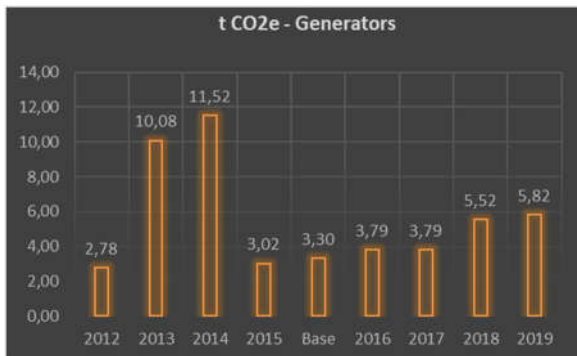
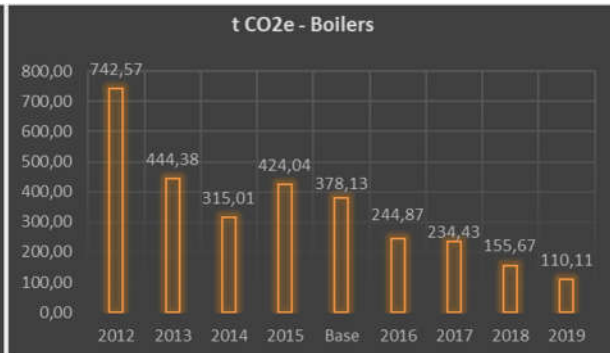
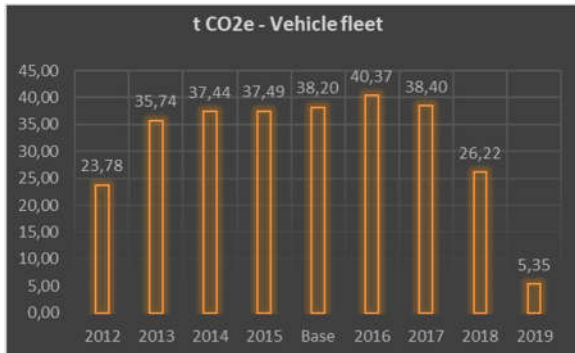
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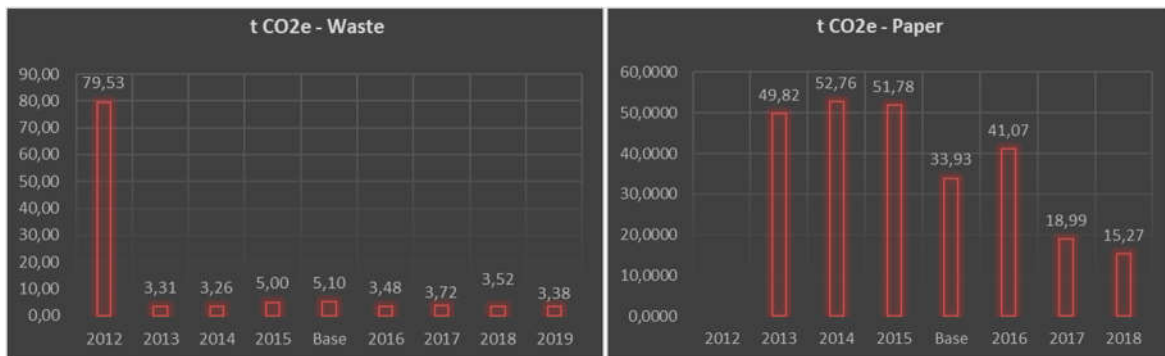
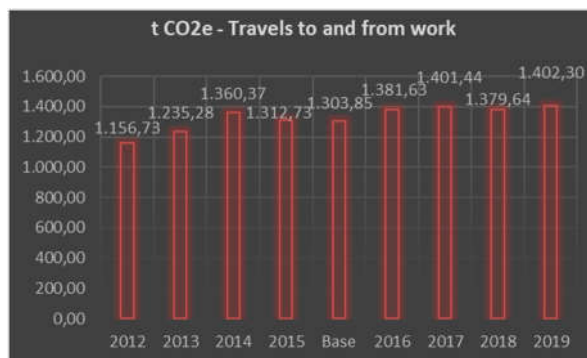
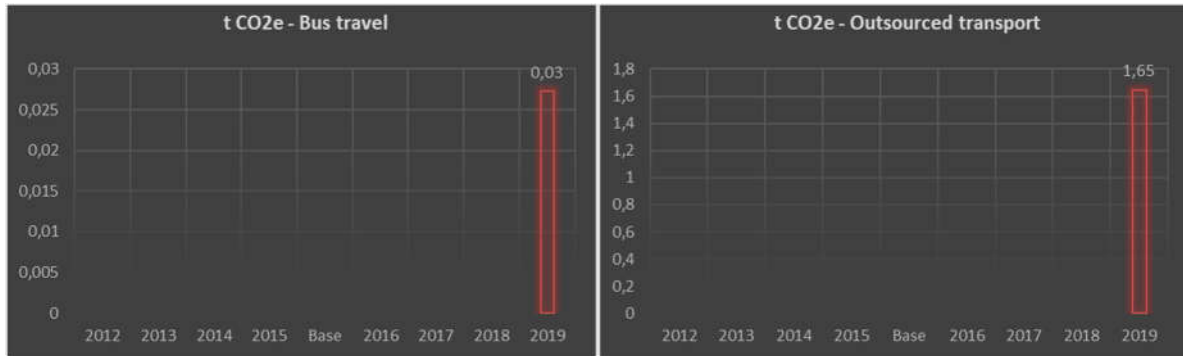
Source	t CO <sub>2</sub> e	t CO <sub>2</sub> e per scope	Scope
Vehicle fleet	35,74		
Boilers	444,38		
Generators	10,08	<b>490,20</b>	Scope 1
Refrigerant gases	0,00		
Electricity	0,00	<b>0,00</b>	Scope 2
Air travel	2.139,62		
Train travel	1,42		
Travel to and from work	1.235,28	<b>3.379,63</b>	Scope 3
Waste	3,31		
Paper			
<b>TOTAL</b>	<b>3.869,83</b>		

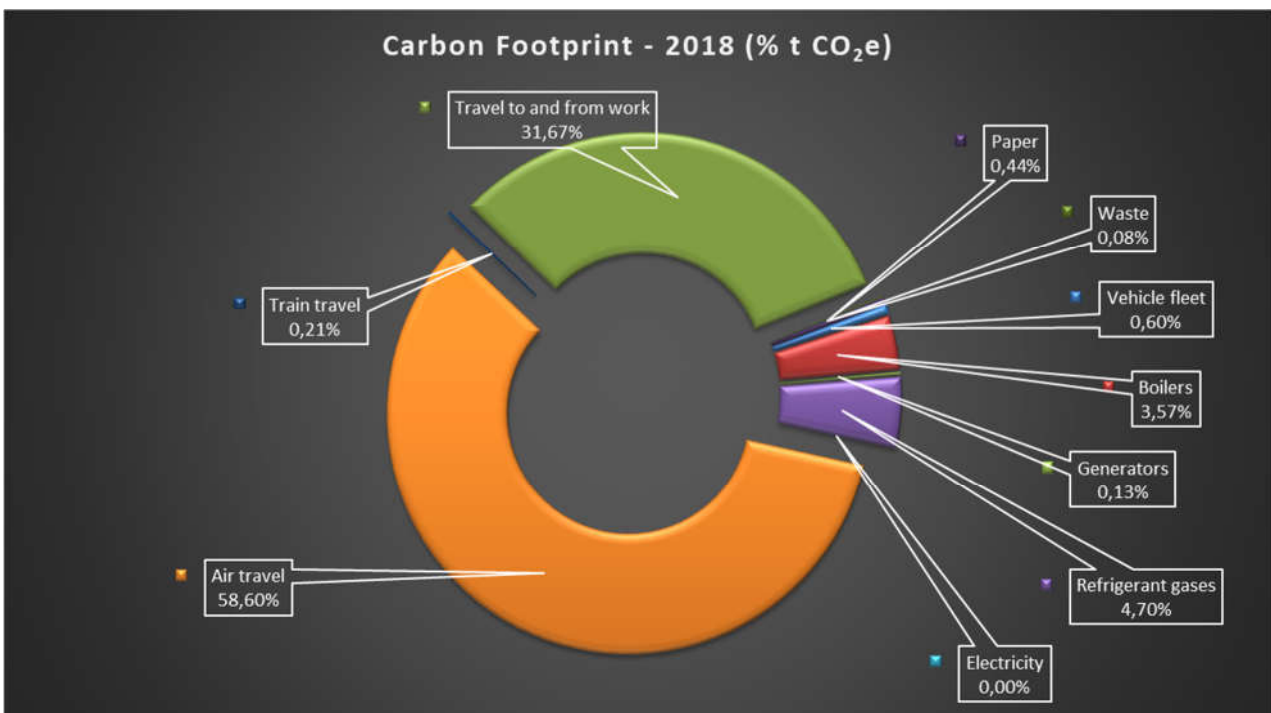
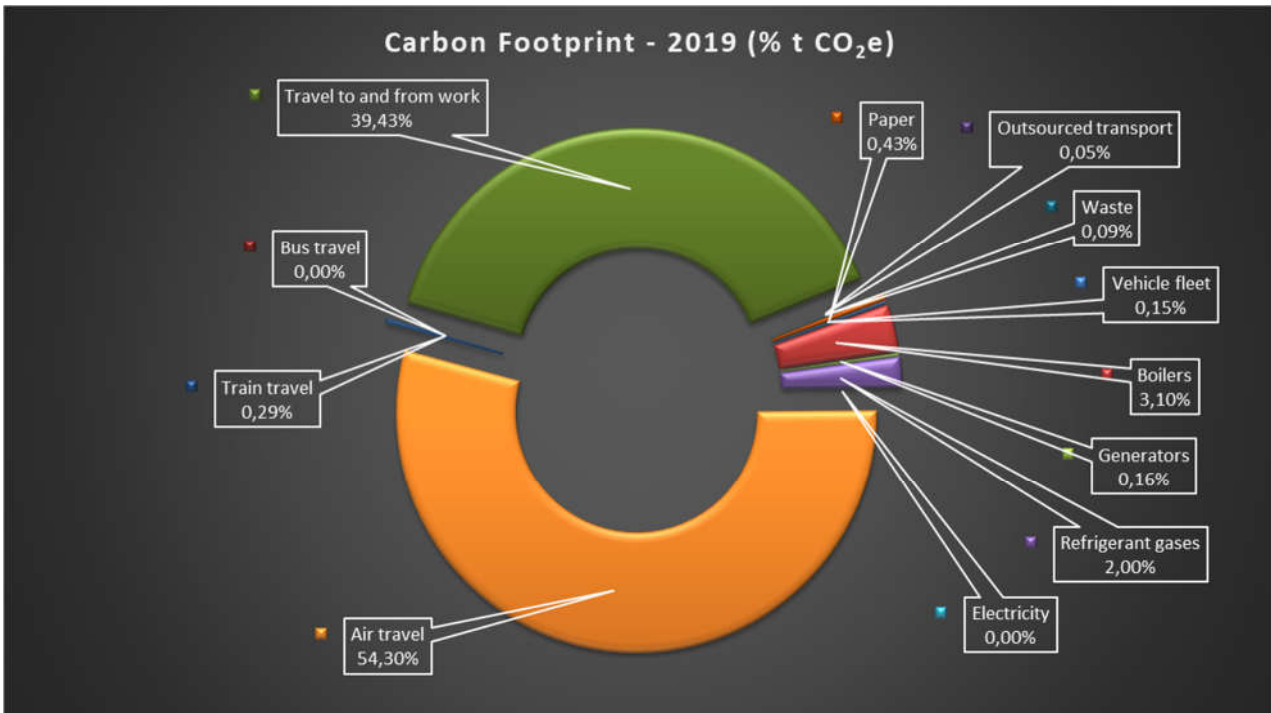
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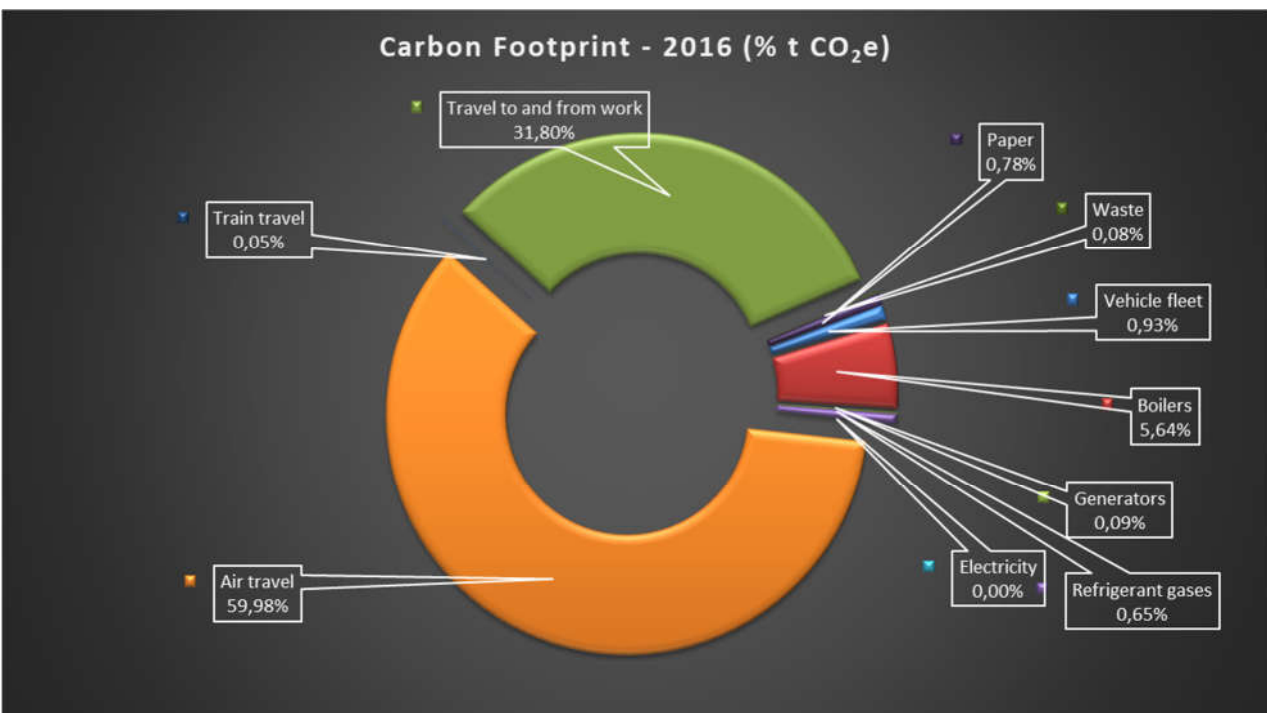
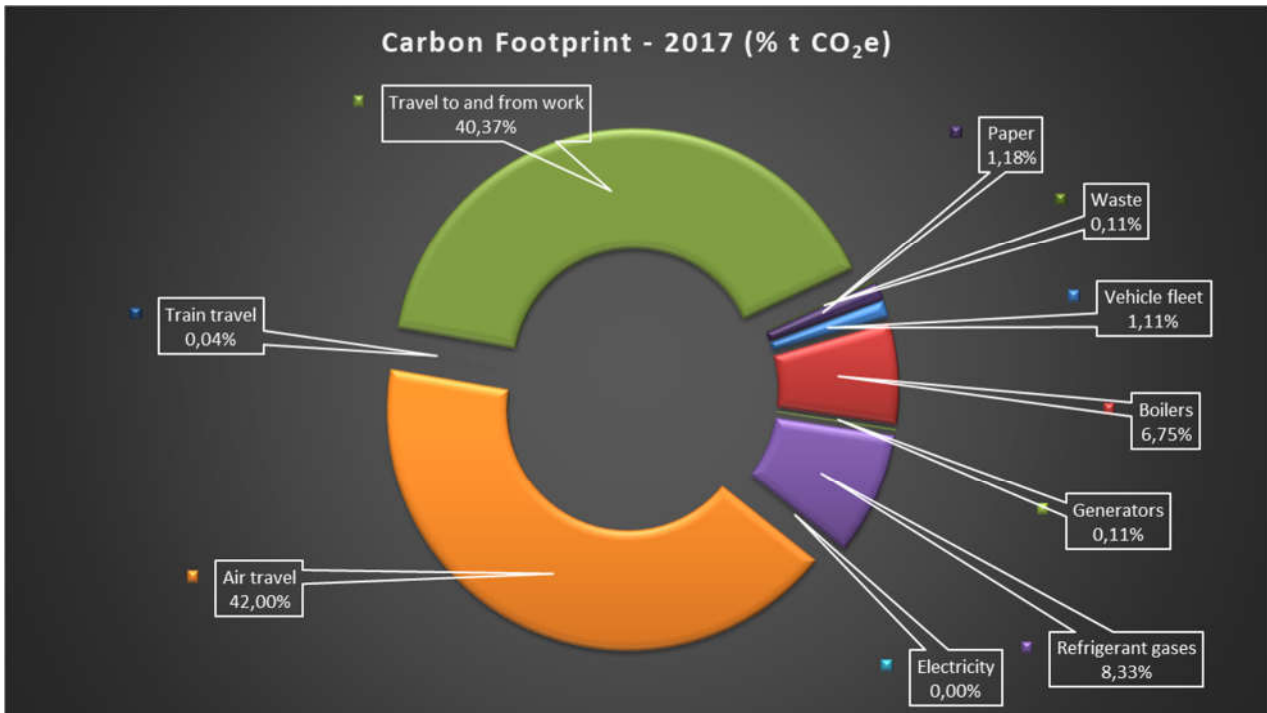
Source	t CO <sub>2</sub> e	t CO <sub>2</sub> e per scope	Scope
Vehicle fleet	23,78		
Boilers	742,57		
Generators	2,78	<b>769,13</b>	Scope 1
Refrigerant gases	0,00		
Electricity	0,00	<b>0,00</b>	Scope 2
Air travel	1.402,30		
Train travel			
Travel to and from work	1.156,73	<b>2.638,56</b>	Scope 3
Waste	79,53		
Paper			
<b>TOTAL</b>	<b>3.407,69</b>		

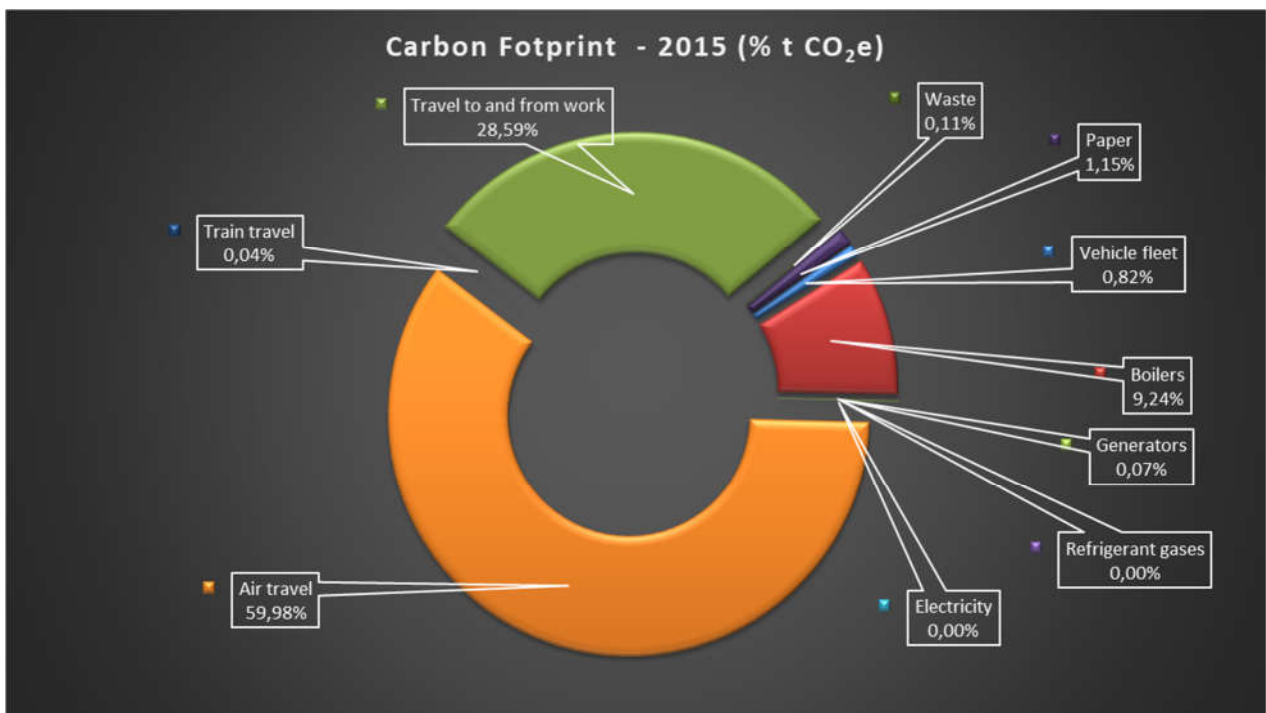
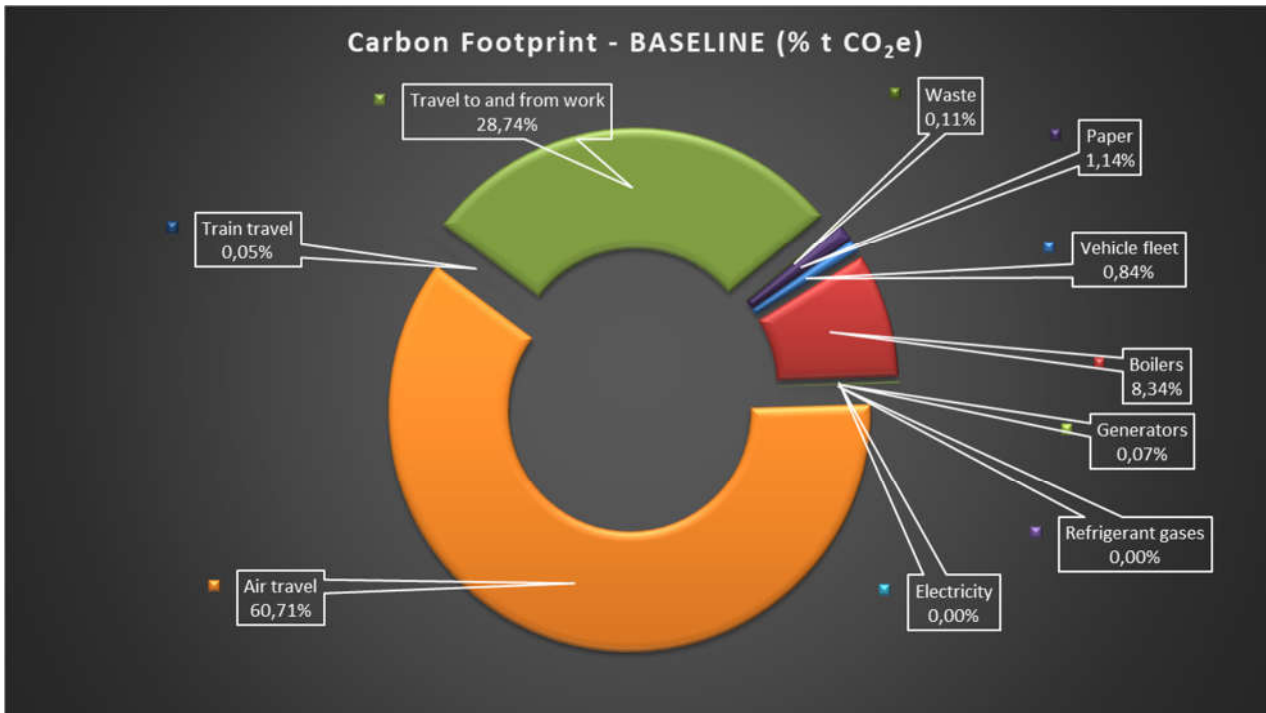


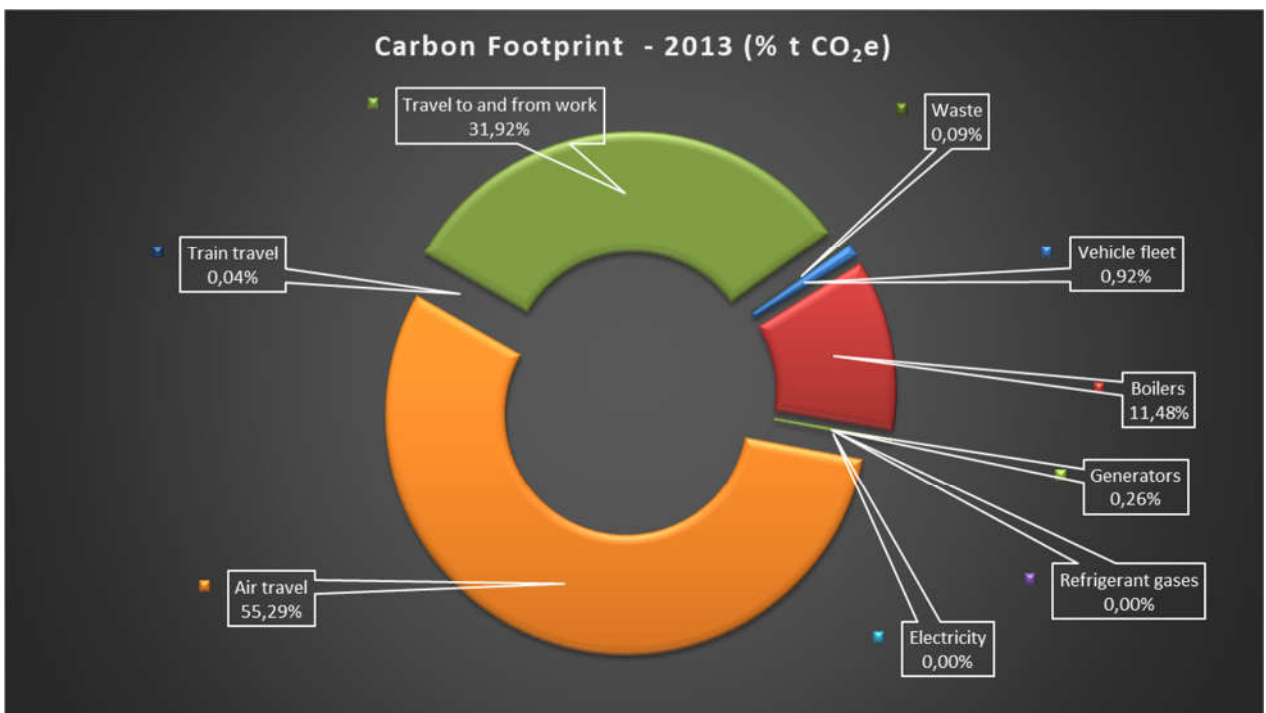
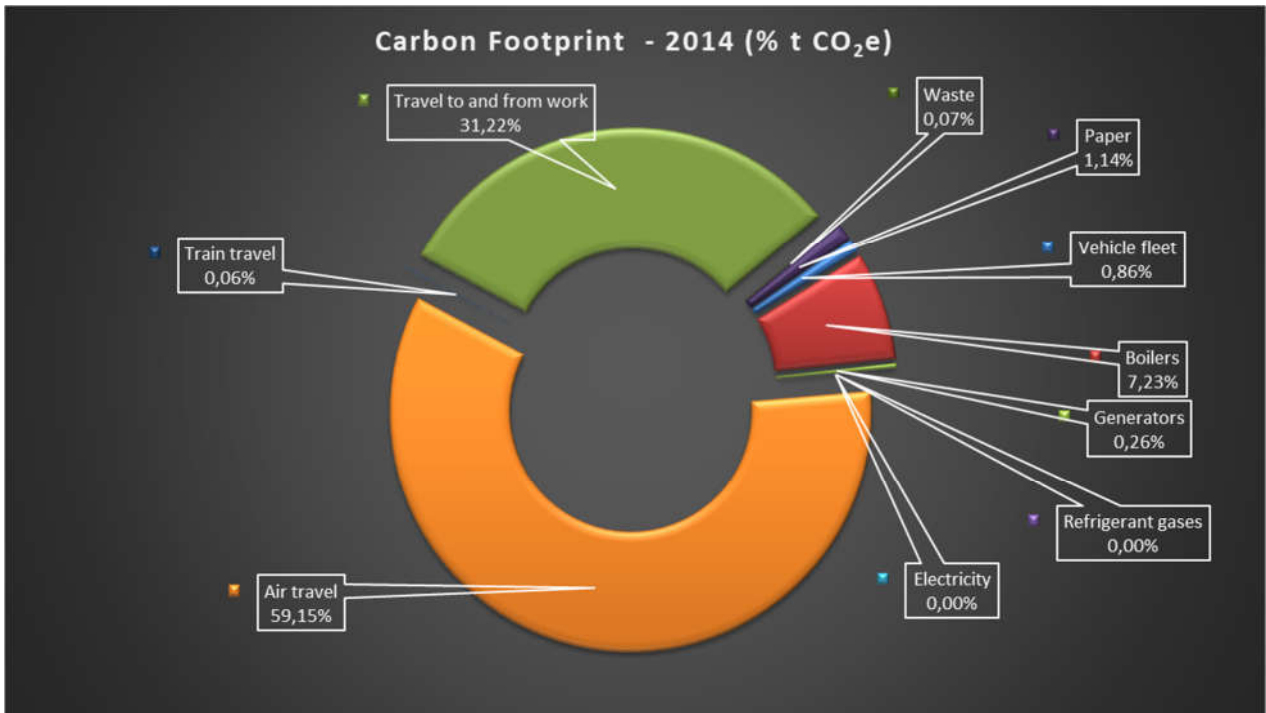


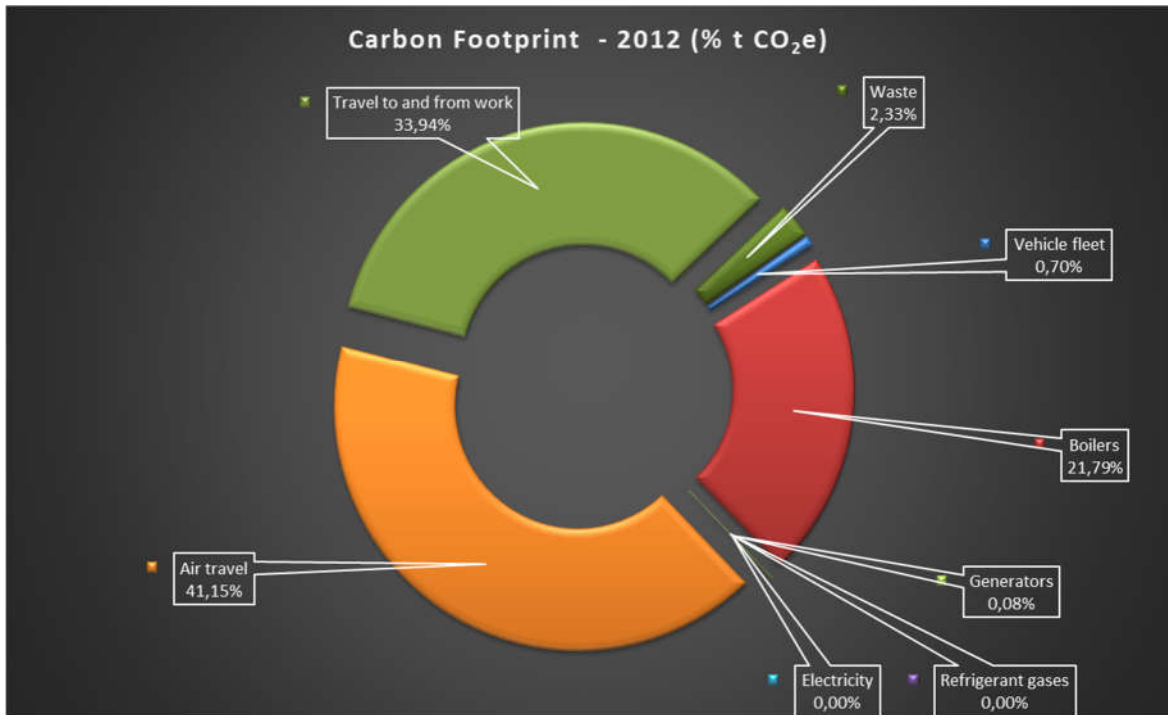












**Comparison per source of emission (ABSOLUTE)**

Source of emission	2012	%	2013	%	2014	%	2015	%	BASE	%
Vehicle fleet	23,78	0,70%	35,74	0,92%	37,44	0,86%	37,49	0,82%	38,20	0,84%
Boilers	742,57	21,79%	444,38	11,48%	315,01	7,23%	424,04	9,24%	378,13	8,34%
Generators	2,78	0,08%	10,08	0,26%	11,52	0,26%	3,02	0,07%	3,30	0,07%
Refrigerant gases	0,00	0,00%	0,00	0,00%	0,00	0,00%	0,00	0,00%	0,00	0,00%
Electricity	0,00	0,00%	0,00	0,00%	0,00	0,00%	0,00	0,00%	0,00	0,00%
Air travel	1.402,30	41,15%	2.139,62	55,29%	2.577,19	59,15%	2.753,84	59,98%	2.753,84	60,71%
Train travel	0,00	0,00%	1,42	0,04%	2,40	0,06%	2,06	0,04%	2,06	0,05%
Bus travel	0,00	0,00%	0,00	0,00%	0,00	0,00%	0,00	0,00%	0,00	0,00%
Travel to and from work	1.156,73	33,94%	1.235,28	31,92%	1.360,37	31,22%	1.312,73	28,59%	1.303,85	28,74%
Outsourced transport	0,00	0,00%	0,00	0,00%	0,00	0,00%	0,00	0,00%	0,00	0,00%
Waste	79,53	2,33%	3,31	0,09%	3,26	0,07%	5,00	0,11%	5,10	0,11%
Paper	0,00	0,00%	0,00	0,00%	49,82	1,14%	52,76	1,15%	51,78	1,14%
<b>ABSOLUTE</b>	<b>3.407,69</b>	<b>100,00%</b>	<b>3.869,83</b>	<b>100,00%</b>	<b>4.357,01</b>	<b>100,00%</b>	<b>4.590,94</b>	<b>100,00%</b>	<b>4.536,27</b>	<b>100,00%</b>
<b>RELATIVE</b>	<b>2,57</b>		<b>2,72</b>		<b>2,78</b>		<b>3,01</b>		<b>2,99</b>	

Source of emission	BASE	%	2016	%	2017	%	2018	%	2019	%
Vehicle fleet	38,20	0,84%	40,37	0,93%	38,40	1,11%	26,22	0,60%	5,3547	0,15%
Boilers	378,13	8,34%	244,87	5,64%	234,43	6,75%	155,67	3,57%	110,1106	3,10%
Generators	3,30	0,07%	3,79	0,09%	3,79	0,11%	5,52	0,13%	5,8232	0,16%
Refrigerant gases	0,00	0,00%	28,19	0,65%	289,14	8,33%	204,70	4,70%	71,3021	2,00%
Electricity	0,00	0,00%	0,00	0,00%	0,00	0,00%	0,00	0,00%	0,0000	0,00%
Air travel	2.753,84	60,71%	2.606,03	59,98%	1457,86	42,00%	2.553,13	58,60%	1.931,1483	54,30%
Train travel	2,06	0,05%	2,27	0,05%	1,44	0,04%	9,27	0,21%	10,1587	0,29%
Bus travel	0,00	0,00%	0,00	0,00%	0,00	0,00%	0,00	0,00%	0,0273	0,00%
Travel to and from work	1.303,85	28,74%	1.381,63	31,80%	1401,44	40,37%	1.379,64	31,67%	1.402,3044	39,43%
Outsourced transport	0,00	0,00%	0,00	0,00%	0,00	0,00%	0,00	31,67%	1,6478	0,05%
Waste	5,10	0,11%	3,48	0,08%	3,72	0,11%	3,52	0,08%	3,3769	0,09%
Paper	51,78	1,14%	33,93	0,78%	41,07	1,18%	18,99	0,44%	15,2739	0,43%
<b>ABSOLUTE</b>	<b>4.536,27</b>	<b>100,00%</b>	<b>4.344,56</b>	<b>100,00%</b>	<b>3.471,30</b>	<b>100,00%</b>	<b>4.356,66</b>	<b>131,67%</b>	<b>3.556,53</b>	<b>100,00%</b>
<b>RELATIVE</b>	<b>2,99</b>		<b>2,73</b>		<b>2,10</b>		<b>2,52</b>		<b>2,00</b>	



## ANNEX II – ELECTRICITY CERTIFICATES



**IBERDROLA**

IBERDROLA CLIENTES certifica que ha realizado las gestiones necesarias para acreditar que la energía con **Garantía de Origen** de Iberdrola consumida por:

**EUIPO (ES002100000659707AH)**

en el periodo comprendido entre 01/01/2019 y el 31/12/2019 , por un volumen de 3.840.300 kWh en barras de central, conste ante la Comisión Nacional de Mercados y la Competencia como energía proveniente exclusivamente de fuentes **100% renovables**, que respetan el medio ambiente y evitan las emisiones de CO<sub>2</sub> y otros gases contaminantes.



Alfonso Calderón Jiménez  
Director Comercial

IBERDROLA es un líder en la implantación de energías renovables y en la protección del medio ambiente. Dispone de su propia Política Medioambiental, que es de obligatorio cumplimiento en todas las áreas de Iberdrola y de su grupo de empresas. Las instalaciones han sido certificadas medioambientalmente por AENOR, según la norma UNE-EN ISO 14001. Ha sido adherida formalmente al Pacto Mundial de Naciones Unidas de buenas prácticas de los Derechos Humanos y Medio Ambiente, ha participado en el programa piloto de mecanismos derivados del Protocolo de Kyoto de la Oficina Española de Cambio Climático y es integrante del Índice Dow Jones de Sostenibilidad.

9000M03729



**IBERDROLA**

IBERDROLA CLIENTES certifica que ha realizado las gestiones necesarias para acreditar que la energía con **Garantía de Origen** de Iberdrola consumida por:

**EUIPO (ES0021000019226978EX)**

en el periodo comprendido entre 01/01/2019 y el 31/12/2019 , por un volumen de 5.075.987 kWh en barras de central, conste ante la Comisión Nacional de Mercados y la Competencia como energía proveniente exclusivamente de fuentes **100% renovables**, que respetan el medio ambiente y evitan las emisiones de CO<sub>2</sub> y otros gases contaminantes.



Alfonso Calderón Jiménez  
Director Comercial

IBERDROLA es un líder en la implantación de energías renovables y en la protección del medio ambiente. Dispone de su propia Política Medioambiental, que es de obligatorio cumplimiento en todas las áreas de Iberdrola y de su grupo de empresas. Las instalaciones han sido certificadas medioambientalmente por AENOR, según la norma UNE-EN ISO 14001. Ha sido adherida formalmente al Pacto Mundial de Naciones Unidas de buenas prácticas de los Derechos Humanos y Medio Ambiente, ha participado en el programa piloto de mecanismos derivados del Protocolo de Kyoto de la Oficina Española de Cambio Climático y es integrante del Índice Dow Jones de Sostenibilidad.

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