



# **European Investment Bank**

## **Carbon Footprint Report 2013**

### **GHG emissions resulting from EIB internal operations**

**January to December 2013**

This report has been prepared by Carbon Trust Advisory Ltd for the European Investment Bank using data provided by the EIB for 2013 and 2012, and reports published by the EIB for 2007 to 2011.

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## 1 EXECUTIVE SUMMARY

The EIB first calculated the carbon footprint of its head office operations in 2007 and set a target to reduce emissions by 20-30% by 2020. This includes emissions from energy use in the buildings (natural gas for heating and power generation, and purchased electricity and steam for power), from mobility activities (owned vehicles, business travel and employee commuting), from waste disposal and from the production of paper used in the offices. However, purchased electricity is covered by green guarantees of origin so is treated as zero carbon on a net basis.

In 2013, the EIB's total net carbon footprint was 14,713 tCO<sub>2</sub>e, a decrease of 11% from 2012 and a decrease of 18% compared to 2007. However, there were a number of improvements to the methodology in 2013 that impact the carbon footprint. On a like-for-like basis, emissions increased 9% compared to 2012 and are equivalent to 2007 emissions (albeit with a different operational and organisational boundary).

The relative carbon footprint in 2013 was 6.21 tCO<sub>2</sub>e per employee, a decrease of 17% compared to 2012 and a decrease of 48% compared to 2007. This reflects a 58% increase in staff numbers since 2007. As such, the EIB is on track to achieve the target set in 2007.

The most significant source of emissions (91% of total net emissions) relates to mobility activities. Air travel represents the biggest share of this (76% of total net emissions). Policies related to travel class are in place to minimise emissions, but it is a core part of EIB's business activity and emissions will therefore remain significant.

## **2 INTRODUCTION**

The European Investment Bank (EIB) was established in 1958 under the Treaty of Rome. It is the European Union's financing institution, with a remit to contribute towards the integration, balanced development and economic and social cohesion of the Member States. It raises funds on the capital markets to finance projects that meet EU objectives: regional development, trans-European networks of transport, telecommunications and energy, research, development and innovation, environmental improvement and protection, health and education. Outside of the European Union, the EIB implements the financial components of agreements concluded under the European development aid and cooperation policies.

The European Investment Fund (EIF) is a European Union agency, majority-owned by the EIB, whose remit is to provide finance through private banks and funds to small and medium-sized enterprises. The EIF is included within the boundary of the EIB's carbon footprint and references to the EIB's emissions in this report include the EIF.

The EIB first calculated its carbon footprint in 2007 and adopted a 20-30% reduction target from this baseline to 2020. This was consistent with the European Commission target for 2020 of a 20% reduction in EU greenhouse gas emissions from 1990 levels (with an 8% reduction to be achieved between 2008 and 2012 as agreed under the Kyoto Agreement). For Luxembourg, the National Emissions Reduction target was set at 28% by 2012 based on its relative wealth at the time.

The EIB's commitment to measure and manage its footprint is consistent with its environmental and social policies, principles and standards for the projects it finances. Understanding its carbon footprint also allows it to identify and implement measures to reduce emissions and to track performance against its target. Measures taken in previous years include expansion into a BREEAM 'excellent' building and investment in the energy efficiency of existing buildings, in addition to some activities to reduce travel related emissions. Examples of specific measures taken in 2013 to reduce energy consumption include: low energy lighting; lighting reduction during weekends and holidays; promotion of "free air cooling" to reduce the need for compressor driven air conditioning; optimisation of heating and cooling in offices; awareness raising initiative with catering company employees to highlight energy saving; and integration of IT network infrastructure.

This report presents the analysis of EIB's 2013 carbon footprint based on the GHG Protocol Corporate Standard and the Global Reporting Initiative principles and indicators.

### 3 ORGANISATIONAL AND OPERATIONAL BOUNDARY

#### 3.1 Organisational boundary

The organisational boundary defines the businesses and operations that constitute the company for the purpose of accounting and reporting greenhouse gas emissions. Companies can choose to report either the emissions from operations over which it has financial or operational control (the control approach) or from operations according to its share of equity in the operation (the equity share approach).

The EIB's carbon footprint uses the operational control approach. As such, it includes the EIB and EIF head office operations in Luxemburg (Kirchberg, Hamm and the new site BHK). Smaller regional offices are not included due to difficulties obtaining consistent data, but will not represent a material share of the total footprint.

#### 3.2 Operational boundary

Defining the operational boundary involves identifying emissions associated with its operations, categorising them as direct and indirect emissions, and choosing the scope of accounting and reporting for indirect emissions.

The following definitions are used:

##### Direct GHG emissions

- **Scope 1:** emissions from sources that are owned or controlled by the reporting entity (i.e. any owned or controlled activities that release emissions straight into the atmosphere).

##### Indirect GHG emissions

Indirect emissions occur as a consequence of the reporting entity's activities but at sources that are owned or controlled by another entity (and are therefore their scope 1 emissions). These are classified as:

- **Scope 2:** Indirect GHG emissions from the consumption of purchased electricity, heat, steam or cooling.
- **Scope 3:** Indirect GHG emissions from other activities. A detailed Standard exists that sets out the rules for 15 categories of scope 3 emissions as indicated in Figure 1<sup>1</sup>

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<sup>1</sup> The Corporate Value Chain (Scope 3) Accounting & Reporting Standard, available: <http://www.ghgprotocol.org/standards/product-and-supply-chain-standard>

The operational boundary for EIB's carbon footprint report includes the following:

- **Scope 1:** Natural gas combusted in boilers to heat EIB buildings and used in the co-generation plant to generate heat and power, and transport fuel used to run vehicles owned by the EIB. There are no relevant fugitive emissions because air conditioning systems use ammonia.
- **Scope 2:** Purchased grid electricity (from green tariffs) and steam used for power in the properties (lighting, air conditioning, small power, elevators etc).
- **Scope 3:** Transport fuel and power used by air and rail transport operators for EIB business travel, by the outsourced mini-bus service that operates between the Luxembourg sites and by employee-owned vehicles for commuting to and from work; emissions from waste management operations due to incineration or recycling of waste generated by the EIB; and, emissions generated in the production of office paper purchased by the EIB.

**In 2013, a new site (BHK) was added to the EIB's estate.** This is being leased for the EIF, which in previous years has been sited within the buildings used by EIB.

Figure 1 illustrates the current organisational and operational boundary.

### 3.3 Reporting period covered

The reporting period covers 1 January 2013 to 31 December 2013.

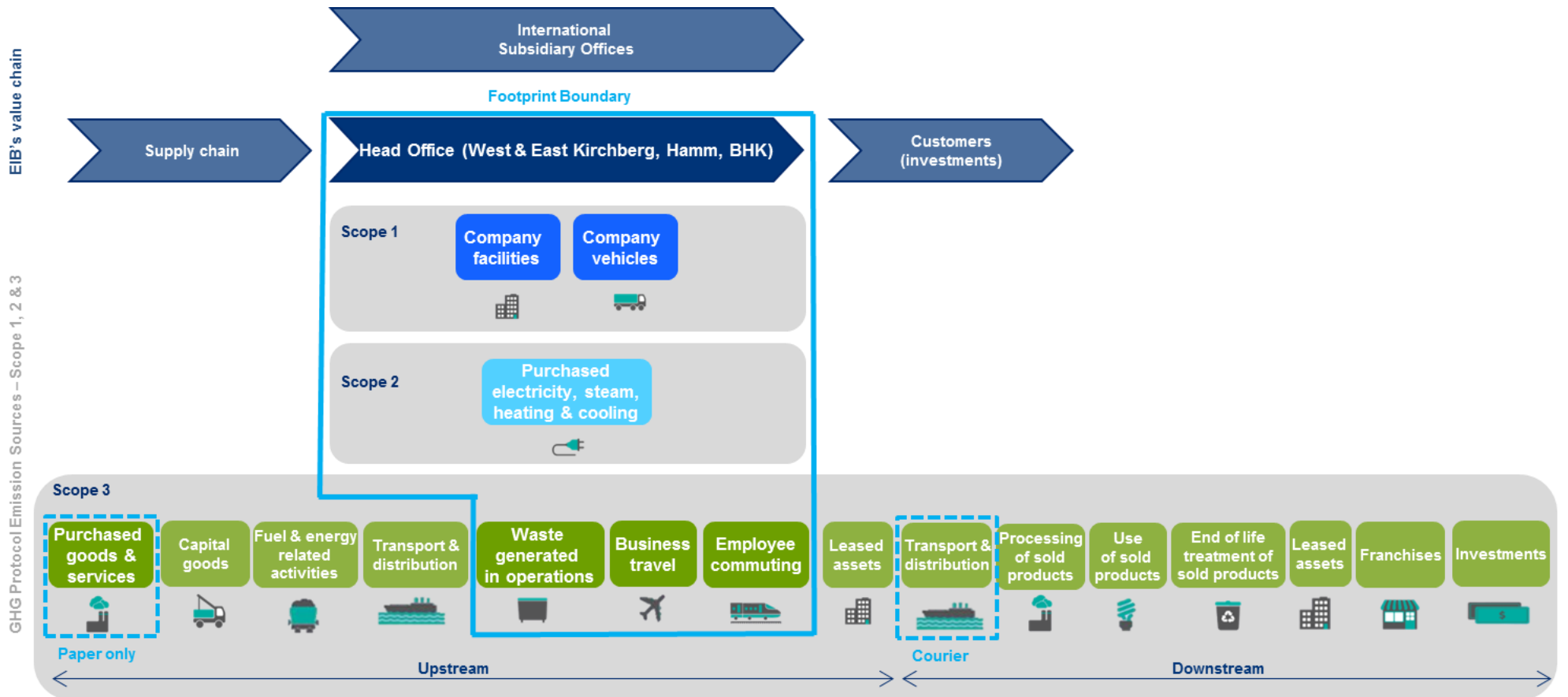


Figure 1: Boundary Diagram

## 4 METHODOLOGY

Carbon footprint analysis in 2013 follows the GHG Protocol<sup>2</sup>, consistent with the approach adopted in 2012. The GHG Protocol is recognized as the most widely used international accounting tool for government and business leaders to understand, quantify, and manage greenhouse gas emissions. It is an international standard used by a diverse range of organisations, including many in the banking, and it is widely accepted as best practice.

To calculate the GHG emissions inventory, we identified all relevant GHG emissions sources and collected activity data from the EIB then, using emission factors, calculated emissions from each source. This was aggregated to corporate level for EIB's total carbon footprint.

The following sections set out the details of the process followed.

### 4.1 Emission sources and activity data

Activity data is a quantitative measure of activity that results in GHG emissions. Table 1 shows the activity data provided by the EIB. It is mainly primary data e.g. the amount of gas used for heating or the distance travelled by air, with the exception of commuting data that is based on the average number of vehicles and average distance travelled. The activity data is also used as environmental impact indicators as per the Global Reporting Initiative (GRI).

**In 2013, the EIB has improved reporting of scope 3 emissions by adding courier services (for which the emissions are fully offset by DHL) and water use (emissions associated with water supply and the treatment of waste water).**

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<sup>2</sup> <http://www.ghgprotocol.org/standards/corporate-standard>



Emission scope	Emission source	Units	Resolution
Scope 1	Natural Gas for heating	kWh	By site, by month
	Natural gas for co-generation <sup>1</sup>	kWh	By site, by month
	Owned vehicles	km	By vehicle
Scope 2	Purchased electricity <sup>2</sup>	kWh	By site, by month
	Purchased steam	kWh	By site, by month
Scope 3	Business travel – Air	Passenger km	By journey (inc. class and distance)
	Business travel – Rail	Passenger km	By journey (inc. class and distance)
	Outsourced minibus	km	Single figure
	Employee commuting	Parking spaces <sup>3</sup>	Average count by month
	Couriers (NEW in 2013)	Shipments	Single figure
	Water (NEW in 2013)	m <sup>3</sup>	By site, by month
	Waste	kg	By type and treatment, by site, by month
Paper consumption	Tonnes	By site	

**Table 1: Activity data**

*Notes to Table 1:*

<sup>1</sup> The co-generation plant generates electricity that is sold to the grid. The EIB profits directly from the sale of this electricity therefore the emissions associated with its generation (from the combustion of natural gas) are accounted for under scope 1.

<sup>2</sup> The EIB began to purchase electricity originating 100% from renewable sources (hydropower, wind power and biomass) in 2007 and is the proprietor of the related green guarantees of origin. As such, whilst emissions at a grid average factor are accounted for under scope 2, there are no net emissions associated with purchased electricity.

<sup>3</sup> Primary data on distances travelled or fuel consumed for commuting is not currently available. The EIB therefore counts the average number of available parking spaces on a monthly basis, deducted from the total number of available spaces, to arrive at an assumed number of cars per day. This is then multiplied by an average distance travelled of 35 km, based on a survey conducted by the European Commission of its employees in Luxemburg (and supported by 3<sup>rd</sup> party research<sup>3</sup>). This is then multiplied by 220 days (365 days in previous years).

<sup>3</sup> A. Aguilera (1999) 'Growth in commuting distances in polycentric metropolitan areas: the case of Paris', 45th Congress of the European Regional Science Association. Available: <http://www-sre.wu-wien.ac.at/ersa/ersaconfs/ersa05/papers/255.pdf>

## 4.2 Emission factors

Emission factors are calculated ratios relating GHG emissions to a measure of activity at an emissions source. They are used to convert activity data to carbon emissions.

Consistent with prior years, the emission factors represent carbon dioxide equivalent (CO<sub>2</sub>e). They convert the impact of each of the six greenhouse gases covered by the Kyoto Protocol – carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulphur hexafluoride (SF<sub>6</sub>) – into a common unit of tonnes of CO<sub>2</sub>e based on their Global Warming Potential (GWP). The GWP is a measure of how much heat the respective gas retains in the atmosphere over a given time horizon, based on the Intergovernmental Panel on Climate Change (IPCC) 100-years GWP coefficients.

Table 2 sets out the emission factors used and the sources of data.

Emission scope	Emission source	Emission factor	Data source
Scope 1	Natural Gas for heating	0.182 kgCO <sub>2</sub> e/kWh	EIB
	Natural gas for co-generation	0.182 kgCO <sub>2</sub> e/kWh	EIB
	Owned vehicles	0.157 kgCO <sub>2</sub> e/km <sup>1</sup>	EIB
Scope 2	Purchased electricity <sup>2</sup>	0.409 kgCO <sub>2</sub> e/kWh	Defra
	Purchased steam	0.043 kgCO <sub>2</sub> e/kWh	Ville de Luxembourg
Scope 3	Business travel – Air <sup>3</sup>	0.183 to 0.571 kgCO <sub>2</sub> e/Passenger km	Defra
	Business travel – Rail	0.012 kgCO <sub>2</sub> e/Passenger km	Defra
	Outsourced minibus	0.460 kgCO <sub>2</sub> e/km	EIB
	Employee commuting	0.190 kgCO <sub>2</sub> e/km	Defra
	Courier services	4.830 kgCO <sub>2</sub> e/shipment	DHL
	Water <sup>4</sup>	1.053 kgCO <sub>2</sub> e/m <sup>3</sup>	Defra
	Waste	21 kgCO <sub>2</sub> e/tonne	Defra
Paper consumption	955 kgCO <sub>2</sub> e/tonnes	Defra	

**Table 2: Emission factors**

*Notes to Table 2:*

<sup>1</sup> This is an average figure for all the vehicles owned by the EIB. The factor provided by the vehicle manufacturers is used for each vehicle to calculate emissions.

<sup>2</sup> The gross carbon footprint is reported using the grid average factor for purchased electricity, but as EIB purchase 100% green power the net carbon footprint is used for analysis in this report (i.e. emissions from purchased electricity treated as zero). See section 7 for a breakdown of gross and net emissions.

<sup>3</sup> The emission factor for air travel includes a Radiative Forcing factor that accounts for impacts other than CO<sub>2</sub> emissions (including water vapour, contrails, NO<sub>x</sub> etc) that magnify the warming effect in the upper atmosphere. The range of factors represents the distance (i.e. short- and long-haul) and travel class (i.e. economy and business).

<sup>4</sup> The emission factor includes both emissions associated with the supply of fresh water and the treatment of waste water

### 4.3 Emissions inventory calculation

An inventory of GHG emissions by source was calculated by applying the emission factors to relevant activity data and aggregating the results to calculate EIB's absolute carbon footprint. A relative footprint was also calculated using employee numbers in Full Time Equivalent (FTE).

### 4.4 Methodology changes in 2013

For 2012, the methodology and emission factors used were consistent with previous years to allow comparison. However, as highlighted in last year's report, changes have been made in 2013 to fully align with the GHG Protocol as follows:

- **Emission factor used for waste.** According to the GHG Protocol Scope 3 Standard, to avoid double-counting, the emissions associated with recycling and energy generation from waste are attributed to the user of the recycled materials, with only transportation and minimal preparation emissions attributed to the entity disposing of the waste. As such, the credit previously accounted for by the incineration of general waste (with heat recovery) has not been included in the emission factor for waste.
- **Emission factor used for commuting.** The emission factor previously used was a cradle-to-grave factor reflecting the full lifecycle of the vehicles used. For 2013, we have used the factor for the combustion of fuel during use. This more accurately reflects emissions associated with EIB commuting as the vehicles are owned by employees and used for other purposes over their life.

Additionally, we recommended improvements to the methodology to improve the accuracy of the carbon footprint. The following change has been made:

- **Commuting calculation.** The total distance is calculated by estimating the number of vehicles driven to work on an average day (a monthly survey of empty car parking spaces, deducted from available spaces) and multiplying this by the average distance travelled (35km) and the number of days. In previous years, 365 days were assumed but 220 is used for 2013 as more reflective of working days (5 days per week for 44 weeks per year).

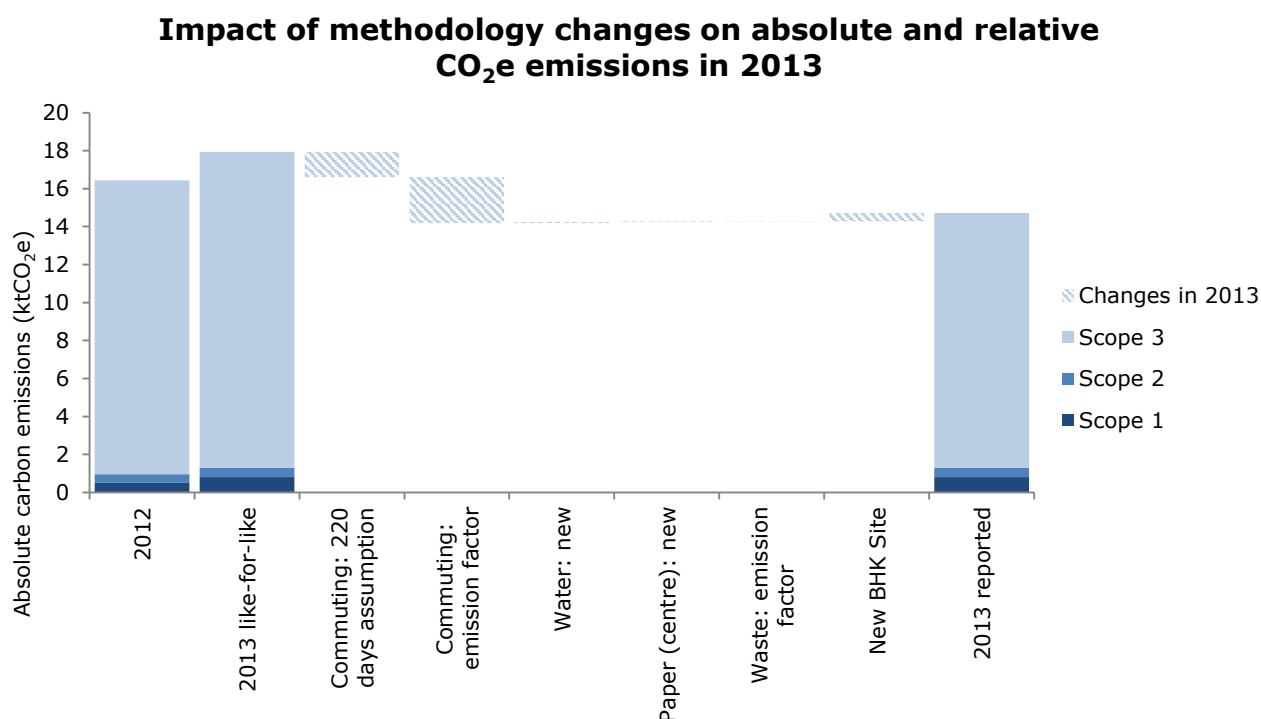
The emissions impact of these changes and the change in boundary (see section 4.1) is illustrated in Table 3 and Figure 2 below.

Methodology change	Impact on 2013	Total emissions
<i>Current total:</i>		<i>14,713 tCO<sub>2</sub>e</i>
Assumption of 220 days for commuting	+1,346 tCO <sub>2</sub> e	
Emission factor for commuting <sup>1</sup>	+2,408 tCO <sub>2</sub> e	
Addition of scope 3 water emissions	-49 tCO <sub>2</sub> e	
Addition of copier centre paper	-32 tCO <sub>2</sub> e	
Emission factor for waste	-13 tCO <sub>2</sub> e	
<i>Total equivalent to 2012 methodology:</i>		<i>18,373 tCO<sub>2</sub>e</i>
Energy emissions associated with BHK	-431 tCO <sub>2</sub> e	
<i>Total equivalent to 2012 boundary:</i>		<i>17,942 tCO<sub>2</sub>e</i>
Variance to 2012:		9.1% increase
Variance to 2007:		0.1% decrease

**Table 3: Impact of methodology changes**

Notes to Table 3 Table 2:

<sup>1</sup> This is the incremental difference to commuting emissions, above and beyond the change to the assumption of 220 days (v 365 in 2012) for commuting.



**Figure 2: Impact of methodology changes**

## 5 CARBON FOOTPRINT

### 5.1 Total net emissions

The EIB's total carbon footprint in 2013 was 14,713 tCO<sub>2</sub>e, a decrease of 11% compared to 2012 and a decrease of 18% compared to the 2007 baseline year.

The relative carbon footprint in 2012 was 6.21 tCO<sub>2</sub>e per employee, a decrease of 17% compared to 2011 and a decrease of 48% compared to the 2007 baseline year. The additional reduction in relative emissions over absolute emission reductions reflects a 58% increase in staff numbers since 2007.

It should be noted that a number of changes have been made to the methodology and scope in 2013 that impact the emissions. Information about these changes and the impact on the carbon footprint is set out in section 114.4

The EIB is on track to achieve the original emission reduction target of 20-30% by 2020 (against a 2007 baseline). This remains true even when the impact of methodology changes is accounted for.

#### Absolute and relative CO<sub>2</sub>e emissions by year

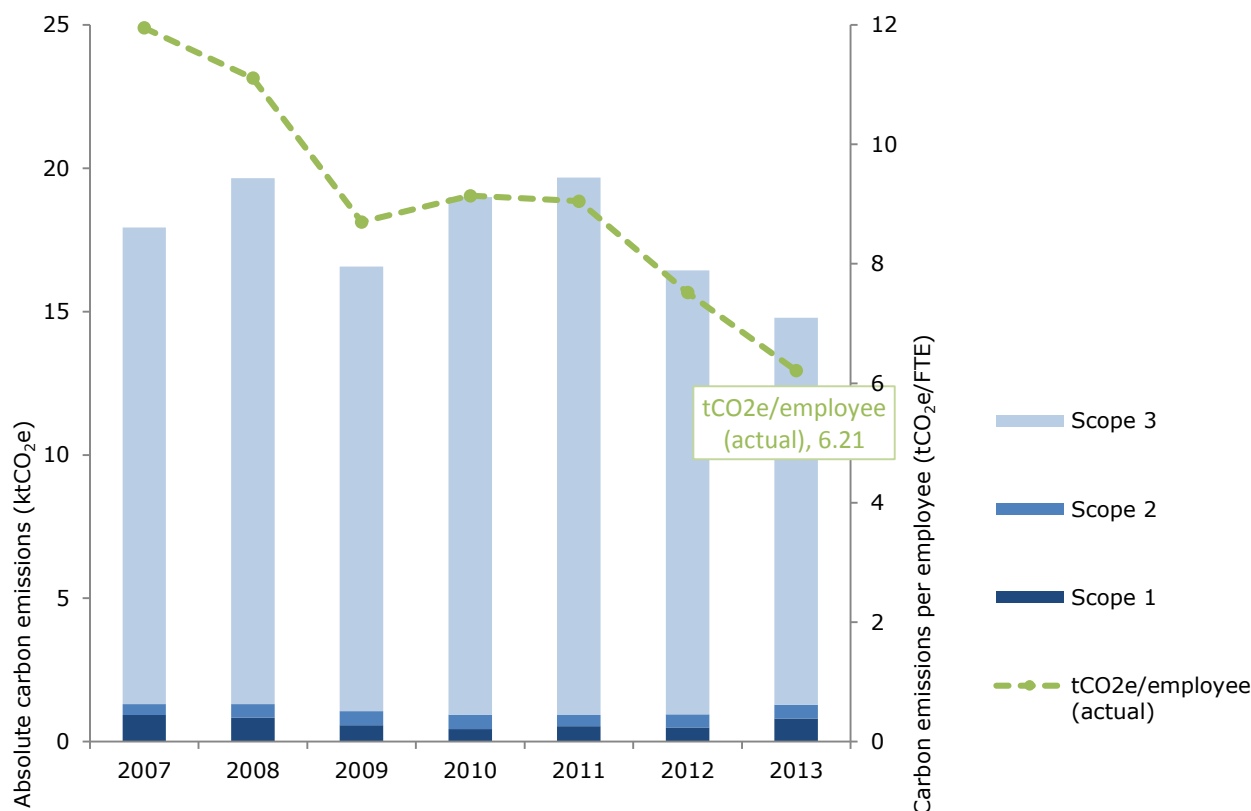
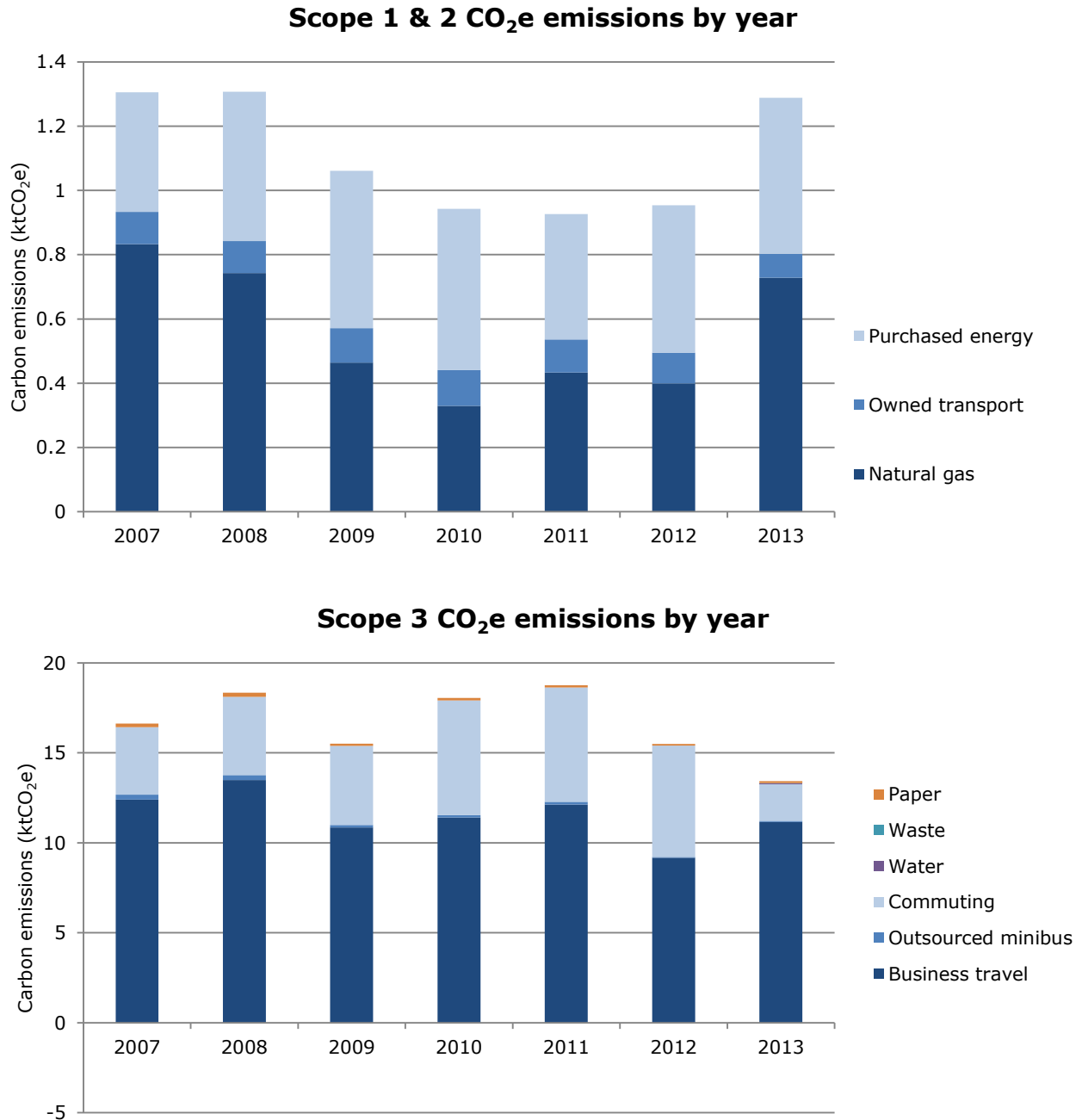


Figure 3: 2007-2012 total and relative net emissions

Figure 4 shows absolute emissions broken down by source for 2007 to 2013.



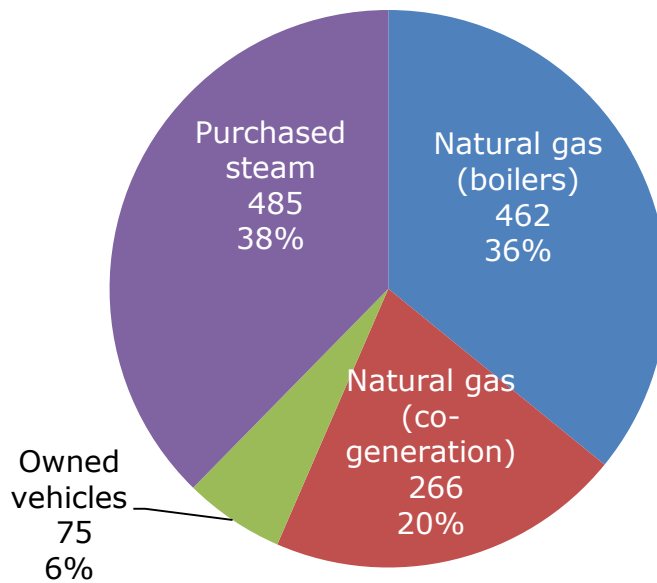
**Figure 4: 2007-2012 scope 1, 2 and 3 emissions breakdown**

**Notes:**

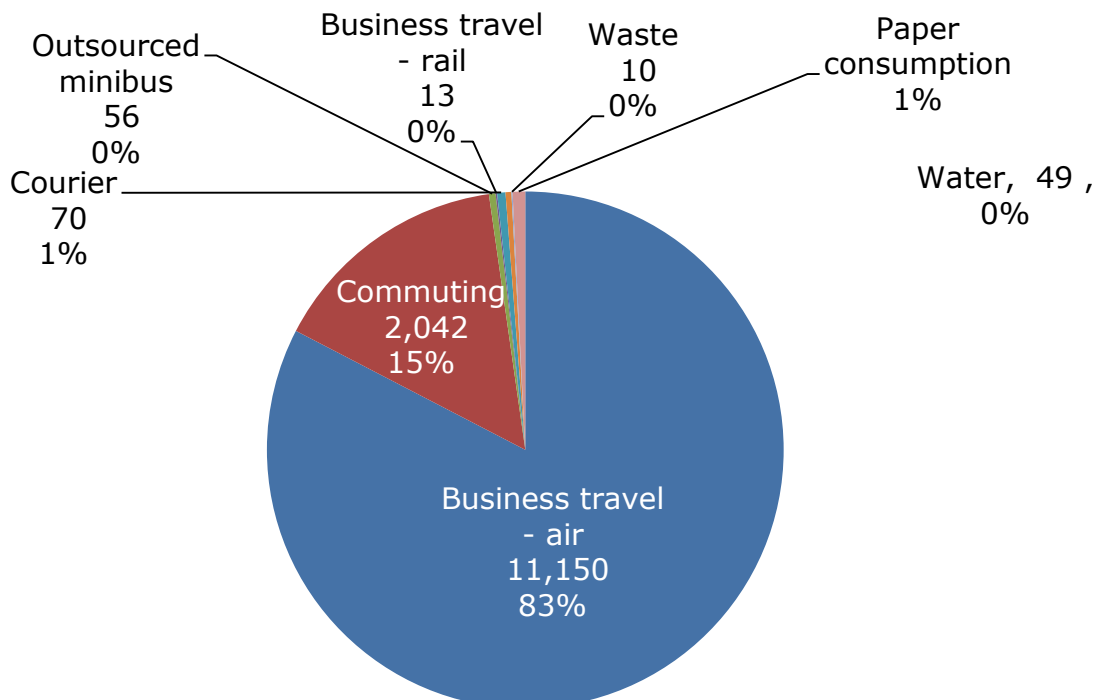
1. The significant increase in scope 1 natural gas emissions in 2013 (83% v 2012) relates to heating for the newly leased BHK site, whilst the Kirchberg site continues to use purchased steam for heating (scope 2).
2. The significant increase in scope 3 business travel emissions (22% v 2012) relates to the increase in overseas travel consistent with an increase in EIB projects signed in 2013.
3. The decrease in scope 3 commuting emissions is due to changes in methodology calculation (see section 4.4)

The 2013 carbon footprint is broken down by emissions source as per Figure 5 below. Approximately 91% relates to mobility - travel in owned vehicles and third party transport used for business travel and employee commuting. Air travel represents the most significant proportion of this but is a core part of EIB's business and cannot be avoided (although policies regarding travel class are in place to minimise emissions).

**2013 CO<sub>2</sub>e emissions by source - Scope 1 & 2**



**2013 CO<sub>2</sub>e emissions by source - scope 3**



**Figure 5: Emissions by source**

## 5.2 Stationary emissions analysis

Stationary energy emissions were 1,213 tCO<sub>2</sub>e (0.5 tCO<sub>2</sub>e per employee) in 2013, representing 8 % of total net emissions. This is 41% higher than 2012 (858tCO<sub>2</sub>e), and 1% higher than 2007 (1,206tCO<sub>2</sub>e).

Stationary emissions relate to the combustion of fuels in stationary equipment owned or controlled by the EIB for heating and power (scope 1), and from purchased heat and power (scope 2).

The activity data provided by the EIB and resulting emissions are shown in Table 4.

Site	Emission source	Energy (MWh)	Emissions (tCO <sub>2</sub> e)	tCO <sub>2</sub> e Variance to 2012	tCO <sub>2</sub> e Variance to 2007
Hamm	Boiler (gas)	169	31	-79%	-89%
Hamm	Co-generation (gas)	1,465	266	+6%	-25%
Hamm	Heating (biogas)	381	-	-	-
West Kirchberg	Heating (steam)	8,320	358	+14%	+48%
East Kirchberg	Heating (steam)	2,956	127	-12%	n/a
BHK	Boiler (gas)	2,371	431	NEW	NEW
All	Power (electricity)	16,761	6,869	0%	+15%
<b>Total energy emissions</b>		<b>32,422</b>	<b>8,082</b>		
<i>Less green tariff electricity</i>			<i>(6,869)</i>		
<b>Total net energy emissions</b>			<b>1,213</b>	<b>+41%</b>	<b>+1%</b>

**Table 4: Stationary emissions and activity data**

The increase in emissions reflects the additional BHK site added to the property portfolio in 2013. However, emissions are significantly lower at Hamm due to the switch to Biogas in April 2013 which resulted in 381MWh of power generated on a zero carbon basis.



### 5.3 Mobility emissions analysis

Net mobility emissions were 13,336tCO<sub>2e</sub> in 2013, representing 91% of total net emissions. This is 14% lower than 2012 (15,506tCO<sub>2e</sub>), and 19% lower than 2007 (16,526tCO<sub>2e</sub>).

Mobility emissions relate to the combustion of fuels in the vehicles owned or controlled by the EIB (scope 1) or third party transport for employee business travel and commuting to and from work (scope 3).

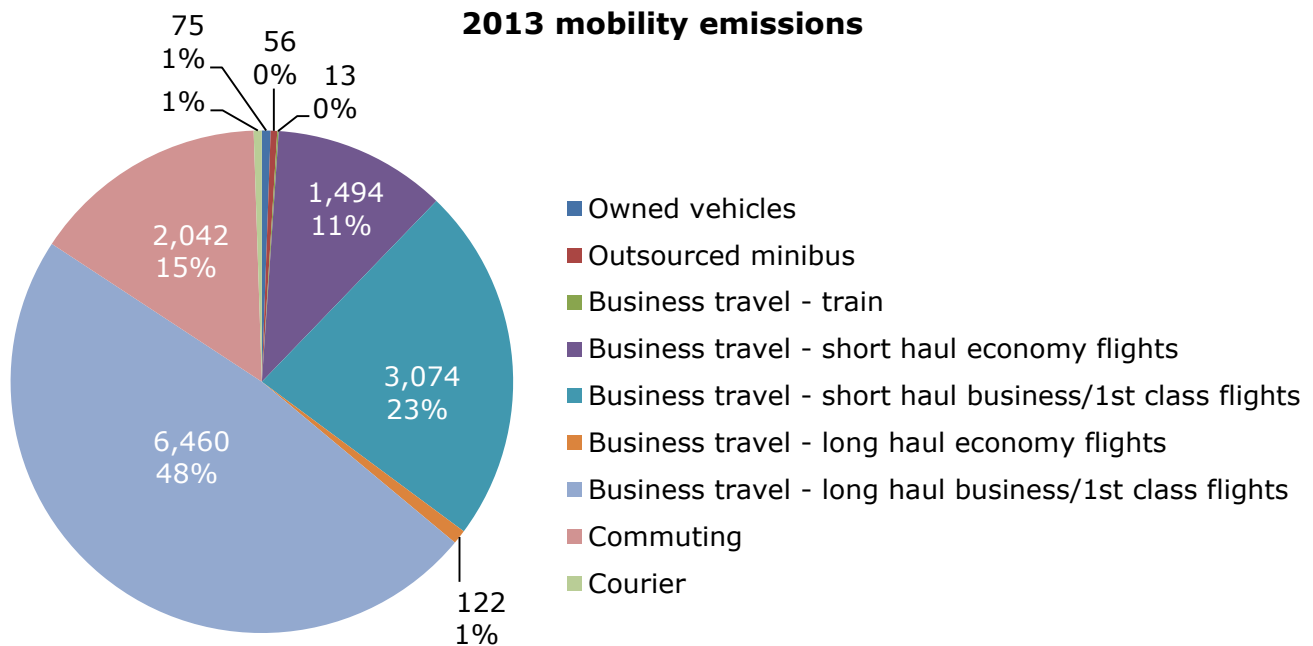
The activity data provided by the EIB and resulting emissions are shown in Table 5

Emission source	Activity data	tCO <sub>2e</sub>	tCO <sub>2e</sub> variance to 2012	tCO <sub>2e</sub> variance to 2007
Owned vehicles ( <i>scope 1</i> )	476,781 km	75	-22%	-25%
Outsourced minibus	120,816 km	56	+7%	-79%
Business travel – air (short haul, economy class)	8,144,300 km	1,494	-1%	-10% for total flights
Business travel – air (short haul, business/1 <sup>st</sup> class)	11,173,281 km	3,074	+7%	
Business travel – air (long haul, economy class)	569,290 km	122	+130%	
Business travel – air (long haul, business/1 <sup>st</sup> class class)	11,322,849 km	6,460	+37%	
Business travel – train	1,082,703 km	13	-21%	-45%
Commuting <sup>1</sup>	10,734,763 km	2,042	-67%	-46%
Courier	14,478 shipments	70	NEW	NEW
<b>Total transport emissions</b>		13,406		
<i>Less offset courier emissions</i>		(70)		
<b>Total net transport emissions</b>		<b>13,336</b>	<b>-14%</b>	<b>-19%</b>

Table 5: Mobility emissions and activity data

Notes to Table 5:

<sup>1</sup> The decrease in commuting emissions is largely due to the changes in methodology. Assuming 365 days of commuting would give distance of 17,809,947km (3,388tCO<sub>2e</sub>). Using a cradle-to-grave emission factor would further increase emissions to 5,796tCO<sub>2e</sub>. Without these changes, mobility emissions would have increased by 10%.



**Figure 6: Mobility emissions**

The majority of mobility emissions are scope 3 emissions (99.4%), of which 83% relates to flights. The EIB already has policies in place regarding travel class to minimise emissions and cost, and could consider further measures such as the broader use of tele- and video-conferencing.

Company owned vehicles fall under scope 1 and represent 6% (75tCO<sub>2</sub>) of EIB's net scope 1 and 2 emissions. By definition, the EIB has greater control over these emissions and it has implemented a policy to replace poor performing vehicles (in carbon efficiency terms). For example, the poorest performing vehicle was replaced with the top performing vehicle during 2013. Rankings are set out in Table 6 below.

Rank	Emission gCO <sub>2</sub> /km	KMs	Total emission kgCO <sub>2</sub>
1	0 <sup>1</sup>	3501	0
2	99 <sup>2</sup>	20,410	2,021
3 (replaces 18)	139	4,159	578
4a (replaced by 6a)	149	25,983	3,871
4b	149	33,981	5,063
6a (replaces 4a)	150	36,546	5,482
6b	150	38,925	5,839
6c	150	63,136	9,470
9	152	21,265	3,232
10a (replaced by 12a)	154	13,641	2,101
10b	154	33,500	5,159
12a (replaces 10a)	158	5,610	886
12b	158	47,595	7,520
14	162	17,728	2,872
15	175	14,689	2,571
16	183	42,000	7,686
17	195	39,332	7,670
18 (replaced by 3)	199	14,780	2,941
<b>TOTAL</b>		<b>476,781</b>	<b>74,962</b>

Table 6: Owned vehicles

Notes to Table 6:

<sup>1</sup> Vehicle #1 is an electric car used by the IT department to visit data centres. No emissions are recorded because electricity is accounted for under building use.

<sup>2</sup> Vehicle #2 is a full hybrid car.

## 5.4 Paper consumption

Paper consumption emissions relate the emissions released in the production of office paper that is then used by the EIB (not paper waste which is accounted for under waste). Emissions relating to the 111 tonnes of office paper used accounts for 106tCO<sub>2</sub>e, 1% of total emissions. This is an increase of 28% compared to 83tCO<sub>2</sub>e in 2012, and a decrease of 47% compared to 200tCO<sub>2</sub>e in 2007. However, 30% of the paper relates to the copy centre which was not accounted for in prior years (an additional 32tCO<sub>2</sub>e, without which emissions would have decreased by 11% compared to 2012).

## 5.5 Waste

Emissions from waste disposal account for 10tCO<sub>2</sub>e. The activity data provided by the EIB and resulting emissions are shown in Table 7 and Figure 7 below. Due to the small figures involved, variances are not meaningful.

Type	Treatment	Volume (tonnes)	tCO <sub>2e</sub>
Mixed	Incineration <sup>1</sup>	186	4
Organic	Compost	184	1
Paper	Recycled	164	3
Glass	Recycled	39	1
Plastic	Recycled	10	-
Metal	Recycled	2	-
Wood	Recycled	20	-
<b>TOTAL</b>		<b>604</b>	<b>9</b>
<i>Excluded hazardous waste</i>		<i>19</i>	<i>n/a</i>

Table 7: Waste emissions and activity data

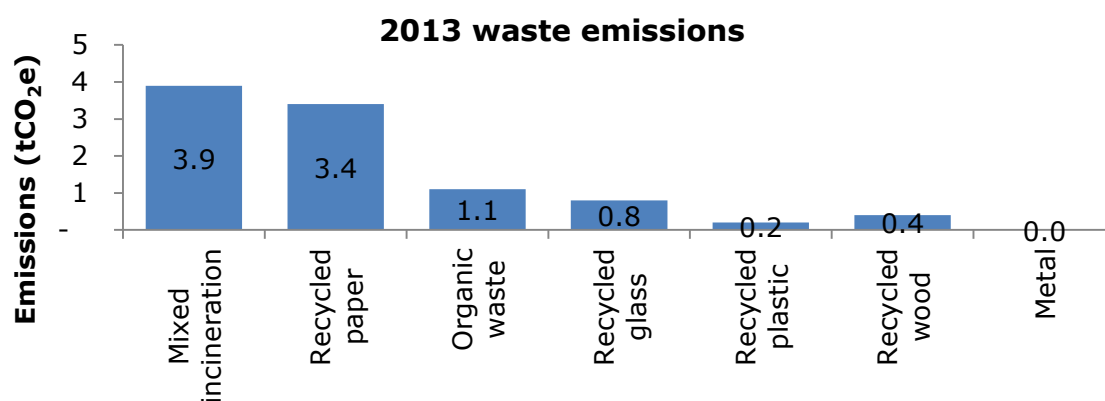


Figure 7: Waste emissions by type

We have added organic waste to the calculation for 2013. Hazardous waste, which includes Waste Electrical and Electronic Equipment (WEEE), florescent light bulbs, batteries, toner cartridges and other harmful substances, continues to be excluded. Data is collected for regulatory purposes as per Table 9 but cannot be converted into emissions because some items are measured in m<sup>3</sup> or units rather than weight and there is insufficient information about waste treatment – it may be sent to landfill, recycled or incinerated. Nonetheless, it would not have a material impact on the total carbon footprint (11 tonnes of hazardous waste in 2013 – excluding waste for which weight data was not available - equates to 1.8% of total waste).

## 5.6 Water

Emissions associated with water use (supply and waste water treatment) account for 49tCO<sub>2e</sub> (46,360m<sup>3</sup>). This is a new area of GHG accounting for 2013, although historic data is available back to 2007 (from GRI reporting). This data shows that water consumption has fallen 12% since 2012 (56tCO<sub>2e</sub>, 52,813m<sup>3</sup>) and 25% since 2007 (65tCO<sub>2e</sub>, 61,706m<sup>3</sup>), despite increases in employee numbers.

## 6 DATA ASSESSMENT AND METHODOLOGY CHANGES

### 6.1 Data quality and completeness

Table 8 sets out our assessment of the activity data and assumptions applied in 2012.

Emission source	Activity data	Assumptions applied
Boiler (Hamm & BHK)	Primary data	n/a
Co-generation (Hamm)	Primary data	n/a
Steam heating (Kirchberg)	Primary data	n/a
Purchased electricity	Primary data	n/a
Owned cars	Primary data	Fuel efficiency conversion based on manufacturer's data
Minibus	Primary data	Fuel efficiency conversion based on manufacturer's data
Business travel – air	Primary data	Short- / long-haul split at 4,000km
Business travel – train	Primary data	n/a
Commuting	Number of vehicles is inferred from available spaces and an average count of empty spaces at Kirchberg	All commuting is by car and the average daily distance of 35km is applied 220 days per year
Paper consumption	Primary data	n/a
Waste	Primary data	All general waste is incinerated with heat recovery

Key:	Weak – priority area for improvement	Satisfactory – could be improved	Good – no changes recommended
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**Table 8: Data quality and completeness assessment**

The regional offices are excluded because data was not available and they are assumed to be less than 5% of total emissions (allowable for exclusion under the GHG Protocol). Hazardous waste is excluded because there is insufficient information about its treatment to calculate emissions and many of the waste streams are measured in size (m<sup>3</sup>) or units rather than weight (kg), which is needed to calculate emissions. Again, emissions are likely to be very small as total waste contributes only 0.07% of the total net carbon footprint.

The EIB has improved the completeness of data in 2013 with the addition of water and courier emissions and should seek to improve continuously.

## 7 ENVIRONMENTAL INDICATORS 2013

### 7.1 Emissions by Scope

Emissions (tCO <sub>2</sub> e)	2013	2012	2011	2010	2009	2008	2007
Natural gas	728	399	433	329	464	743	833
Owned transport	75	96	103	112	107	99	100
<b>Total Scope 1</b>	<b>803</b>	<b>495</b>	<b>536</b>	<b>441</b>	<b>570</b>	<b>842</b>	<b>933</b>
Purchased electricity <sup>1</sup>	6,869	6,876	7,061	7,111	7,367	7,454	6,085
Purchased steam	485	459	390	502	490	374	249
Purchased cold supply						28	32
<b>Total Scope 2</b>	<b>7,354</b>	<b>7,335</b>	<b>7,451</b>	<b>7,613</b>	<b>7,857</b>	<b>7,857</b>	<b>6,366</b>
Business travel	11,163	9,168	12,131	11,413	10,858	13,489	12,407
Outsourced minibus	56	52	141	130	130	270	270
Commuting	2,042	6,190	6,369	6,369	4,407	4,363	3,749
Courier	70						
Water <sup>2</sup>	49	56	68	65	82	70	65
Waste	10	(6)	(2)	(4)	0	(1)	0
Paper consumption	106	83	115	146	120	227	200
<b>Total Scope 3</b>	<b>13,496</b>	<b>15,488</b>	<b>18,754</b>	<b>18,054</b>	<b>15,515</b>	<b>18,348</b>	<b>16,626</b>
<b>Total Gross emissions</b>	<b>21,653</b>	<b>23,317</b>	<b>26,741</b>	<b>26,108</b>	<b>23,943</b>	<b>27,047</b>	<b>23,926</b>
Green tariff	(6,869)	(6,876)	(7,061)	(7,111)	(7,367)	(7,392)	(5,993)
Offset courier emissions	(70)						
<b>Total net emissions<sup>3</sup></b>	<b>14,713</b>	<b>16,441</b>	<b>19,682</b>	<b>18,997</b>	<b>16,576</b>	<b>19,653</b>	<b>17,932</b>
% change from 2012	-11%						
% change from 2007	-18%	-8%	10%	6%	-8%	10%	0%

Number of employees	2,369	2,185	2,175	2,079	1,906	1,769	1,501
<b>Net emissions per employee</b>	<b>6.21</b>	<b>7.52</b>	<b>9.05</b>	<b>9.14</b>	<b>8.69</b>	<b>11.11</b>	<b>11.92</b>
% change from 2012	-17%						
% change from 2007	-48%	-37%	-24%	-24%	-27%	-7%	0%

<sup>1</sup> Assumes the grid average emission conversion factor for Luxembourg in 2009 (latest available) for all years for comparability

<sup>2</sup> Water emissions not reported prior to 2013. Figures here are back-calculated from water usage per employee.

<sup>3</sup> Small differences in total due to rounding

## 7.2 Net emissions by type

Indicators	Total tCO <sub>2</sub> e 2013	tCO <sub>2</sub> e per employee 2013	tCO <sub>2</sub> e per employee 2012	tCO <sub>2</sub> e per employee 2011	tCO <sub>2</sub> e per employee 2010	tCO <sub>2</sub> e per employee 2009	tCO <sub>2</sub> e per employee 2008	tCO <sub>2</sub> e per employee 2007
Energy emissions <sup>1</sup>	1,213	0.51	0.39	0.38	0.41	0.52	0.68	0.82
Mobility emissions <sup>1</sup>	13,336	5.63	7.10	8.62	8.67	8.13	10.31	11.10
Copying paper emissions	106	0.04	0.04	0.053	0.10	0.06	0.13	0.13
Water emissions <sup>2</sup>	49	0.02	0.03	0.03	0.03	0.04	0.04	0.04
Waste emissions	10	0.0042	-0.0026	-0.0007	-0.0020	0.0001	-0.0007	0.0002
<b>Total (net emissions)<sup>3</sup></b>	<b>14,713</b>	<b>6.21</b>	<b>7.52</b>	<b>9.05</b>	<b>9.14</b>	<b>8.69</b>	<b>11.11</b>	<b>11.92</b>

<sup>1</sup> Based on net emissions therefore does not include grid electricity under scope 2 or courier services under scope 3.

<sup>2</sup> Water emissions not reported prior to 2013. Figures here are back-calculated from water usage per employee.

<sup>3</sup> Small differences in total due to rounding

## 7.3 Other indicators

	Total m <sup>3</sup> 2013	m <sup>3</sup> per employee 2013	m <sup>3</sup> per employee 2012	m <sup>3</sup> per employee 2011	m <sup>3</sup> per employee 2010	m <sup>3</sup> per employee 2009	m <sup>3</sup> per employee 2008	m <sup>3</sup> per employee 2007
Water	46,360	19.57	24.17	29.88	29.57	40.89	37.34	41.11

	Total kWh 2013	kWh per employee 2013	kWh per employee 2012	kWh per employee 2011	kWh per employee 2010	kWh per employee 2009	kWh per employee 2008	kWh per employee 2007
Purchased electricity with green certificates	16,761,358	7075.29	8,042.94	8,296.82	8,742.91	9,878.63	10,679.51	10,205.32

	Total tonnes 2013	t per employee 2013	t per employee 2012	t per employee 2011	t per employee 2010	t per employee 2009	t per employee 2008	t per employee 2007
Total copying paper	111	0.05	0.04	0.04	0.05	0.05	0.07	0.07

## 7.4 Charts showing key indicators per employee

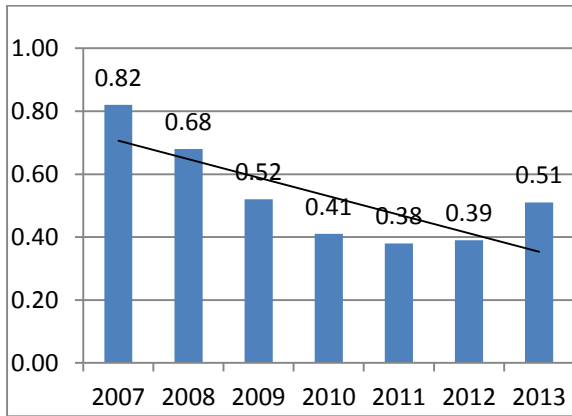


Chart 1 - Energy emissions - tCO<sub>2</sub>e per employee

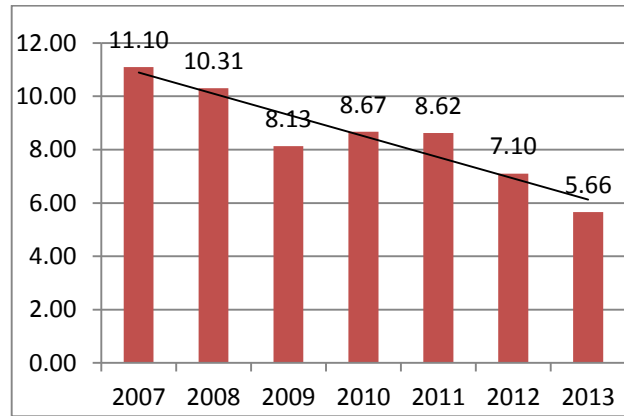


Chart 2 - Mobility emissions - tCO<sub>2</sub>e per employee

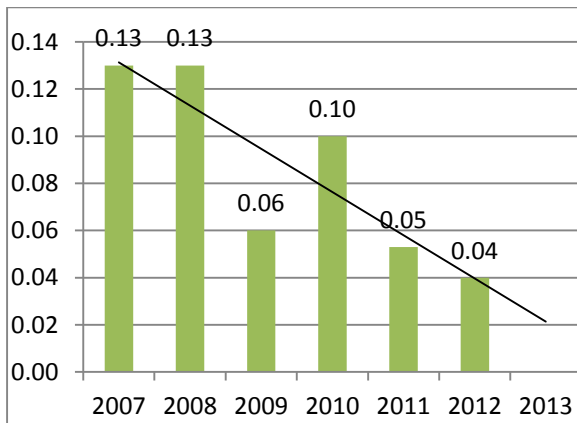


Chart 3 - Copying paper emissions - tCO<sub>2</sub>e per employee

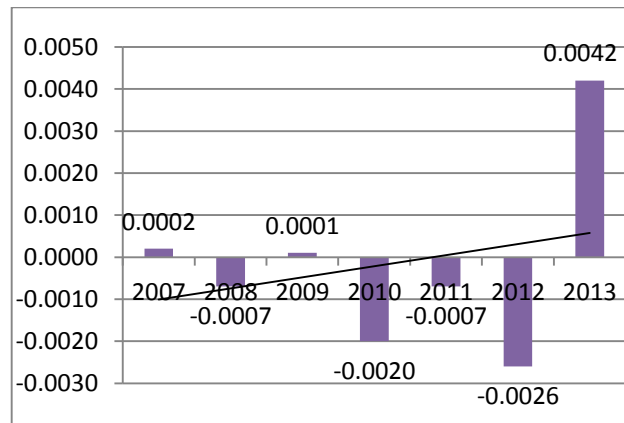


Chart 4 - Waste emissions - tCO<sub>2</sub>e per employee

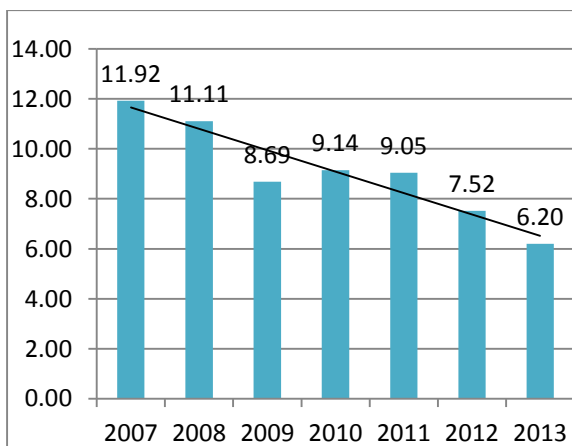


Chart 5 - Total Emissions - tCO<sub>2</sub>e per employee

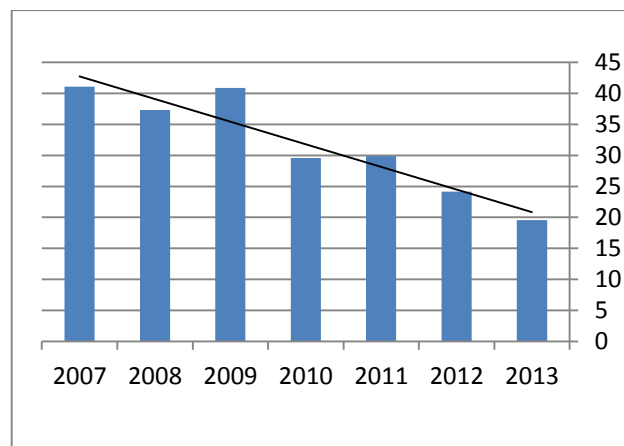


Chart 6 - Water consumption in m<sup>3</sup> per employee



## 8 ANNEX – GRI INDICATORS

### **EN5: Energy saved due to conservation and efficiency improvements.**

Energy savings due to conservation and efficiency improvements have resulted in a decrease by 19% of the fuel and energy purchased by the EIB per employee since 2007, as shown in the following table.

Energy source	2013	2007	Variance	% change
Natural gas (kWh)	4,004,520	4,040,540	-36,020	-1%
Electricity (kWh)	16,761,358	15,619,594	1,141,764	7%
Steam (kWh)	11,275,768	5,785,063	5,490,705	95%
Biogas (kWh)	380,757	n/a	380,757	
<b>Total (kWh)</b>	<b>32,422,403</b>	<b>25,445,197</b>	<b>6,977,206</b>	<b>27%</b>
Number of employees	2,369	1,501	868	58%
<b>Energy per employee</b>	<b>13,686</b>	<b>16,952</b>	<b>-3,266</b>	<b>-19%</b>

In 2012, the EIB awarded a contract for the technical and energy systems management of the over 180,000 square meters of EIB office space in Luxembourg. To further optimize the EIB energy consumption, a dedicated person in charge of environmental issues is working on EIB premises. Multiple actions have been undertaken e.g. potential energy savings as regards the existing technical appliances but also include awareness sessions/ trainings for the other subcontractors acting on EIB site as regards their energy consumption practices.

Some examples of EIB projects aiming at energy savings:

- Reduction of electrical consumptions originating from the lighting (Automatic shut off, low power bulbs, lighting power reduction during weekends and holidays, conditional lighting according to brightness sensors).
- Heating shut-off in unoccupied working places and optimization of process regulation
- Optimization of cold production promoting "Free Cooling" to reduce electrical needs (compressors)
- Optimization of heating and cooling needs in offices
- Communication to sensitize the catering company's employees to energy savings in kitchen, restaurant and cafeteria
- Integration of all network infrastructure into the EIB network (managed by IT department) to streamline, reduce costs and footprint
- Membership in the voluntary agreement between the Government of Luxembourg, My Energy and GIE FEDIL - Business federation Luxembourg on improving energy efficiency in industry in Luxembourg. This membership furthermore grants the EIB a more favourable compensation fund (category C instead of B today) paid as tax on the supply of electricity contribution rate. Annual financial gain estimated: about € 50,000 in 2013.

As an example, some of the specific initiatives described above, relating to electricity consumption for lighting and thermal production resulted in an estimated consumption reduction of 530,000 kWh/year for 2013.

## **CARBON NEUTRAL ENERGY FOR EIB PREMISES**

Aiming at 'carbon neutrality' for its energy supplies, the EIB has been buying 100 % renewable energy (hydropower, biomass and wind) from its electricity supplier LEO SA. This has reduced the annual internal carbon emissions by approximately 7,000 tCO<sub>2e</sub> each year since 2011.

Also, for several years, the EIB headquarter campus has been receiving its heating supplies by the nearby cogeneration plant of the Ville de Luxembourg.

Cogeneration is a combined process which allows the simultaneous production of heating and electricity with high performance. This technical choice has a significant impact on carbon emissions compared to traditional boiler systems.

As a result of the signature of a BIO-Gas/Green-Gas contract in April 2013 for the Hamm building, the CO<sub>2e</sub> emissions relating to heating at Hamm have been reduced by 25 % in the related period (399 tCO<sub>2e</sub> in 2012, 297 tCO<sub>2e</sub> in 2013).

Note that the EIB ceased operating the Hamm building as from 1.1.2014.

## **EN22: Total weight of waste by type and disposal method.**

The EIB disposes of waste through the Luxembourg municipal authorities. Waste is sorted in-house to the extent possible so that it can ultimately be recycled. All unsorted waste is incinerated with energy recovery. Details of the quantities of waste by the official categorisation are shown in Table 9 below.

The Luxembourg "SuperDrecksKëscht Green Label" was first awarded to the Bank for its internal waste recycling practices in 2007 and renewed annually to date for the East, West and Hamm buildings. The criteria for obtaining the label are as follows:

- visible and accessible collection sites;  
Transposition of all measures for waste prevention  
Waste collection according to types  
Safe and environmentally correct storage
- safe and environmentally correct storage;
- good management in terms of waste recycling and disposal.

The SuperDrecksKëscht® fir Betriber label is certified in accordance with the internationally accepted ISO 14024:2000 standard. This certificate comprises among other things the control procedures and requirements the inspectors have to satisfy. Thus waste management in the certified businesses fully meets the requirements for ISO 14024.

To achieve the EIB expectations to further optimize the EIB waste imprint further actions are planned, such as:

- establishing a new collection process to reduce the volume of paper waste while maximising the security of confidential documents;
- replacing biodegradable and compostable paper cups by a more sustainable approach;

Code CED	Official description of waste	Quantity (kg or other specified) 2013	Quantity (kg) 2012
080317	waste printing toner containing dangerous substances	<b>5,700 cartridges</b>	5310 cartridges
110107	Cleaning products	96	
130208	Mixed oil and water	61	
140601	Organic chemicals	31	
140603	Solvents	9	
150101	paper / cardboard	80,076	75,606
150102	plastic packaging	1,335	406
150106	mixed packaging	5,967	5,952
150107	glass packaging	38,897	39,444
150110	packaging containing residues of hazardous or contaminated by residues	917	964
150110	packaging containing residues of hazardous or contaminated by residues	46	16
150202	Air filters	1,363	-
160107	Oil filters	3	-
160211	Refrigerant	715	
160211	Fridges	<b>8 units</b>	
160214	Electronic and electrical scrap sorting	215	0
160601	lead-acid accumulators	145	0
160601	lead-acid accumulators	<b>25 units</b>	0
170401	leather	90	
170405	Mixed metals	<b>8 m<sup>3</sup></b>	
170411	cables other than those in 170410	0	141
170504	Demolition waste	<b>9 m<sup>3</sup></b>	-
170604	insulation materials not in 170601 or 170603	1,891	1,396
170604	insulation materials not in 170601 or 170603	<b>14 m<sup>3</sup></b>	1,396
170904	Mixed hazardous waste	5,097	0
170904	Construction waste	<b>48 m<sup>3</sup></b>	
200101	paper and cardboard	84,165	77,958
200108	kitchen waste and canteen waste	181,700	136
200121	fluorescent tubes and other mercury-containing waste	263	230
200121	Energy saving bulbs	127	309

200121	Incandescent bulbs	74	157
200125	used cooking oil	2,170	2,172
200127	paint	37	
200133	batteries and accumulators in 160601, 160602 or 160603 and unsorted batteries and accumulators containing these batteries	437	351
200135	electrical and electronic equipment discarded containing hazardous components other than 200121 and 200123	774	392
200136	electrical and electronic equipment discarded containing hazardous components other than 200121 and 200123	6,348	6,421
200137	Treated wood waste	19,642	0
200137	Treated wood waste	261 m3	0
200138	Untreated wood waste	0	82
200139	plastics	1,554	1,438
200139	plastics PSE-PP-PE	1,057	563
200140	waste metals	1,893	1,575
200301	mixed municipal waste (garbage)	137,550	136,500
200301	mixed municipal waste (compactor)	48,719	50,212
<b>TOTAL (kg)</b>		<b>623,461</b>	<b>402,420</b>
<b>NB does not include waste in m<sup>3</sup> or units</b>			

Table 9: Waste categories