



Carbon Footprint Report

- Fiscal Year 2009-



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Introduction

The economic downturn has seen Europe and its citizens fundamentally reconsider its values and ideology. The crisis has forged a new era which will see important reforms. A less carbon intensive economy, better energy efficiency and more renewable energy remains at the heart of this plan. International action on climate change may have failed in Copenhagen and more objective and transparent scientific data needs to be gathered to persuade the remaining skeptics but Europe is not taking the risk of waiting anymore and sees this opportunity as an important driver to the economy. The Lisbon strategy clearly addresses these points aiming to stimulate growth and create more and better jobs, while making the economy greener and more innovative.

The Commission is proposing five measurable EU targets for 2020 that will steer the process and be translated into national targets: for employment; for research and innovation; for climate change and energy; for education; and for combating poverty. Thus even after the mitigated outcome at Copenhagen climate change remains one of the central pillars of the European 2020 Plan and reducing carbon emissions certainly represent the direction Europe still wants to take.

The shift towards a low carbon economy is now truly underway and local legislation in the EU member states is reinforcing this drive. This carbon footprint report will help the European Investment Bank (EIB), the European Investment Fund (EIF) and more importantly their executive management committee, their employees, their purchasing decision makers, their members, all related stakeholders, and public entities to have a better comprehension of the banks impact on climate change and to see how it improved or not compared to last year and how they can continue trying to improve it year on year. It will also facilitate decision making in respect to internal carbon abatement. The report will act as a sort of Key Performance Indicator (KPI) to inform, educate and encourage proactive action and corporate social responsibility. A clear overview of the current carbon footprint of the EIB has been mapped out in this report. One can only control what one measures and being conscious of ones personal carbon emissions is the first important step towards a low carbon economy.

This carbon report, prepared by CO2logic is divided into two parts. The first part provides an analysis of the CO2 emissions emitted by the organisations for the Fiscal Year (FY) 2009. The final part investigates the company's exposure to a carbon tax or a cap and trade system.

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1. Context

1.2. What is one tonne of CO2

- ⌚ 3 month of heating in an average flat in Luxemburg
- ⌚ 1 return ticket from Luxemburg to Malaga by plane
- ⌚ 5 returns from Paris to London by plane
- ⌚ 0.5 tonnes of paper.
- ⌚ 7000 km with the average European car
- ⌚ 4000 km with a SUV 4X4

All greenhouse gases (GHG) such as carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), refrigerants (HFC's, PFC's, CFC's), sulfur hexafluoride (SF₆), water vapor (H₂O), ozone (O₃) ... are converted into CO₂ equivalent using the Intergovernmental Panel on Climate Change (IPCC) 100-years global warming potential (GWP) coefficients.

Gas	GWP 100 years time horizon
CO ₂	1
Methane (CH ₄)	25
Nitrous Oxide (N ₂ O)	298
Sulfur Hexafluoride (SF ₆)	22800

2. Carbon Footprint

2.1. Quick presentation of the EIB and EIF

The European Investment Bank was established in 1958 under the Treaty of Rome. The European Investment Bank is the European Union's financing institution, whose remit is to contribute towards the integration, balanced development and economic and social cohesion of the Member States. In particular financing is provided for regional development, Trans-European Networks of transport, telecommunications and energy, research, development and innovation, environmental improvement and protection, health and education. To that end, it raises substantial funds on the capital markets, which it channels, on the keenest terms, into the financing of projects that meet EU objectives. Outside the Union, the EIB implements the financial components of agreements concluded under the European development aid and cooperation policies.

The EIB and EIF have their head office buildings in Luxembourg (East & West Kirchberg, Hamm) next to each other on the Kirchberg Plateau in Luxembourg. The EIB has been based in Luxembourg since 1968 and moved onto the Kirchberg Plateau in 1980. The EIB and EIF employ 1906 people. The EIB also has small international subsidiary offices around the world which report to the head office.

2.2. Methodology

To carry out this carbon footprint report we used the emission conversion factors from the recognised Bilan Carbone® ADEME tool or from the WRI GHG Protocol when no figures were available for certain emission factors we used data from the CO2logic database and research. The consultants at CO2logic are certified to use the Bilan Carbone® tool but other figures were used in certain cases when considered more adapted to the specific situation.

What is the Bilan Carbone® method?

Bilan Carbone® is a methodology developed by the ADEME (French government Agency for Environment and Energy Management) allowing a consistent approach to measure and quantify CO₂ emissions. The Bilan Carbone® methodology is compliant with the ISO 14064 quality standard, the World Resources Institute and the World Business Council for Sustainable Development, GHG Protocol Initiative Standard as well as the EU ETS Directive n° 2003/87/CE.

Nearly all human activities rely directly or indirectly on fossil fuels and generate directly or indirectly, greenhouse gas (GHG) emissions. As the use of these fossil fuels modifies the climate, all industrial and service companies, government agencies, not-for-profit groups and individuals should assess their carbon footprint. A carbon footprint is an indicator of one's climate change impact. Such a calculation will also allow a company to anticipate and prepare for any carbon tax. Carrying out a carbon footprint is an effective solution for ranking emissions by source and for launching an active carbon emission reduction strategy.

The results given in this report are designed to give the EIB and EIF an accurate view of their carbon footprint. The results can be used to facilitate carbon reduction decision making. The time period which this carbon footprint report covers is 01/01/2009 to 31/12/2009.

The items quantified in this study are:

- ⌋ Internal consumption, heating and electricity production. (all scope 1 emissions GHG protocol, direct emissions)
- ⌋ Sourced electricity and heating (all scope 2 emissions GHG protocol, indirect emissions)
- ⌋ Employee commuting to and from work, employee business travel, paper consumption and disposal of waste generated. (certain scope 3 emissions, GHG protocol and radiative forcing, indirect emissions)

The EIB management has decided that to make this initial carbon footprint report the boundaries of the carbon footprint scope would be set as defined above. At this stage the emissions from the EIB headquarters East & West Kirchberg, Hamm, will be taken into account. Findel is taken into account in this calculation but represents only a small figure as during the year 2009 the building was vacated and the rent ceased. The smaller international offices are not taken into account either. The figures from 2009 and 2008 are very difficult to compare due to the vacation of several buildings and relocation of staff into the new EIB building during 2008 as well as the vacation of Findel in 2009. The future years should provide more stability and comparability and should help identify CO2 reduction activities more clearly.

This report has taken into account the GHG Protocol Initiative Standards as well as the latest principles and indicators (G3) developed by the Global Reporting Initiative (GRI) to report on sustainability. Using the Global Reporting Initiative definition of Materiality it is considered that reporting on the EIB and EIF carbon footprint is of significant importance. This report has been written in a way so as to facilitate sustainability reporting in accordance with the latest principles and indicators (G3) developed by the Global Reporting Initiative. This includes the principles for ensuring report quality and guidance for boundary setting. Calculations were all based on figures provided by the EIB and the EIF who obtained them from their invoices. These figures were then sent to CO2logic. Thus the results of the report can only be as accurate as the figures provided by the EIB and EIF.

2.3. Carbon Balance

2.3.1. Global footprint for EIB and EIF

Within the emission boundary set, as explained above the results obtained show that the total carbon footprint of the EIB and EIF comes to 16,576 tonnes of Carbon Dioxide equivalent (tCO₂ eq) per year (compared to 19,653 tonnes of CO₂ in 2008 thus a reduction of 16%) .

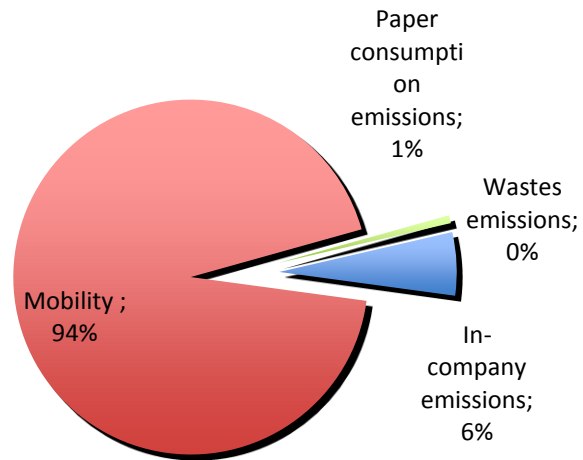
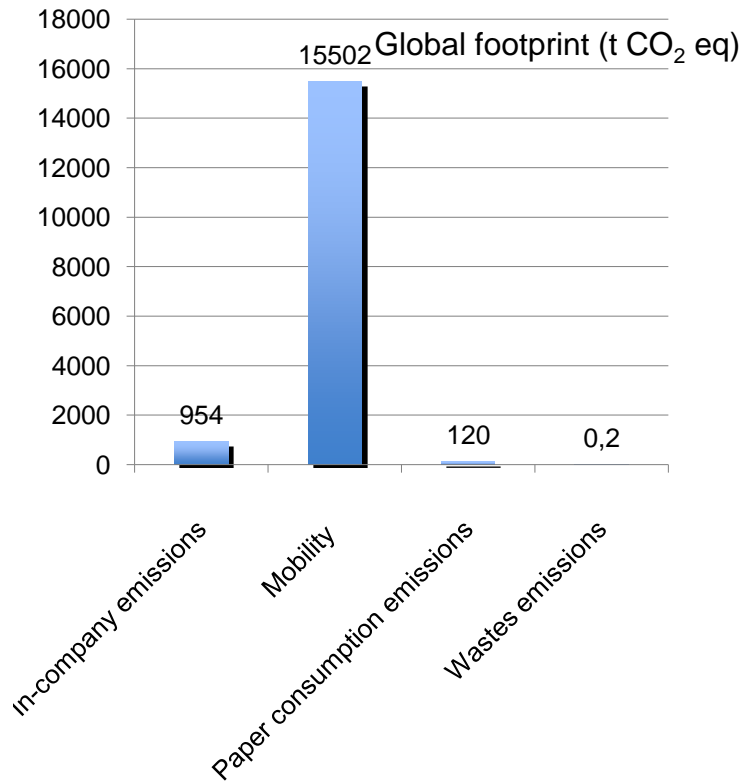
The CO₂ emissions coming from in-company emissions, which relate to heating, electricity and co-generation, account for 954 tonnes of CO₂ thus 6% of the total emissions (the same percentage as 2008).

The emissions coming from mobility thus the travel of employees due to transport, commuting and air travel account for 15,502 tonnes of CO₂ thus 94% of emissions (2719 less than 2007). It should be noted that a radiative forcing factor of X2 was used for air travel which is what CO₂logic advises according to the Bilan Carbone® methodology. This however differs from the GHG Protocol which does not take into account radiative forcing and for which the result would be halved.

The emissions related to paper consumption account for 120 tonnes of CO₂ thus 0.7 % of total emissions.

The emissions from waste disposal account for 0,19 tonnes of CO₂. Some waste is used as an energy source to produce electricity and thus replaces the use of fossil fuels.

With 1906 employees at the EIB & EIF in 2009 this implicates an



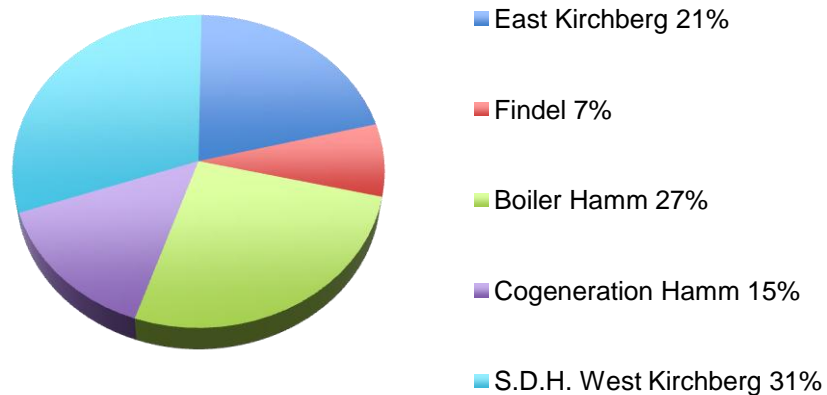
overall average emission level of 8,7 tonnes of CO₂ per person per year at work within the scope set.

2.3.2. In-company emissions

The emissions related to this category are those related to internal production of heat and electricity as well as emissions from externally sourced electricity and heating.

In-company emissions count for 954 tonnes of CO₂ thus 6% of the total emissions (compared to 1207 tonnes of CO₂ in 2008 thus a reduction of 21%). This means 0,5 tonnes of CO₂ per employee for this emission category.

EIB and EIF in company emissions (t CO₂ eq)



The following data was collected by the facilities management:

- ⌋ Steam heating West Kirchberg, 291,42 tonnes of CO₂ (Steam 6,777,302 kwh purchased)
- ⌋ Steam heating East Kirchberg, 198,91 tonnes of CO₂ (Steam 4,625,881 kwh purchased)
- ⌋ Heating Findel, 71,55 tonnes of CO₂ (Gas 347,349 Kwh purchased) (building vacated)
- ⌋ Boiler Hamm, 253,47 tonnes of CO₂ (Gas 1,230,462 kwh purchased)
- ⌋ Co-generation Hamm, 138,45 tonnes of CO₂ (Gas 672,114 kwh purchased)

One should consider when comparing year on year CO₂ emissions from the buildings as differences in seasonal temperatures etc can influence the annual situation. Thus it is only over the long term that differences can really be observed. The more efficient East Kirchberg building should help and it is strongly advised that further energy audit should be carried out for the remaining buildings. Quick wins can easily help reduce emissions often at no cost. All EIB purchased electricity is green electricity and the EIB is proprietor of the related green guarantees of origins. The electricity produced by the cogeneration system in the Hamm building is not used

internally by the EIB as it is sold to the network and green electricity is bought instead. However the EIB profits directly from the sale of this electricity thus the gas consumption and therefore the CO₂ emissions created by this cogeneration system are fully allocated to the EIB Hamm building CO₂ emissions. Gas consumption was converted from PCS to PCI figures to ensure further accuracy of calculations. The EIB air-conditioning systems use ammonium so there is no global warming impact from leakage only the electricity usage which is already accounted for. The Kirchberg plateau has a positive particularity of all the buildings being heated centrally by the Kirchberg power plant steam production. For steam heating purchased we were provided by the supplier with an emissions factor of 43g CO₂ per Kwh. This was used for all steam purchased. Co-generation systems are very positive and minimise energy loss.

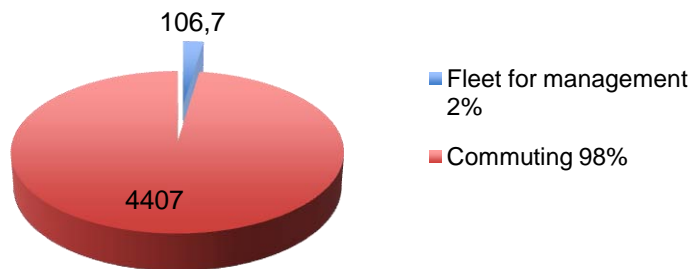
2.3.3. Mobility emissions

Mobility related CO₂ emissions included emissions from commuting, company fleet cars, a shuttle service between the various buildings and CO₂ emissions from travel by plane and train.

Mobility emissions represent 15,502 tonnes of CO₂ thus 94% of the total emissions (compared to 18,221 tonnes of CO₂ in 2008 thus a reduction of 15%). This means 8,13 tonnes per employee for this emission category. Clearly this is an important element for which further efforts need to be made.

For the EIB this represents 4063,5 tonnes of CO₂

Fleet and commuters EIB & EIF (t CO₂ eq)



For the EIB and EIF we get the following information as collected by the facilities management:

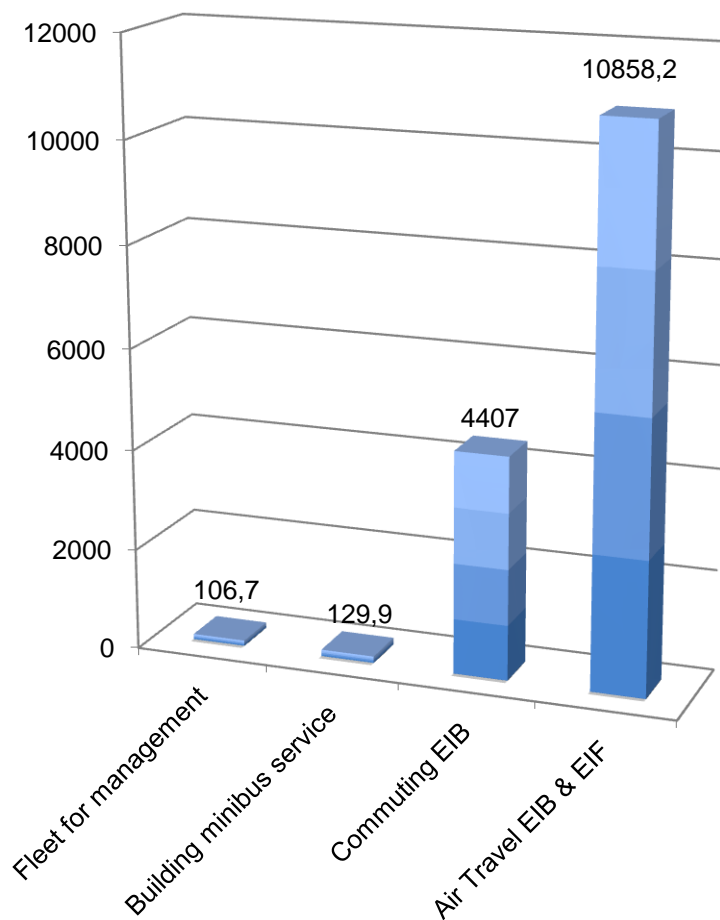
- ⌋ Owned management cars EIB & EIF 106,7 tonnes of CO₂.
- ⌋ Building minibus service, 2129,9 tonnes of CO₂
- ⌋ Commuting EIB & EIF, 4407 tonnes of CO₂ (19,149,725 km)
- ⌋ International Travel EIB & EIF,

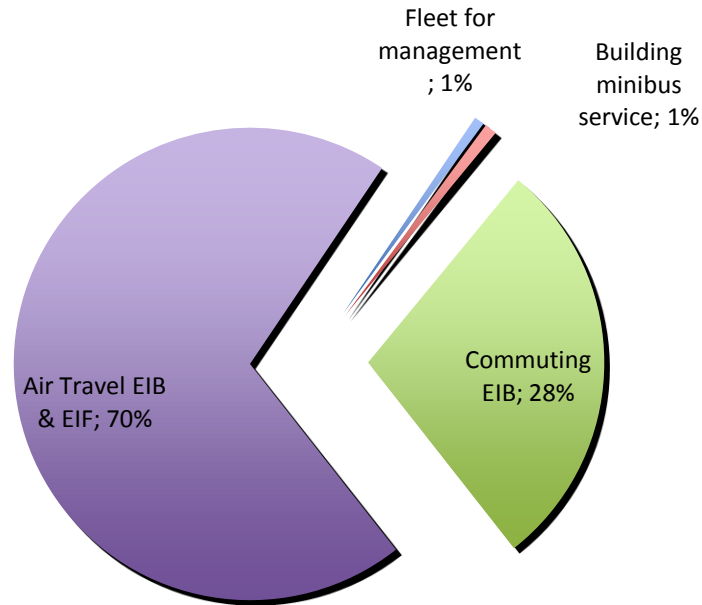
- For air travel 5409 tonnes of CO₂ without the radiative forcing and 10817 tonnes of CO₂ with radiative forcing X2 Bilan Carbone® (plane: short haul 10,543,488 km, long haul first class 10,654,543 km)
- For train travel 41 tonnes of CO₂ (1,028,879 km)

For flights Non Kyoto Gases were included with a radiative forcing factor of X2 in line with the Bilan Carbone® recommendation this is however in contradiction with the WRI GHG Protocol which does not include radiative forcing factor for aviation. For travel by plane we were informed that for short haul journeys economy class was used and for long haul journeys, business class was used. As the class affects the number of people in a plane and thus the emission factor per person this was taken into account in the calculations.

For the EIB commuting emission figure the average distance travelled of 35 km was applied based on the research carried out at the European Commission (2007) for its employees in Luxembourg.

Transports (t CO₂ eq)





For train travel the emission conversion figure applied per km was the Luxemburg train average. This figure is not far off the European average and thus is assumed a reasonable average to apply even if it is understood that many of the train journeys did end abroad.

2.3.4. Paper consumption

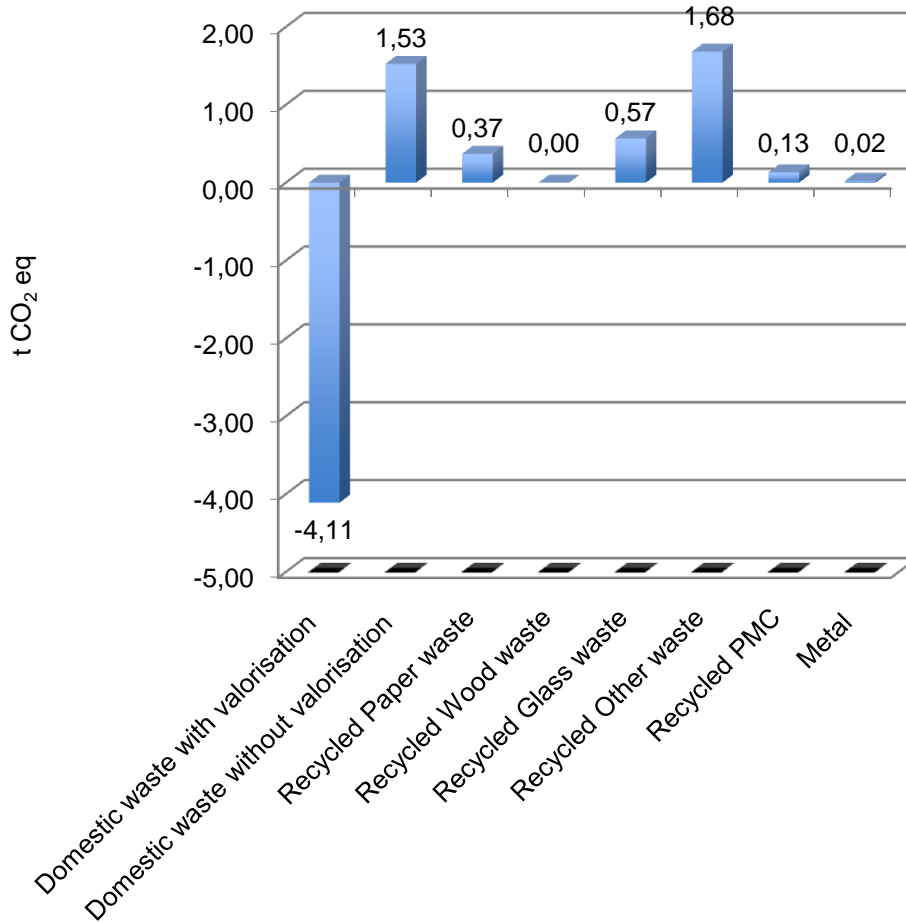
The paper consumed by the EIB and the EIF was also calculated in terms of its CO₂ production impact.

Paper consumption of 90,94 tonnes of Paper represent 120 tonnes of CO₂ thus 0.7% of the total emissions (compared to 227 tonnes of CO₂ in 2008 thus a reduction of 47%)

2.3.5. Waste

The emissions from waste disposal account for 0.19 tonnes of CO₂ (compared to -1,3 tonnes of CO₂ in 2008)

EIB & EIF Waste emissions (t CO₂ eq)



The following data was collected by the facilities management:

- ⌚ Domestic waste with valorization caused 4.1 tonnes of CO₂ spared (244 tonnes of waste)
- ⌚ Domestic waste without valorisation caused 1.5 tonnes of CO₂ (104 tonnes of waste)
- ⌚ Recycled Paper waste caused 0,368 tonnes (11.15 tonnes of waste)
- ⌚ Recycled Glass waste caused 0,568 tonnes of CO₂ (39.43 tonnes of waste)
- ⌚ Recycled other waste caused 1,681 tonnes of CO₂ (114.7 tonnes of waste)
- ⌚ Recycled PMC caused 0,132 tonnes of CO₂ (9.1 tonnes of waste)
- ⌚ Metal waste caused 0,023 tonnes of CO₂ (1,6 tonnes of waste)

Domestic waste with valorization causes a positive emissions contribution as the waste is used to make electricity which would normally have been produced from a non renewable fossil fuel source. In general the disposal of waste at the EIB through recycling and valorisation allows this emission category to be relatively low.

3. Carbon Tax / Carbon Offsetting

As carbon restrictions, taxes and regulations are being rolled out across Europe and even in the US, companies that take into account and anticipate any legislation by putting a price on their carbon emissions will see a growing competitive advantage over those businesses that delay taking this decision till later. A company's carbon footprint is equal to a company's overall internal and external consumption of fossil fuels. By reducing this emissions figure a company will also be directly reducing its exposure to any fluctuation in fossil fuel price. This could help make some very significant savings.

Assuming the following factors the cost for the EIB and the EIF would be :

If a carbon tax or offset (CER from Kyoto Clean Development Mechanism) was set at the rate of 14 Euro the cost would be **232,062 Euro**


If a carbon tax or offset was set at the rate of the Stern Review estimated CO2 social cost of approx 60 Euro the cost would be **994,553 Euro**

There are three steps to reaching the «CO2 Neutral» status. The first involves measuring and calculating ones carbon footprint as has been done in this report. The next step involves looking at ways of acting on these results and identifying reductions which can be made internally. The last step involves offsetting one's residual emissions. By offsetting one's emissions a company is internalising its external costs. This will help the executive management consider the otherwise often neglected environmental impact cost of their pollution and encourage them to reduce this cost and thus their carbon emissions. Considering the conclusions made by Sir Nicholas Stern that say spending 1% of world GDP to avoid a cost of 20% after 2050 it seems clear that offsetting is an interesting way to take immediate action and to reduce ones global warming impact whilst the low carbon technologies arrive to the market.

4. Environmental indicators 2009

	Tonnes of CO ₂ 2009	Tonnes of CO ₂ per staff member 2009	Tonnes of CO ₂ per staff member 2008	Tonnes of CO ₂ per staff member 2007
Energy emissions	954	0.50	0.68	0.8
Mobility emissions	15502	8.13	10.3	11
Waste disposed of	0,19	0.0001	-0.0007	0.0002
Copying paper consumption	120	0,06	0.13	0.13
TOTAL	16576	8,7	11.11	11.9

	m ³ 2008	m ³ per staff member 2009	m ³ per staff member 2008	m ³ per staff member 2007
Total water consumption (EIB only)	77943	40,89	37.34	41

	kWh 2009	kWh per staff member 2009	kWh per staff member 2008	kWh per staff member 2007
Total electricity consumption (with green certificates)	18,828,620 	9878.6	10 679.5	10 205.3

	Tonnes 2009	Tonnes per staff member 2009	Tonnes per staff member 2008	Tonnes per staff member 2007
Total paper consumption	90,94	0,05	0.07	0.07

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Key terms

Carbon Dioxide equivalent (CO₂). An internationally accepted measure that, by means of agreed conversion factors, expresses the global warming capacity of different greenhouse gases in terms of the amount of carbon dioxide that would have the same global warming potential (GWP).

Certified Emissions Reduction (CER). A carbon reduction credit for one tonne of CO₂ as certified by the UNFCCC under the United Nations' Clean Development Mechanism (CDM).

DEFRA (Department for Environment, Food and Rural affairs).

European Union Emissions Trading Scheme (EU ETS). The world's largest multi-country, multi-sector, greenhouse gas emission trading scheme. The scheme, in which all 25 member states of the European Union participate, started operations on 1 January 2005.

Gold Standard (GS) Voluntary offset verification standard

Greenhouse gas (GHG). Any gas, such as carbon dioxide (CO₂), methane (CH₄) or water vapour (H₂O) that gives rise to a greenhouse global warming impact.

Intergenerational equity. The issue of the fairness of the distribution of the costs and benefits that are borne by different generations. In the case of climate change policy, for example, action or inaction today has impacts not only on the present, but also on future, generations.

Intergovernmental Panel on Climate Change (IPCC). The IPCC was established in 1988 by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP). The role of the IPCC is to "... assess on a comprehensive, objective, open and transparent basis the scientific, technical and socio-economic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts and options for adaptation and mitigation."

Kyoto Protocol. An international agreement adopted in December 1997 in Kyoto (Japan). The Protocol sets binding emission targets for developed countries that would reduce their emissions on average by 5.2% below 1990 levels.

Radiative forcing. In climate science, defined as the difference between the incoming radiation energy and the outgoing radiation energy in a given climate system. A positive forcing (more incoming energy) tends to warm the system, while a negative forcing (more outgoing energy) tends to cool it. Possible sources of radiative forcing are changes in insulation (incident solar radiation), or the effects of variations in the amount of radiatively active GHG gases present.

Social cost of carbon. The damage value of an additional tonne of carbon emissions.

United Nations Framework Convention on Climate Change (UNFCCC). A treaty, signed at the 1992 Earth Summit in Rio de Janeiro, which calls for the "stabilization of greenhouse gas

concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference

Verified Emissions Reductions (VER) Offsets that are used in the voluntary market and which are verified by a third party.