



EUROPEAN CENTRAL BANK

EUROSYSTEM

# ECB Environmental Statement 2010



GREEN ECB



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This environmental statement provides information on the environmental performance and activities of the European Central Bank (ECB) in 2009 to the public and other interested parties. It can be found on the ECB's website (in the "Publications" section).

## 2 Foreword

For a European institution like the ECB it is only natural to look beyond borders, to focus on the medium and long term and to stress the importance of sustainability in every respect. We always look at international developments and not just the developments in single countries. We have policies that are suitable not just for the short term, but especially for the medium and longer term. And we believe strongly in the importance of sustainable policies. Policies that help growth and job creation, but in a manner that is sustainable. In a manner in which it can also contribute to future growth and job creation.

The challenges in the financial system can only be solved by global action and by working together. The improvement of our environment is something that is at least as challenging as the improvement of our financial system.

Climate change, the “greenhouse effect” and the need to cut emissions are serious global challenges. As a consequence of the Kyoto process, an increasing number of international organisations, government entities and commercial companies have adopted internal environmental strategies. Moreover, protection of the climate has become a general policy principle of the European Union.

Already in 2007 the ECB decided to take action in order to systematically pursue environmental sustainability. As a result, we established a green initiative. Since then we have achieved a more environmentally sustainable management of resources, in particular by raising awareness among management and staff, reducing our consumption of natural resources and lowering our carbon dioxide (CO<sub>2</sub>) and greenhouse gas emissions.

This publication is the European Central Bank’s first environmental statement. It outlines our commitments and our environmental policy framework, as established by the Executive Board of the ECB in 2007.

The ECB wants to be an environment-conscious institution. It makes prudent use of natural resources, to preserve the quality of the environment and to protect human health. We hope that our approach encourages others to demonstrate their environmental awareness and corporate responsibility to staff, third parties and the general public.



Vitor Constâncio  
Vice-President of the European Central Bank

### **3 Description of the ECB's activities**



## 3 Description of the ECB's activities

### 3.1 Mission and basic tasks

Since 1 January 1999 the European Central Bank (ECB) has been responsible for conducting monetary policy for the euro area.

The legal basis for the single monetary policy is the Treaty on the functioning of the European Union (the Treaty) and the Statute of the European System of Central Banks and of the European Central Bank (the Statute)<sup>1</sup>.

The ECB and the national central banks of those countries that have adopted the euro together constitute the Eurosystem (the central banking system of the euro area). The main objective of the Eurosystem is to maintain price stability, in order to safeguard the value of the euro. Accordingly, the ECB defines Eurosystem policies and conducts, coordinates and monitors monetary policy operations. It establishes guidelines and instructions and monitors financial risks and the foreign exchange market. The ECB provides the operational hub for the systems of the ESCB, the institutional framework that comprises the ECB and the central banks of all the EU Member States.

Further, the ECB provides strategic planning for the production and issuance of banknotes within the euro area and has the exclusive right to authorise their issuance.

The ECB publishes a Monthly Bulletin, containing a detailed analysis of the prevailing economic situation and the risks to price stability, a consolidated Weekly Financial Statement and an Annual Report, which describes the activities of the ESCB and reports on the Eurosystem's monetary policy during the previous year. In addition, the ECB produces a range of other task-related publications.

Detailed information on the ECB's mission and tasks can be obtained via [www.ecb.europa.eu](http://www.ecb.europa.eu)

<sup>1</sup> The texts of the Treaty and the Statute are available on the ECB's website (under "Legal framework", in the section "The European Central Bank").

### 3.2 Organisation

There are two main decision-making bodies of the ECB, the Governing Council and the ECB's Executive Board. The Governing Council adopts the guidelines and takes the decisions necessary to ensure the performance of the tasks entrusted to the Eurosystem and formulates monetary policy for the euro area. It comprises the members of the Executive Board of the ECB and the governors of the national central banks of the 16 euro area countries.

The ECB's Executive Board comprises the President and the Vice-President of the ECB and four other members appointed by the European Council, acting by a qualified majority. The main responsibilities of the Executive Board, which as a rule meets once a week, are: to prepare the meetings of the Governing Council; to implement the monetary policy of the euro area in accordance with the guidelines and decisions laid down by the Governing Council and, in doing so, to give the necessary instructions to the euro area NCBs; to manage the current business of the ECB; to exercise certain powers delegated to it by the Governing Council, including some of a regulatory nature.

The Executive Board is assisted by a Management Committee in matters relating to the ECB's management, business planning and annual budget process.

### 3.3 Premises

In the city of Frankfurt am Main, the ECB rents three high-rise buildings: the Eurotower, the old Commerzbank building and the Eurotheum. Together they provide a gross building area of about 133,000 square metres, with office space for approximately 2,100 workplaces for around 1,563 members of ECB staff<sup>2</sup>, for trainees, external consultants and staff members of the national central banks. In addition, the ECB's premises contain a conference centre and meeting rooms for ECB meetings and conferences, as well as for ESCB Committee meetings. In 2009 more than 40,000 visitors and guests were welcomed at the ECB in Frankfurt.



The ECB has a staff canteen and dining area in the Eurotower. Further, it offers a fitness facility, open from 7 a.m. to 9 p.m. on ECB working days. For staff commuting by bicycle the ECB provides about 260 bicycle stands and showers, which are also used by staff who do sport at lunch time.

The Eurotower, built in the 1970s, was fully renovated in 1995, before the ECB moved in. Three combined heat and power systems were installed, each providing 600 kW of thermal power and 450 kW of electrical power. The Eurotheum was built and opened in 2000. It has a district heating system and, in addition to openable window elements in the offices, modern absorption chillers and a compressor chilled water unit for

<sup>2</sup> On 31 December 2009 the actual full-time equivalent number of staff holding employment contracts with the ECB was 1,563 (1,536 on 31 December 2008).

cooling. The Commerzbank, built in the 1970s, has a district heating system, and its technical equipment was renovated in 2003, before the ECB moved in.

In addition, the ECB has an official representation in Washington and rents computer space in the Frankfurt area.

In 2010 the ECB started constructing its own premises and future headquarters – due to be completed by the end of 2013 – on the site of the Grossmarkthalle (former wholesale market hall) in Frankfurt am Main. The New ECB Premises (NEP) will comply with the voluntary “GreenBuilding Programme”<sup>3</sup>, launched by the European Commission in 2004.

<sup>3</sup> The GreenBuilding Programme (GBP) aims at improving the energy efficiency and expanding the integration of renewable energies in non-residential buildings in Europe on a voluntary basis. The programme addresses owners of non-residential buildings to realise cost-effective measures which enhance the energy efficiency of their buildings in one or more technical disciplines (<http://www.eu-greenbuilding.org>).



## 4 Environmental management at the ECB



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### 4.1 The environmental policy

Climate protection has become a general policy principle in the European Union. As a result, the ECB adopted an environmental policy in 2007 as an integral part of its governance framework with the following elements:

- the ECB is committed to complying with applicable legal regulations relating to its environmental aspects;
- the ECB is committed to minimising its ecological footprint;
- in principle, CO<sub>2</sub> emissions caused by the ECB should be reduced, in particular by lowering consumption of energy and natural resources;
- to this end, internal ECB processes should be designed, wherever possible, to be cost efficient and environmentally friendly;
- staff members are encouraged to actively contribute to achieving the objectives of this policy.

Each ECB business area is responsible for its own adherence to the principles of the governance framework. Further, all ECB staff are invited to actively contribute to the objectives of the environmental policy.

In order to ensure that its objectives are achieved, the ECB has implemented an Environmental Management System (EMS), applicable to all activities at the ECB's main premises. The EMS applies the international standards EN ISO<sup>4</sup> 14001 and EMAS<sup>5</sup>, with the aim of continuously improving the system and its environmental performance. In compliance with EMAS requirements the ECB maintains open communication with the public on its environmental performance.

The ECB has legal personality under public international law. It is committed to complying with applicable European, national, regional and local regulations relating to its environmental aspects.

### 4.2 The environmental management organisation

In 2008 specific operational roles and responsibilities within the EMS were established:

The **Executive Board** adopts the environmental policy, provides resources and appoints the Environmental Coordinator and the Environmental Management Officer. Further, it signs and authorises publication of the ECB's environmental statement.

The **Management Committee** provides strategic guidance on EMS-related issues and, where necessary, resolves disputes. It considers and approves the formal EMS Management Review and issues environmental objectives and the Environmental Management Programme.

The **Environmental Coordinator**, who is the Director General Administration and thus a member of senior management, steers the EMS and assesses its performance and effectiveness in a management review process.

4 An International Organization for Standardization Standard that has been approved as a European Standard.

5 The EU Eco-Management and Audit Scheme (established by Regulation (EC) No 1221/2009 of the European Parliament and of the Council).

The **Environmental Management Officer** is responsible for the entire EMS, coordinates all matters in the field of environmental protection management and invites and advises on environmental initiatives by business areas. He leads a team of Environmental Representatives and the Green Initiative – a group of staff volunteers who contribute to the objectives of the environmental policy – and ensures that training at the ECB is adequate.

The **Environmental Representatives** are permanent delegates from each business area with a strong interest in and awareness of environmental issues. They ensure that the interests of the business areas are considered within the EMS and act as internal contact persons for environmental issues. They support implementation of the EMS in their own business area and maintain horizontal communication on EMS-related matters across the organisation.

For the exchange of information and EMS-related training, workshops for Environmental Representatives are scheduled twice a year. First, as fixed agenda items, the Environmental Coordinator and the Environmental Management Officer report on the current status of the EMS and provide information on the ECB's environmental performance, environmental issues and new developments. Second, the Environmental Representatives provide feedback on progress in implementing the EMS and on any new topics identified inside the business areas. Third, external speakers are invited to lecture on examples of best practice and innovative ideas on how to improve environmental performance.

Further, internal communication channels have been established within the ECB for information sharing, and also to raise awareness on environmental matters, including by informing staff of the impact of the ECB on the environment, providing guidelines for environmentally responsible behaviour in daily business, informing staff about the EMS and their responsibilities, and providing information on developments in the ECB's environmental performance and the EMS.

To achieve these objectives, the ECB ensures relevant information is available to all staff on the "Green ECB" intranet site and also shares information at bi-monthly brown-bag lunches of the Green Initiative team, as well as during staff events, such as the first "Green Day" at the ECB, which took place on 22 June 2009.

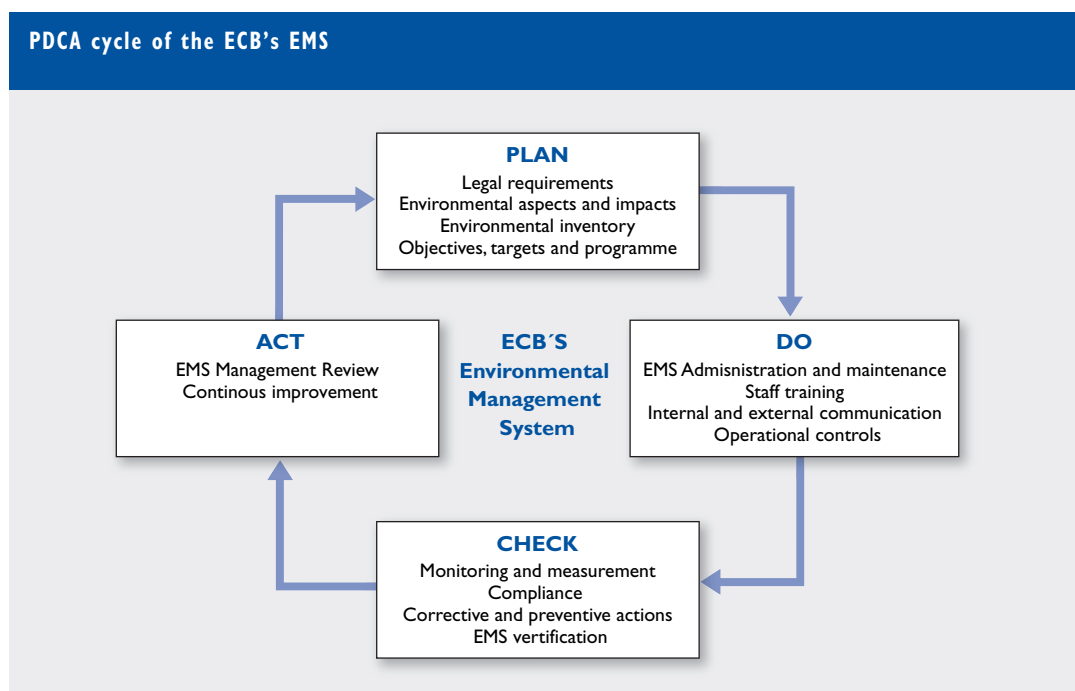


### 4.3 The Environmental Management System

At the end of 2008 the ECB launched the development and implementation of an EMS, following the international standards of EN ISO 14001 and of Regulation (EC) No 1221/2009 of the European Parliament and of the Council (EMAS). The application of these standards and the ECB's registration with EMAS will ensure transparency and accountability to the public.

The ECB's EMS is fully integrated in the ECB's general governance framework and outlined in the organisation's Business Practice Handbook. This allows staff to readily ascertain environmental roles and responsibilities in the organisation. The system is further detailed in an Environmental Management Handbook. The handbook describes the operational procedures of the EMS and who is responsible for doing what, when and how.

Further, to avoid deviations from its environmental governance framework, the ECB has established various instruments for monitoring and measuring performance that focus on more than just environmental aspects and impacts. The EMS comprises a best-practice PDCA cycle (plan-do-check-act) typically used to improve business processes, which is intended to lead to constant improvement in the ECB's management system, as well as in its environmental performance.



In 2010 the EMS and its operational procedures were formally established as an integral part of the ECB's governance framework. Accordingly, tasks and measures within the scope of the EMS are now centrally coordinated by the Environmental Management Officer, who implements any necessary preventive or corrective actions.

Business area initiatives, such as the Directorate General Information Systems' Green IT initiative, the development of a facility management concept for the New ECB Premises and the Directorate

Communication' efforts in relation to electronic publications, are monitored within the EMS but remain decentralised insofar as the budgetary and operational responsibility of the applicable line manager is concerned.

Among other procedures, inspections and external EMS verifications will ensure compliance with legal obligations, the overall effectiveness of the EMS and, in particular, process stability in relation to environmental deviations and non-conformities, as well as the achievement of the ECB's environmental objectives and targets.

#### 4.4 Milestones of environmental management at the ECB

Milestones 2007-10	
<b>11/2007</b>	Adoption of first environmental policy framework, launch of environmental status quo analysis and implementation of "quick-win" measures for improvement.
<b>08/2008</b>	Appointment of the Environmental Coordinator and the Environmental Management Officer and start of EMS implementation project.
<b>06/2009</b>	In parallel with the EU Green Week, first "Green ECB" staff event held at the ECB.
<b>01/2010</b>	Launch of the EMS management cycle and establishment of the Environmental Representatives group.
<b>07/2010</b>	EMAS validation of the ECB.

## 5 Environmental aspects and impacts



## 5 Environmental aspects and impacts

In 2007 the ECB's environmental aspects were identified for the first time. This exercise included an evaluation of their significance, determination of the degree to which the ECB can influence and control them and estimation of the potential for improvement. This was an important step towards recognising the organisation's impacts on the environment and proved to be helpful in formulating the first environmental policy framework, but also for identifying quick-win measures that could be implemented in 2008.

As part of the EMS cycle, the ECB's environmental aspects are annually reviewed. Data are collected and their significance is assessed on an annual basis by means of an ABC analysis. The outcome is used as a basis for deriving objectives and measures for the Environmental Management Programme, to improve the ECB's environmental performance.

The ECB has identified the following aspects of the organisation's activities that have significant direct and indirect environmental impacts:

### 5.1 Aspects of the ECB's activities that have a direct or indirect impact on the environment

The ECB rents the Eurotower, the old Commerzbank building and the Eurotheum; operation and maintenance of the premises are performed by the ECB's landlords and their facility management service providers. In addition, the ECB contracts catering services for its canteen, the office kitchenettes and the conference and meeting areas.

Even when related tasks are not performed by the ECB itself, all service provision is closely monitored and supervised by the ECB.

#### **Energy and emissions**

The ECB's main premises are equipped with modern heating installations, air conditioning systems and IT infrastructure.

Heating and cooling energy and electrical consumption are the ECB's main environmental aspects, accounting for 80% of the ECB's total carbon emissions. They mainly arise from the operation of its premises and their technical infrastructure (lifts, air conditioning and ventilation and lighting) as well as computer rooms and IT infrastructure.

Heat and cooling energy is supplied both by combined heat and power systems and by district heating. In close cooperation with the ECB's landlords, energy management is performed to optimise the consumption of energy at the premises and switching to electrical power from renewable resources is the focus of the ECB's facility management. Further, a Green IT initiative has been launched, with the aim of minimising electrical consumption in computer rooms and at ECB workplaces.

The use of gas in the modern power plants of the ECB's premises does not lead to significant emissions of sulphur oxide, nitrogen oxide or particulate matter and, as a matter of principle, all emission-relevant installations are subjected to preventative maintenance and servicing, as well as to tests by external technical experts. Consequently, CO<sub>2</sub> emissions have only been further assessed by the ECB insofar as CO<sub>2</sub> is a greenhouse gas.

As part of the initial assessment of its environmental aspects, the ECB also looked at the generation of nuisances (noise, smell, traffic congestion, etc.). Noise is produced by the ventilation and air conditioning systems and the monthly testing of the emergency power supplies (diesel generators). However, levels are not significant when compared with the background traffic noise in Frankfurt. Smells may arise from the kitchen/canteen or from related waste in the Eurotower store rooms. As the ECB has not received any complaints to date regarding these environmental aspects, neither is considered a problem and they have not been further assessed.

The ECB monitors losses of coolants. These may arise, for example, from maintenance of the cooling facilities. However, as the ECB has no control over these losses their environmental impact is not included in the ECB's carbon footprint.

Emissions caused by ECB business travel are recognised in the CO<sub>2</sub> footprint. However, emissions resulting from the commuting to work of ECB staff have not been taken into account so far. A transport survey conducted in 2008 showed that many of those working at the ECB already used public transport to commute, or cycled or walked to and from the workplace.

### **Water**

The ECB's water consumption is partly attributable to its sanitary installations, used by ECB's staff and visitors alike, and to the operation of the staff canteen and kitchens, but especially to the technical installations at its premises, such as air conditioning systems (and in particular their humidification systems and open cooling towers). Waste water is generated through normal office activities only. All waste water is discharged to the public sewer and efforts to minimise water consumption should reduce both the amount of water consumed and discharged. Waste water from the canteen, which is run by an external service provider, drains to an interceptor designed to remove grease and oil before it is discharged to the public sewer.

As facility management, cleaning and catering services are purchased the ECB closely monitors water consumption and the levels of pollutants in waste water arising from the activities of its suppliers.

### **Paper and office materials**

The ECB's paper consumption is mainly attributable to the production of official publications as a result of the ECB's duty to provide documentation regularly. The possibility of switching to electronic documents is currently being considered. Around 15% of total paper consumption arises from printing and copying in the office. The standard office paper is 50% FSC certified and 50% recycled. In addition the ECB provides paper produced entirely from recycled fibres.

Specifically, various initiatives by business areas and the implementation of an enterprise resources management system and a central documents management system have led to a 50% reduction in internal paper consumption since 2006.

In the context of new procurement specifications, the range of sustainable office products in the central purchasing portal is being expanded even further, as a matter of principle.

### **Use of hazardous substances**

Small amounts of chemicals and hazardous substances are in use at the ECB, although these are only used by the ECB's suppliers.



In the landlords' operation of the premises chemicals are used for the treatment of fresh water and for water softening. The amount of chemicals used and the installations are routinely checked in accordance with official regulations. Hygiene standards require the use of specific chemicals in the kitchen, e.g. the tablets used in the dishwashers contain classified chemicals. Hazardous substances are also used for pest control.

Accordingly, the use of hazardous substances and their handling were not considered an issue and therefore statistics have not been computed for them.

### **Waste**

Waste fractions, such as paper, glass, confidential waste<sup>6</sup>, used batteries, electronic waste (e-waste) and residual waste are collected individually by the ECB.

The biggest fraction is residual waste, which is treated by the local waste management company. Paper and cardboard waste is either reused or recycled, confidential waste is shredded and then recycled, and e-waste is either recycled or disposed of in accordance with applicable German regulations.

The disposal of organic waste and grease from the canteen is monitored by the ECB. However, since ECB staff and visitors use other canteens apart from the ECB's main canteen in the Eurotower, the available data that have been assessed are incomplete. Data relating to other canteens have not been included in the ECB's environmental inventory.

### **Business travel**

Direct contacts and exchanges of information with the national central banks of the ESCB and with third parties from the official and private sector, spanning the EU as well as the broader international environment are a key component of the ECB's core business. Indeed, the business travel of ECB staff is responsible for about 10% of the organisation's total carbon emissions. Clear specifications for business trips require staff to use the train for journeys, which take less than four hours. Further, technical facilities have been provided, so that, where possible, business trips can be reduced through the use of media such as telephone and video conferencing. The ECB does not provide company cars to staff.

### **Banknotes**

The ECB has the exclusive right to authorise the issuance of banknotes within the euro area. It has carried out a Life Cycle Assessment to quantify the environmental impact of euro banknote production and circulation and to identify whether it could be reduced through improvements to the product or processes involved. The study covered the whole life cycle of banknotes from production, storage and circulation to their end-of-life treatment and found that the total environmental impact of a euro banknote during its entire life is equivalent to leaving a 60W light bulb switched on for half a day. In addition, the ECB has carried out a health and safety assessment of euro banknotes. Independent test results confirmed that euro banknotes are safe and do not cause any hazards. Euro banknotes fulfil all EU regulations concerning the wide range of chemical substances found to be present in them. All such substances were found to be at concentrations

<sup>6</sup> Confidential waste is paper containing confidential information.

far below any applicable limit. Detailed information on the environmental impact of euro banknotes is provided on the ECB's website (in the „The Euro“ section).

### Biodiversity

No significant negative impact on biodiversity has been identified that arises from the ECB's activities and could be controlled by the ECB.

## 5.2 Inventory and key figures

The ECB's ecological impact is ascertained and evaluated by means of an environmental inventory carried out on an annual basis. Data are collected on the premises' environmentally relevant input-output streams, namely energy, water, resource consumption and business travel on the input side and waste, waste water and carbon dioxide emissions on the output side. Since the ECB's premises are rented and fully operated by its landlords, the majority of inventory data, such as the data on energy and water consumption and waste production, are provided by them.

The first environmental inventory was based on 2007 data within the framework of an environmental status quo analysis. Due to data inconsistency and consequential comparability difficulties for subsequent inventories, 2008 data have been established as the inventory data baseline.

Comparison of environmental inventory data for 2008 and 2009			
Environmental inventory data	2008	2009	Change (%)
<b>Energy*</b>			
Total heating and cooling energy consumption (MWh)	20,087	22,815	+ 13
Total electrical energy consumption (MWh)	21,699	19,498	- 10
of which, renewable electrical energy (MWh)	-	6,565	-
Production of electrical energy (MWh)	3,707	5,333	+ 43
<b>Water<sup>7</sup></b>			
Fresh water consumption (thousands of m <sup>3</sup> )	38.4	45.0	+ 17
Waste water (thousands of m <sup>3</sup> )	38.4	45.0	+ 17
<b>Materials</b>			
Cleaning materials consumption (tonnes)	2.4	1.9	- 21
<b>Paper</b>			
Total mixed white recycled paper (millions of sheets of A4 equivalent)	25.2	15.0	- 40
Recycled paper (millions of sheets of A4)	2.7	2.7	0
ECB publications (white paper) (tonnes)	786.2	400.1	- 49
<b>Business Travel</b>			
Plane, train and car travel (thousands of tonnes of CO <sub>2</sub> )	1.7	1.6	- 6
<b>Waste</b>			
Paper and cardboard, recycled (tonnes)	188.3	149.1	- 21
Confidential waste, recycled (tonnes)	94.8	92.4	- 3
Residual waste, combusted (tonnes)	200.8	225.0	+ 12

\* Energy values were amended in 2011 and are measured in MWh.

<sup>7</sup> Water consumption includes all non-technical water used in the ECB's premises that can be directly influenced by staff. Waste water is not measured, but is assumed to be equal to fresh water consumption. Waste water and grease from the ECB's canteen is included.

Environmental inventory data	2008	2009	Change (%)
<b>Hazardous waste</b>			
IT e-waste, recycled (tonnes) <sup>8</sup>	-	28.6	-
E-waste, white goods (refrigerators, etc.), recycled (tonnes)	0.3	0.2	- 33
Batteries collected from staff, recycled (kg)	180	225	+ 25
Batteries for UPS system, recycled (tonnes)	-	9.0	-
Incandescent and fluorescent light bulbs, recycled (tonnes)	1.3	1.7	+ 31
<b>Emissions</b>			
Carbon emissions (thousands of tonnes of CO <sub>2</sub> )	17.1	13.4	- 22

In addition to the significant reduction in total carbon emissions, further improvements were achieved with regard to the ECB's consumption of paper in the office and for official publications.

The ECB's consumption of electrical energy decreased. Also, 5,333 MWh of electrical energy were produced in the Eurotower's combined heat and power system, mainly for own use.

The operating hours of additional air-conditioning, e.g. on weekends, increased from 2008 to 2009 by about 40%. This led to an increase of 13% in the consumption of heating and cooling energy.

A large increase was recorded for the disposal of incandescent and fluorescent light bulbs, which was the result of scheduled technical replacements.

Collection boxes for staff batteries were first provided in 1998. A gradual increase in acceptance has been observed ever since. From 2008 to 2009 the total weight of batteries collected increased by 25%. The increase in water consumption is assumed to have been a result of the increase in the numbers of ECB visitors and guests, as well as of changed habits during the pandemic crisis in 2009.

As a result of implementing the EMS, the ECB started to centrally monitor environmental aspects of its activities, e.g. the production of e-waste and the consumption of batteries for the Uninterruptible Power Supply (UPS).

<sup>8</sup> IT waste monitoring started in 2009

### Comparison of environmental key figures for 2008 and 2009 with regard to number of ECB workplaces

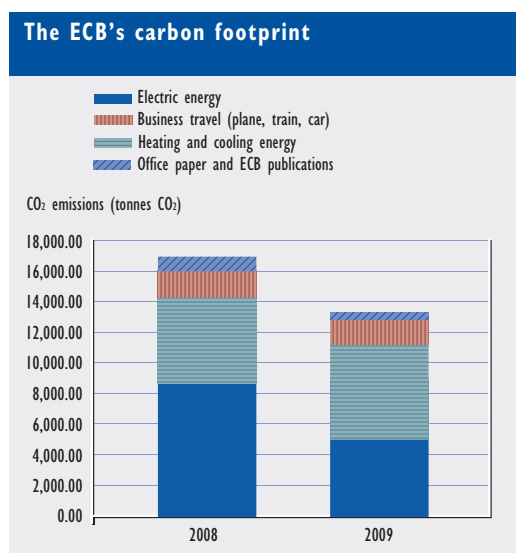
Environmental key figures per workplace	2008	2009	Change (%)
<b>Energy</b>			
Total heating and cooling energy consumption (MWh/workplace)	9.4	10.7	+ 14
Electric energy consumption (MWh/workplace)	10.1	9.1	- 10
Renewable electrical energy share (%)	-	33.3	+ 33% pp
<b>Water</b>			
Fresh water consumption (m <sup>3</sup> /workplace)	18.0	21.0	+ 17
<b>Paper</b>			
Total office paper consumption (thousands of sheets of A4 equivalent/workplace)	11.8	7.0	- 41
Recycled paper share (%)	10.7	17.7	+ 7% pp
<b>Waste</b>			
Paper and cardboard (kg/workplace)	88.0	69.7	- 21
Confidential waste (kg/workplace)	44.3	43.2	- 2
Residual waste (kg/workplace)	93.8	105.2	+ 12
<b>Emissions</b>			
CO <sub>2</sub> emissions (tonnes CO <sub>2</sub> /workplace)	8.0	6.3	- 21

The number of “allocated workplaces” is used in many of the calculations (e.g. for the core indicators). It represents the concept of “number of employees” used in EMAS. There was no alteration in the number of workplaces over the years 2008 to 2009.

### 5.3 CO<sub>2</sub> footprint in 2009

The carbon footprint of the ECB covers direct CO<sub>2</sub> emissions, arising mainly from the production of electricity, heat and cooling. Cogeneration systems, also known as combined heat and power systems, are used at the ECB's premises. Part of the cogenerated heat is used to produce cooling, through absorption refrigeration chillers. The carbon footprint also includes indirect CO<sub>2</sub> emissions, i.e. those arising from the consumption of electricity and heat that is purchased for the premises, from staff business travel and from paper consumption.

Comparing the 2008 and 2009 data reveals a 22% reduction in total carbon emissions. The most significant reduction in emissions was achieved through the switch to carbon neutral hydropower in the old Commerzbank building in 2009. Further reductions result from a decrease in the consumption of paper in the office and an increase in the use of recycled paper, as well as from a decrease of around 50% in the printing of ECB publications.



The carbon footprint is ascertained on the basis of the environmental inventory figures outlined in Section 5.2. The calculation includes direct CO<sub>2</sub> emissions, as well as indirect CO<sub>2</sub> emissions generated by activities in the supply chain and by business travel. CO<sub>2</sub> equivalents were calculated using certified conversion factors obtained from the ECB's energy suppliers (the Defra<sup>9</sup> conversion factor for flight kilometres and the IEER<sup>10</sup> one for paper consumption).

9 The UK government's Department for Environment, Food and Rural Affairs.

10 The Institute for Energy and Environmental Research.

## 6 Environmental performance



## 6 Environmental performance

The main impact of the ECB on the environment and about 80% of its carbon footprint are caused by the operation of its premises. Accordingly, the ECB’s efforts have been focused on energy consumption. One of the ECB’s objectives is to significantly reduce the carbon footprint resulting from energy use in the Eurotower and the Eurotheum, as was achieved in the old Commerzbank building by switching to “green” power. The long-term target of a 25% reduction in carbon emissions from energy use will be achieved by moving to the new premises, which is planned to take place in mid-2014.

To monitor the environmental impact of euro banknotes, the ECB is currently developing an environmental management system for the complete banknote supply chain. Furthermore, it is investigating the possibility of using raw materials with a lower environmental impact.

### 6.1 Objectives and targets

On the basis of the assessment of its environmental aspects and impacts, the ECB has established its environmental objectives and targets. The table below outlines, in six categories, the objectives and targets set for 2011 (baseline 2009 inventory data).

Objectives and targets 2011	
<b>Energy efficiency</b>	Increase in equipment-related energy efficiency and reduction of energy/electrical power consumption. Switch to renewable energy supply in the Eurotower and the Eurotheum.
<b>Material efficiency</b>	Promotion of the paperless office concept. Reduction in office paper consumption of 15% and increase in the share of recycled paper to > 50%.
<b>Waste</b>	Reduction of residual waste in ECB offices by following the reuse-reduce-recycle concept.
<b>Biodiversity</b>	Assessment of the ECB’s impact on biodiversity and the establishment of objectives for the New ECB Premises.
<b>Emissions</b>	Reduction in total carbon footprint of 15%.
<b>Green Procurement</b>	Integration of environmental considerations in procurement activities and training of purchasers.
<b>Raising awareness</b>	Increase in environmental awareness among staff and provision of environmentally related training.

## 6.2 Activities and measures

The ECB's first efforts to improve the environmental performance were driven by local area initiatives called "quick-wins":

- Installation of energy-saving and long-life fluorescent light bulbs throughout the ECB's premises
- Implementation of environment-friendly office stationery, e.g. text markers, permanent markers and wooden pencils
- Replacement of monthly paper bills to staff for private telephone calls by online system
- Switch to electronic release only of daily press reviews
- Installation of additional bicycle stands
- Launch of the Green IT initiative to raise staff awareness about printing
- Holding of the first "Green Day" staff event on 22 June 2009

Further measures were drawn up in 2008 with the establishment of the first Environmental Management Programme. The following is a selection of successfully implemented measures:

### **Environment-friendly cleaning products**

Service providers tested biodegradable cleaning products, resulting in a switch to EU Ecolabel „flower“ certified cleaning products in 2009.

### **Training of suppliers**

Awareness raising and environmental training of cleaners with regard to the use of dishwashers and switching off lights when they have finished their work.

### **Rebuilt toner cartridges**

Switch to more environmentally friendly rebuilt toner cartridges for printers and copy machines.

### **Online documents and electronic workflows**

In 2009 the ECB produced a significantly lower number of printed copies of the English version of its Monthly Bulletin. It also produced a significantly smaller number of hard copies of its Annual Report, dispensing with them entirely in certain languages. This was part of a shift towards greater use of the electronic versions of these publications and led to a decrease of about 50% in paper consumption. Further, the introduction of an enterprise resources management system, based on electronic paperless workflows, and of an electronic records and document management system reduced the total consumption of office paper.

## 6.3 Environmental Management Programme 2010-II

As a result of the launch of the EMS, an Environmental Management Programme (EMP) was subsequently issued by the Management Committee for 2010-II. Its measures are based on the results of the assessment of environmental aspects, the evaluation of the 2009 environmental inventory data and staff suggestions for improvement measures made via the employee suggestion system.

Objectives and measures have been formulated in accordance with the strategic performance targets set by the Executive Board.



ECB Environmental Management Programme 2010-11							
	Year	Environmental aspect					Raising awareness
		Energy efficiency	Material efficiency	Waste	Biodiversity	Emissions	
1. Assessment of costs and benefits of LED illumination at ECB workplaces	2011	■				■	
2. Assessment of costs and benefits of carbon neutral business travel by train	2010					■	
3. Consideration of a "sustainable investment" pension investment choice for ECB staff	2011						■
4. Consideration of opportunities for reusing IT equipment, and/or local disassembly solutions	2011			■			■
5. Establishment of "power-off policy" for non-IT equipment	2010	■				■	■
6. Implementation of so called multi-functional-devices (MFDs)	2011	■	■	■		■	
7. Increase of energy efficiency of equipment in computer rooms	2010-11	■	■	■		■	
8. Increase of energy efficiency of office IT equipment and adjustment of procurement guidelines accordingly	2010-11	■	■	■		■	
9. Implementation of remote IT power management system	2010	■				■	
10. Implementation of eco-rating system in stationery catalogue	2010			■			■
11. Implementation of briefing on the environmental policy and the EMS in the newcomers' induction sessions	2010						■
12. Implementation of specific green-procurement training for purchasers	2011						■
13. Assess opportunities for stationery packing and logistics with low environmental impact	2010			■			
14. Implementation of a map, containing EMS related information on technical plants and equipment in the premises	2011						■
15. Increase of electronic and online publications	2011		■	■		■	■
16. Increase share of recycling paper use	2010		■	■		■	
17. Increase the use of telephone conferencing and video conferencing	2011	■				■	
18. Performance of staff campaign on the EMS and general awareness on climate change	2010-11						■
19. Implementation of staff awareness campaigns and of subsequent Green Day at the ECB	2010-11						■
20. Switch to "green" power (e.g. from water power) for all ECB's premises	2011					■	
21. Reduced greenhouse gas emissions from transportation of goods/mail between ECB premises.	2010-11					■	

It should be noted that the EMP 2010-11 measures were issued in June 2010. However, individual measures may be subject to the 2011 budget planning and the work programmes of the business areas.

## 7 New ECB Premises

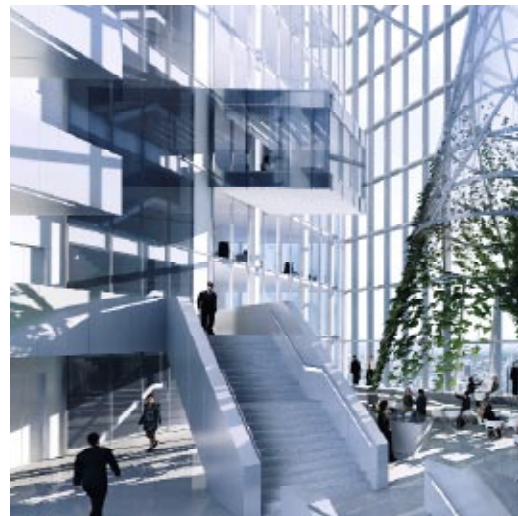


## 7 New ECB Premises

The ECB is looking forward to moving into its new headquarters in 2014. From the very outset of the design competition it has been the ECB's stated aim that its new premises should be 30% more energy efficient than stipulated by the Energieeinsparverordnung 2007 (the applicable German energy saving directive). Accordingly, detailed state-of-the-art energy-efficient design requirements have been established in the planning phases as well as in the procurement processes.

To achieve its objectives, all possibilities have been explored and analysed, particularly with regard to the facades and technical systems. The resultant energy design has the following key features:

- Energy-efficient triple-layered facade for the new high-rise tower and efficient insulation for the facades and the roof of the Grossmarkthalle (a protected 20th century building)
- Natural ventilation based on openable facade elements, electric sun shading and low-energy lighting, to provide optimal workplace conditions with maximum use of daylight
- Rainwater recycling
- Use of recycled heat (from the computer centre) and the possibility of using geothermal energy for heating and cooling



## 8 Conclusion

This first consolidated environmental statement is issued by the European Central Bank in Frankfurt am Main, Germany. We perform internal environmental audits each year, in such a way that over a three year cycle every part of our organisation is audited at least once. Along with our annually updated register of significant environmental aspects and the tables of facts and data for past years, the “internal audit”<sup>11</sup> reports constitute the basis for our EMS Management Review and the update of our Environmental Management Programme. An updated statement based on 2010 data will be published in 2011. In 2013 we intend to publish a new consolidated environmental statement of the ECB.

Frankfurt am Main, 9 July 2010

A handwritten signature in blue ink, consisting of a large initial 'V' followed by several loops and a final flourish.

Vitor Constâncio  
Vice-President of the European Central Bank

<sup>11</sup> The EN ISO 14001 standard term “internal audit” is not used within the ECB to avoid confusion with the ECB’s Directorate Internal Audit and their internal auditing.

### Environmental verifier's declaration in verification and validation activities

Prof. Dr.-Ing. Jan Uwe Lieback and Dipl.-Ing. Andreas von Saldern with the EMAS environmental verifier registration numbers DE-V-0026 and DE-V-0155 accredited and licensed for the scope 64.I and 84.I declare to have verified the whole organisation of the European Central Bank (ECB) at their site in 60311 Frankfurt am Main, Kaiserstraße 29 (Eurotower), Germany as indicated in the first environmental statement. Therefore a registration number yet has to be awarded.

The European Central Bank meets all requirements of 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).

By signing this declaration, we declare that:

- The verification and validation has been carried out in full compliance with the requirements of Regulation (EC) No 1221/2009
- The outcome of the verification and validation confirms that there is no evidence of non-compliance with applicable legal requirements relating to the environment
- The data and information of the environmental statement of the ECB in Frankfurt am Main reflect a reliable, credible and correct image of the organisations activities, within the scope mentioned in the environmental statement

This document is not equivalent to EMAS registration. EMAS registration can only be granted by a Competent Body under Regulation (EC) No 1221/2009. This document shall not be used as a stand-alone piece of public communication.

Done at Frankfurt am Main on 9 July 2010

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<p>Prof. Dr.-Ing. (aff. ESCP Europe) Jan Uwe Lieback Verifier DE-V-0026</p>	 <p>Dipl.-Ing. Andreas von Saldern Verifier DE-V-0155</p>	

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