



In 2008 Brussels participated in the pilot edition of the European Waste Reduction week, part of preparation for an official European Waste Reduction Week in November 2009.

Air quality: Brussels ranks 16th in the category for air quality, largely because it is affected by emissions from the combustion of fossil energy sources used for heating buildings and from vehicular traffic. Transportation accounts for 80% of carbon monoxide emissions and 77% of

nitrogen oxide emissions, as approximately 188,000 residents commute to work by car daily. The heating of buildings also accounts for 25% of sulphur dioxide emissions.

Initiative: The regional authority and the 19 municipalities offer a number of subsidies for retroactive fitting of buildings or new constructions that take advantage of environmentally friendly heating mechanisms. For example, the Brussels-Capital region gives a cash bonus for the purchase or replacement of a solar water

heater equal to 50% of the purchasing and installation costs.

Environmental governance: Brussels ties in first place with Copenhagen, Helsinki and Stockholm in the category for environmental governance. Brussels's environmental plan is co-ordinated by IBGE. The region's targets for various environmental issues are mostly delineated in an "Agenda 21" plan and the "Practical Guide to the Environment". The Brussels Energy Agency (ABEA) provides guidelines and advice for citizens on how to reduce their energy consumption, while IBGE provides information on how citizens can reduce their carbon footprint, use grants to make their houses more energy efficient and embrace environmentally friendly transportation.

Initiative: To foster environmental awareness and action, IBGE launched the Quartier Durable (Sustainable Neighbourhood) project. Residents are encouraged to form groups and identify a sustainable project where they live. IBGE then selects the strongest projects and provides subsidies, expertise and technical support to achieve the neighbourhood's environmental objectives. Other competitions include Bâtiments Exemplaires (Exemplary Buildings) where environmental construction plans are awarded generous land subsidies.

In conjunction with the city authorities, IBGE's website offers practical information about environmental living, ranging from advice on energy efficiency and water use in houses to eco-mobility and green spaces.

Quantitative Indicators: Brussels

	Average	Brussels	Year	Source
CO ₂ emissions per capita (tonnes/inhabitant)	5.21	3.91	2005	Bruxelles Environnement (CO ₂ emissions); Brussels institute for statistics (population)
CO ₂ emissions per unit GDP (g/€)	356.12	72.28	2005	Bruxelles Environnement (CO ₂ emissions); Brussels institute for statistics (GDP)
CO ₂ reduction target to 2020 (% pa, from yr in which target set)	14.48	20.00	2007	Bruxelles Environnement
Energy consumption per capita (GJ/inhabitant)	80.87	86.88	2006	Bruxelles Environnement (energy); Brussels institute for statistics (population)
Energy consumption per unit GDP (MJ/€ GDP)	5.25	1.61	2006	Bruxelles Environnement (energy); Brussels institute for statistics (GDP)
% of renewable energy consumed by the city (%)	7.30	0.58	2006	Bruxelles Environnement
Energy consumption of residential buildings (MJ/m ²)	908.88	798.33	2006	Bruxelles Environnement (energy); Urban Audit (floor space)
Share of people walking or cycling to work (%)	20.94	2.00	2001	Belgian statistical office and Iris
Share of people taking public transport to work (%)	41.56	35.00	2001	Belgian statistical office and Iris
Length of cycle lanes (km/km ²)	1.15	0.43	2008	Maison des cyclistes Bruxelles
Length of public transport network (km/km ²)	2.33	4.48	2008	STIP
Annual water consumption per capita (m ³ /inhabitant)	105.43	54.04	2007	Brussels institute for statistics
Water system leakages (%)	22.63	6.00	2008	IBDE
Dwellings connected to the sewage system (%)	95.02	98.20	2008	IBDE
Municipal waste per capita (kg/inhabitant)	510.93	464.00	2007	Brussels institute for statistics
Share of waste recycled (%)	17.62	23.68	2007	Brussels institute for statistics
Average daily nitrogen dioxide emissions (ug/m ³)	35.18	39.90	2007	EEA airbase
Average daily ozone emissions (ug/m ³)	40.38	35.53	2007	EEA airbase
Average daily particulate matter (ug/m ³)	34.86	29.03	2007	EEA airbase
Average daily SO ₂ emissions (ug/m ³)	6.96	6.92	2007	EEA airbase



Brussels_Belgium

Select city data

Population:	1.05 million
GDP per head, PPP:	€ 49,554
CO ₂ emissions per head:	3.91 tonnes
Energy consumption per head:	86.88 gigajoules
Percentage of renewable energy consumed by the city:	0.58 %
Total percentage of citizens walking, cycling or taking public transport to work:	37 %
Annual water consumption per head:	54.04 m ³
Share of waste recycled:	23.68 %

The City of Brussels is the capital of Belgium and seat of its federal government. It also serves as the main headquarters for the EU. With just one-tenth of the country's population, the Brussels-Capital region contributes around 17% of Belgian GDP. As in many other developed cities, there has been a shift from manufacturing and production to business-related services over the past decade. Services accounted for 88% of the region's gross value added (GVA) in 2006, up from 84% in 2004. The remainder of Brussels's GVA can be attributed primarily to industry.

Brussels ranked ninth overall in the European Green City Index, with a score of 78.01 out of 100. The region scored particularly well in the category for water, largely reflecting the low levels of water consumption per head and relatively low incidences of water-system leakages. Environmental governance was another area of

strong performance, with its environmental plan being ranked joint first along with Copenhagen, Helsinki and Stockholm. Brussels' overall score was primarily held back by high levels of energy consumption per head. This is partly because of the energy consumption of residential buildings, which is among the highest in western Europe.

CO₂ emissions: Brussels ranks fifth in the category for carbon dioxide (CO₂) emissions. The city emits 3.9 tonnes of CO₂ per head, well below the 30-city average of 5.2 tonnes, but behind the category leader, Oslo (with 2.2 tonnes of CO₂ per head). Its CO₂ emissions per unit of GDP is about one-fifth of the index average, an excellent result that puts it in third place for this sub-category. In terms of its CO₂ reduction strategy, Brussels ranks joint eighth with Helsinki and Vienna.



Car share to care

The City of Brussels promotes the use of Voiture Avec Passengers (Cars with Passengers, VAP), a formalised hitch-hiking scheme. Users register and receive a personalised membership card. When they are looking to travel short distances within the city, they stand at a designated VAP location and cars that are also registered with the programme pick them up if they are travelling in the same direction (although no specific incentives are provided for drivers). The city also promotes car-sharing and car-pooling initiatives, advertising them on the city website and acting as an official partner to a car-sharing platform, Cambio. Members of Cambio subscribe, then sign up to use a shared car whenever they need it. Another service is Taxistop, which allows members to search an online database to set up car pools and go to established car-pool stations around the city. These services are also available for school pools, to reduce the number of families driving their children to school. Taxistop's software is configured in such a way that those registered in Brussels can also search the areas around Brussels, so that commuters looking to car pool from neighbourhoods in Flanders to Brussels can find one another. These initiatives and the government's promotion of them through the Brussels Mobility website have helped to reduce the number of cars in Brussels, thereby also contributing to a reduction in CO₂ emissions.

Initiative: Brussels aims to reduce its CO₂ emissions by 15% between 1999 and 2010, through initiatives in the areas of transport, energy, enterprises and private households. These initiatives are enumerated in the region's Air Climate Plan. Several measures have already been implemented, including promoting passive and low-energy building construction, educating households on reducing their energy use, promoting the use of public transportation and supporting renewable energy initiatives.

Energy: Brussels ranks eighth in the category for energy, set back primarily by its relatively poor performance on energy consumption and renewable energy consumption. Energy consumption in Brussels is mainly driven by the heating of buildings with fossil fuels: the Brussels-Capital region consumes about 87 gigajoules per head, slightly higher than the 30-city average of 81 gigajoules. About half of total energy consumption is derived from oil and one-quarter is from gas. Brussels ranks just 24th for the percentage of renewable energy that it consumes, which at less than 1% is far below the 30-city average of 7.3%.

Initiative: With most of Brussels's energy consumption driven by heating for buildings, the city has developed several initiatives for the construction and renovation of residential and commercial buildings. The city offers financial incentives for the installation of insulation and solar panels.

Buildings: Brussels ranks 12th in the category for buildings. The city's overall score in this category is pulled down by the high levels of energy consumption of its residential buildings. This amounts to nearly 800 megajoules per square metre — and while this is below the 30-city average (of 909 megajoules), it is far behind the



leading high-income, mid-size city, Copenhagen (553 megajoules). However, the city has developed a series of incentives for making buildings more energy efficient. As a result, the city receives full marks in the sub-category for energy efficient buildings incentives.

Initiative: The city offers a range of financial incentives for eco-friendly buildings. These cover insulation, heat pumps, "smart" lighting, passive buildings, eco-friendly building materials and the installation of solar panels.

Brussels encourages big firms, banks and institutions to qualify themselves as "eco-dynamic enterprises". To do this, they must obtain a certificate with one, two or three stars, relating to their relative levels of energy efficiency. These companies can then advertise their status as an example of their commitment to sustainable development.

Since April 2008 the Brussels-Capital Region has offered cash bonuses for those volunteering for an energy audit done by an official EAP auditor recognised by the Brussels-Capital Region.

Information on how to reduce the energy consumption of homes and offices is made available on the website of the city's dedicated environmental authority, the Brussels Institute for Management of the Environment (IBGE). IBGE has also launched a series of campaigns to stimulate eco-friendly buildings, such as the Exemplary Building Awards.

Transport: Brussels ranks seventh in the category for transport. Its score is boosted by the availability of public transport links, with Brussels ranking fourth overall for length of public transport network. According to the city's Air Climate Plan, Brussels offers approximately 640,000 jobs in total, of which only 351,000 are filled by people living in the city. However, while commuter links between the capital and the sur-

rounding areas have improved recently, approximately 186,000 workers living outside Brussels commute by car every day. Only 2% of the population cycles or walks to work, significantly below the index average of about 21%. More generally, Brussels is relatively spread out and its public transport system, while sufficient in the city centre, does not have extensive coverage in the outskirts. Furthermore, parking in Brussels is fairly extensive and inexpensive, making driving relatively convenient.

Initiative: The latest buses acquired by the STIB (Brussels Society of Intercommunal Transportation) meet the most stringent European standards on emissions while the older buses have been fitted with particle filters. The fleet also includes 20 vehicles that run on natural gas.

Brussels supports Friday Bikeday, which encourages commuters to cycle to work on Fridays and raises awareness about public transport. The city also supports the "Villo" scheme, where public bicycles can be picked up or dropped off at various bike stations around the city, for a small charge.

If citizens cancel their car licence plates, thereby indicating that they will be getting rid of their car, the region offers a subsidy for public transport or the purchase of a bicycle.

The city is currently in the process of refurbishing and expanding its local commuter railway network and signalling control systems.

An annual "mobility week" is organised by the Brussels regional authority in conjunction with 19 communities, which culminates in a car-free Sunday across the entire Brussels-Capital Region.

Water: Brussels ranks fourth in the category for water, largely because of the city's low levels of water consumption per head. At just 54 litres per inhabitant per day, this is nearly half the index

average of 105 litres per inhabitant per day. Brussels also performed well in the sub-category of water system leakages, which reached only 6% in 2008 compared with the 30-city average of 23%. The city's water is tested for bacteria and for concentrations of nitrates, pesticides and heavy metals. All wastewater is sent to one of two plants in Brussels before it is discharged into the sewer system that leads directly into the Zenne river.

Initiative: Brussels has a "Do not waste water!" video, which promotes the use of water meters, low-flush toilets and showers instead of baths, on the IBGE website. The city also offers subsidies for the installation or repair of rainwater tanks.

The Brussels Observatory for Sustainable Consumption was established to inform customers about the selection of products with the lowest environmental impact. This extends to choosing washing machines and dishwashers that use relatively low levels of water (and energy).

Waste and land use: Brussels ranks tenth in the category for waste and land use, a score underpinned by the city's waste-reduction strategies. Since 1992 the Brussels-Capital Region has implemented a waste plan that aims to reduce the production of waste through recycling and other activities. There are 13 nature reserves in Brussels, which are protected for their unique biological qualities. The public is only allowed in certain parts of these reserves. The reuse of brownfield sites is not specifically promoted, but they are acknowledged by the regional authority as being habitats for local flora and fauna.

Initiative: The city of Brussels promotes the practice of composting by offering information on the process through an Eco-Council and by providing a bonus for the purchase of a compost bin.

Green Tuesdays

The alderman for the environment and the City of Brussels's eco-advice unit, organise a monthly meeting called Environment Tuesdays. These meetings are held throughout Brussels and are used to disseminate information about a specific issue related to the environment. The topic for upcoming meetings and their location can be found on the City of Brussels website. Following a detailed presentation by a member of the eco-advice unit, an informal debate takes place between the participants. Topics discussed at recent meetings include urban noise, various green bonuses offered by the city, sustainable food consumption and renewable energy. Environment Tuesdays provide concerned citizens with a platform not only to learn more about specific topics related to the environment, but also to express their concerns and promote their ideas to city representatives.