

# Press Release No. 13/2010

**Press Relations Officer:** Martin Ittershagen  
**PR-staff:** Anke Döpke, Dieter Leutert,  
Fotini Mavromati, Theresa Pfeifer, Martin Stallmann  
**Address:** Postfach 1406, 06813 Dessau-Roßlau  
**Telephone:** +49 340/21 03-2122, -2827, -2250, -2318, -3927, -2507  
**E-Mail:** [pressestelle@uba.de](mailto:pressestelle@uba.de)  
**Internet:** [www.umweltbundesamt.de](http://www.umweltbundesamt.de)



Joint press release with the Federal Ministry for Environment (BMU)

## Climate protection: 2009 shows 8.4% decline in greenhouse gas emissions

### Economic crisis causes biggest slump in emissions since foundation of the Federal Republic

**According to initial calculations by the Federal Environment Agency (UBA), total greenhouse gas emissions<sup>1</sup> in Germany at the end of 2009 had declined by some 80 million tonnes (minus 8.4 percent) over 2008 levels. Since 1990 Germany had reduced its greenhouse gas emissions by 28.7 percent as of late 2009. The industrial sector and manufacturing industry produced 20 percent less emissions. Federal Minister for Environment Norbert Röttgen explains, "The decline in emissions owes mainly to the economic crisis. However, our aim is to achieve growth through climate protection, which is why we will continue to promote the expansion of renewable energies and development of energy efficiency as they are the only means to ensure long-term protection of the climate while propelling economic growth at the same time."**

In light of these impacts of the economic crisis, taking consideration of climate protection in all initiatives is of key importance to economic recovery. UBA President Jochen Flasbarth explained, "It is precisely this disproportionate downturn that can be seized upon as an opportunity. As the economy restarts we must make greater effort to decouple the link between greenhouse gas emissions and energy consumption. The decline in demand for energy is proof of how significant the effects of saving energy might be. It is only by rigorous implementation of measures and other initiatives to continue to boost efficiency and save energy in the areas of climate and energy policy that we can prevent emissions from rallying as we recover from the crisis, and thereby achieve the Federal government goal of reducing greenhouse gas emissions by 40 percent up until 2020." This affects all domains—that of increasing efficiency, expanding the use of renewable energies, the remediation of building stock, and other emissions mitigation measures.

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<sup>1</sup> The contents of this press release refer to emissions only. Land use and changes to use are not taken into account.

The greatest downturn in greenhouse gas emissions since the existence of the Federal Republic of Germany owes largely to industry, especially the energy-intensive sectors. A sharp decline in industrial demand for electricity produced a parallel drop in emissions from electricity production by public utilities. CO<sub>2</sub> emissions from households as well as commerce, trade and the services sectors reflect little to no effect from the impact of the economic crisis. The 'cash for clunkers' incentive had little impact on emissions produced in the transport sector.

The decline is accounted for in large part by carbon dioxide emissions, which sank by 68 million tonnes (minus 8.2 percent), and represents a greater drop than in primary energy consumption with an overall decline of 6.5 percent. Energy consumption of emissions-related fuels decreased by 7.3 percent. The relatively steep reduction in CO<sub>2</sub> in light of decreasing primary energy consumption owes to shifts in the mix of fuels used (disproportionate decline in hard coal of 18.1 percent). At roughly 87 percent, CO<sub>2</sub> continues to represent the lion's share of greenhouse gas emissions produced in Germany in 2009.

CO<sub>2</sub> emissions from consumption of lignite shrank by a total 3.2 percent, attributable largely to lower emissions from public utilities' power plants. The use of lignite in industry also decreased due to the strong downturn in economic activity. On the other hand, use of briquettes in small firing installations and in households experienced a re-growth, traceable to cold weather.

The steepest decline of all energy sources was from hard coal. This fuel causes a very high volume of CO<sub>2</sub> emissions and thus influences the overall trend accordingly. In keeping with economic trends the greatest reductions were registered in steel production and other industrial means of heat production. Electricity production from hard coal also shrank by 12.5 percent. The downturn is particularly marked in industry, less so in the sector of public utilities' energy supply. Due to weather conditions households and low-volume consumers recorded a slight rise in consumption of hard coal.

The greatest decline in emissions from use of natural gas were most marked in the industrial sector as they owe to a drop in production. There was an overall fall of slightly more than nine percent, and electricity production from natural gas accounted for the first decline since 1994. Household and low-volume consumers emissions from this fuel also recorded marginal growth attributable to weather.

Carbon dioxide emissions from use of petroleum slid by 4.3 percent, as heating oil consumption by households stagnated. There was a slight decrease in the transport sector and among low-volume consumers. CO<sub>2</sub> emissions from liquid fuels dropped by a mere 0.3 percent. Power production from petroleum is the only fossil fuel that had a slight increase as a result of higher consumption associated with peak-load supply. In contrast the refineries' own consumption is considerably lower due to lower capacity utilization. The greatest reduction in emissions occurred in industry as a consequence of the economic slump.

Electricity supply from renewable energies in 2009 only achieved the same degree of use as in the previous year despite continued its continued expansion in a below-average wind year. Nevertheless, the share of renewable energies in gross electricity consumption rose marginally due to the decline in overall electricity consumption. Detailed assessments of the renewable energies balance for 2009 will be published in mid-March by the German Federal Ministry for Environment, based on findings by the Working Group on Renewable Energies - Statistics.

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Methane and nitrous oxide each accounted for about 5.5 percent of total greenhouse gas emissions in 2009. An additional two percent were caused by fluorinated gases. Total methane emissions dipped slightly by a little more than three percent in 2009. This is largely as a result of continued reductions in waste treatment and cyclical downturns in the energy and processing industries. Methane emissions from agriculture remained unchanged. Nitrous oxide emissions, mainly produced in agriculture through fertilisation and in the chemicals industry, decreased by 15 percent over the previous year as a concurrent result of significant cuts in the use of mineral fertilisers and the aforementioned impacts of the economic crisis.

Emissions from fluorinated greenhouse gases (perfluorocarbons (PFC), hydrofluorocarbons (HFC), sulfur hexafluoride (SF<sub>6</sub>)) developed different trends. Whereas emissions of PFC remained virtually unchanged, HFC emissions rose by 2.5 percent due to increased use in refrigeration. Emissions from sulfur hexafluoride, used mainly as an insulating gas, increased by 1.9 percent. The increase owes largely to a growing trend to dispose of old soundproof windows, which release this gas upon destruction of the windows.

UBA calculations are based on detailed greenhouse gas inventories drawn up for 2008 as well as data issued in publications on 2009 energy consumption in Germany [Energieverbrauch in Deutschland 2009] by AGEBA – the Working Group on Energy Balances, and on Germany's gross domestic product statistics for 2009 issued by the Federal Statistical Office. There is also information from associations, expert surveys and assessments. For the first time real-time development in the individual source groups were derived and integrated, based on data from expert surveys and assessments. UBA calculated emissions with the help of a simplified model computing method. Accuracy of data is forfeited in favour of up-to-dateness.

Any statements regarding CO<sub>2</sub> emissions from the various emitter groups—provided here for orientation purposes—can probably only be adjusted for accuracy upon publication of detailed energy consumption information in the middle of this year. An initial validation of CO<sub>2</sub> emissions is possible upon publication of emissions statistics from installations involved in emissions trading, which is expected—as last year—in early April.

Charts illustrating greenhouse gas emissions and other energy-related emissions are here:  
[http://www.umweltbundesamt.de/uba-info-presse/2010/pdf/pd10-013\\_treibhausgasemissionen\\_grafiken.pdf](http://www.umweltbundesamt.de/uba-info-presse/2010/pdf/pd10-013_treibhausgasemissionen_grafiken.pdf)

Dessau-Roßlau, 5 March 2010