

**Report
under the Kyoto Protocol to the
United Nations Framework
Convention on Climate Change
2006**

Demonstrable Progress Report

Federal Republic of Germany

June 2006

Contents

- I. Background 3
- II. Policies and measures 3
 - II.1. General and political background 3
 - II.2. Climate protection policy measures since the signing of the Kyoto Protocol 4
 - II.3. Climate Protection Programme 2000 5
 - II.4. Climate Protection Programme 2005 8
 - II.5. Individual measures and programmes 11
 - II.5.1. *Emissions trading* 11
 - II.5.2. *Promotion of renewable energies* 12
- III. Development of greenhouse gas emissions in Germany 13
 - III.1. Historical development of greenhouse gas emissions 13
 - III.1.1. *Overview: Development of greenhouse gas emissions from 1990-2004*..... 13
 - III.1.2. *Emission development by sectors* 14
 - III.1.3. *Emission trend by greenhouse gases*..... 16
 - III.2. Emission forecasts 19
- IV. Assessment of the contribution made by national climate policies and measures to fulfilling the obligations under Article 3 of the Kyoto Protocol..... 22
 - IV.1. Overall impact of the measures taken up to 2004 22
 - IV.2. Impact of the National Climate Protection Programme 2005 22
 - IV.3. Overall picture 23
- V. Measures and activities to fulfil the obligations under Articles 10 and 11 24
 - V.1. Greenhouse gas inventories 24
 - V.2. Measures to adapt to climate change and reduce greenhouse gas emissions 25
 - V.3. Cooperation in scientific and technical research 26
 - V.4. Capacity building 27
 - V.5. Financial assistance for non Annex-I countries for the purpose of implementing the convention; technology transfer 28
- VI. Bibliography..... 30

I. Background

On the basis of Article 3 paragraph 2 of the Kyoto Protocol and in accordance with decisions 22/COP.7 and 25/COP.8, Annex-I countries which are also signatories of the Kyoto Protocol are required to submit a demonstrable progress report by the end of 2005. This progress report is to include the following elements:

- Description of the policies and measures implemented to meet the Kyoto targets;
- Account of historical trends in and projections of greenhouse gas emissions;
- Assessment of how – having regard to emission trends – the national measures taken will contribute to meeting the targets;
- Description of the measures and activities undertaken to meet the obligations under Articles 10 and 11 of the Kyoto Protocol.

The Federal Republic of Germany hereby submits its report on demonstrable progress.

II. Policies and measures

II.1. General and political background

The Federal Republic of Germany is committed to national and international climate protection. It was recognised at an early stage that climate change would become one of the central challenges of the 21st century. Since end of the 1980s Germany has therefore been continuously developing and implementing an ambitious and comprehensive climate protection policy.

The process of developing and implementing the Federal Government's climate protection programme was set in motion in January 1990, when the Federal Chancellor's Office commissioned the Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) to submit proposals for targets and measures for combating the worldwide anthropogenic greenhouse effect. In June 1990 the BMU presented the Federal Cabinet with initial recommendations that determined the form of the subsequent objectives and structures. The first cabinet decision on the national climate protection policy shaped the advisory infrastructure that essentially still applies today: the Interministerial Working Group (IMA) on "CO₂ Reduction" was set up under the lead management of the BMU.

The task of the interministerial working group on "CO₂ Reduction" consists in drawing up guidelines for climate protection policy activities, identifying the existing need for action, indicating potentials for reducing greenhouse gases, and submitting to the Federal Cabinet comprehensive packages of measures for reducing greenhouse gas emissions in Germany. The working group presented reports on the National Climate Protection Strategy to the Federal Cabinet in November 1990, December 1991, September 1994, November 1997, October 2000 and July 2005. It is continuing its

work on an ongoing basis and today consists of seven working groups, each chaired by the department primarily responsible:

- Working Group I “Energy Supplies”,
- Working Group II “Transport”,
- Working Group III “Building Sector”,
- Working Group IV “CO₂ Reduction through New Technologies”,
- Working Group V “CO₂ Reduction through Agriculture and Forestry”,
- Working Group VI “Emissions Inventories” (since October 2000),
- Working Group VII “Project-specific Mechanisms / JI and CDM” (since July 2005).

The interministerial working group on “CO₂ Reduction” provides a cross-sectoral body where all climate protection issues can be discussed and agreed within the Federal Government. Activities at national level are coordinated with the regional level (*Länder*) through joint national/regional committees, like the conference of environment ministers, and with the local level (municipalities) via the central associations of the local authorities.

In order to achieve the climate protection objectives, a comprehensive package of climate policy measures was developed, implemented and continuously updated. The following sections provide an overview of the main elements of German climate policy. They first describe the policies and measures implemented since the signing of the Kyoto Protocol and also the National Climate Protection Programmes of 2000 and 2005, before going on to give separate explanations of a number of cornerstones of German climate policy.

II.2. Climate protection policy measures since the signing of the Kyoto Protocol

Immediately following the signing of the Kyoto Protocol on 29 April 1998, Germany initiated measures designed to achieve the climate protection targets. In particular, the central measures initiated in 1998 and 1999 include the following:

- *The Ecological Tax Reform*
The ecological tax reform made the factor “energy” progressively more expensive by imposing taxes on automotive and heating fuels and on electricity, in order to create an incentive to develop and launch energy-saving technologies and to make efficient and economical use of energy.
- *The Renewable Energies Act*
The Renewable Energies Act promotes the generation of power from renewable energy sources by providing offtake guarantees (offtake obligations for electricity network operators) and defined payment rates differentiated by energy sources.

- *The Market Introduction Programme for Renewable Energies*
The market introduction programme benefits in particular the deployment of solar collectors and the efficient use of energy. It includes grants and attractive loans for systems for the use of renewable energies.
- *The 100,000 Roofs Solar Power Programme*
The 100,000 roofs solar power programme provided financial support for investment in photovoltaic systems by making available reduced-interest loans from the federally owned KfW bank group (programme ran until 2003).
- *Promotion of low-sulphur or no-sulphur automotive fuels*
This promotes low-consumption and low-emission engine technologies.
- *Intensification of public relations work and increased information and advice for households*

II.3. Climate Protection Programme 2000

Even though CO₂ emissions in Germany showed a reduction of 15.3% by 1999 compared with 1990, and the six Kyoto gases (CO₂, CH₄, N₂O, SF₆, H-CFC and CFC) had been reduced by around 18.5% compared with 1990/95, the emission forecasts available at the time led to a realisation that additional steps would have to be taken if Germany's climate protection target was to be achieved. As a reaction to this, the "National Climate Protection Programme" was adopted on 18 October 2000.

It contains a package totalling 64 measures for the sectors: Households, Transport, Industry, Energy Industry, Renewable Energy, Waste Management and Agriculture. It also identified and initiated cross-sectional measures. These are summarised in Table 1.

The core elements of the National Climate Protection Programme 2000 include:

- *Safeguarding and expansion of CHP plants*

On 1.4.2002 the Act on the maintenance, modernisation and expansion of combined heat-and-power generation (*Kraft-Wärme-Kopplungsgesetz – KWK-G*), or CHP Act, entered into force. The purpose of the Act, which supersedes the CHP Act of 12 May 2000¹, is to maintain, modernise and expand the resource-saving and climate-friendly form of energy generation used in combined heat-and-power plants (CHP plants) and to promote the market launch of the fuel cell. The new legislation lays down reducing bonus rates for CHP electricity, differentiated by plant categories, which the grid operator (who is under an obligation to take such electricity) pays the CHP operator for a limited period in addition to the market price.

¹ The previous "Act of 12 May 2000 on the protection of power production from combined heat-and-power generation" only provided assistance for CHP plants operated by electricity supply companies. The Act, which was valid for a limited period until the end of 2004, did not differentiate between whether or not the electricity was in fact produced by simultaneous heat offtake and use of heat condensation.

- *Energy Saving Ordinance for new buildings*

The Energy Saving Ordinance defines minimum standards for residential and non-residential buildings with regard to insulating properties and the quality of building services technology. In addition to the primary energy requirements for heating, it also registers and imposes limits on the primary energy requirements for hot water production.

- *Financial assistance programme for CO₂ reduction in existing buildings*

The financial assistance programme provides reduced-interest loans to promote investment in carbon dioxide reduction and energy saving in residential buildings constructed in 1978 or earlier (older existing buildings).

- *Declaration by German industry on global warming prevention*

The Federal Government and German industry agreed on an update to the German industry declaration of 26 March 1996 on global warming prevention. In the declaration signed in November 2000, the associations of German industry undertook to reduce their specific CO₂ emissions by 28% from 1990 to 2005 and their specific emissions of the six Kyoto gases by 35% by the year 2012. To lend concrete shape to this general declaration, a further agreement on CO₂ reduction and CHP promotion laid down that measures would be taken in the field of cogeneration of heat and power and by other means to reduce emissions of the six Kyoto gases by 45 million tonnes CO₂ equivalent from 1998 to 2010/2012.

In addition to these measures at federal level, the Climate Protection Programme 2000 also points to the numerous and wide-ranging programmes of the 15 federal *Länder*. In view of their great scope these are not described in detail here.

No.	Description of measure
Cross-sectional measures	
1	Ecological tax reform
2	Voluntary commitment by Federal Government to reducing CO ₂
3	Demonstration projects relating to climate-friendly and environmentally friendly energy forms (e.g. fuel cells)
Private households	
4	Energy Saving Ordinance (ENEV)
5	Improved implementation of the Energy Saving Ordinance by the <i>Länder</i>
6	Subsidy programme for energy saving in existing buildings, including energy diagnoses
7	Eco subsidies as part of home ownership promotion scheme
8	Energy consumption codes for buildings in the context of the Energy Saving Ordinance
9	EU-wide maximum consumption standards for electricity-intensive household appliances
10	Measures directed at electricity consumption (especially in standby-mode)
11	Promotion of "green electricity"
12	Expansion of loan programmes offered by Federal Government banks
13	Campaign for "Climate protection in private households"
14	Greater market penetration of state-of-the-art household technology, such as condensing boilers, fuel cells, connection to district heating supply systems
15	Intensification of research, development and demonstration efforts
16	Promoting the use of natural gas
Transport	
17	Air traffic: emission-based levies, optimised traffic control
18	Replacement of flat mileage rate by a distance rate that is independent of the mode of transport
19	Ecological tax reform
20	Promotion of low-sulphur fuels
21	Integrated transport planning
22	Transport-efficient energy strategy
23	Climate-oriented perspectives for German railway system
24	Low-friction oils and low-friction tyres in new cars
25	Anti-congestion campaign 2003-2007
26	Promotion of fuel-efficient vehicles under vehicle road tax system
27	Distance-based motorway tolls for HGVs / heavy load levy
28	Review of 1992 Federal Traffic Routes Plan
29	CO ₂ reduction for new cars / voluntary undertaking by the automotive industry
30	Consideration of climate protection issues in community and landscape planning
31	Use of alternative fuels (natural gas, hydrogen, methanol)
32	Telematics and fleet management systems
33	Abolition of sales tax exemption in transboundary air traffic
34	Research, development and demonstration projects
35	Information and public education work (e.g. driver training courses)
36	Implementation of Federal Government's report of 23.05.2000 to encourage cyclists
37	Improvement of and creation of preconditions for an energy-saving transport mix
38	Creation of freight and distribution centres / avoidance of "no-load" trips

No.	Description of measure
Industry	
39	Promotion of contracting
40	Energy diagnoses, particularly amongst SMEs
41	Further development of the "Declaration by German industry on global warming prevention"
42	Statement by the ZVEI on electrical applications
43	Long-term CHP programme
44	Supply of "green" electricity
45	Improvement of the loan programmes offered by the ERP, DtA and KfW
46	Activities relating to information, advice, education and training
47	Energy Saving Ordinance for industry and small consumers
48	Increasing the efficiency of ancillary plants
Energy industry	
49	Further development of the "Voluntary undertaking declaration by German industry on global warming prevention"
50	Building more natural gas-fired gas-and-steam power plants
51	Immediate aid programme for CHP generation
52	Long-term CHP programme
53	Contracting and other energy services
54	Use of pit gas in bituminous coal mining
55	Reduction of methane losses in the extraction and transportation of natural gas
Renewable energy sources	
56	Renewable Energies Act
57	Market introduction programme for renewable energies:
58	100,000 roofs photovoltaic solar power programme
59	Improvement of information and advice
60	Solar campaign
Waste management	
61	Measures relating to waste from human settlements
Agriculture	
62	Expansion of organic farming
63	Preservation and maintenance of existing forests / afforestation
64	Biogas in the agricultural sector

Table 1: Overview of measures from the National Climate Protection Programme 2000

II.4. Climate Protection Programme 2005

The climate protection programme of 18 October 2000 was updated in July 2005. The National Climate Protection Programme 2005 takes stock of the climate protection policies of the preceding five years. Having analysed the impacts of the measures taken, it identifies the need for further action and puts forward an appropriately updated list of measures.

It should be noted that since 1 January 2005 the sectors "Energy Industry" and "Industry" have largely been integrated in the new, EU-wide instrument of CO₂ emissions trading at installation level, cf. also Section II.5.1. Thus the focus of the

Climate Protection Programme 2005 is on meeting the need for action that exists at this time in the sectors “Transport” and “Households”.

The lists of measures for these two key areas and the expected CO₂ reduction potentials are set out in Table 2 and Table 3.

Measures in the sector “Households” to meet the emission reduction target in the 2008-2012 period	CO₂ Reduction Potential [mill. t]
Public Relations Campaigns. Counselling. Innovation	0.7
<ul style="list-style-type: none"> ▪ Large-scale public relations campaigns ▪ Training courses and quality improvement initiatives (investors, trade, planners, construction) ▪ Increased research under the auspices of the Building and Transport Ministry for innovations to increase energy efficiency; improved building materials ▪ Further development of the energy savings contracting system on the heating market ▪ Upgrading of Deutsche Energie-Agentur (dena) as a centre of expertise for energy efficiency 	
Financial Support Measures	2.8
<ul style="list-style-type: none"> ▪ KfW bank loans for the building sector ▪ Market incentive programme in the biomass sector ▪ Market incentive programme in the solar energy sector ▪ On-the-spot counselling ▪ Upgrading of cities / towns in Eastern Germany, council housing 	
Regulatory Measures	0.4
<ul style="list-style-type: none"> ▪ Introduction of the Energy Savings Ordinance (EnEV) 2006 ▪ Introduction of energy passes ▪ Amendment of Home Ownership Act (<i>Wohnungseigentumsgesetz</i>) 	
Autonomous Reduction Effects*	1.3-1.5
Total	5.3

* The estimate of the autonomous reduction effects is based on energy prices of USD 29 per barrel of crude oil for the reference year 2000. The further development was calculated on the basis of a long-term mean real increase of 1.5% per year, which results in a price of USD 45 per barrel for the year 2030. Source: Forschungszentrum Jülich (Ed.) (2005): *Evaluierung der CO₂-Minderungsmaßnahmen im Gebäudebereich* (Research Centre Jülich: *Evaluation of CO₂ reduction measures in the building sector*).

Table 2: Measures in the sector “Households” to meet the emission reduction target in the period 2008-2012 (figures in mill. t CO₂). Source: BMU (2005)

Measures in the sector “Transport” to meet the emission reduction target in the 2008-2012 period	CO₂ Reduction Potential [mill. t]
Incentives to reduce transport intensities and increase energy efficiency in the transport sector	1.5
<ul style="list-style-type: none"> ▪ Revenue-neutral tax reductions for low fuel consumption passenger cars taking into account activities of the EU Commission serving the same purpose ▪ Introduction of emissions-related landing fees at German airports 	
Technical improvements in vehicles and fuels and support for alternative fuels and innovative engines	8.5
<ul style="list-style-type: none"> ▪ Fuel strategy of the Federal Government: Substitution of bio fuels for traditional fuels ▪ Use of substitutes for F-gases in mobile air conditioning systems in accordance with the planned EU directive on air conditioning in vehicles ▪ Public information campaigns on low-emission driving habits ▪ Stepping up the campaign “New Ways of Driving” 	
Total of quantifiable measures	10

Table 3: Measures in the sector “Transport” to meet the emission reduction target in the period 2008-2012 (figures in mill. t CO₂). Source: BMU (2005)

As well as these quantifiable measures, decisions were taken on a whole range of additional measures in the transport sector which will undoubtedly bring about tangible reductions in greenhouse gas emissions, even if these cannot be reliably calculated at the present time:

- Upgrading of the HGV toll system to set up a real “road pricing system” on the basis of different local and time-related toll rates.
- Support for international measures to promote energy efficiency in aviation
- Measures to prevent distortions of competitive positions between different means of transport
- Refinement of the promise made by the car industry (ACEA) to reduce specific CO₂ emissions by new vehicles
- Introduction of new engine types and measures to increase engine efficiency
- Increased fitting of fuel consumption indicators in new vehicles

II.5. Individual measures and programmes

II.5.1. Emissions trading

The Federal Republic of Germany introduced the European Emissions Trading System as scheduled on 1 January 2005. On the basis of the fundamental European legislation of the *Emissions Trading Directive*² and the *Linking Directive*³ there exists in Germany an extensive legal framework which includes the elements *Greenhouse Gas Emissions Trading Act (TEHG)*, *Allocation Act 2007 (ZuG 2007)* and *Project Mechanisms Act (ProMechG)*, plus various ordinances.

In Germany, emissions trading accounts for about 55% of CO₂ emissions and is thus the central instrument of climate protection policy. Emissions trading is integrated in the comprehensive package of measures in the National Climate Protection Programme. The national allocation plan lays down the emission targets for all sectors (energy, industry and transport, households, trade/commerce/services).

The current first trading period of the EU emissions trading system, running from 2005 to 2007, takes in 1,849 installations. The companies subject to compulsory emissions trading are almost entirely in the Industry and Energy Industry sectors. The total quantity allocated to these installations (incl. reserve for new emitters) is 499 million tonnes CO₂ per year.

The National Allocation Plan for the second trading period of the EU emissions trading system (2008-2012) was approved in June 2006. The plan is intended to improve the efficiency and predictability of emissions trading through greater transparency and fewer special arrangements. With its emission targets of 482 million tonnes CO₂/year for installations subject to compulsory emissions trading⁴ and 517.5 million tonnes CO₂ for the Energy and Industry sector, plus the climate protection policy measures already decided for the sectors and areas not covered by emissions trading, it ensures compliance with the German climate protection targets.

In view of the great importance of emissions trading as an innovative instrument of climate protection policy, the *Working Group on Emissions Trading to Combat the Greenhouse Effect (AGE)* was set up under the lead management of the Federal Environment Ministry as long ago as the end of 2000. In addition to representatives of the Federal Government and selected regional (*Land*) governments, this working group includes in particular participants from industrial associations and enterprises and from trade unions and environmental associations. The working group has met more than 55 times since December 2000. Today it effectively performs the function of a permanent hearing as far as integration of emissions trading into the range of climate protection policy instruments is concerned.

² Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC

³ Directive 2004/101/EC of the European Parliament and of the Council of 27 October 2004 amending Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Community, in respect of the Kyoto Protocol's project mechanisms

⁴ It must be borne in mind that there is a change in scope compared with the first trading period 2005-2007.

II.5.2. Promotion of renewable energies

The Federal Government's goal is to double the share of energy supplies accounted for by renewable energies by the year 2010. Its share of primary energy consumption is then to be at least 4.2% and its share of gross electricity consumption is to increase to at least 12.5%. As a medium-term objective, the Federal Government plans to increase the share of electricity supplies due to renewable energies to at least 20% by 2020 and the share of primary energy consumption to 10%.

The central instrument for promoting the expansion of renewable energies is the Renewable Energies Act (*Erneuerbare-Energien-Gesetz – EEG*). The new Renewable Energies Act of 21 July 2004 places electricity network operators under an obligation to give priority to taking electricity from renewable energies and to pay a predetermined price for it. As mentioned in Section II.3, the payments for electricity input differ depending on the energy source. The rates are high at first and reducing later, in order to provide an incentive to improve efficiency and reduce costs.

Following the adoption of the precursor to the Renewable Energies Act in 1990, wind energy initially displayed rapid development. With the passing of the Renewable Energies Act in 2000 the boom widened to take in photovoltaic systems, and after the amended Renewable Energies Act in 2004 to include biomass as well. Remarkable developments can also be observed in the use of geothermal energy for electricity generation. Thus the Renewable Energies Act has become an instrument that is both exemplary and successful. The following Figure 1 shows the contribution of renewable energies to electricity generation over the period 1990-2005.

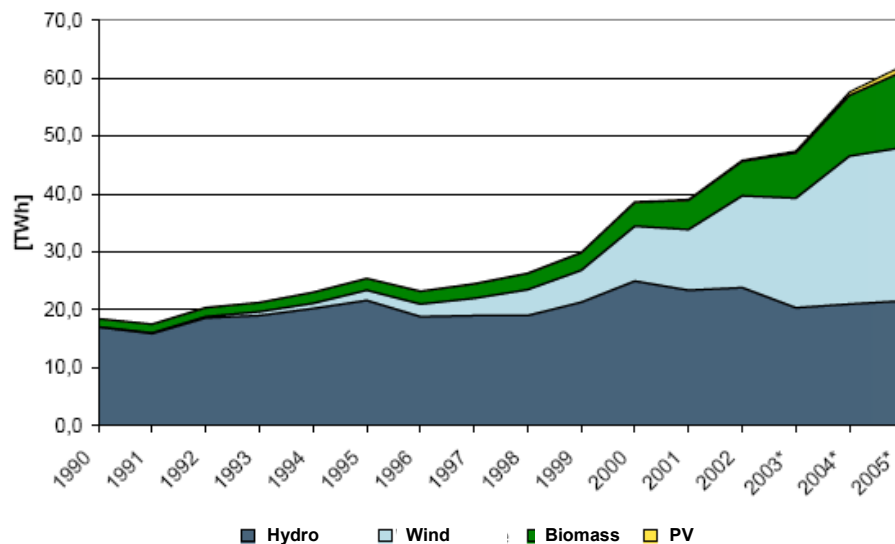


Figure 1: Contribution of renewable energies to electricity generation from 1990-2005.

Source: BMU (2006)

Figures for biomass include 50% of the biogenic content of waste

* Provisional figures, partly estimated, as at February 2006

Electricity from geothermal sources not shown owing to small quantity of electricity

Sources: According to Working Group on Renewable Energy Statistics (AGEE-Stat), using data from the Energy Accounting Association (AGEB); Federal Statistical Office (StBA); Baden-Württemberg Centre for Solar Energy and Hydrogen Research (ZSW); Leipzig Institute for Energy Systems and the Environment (IE); Federal Wind Energy Association (BWE); ISET Kassel

III. Development of greenhouse gas emissions in Germany

III.1. Historical development of greenhouse gas emissions

III.1.1. Overview: Development of greenhouse gas emissions from 1990-2004

In overall terms, greenhouse gas emissions were reduced by 17.4% (disregarding land use changes [LUCF]) by the year 2004 compared with the base years 1990/1995, cf. also Figure 2 and Table 4. According to the latest *National Inventory Report on the German Greenhouse Gas Inventory 1990 - 2004* (National Inventory Report 2006), emissions of the six Kyoto gases in 2004 (disregarding land use changes, which currently cannot be taken into account in Germany for methodological reasons [LUCF]) totalled 1,015.7 million tonnes CO₂-eq. In the Kyoto Protocol base year 1990/1995 the figure had been as high as 1,226.7 million tonnes CO₂-eq.

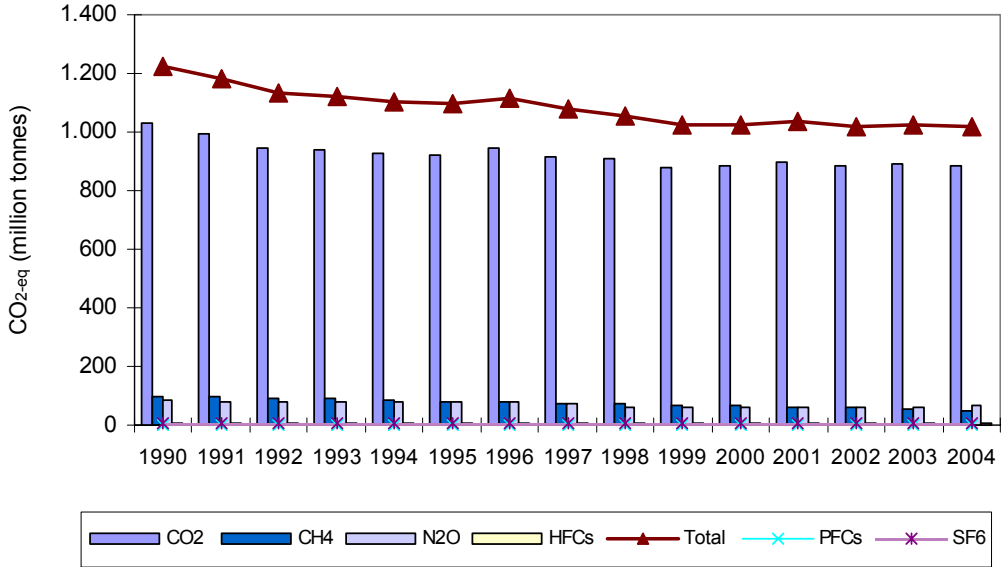


Figure 2: Development of Kyoto gas emissions from 1990-2004 (in CO₂-eq)

A provisional estimate by the German Institute for Economic Research (DIW) comes to the conclusion that “CO₂ emissions due to energy consumption in 2005 were 2.3% down on the previous year. [...] Emissions of all greenhouse gases in 2005 [seem likely] to have been some 19 to 20% lower than in the base year”⁵ (DIW, 2006).

⁵ It should be noted that this indication by the DIW is not based on government-verified figures from official statistics.

III.1.2. Emission development by sectors

As can be seen from the following figures, there are substantial variations between the development of greenhouse gas emissions in the individual source categories according to the CRF tables and in the economic sectors energy industry, industry, trade, households, and transport.

By 2004, greenhouse gas emissions from the waste management sector were reduced by over 60% compared with 1990 (in terms of CO₂-equivalent). In the energy and agriculture sectors, the highest reduction rates since the beginning of the 1990s were achieved; and the reduction trend is continuing.

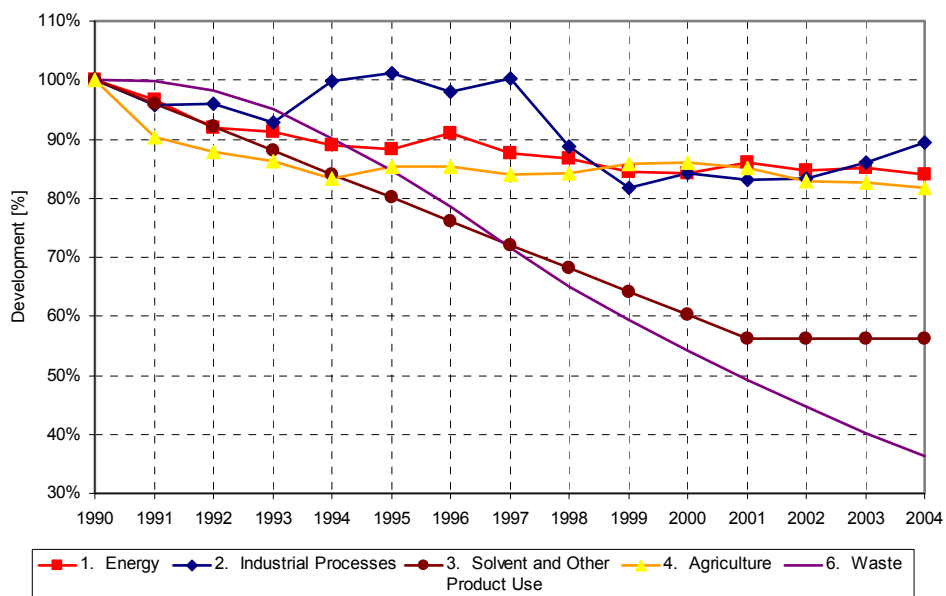


Figure 3: Relative change in greenhouse gas emissions in the source categories from 1990-2004

One point that deserves special mention is the trend reversal in the transport sector, which is unique in the EU context, cf. Figure 4. Following a rise in emissions as a result of a marked increase in traffic volume, the level was reduced again by 15 million tonnes CO₂ between 1999 and 2003. This was due among other things to the ecological tax reform and the strengthening of the public transport system (e.g. Regionalisation Act). Further investigation is required to determine the part played by refuelling habits in near-border areas in view of differences in petroleum excise duty, and the resulting emission allocation effects. Initial analyses indicate a share of less than 35%.

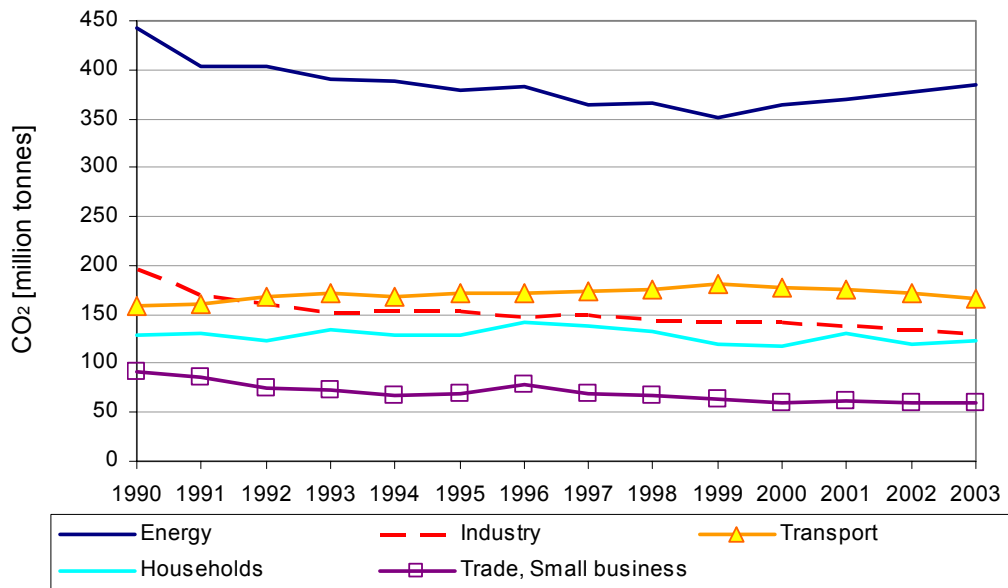


Figure 4: Development of greenhouse gas emissions by sector, 1990-2004 (in million tonnes CO₂-eq)

In the energy sector a marked reduction in emissions up to 1999 was brought about by fuel changes, efficiency improvements due to the construction of new plants, especially in the eastern part of the country, and extensive energy saving measures. For example, CO₂ emissions by public electricity generation and district heating utilities fell by 10 million tonnes compared with 1990. However, it has to be said that CO₂ emissions due to energy have been showing a renewed marked rise in this sector since 1999. This is partly due to the fact that the commissioning of a large lignite-fired power plant in the western lignite field – the Niederaußem plant is the world’s most efficient lignite power plant with PCF technology with an efficiency of 43% – has given rise to additional CO₂ emissions because existing lignite power plants have not yet been closed down. On the other hand the deregulation of the energy markets, especially since 1998, has resulted in “book transfers” of industrial power plants into the energy sector, which means that emission trends and shares are not necessarily comparable. Taking these factors into account, the share of greenhouse gases due to the energy sector is higher today than in the base year 1990.

The emission trend in the industrial sector, by contrast, continues – despite a slight volatility – to point downwards. The reduction rates, however, have slackened off considerably since the early 1990s.

In the household sector the influence of temperature is clearly recognisable (degree day numbers). Here the amplitude of CO₂ emission fluctuations is very large. However, it is possible to discern a slightly downward temperature-adjusted trend. The share of total greenhouse gas emissions due to the household sector has not shown any substantial change since the mid 1990s.

III.1.3. Emission trend by greenhouse gases

Figure 5 shows the relative development of the greenhouse gases CO₂, CH₄ and N₂O compared with 1990, while Figure 6 shows the relative development of the greenhouse gases HFCs, PFCs and SF₆ compared with 1995.

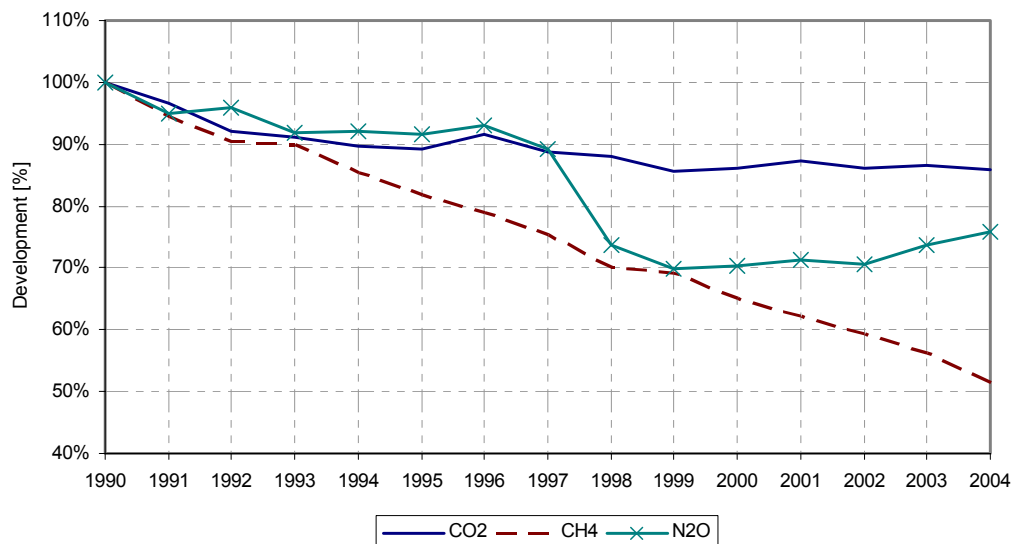


Figure 5: Relative development of greenhouse gases CO₂, CH₄, N₂O compared with 1990 (in CO₂-eq)

The reduction in CO₂ emissions is closely connected with the trend in the energy sector (see also section III.1.2) and with the choice of energy sources. In overall terms, there have been marked changes in the fuel mix since 1990: whereas emissions in the energy sector due to solid and liquid fuels have fallen by 16% and 7% respectively, CO₂ emissions due to the use of gaseous fuels have increased by 29%. This is even more marked in the field of households and small consumers. Here emissions sank between 1990 and 2004 by a total of over 17%, from 204 million tonnes CO₂ to around 169 million tonnes CO₂. Whereas in 1990 solid fuels still accounted for 33% of such emissions, by 2004 their share had fallen substantially to 2%; the share of emissions due to gaseous fuels showed a marked rise from 22% to 52%.

N₂O emissions fell by more than 24% during the period under review. The main causes are the use of nitrogenous fertilisers in agriculture, industrial processes in the chemical industry, stationary and mobile combustion processes, and livestock farming. Lower emissions by comparison are produced by wastewater treatment and by product uses of N₂O (e.g. as an anaesthetic). The greatest influence on emission reduction is found in the industrial sector, in particular the production of adipic acid. In 1997 the producers operating in Germany completed the process of equipping their production facilities with emission reduction systems. This reduced emissions by the chemical industry by nearly 47% compared with 1990. The decreasing use of fertiliser in the agricultural sector also made a contribution to reducing total emissions.

Methane emissions are largely caused by livestock farming, deposition of waste as landfill, and the distribution of liquid and gaseous fuels. They have been reduced by more than 48% since 1990. This trend was largely due to the decline in the deposition of waste as landfill as a result of environmental policy measures (green dot packaging symbol, yellow bags (for lightweight packaging waste), an overall rise in recycling, and increasing use of waste for energy). A second major cause was the increase use for energy purposes of the mine gas occurring in the course of coal mining. Emissions in this field have fallen by more than 60% since 1990.

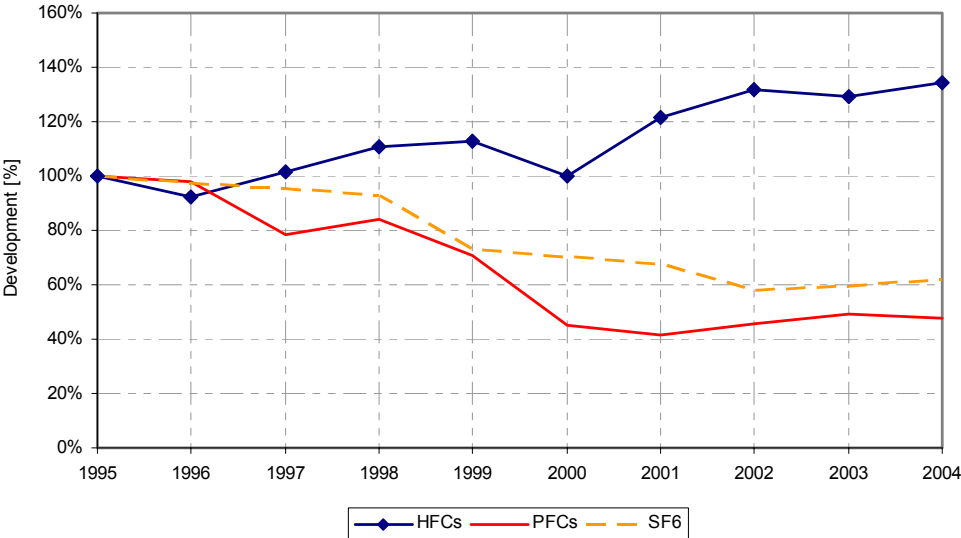


Figure 6: Relative development of greenhouse gases HFCs, PFCs and SF₆ compared with 1995 (in CO₂-eq)

Figure 6 shows the emission trends for the “F gases” over the period 1995-2004. Emissions of halogenated hydrocarbons (HFCs) increased, mainly as a result of their increased use as refrigerants. This cancelled out emission reductions due to the reduced use of these gases in expanding (PU) foam.

The reductions in emissions of perfluorinated hydrocarbons (PFCs) were largely achieved as a result of efforts by the manufacturers of primary aluminium and semiconductors.

The reduction in sulphur hexafluoride (SF₆) emissions is primarily due to the phasing out of its use in car tyres since the mid 1990s. In this case successful environmental education has led to an emission reduction of more than 100 tonnes and has reduced the greenhouse gas emissions by 2.5 million tonnes CO₂ equivalent. Much the same is true of sound-insulating windows, where the use of SF₆ in their production has been cut to one tenth compared with 1995. Present and future emissions largely originate from open disposal of old window panes.

Table 4 summarises the figures broken down by greenhouse gases and source categories.

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
	CO ₂ equivalent (Million tons)														
Net CO ₂ emissions/removals	1.001,6	966,3	918,3	907,8	893,1	888,6	911,6	882,3	874,0	848,6	851,9	864,2	851,1	856,7	849,6
CO ₂ emissions (without LUCF) ⁽⁶⁾	1.030,2	995,8	948,4	938,4	924,4	920,2	943,6	914,7	906,7	881,7	886,3	899,3	886,5	892,5	885,9
CH ₄	99,8	94,3	90,2	89,7	85,3	81,7	78,9	75,2	70,0	68,9	64,9	62,1	59,2	56,2	51,4
N ₂ O	84,8	80,5	81,4	77,8	78,1	77,7	78,9	75,7	62,5	59,2	59,6	60,4	59,8	62,4	64,3
HFCs	4,4	4,0	4,1	4,2	4,4	6,6	6,0	6,7	7,3	7,4	6,6	8,0	8,6	8,5	8,8
PFCs	2,7	2,3	2,1	2,0	1,6	1,7	1,7	1,4	1,5	1,2	0,8	0,7	0,8	0,9	0,8
SF ₆	4,8	5,1	5,6	6,4	6,7	7,2	7,0	6,9	6,7	5,3	5,1	4,9	4,2	4,3	4,5
Total (with net CO₂ emissions/removals)	1.198,1	1.152,6	1.101,7	1.087,9	1.069,2	1.063,6	1.084,2	1.048,1	1.022,0	990,6	988,9	1.000,2	983,7	988,9	979,4
Total (without CO₂ from LUCF) ^{(6) (8)}	1.226,7	1.182,0	1.131,8	1.118,5	1.100,5	1.095,1	1.116,1	1.080,5	1.054,7	1.023,7	1.023,2	1.035,3	1.019,1	1.024,8	1.015,7

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
	CO ₂ equivalent (Million tons)														
1. Energy	985,3	953,5	905,8	898,7	876,8	870,6	897,9	863,4	854,0	832,7	831,0	847,2	834,4	839,0	828,0
2. Industrial Processes	120,1	115,1	115,2	111,6	119,8	121,5	117,7	120,6	106,6	98,1	101,2	99,9	100,1	103,3	107,5
3. Solvent and Other Product Use	2,1	2,0	1,9	1,8	1,8	1,7	1,6	1,5	1,4	1,3	1,3	1,2	1,2	1,2	1,2
4. Agriculture	78,3	70,7	68,7	67,5	65,3	66,8	66,8	65,7	65,9	67,2	67,4	66,7	64,9	64,6	64,0
5. Land-Use Change and Forestry ⁽⁷⁾	-28,2	-29,1	-29,8	-30,3	-30,9	-31,2	-31,6	-32,0	-32,3	-32,7	-33,9	-34,7	-34,9	-35,4	-35,8
6. Waste	40,4	40,4	39,7	38,4	36,4	34,2	31,7	28,9	26,3	24,0	21,9	19,9	18,0	16,2	14,7
7. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO

⁽⁶⁾ The information in these rows is requested to facilitate comparison of data, since Parties differ in the way they report CO₂ emissions and removals from Land-Use Change and Forestry.

⁽⁷⁾ Net emissions.

⁽⁸⁾ The information in these rows is requested to facilitate comparison of data, since Parties differ in the way they report emissions and removals from Land-Use Change and Forestry. Note that these totals will differ from the totals reported in Table Summary2 if Parties report non-CO₂ emissions from LUCF.

Table 4: Emissions inventory in accordance with the Common Reporting Format (CRF). Source: UBA (2006)

III.2. Emission forecasts

Figure 7 shows how greenhouse gas emissions are expected to develop in Germany up to 2012, according to the European Environmental Agency's publication "Greenhouse gas emission trends and projections in Europe 2005" (EEA, 2005).

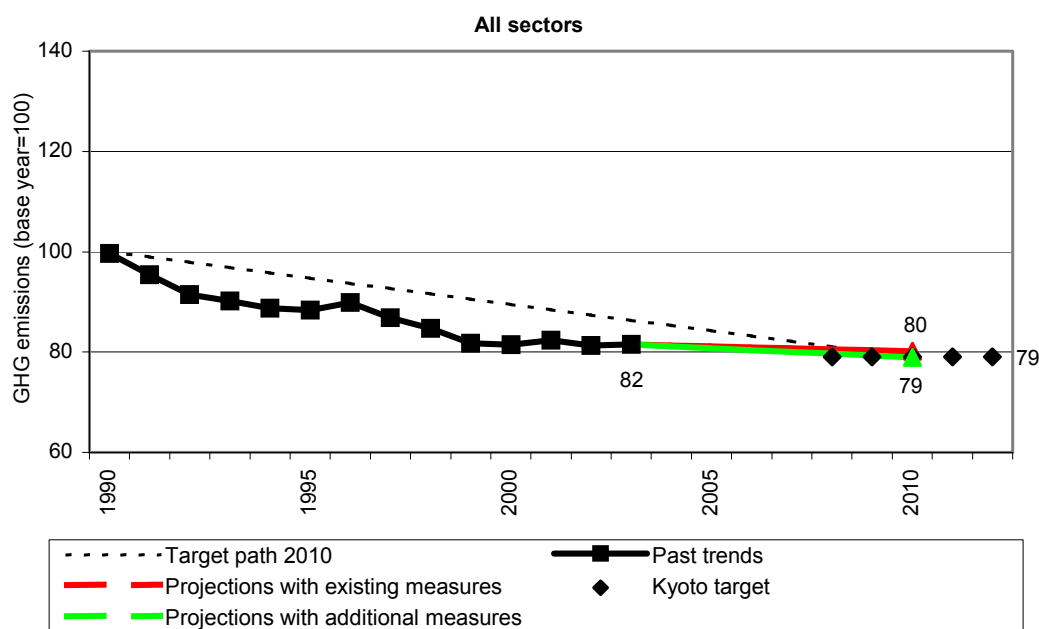


Figure 7: Forecast of development of greenhouse gas emissions in Germany up to 2012, as projected by the EEA (2005)

Since the end of the 1990s a variety of scientific institutions have produced a number of forecasts and scenarios for greenhouse gas emissions in Germany. On the basis of developments in energy consumption they indicate long-term trends in greenhouse gas emissions (mainly CO₂). By comparing the reference scenarios with suitable variant calculations it is possible to deduce the effects of existing and potential policies and measures.

The study "Klimaschutz in Deutschland bis 2030 – Politikszenerien III" (UBA, 2005) compared the results of the following reference scenarios and projections:

- Energy Report by Prognos/EWI (1999),
- EU Energy Outlook from 1999 and 2003,
- Reference scenario of the commission of inquiry of the 14th German Bundestag on "Nachhaltige Energieversorgung unter den Bedingungen der Globalisierung und der Liberalisierung" (EK 2002) and
- Esso Energy Forecast 2001 (Esso 2001).

The results are summarised in Figure 8.

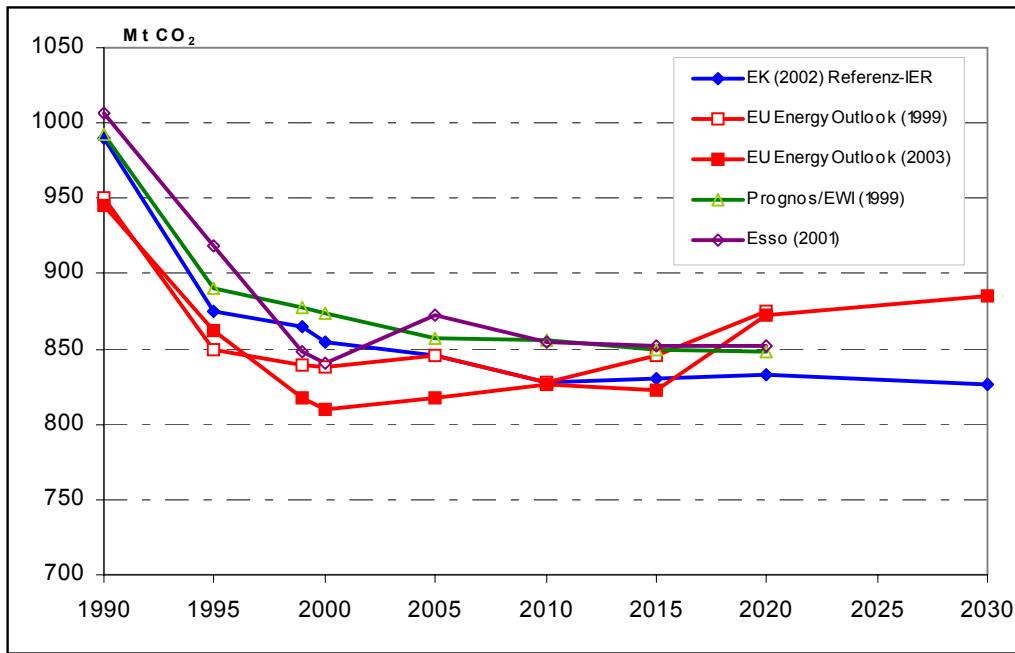


Figure 8: Comparison of emission forecasts for energy-induced CO₂ emissions in various reference projections. Source: UBA 2005, p. 26 (edited)

All these projections show a decline in emissions up to 2015 (EU Energy Outlook 1990: up to 2010), after which they expect to see a marked slackening of the pace of emission reductions or even a renewed rise in emissions (EU Energy Outlook 1999/2003). The bandwidth of the CO₂ emission projections for the years 2010 and 2015 is around 825 – 850 million tonnes; for 2020 it is around 825-875 million tonnes.

Moreover, in May 2005 EWI/Prognos presented a study on energy market developments up to 2030, which also includes a forecast of greenhouse gas trends in Germany (cf. also Figure 9). For 2010 it expects an emission level of nearly 1,000 million tonnes CO_{2-eq}, for 2015 some 950 million tonnes CO_{2-eq} and for 2020 around 915 million tonnes CO_{2-eq}.

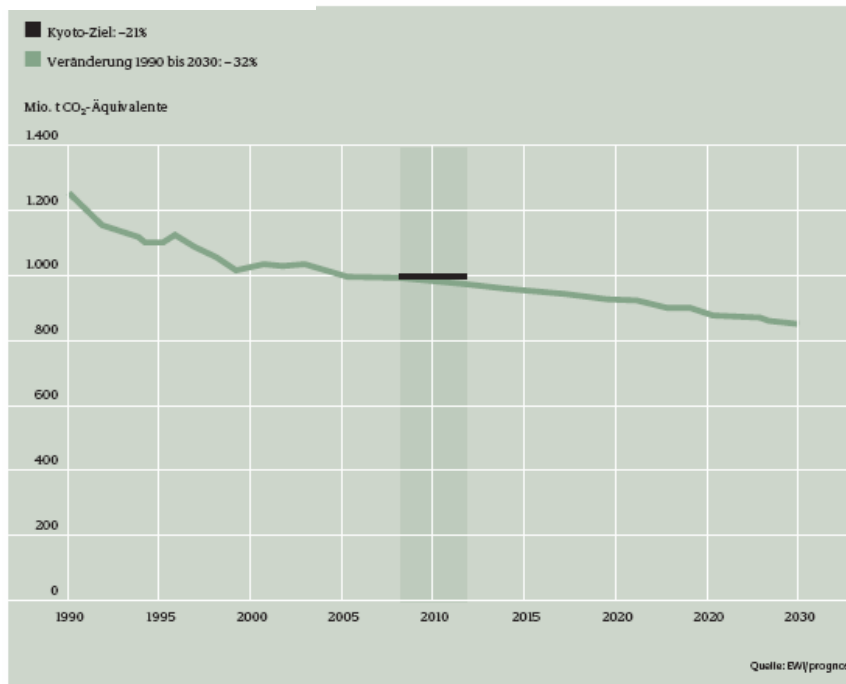


Figure 9: Forecast of greenhouse gas emissions in Germany up to 2030 according to EWI/Prognos 2005 (p. 38)

In all of these projections it must be remembered that they can only reflect the most recent position in each case. For example, most of the models do not take account of the latest developments on the global energy markets (e.g. extreme rise in oil prices since 2004).

Furthermore, the inventory data for the Federal Republic of Germany underwent a fundamental revision during the preparation of the NIR 2006. In particular, this involved adapting the CO₂ emission factors to new international specifications and taking account of additional CO₂ emission sources and CO₂ emissions (e.g. use of lubricants in engines, flue gas purification systems, catalytic converter burn-up). Also, under the EU emissions trading system, adjustments were made to data capture methods in the field of waste incineration and to accounting for CO₂ emissions by the iron and steel industry (attribution of by-product gases). The resulting modifications to the inventories have not yet been taken into account in the projections available.

IV. Assessment of the contribution made by national climate policies and measures to fulfilling the obligations under Article 3 of the Kyoto Protocol

IV.1. Overall impact of the measures taken up to 2004

The study "*Klimaschutz in Deutschland bis 2030 – Politikszenerien III*" (*Climate Protection in Germany up to 2030 – Policy Scenarios III*) undertook an impact analysis of the climate policy measures taken in the various sectors. It compared two scenarios: a "scenario without measures", in which Germany took no climate policy measures, and a "scenario with measures", which took account of the climate policy measures taken in Germany – as of 2004. By comparing the emission figures calculated for 2010 for these two scenarios it is possible to assess the overall impact of the climate policy measures taken.

On the basis of the model calculations, energy-induced CO₂ emissions in 2010 "with measures" work out at nearly 836 million tonnes; this is 15.3% less than in 1990. Together with the CO₂ emissions from industrial processes the combined level is around 860 million tonnes, or 15.2% less than in 1990.

This shows that the many and various climate policy measures have already had a considerable impact. Their total contribution to reducing CO₂ emissions is estimated at around 76 million tonnes. This means that without Germany's climate policy, in other words in the "scenario without measures", CO₂ emissions in Germany in 2010 would not be 860 million tonnes, but around 936 million tonnes. This would amount to a reduction of only 7.7% compared with 1990.

When considering these models it is important to remember that they cannot be more than "snapshots". The above mentioned study, which involved time-consuming data capture and modelling processes, was completed in 2004. Consequently it does not take account of any effects of additional climate protection measures taken since then, such as those of the Climate Protection Programme 2005 (cf. section II.4) or of the emissions trading system (cf. section II.5.1). Moreover, the conclusions of this study are based on the National Inventory Report 2004 (see above).

IV.2. Impact of the National Climate Protection Programme 2005

To ensure an ongoing check on whether the measures laid down in the National Climate Protection Programme 2005 were indeed resulting in the predicted emission reductions, the 2005 programme included regular monitoring. This provides that the interministerial working group on "CO₂ Reduction", on the basis of existing reporting requirements, is in future to present the cabinet with a progress report on the national greenhouse gas situation, especially with regard to achievement of the climate protection objectives.

In addition, the interministerial working group on “CO₂ Reduction” will present its next report with a view to updating the climate protection programme in 2008.

IV.3. Overall picture

By 2004 greenhouse gas emissions in Germany were reduced by 17.4% compared with the base year. This meant that Germany’s obligations under the European burden-sharing arrangements (-21% compared with the base year) had already been fulfilled to a large extent.

To ensure that the targets would be achieved, various additional measures to reduce greenhouse gas emissions have been introduced since 2004. Germany understands climate protection as an essential and ongoing task. For example, climate protection or environmental compatibility will also be included as an equal-ranking goal alongside security of supplies and efficiency in the forthcoming development of the overall energy policy for Germany for the period up to 2020⁶.

All in all, it may be assumed – even on a deliberately conservative assessment – that the emission obligations for 2008-2012 will be achieved with the climate policy measures already taken or initiated. Germany is relying largely on domestic fulfilment of the emission obligations. Supporting measures taken by the Federal Government for the purchase of reduction certificates from the project-based mechanisms of the Clean Development Mechanism (CDM) and Joint Implementation (JI) serve to define a supplementary framework for the EU emissions trading system. Examples of this framework include a check list for project developers, the creation of a manual on the preparation of project design documents (PDDs), the development of a best-practice database, and the signing of Memoranda of Understanding (MoU) by the Federal Environment Ministry. The Federal Government is to make a contribution of up to 9 million EUR, payable over several years, to the KfW Climate Protection Fund. This fund is however to be financed largely on a private basis. The Federal Government’s contribution is to help promote climate protection projects in the field of renewable energies with the participation of German companies⁷.

⁶ At a high-level meeting with representatives of industry and science on 3 April 2006, the Federal Government announced that by the end of 2007 it intended to draw up an integrated overall policy for the energy sector for the period up to 2020.

⁷ The Federal Government is pursuing a similar objective with its contribution of up to 5 million EUR to the testing ground facility (TGF) of the Baltic Sea Energy Cooperation (BASREC).

V. Measures and activities to fulfil the obligations under Articles 10 and 11

V.1. Greenhouse gas inventories

As a party to the UN Framework Convention on Climate Change (UNFCCC), Germany has since 1994 been under an obligation to prepare, publish and regularly update inventories of national greenhouse gas emissions. The entry into force of the Kyoto Protocol in February 2005 brought additional obligations with regard to the preparation, reporting and verification of emission inventories. As a result of the European implementation of the Kyoto Protocol upon the adoption of EU decision 280/2004, these requirements became legally binding on Germany as early as spring 2004.

On 3 March 2006 Germany presented, together with the inventories for 2004, its fourth National Inventory Report (NIR 2006). The inventories of national greenhouse gas emissions for the years 1990 to 2004 were submitted. The National Inventory Report 2006 can be downloaded from

http://unfccc.int/files/national_reports/annex_i_ghg_inventories/national_inventories_submissions/application/x-zip-compressed/deu_2006_nir_13apr.zip. The inventories for the previous years can also be obtained from the UNFCCC website.

Chapter 1 of the NIR 2006 provides a detailed description of the National System for Emission Inventories in Germany (NaSE), which is designed to support and ensure fulfilment of all reporting obligations with regard to atmospheric emissions and removals by sinks. As well as the requirements of the Kyoto Protocol, this will in future also cover other commitments entered into (e.g. UNECE Geneva Convention on Long-Range Transboundary Air Pollution, EU National Emission Ceilings Directive).

Chapter 1 of the NIR 2006 also describes the basic principles and methods used to calculate the emissions and sinks of the IPCC categories, and the emission inventories quality system (QSE). Over the past three years, the institutions concerned have devoted considerable time and money to improving the quality of the basic data and closing gaps in the data. High priority continues to be given to work on improving the systematics of the inventories.

V.2. Measures to adapt to climate change and reduce greenhouse gas emissions

The issue of adapting to climate change (adaptation) is increasingly being taken up by various actors in the fields of industry, politics and society.

To permit targeted initiation of effective and efficient measures, there is a need to further improve our understanding of regional climate changes. Through the Federal Ministry of Education and Research (BMBF), the Federal Government is supporting relevant investigations at establishments of the Helmholtz and Leibnitz Associations and the Max-Planck-Gesellschaft.

Examples are the assistance activities relating to the topic of “research into climate protection and protection against climate impacts”, the establishment of the “Service Group Adaptation (SGA)”, and the development of an operational heat warning system for the Federal Republic. The Federal Environmental Agency has already conducted various research projects.

Informing and involving the public must also play a central role. On 25 April 2006 the results of the study “Possible future climate changes for Germany”⁸ were presented at the Federal Environmental Agency. The modelling make it clear that the impacts on Germany will be significant and that there will be marked regional differences in their severity. As well as a further increase in extreme weather occurrences (heat waves, heavy rainfall events, wind storms), other developments to be expected include a reduction of up to 30% in summer rainfall and an increase of up to 30% in winter precipitation (MPI, 2006).

Furthermore, consideration is being given to the establishment of a centre of expertise on “Climate impacts and adaptation (KomPass)” at the Federal Environmental Agency to support the Federal Government in the identification and implementation of a national plan of measures for adapting to climate impacts. The work of the centre of expertise will be keyed to the coordination, development and evaluation of strategies, measures and instruments.

The Federal Ministry for Economic Cooperation and Development is supporting pilot measures in developing countries that put the partner in a better position to adapt to the consequences of climate change. The most important sectors here are the establishment of early warning systems (e.g. in Mozambique and Nicaragua), the sustainable management of water catchment areas (e.g. in India and Benin), and efforts to combat desertification (Tunisia).

The measures taken by Germany to reduce greenhouse gas emissions are set out in section II of this report.

⁸ The German summary can be obtained from: <http://www.umweltbundesamt.de/uba-info-presse/hintergrund/Klimaaenderungsworkshop.pdf>

V.3. Cooperation in scientific and technical research

Climate protection research and climate protection technologies can look back on a long history in Germany. The German climate research programme (DEKLIM) which was started in 2001 and designed to run for 5 years follows on from earlier financial assistance measures by the Federal Ministry of Education and Research (BMBF): the assistance measure “Climate system research” (1987-1994), sectoral assistance measures for research into climate impacts (1990-2000), and the assistance measure “Applied climate and atmospheric research” (1997-2000).

The priority research topics pursued in the past decade focused on improving our understanding of the climate system, developing environmental policy instruments, and cultivating the rising generation of scientists.

International networking and cooperation by German climate research covers a wide range at all levels. The following are a few examples:

- The Federal Ministry of Education and Research promotes the integration of German global change research in international and European programmes and makes it possible for the scientists involved to participate and play an active part in coordination meetings at national level and in the organisation of international cooperation.
- The German IPCC coordination unit set up by the Federal Education and Environment Ministries supports the inclusion of the results of German climate research in the IPCC process, as most recently in the preparation of the Fourth Assessment Report (AR4). More than 30 German climate researchers work for the IPCC in the various author and management bodies.
- German institutions such as the German Weather Service (DWD) and the Alfred Wegener Institute (AWI) play a considerable role in international measuring networks for observing the atmosphere (GCOS), the seas (Global GOOS) and land surfaces (GTOS).
- Germany’s activities in the field of satellite-assisted observation of the Earth are also very diverse. For example, Germany plays a major role in the missions of the European remote sensing satellite ERS-1, which are used for environmental observation of the Earth, and in the work of analysing the data obtained. Germany also plays a substantial part in the POEM-1 programme decided by the European Space Agency (ESA) council meeting in Munich in 1991. The programme consists of the environmental satellite ENVISAT-1 and the operational meteorological satellite METOP-1.
- The German Climate Computer Centre (DKRZ) performs climate simulations, e.g. with the ECHAM model which was developed jointly with the Hamburg Max Planck Institute for Meteorology and used among other things for the inventory analyses of the IPCC. The DKRZ also coordinates the European Climate Computing Network (ECCN), a network of Europe’s major climate computer centres, including the Hadley Centre and Météo France. The DKRZ and Hadley Centre jointly coordinate the execution of model calculations for the IPCC.
- The Potsdam Institute for Climate Impact Research (PIK) is concerned among other things with the impacts of climate on natural systems and with socio-economic aspects. The PIK’s core topics include: non-linear dynamics of the ecosystem, critical thresholds and extreme events, mitigation and biosphere

management, global actors in the transition to sustainability, regional simulators, vulnerability and development. The PIK is involved in numerous international cooperation programmes and cooperates closely with the British Tyndall Centre for Climate Change Research.

- In the context of pilot measures the Federal Ministry for Economic Cooperation and Development supports the use and practical application at regional and local level in developing countries of the data obtained by the above mentioned institutions. In this process the data are “translated” into a form that enables the local population and local administrative authorities to use them independently within the limits of their capacity. This is done, for example, in Mozambique and Nicaragua in the establishment of early warning systems for extreme weather events, and in India and Benin (West Africa) in the management of water catchment areas.

V.4. Capacity building

One aspect of special importance for the developing countries is capacity building – the strengthening of institutional and individual capacity. Relevant measures aim to boost the potential of individuals and their organisations and institutions, to enable them on the one hand to implement urgent measures, and on the other hand to perceive environmental problems in good time and increasingly master them with their own resources.

A broad spectrum of instruments are available to development cooperation for this purpose: knowledge transfer, organisational development, counselling, and education and training of local technical and management staff, for example training decision makers from politics and industry in aspects of environmental management. Individual and institutional capacity is also strengthened by a number of supporting measures implemented as part of the German Federal Government's financial cooperation.

For this reason the Federal Government also helps the partner countries to establish and expand their scientific and technical infrastructure. It provides financial assistance for technology centres, research institutes or economic assistance institutions.

In order to help developing countries fulfil their obligations under the Framework Convention on Climate Change, take advantage of the resulting opportunities and integrate climate change adaptation measures in development strategies, financial assistance has been provided since 1992 for the convention's project “Climate Protection Programme for Developing Countries”. To date funds totalling 12.5 million EUR have been provided for the programme. In recent years measures have increasingly been undertaken in preparation for implementing the Clean Development Mechanism (CDM). Here partner countries have been given advice on using CDM and drawing up national CDM strategies (e.g. China, Chile, and Morocco). It is also important to create the institutional and organisational basis for efficient approval and management of CDM projects (e.g. Ghana, South Africa, Tunisia, Vietnam, and Indonesia). Further training measures, such as workshops for

international experience sharing on climate protection in developing countries, methodological improvement of the CDM or monitoring of projects, make a contribution to human resources capacity building. Such measures can help to level the playing field in competition between developing countries for CDM projects. The Federal Government gives partners on-site assistance with the identification and model preparation of projects eligible for CDM (India, Indonesia, and Tunisia).

The Federal Government is endeavouring to create the conditions for activity by the private sector in the CDM. Public-private partnerships (PPPs) of CDM relevance are currently being implemented in Indonesia and China.

Another key area is adaptation to the negative impacts of climate change, which is to be strengthened in the least developed countries (LDC) in particular. In future developing countries are also to be prepared for a more active role in the “post-2012” process for the development of the international climate regime.

V.5. Financial assistance for non Annex-I countries for the purpose of implementing the convention; technology transfer

Development, financing, coordination and implementation of the relevant measures and programmes are handled largely by the Federal Ministry for Economic Cooperation and Development (BMZ) and its implementing agency, the Deutsche Gesellschaft für Technische Zusammenarbeit GmbH (GTZ).

The share of funds devoted to projects in the fields of environmental protection and resource conservation has been steadily increased and currently accounts for about one third of all bilateral development cooperation by the BMZ. A large proportion of these funds is used for climate protection measures.

Financial assistance

In order to help developing countries fulfil their obligations under the Framework Convention on Climate Change, take advantage of the resulting opportunities and integrate climate change adaptation measures in development strategies, financial assistance has been provided since 1992 for the convention's project “Climate Protection Programme for Developing Countries”. To date funds totalling 12.5 million EUR have been provided for the programme.

Payments by the Federal Government to multilateral bodies in the context of public development cooperation and the EU totalled 2,100.3 million EUR in 1999 (of which EU: 1 million EUR), 2,542.8 million EUR in 2000, 2,385.2 million EUR in 2001, 2,118.6 million EUR in 2002, and 2,411.3 million EUR in 2003. However, it is not yet possible to show separately the proportion of this accounted for by payments by international organisations relating to the objectives of the Framework Convention on Climate Change.

In addition to bilateral cooperation, the Federal Government makes significant financial and substantive contributions to climate protection in developing countries at

a multilateral level, especially through the Global Environmental Facility (GEF). With a share of around 11%, Germany is the third-largest donor to the FCCC funding mechanism for replenishing the GEF. In the third replenishment of the GEF (period up to 2006) this resulted in a figure of 263.67 million USD (283.36 million EUR).

Germany has contributed 15 million USD to the “Least Developed Country Fund”.

In addition to the regular programmes, the Federal Government provides food and emergency aid as part of its emergency and disaster assistance. It donated 124.04 million EUR for this purpose in 2003, and 135.0 million EUR in 2004. To this must be added many millions in donations made via non-governmental organisations as emergency aid to developing countries.

Technology transfer

The Federal Government sees the main focus of its climate-related development policy measures in no-regret or win-win measures. This means projects that not only improve economic efficiency through cost savings due to lower consumption of energy and raw materials, but also minimise environmental burdens and especially negative climate impacts by reducing emissions, wastewater or waste. Successful climate protection measures should have both local and global benefits. For example, small distributed photovoltaic units in sunshine-rich countries or efficiency improvements in existing power plants can contribute to climate protection by reducing emissions, improve local air quality, provide the rural and urban population with inexpensive electricity and reduce consumption of fuel wood, thereby helping to conserve areas of woodland.

Joint measures devised in cooperation with the partner countries relate to sectors which, according to Article 4.1.c of the Framework Convention on Climate Change, are of special significance for the reduction of greenhouse gas emissions: energy, waste management, transport, industry, agriculture and forestry. Although there are as yet few cases where one can calculate exactly how many tonnes of greenhouse gases are saved by individual projects in the field of bilateral development cooperation, there are many projects that serve to advance the goals of the Framework Convention on Climate Change. These include projects in the renewable energy field such as wind power, small-scale hydro power, use of biogas and solar cookers, the rehabilitation of power plants, gas-steam power plants, efficient use of energy, transport, waste management, afforestation and forest conservation. The Federal Government presents regular reports on these projects.

Detailed information on the activities of the Federal Ministry for Economic Cooperation and Development and the GTZ can be found under <http://www.bmz.de/en/issues/Environment/informationen/index.html#Energy%20policy> , <http://www.gtz.de/en/themen/umwelt-infrastruktur/3958.htm> , and <http://www.gtz.de/en/themen/umwelt-infrastruktur/energie/879.htm> .

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