

Background briefing ONE YEAR "KYOTO" -- A HAPPY BIRTHDAY?

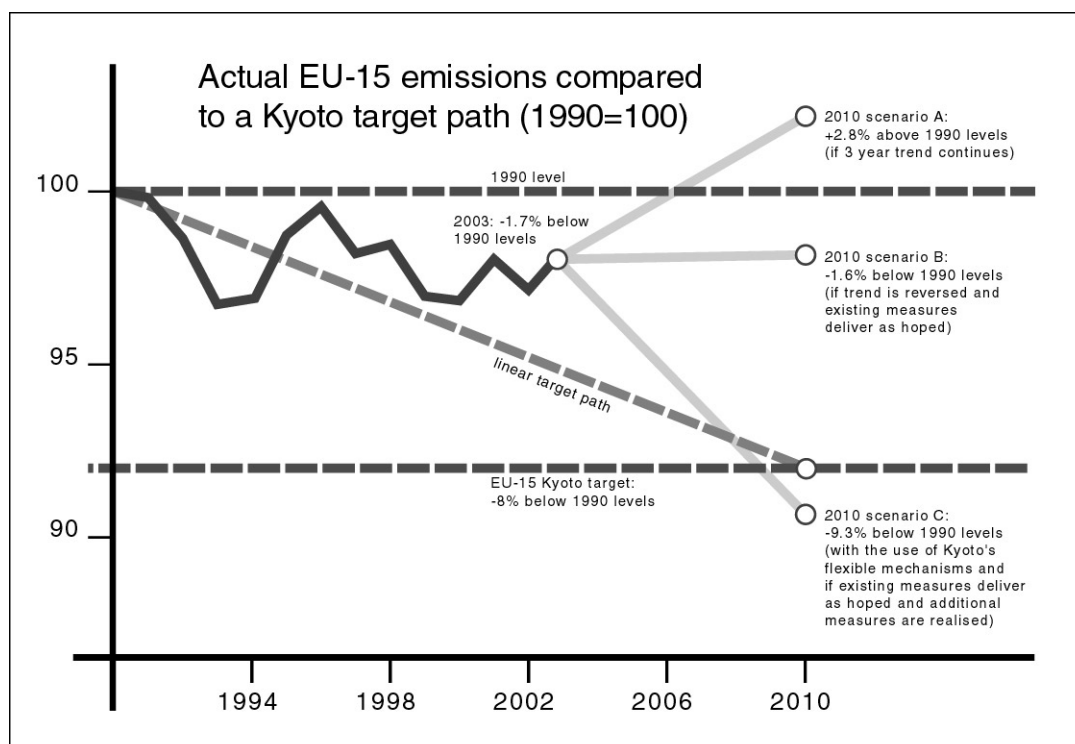
What the EU needs to do next to win the battle against global warming

1. What is the Kyoto Protocol?

The Kyoto Protocol, which entered into force on 16 February 2005, is the only legally binding international treaty to limit greenhouse gas emissions, mainly carbon dioxide (CO₂). Over the past decade, governments met regularly to negotiate the detailed rules of the Kyoto Protocol that was agreed in the Japanese city in 1997.

The Protocol sets legally binding limits on the greenhouse gas emissions for 40 industrialised countries that promised that their annual average greenhouse gas emissions 2008 to 2012 would be about 5% below their 1990 levels. The European Union with its then 15 Member States (EU-15) accepted in 1997 an overall reduction target of minus 8%, with some Member States reducing more, others less and some being allowed to increase their emissions. Most of the ten new Member States all have a reduction target of minus 8%.

The Kyoto Protocol allows countries to meet some of their obligations by either buying 'emission credits' from other countries that achieve more than required, or by investing in emission saving projects in other countries, including developing countries, where such savings can be



Source: "Greenhouse gas emission trends and projections in Europe 2005", European Environmental Agency, December 2005. Scenario A is a calculation based on the official data, looking at trends over the last 3 years.

achieved at lower cost. Developing countries do not have reduction targets under the Protocol, giving priority to their development needs and acknowledging that industrialised countries are responsible for most of the climate crisis.

In late 2005, governments agreed to formally launch negotiations for new commitments of industrialised countries for further greenhouse gas emission after 2012, when current provisions of the Kyoto Protocol end. These negotiations will gain full speed during 2006, with a first meeting of governments in May 2006 in Bonn, Germany.

2. Will Europe meet its obligations?

If current trends continue, Europe will not meet its Kyoto target. The European Commission reported that in 2003 emissions of the EU-15 were 1.7% below 1990 levels. They should have been at minus 5.2% -- if compared to a linear reduction path to meet the Kyoto Protocol's obligations. Also, if emission levels continue to develop as they did over the last three years, the EU-15 emissions in 2010 will be +2.8% above of what they were in 1990.

Official EU-15 predictions hope to achieve a reduction of 9.3% compared to 1990 levels¹ -- as a result of existing and future policies and the use of the Kyoto Protocol's 'flexible mechanisms'. From the old 15 EU Member States, only Germany, Sweden and the UK are likely to achieve their targets through action 'at home'. Others would have to buy their way out on the carbon markets. Also the additional measures needed to achieve the cuts have to be negotiated first -- and the EU Member States have a bad record of blocking meaningful measures to e.g. promote renewable energies or introduce mandatory efficiency standards for cars.

Jan Kowalzig, climate campaigner at Friends of the Earth: *"Usually, new policies are proposed with good intentions but end up rather lame. European governments too often take the narrow view of their industry's profit interests rather than that of avoiding catastrophic climate change."*

Much of the reductions achieved in Europe to date are the result of two lucky incidents: Most of the cuts in the UK result from replacing coal with the then cheaper and more efficient gas in the 1990s. Now coal has become cheaper, and energy companies are beginning to switch back. In Germany, slightly less than half of the emissions savings since 1990 are the result of the economic breakdown of Eastern Germany² in the context of the reunification.

Emission levels 2003 compared to Kyoto targets

	Change of annual emissions for 2008-2012 as required under Kyoto	On track to meet Kyoto? Actual 2003 emissions compared to base year
Austria	-13.0 %	+16.6 %
Belgium	-7.5 %	+0.6 %
Denmark	-21.0 %	+6.3 %
Finland	+0.0 %	+21.5 %
France	+0.0 %	-1.9 %
Germany	-21.0 %	-18.5 %
Greece	+25.0 %	+23.2 %
Ireland	+13.0 %	+25.2 %
Italy	-6.5 %	+11.6 %
Luxembourg	-28.0 %	-11.5 %
Netherlands	-6.0 %	+0.8 %
Portugal	+27.0 %	+36.7 %
Spain	+16.0 %	+40.6 %
Sweden	+4.0 %	-2.4 %
United Kingdom	-12.5 %	-13.3 %
Czech Republic	-8.0 %	-23.4 %
Estonia	-8.0 %	-50.8 %
Hungary	-6.0 %	-31.5 %
Latvia	-8.0 %	-58.5 %
Lithuania	-8.0 %	-66.2 %
Poland	-6.0 %	-32.1 %
Slovakia	-8.0 %	-27.9 %
Slovenia	-8.0 %	-2.9 %

¹ "Greenhouse gas emission trends and projections in Europe 2005", European Environmental Agency, December 2005, available at http://reports.eea.eu.int/eea_report_2005_8/en

² The German government usually states that 7-8 percentage points of the so far achieved 18% cuts since 1990 stem from the breakdown of Eastern Germany's industry.

Jan Kowalzig: *“We’ve been lucky to have the UK fuel switch and the transformation of Central and Eastern Europe, including the German reunification. But now there is no more free lunch. Rising emissions illustrate how European energy and climate policy is failing to set our economy on a highly efficient, low-carbon development path.”*

3. What Europe needs to do now

While the European Commission has noted that the benefits of avoiding catastrophic climate change will clearly outweigh the costs of abatement policies³, Europe has still not begun to move away from dirty energy to an era of renewable energies and highly efficient energy use.

At the upcoming EU Spring Summit (23-24 March 2006), European leaders plan to agree a New Energy Policy for Europe. The current debate focuses on securing long-term oil and gas imports and allowing a revival of nuclear power. Such a strategy does little more than locking taxpayers money and urgently needed investments in dirty and unsustainable energy systems for several decades. Friends of the Earth believes that a New sustainable Energy Policy for Europe should take the following crucial steps:

a. Make energy efficiency the central pillar of any EU energy policy

Policy makers in Europe continue to misinterpret the growing demand for energy services as a growing demand for energy, despite the widespread consensus among experts that the cheapest and most effective way to both reduce greenhouse gas emissions and securing supply will always be to reduce our huge demand for energy first.

The European Commission noted in its Green Book on Energy Efficiency that 20% of the EU’s current energy use could be saved by 2020 at no cost. The rate would be several times higher if external costs of conventional energy, such as increased health care costs as a result of air pollution or the costs of climate change, were part of the equation.

Jan Kowalzig: *“Any European energy policy that fails to cut down energy waste through increasing efficiency helps securing profits of the energy producing companies, but will do so at a high cost for society. Every year, Europe pays a hidden electricity bill of about 40-70 billion Euro. Policy makers might want to remember whose interests they should represent.”*

The few policies put in place are weak. The EU directive on the efficiency of buildings, for example, addresses only about a tenth of the total potential⁴ to save energy in the household sector, that accounts for 40% of European energy use. Another EU directive on the promotion of simultaneous generation of electricity and heat, neither sets targets nor standards but only requires EU Member States to study the issue. A recent embarrassing example is the proposed EU directive on energy end-use efficiency that, as a result of heavy resistance from European industry ministers, does little more than suggesting to continue with business-as-usual.

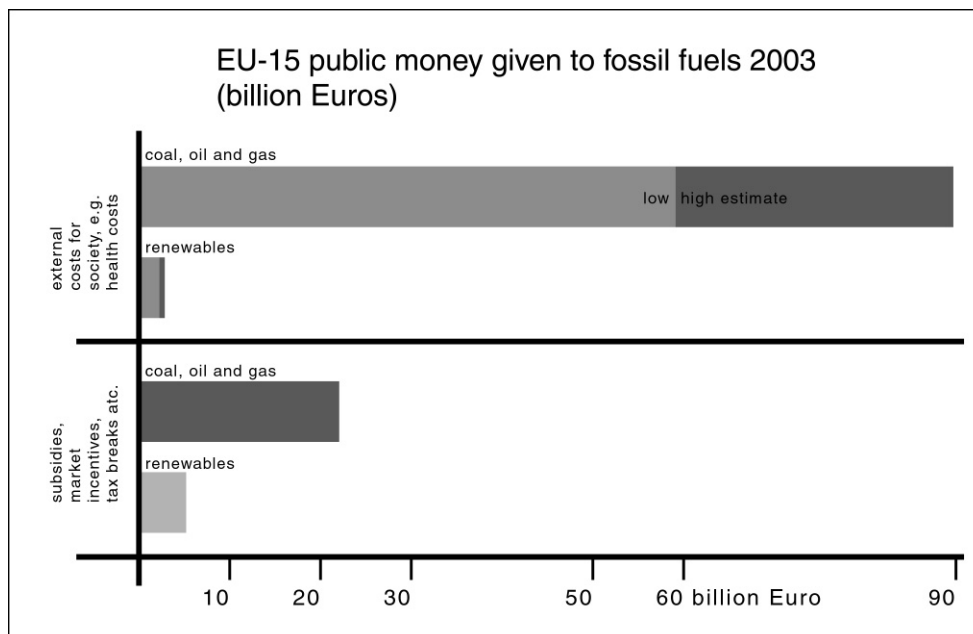
³ ‘Winning the Battle Against Global Climate Change’; European Commission, COM(2005) 35 final; February 2005; at http://www.europa.eu.int/comm/environment/vlimate/pdf/comm_en_050209.pdf

⁴ See “Mitigation of CO₂ - Emissions from the Building Stock. Beyond the EU Directive on the Energy Performance of Buildings”; EURACE 2003; at http://www.eurace.org/reports/R_160204.pdf

b. Produce 25% of primary energy use from renewable energy sources by 2020

Other than nuclear energy or fossil fuel based energy, renewable sources provide energy without costly and dangerous legacies for future generations, such as radioactive waste or climate change. Renewable energies currently constitute around 6% of the EU's total energy mix. Opponents often argue that renewable energy is a costly option and supporting this technology increases electricity costs. This is a myth. In Germany, for example, only 2.5% of the electricity costs for households are due to the feed-in law.⁵

Renewable energies are competing against a highly distorted market. In 2003, energy produced from coal, oil or gas was subsidised with €23.9 billion tax-payers money, while renewable energies received about €5.3 billion. In addition, conventional energies have hidden costs of about €40-70 billion annually that do not appear on the electricity bill. These costs have to be paid, e.g. through increased health care costs through air pollution and other environmental damages.



Source:
Energy Subsidies
in the European
Union: A brief
overview; EEA
2004

Wind power is increasingly becoming competitive against conventional energy, despite the unfavourable market distortions. Cumulative installed capacity in Europe grew by 18% over the last year to 40,500MW, and the wind industry's annual turnover reaches €6bn EUR⁶.

In an attempt to increase the use of renewable energies in Europe, the EU Renewables Directive sets voluntary targets for each EU Member State on the share of renewable energies in the energy mix, aiming a meeting 12% of Europe's primary energy demand from renewable sources by 2010. Europe will most likely achieve around 8-10%⁷.

⁵ Rising oil and gas prices, for example, have a much higher influence. Over the last year, prices for fossil fuel based energy have risen twice as much as prices for energy from renewable energies, which also means that without energy from sun, wind and water, electricity bills for private households would be higher. This is illustrated in Germany, where households can often choose between various electricity packages that include differing shares of renewable energy. Vattenfall Europe's customers in Berlin, for example, using the "Berlin Klassik" package (conventional energy) now face a 5.8% cost increase, while customers using the "Öko Pur" (renewable energy) get away with an 2.8% increase.

⁶ See also on the web site of the European Wind Energy Association at: http://www.ewea.org/fileadmin/ewea_documents/documents/publications/statistics/2005statistics.pdf

⁷ Calculations based on 'European Barometer of Renewable Energies'; Paris 2004; at http://www.energies-renouvelables.org/oberv-er/stat_baro/barobilan/barobilan4.pdf

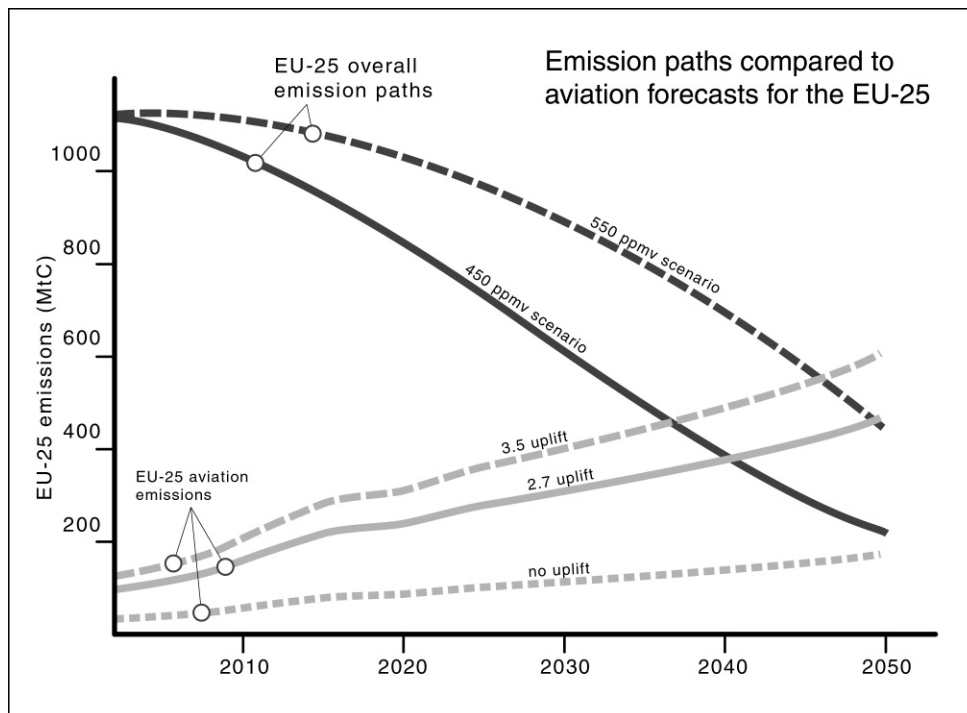
It is urgently needed that perverse subsidies are phased out and that the hidden costs of dirty energy are internalised into the price of the product. Europe should also set an ambitious and mandatory target for meeting 25% of its primary energy needs from renewable energies by 2020. Such a long-term target is crucial for energy businesses when planning investments.

c. Reverse emission trends in the transport sector

Transport remains one of the most problematic sectors of EU energy and climate policy. While emissions from all other sectors have gone down, absolute emissions from the transport sector grew by 29% between 1990 and 2003, constituting about a quarter of all EU greenhouse gas emissions⁸.

This comes as no surprise, since EU measures to cut emissions from the transport sector are almost completely lacking. Years ago the European Commission had planned to set binding rules on the efficiency of cars, but car manufacturers managed to get away with a weaker and only voluntary efficiency target of 140g CO₂ emissions per km by 2008 -- which they are going to miss⁹. Consequently, the European Commission should begin drafting binding legislation on car efficiency, based on best available technology and bringing down emissions to at least 120g CO₂ per km by 2010, as originally envisaged by the European Commission.

Jan Kowalzig: "80% of all European oil imports happen to power our cars. The easiest and cheapest strategy to reduce dependence on imports would be to cut down consumption, through increasing car efficiency and massively expanding the use of public transport. That's good for the economy and good for the climate."



Source: Growth scenarios for the EU and UK aviation. Contradictions with climate policy; Tyndall Centre for Climate Change Research; London 2005.

⁸ Annual European Community greenhouse gas inventory 1990 –2003 and inventory report 2005 plus annexes; European Environmental Agency; Copenhagen 2005. The transport emission data includes emission for international aviation and marine shipping, which are currently not covered by the Kyoto Protocol.

⁹ In 2003, cars were only 4% more efficient than they were a decade ago -- due to weight and engine power increases and the growing use of air-conditioning. Especially the latter is often not included in official figures. See also "Sense and Sustainability -- Smart thinking to restart European transport policy"; European Federation for Transport & Environment; Brussels 2004; <http://www.t-e.nu>

European air transport remains a sector of particular concern. Constantly growing emissions in the aviation sector will lead to the bizarre situation that the sector's emission would soon use up the entire emission budget of the EU, if it follows a downward emission path to meet its own objective of keeping temperature increase to below 2°C, in particular if a multiplier ("uplift" factor) is applied on air transport emissions, to account for the higher warming potential of emissions at high altitudes.

The European Commission aims to address the emissions in the aviation sector by integrating the sector in the European Emissions Trading Scheme. Friends of the Earth believes this can only be successful if the result of that exercise is to reverse emission growth in the aviation sector so that it contributes its share to achieve Kyoto and future requirements -- rather than to protect the sector from the necessary cuts.

d. Phase out expensive and dangerous nuclear energy

With growing awareness in Europe that climate change needs urgent action, the nuclear industry hopes to trigger a revival of its dangerous technology. They argue: nuclear power is emission free and helps securing the supply of energy. They do not say: nuclear accidents can still happen every day; there is yet a solution to be found for the long-term waste treatment and its sensational costs; and proliferation of nuclear material remains a serious risk for society.

Also the arguments the industry are wrong. Yes, nuclear power stations do not generate emissions during the electricity generation process itself. But over the entire life-cycle -- including uranium mining, transportation, plant construction and decommissioning -- nuclear power is not at all emissions free. And it is horrendously expensive: Every Euro spent on nuclear power could save ten times more emissions if it was invested in energy conservation measures -- thus also securing energy supply ten times cheaper¹⁰. Unless huge amounts of extra taxpayers money is channelled to nuclear power generation will not be able to compete on a level playing field with renewable energies.

Jan Kowalzig: "Nuclear power is financially insane. If governments turn a blind eye to the risks of disastrous accidents, long-term waste treatment or proliferation of nuclear material, they might at least look into the economics. Nuclear power had 50 years to prove itself -- and failed. It is high time that we finally send this technology into a museum."

e. Redirect public money to foster growth in clean energy industries

Every year, the European Union is spending billions of euros to directly or indirectly support dirty technologies or unsustainable developments. This happens not only, as outlined above, through direct or indirect subsidies given to fossil fuels or by allowing energy companies to externalise huge costs to society, but also through dedicated policies such as lending priorities of public banks. For example, between 1998 and 2003 the European Investment Bank -- the EU house bank -- has granted approximately €7.7 billion¹¹ loans to the transport sector in Central and Eastern Europe. Half of that

¹⁰ The high costs of nuclear power result from not only the costs of constructing and operating the plant, but also waste treatment and storage for thousands of years and the costs of decommissioning the plant at the end of its life-span. See "Nuclear power: economics and climate protection potential": Rocky Mountains Institute; January 2006; available at <http://www.rmi.org>

¹¹ Heading down dead ends. Transport sector financing in Central and Eastern Europe; Bankwatch 2004; available at http://www.bankwatch.org/publications/studies/2004/dead_ends-transport_study_09-04.pdf..

money was used to build roads, less than a fifth (17.5%) went into the railway sector, and urban public transport received 7.5%¹².

Similarly, the record of the EU regional policy on climate change has so far been a complete failure: the four countries, which have so far most benefited from the Structural and Cohesion Funds (Greece, Ireland, Portugal, Spain) have witnessed by far the greatest increases of greenhouse gas emissions in the EU. Unless funding priorities are massively shifted towards the three areas of energy efficiency, renewable energy and sustainable transport, the trend is likely to be repeated in the new Member States, which will now become the main recipients of the EU funds.

Furthermore, the EU's budget 2007-2013 is likely to direct the lion's share of public research money to go into nuclear energy. The current proposal splits the research budget into two chunks: €4.8 billion for nuclear power and €3 billion for all other energy technologies. The money allocated to nuclear power is dealt with under the Euratom treaty that is not subject to democratic control by the European Parliament nor does it have to 'compete' with other forms of energy¹³. What's more, the European Commission plans to use most of the non-nuclear research money to further research on Carbon Capture & Storage (CCS) rather than e.g. for renewable energies. Friends of the Earth believes the fossil fuel sector, already making record profits every year, has no need for public money for such research, contrary to the relatively young renewable energy sector that finds it difficult to compete against the already distorted market.

f. Ensure a strong next phase of the Kyoto Protocol

The meagre cuts of the Kyoto Protocol will not prevent catastrophic climate change. But the Kyoto architecture can serve as a framework for agreeing more ambitious emission cuts in the future.

There is increasing acceptance that while all levels of climate change will have destructive impacts, the threshold between *relatively acceptable* and *catastrophic* climate change corresponds to an increase of the average global temperature by no more than 2°C. At the 2005 EU Spring Summit, staying below 2°C warming was set as the central objective of EU energy & climate policy by the European Heads of State. When negotiating the post-2012 period, Europe must commit to future emission cuts that correspond to this objective, based on latest scientific findings. Respecting the 2°C threshold would require global emissions by 2050 would have to be half of what they were in 1990¹⁴. As industrialised countries have created most of the crisis, they will have to contribute most to achieve the required cuts: at least 30% by 2020 and 80% by 2050.

A viable global regime will also need to address growing emissions from developing countries such as China or India but do so with the principles of equity and fairness at its core. As a consequence for causing most of the climate crisis that no longer can bear high-emission development paths, industrialised countries will have to enable developing countries, through finance and technology transfer, to choose climate-friendly technologies to foster their urgently needed development.

¹² Online database of the European Investment Bank at <http://www.eib.org/projects/loans/regions/list.asp> and calculations from the CEE Bankwatch Network.

¹³ See also http://www.greens-efa.org/pdf/documents/greensefa_documents_111_en.pdf

¹⁴ Recent science suggests that in order to achieve the 2°C temperature target with reasonable certainty, concentration levels must peak below 500 ppm and then return below 400ppm, which would require global cuts of 50% by 2050. In contrast, a concentration of 550ppm, a figure that has been used as a rule-of-thumb in the past, has a 68% to 99% chance of exceeding the 2°C threshold. See: Malte Meinshausen, Swiss Federal Institute of Technology in Zurich: "On the Risk to Overshoot 2 °C"; <http://www.up.umnw.ethz.ch/~mmalte/simcap/data.html>