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# The new EU energy package is inadequate!

## A plea for a drastic yet exemplary change in climate policy

Climate change is the greatest danger confronting humanity in the 21st century. This is why we need the transition to energy supply that is extensively emission-free. This will only succeed if this enormous task is resolutely tackled and started up as quickly as possible.

On 10th January 2007, the European Commission introduced its communication "An Energy Policy for Europe". In it, emphasis is put on the need for a drastic reduction in worldwide levels of $CO_2$ and methane by 2050, and a plea is made for the European Union to commit itself to both long-term goals and a 20% reduction in greenhouse gas emissions by 2020 in relation to 1990 levels.

The Commission's proposals point in the right direction, yet they need to be more precisely defined in terms of the goals, though chiefly in relation to measures envisaged for realizing them. The EU should therefore spell out clearly how much of its energy consumption should be $CO_2$-free in 2020, 2030 and 2050, and from which sources its energy consumption will be fed.

Only through drastic changes in energy- and transport policy in Europe and most of all worldwide will it be possible for the about-turn to significant reductions in emissions to succeed. Otherwise, global emission of greenhouse gases will be double 1990 levels as early as 2030.

The transition to an extensively emission-free energy supply is technically possible. Yet it will take a long time and lead to higher energy prices. At the same time, Europe can be leading the way. It possesses the know-how for emission-free energy supply.

The European Union should pursue three avenues, combining compulsion and financially clear incentives:

- Significant rises in consumption tax on fossil-fuel energy, that is, revenue-neutral.
- Maximum utilisation of existing and unremitting further development of $CO_2$-free energy technology or alternative technology, in addition to mandatory standards for its implementation.
- Significant mandatory restrictions on maximum $CO_2$ emission levels by the three main perpetrators: power generation, transport and heating.

Since the EU's contribution of $CO_2$ is only about 15% in relation to the rapid development of other world regions, this means that all efforts made by the EU on its own will remain largely ineffective. It should therefore forge an "alliance for conserving world climate" with a multilateral coalition, at the earliest with the G8, i.e. with the largest emitters.

The proposed measures will meet with little popularity, yet in view of the urgency drastic action is necessary. Also, the transition to $CO_2$-free energy remains inevitable regardless of climate policy imperatives. The energy independence that grows in line with $CO_2$-free energy generation increases room for manoeuvre in foreign policy, thereby also creating room for manoeuvre for a truly independent foreign and security policy. This in turn can clearly bring pressure to bear in terms of climate policy.

## I. The hastening of global warming

Global warming is in full swing. Since the warm winter of 2006-07, this should have been noticed by every inhabitant of the northern hemisphere. The process that has been progressing slowly for thirty years has accelerated dramatically since the beginning of the century. Year by year, weather services have been recording new peak values in the Earth's temperature. The issue is not about a few coincidentally warm years, but a long-term trend.

* The working group "European Integration" of the EU office of the FES in Brussels has been in existence for over ten years. Members consist of experts from European institutions, federal ministries, representatives from *Länder*, associations and the scientific community.

As correctly ascertained by the *Intergovernmental Panel on Climate Change (IPCC)* in its recent report for the United Nations (UN), humans bear significant responsibility for the looming debacle. Within the space of a few decades, humans have been burning up the carbon embedded for over hundreds of millions of years in plant residue. Through this, annually increasing amounts of $CO_2$ have been released for one hundred and fifty years; the gas rises into the atmosphere to linger there for at least one hundred years. Since 1980 an unimaginable 500 billion tonnes or so have been released into the atmosphere. There, the gas acts like a filter that prevents the sun's rays that reach the Earth from escaping back into space. By 2050, the $CO_2$ stored in the atmosphere will have increased to at least 2,000 billion tonnes. This will be a result of an increase in human population to nine billion and an average emission quantity growing to at least four tons per inhabitant – as long as energy consumption is not dramatically reduced and predominantly $CO_2$-free energy is used.[1]

In view of such prospects, there can be only one sensible answer: carbon dioxide emissions into the atmosphere must be halted as quickly as possible. However, this means nothing apart from discontinuing further combustion of fossil fuels such as oil, gas and coal – in their forms hitherto. This is technically feasible, even if this means sweeping change concerning policy, the economy and society.

The prerequisite for this is the willingness of political elites worldwide to convince people to adopt more effective energy consumption and in another form – $CO_2$-free. This is a difficult undertaking, as certain habits and forms of dependency must be curtailed, such as the extreme mobility of goods and people, cheap energy and habitual squandering of this.

## II. Major barriers to rethinking

Why is it so difficult for people, ranging from the individual right up to the international community of states, to recognise global warming as the greatest threat and to act? The answer is multi-faceted, yet very simple:

Firstly, the individual is powerless. He alone hasn't the capacity to make a contribution to halting global warming. Of course, he can save a little power, go without his car more often, reduce the temperature in his flat by one degree, etc, yet reduction in demand for fossil fuels by the individual only makes sense if at least three billion people in the USA, China, India, Europe, Russia and Japan act likewise at the same time.

Secondly, the outcome will become apparent only after some time. There is no feedback, in more than one sense of the word. The individual does not feel the harmful effects of his own action because it is insignificant. The international community does not sufficiently recognize it as being a common problem because of the time delay and because of the consequences that differ from region to region. There is avoidance of facing up to what a rise in sea levels and in temperature means for life on Earth in 50-100 years' time. This would be highly disruptive to our present-day life and to our habits!

Thirdly, the individual state is just as powerless. Even at this level a campaign against $CO_2$ emissions will not bring about the desired effect at global level. The major emitters must convene to undertake joint action. So far this has failed because each state views its short-term interests as taking priority, and baulks at the political costs that effective action involves. This is where the UN is needed, yet will only be effective if all 190 member states pull together.

Fourthly, the market mechanism is failing. It expresses only the prevailing scarcity of a commodity, though not the "external costs" associated with consumption, such as $CO_2$ emissions and their cumulative damage to world climate. Oil, coal and gas are therefore too cheap. Consumption of fossil fuels would be lower and utilisation of alternative energy sources would be subject to significantly greater development if elements of the market price were also made up of "external costs".

Transition to $CO_2$-free energy is also mandatory regardless climactic imperatives, as fossil-fuel energy stored in the Earth is finite. With growing demand and a growing world population, resources will undoubtedly last only until the end of this century. The 22nd century will give us no other choice than a wholesale changeover to renewable energy.

After all, the prospect of increasing energy dependence on ever fewer potential supplier countries poses serious dangers to every state from a political aspect.

[1] In addition to CO2, methane (CH4) at 20% is also significantly responsible for global warming. It is generated by organic processes, in marshes, in rice cultivation or digestive processes of cattle. To reduce methane output, other means and instruments are required, though likewise a multilateral approach. The EU Commission should present proposals as rapidly as possible to this effect.

## III. Changing over to $CO_2$-free energy supply

So, what is to be done to keep global warming within bearable limits? The formula is simple and well-known. Energy must be used more sparingly and the introduction of $CO_2$-free energy generation must be hastened.

Half the energy consumed worldwide can be saved by consistent use of available technology or technology that is undergoing further development. This starts with power generation and stops with energy-saving bulbs, electrical appliances, heating appliances and cars.

Thanks to wind, water sun and biomass, it is possible to generate extensively $CO_2$-free energy today already. The proportion of nuclear power, being a part of this form of energy, varies in degree in the EU member states.

However, two simple reasons bar the way to this changeover. On the one hand, mineral oil, natural gas and coal are still significantly cheaper than alternative forms of energy. On the other hand, expenditure on energy amounts to just 10% of local income, where convenience frequently and plainly triumphs over the use of energy-saving methods or over alternative forms of power supply.

What is therefore required is a mix of compulsion and financially clear (negative) incentives in order to bring about a fundamental change in behaviour, and to invest in the potential for reducing $CO_2$ emissions.

## IV. The EU leading the way

The EU must summon up the strength to devise an effective climate policy, and to implement it with a level of conviction that will serve as an example to the rest of the world. Emitters such as China, India and developing countries, where there is a dramatic rise in energy consumption along with increasing development, will scrutinize the extent to which the EU keeps to its own policy ideals on climate and energy before they become involved with the Europeans in a climate alliance.

The EU has played a laudable pioneering role over the past twenty years. Thanks to the EU, there are now the first signs of a worldwide climate policy developing, chiefly through the Kyoto Protocol. Yet this is insufficient. The EU must become bolder, accelerate the tempo, and act more swiftly and effectively. They should concentrate their efforts to prevent $CO_2$ emissions in those three areas which are responsible for about three-quarters of $CO_2$ emissions: power generation, transport and heating.

On 10th January 2007, the EU Commission proposed to reduce its $CO_2$ emissions by 30% below 1990 levels by 2020, provided that the USA, China, Japan, Russia, India and other countries would pledge themselves to similar efforts. Otherwise, the outcome would be a 20% reduction unilaterally by the EU.

Such types of reduction targets expressed as percentages are becoming increasingly misleading, as they are based on information valid in 1990.[2] It is necessary to stipulate clearly that the structure of energy supply in Europe by 2100 will be $CO_2$-free and to set down positive interim goals for 2020, 2030 and 2050.[3]

This is an ambitious goal, which can only be achieved if EU climate policy becomes significantly more effective. It should utilize two instruments in a targeted manner to save energy and to provide incentives for investment and research for further development of alternative and $CO_2$-free energy generation:

- setting mandatory standards of consumption;
- a massive price hike of fossil-fuel energy through an energy tax as a fundamental incentive system for taking any kind of new direction in climate policy.

### 1. Mandatory standards for energy consumption

The EU should settle for the fewest technical standards and relatively few though mandatory requirements. This way, a quantum leap could succeed by which the EU sets an example for others.

#### *$CO_2$-free power generation by 2025!*

Setting the goal of $CO_2$-free power generation by 2025 may appear to be revolutionary. Yet this is not so

[2] Global $CO_2$ emissions will rise from 20 billion tonnes (1990) to 30 billion in 2010 and 40 billion in 2020. A 30% drop between 1990 and 2020 corresponds to only six billion tonnes. The volume of global emissions will therefore rise between now and 2020 by at least four billion tonnes instead of effectively dropping.

[3] Denmark and Sweden have already formulated their climate goals in a 'positive' vein. They both intend to become as independent of fossil fuel sources as they can. By 2025, Denmark intends to meet 30% of its energy needs from renewable resources.

by any means, given that almost 50% of power in the EU is already generated $CO_2$-free - from renewable energy and at present also from nuclear power to a still significant degree.

In order to realise this ambitious goal, the following steps must be taken:

- conversion of existing coal- or gas-fired power stations either to carbon separation or closing down of such plants;
- from around 2012 approval only of those power stations that generate $CO_2$-free power or their conversion with effect from 2020-25.

Power plant operators have the following options to adopt these defined policy goals and objectives:

- Erection of wind farms. Chiefly the member states with coastlines will profit from these. The resolution will trigger a boom in wind-farm construction and further reduce the costs of wind power.
- Importing $CO_2$-free power from other member states and third countries, such as solar power from North Africa. The realisation of a common EU market for power will make it more worthwhile for a number of EU states to import power than to generate it themselves.
- Accelerated development of safe processes for separation and storage of $CO_2$ with power generation from fossil fuels (sequestration).
- To achieve this, it will be necessary to hasten the most cost-effective and safest processes. A satisfactory technical solution is crucial to generation of $CO_2$-free power. Europe therefore has a compelling interest in taking on a leading role in developing the technology.

In the context of $CO_2$-free power generation, the issue of utilising nuclear power is also up for discussion, whether about prolonging the service lives of nuclear power plants or new-build nuclear power plants. Germany has devoted itself to opting out of this. In other member states such as France, Sweden or Belgium, the contribution made by nuclear power to energy- and power generation is proportionally significant. Yet overall, nuclear power makes up just three percent of worldwide power production, resulting effectively in a proportionally low effect on $CO_2$ emissions. In order to actually achieve an impact on climate, what would need to happen is a profligate boom in new-build power stations. This would be neither financially possible nor would uranium supplies be adequate to cover this. In addition, the programme would not find enough public support to the required extent.

### *$CO_2$-free heating by 2050!*

Consumption of heating oil and natural gas for buildings causes about half the $CO_2$ emissions in the EU. In its efforts to reduce emissions, the EU should therefore concentrate its attention primarily on this area.

The European Commission considers it possible to save almost one third of energy consumed in buildings by 2020 (though potential savings actually outstrip this figure hugely). With this goal, it has launched a series of programmes to implement stricter insulation standards for new and old buildings since 2002.

This approach is fundamentally correct: except it will take a very long time. At least five years go by from the time at which a standard is devised to its taking effect in all member states. Yet this is only the first step taken towards realisation.

More drastic measures are needed:

- From 2012, approval will be granted only to buildings of a certain size and to all public buildings if these no longer rely on heating from fossil fuels. This regulation is then to be extended progressively to all buildings. This is technically possible through a mix of perfect heat insulation, utilising sensible heat, solar panels in façades and roofs, heat pumps, etc. The EU will have to bring together these constituent parts as quickly as possible, though leave it to member states to pass their specific standards that do justice to climate.
- For old buildings, member states should enact strict standards for energy-efficient systems of heating and heat insulation, which must be fulfilled no later than 2025. The member states could grant bonuses for early renovation/modernisation.

### *Halving $CO_2$ emissions in transport by 2030!*

In the EU and worldwide, the transport sector is responsible for at least one quarter of $CO_2$ emissions. The worldwide increase in traffic will cause $CO_2$ emissions to continue rising in the future too.

Over the past twenty years, neither the USA nor the EU have made the necessary efforts to incorporate the transport sector in climate policy.

US consumption standards for cars are thirty years old. So far, the EU has refused to legislate standards for $CO_2$ emissions for vehicles. It has left it to industry to set voluntary standards. In 1998, European industry pledged to reduce its average car emissions to 140g/km by 2008, though this will not succeed. This is why $CO_2$ emissions from the transport sector have risen

in the EU between 1990 and 2004 by a staggering 23%.

It is therefore a matter of urgency to overhaul taxation and to drastically reduce $CO_2$ emissions from transport by the EU clearly defining goals and objectives. To achieve this, the EU cannot avoid setting down mandatory and credible climate-policy $CO_2$ emission levels when confronted by every kind of resistance of the automotive industry and its national lobby groups. Only in this way will the manufacturers concentrate their efforts on developing engines and vehicles with low $CO_2$ emissions.

The EU should strive to halve the average emissions of all vehicles on the road to 80g/km by 2030. Two parallel paths to achieve this are recommended:

- An obligation progressively and by compulsion to implement the addition of biofuels, which in 2020 will be 10%.
- Setting down a progressive decrease in emission limits for $CO_2$, beginning with 120g/km from 2012 and ending with 80g/km from 2030 (consumption with petrol/diesel of approx. 5.5 litres/100km or 4 litres).

Setting down mandatory EU emission standards for vehicles (including HGVs) will have worldwide consequences, as all important producer countries, chiefly Japan, the USA and South Korea will ally themselves to this. The EU should therefore come to a decision as quickly as possible, in order to give the automotive industry the opportunity to adapt to these trenchant changes in good time.

Because the conditions for biomass generation in Europe are not the best, and creating new agricultural protective interests is not allowed, import duty on biofuels should be fully or partially suspended as quickly as possible. [4]

### *$CO_2$-free flight from 2030!*

Air traffic currently contributes 3% of global $CO_2$ emissions, though this will continue to rise sharply along with the big increase in air traffic, overtaking other means of transport. There is also the increased effect on climate of aircraft exhaust at altitudes. It is therefore a matter of urgency to impose obligations on air traffic for the sake of climate protection. In view of the huge growth potential for air traffic and the lengthy implementation phases for innovation and new technology, the present time still offers the chance for timely intervention.

The EU put forward proposals for this at the end of 2006 for the first time. In the medium term it intends to make air travel within the EU as well as in most significant third countries a part of its system of $CO_2$ emission quotas and trading in emission certificates. This proposal is encountering fierce resistance by flight operators and the American government. This is to some extent justified, as flight operators are hardly in any position to reduce their $CO_2$ emissions.

The problem must be tackled by placing obligations on the manufacturers. At the same time as automotive manufacturers have emission standards imposed on them, this should also be implemented with aircraft manufacturers. Based on the virtual worldwide monopoly held by Boeing and Airbus, the outcome would even be felt directly worldwide.

The goal would be the development of $CO_2$-free fuel. To achieve this, manufacturers of turbines, aircraft and mineral oil companies under a European initiative must be brought around the table in order to set down a timetable within which changeover to $CO_2$-free aviation fuel could be possible. By 2030, this changeover would have to be capable of implementation for commercial air travel. The EU should begin as quickly as possible to win support from the American government for such an initiative.

In parallel, it is necessary for the EU to raise the issue of taxing air traffic. Air traffic is free of all indirect taxation worldwide, especially VAT and tax on mineral oil. This is a part of regulation spanning many decades and agreed between governments and flight operators. The operators should be subject to VAT like any other service provider. This is a mandate for preventing distortion in competition.

The EU can impose VAT duty on all EU domestic flights quickly and effortlessly. For international flights, an agreement needs to be made within the framework of the International Air Transport Association. Within this framework, tax on kerosene also needs to be resolved as a matter of urgency. Unilateral action on the part of the EU would undermine the competitiveness of European flight operators, and especially of European airports that function as 'turnstiles' for international air traffic.

### *Mandatory standards for households by 2020!*

Household appliances, from the light bulb via the refrigerator right up to hi-fi appliances harbour the potential for efficiency and energy-saving. Although this

[4] Import duty for ethanol is 45%, and for bio diesel 5%.

potential for lowering $CO_2$ emissions in relation to other large-scale consumers is slight, energy awareness must be raised at the level of the individual in households.

Electric light for example is still largely emitted by conventional bulbs, although for many years bulbs have been in existence that are many more times effective and more economical. Because their purchase price is considerably higher, many consumers adhere to conventional sources of light. Alternatively: many entertainment appliances have a standby switch, and do not turn off completely, thereby continually consuming power.

The EU should intervene in the market by way of regulation throughout Europe:

- from 2020, prohibit the marketing and import of conventional light bulbs, along the lines of the latest initiatives in Germany and Australia;
- enact regulations on standby operation, or rather, oblige producers to equip appliances with a power cut-out; introduce a mandatory standard EU energy label for electronic appliances at home and in the office. The label provides information about the appliance's power consumption and makes it easly comparable with the latest technical efficiency options.[5]

These measures would be mainly educational in character, as they would ultimately inculcate greater energy awareness in every household.

## 2. Raising taxes on fossil-fuel energy

New forms of energy technology and their development – whether for greater energy efficiency of renewable energy – will not be fully implemented as long as the price of fossil-fuel energy is not significantly higher than at current levels.

As the market price does not currently express the "external costs" of the effects of climate change associated with consumption, the market mechanism must be corrected by a corresponding tax on all fossil fuels. This does not run up against any technical problems. It would be sufficient for natural gas, oil and coal to have a consumption tax imposed at source or when importing these resources. This would not happen with an aim to generating fiscal income, but to make fossil-fuel energy more expensive, so that

- the consumer would be encouraged to consume less fossil-fuel energy;
- "green" energy can compete with fossil fuels without expensive subsidies;
- adequate incentives exist as a long-term cost-cutting strategy for promoting sustained investment in research and development in the field of energy technology.

For a long time, overhauling the tax system along environmental lines has been demanded by environmental organisations and those of a green persuasion. Yet nowhere has the overhaul gone much beyond diffident eco-taxes in some member states.

A concept for a European climate tax could appear as follows:

- The EU levies a "climate duty" on the import and production of oil, gas, coal, power and refinery products, the level of which is an approximate reflection of the various $CO_2$ emissions of the type of energy in question.
- The aim of the tax is to double the price of fossil-fuel energy in the EU. Concerning crude oil, this could for example be at a level inclusive of tax of at least $100 a barrel. The rate of tax is regularly adapted in line with price trends on the world market. The higher the price on the world market, the lower the tax can be, and vice versa.
- The tax must be revenue neutral. It flows to member states; these lower, as a compensation, the rates of multiple other taxes, most of all income tax on lower incomes and VAT, in order to provide relief for low earners.
- The tax is introduced in increments in order to make adaptation easy. What is important is establishing the goal and the time span for introduction. It should be possible to fully implement this in the EU within ten years, i.e. no later than 2020.
- With the implementation of an EU-standard climate tax, the system of $CO_2$ emissions quotas (and carbon-certificate trading) would be abolished. It would also replace the numerous consumer taxes on energy and transport at national level.

The deciding factor is the expectation of at least a doubling of energy prices with investors and consumers in order to influence their investment and purchase

[5] The current EU energy label indicating consumption levels A-G applies only to household appliances such as refrigerators, washing machines and the like. Another label applies to office appliances.

decisions.[6] With such a climate tax, the EU would only anticipate the high increase in oil prices over the next two decades regarded as inevitable by economists.

There are chiefly two objections to a climate policy tax reform that are put forward:

Firstly, like any measure of taxation policy in the EU it requires the unanimity of all member states, and its resolution is viewed as problematic because of the feared impact on competition policy in the member states. Nevertheless, the EU Commission should challenge the member states. The dangers for Europe arising from climate change demand unconventional measures, resulting in a chance that the member states might ultimately be convinced of a simple and clear concept. [7]

Secondly, making fossil-fuel energy more expensive in the EU adversely affects the competitiveness of European industry. This argument is highly exaggerated, as the price of energy even for an average industrial concern is by far no longer as crucial as it was a few decades ago. It places a burden on production costs of most industrial products by less than 10%. This is the only reason why European industry is in the position to compete at international level, although competitors, mostly those in the USA, are able meet their energy needs much more cheaply.

A doubling in price of fossil-fuel energy would seriously affect only a few energy-intensive industrial sectors, such as petro-chemicals, aluminium, steel, metallurgy, cement, fertilizers and paper. However, these sectors would be given substantial relief, because the EU would have to dispense with setting $CO_2$ emission quotas at the same time as it would introduce the climate tax.[8] If necessary over and above this, the EU could introduce a compensatory levy in favour of some energy-intensive products.

Overall, the system could function like a sales tax, which means that the climate tax applies within the EU. It is exempt for export products (= "export subsidy" at the level of climate tax) and imports in the EU would be subject to climate tax in line with their $CO_2$ balance. In addition to the effect on the domestic market, the EU would in this way export its climate policy indirectly, as manufacturers in third countries would be encouraged to keep their $CO_2$ balance low in order to compete with prices in the internal market of the EU. This would increase the EU's chances for convincing their most important trading partners of the usefulness of a worldwide high consumption tax on fossil fuels, with a weakening of opposition by EU member states in the Council when approving a climate tax.

Those experiencing a greater impact from a "climate tax" would not be industrial concerns but households and service providers, chiefly in the transport sector. They account for more than 50% of energy consumption, with only one quarter for industry. However, households would be granted relief as defined by revenue neutrality on climate tax elsewhere, chiefly with income tax for low earners.

Concerning long-term economic policy, it is in the interests of Europe to hasten the change in industrial structure by bringing forward a rise in energy prices. Only through negative financial incentives will enough pressure arise to introduce energy-saving and alternative forms of technology for bringing about the consumption levels indicated above.

In this context, the EU and its member states must perceive not only their pioneering role in reducing $CO_2$ emissions, but provide rigorous support to this process through strengthening research and development in the field of energy technology. This way, the EU at international level can not only become a model of actual reduction in its emissions, but also lead the way in high-quality, forward-looking innovation and technology, which will become subject to ever increasing global demand.

[6] The significance of the price of oil for investment decisions has been shown by the worldwide investment boom in renewable energy – chiefly wind power and biomass - since the tripling of the price of oil in 2004-05. It was the combination of high oil prices with guaranteed power prices that sparked off this boom.

[7] The EU Commission failed with a similar tax concept at the beginning of the 1990s. At the time it wanted to introduce a carbon tax differentiated according to coal, oil, natural gas, etc, also contemplating in this way stockpiling EU-internal revenue. The concept of a "climate tax" is significantly less complicated in nature. Most of all, the field of climate policy has since undergone radical change.

[8] This system has proved to be rather ineffective. The administration is top-heavy. In addition, it has led to different levels of burdens amongst member states and industrial sub sectors. Most of all, it has placed the burden of adapting to lower $CO_2$ emissions solely on the shoulders of the power generation sector and energy-intensive industry. A standard "climate tax" levied on all fossil fuels has a much broader impact, and is thus more sustainable. Most of all, it is simpler to manage.

## V. An alliance for safeguarding the world climate

The Kyoto Protocol is a poor model on which to build an effective global climate policy. Negotiations with over 190 participating states under the umbrella of the UN were extremely complicated, and accordingly lengthy. Without the fervent commitment of the EU they would have foundered. The content is a "lame compromise", with the wording largely lacking in relevance. Only one third of the participants in the negotiations ultimately accepted responsibility for reducing $CO_2$ emissions. What is lacking is effective control over honouring commitments.

This is how valuable years have been lost in lowering $CO_2$ emissions. Because only a few countries have accepted obligations to reduce by a mere 5% average over 20 years, the time span being 1990 to 2010, a sharp increase in global emissions of about 25% cannot be ruled out.

The EU should therefore take action for a radical fresh start with the largest $CO_2$ emitters. Even if the USA, China, Russia, Japan and India alone are responsible for three quarters of worldwide $CO_2$ emissions, the climate coalition coming into being at the earliest will be made up of the EU27 and G8 states, i.e. the EU27 together with the USA, Russia, Japan and Canada. Once this group is unanimous about joint action against global warming, and in so doing takes on a pioneering role, even India and China will sooner or later be unable to break free from this pressure. They can then be brought on board by a second step being taken.

During further steps, other significant emitters such as the Ukraine, Australia, Brazil, the Gulf States, and South Africa, among others, could be included. If the coalition partners succeed in driving the pegs home on climate- and energy policy, then the developing countries, with as yet relatively low energy consumption and $CO_2$ emissions can be committed to achieving climate targets in the long run.

Content-wise, agreement should be reached on the following:

- By 2100, stemming the rise in global temperature to 2° maximum.
- By 2050, $CO_2$-free generation of 50% of energy consumed.
- By 2100, generation of 95% of energy from $CO_2$-free sources – wind, solar power, geothermal sources, biomass, wave power, nuclear fusion.
- By 2030, the partners should concentrate on three key points:
  - strict technical standards for greater energy efficiency, chiefly in cars: $CO_2$ emissions of 80g/km maximum
  - compulsory 10% addition of biofuels
  - $CO_2$-free power generation.

Because it will be difficult to get all coalition partners (EU27 and G8) to commit to an identical catalogue of measures and instruments, they should present their "climate strategy" to the other partners and give them the opportunity to compare notes on experience.

In the interests of optimum efficacy, ongoing exchange about research programmes is indispensable. As far as possible, private and public research programmes should be open to all partners and results be made accessible to all others.

Furthermore, it is necessary for all partners to agree a code of conduct for all foreign investment in the energy sector, and in it set down equal treatment in law and taxation in addition to protection against nationalization.

Finally, the partners should provide each other with information about taxation of fossil-fuel energy. It would be ideal to obtain agreement on a "climate tax". If this is not successful, consideration could at least be given to subjecting road and air travel to high excise duty.

Where the partners have a preference for emission quotas and emissions trading, rules need to be established as to whether and to what extent climate-friendly investment in partner countries should be given consideration.

In contrast to the approach of the Kyoto Protocol hitherto, an "alliance for sustaining world climate" with only a few participants initially offers crucial advantages:

- Each participant feels responsible for ensuring that an agreement is reached. This turns into a kind of solidarity, an "esprit de corps".
- Activity centres around a small circle of politicians and experts who know each other, and are therefore able to work in a more open and informal way than UN committees.
- Progress is quicker, work is participatory, and modern communication methods are used.

- It is possible to work on a number of partial aspects simultaneously and at various levels (experts, ambassadors, ministers, heads of state).
- For the Kyoto opponents, this way offers the chance to break free from the unpopular protocol without losing face. This is a crucial argument for a new approach to methods.

## VI. A problematic undertaking

In order to set this alliance in motion, it is necessary for the EU first of all to adopt its strategy in early summer 2007.

Secondly, the EU should establish contact with the proposed coalition partners in order to win them over to a pragmatic solution. The EU will only be able to implement a climate policy internally if it succeeds in encouraging the USA, Russia and Japan, and gradually also China and India, to espouse an active climate policy. Much emphasis of EU foreign policy must be focused on swiftly appointing an internationally famous personality with experience in climate policy as a "Special Ambassador for Climate Policy". The ambassador's task would be to win over the most prominent emitters of greenhouse gases for a common and committed climate policy.

Thirdly, the EU should declare its willingness to support China, India and Russia when working out their climate strategies from a technological aspect. As defined by its pioneering role, it has the necessary means and the technical and innovative expertise.

It will be extremely difficult to achieve a 30% reduction in EU carbon dioxide emissions by the year 2020. This will not happen without many more drastic measures being taken than hitherto, especially in transport. To this end, a revenue-neutral levying of energy tax should no longer remain taboo.

The EU will only succeed in its climate policy if they summon up the political will to convince all those concerned of the need for inconvenient measures. To date, too little has been done.

In parallel with this, there must be a fundamental shift in awareness and behaviour when it comes to energy consumption. The foundations for this should be laid during school years and further education.