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Test Case Energy

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Climate change and energy policies are increasingly becoming dominant issues in European policymaking, and public awareness of what is at stake has never been more pronounced. This constitutes a great opportunity for action. The time has come for the EU to embark on a coherent internal and external strategy shift. Five specific requirements are to be met.

Energy Provision Difficulties

In the past Western economic success was to a large extent based on unimpeded access to relatively inexpensive fossil fuels. This is no longer the case. For a whole host of reasons Europe must in future pursue a different kind of energy policy:

• The demand for oil and gas has reached the point where it exceeds the increasingly scarce supply. The global economic upturn, coupled with a swift upsurge in demand from China and India, has driven oil and gas prices to record levels. A barrel of oil currently costs about US$ 70. In 1990 the price per barrel was still as low as US$ 20.

Whereas wealthy countries can still pay these prices, developing countries cannot. Certain states in Africa spend more than half of their small GDPs on energy. This money is available neither for the construction of urgently needed infrastructure, nor for education, nor for health care. High energy prices make it impossible to close the development gap, and as a result the early integration of certain countries into the global economy seems more and more unlikely.

• Fossil fuels are finite. Estimates suggest that in the case of oil the maximum production levels have already been reached. The proven reserves in the case of crude oil amount to 1,292.936 billion barrels and in the case of gas to 176,389.66 trillion cubic metres. At current energy consumption levels these resources will last until 2040 (oil) or 2060 (gas).

The high oil and gas prices make it increasingly profitable to drill in remote areas and to use ever more sophisticated technology. However, the expansion of production areas can at best do no more than to defer the inevitable to a later date. And it has far-reaching consequences. A foretaste of what is to come is the recent race for the Arctic. Some people may simply find it amusing that, as in the days of the Klondike gold rush, Russia is trying to stake out its claims by placing a titanium flag on the seabed. They will be brought back to earth with a jolt as soon as international relations begin to be marred by new conflicts emanating from claims to sovereignty over the continental shelf.

• Oil and gas belong to a minority. The reserves are so unevenly distributed that the vast majority of states have to import these resources. The EU member states import 57 per cent of the natural gas and 82 per cent of the oil they consume. The U.S., the world's largest consumer of energy, imports about 700 million tons of oil, followed by Europe, which imports 650 million tons. Moreover, China's hunger for energy is so great that it is now the second-largest consumer of energy. Its oil consumption currently amounts to about 200 million tons.

It is more and more likely that there will be distribution struggles to secure ever scarcer resources. International standards which have been established with a great deal of difficulty are simply being ignored. For example, China, in its energy and Africa policies, is not interested in whether or not Sudan is trampling on human rights. It is simply concerned to secure an exclusive share of the local energy cake.

• The energy-producing countries either subscribe to democracy and the market economy in a lukewarm manner, or not at all. This makes the dependence of the consumer states even more problematical. Thus the world's largest oil reserves are located in the Middle East one of most unstable and conflict-ridden regions on earth. It is an area where a disruption of oil supplies could occur at any time.

Another problem is the fact that in many energy-producing countries, the energy corporations are often state-owned entities. Their decisions are not only dictated by market forces. When Gazprom recently stopped supplies reaching Ukraine, Belarus and Georgia, the issue was not only higher gas prices. It was also a new way of expressing Russian self-confidence. Gas had become a way of exerting political pressure.

"Problematic: Energy Corporations are often state-owned entities"

• Sourcing energy from coal, oil and gas exacerbates climate change. Ever since the publication of the British Stern Review, the misguided energy policies of the industrialized states, which are now being repeated in a disastrous manner in the booming areas of Asia, have had a price tag put on them. It is estimated that it will cost up to 20% of global GDP unless decisive action is taken soon to reverse the trend.

Climate change contains the seeds of new tensions and conflicts. Persistent drought and the concomitant increase in flooding will increase migratory pressure from Africa (and from parts of Asia) to Europe. Conflicts about water are a foregone conclusion in the Middle East. The decrease in the available arable land and the concomitant growth of the global population is leading to another set of potential conflicts. The consequences of this as far as Europe is concerned are still difficult to assess.

REQUIREMENT I

Separating growth and energy consumption

The problems associated with energy consumption cannot be solved on a national level. States which are trying to do this will get nowhere. Similarly, the diversification of energy supplies cannot solve the problem either, since it is ineffective with regard to the crucial points. Oil and gas are finite resources which more and more countries wish to procure.

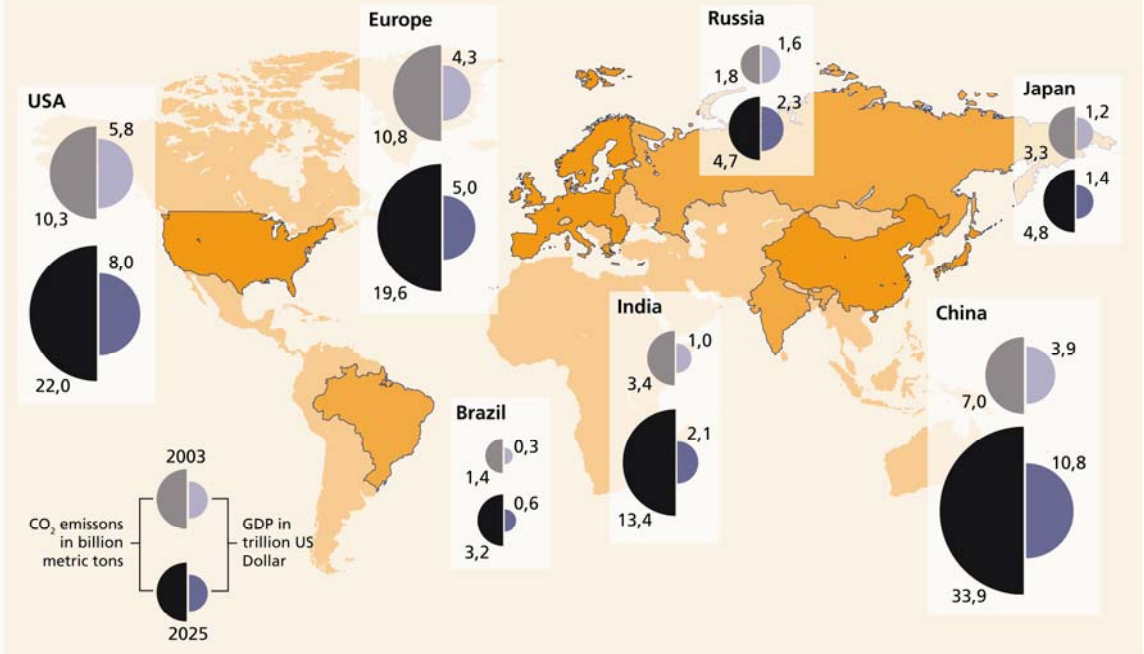
Since the Europeans do not wish to (and in fact cannot) exclude other regions from growth and modernization in order to protect finite energy resources and the global climate, they will have to do three things. First, they must do what they can to ensure that in the booming industrial areas, especially in Asia, economic growth is separated step by step from energy consumption. Secondly, they must help to lay the foundations for a new energy-friendly and environmentally friendly economic policy in the developing areas in Africa, so that the mistakes of their own industrialization are not repeated. And thirdly, the Europeans themselves must display greater determination with regard to the ongoing separation of growth and energy consumption by instituting a common and goal-oriented EU research and energy policy.

In the case of the third step in particular the potential is enormous. It reaches from the greater use of cogeneration (combined heat and power) to improved insulation, energy-saving electrical devices, and internal combustion engines with direct injection to the development and greater utilization of renewable energy sources.

Energy saving and energy efficiency are virtually unknown in the energy-producing states. Oil and gas have hitherto been wasted because the prices have been lower than those on the global market. In Russia, for example, this means that there is clearly less room for manoeuvre when it comes to profiting from increasing internal and external demand. With the technical expertise at its disposal, the EU would make an ideal partner, and would thus be performing a responsible task.

ECONOMY AND ENERGY CONSUMPTION

Proportion of GDP to CO_2 emissions, 2003/2025



Source: US Energy Information Administration: International Energy Outlook 2007

REQUIREMENT II

Restructuring the EU budget

The EU could do much more than this. By lowering and reallocating agricultural subsidies, it would acquire formidable financial resources with which to fund its research policy, and it would continue to be a global leader in the development of alternative sources of energy. In this way it could in future provide European industry with some outstanding opportunities. This is especially true of the development of hydrogen-based technology. This is currently being tested in the ITER fusion research reactor in Cadarache in France. On the other hand, hydrogen motors and the hydrogen/oxygen fuel cell constitute two potential ways of shifting away from the fossil fuel economy.

The financial resources no longer assigned to the agricultural budget could help the member states to implement agreed European climate change targets. For example, they could be used to fund measures designed to increase energy efficiency, and for alternative energy projects. Is there any reason why the profound solidarity displayed for decades by the member states in order to stabilize the agricultural sector should not be in evidence in future when it comes to securing our energy supplies?

As the most important donor of development aid, the EU can also insist on the implementation of climate change measures and the need for energy security in the developing countries. At present development cooperation is already subject to a set of specific conditions. Aid is increasingly being tied to compliance with certain norms. It is no doubt important to insist on respect for human rights and good governance. However, it would be equally important in the case of subsidized infrastructure projects to discuss the introduction of energy security and climate change measures. The EU Energy Initiative for Poverty Eradication and Sustainable Development thus merely constitutes a starting point which needs to be followed up by other steps. Subsidizing alternative energy projects in such countries would also be of benefit to European industry.

REQUIREMENT III

Creating European standards

At the Brussels summit in June 2007 the EU made far-reaching decisions relating to its future climate change and energy policies. It is of crucial importance for the EU to define common standards for more energy efficiency as soon as possible. An Action Plan devoted to this subject will first be finalized early in 2010. However, manufacturers need uniform regulations in order to develop new energy-saving and climate-friendly technologies without undue delay. In order to acquire this business, the EU must create the requisite preconditions in the internal market. Manufacturers also need clear-cut guidelines. Why not think about an EU-wide tempo limit, or defined permissible carbon dioxide emissions from motor vehicles?

If the EU were to reach agreement on common standards, there is a good chance that these could then be introduced on the international level. The world's manufacturers take their cue from Europe's purchasing power. If it is possible to stop the import of potentially harmful toys from China, it should also be possible to insist on high energy-saving norms for imported electrical devices. A German ban on stand-by functions would make it possible to shut down a medium-sized power station.

Every technology which helps to save energy will also be of vital significance for China and India in the near future. At present the two countries may not yet be prepared to embark on a change of direction, since it might harm their economies. In China a sudden end to growth could well lead to a situation where the whole political system is called into question. However, high oil and gas prices and the population's growing demand for a higher standard

of living will soon make it imperative to steer in a different direction.

REQUIREMENT IV

Unanimity and market liberalization

Despite public pronouncements to the contrary, there is little unanimity in the EU when it comes to energy issues. This engenders a credibility gap, since the member states still tend to approach energy problems on the basis of the idea that charity begins at home. It is difficult to interpret in any other way the various agreements concerning pipelines and gas supplies concluded in the recent past by Germany and Russia, or Hungary and Italy and Russia. They have often been to the detriment of other member states, have jeopardized certain European norms, or constituted a threat to joint EU projects such as the Nabucco pipeline. The sale of a French nuclear power plant to Libya should also be seen in this context.

For this reason the EU should proceed to liberalize its own energy market, even in the face of increasing internal resistance. Here the European Commission deserves all the support it can get. The internal market also needs to be opened up for foreign direct investment.

If European markets are opened up for foreign investors, the introduction of golden shares could alleviate anxieties about allowing key European industries to pass into the hands of problematical state-owned entities. However, energy security cannot be improved by excluding producers of natural resources from supply networks and retail activities.

REQUIREMENT V

International energy management

By setting a good example with its standards and a liberalized energy market, the EU will gain credibility and negotiating clout. In the forthcoming negotiations on a Kyoto protocol follow-up agreement on the reduction of carbon dioxide emissions it will need both in order to convince other states that its climate policy goals are not a Trojan horse. Past attempts to make progress in this area have come to grief primarily as a result of the suspicions harboured by the developing countries, which fear that the West's climate change policy merely exists to give it a one-sided competitive advantage and to exclude the rest of the world from growth and progress.

Yet the EU will also find credibility useful in its dealings with energy-producing countries. If it wishes to avert the looming energy crisis, it must encourage producers and give them the feeling that it makes sense to proceed with new investments. Estimates suggest that by the year 2030 the global use of fossil fuels will have increased by about 85 per cent. The investments needed for the discovery and exploitation of new oil and gas reserves and the associated transportation systems amount to US $ 20 trillion. Few of the countries with natural resources would be prepared to embark on investments of this magnitude if European consumers were to give them the feeling that they were primarily on the look-out for alternatives in order to diversify or reduce their energy requirements.

Strategic partnerships between the EU and the energy-producing countries are an excellent way of achieving greater transparency and of promoting confidence-building between the players–as long as they are based on multilateral agreements, and not on bilateral ones. Otherwise, as the agreements of certain EU member states with Russia demonstrate, there will be a danger that a familiar pattern of protecting power and interests will reappear. However, in the past this has tended to exacerbate conflicts and not to reduce them. In the final analysis exclusive EU relations with Russia or Central Asia cannot prevent other countries from entering into such exclusive relationships. But does Europe really want China to establish an energy partnership of this kind with Iran and Pakistan?

In order to prevent zero sum games between new energy blocs, relations between producers and consumers should thus be placed on a completely new multilateral basis. What is needed is a kind of energy management that is both international and co-operational. This may seem like a tall order. However, there is no time like the present, and no one is more suited to making such a move with a certain amount of credibility than the EU. Its credentials are impeccable. In the final analysis its own history constitutes the best example of the fact that economic success is possible on the basis of binding legal regulations.

Such a regime is also long overdue when it comes to confidence-building between consumers. It might be a way of toning down the global competition for finite resources, and, in the event of an energy crisis, it could reduce the tension in the markets and in international relations.

"Does the EU really want China to establish an energy partnership with Iran and Pakistan?"

However, there is still no framework within which the OECD states and the developing countries can discuss these issues. The members of the International Energy Agency (IEA), contrary to what the name suggests, are largely the same as those of the OECD. The IEA was founded as a consumer's association after the first oil price shock in 1974, and has had no more than mixed success. When there have been shortages and sudden price hikes, it has proved possible only to a certain extent to persuade members to refrain from exacerbating the crisis by engaging in panic buying. Furthermore, the question arises of whether in future the IEA's strategic oil reserves will be sufficient if India and China, whenever there are shortages, will buy anything they can lay their hands on.

The EU should do everything it can to incorporate China, India and other Asian countries into a common system. These states must be convinced that, with regard to the distribution of energy in a time of crisis, their interests will be taken into account in an appropriate manner. The Energy Charter treaty, which was launched in 1991 as an EU initiative, could form the basis for further action in conjunction with aspects of the International Energy Agency.

In the final analysis most countries wish to see functioning energy markets, an end to distorted competition, information security and secure delivery routes, and, last but not least, the development of alternative energy sources.

Seizing the opportunity

If energy security signifies the establishment of an atmosphere of trust between producers and consumers and among consumers themselves, then the EU seems to be predestined for the task. In practice the goal has not yet been attained. If it were to materialize, it could provide a global model for a path leading to the separation of economic growth and energy consumption.

There are positive signs that a coherent European energy policy of this kind is beginning to emerge. The European electorate has never been more receptive to the subject of climate change. Since climate change and energy policies are merely two sides of one coin, any policy designed to deal with climate change also makes a contribution to energy security. It reduces the tensions which derive from the paucity of energy resources. And at the same time it also ensures that there are no new tensions as a result of climate change.

Perhaps the time is not yet ripe for a project on the scale of a World Energy Agency. However, the EU should do whatever it can with the resources at its disposal and should support convincing and effective multilateral solutions in all the international and regional forums. There is a need for political foresight - that is what EU citizens expect.

Further Reading:

Bertelsmann Stiftung, Europa im Wettlauf um Öl und Gas. Leitlinien einer europäischen Energieaußenpolitik, Gütersloh, Mai 2007.

Lars Hendrik Röller, Juan Delgado and Hans W. Friederiszick, Energy: Choices for Europe, Bruegel Blueprint Series, Brussels, 2007.

Nicholas Stern, The Economics of Climate Change. The Stern Review, Cambridge University Press, 2007.

Institut Montaigne, What energy policy for the European Union? Report, March 2007.

Kristina Notz, Energie für Europa - Im Spannungsfeld von Sicherheit, Wettbewerb und Nachhaltigkeit, C·A·P Aktuell, Vol. 5, München, August 2006.

Florian Baumann, Klimafreundliches Brüssel? Die neue EU-Energiepolitik, C·A·P Aktuell, Vol. 5, München, März 2007.

Commission of the European Communities, Green Paper. A European Strategy for Sustainable, Competitive and Secure Energy, Brussels, 8.3.2006 COM (2006) 105 final.

Communication from the Commission to the European Council, External energy relations - from principles to action, Brussels, 12.10.2006 COM (2006) 590 final.

Communication from the Commission to the European Council and the European Parliament, An Energy Policy for Europe, Brüssel, 10.1.2007, COM (2007) 1 final.

Responsible

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