

THE EXTERNAL ENERGY POLICY OF THE EUROPEAN UNION

GOUVERNANCE EUROPÉENNE ET GÉOPOLITIQUE DE L'ÉNERGIE

3

Edited by Jacques LESOURNE

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GOVERNANCE EUROPÉENNE ET GÉOPOLITIQUE DE L'ÉNERGIE
TOME 3

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The Institut Français des Relations Internationales (Ifri) is a research center and a forum for debate on major international political and economic issues. Headed by Thierry de Montbrial since its founding in 1979, Ifri is a non-governmental and a non-profit organization.

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The objective of the “European Governance and the Geopolitics of Energy” program is to promote a coherent and sustainable European energy policy through seminars, debates, and publications. This series covers the main aspects of the energy issue.

Tome 1: *Abatement of CO₂ Emissions in the European Union* (2007)

Tome 2: *L'énergie nucléaire et les opinions publiques européennes* (2008)

Tome 3: *The External Energy Policy of the European Union* (2008)

Tome 4: *Gaz et pétrole vers l'Europe. Perspectives pour les infrastructures* (2008).

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Preface

This third monograph of the Ifri program on *European Governance and Geopolitics of Energy* is devoted to the program's first annual conference on the "External Energy Policy of the European Union." The conference took place from January 31 to February 1, 2008, at the Palais Egmont, in Brussels, Belgium.

Representatives of the European Commission, national governments, academia, and industry examined the European perspectives on the highly topical issue of external energy policy and assessed their relative prospects. The purpose of the conference was to take stock of current policies and to develop perspectives for the future.

This monograph comprises five chapters:

– A background paper prepared by **Jacques Lesourne**. A version of this document was given to the speakers prior the conference. It provided a set of questions that were designed to orient their reflection.

– Three background papers that introduced some of the questions to be addressed during the three sessions. These papers were written by **Jan Horst Keppler**, professor at Université Paris-Dauphine and Senior Research Associate at the Ifri Energy Program; **Roland Götz**, Senior Research Fellow at the Institute for International and Security Affairs (SWP), Berlin; and **Coby van der Linde**, Senior Research Fellow and Director of the Clingendael International Energy Programme (CIEP).

– An assessment of the main points raised during the exchanges among the conference participants and an evaluation of the European Union's external energy policy written by **J. Lesourne**.

JACQUES LESOURNE
Chairman of the Scientific Committee
of the Ifri Energy Program

External Energy Policy of the European Union

JACQUES LESOURNE*

1. Introduction

This presentation, intentionally brief, is meant to be a tool for conference attendees. It covers the entire issue. Three future presentations will cover each of the three sessions, respectively.

The conference's title raises four questions more or less explicitly:

1. Is energy a product like any other, subject to both the general internal rules of the Common Market and the rules of the WTO, or is it a unique product governed by specific domestic and foreign policies of individual countries and the European Union?

2. How can one evaluate domestic energy policies within the EU and the prospects they offer for the EU and its partners?

3. Would it be possible to implement a formal EU foreign policy, instead of a mere common position, and to apply, in the EU, existing measures currently applied to players from outside the EU?

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4. If the answers to the previous questions have not pre-empted this last one: What would be the main lines of an EU policy on external energy?

2. Is Energy a Product Like Any Other or Is It a Special Case?

Two contradictory arguments, which are not always clearly stated, prevail in European debates on energy:

1. The first stresses the necessity to facilitate the free flow of energy on European and world energy markets, enabling competing players to use resources efficiently.

2. The second focuses on the specific character of energy in the 21st century and raises the following points:

a) The need to control global warming and to reduce carbon gas emissions, particularly in developed countries.

b) The need for a harmonious management both of increasingly rare oil and natural gas resources and of the proportionally increasing use of other energy sources.

c) The different and sometimes contradictory public opinions about diverse primary energy sources.

d) The need for unprecedented technological progress in order to increase the efficient use of primary energy sources, develop new sources of energy at an acceptable cost, and capture and sequester greenhouse gas emissions.

Some advocates of the second argument plead for the re-nationalization of European energy policies, while others advocate the elaboration of a specific, restrictive European policy.

3. The European Union's Energy Policy: Fact or Fiction?

Before summarizing the elements of the EU's policy, one must remember the diversity of the national policies on the use of primary energy sources. Each country's political tendencies greatly depend on national resources and the country's position on the use of nuclear energy and its development.

The EU's policy is based on three main lines of action:

1. To build a competitive natural gas and electricity market.

2. To achieve three goals by 2020 as agreed by EU governments: to decrease CO₂ emissions by 20% compared with 1990, to improve energy efficiency by 20%, and to increase the use of renewable energy sources to 20% of the total of energy sources consumed (nuclear energy is not considered a renewable form of energy).

3. To implement a “cap and trade” system of rights to emit greenhouse gases, with the possibility of exchanging quotas (a system that was introduced as an experiment between 2005 and 2007 and renewed until 2012).

The European Commission’s efforts in terms of energy policy have been widely recognized. However, several points of criticism have been raised about the policy, including the following questions:

– Designed in a different geopolitical context, is the policy to introduce competition the best way to ensure supply security and control infrastructures (in particular, concerning unbundling)?

– Are the commitments for 2020 serious, considering the dubious value of governments’ long-term promises?

– Even if the European trading system is efficient, isn’t the current level of allowances so low that the system has its limitations?

Therefore, the EU’s energy policy remains imperfect according to many critics.

4. The European Union’s Foreign Policy: Shadows and Light

Depending on the sector, the EU’s foreign policy is either non-existent, influential, or realistic. These three cases are easy to illustrate:

1. When the United States invaded Iraq, the countries of the European Union were incapable of reaching a common position. They therefore positioned themselves according to their degree of alignment with US policies. This crisis showed how difficult it is for the EU to elaborate a common foreign policy that would not be in alignment with US policy,

especially when US interests are involved in the issue under discussion and when relations with the Middle East and Russia (and the NIS) are concerned. It is generally believed that an EU foreign policy cannot be elaborated until a sense of common identity and shared future has become considerably stronger in the European Union.

2. Nevertheless, the European Union has a certain degree of foreign influence thanks to its member countries' general position on global issues: recognition of other civilizations, commitment to human rights, advocacy of humanitarian aid, positive stance on the struggle against global warming.

3. The EU member countries have made possible the European Commission's action in several fields, including the European Fund for Development and WTO negotiations. The respective positions of the major European countries are generally more-or-less coordinated when these issues are addressed.

Therefore the EU's foreign policy appears to be fragmented; its influence does not seem to be equal to Europe's importance in the world economy.

5. Which Main Lines of Action for an External Energy Policy?

Taking into account the answers that participants may provide to the foregoing questions, which main lines of action could be applied to an external energy policy for the EU? The answers could influence both the content of the policy and the various foreign partners of the European Union.

As a first approach, the policy could include the following five main lines of action:

1. Help to implement, in other regions of the world, control mechanisms or systems to reduce CO₂ emissions, and set up a system to coordinate these mechanisms.

2. Assist countries that would like to have access to the technology offered by European firms.

3. Foster stable relations between the EU and countries that supply it with energy sources (these partners must

contribute to the creation of a climate of mutual trust –beyond the energy sector).

4. Adopt, as much as possible, a specific European position so as to help to pacify conflicts.

5. Participate actively in the process of elaborating regulations that are necessary in the context of globalization (exchange rates, foreign investments, intellectual property, etc.).

In the case of regional partners, a simplified list could include the following areas:

– The United States (in particular, for limiting greenhouse gases) and Japan.

– Russia and Central Asia for hydrocarbon trading and investment issues.

– The Middle East in general, where energy issues are related to numerous conflicts.

– China and India, major emerging economies where the energy issue is an essential factor in their development.

– The poorest parts of the Third World –where assisting development remains essential and where there is an important dichotomy between overpopulated urban areas and scattered rural areas– which cannot be integrated into networks.

The conference organizers hope that the debates will allow the participants to express themselves freely and make constructive proposals to the Commission and to EU Member States.

Building a Common European Energy Policy Around a Market-Based Approach

JAN HORST KEPPLER*

In a Country not furnished with Mines there are but two ways of growing Rich, either Conquest, or Commerce. By the first the Romans made themselves Masters of the Riches of the World; but I think that in our present circumstances, no Body is vain enough to entertain a Thought of our reaping the Profits of the World with our Swords... Commerce therefore is the only way left to us, either for Riches or Subsistence. (Locke, 1691)

1. Introduction

The unequal distribution of the world's natural resources –whether mines of gold and silver in the 17th century, or deposits of oil, gas, and uranium today– is a longstanding problem. John Locke's insistence on the primacy of contract

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over conflict in the debate with his mercantilist contemporaries was as valid then as it is now. In comparative terms, nature has served Europe poorly when it comes to energy resources. In the face of ever-rising demand, the exhaustion of domestic resources and rising import dependency are the logical consequence. The key question pursued in this chapter is how Europe can best respond to such import dependency and how it can progress in constructively engaging its trading partners in order to safeguard European independence and economic growth.¹ In particular, the question is whether Member States of the European Union should, one by one, engage in bilateral negotiations with supplier countries.

In Europe energy questions have also played an important role in the evolution towards an ever-closer union between nation-states. The first common institutions of the six founding members of the European Union were the European Coal and Steel Community (ECSC) in 1951 and the European Atomic Energy Community (Euratom) in 1957. The founding fathers of modern Europe had fully grasped the strategic character of energy supply security. To survive and function, the yet-to-be-created European Union would have to be first and foremost an energy union. Since the 1950s, Europe has clearly made great strides towards closer integration, most importantly perhaps through the creation of a single market for goods and services. Paradoxically, the integration of energy policies has not made much progress since then, except for the launch of a hugely problematic process of liberalizing electricity and gas markets, defined by technical, legal, and financial rather than political questions. Even the international coordination concerning coal, steel, and nuclear issues has largely withered away. National choices in the energy mix are today largely made without consultations among European partners; common projects have a difficult time taking off; and the EU Member States struggle to find a common voice when talking to its key partners in international energy affairs.

1. Unless otherwise indicated, the terms "Europe" and "EU" refer to the EU-25, which includes the following Member States: Austria, Belgium, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, the Slovak Republic, Slovenia, Spain, Sweden, and the United Kingdom.

1.1. A difficult European energy supply situation...

The European energy situation is characterized by growing demand, notably for gas and electricity, and slowly tightening supplies in several facets of the supply spectrum. Efforts to assure safe and affordable energy supplies in Europe are at a crossroads. While there is no immediate crisis in the energy sector, a number of short-term and long-term pressures are building up and are cause for concern.

Indigenous European oil and gas resources, which never were abundant, are dwindling and will be largely depleted by the end of the decade. Coal, Europe's most abundant resource, presents problems of acceptability due to its environmental impact. While alternative supplies are physically available, there are only a limited number of suppliers, frequently in geopolitically unstable regions (e.g., the Middle East, North Africa, Central Asia), which complicates the European energy equation. The rapid growth of India and China, with 2.3 billion people between them, and the concomitant increase in energy demand are further causes for concern. Observers were also startled by China's dynamism in securing physical energy supplies, in particular from African countries.

In addition, the world has just been through a three-year rise in energy prices, during which the price of crude oil tripled and the prices of gas, electricity and coal all doubled. While higher prices due to increased resource scarcity do not necessarily equate with a decline in the security of physical energy supplies, the sudden and massive increase in energy prices has worried policymakers and the public alike. Russia's decision briefly to suspend gas deliveries to Ukraine in winter 2005-2006 and to suspend oil deliveries to Byelorussia in winter 2006-2007, both vital transit countries, has further highlighted Europe's dependence on energy imports. Last but not least, the accession of Central and Eastern European countries to the EU in 2004 has revealed conflicts of interest in energy policy along historical fault-lines. While it is unlikely that any one European country could continue in splendid isolation in the case of a serious interruption of supply, a more coherent and explicit framework for European cooperation in case of emergency is needed to calm sometimes overblown concerns.

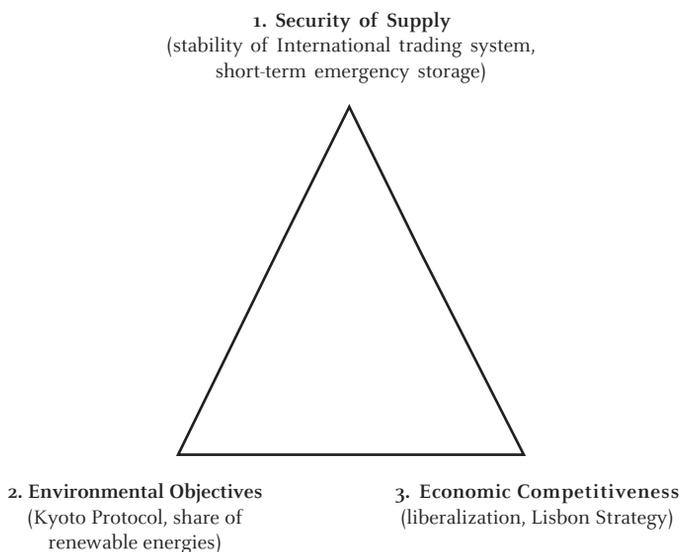
1.2. ...is made worse by the inability of decision-makers to develop a coherent energy policy

The inability of policymakers in the European Commission and within national governments to decide between competing objectives adds to the difficulties Europe is facing. Reducing greenhouse gas emissions, limiting subsidies, decreasing import dependence, phasing out nuclear power, augmenting the use of renewable energies, liberalizing energy markets, increasing economic competitiveness, etc. –the wish-list of energy policy objectives is very long, indeed. Crucially, European efforts to improve energy security are hampered by the lack of an internal consensus about the trade-offs between competing policy objectives.

1.3. The Triangle of European Energy Decision-Making

Consider, for instance, the share of gas in European energy consumption (see fig. 1). Favored over coal for environmental reasons and over nuclear due to cost, natural gas satisfies objectives 2 (environment) and 3 (competitiveness). Unsurprisingly, its share in total primary energy supply is expected to rise from 23% in 2004 to 30% in 2030 (IEA, 2006). Increased natural gas consumption, however, means increased import dependency and thus contradicts objective 1 (security of supply). The inability to define lasting trade-offs between the different objectives implies continuing policy drift.

Nowhere is the old adage that “crisis spells opportunity” more applicable, however, than in the case of European energy supply security. The EC’s Green Papers on energy security, *Towards a European Strategy for the Security of Energy Supply* (EC, 2000; 2006), have sparked a wide-ranging debate. While the debate is far from concluded, there are initial indications of the main orientations that will guide European energy policy-making in the coming years. Political commentators and the public have begun to voice concern about the resulting policy vacuum and are ready to contemplate stronger intra-European coordination in energy matters and a more forceful voice for the Union abroad.

Figure 1. The Triangle of European Energy Decision-Making

Source: Jan H. Kepler.

Energy matters played an important role in the birth of modern Europe. The European Coal and Steel Community (ECSC) and European Atomic Energy Community (Euratom) were the precursors of the EU. However, to reminisce in this way might do more harm than good. In the modern energy world, there is no place for visions of manifest destiny. The current situation does not require inward-looking, mutual subsidization but the acceptance of global interdependence and the creation of structures that allow global energy markets to function. The energy security debate thus inserts itself into the wider debate about the nature and the course of the EU. It could even be a catalyst for an updated European policy identity. Rightly addressed, Europe and the EU have much to gain from the current debate about energy security.

2. The Energy Security Situation in Europe

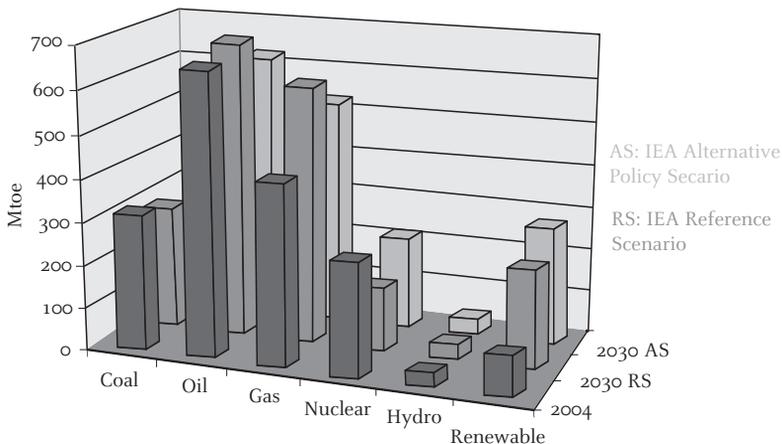
The EU-25 relies heavily on fossil fuels for its energy consumption. In 2004, coal constituted roughly 18% of total primary energy supply (TPES), oil 37%, gas 24%, and nuclear

and renewable energies about 20%. From the perspective of security of supply, Europe's heavy reliance on oil and gas poses the most immediate challenge, of course. Europe currently imports about 80% of the oil and about 60% of the gas it consumes. High growth rates in the use of renewable energies of almost 5% per year (compared to growth rates for total TPES of 0.5% in the reference scenario and of less than 0.2% in the more proactive alternative scenario) will not fundamentally change that picture since their base is too low.

Given the historic inelasticity of energy demand in the transport sector, any impulses for significant structural change in Europe's energy sector can only come from the power generation sector. Coal and nuclear each represented 31% of total electricity generation, gas 19%, hydro 10%, renewable energies 5%, and oil 4%. Expectations are that the demand for gas and renewable energies will grow rapidly (at 3% and 6% per year, respectively, in a market growing at 1% per year) to reach 32% and 19%, respectively, of total electricity generation in 2030 in the "policy as usual" reference scenario. This coincides with the decline in shares of coal and nuclear.

Coal-fired power generation, particularly *new* coal plants, will be progressively priced out of the market by higher prices

Figure 2. EU Total Primary Energy Supply, 2004 and 2030



Source: IEA (2006).

for CO₂-emissions. Nuclear energy, on the other hand, is hampered by political commitments –most notably in Germany and in Sweden– to phase out nuclear power as well as by the price risk that private investors in technologies with high fixed costs (such as nuclear) incur in liberalized electricity markets. While gas-fired power generation, which is a technology with low fixed costs, does not have such disadvantages, it does, of course, pose specific questions concerning the security of supply (see below). Gas is thus the variable of adjustment when distinguishing the “reference scenario” from the “alternative policy scenario.” Higher gas prices due to political uncertainty and/or fiscal policy, combined with more aggressive efforts to improve the efficiency of power consumption and the competitiveness of renewable energies, might lead to much lower growth of the electricity market (where prices are set at the margin by the marginal fuel for peak-load demand, that is, gas). In a smaller market such as this, gas might stay at a share of 20%, overtaken even by renewable energies with 24%, while a slower phase-out of nuclear power would essentially make up the rest.

In summary, however, the modeling results of the International Energy Agency (IEA), which to some extent reflect a consensus estimate of energy experts, make for sobering reading when applied to the issue of security of energy supply. Even assuming the more optimistic “alternative policy scenario,” Europe will consume more gas and an equivalent amount of oil in 2030 than it does today. There are three key reasons why the outlook for European energy does not look very different from the present:

1. The intractable issue of oil demand for private transport, where modest technical improvements are unable to compensate for the rising use of ever-heavier personal vehicles.

2. The fast rise of gas, around 1% per year, in both scenarios due to the attractive economics of combined cycle gas turbines (CCGT) in liberalized (and rapidly growing) electricity markets. This fact is linked to the decision of several European countries to phase out nuclear power.

3. The inability of European policymakers to agree on an effective energy policy that would need to be built around two

principles: (a) a commitment to liquid and transparent global energy markets, and (b) strengthening the commitment to energy efficiency and renewable energies with a pricing strategy that fully incorporates impacts on the environment as well as the economic effects of the risks of physical disruptions and excessive volatility.

It would be unfair, however, to say that procrastination is the only hallmark of the European energy situation. A picture of essentially stable, or slightly increasing, *total* energy consumption hides another picture, one in which economic growth constantly plays catch-up with relative improvements in the efficiency of energy consumption. Per unit of GDP, Europe uses only 60% of the energy today that it used in 1970. Its energy intensity is still 10% below that of the OECD average, although the distance between the high-intensity countries of North America has shrunk both in absolute and in relative terms.

2.1. The Oil Sector

Directly or indirectly, recent concerns about the security of energy supplies have also been prompted by the rapid rise of oil prices during the last three years. Global oil prices rose from a historic low of US\$10 per barrel (152 liters) of oil in 1998 to US\$20-30 in the period 2000 to 2003, a price level that was close to OPEC's announced target price of US\$25-35 and that experts widely considered to be sustainable. The three-fold increase in the price to a historic high of US\$78 in spring 2006 caught markets, including OPEC, by surprise. Oil is still the world's single most important commodity. Its price is to some extent an indicator of the price of energy in general. The rise in oil prices also drove a global boom in commodity prices that is only now coming to a halt. Several factors contributed to its massive increase:

- The inability of producers to increase supply: The oil industry has investment cycles that can span one or two decades; it was unable to respond quickly to any increase in price.

- The inelasticity of oil demand in the short run: High in energy content, easily transportable and usable, oil is a vital

ingredient of modern economies through the transport vector; while changes in behavior are possible, they take years to be implemented in response to price changes.

– Political uncertainties surrounding key supplier countries (including Iran, Iraq, Venezuela, Nigeria, and to a lesser extent Russia) added a risk premium of up to US\$20 per barrel; while the bulk of oil was still flowing freely, prices are set at the margin, which means that in a tight market the risk of a single country unable fully to service its commitments pushes up prices.

– The fast growth of Asian demand for oil: Economic growth of 5-10% per year was coupled with a massive one-million-barrel-per-day increase in demand from China, which was rebuilding its strategic petroleum reserves.² Of course, Asian demand was also a key factor in sustaining the more general boom in commodities.

– The technical and geological challenges for alternative supplies (such as deep-sea or Arctic deposits or heavy oil sands in Canada and Venezuela) to come on-stream quickly. In some areas, such as Canada, environmental pressures and the inability to find qualified personnel have limited expansion.

While the situation in the oil market is serious but not dramatic, consuming countries cannot relax. In the long run, oil prices will stay high to balance increasing global demand with ever more difficult and more costly production conditions. An indicative number for marginal production costs at current demand levels might be US\$35 per barrel (average costs in countries such as Saudi Arabia can be much lower). Add an uncertainty premium of US\$10-20 due to political tensions and US\$50 all of a sudden look like a reasonable floor for oil prices. Most important, however, is that even with a well-working global oil market, oil supplies constitute not only a price issue but also an issue concerning the continuity of physical flows. The Drushba incident was a potent reminder in this respect.

2. China's strategic oil reserves, with a storage of roughly 20 days of demand, are still far below the level of the stored reserves of most industrialized nations. Members of the International Energy Agency (which include the EU countries, excepting Bulgaria, Romania, and the Baltic States), for instance, have a legal obligation to provide for 90 days of storage.

Table 1. Inter-Area Oil Movements in 2005 (thousand barrels per day)

| From | To | | | | | Total exports |
|----------------------|---------------|--------------|--------------|---------------|---------------|---------------|
| | Europe | China | Japan | USA | Rest of world | |
| Former Soviet Union | 5,811 | 398 | 47 | 473 | 347 | 7,076 |
| Middle East | 3,144 | 1,360 | 4,269 | 2,345 | 8,703 | 19,821 |
| Africa | 2,681 | 773 | 142 | 2,490 | 1,608 | 7,694 |
| Rest of world | 1,625 | 853 | 767 | 8,217 | 3,853 | 15,315 |
| Total imports | 13,261 | 3,384 | 5,225 | 13,525 | 14,511 | 49,906 |

Source: BP (2006).

However, even in this respect Europe is not too badly prepared given that its oil supplies are far better diversified than those of other major importing regions (see table 1). This is different from the gas sector, which poses a more immediate challenge to the security of European energy supplies, the greater relative importance of oil supplies notwithstanding.

In addition, efforts are underway to diversify oil supplies further. However, one of the most important oil infrastructure projects of the recent decade, the 1,760 km BTC oil pipeline between Baku (Azerbaijan), Tbilisi (Georgia), and Ceyhan (Turkey), was undertaken without any official involvement of the European Union or its Member States despite the fact that European companies –BP (31% and project leader), ENI (5%), and Total (5%)– hold major stakes in the project. The one-million-barrel-per-day BTC oil pipeline that opened in May 2006 is part of the strategy of diversifying the European oil supply routes. One estimate says that up to one-quarter of global incremental oil supplies of recent years will flow through BTC (Starr and Cornell, 2005: 39).

2.2. The Gas Sector

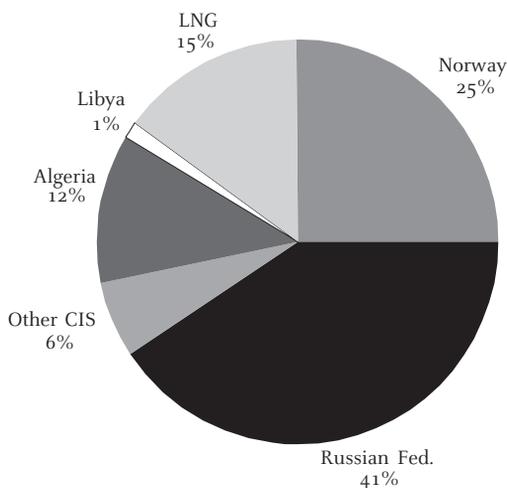
The gas sector is currently the most vulnerable part of the European energy sector. Contrary to oil or total energy, the intensity of Europe's economy has risen since the 1970s.

Europeans today use more gas per unit of GDP than 30 years ago. While Europe shares growing gas intensity with the industrialized countries of Asia (Japan and South Korea), its absolute share per unit of GDP is almost three times as high. Such rising intensity of consumption is highly unusual in the energy sector and it can only be explained by the conjunction of three factors: (1) the maturity of the gas transport system, (2) the development of the combined-cycle gas turbine, and (3) the liberalization of European electricity markets. However, despite the good economic reasons for adopting gas-based power production, growing gas intensity also means increased vulnerability to physical disruptions of supplies and increased economic vulnerability to changes in the price of gas.

Europe's gas is increasingly imported. Total gas imports of the EU's 27 Member States from outside the EU area (i.e., net of intra-European trade-flows) amount to 317 billion cubic meters (bcm), 41% of which come from Russia. This is certainly a large proportion and an indicator of a certain degree of dependence. However, nowhere is the old adage that dependence is mutual truer than in the current gas trade between Russia and the EU. The 128 bcm that Russia exports each year to Europe constitute the bulk of Russia's total exports of 151 bcm. In addition, it constitutes by far the most profitable part of Russia's enormous annual production of 598 bcm, which is fueled by domestic consumption that is subsidized with prices at around one-quarter of world prices.

During the past ten years, gas prices have also more than tripled. They roughly doubled in the past three years, before easing in the second half of 2006. Quite rightly, politicians and the general public were more concerned about rising electricity prices (of which rising gas prices are an essential part) than about rising oil prices. Oil intensity has been steadily declining, playing a far smaller role in government and consumer budgets, the trade balance, and inflationary pressures. The opposite happened in the gas market. It is completely reasonable for politicians and consumers to focus their policy efforts on this point.

Currently Europe is still producing 42% of its gas consumption domestically. In addition, the least problematic

Figure 3. Provenance of European Union Gas Imports in 2005

Source: BP (2006).

source of supplies –globally diversified LNG (liquefied natural gas) trade– already constitutes 15% of imports and is rising fast. It is estimated that European LNG imports will rise by 7.5% per year, compared to 5.1% for imports through pipelines and 2.1% for the growth of total demand (Suez, 2006: 36). Global LNG trade will be fuelled by Qatar’s massive “North Field,” which contains an estimated 900 trillion cubic meters, constituting 14% of proven global reserves. The increase in LNG trade is usually seen as a positive contribution to the diversification and the security of European energy supplies. This is by and large correct. However, the establishment of a truly global marketplace for gas can play both ways. It allows diversification for both suppliers and consumers –witness the discussion to export LNG to the United States from Russia’s large Shtokman Field, on which the Russian supplies to Europe will significantly depend.

European consumers will be in competition not only with Asian and American consumers but also with Russia’s domestic market. In the long run, however, the emerging LNG market contributes to the necessary diversification of both consumers *and* suppliers. The sometimes controversial discus-

sions about different pipeline projects, such as North Stream, South Stream, or Nabucco, have to be seen in the same light. A case in point is the Turkmen strategy to construct gas pipelines to the West, the East, and the South. Every commercially viable pipeline or LNG terminal should be built. In the long run, the diversification and substitutability of both supply sources and retail markets can only contribute to the de-politicization of the gas market, with benefits both for energy markets and for politics.

3. Key Developments Likely to Impact on EU Security of Energy Supply

In the following we shall briefly sketch developments in three key regions –Russia, OPEC and the Middle East, and the United States– which are likely to affect the security of European energy supplies in the medium term.

3.1. Russia: Merits and Limits of a Special Relationship

Russia is Europe's main supplier of both oil and gas. The EU-Russia relationship is thus of great importance to European energy security. The decisive question, however, is whether this relationship (significant though it is) should insert itself into a global commercial logic, in which each side is free to look for the best deal available, or whether it should link the two partners in a binding long-term agreement. While Russia is Europe's neighbor and deserves every attention as well as all technical and institutional help it is willing to accept, the energy relationship between the two blocs should be have a commercial rather than a political basis.

The reasons for this are not necessarily the obvious ones. The dispute between Russia and Ukraine in winter 2005-2006, unsettling as it was on a symbolic level, led only to a minor shortfall of 100 million tons, which corresponds to a difference in demand due to a temperature change of 2°C on a single day (Ladoucette, 2006: 4). Those who prefer to see the interruption (together with the three-day shut-off of the Druzhba pipeline in January 2007) as a sign of decreased

reliability should consider that the current dependence is mutual. Gas exports to Europe constitute 70% of Gazprom's revenues (Finon and Locatelli, 2006: 8).

The real reason for advocating a market-based approach to energy relations with Russia is that the energy world is changing. By the end of the decade, Russia will be able to export gas to East Asia, and Europe will be able to import gas from Central Asia, Iran, and Iraq. New centers of supply and demand have emerged that must be integrated into the world economy. The fast-rising share of LNG transported by tankers, in particular due to the discovery and exploitation of the vast Qatari Pars Field, further transforms the gas market from a logic of long-term bilateral relationships to a logic of multilateral market relations.

The problem is that Russia's production is not increasing fast enough. Gas prices (including VAT) in Russia for both residential and non-residential consumers vary between US\$35 and US\$70 per 1,000 cubic meters, depending on the administrative zone. Compared to the current world price of about US\$235 per 1,000 cubic meters, this amounts to a subsidization rate of between 70% and 85%. Run-away domestic gas consumption is Russia's (and with it Europe's) biggest energy problem today. Europe should assist Russia with policy and technical advice to solve this problem.

Clearly, the perceived insecurity of property rights –whatever its legal, political, and historical legitimacy– did not encourage long-term investment. This weighs particularly on new exploration, which is now short of production replacement levels. An additional issue is the new tax system introduced in 2002, which taxes physical production rather than profits. While this makes it possible to limit the extent of tax evasion through skewed transfer pricing, it also limits companies' incentives to invest in less profitable production in lower margin fields, thus restricting supplies (Finon and Locatelli, 2006: 23-24).

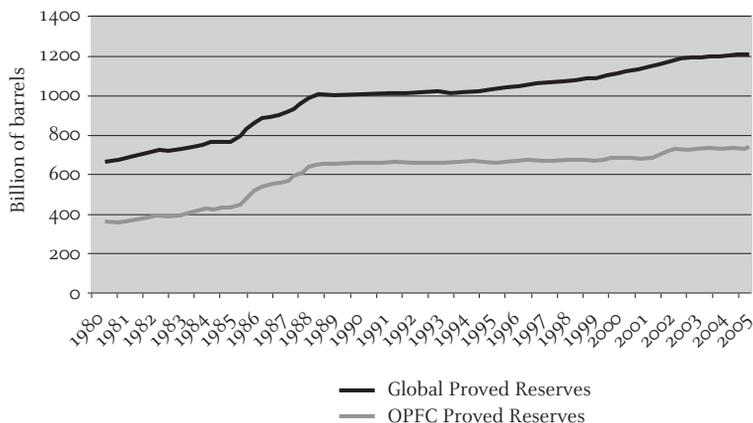
What happens in Russia remains important. Much has been made of the future supplier role of countries surrounding the Caspian Sea as alternatives to Russia. One should not

forget that Russia still produces three-quarters of total oil output and exports of the Community of Independent States (CIS), with Kazakhstan making up most of the rest. Russia is an important player in the world of gas and oil, but its power to determine prices should not be overestimated. It is very limited in the oil sector and far from absolute in the gas sector. Its transition towards basing decisions on commercial rather than political logic should be encouraged. In the long run, the question of foreign direct investment is a more important issue (for both Russia and Europe) than the issue of third-party access to gas pipelines that has made headlines. To give way on the latter and to ask for solid guarantees on the former might be the EU's best negotiating stance in order to improve the security of its energy supplies.

3.2. OPEC: Still the Center of the Oil World

First of all, there is still plenty of oil in the ground. Second, these resources are concentrated in a very small number of countries. In fact, on the face of it OPEC looks stronger than ever. For three years, oil prices have been above US\$50 for a barrel of oil. At the beginning of 2007, Angola became the 12th member of the cartel, which now supplies 52% of the oil imports to developed countries –the highest share in five years. Experts widely agree that OPEC's share will rise rather than decline in coming years. In figure 4 below, one can see that for 25 years, most new discoveries of oil reserves have been in OPEC countries.

Looking closer, however, another picture emerges. Prices are set at the margin, which means that the cost of the last, additional ton produced determines price. If countries are producing at full capacity (which OPEC has done in recent years), they no longer have any influence over prices. The increases in oil prices over the past three years happened entirely independently of any OPEC action, which agreed on production cuts only in the second half of 2006. The organization initially had even feared a world economic slowdown due to higher oil prices and adjusted its original range of US\$25-35 per barrel only several months after the price

Figure 4. The End of the Oil Age: Not Now, Maybe Later

Source: BP (2006).

changes had occurred. The price increases were due to the ending of a 25-year investment cycle that coincided with a strong rise in Asian demand. This pushed global oil production to its capacity limit. Due to the addition of a US\$10-20 risk premium due to political and military instability, oil prices reached US\$78 per barrel without OPEC ministers having to move as much as a finger. Much the same mechanisms have been on display during the past twelve months with oil reaching its historical high of US\$ 135 per barrel in May 2008.

Despite recent oil price spikes (or rather because of them), however, new supplies are coming on stream. Experts estimate the amount of new production capacity currently being built between three and four million barrels per day. That is a substantial increase, easily capable of making a difference. OPEC is well aware of this fact. Its decision to cut production by 500,000 barrels a day (about 2% of its total production), beginning in February 2007, is the logical response. This does not necessarily mean that OPEC's pricing power will be restored immediately. OPEC countries have not been very dynamic in expanding oil production, partly because of their wariness to attract foreign direct investment and the technological and geological expertise that comes with it. Other players, such as the countries of the

Table 2. Proven Oil Reserves in 2005

| | Billion barrels of oil | Percent of world total |
|------------------------------------|------------------------|------------------------|
| EU Countries of which | 6.0 | 0.5 |
| Denmark | 1.3 | 0.1 |
| Italy | 0.7 | 0.1 |
| United Kingdom | 4.0 | 0.3 |
| Europe and Eurasia of which | 140.5 | 11.7 |
| Kazakhstan | 39.6 | 3.3 |
| Norway | 9.7 | 0.8 |
| Russia | 74.4 | 6.2 |
| Middle East of which | 742.7 | 61.9 |
| Iran | 137.5 | 11.5 |
| Iraq | 115 | 9.6 |
| Kuwait | 101.5 | 8.5 |
| Saudi Arabia | 264.2 | 22.0 |
| United Arab Emirates | 97.8 | 8.1 |
| Africa of which | 114.3 | 9.5 |
| Algeria | 12.2 | 1.0 |
| Libya | 39.1 | 3.3 |
| Nigeria | 35.9 | 3.0 |
| North America of which | 58.5 | 5 |
| Canada | 16.5 | 1.4 |
| Mexico | 13.7 | 1.1 |
| United States | 29.3 | 2.4 |
| South America of which | 103.5 | 8.6 |
| Brazil | 11.8 | 1.0 |
| Venezuela | 79.7 | 6.6 |
| Asia Pacific of which | 40.2 | 3.4 |
| China | 16.0 | 1.3 |
| Total World | 1200.7 | 100 |

Source: BP (2006).

Caspian Sea, East Africa, Mexico, and Canada, have stolen some of the limelight recently. Nevertheless, geology is firmly in OPEC's favor. Its future role will depend, however, on its ability to cooperate with the oil and gas companies of the developed world in order to unlock the energy resources nature has so abundantly provided its member countries.

3.3. The United States: Big Boats Turn Slowly

In recent years the federal government of the United States has issued a series of high-profile announcements heralding major changes in US energy policy. While announcing the "hydrogen economy," the "alternative fuels initiative," and tackling the country's "addiction to oil" have failed to make a lasting impact on the ground, they are nevertheless testimony to the fact that energy is high on the US government's list of priorities.

For the time being, the US is still the world's largest energy consumer (and carbon emitter), its biggest energy producer, and, incidentally, the world's third greatest oil producer and its greatest importer. With 5% of the world's population, it produces 20% of global energy resources and consumes one-quarter of them with a corresponding share of greenhouse gas emissions (see table 3 below). Mechanically, the US economy is thus much more energy-intensive than the comparable economies of Europe, Japan, or China. While size, population density, and climate can explain part of the difference, the main reason is price. Nominally, taxed end-use prices for energy in the US –most notably for oil products such as gasoline– are one-tenth of those in European countries.

While the US government has generously funded research for new technologies, such as biofuels, carbon sequestration, and "clean coal" technologies, and while the 2005 Energy Act contains substantial subsidies for a new generation of nuclear power plants, the government has so far fiercely resisted any attempts to use fiscal measures. Its refusal to sign the Kyoto Protocol, or to commit itself to limiting greenhouse gas emissions by pricing them through a carbon market equivalent to the European Emission Trading Scheme (ETS), are both part of the same policy stance.

Table 3. Global Blocs in Comparison

| | USA | China | Europe |
|---------------------------|-------|-------|--------|
| Population | 290 | 1,280 | 470 |
| Share of global | 5% | 21% | 7% |
| TPES (Mtoe) | 2,300 | 1,180 | 1,080 |
| Mtoe/capita | 8 | 1 | 4 |
| No. of vehicles (million) | 220 | 13 | 229 |
| Oil consumption (Mbd) | 22 | 5 | 13 |
| Oil import ratio | 5% | 50% | 77% |

Source: CGEMP (2006).

Despite the discouraging slowness of the US government in following up its grand announcements with decisive action, it would be wrong to describe the US as at a standstill. The initiative on new nuclear energy has already been mentioned. It is seconded by the decision to create a deposit for the long-term storage of spent nuclear fuels at Yucca Mountain, Nevada. This puts the United States ahead of almost all other industrial nations (exceptions being Finland and Sweden) in finding a solution to the vexing issue of nuclear waste. Regional initiatives (California and the Northeastern States), a series of corporate leaders (most notably in the financial industry), public opinion (influenced by Al Gore's movie, *An Inconvenient Truth*), and political initiatives (the narrowly defeated McCain-Lieberman Act) all contribute to increasing pressure for action on climate change. It is likely that the US will see a federal limit on greenhouse gas emissions before the end of George Bush's second term. At the G8 Summit on June 6-8, 2007, in Heiligendamm, the United States committed itself for the first time to take climate change seriously.

Big boats turn slowly and in energy terms the United States is a very big boat, indeed. Nevertheless, there are a number of concurrent signals that a consensus is forming that cheap, unlimited energy consumption is no longer as central to today's "American way of life" as it was in the past. If this reading is correct and the different tendencies gather force,

this would have an enormous impact on global energy markets in the medium term.

4. A Multilateral Framework for European Energy Supplies

While others are moving, Europe seems to be standing still –leaving aside for the moment its admittedly important activism in the debate on climate change, to which we shall return. What are Europe’s choices in this situation? Continue with a proliferation of bilateral initiatives between different Member States and individual supplier countries, be they Russia, Iran, or Algeria? Or develop a truly common external energy policy consistent with Europe’s fundamental commitment to open and transparent markets?

Posed in this way, the answer seems obvious. So far, however, there has been precious little effort from the European side to work towards the improvement of the multilateral energy trading system and actively to promote free, liquid, and transparent international energy markets. It seems that the imagination of energy decision-makers is currently limited by the ambition to repeat on a larger European scale the mistakes that are committed again and again by its Member States. The oft-repeated mantra that in energy matters “Europe needs to speak with one voice” is only used in the sense that Europe should better leverage its bargaining power by creating bilateral rather than asymmetrical monopolies. The notion of a single European buyer for gas smacks of the corporatist ideal to impose the “just price” by sheer might of size and political will.

Such an approach would put European energy consumers on the tenterhooks of the vagaries of intra-European horse-trading and external political relations. Since it will be an energy importing region for decades to come, Europe needs open and transparent global energy markets. Its energy companies are large and competent enough to hold their own in the global marketplace. However, this marketplace has so far evolved in a somewhat haphazard manner. Pricing arrangements, contract modalities, the structure of production-sharing agreements, the interaction of physical and financial markets, etc. –global energy markets do not even have a common

language, much less a common set of procedures, and even less a common set of rules. The time seems ripe (for technical, political, and commercial reasons) to begin working on the governance of global energy markets. It is in this direction that Europe's external energy policy must evolve. If Europe as a whole insists on repeating in its external energy policy the mistakes of its Member States, then the absence of a European energy policy might be the lesser of two evils.

Of course, there is no harm in bilaterally acknowledging mutual interdependence between supplier and consumer countries and in agreeing on common projects. However, such bilateral cooperation must not stand in the way of the workings of global energy markets, in which each country and each company may act as an independent profit-maximizer. Energy will not be "just a commodity" for many years to come. Yet the more normal it is, the more beneficial it will be for all involved. Europe should resist resource nationalism. However, it should do so on economic, not moral, grounds. An effort has to be made to explain that retreating into exclusive bilateral agreements constitutes a sub-optimal solution for both exporting and importing countries. Fortunately, resource nationalism is much less virulent in practice than in rhetoric. Most exporters quickly realize that gaining revenues by exporting their resources is still the best strategy to promote their national interests. In the long run, economic logic naturally wins.

Europe should finally acknowledge the limits of bilateralism and "neighborhood policies" that now reach as far as the western border of China.³ The new Europe requires a more

3. Generalized bilateral initiatives (as opposed to cooperation on concrete projects) are of limited help at best and can be a distraction and a drain on scarce resources. The number of European "energy dialogs" is currently proliferating without tangible results. Other than the dialogue with Russia, the European Commission entertains bilateral initiatives with almost every energy-producing country in the world. *An Energy Policy for Europe* (EC, 2007), a synthetic policy document for high-level decision-makers, mentions Memoranda of Understanding with Azerbaijan, Kazakhstan, Turkmenistan, and Uzbekistan, a Communication to the Black Sea Council, contacts with OPEC, the Gulf Cooperation Council, Latin America and the Caribbean, and a special Africa-Europe energy partnership. The problem, of course, is *not* that these initiatives exist as part of normal international relations. Rather, the problem is that these routine diplomatic exercises are currently at the heart of the European policy to safeguard energy supplies, an objective they simply cannot achieve.

open and more realistic approach. Important as it is, Europe will not sway on its own countries such as Russia or the countries of Central Asia one way or another. At the same time, Europe should continue to offer technological, financial, and institutional aid freely. Frequently, exporting countries—especially smaller ones—are in dire need of it. The role of such help is not to advance “influence” but to stabilize vital trading partners.

Agreeing on a commitment to an open, market-driven approach would lay the basis for a more secure energy world in the future by rationalizing an energy debate too often clouded by superficial pronouncements of “shared responsibilities.” While there are shared responsibilities for securing international energy markets, ensuring its position in international market is a matter of each independent actor: Russian gas exports to Asia are as legitimate as European gas imports from the Middle East. The introduction of moral categories into energy decision-making has only contributed to a deterioration of relations. A multilateral trading system is by far the most likely way to produce benefits for producers and consumers. Partners in the process securing and strengthening the international energy trading system must be the United States, China, Russia, and Saudi Arabia.

Following a phase of excessive euphoria vis-à-vis special relationships, European policymakers are now fortunately rediscovering the benefits of multilateral action. Five key elements in this process are:

1. Continued involvement in multilateral organizations, such as the International Energy Agency (IEA), the World Bank, the United Nations Framework Convention on Climate Change (UNFCCC), and the World Trade Organization (WTO). The EC should also press for a global summit on the multilateral energy trading system.

2. Europe’s leadership in the Kyoto process and the creation of the European Emission Trading Scheme (ETS) for CO₂ emissions is one of the EU’s few policy successes in the energy field in recent years, and can contribute massively to decarbonizing the EU economy further.

3. Continuing improvement of the conditions for private investment in supplier countries. The European Investment Bank (EIB) and the European Bank for Reconstruction and Development (EBRD) need to work towards the legal and technical infrastructures to enable private investment. This is a task, however, that can only be pursued in cooperation with other major countries, most notably the United States, Saudi Arabia, Russia, and China.

4. Europe needs to stay involved in the process of the Energy Charter Treaty (ECT). Its focus, however, should switch from an emphasis on “third-party access” to clarifying the conditions for investment.

5. EU participation in multilateral technical initiatives, such as the World Bank’s Global Gas Flaring Reduction Partnership, the Extractive Industries Transparency Initiative, the Financial Action Task Force (FATF), as well as broader adoption by EU companies and banking institutions of the *Equator Principles*, is certainly useful.

Perhaps most important is the possibility that energy will be included in the discussions under the auspices of the WTO once the Doha Round –difficult as it is– is concluded. In any case, as far as external policies are concerned, any improvement in the situation of European energy supplies will depend on multilateral approaches.

5. Conclusion

The European energy supply situation gives reason for concern but is currently not in crisis. Investment remains a key issue. Policy uncertainty adds to a structural reluctance of operators to commit to new investment, which raises questions about the adequacy of supply. In the electricity market, much of recent investment has therefore been in combined-cycle gas turbines (CCGT), whose low fixed costs are appreciated by risk-averse investors. In response, European gas consumption has increased strongly, which has raised questions about the extent to which Russia can develop the necessary capacity to service future increases in European gas

demand while at the same time developing its Asian markets and supplying its fast-growing domestic market.

Key to ensuring the security of energy supplies is that Europe manages to formulate coherent policies in the interaction between its objectives of market liberalization, environmental quality, and security of energy supplies. In nearly all permutations, this will require real energy prices to stay high for the foreseeable future. It will also imply a more pragmatic approach to electricity market liberalization, paying more attention to incentives for investment, in particular by creating less volatile market conditions.

As far as Europe's external energy policy is concerned, the choice is between a defensive and a progressive attitude. The defensive attitude implies looking for opportunities for import substitution wherever possible (at taxpayers' expense if need be), looking for bilateral "guarantees" for preferential treatment (particularly in times of crisis), and pooling European negotiating power wherever possible. The progressive attitude, on the other hand, implies embracing the global energy marketplace by trying to create the structures that give both suppliers and consumers the confidence to go forward to maximize joint benefits. The greatest risk on both the supply and the demand side is uncertainty. Opacity, non-transparency, and the mingling of commercial with political considerations are thus the greatest obstacles to the security of European energy supplies.

Europe's energy supply security requires the stability of the global multilateral energy trading system. Accepting and organizing the international division of labor in this field is the best way to realize the full benefits from nature's riches for producers and consumers alike. This implies keeping questions concerned with the organization of energy markets, as much as possible, separate from political considerations. A number of encouraging initiatives in this direction have been mentioned. However, they require a much more forceful commitment to multilateral rather than to bilateral approaches, and more creativity in searching for innovative policy solutions in a rapidly changing energy world.

Such a market-based approach to the world's suppliers of energy resources is also the best way –possibly the only way– to further the convergence of the national energy policies of the (currently) 27 Member States of the EU. Otherwise, historical relationships –good and bad– with specific supplier countries will always take precedence over common European interests, and the primary objective of safeguarding European energy supplies will be diluted by partial and short-term political considerations. Of course, Europe needs neighborhood policies. But it needs them as part of its efforts to build a network of normal political, diplomatic, social, and cultural relations, and not to extract special deals in return for concessions on other matters or to play one partner off against another. The only criteria in the choice of a supplier should be price and quality of supply. Burdening energy choices with additional considerations is unlikely to improve the European security of supply. But market-based energy choices do need frameworks for negotiation. Creating such frameworks and strengthening existing ones should be the primary orientation of an external European energy policy.

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European Energy Foreign Policy and the Relationship with Russia

ROLAND GÖTZ*

1. Introduction

Europe –here the European Union, as well as Norway, Switzerland, the Balkans, and Turkey– receives about three-quarters of its natural gas imports by pipeline and the remainder in the form of liquefied natural gas (LNG). Even though the share of LNG as a part of overall imports will increase, the share of the less expensive pipeline gas will prevail in the long run. Gas delivery via pipeline creates a European regional gas market dominated by only a few non-European suppliers –above all, Russia and Algeria– with only Iran having the potential to become the third major supplier. Therefore, the question of gas dependence on companies and states outside Europe is more urgent than questions about oil and hard coal, which are traded on a worldwide basis.

Since the production of natural gas in Europe will decrease, whereas consumption will increase, the need for imports will grow. The extent of this increase will depend on

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diverse factors, including political decisions. This is why statements about future import dependency are only conditionally valid. The European Commission (EC, 2007: 3) writes in its main document on European energy policy: “Reliance on imports of gas is expected to increase from 57% to 84% by 2030.” This proposition is limited by two premises: First, it refers to the EU-27 (the EU without Norway), whereas the import dependency of Greater Europe would be less if Norway were counted as a European country.¹ Secondly, in this document a “business as usual” policy is assumed, whereas the EU is planning an increase in energy efficiency and greater use of renewable energies. If this policy succeeds, European import dependency would clearly increase less than the “standard prognoses” assume.

The EC (2007: 4) deduces “political and economic risks” from the increasing import dependency. It regards some energy-exporting countries as politically unreliable, but does not elaborate on this point. The EC, which generally refers to the International Energy Agency (IEA), regards a growing gap in energy supply as the most threatening economic danger. With this rather inadequate threat analysis, the EC tries to justify a common European energy policy and external energy policy for the purpose of greater energy security.

In the EU action plan, the European foreign energy policy is formulated under the heading, “Solidarity between Member States and security of supply for oil, gas and electricity” (EC, 2007: 10-11). This document calls for solidarity mechanisms in case of supply crises and further diversification of energy imports. EU members called upon to ease cross-border access to strategic gas storages for their companies and promote the construction of LNG terminals. Furthermore, a net of “energy experts” has been created and four European coordinators for interregional infrastructure projects have been nominated, one of them for the Nabucco pipeline. Dialogs between the EU and other countries will supplement the EU-Russia and EU-Ukraine energy dialogs.

1. When Norway is regarded as an internal supplier, the import dependency of Europe in 2005 was about 40%. It will increase under a “business as usual” policy until 2030 to about 70%. See EC, (2006b), 24.

The EC wants the EU to speak on behalf of European governments and companies with energy-exporting countries and companies “with a single voice” to counterbalance Gazprom’s market power. At the same time, major Member States, such as Germany, France, and Italy, see no real advantage to ceding more power to the EU when at issue is their foreign trade relations with Russia (Finon and Locatelli, 2008: 427 and 437).

Likewise the EU’s endeavors to create a “southern gas corridor” (the Nabucco project) reveal the limitations and weaknesses of the European external energy policy. It is highly probable that they have forced Russia’s Gazprom not only to extend its “Blue Stream” gas pipeline to southern Europe but also to announce the construction of a second offshore pipeline across the Black Sea –the “South Stream” pipeline to Romania. Europe and Russia are reacting reciprocally to perceived threats, thus creating still more perceptions dangers on both sides. They find themselves in a “perception trap,” which has caused a “diversification race” between the EU and Russia (Monaghan, 2005: 9). At the same time, both sides have ignored the fact that, despite political wishes, the choice between different pipeline routes should be left to interested companies, which have to balance profitability and risk. Therefore, the EC’s current practice of identifying priorities for new transport infrastructure and formulating them as quasi-governmental projects should be questioned.

2. European Gas Demand and Russian Gas Export Potential

Forecasts of future gas demand are affected by considerable uncertainty due to, among other things, unreliable assumptions about the development of gas prices and the shaping of climate policy. If the current system of price formation continues, gas prices will crucially hinge on oil prices (Energy Charter Secretariat, 2007). The higher the price of natural gas, the stronger will be the substitution of gas by coal and renewable energies. Depending on the strategies employed in climate policy, natural gas will be either regarded as a

relatively CO₂-poor surrogate fuel for coal and crude oil or replaced by renewable energies.²

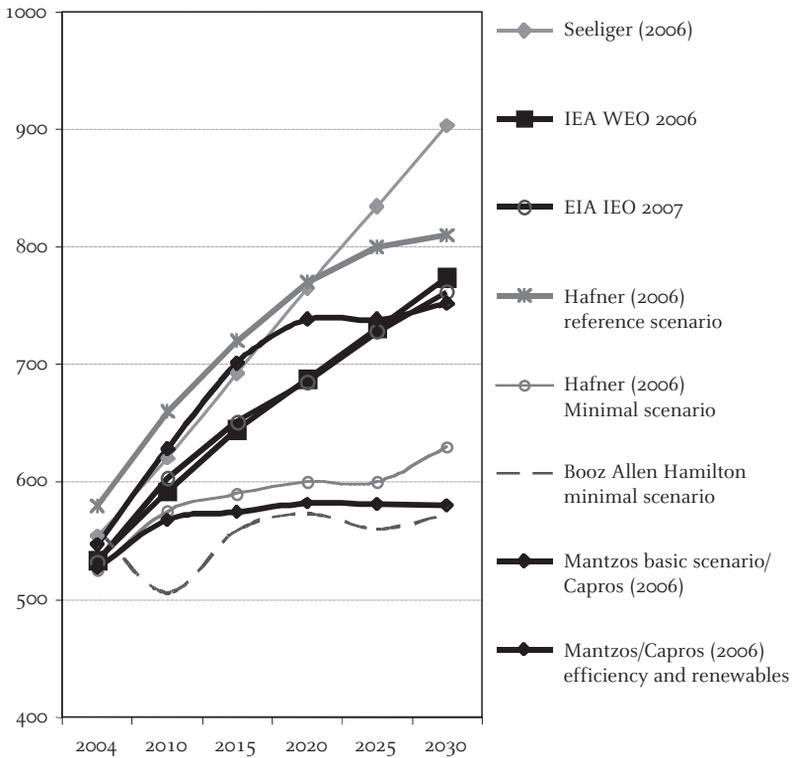
The Energy Information Administration (EIA, 2007) and the International Energy Agency (IEA) forecast for OECD-Europe a nearly linear increase in gas demand, as does Andreas Seeliger (2006) in his global gas world model. Yet the studies on the European gas market carried out on behalf of the EU forecast in their basic scenarios a decreasing growth rate of gas demand for the period after 2010 (Mantzios and Capros, 2005: 25; Hafner, 2006: 7). Assuming efficiency growth and use of more renewable energies, the scenarios forecast a stagnation of gas demand after 2015 (Mantzios and Capros, 2005: 53 ff.; Hafner, 2006: 7; Booz Allen Hamilton, 2007).

If linear growth in demand does occur, then gas demand will grow by 300 billion cubic meters (bcm; 1 bcm = 10⁹ cubic meters) between 2004 and 2030. On the other hand, the forecasts, which imply a policy change in the energy field, estimate a growth in demand of only 50 bcm in the decades to come. The gap between the projections by the two approaches is of the same magnitude as those for the gas export volume of either Russia or Africa and is therefore of considerable importance for Europe's supply situation.

But what are the arguments for the more modest demand forecasts? The big unknown in the calculations is the amount of future use of natural gas for electricity production, which again depends on the prices of gas and emission certificates. Some special studies that analyze the electricity sector anticipate a minor growth in gas use for electricity production. For example, Anouk Honoré (2006: 86) points out that current investment plans foresee a strong increase in gas power capacities in Spain and Italy, but not in the rest of Europe. The consulting firm Booz Allen Hamilton (2007) believes that high gas prices will make investment in gas power plants and the operation of existing ones unprofitable and will lead to their substitution by coal plants. Likewise, the EU energy studies say that as a consequence of an ambitious energy-saving policy

2. The specific CO₂ emissions of natural gas are only half those of brown coal (200 g/kWh as compared to 400 g/kWh).

Figure 1. European Gas Demand, 2004-2030 (in bcm)



Sources: EIA, 2007; Seeliger, 2006; Mantzos and Capros, 2005; Hafner, 2006; Booz Allen Hamilton, 2007.

and a continuous transition to renewable energies, gas demand for electricity production will grow only modestly compared to 2005.³

All forecasts agree that Europe’s own natural gas production will decrease. If Norway is included, gas production in Europe amounted to nearly 300 bcm in 2005, which corresponded to about 60% of European gas demand. By 2030, natural gas production will decrease to 200-250 bcm due to the depletion of the North Sea fields.

3. The long-term development of energy corridors to Europe has been studied in the framework of the ENCOURAGED-Project (see <www.encouraged.info>). Manfred Hafner (2006) has compiled the results for the gas sector.

Table 1. Potential Gas Exports to Europe (in bcm)

| From | 2005 | 2010 | 2020 | 2030 |
|-------------------------|------------|------------|------------|------------|
| North and South America | 1 | 6 | 6 | 6 |
| Caspian Region | 0 | 0 | 13 | 13 |
| Middle East | 7 | 44 | 108 | 143 |
| Africa | 78 | 137 | 201 | 226 |
| Russia | 139 | 166 | 196 | 207 |
| Total | 225 | 353 | 524 | 595 |

Source: Hafner, 2006.

As a consequence of a relatively low European import demand, LNG from Africa and the Middle East would be redirected to North America and Southeast Asia. Investment in new LNG terminals would slow down and the implementation of the planned pipelines from the Caspian region and Iran (Nabucco) might become doubtful.

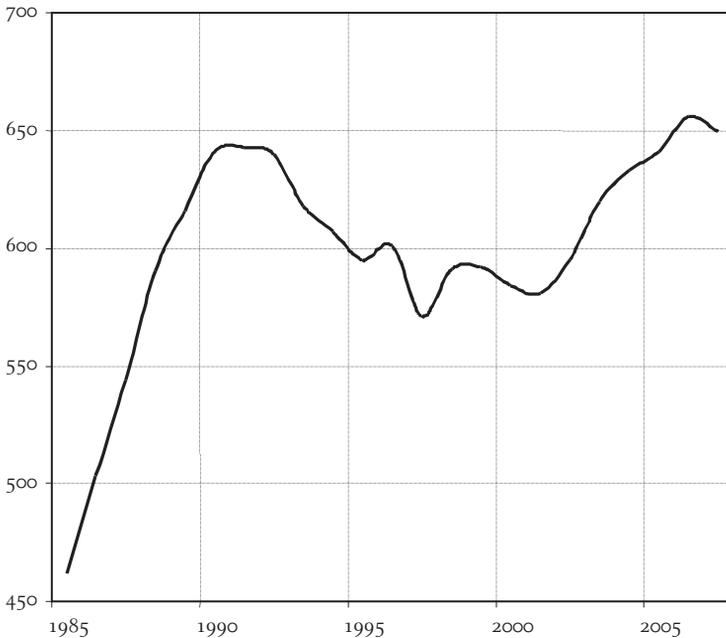
3. Alternatives to Russian Gas Supply

In the case of the standard demand scenario, Russian gas alone will not match Europe's additional gas demand. Other countries besides Russia will supply Europe with growing volumes of natural gas. In particular, gas imports from Africa will rise, and in 2020 they will reach the magnitude of imports from Russia, partially in the form of LNG. On the other hand, imports from the Caspian region will play only a subordinate and indirect role in European gas supply by being substituted for Russian gas in the domestic market.

The growing share of gas imports from Africa and the Middle East will lead to greater regional diversification of imports. Russia's import share will decrease from the current 60% to less than 40%.

4. Forecasts of Russian Gas Production and Gas Export Potential

Russian gas production preliminarily peaked at a level of nearly 650 bcm at the time of the break-up of the Soviet

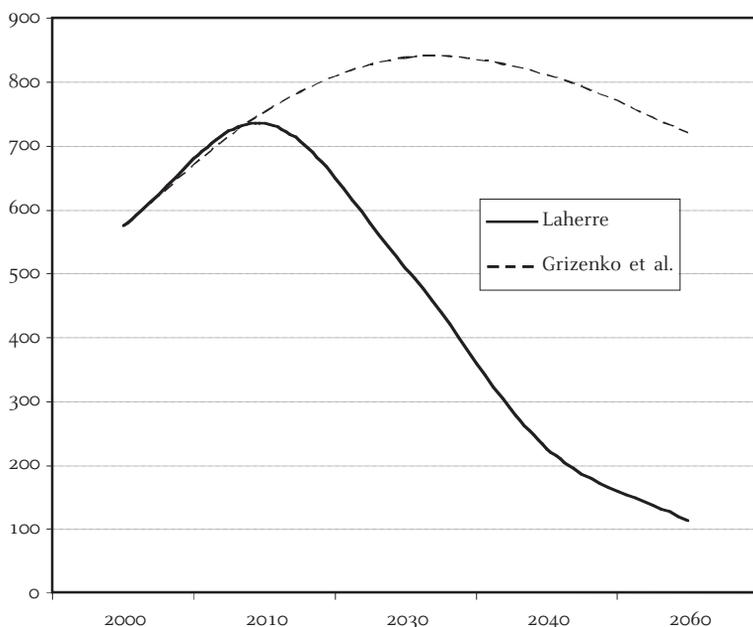
Figure 2. Gas Production in Russia, 1985-2007 (in bcm)

Source: Russian Statistical Agency (Goskomstat), *Russian Statistical Yearbook*, various issues.

Union.⁴ In the 1990s, it decreased by about 10% due to organizational problems during the transition period as well as the temporarily low gas demand in former Soviet countries. But in 2006 it reached 656 bcm and exceeded its 1991 record.

The future of Russian gas production cannot be deduced from past developments, but must be based on the production potential (proved and estimated resources) as well as on the speed of opening up this potential. Because the assessment of the production potential is based on assumptions about the probability of the volumes of single gas deposits, it contains a strong subjective element. So it is not surprising that the available long-term estimates of Russia's gas potential differ considerably.

4. These gas production data are taken from official Russian sources and contain natural gas as well as associated gas. Gas volumes in Russia and CIS countries are measured at 20°C (instead of 15°C) and because of the larger volumes resulting from the higher temperatures, it accounts for volume data 7% higher than the data of BP's *Statistical Review of World Energy*.

Figure 3. Gas Production in Russia, 2000-2060 (in bcm)

Sources: Laherrère, 2007; Grizenko et al., 2001.

Jean Laherrère (2007), of the Association for the Study of Peak Oil and Gas, calculates a gas potential of 43 trillion cubic meters (tcm; $1 \text{ tcm} = 10^{12}$ cubic meters) and forecasts a peak production in 2015, to be followed by a sharp production decline. A Russian team of authors (Grizenko et al., 2001) calculates a potential of 100 tcm, whereas the German Federal Institute for Geosciences and Natural Resources (2007: 57) estimates a potential of 130 tcm. Alexander Ananikov (2007), Gazprom's deputy chairman, has even spoken of 250 tcm. As a consequence of their differing estimates, Laherrère's and the Russian team's long-term forecasts assume different production profiles (see fig. 3).

Apart from the aforementioned long-term analyses, there exist a number of mid-range forecasts for Russian gas production. Based on different data and parameters, they reveal a scope of production between 650 and 730 bcm already for 2010 and between 700 and 1,000 bcm after 2025. This corre-

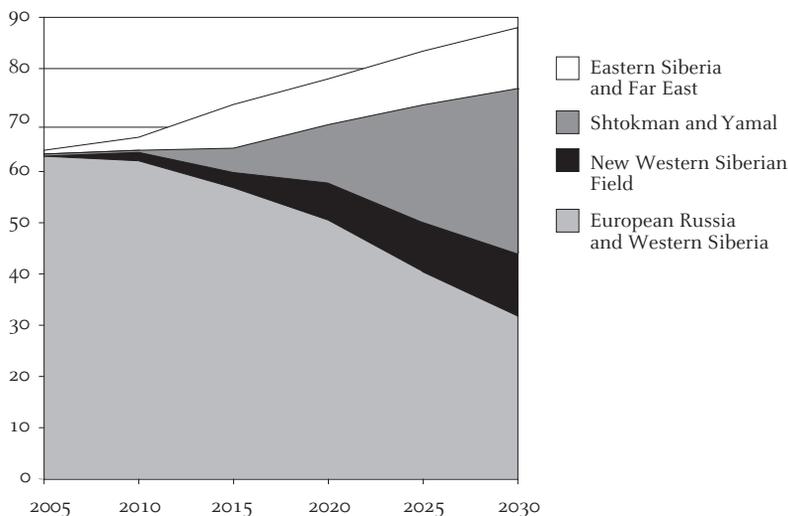
sponds more closely to the Russian team's long-term forecast than with Laherrère's.

The overwhelming part of Russian gas production is located in western Siberia and in the European part of Russia, whereas production in eastern Siberia and the Far East is only about to begin. To stabilize production in West Siberia, it is necessary to bring new fields into operation, especially on the Yamal Peninsula and in the Barents Sea (see fig. 4).

Because Yamal contains the largest, still untouched gas reserves in Russia, its development is crucially important for Europe. Gazprom plans to start industrial production on Yamal in 2011, beginning with the giant Bovanenkovo field. Production on Yamal and in the shelf of the Kara Sea is projected to rise to 250 bcm by 2028 (OAO, Gazprom, 2007b: 6–9).

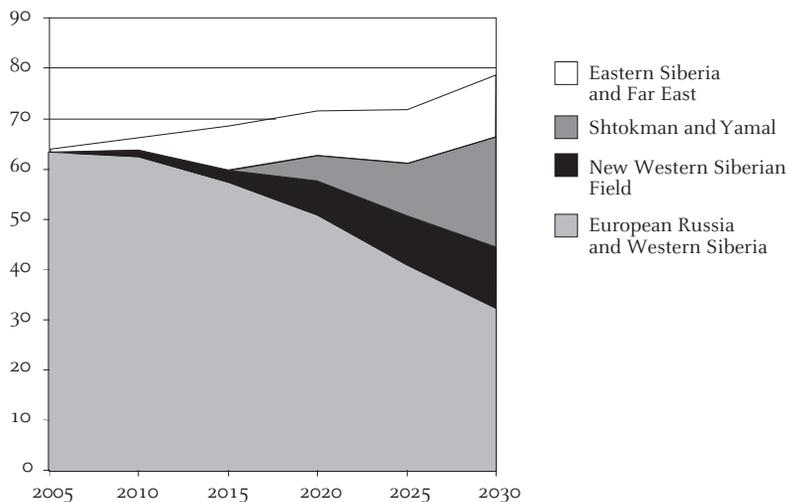
The conditions for gas production and transport on the Yamal Peninsula, with its many rivers and shallow lakes, are challenging due to difficult soil conditions. Global warming can cause additional difficulties, because the permafrost soil may thaw and gas installations and pipelines will need stronger foundations. For all those reasons, it is questionable

Figure 4. Gas Production in Russian Regions, 2005-2030 (in bcm)



Source: Mitrova, 2007.

Figure 5. Gas Production in Russian Regions, 2005-2030, Deferred Case (in bcm)



Source: Mitrova, 2007; author's calculations.

whether the big development projects on Yamal and in the Barents Sea (Shtokman) will go as planned. If, for example, they are delayed by five years, gas production in western Siberia, including Shtokman and Yamal, will stagnate at the 2010 level or even decrease, and an increase of exports to Europe will become impossible (see fig. 5).

Calculated in 2004 prices, production installations will cost US\$25 billion and pipeline expenditures will amount to US\$39 billion; so, together with other expenses, total investment for the Yamal development will total US\$70 billion (Pirani, 2004). Investment in the whole gas industry of Russia in the period up to 2030 will account for US\$440 billion (2005 prices), including up to US\$195 billion for pipelines, US\$142 billion for production facilities, US\$38 billion for exploration, US\$58 billion for gas processing installations, and US\$7 billion for gas storage (Mazneva and Reznik, 2007). This means an annual cost of US\$18 billion. This sum seems sustainable only so long as high oil and gas prices persist.⁵

5. The investment volume of Gazprom in 2006 was US\$13 billion (without investment in oil- and gas-condensate activities). See OAO Gazprom (2007), 67.

5. Imports and Domestic Consumption

Russia currently imports natural gas from three Central Asian CIS countries: Turkmenistan, Kazakhstan, and Uzbekistan. It is then exported to Belarus, Ukraine, and Moldova. But the future of Russian gas imports is at risk, because China and Europe will gradually become rivals for Central Asian gas. Therefore, some forecasts assume a decrease in Russian gas imports.

Gazprom is strongly interested in the continuation and expansion of its gas imports, especially from Turkmenistan. According to the “25-year-treaty” of 2003, Turkmenistan has to deliver 50 bcm per year between 2007 and 2009 and up to 90 bcm per year thereafter.

On the other hand, Turkmenistan plans to export up to 30 bcm per year to China by means of a pipeline that will be brought on-line in 2009. Iran, Pakistan, and India are also interested in gas imports from Turkmenistan. This means that Turkmenistan gas production has to be extended considerably to satisfy the demand.

Russia’s gas export potential strongly depends on the development of its internal gas consumption. Russia itself consumes about two-thirds of its enormous gas production, exporting only one-third. This is the consequence of a reorientation of energy consumption to gas at the expense of coal and oil, as decreed in the 1980s. This “gas break” was originally conceived as a temporary measure, but it has continued to this day because gas is cheaper than coal and oil on the internal market. Another reason for the high gas consumption is its inefficient use in outdated power plants and heating installations. Moreover, gas is wasted and avoidable CO₂ is emitted because associated gas, which is a by-product of crude oil production, is flared in the amount of 60 bcm per year (IEA, 2006: 21). Only if the administrated internal gas price were to rise sufficiently could the increase of gas consumption be constrained to 500 bcm in 2010 and to 550-600 bcm in 2030. This will not mean an adjustment of the internal price to the export price, but an adoption of the “European” price formula, which ties gas prices to the prices of alternative fuels, above all to crude oil.

There are some fears, however, that higher prices on the Russian internal gas market will lead to declining gas exports to the West (Spanjer, 2007: 13). Yet these fears seem to be unfounded since higher internal prices will reduce the volume of internal gas demand and, therefore, export will remain an attractive option for Gazprom.

6. The Russian Gas Export Potential

The US Energy Information Administration (EIA) and the International Energy Agency (IEA) differ considerably in their evaluation of Russia's gas export potential. Whereas the EIA, in accordance with its optimistic production forecast, calculates a very optimistic export potential, the IEA predicts a situation close to stagnation for Russian gas exports. On average, the prognoses forecast an increase of gas exports from about 200 bcm in 2005 to 300 bcm in 2030.

A reallocation of gas exports is also anticipated. Whereas all exported Russian gas goes to the CIS and to Europe at present, some of it will be directed to China and Southeast Asia in the future. But the bulk of Russian gas exports will always flow west due to the vast pipeline network already in operation, whereas pipelines to the east have yet to be built.

7. The Legend of the 2010 Gas Deficit

Both the increase of Russian domestic gas consumption and the growing gas export obligations force the question of the sustainability of the Russian gas balance. Some observers, including the former Russian deputy energy minister, Vladimir Milov, have warned about an impending Russian gas deficit of 126 bcm in 2010 (Milov et al., 2006: 305). Milov's arguments have been presented to a broader audience by Alan Riley, a lecturer on competition law at the London City Law School, in a publication of the Brussels-based Centre for European Policy Studies (Riley, 2006: 3; Riley and Umbach, 2007: 85). Nevertheless, the thesis of an upcoming Russian gas deficit as presented by Milov and his supporters is by no means convincing.

Table 2. Calculations of a Russian Gas Deficit (in bcm)

| | Milov I 2010 | Milov II 2010 | Paillard I 2012 | Paillard II 2012 |
|-------------------------|-----------------|------------------|--------------------|---------------------|
| Gazprom production | 550 | 527 | | |
| Independent producers | 0 | 120 | | |
| Total production | 550 | 647 | 645 | 555 |
| Import | 105 | 85 | 0 | 0 |
| Total supply | 655 | 732 | 645 | 555 |
| Export to Europe/CIS | 312 | 325 | 223 | 228 |
| Export to Asia/US | 0 | 38 | 35 | 35 |
| Total export | 312 | 363 | 258 | 263 |
| Domestic consumption | 469 | 465 | 440 | 480 |
| Total use | 781 | 828 | 698 | 743 |
| Balance | -126 | -96 | -53 | -188 |

Sources: Milov, 2006a-b; Paillard, 2007.

Although Milov's statements always referred to the importance of independent gas producers and to the gas production of oil companies in Russia (Heinrich and Kuszmin, 2005), he neglected their contribution –which will add 120-140 bcm in 2010– in his frequently cited deficit calculation (table 2). And even though he corrected this mistake in a later publication, he incorrectly calculated a gas deficit of 96 bcm, because he forecasts an extremely low gas production simultaneously with an extremely high export obligation (Milov, 2006a-b).

But Milov is not the only author who wrongly calculated a Russian gas deficit. Christophe-Alexandre Paillard (2007: 6-7), of the French Ministry of Defense, also forecasts a gas deficit of 63-200 bcm for 2012 because he excluded from his calculation the Russian gas imports from Central Asia and/or the contribution of independent gas producers (table 2). At the same time, the IEA (2007) voiced its concerns about too little investment in Russian gas production installations, while refusing to publish its own forecast of the Russian gas balance.

8. Taking Advantage of an Asymmetric Dependency?

While in the 1970s gas from Russia had been regarded as a safe alternative to the precarious energy imports from the Middle East, recent discussions give the impression that Russian power and influence endanger European energy security (Larsson, 2007; Baran, 2007). One of the main arguments is the alleged “asymmetric dependency” of Europe on Russia in the gas sector. The procurement of natural gas by pipelines admittedly offers nearly no possibility of changing suppliers, and therefore an interruption of deliveries would have considerable consequences for consumers. But the dependency is two-sided: Neither the supplier nor the recipient can change its partners. So a discontinuation of deliveries would be detrimental to both sides. The negative consequences for the Russian side would be more serious than for Europe, because Europe’s share in Russian gas exports is more than 90%, while Russia’s share in European gas imports is only about 60%, with a decreasing trend (Guillet, 2007: 17-18).

One objection to this argument is that Gazprom could temporarily do without earnings from gas exports, whereas its clients do not possess similar leverage. Yet the objection totally misjudges the company’s commercial interests. Gazprom is vitally dependent upon its reputation as a reliable supplier and it is not prepared to jeopardize that reputation for any short-term advantages or a (unspecified) Russian external energy policy. In fact, an arbitrary stop of delivery would bring about most serious consequences for Gazprom and the whole Russian economy. Because natural gas in Europe competes heavily with coal and renewable energies, a prolonged supply crisis would cause European power stations and industrial consumers to switch to those other energy carriers. Gazprom would most probably lose its main markets forever. The consequences for the company and the Russian budget would be fatal. Thus the thesis of “asymmetric dependency” proves to be unfounded.

9. Gazprom’s Power Monopoly?

Will Gazprom try to exercise market power on the European gas market with the aim of increasing gas prices? If

so, Gazprom must have an interest in developing its spot transactions on the European market. This scenario implies the existence of a European spot market for gas or the predominance of short-term transactions. But this is not the case. Spot trading accounts for less than 5% of the trade volume on the European market. There has been no expansion of spot markets after the development of the UK market, which followed the establishment of several competing North Sea gas producers (Finon and Locatelli, 2008: 430). Furthermore, Gazprom is not pursuing short-term sales on the European market. Gazprom has constantly reiterated its preference for long-term contracts. In 2006, it renewed contracts over 20-30 years with the major European gas companies (E.ON, Wintershall, OMV, ENI, etc.). Investors like Gazprom are unwilling to invest in capital-intensive gas fields or LNG chains without guarantees on quantity and price that are only provided by long-term contracts. Hence, on the continent, spot markets will probably be insufficiently developed to be reference markets for contractual pricing (Finon and Locatelli, 2008: 431).

10. Will Russia Join a Gas Cartel?

Some statements of the presidents of Iran and Russia on the possibility of a cartel of gas producing countries similar to the Organization of Petroleum Exporting Countries (OPEC) alarmed EU institutions and the public. The May 2007 resolution of the thus-far insignificant Gas Exporting Countries Forum, which asserted the intention to intensify cooperation between its members, further heightened those fears.

A gas cartel becomes effective only when its members jointly vary production in order to influence gas prices. In particular, a decrease in production aims to stabilize or increase gas prices. But a policy to cut back production would be more costly to implement than in the oil sector, since the gas industry has much higher fixed costs and so the incentives are much fewer effective than in the oil sector. Consequently, in Europe and most parts of the world, gas prices are

determined not by supply and demand but by long-term contracts, where gas prices are linked to indices that reflect, above all, oil prices.⁶ So gas prices are not up to the whims of gas producers, and an OPEC-like cartel mechanism could not work. A cartel would presuppose the cancellation of existing long-term contracts. But at present, no big gas producer is considering such a step. Furthermore, because the economic and political interests of the big gas producing countries of Russia, Iran, and Qatar differ considerably, it is extremely questionable whether a gas cartel will emerge in the future (Finon, 2007). Norway fully obeys the competitive rules of the EU. International gas and oil companies that operate in Qatar and African countries would never subject their long-term gas strategies to the decisions of a producer-state monopoly. Finally, if oil prices remain high for a long time and the fixing of the gas export price to oil stays in place, strategies to restrict short-term gas supply would not provide gas producers with any additional advantages (Finon and Locatelli, 2008: 432).

11. Gazprom's Diversification Strategy and European Pipeline Policy

Currently two kinds of transport systems are available for exporting Russian natural gas beyond CIS countries: transit pipelines and direct pipelines. LNG pipelines on Sakhalin and along the coast of the Barents Sea are also under construction.

The largest and oldest pipeline branch (Brotherhood) traverses Ukraine, Slovakia, and the Czech Republic and ends in Germany, its final destination. Offshoots stretch to Hungary as well as to Turkey, by way of Moldova, Romania, and Bulgaria.

6. In the system of long-range contracts, the gas export price at the border of a receiving country is derived from the prices of the substitutes for natural gas, such as hard coal and fuel oil (*replacement value*). The price at the border of the supplier country corresponds to the export price without transport costs (*netback pricing*). Therefore, the export price for the supplier depends on the internal situation in the respective receiving country. On the other hand, gas prices in the consumer country depends neither on the supplying company's production costs nor on its transport expenditures. Because the recipient has to accept the fixed volume of gas, he bears the quantity risk (*take or pay*), whereas the supplier bears the price risk, because he cannot influence the price. [See Energy Charter Secretariat, 2007.]

The so-called Jamal-Europe pipeline, which was completed in 2005, crosses Belarus and Poland on its way to Germany. These “transit pipelines” in a way pose a “transit problem” because they are not totally separated from the gas pipelines and gas storage facilities used to supply the transit countries themselves. Thus, when authorities in transit countries make unjustified gas withdrawals in response to quarrels over the price of gas for domestic consumption, gas transit is affected (Götz, 2007).

Gas pipelines that bypass transit countries (direct pipelines) include the Blue Stream offshore pipeline across the Black Sea to Turkey, the Nord Stream offshore pipeline across the Baltic Sea to Germany, the projected South Stream offshore pipeline across the Black Sea to Bulgaria, and a small pipeline to Finland. Still other direct pipelines will include the Altai pipeline to China, which will cross the short Russian-Chinese border between Kazakhstan and Mongolia. A further pipeline runs from eastern Siberia to China.

Having obtained the exclusive right to export Russian gas (“unified export channel”) in 2006, Gazprom aims to diversify its export routes in two ways: on the one hand, by building “direct” offshore pipelines, Gazprom is attempting to create alternatives to the transport routes through transit countries; on the other hand, it intends to export more to the east as an alternative to supplying Europe. Transit pipeline capacities to Europe will stagnate at roughly 200 bcm, while direct pipeline capacities are expected to increase to the same level. In this way, the total capacity of pipelines to Europe will grow from 200 bcm to about 500 bcm. Because future gas exports to Europe will only slightly exceed 200 bcm, this development will obviously result in a large overcapacity in westward pipelines.

Creating overcapacities is apparently an element of Gazprom’s diversification strategy. The strategy is costly, however, because relatively expensive offshore technology is being used instead of the cheaper multiplication of existing onshore pipelines. At the same time, Gazprom’s financial and engineering resources are being heavily burdened by the

Table 3. Capacity Predictions for Russian Natural Gas Exports to Countries Outside the CIS (in bcm)

| Direction | Point of delivery | 2004 | 2010 | 2020 | 2030 |
|--------------------------------|------------------------|------------|------------|------------|------------|
| Ukraine-Poland | Khodnovici | 5 | 5 | 5 | 5 |
| Ukraine-Slovakia | Uzhgorod | 100 | 100 | 100 | 100 |
| Ukraine-Hungaria | Beregovo | 15 | 15 | 15 | 15 |
| Ukraine-Romania | Khust | 5 | 5 | 5 | 5 |
| Ukraine-Moldova-Romania | Izmail | 28 | 40 | 40 | 40 |
| <i>Ukraine (total)</i> | | 153 | 165 | 165 | 165 |
| Belarus-Poland | Brest | 6 | 6 | 6 | 6 |
| Belarus-Poland ("Yamal") | Kondrakti | 23 | 33 | 33 | 33 |
| Total transit pipelines | | 182 | 204 | 204 | 204 |
| Finland | Svetogorsk-Imatra | 9 | 9 | 9 | 9 |
| Turkey ("Blue Stream") | Dzubka-Samsun | 16 | 16 | 32 | 32 |
| Balkan/Italy "South Stream" | Varna | 0 | 32 | 32 | 32 |
| Germany ("Nord Stream") | Greifswald | 0 | 28 | 55 | 55 |
| China | Altai/Zabaykalsk | | | 40 | 80 |
| Total direct pipelines | | 25 | 85 | 168 | 208 |
| LNG USA | Shtokman (Barents Sea) | | | 23 | 23 |
| LNG USA | Yamal (Kara Sea) | | | | 25 |
| LNG Kanada | Ust-Luga (Baltic Sea) | | | 5 | 5 |
| LNG Asia | Sachalin (Pacific) | | 13 | 26 | 39 |
| Total LNG | | 0 | 13 | 54 | 92 |
| Total capacities | | 207 | 302 | 426 | 504 |

Sources: Hafner, 2006; supplementary calculations by author.

expansion of its internal gas network ("gasification of the regions") and the costly and difficult linkage of the new gas fields on the Yamal Peninsula to the long-range pipelines.

What is the logic behind Gazprom's pipeline strategy? The most widespread explanation is political: Gazprom is acting as an arm of the Kremlin. It threatens and punishes CIS coun-

tries for attempting to escape Russian dominance. Yet this line of argumentation ignores the company's autonomous position. Although the Russian state is indeed Gazprom's majority shareholder, the company is not necessarily obliged to protect the country's interests. By supplying the domestic market at low prices, Gazprom is already serving state aims (and the interest of certain sectors, such as the fertilizer and steel industries). Apart from that, it would appear that Gazprom uses its contacts with the state bureaucracy to promote its own commercial interests (and the interests of its private owners, such as the German company E.ON). In fact, some of Gazprom's more spectacular moves, such as increasing the gas price in Ukraine at the beginning of 2006 and in Belarus a year later, actually have run counter to Russia's policy of reintegrating post-Soviet countries. Such moves obviously serve the company's commercial interests.

On the other hand, Gazprom's diversification strategy is economically sound. The capital and operating costs of offshore pipelines are indeed much higher than the corresponding costs of onshore pipelines (Hubert and Ikonnikova, 2003: 7, table 1). Alternatively, transit fees are non-existent or negligible (and are only charged if the pipeline crosses an economic zone in a given country), which in the long run can offset the higher capital costs. So the "direct" offshore pipelines are first and foremost an instrument of Gazprom's corporate strategy.

In the case of the Blue Stream pipeline, Gazprom has tried to close off the Turkish gas market to competitors from the Caspian region (especially Turkmenistan). Around the same time, plans for a major pipeline from Iran to Europe (today's Nabucco pipeline) were foiled. Gazprom's current plans to extend the Blue Stream pipeline and/or to construct the South Stream pipeline are an extension of this concept, which is aimed at dominating the market and ousting competitors.

The Jamal-Europe pipeline and the projected Baltic pipeline (Nord Stream) are part of a different strategic approach. Both provide alternatives to the extensive Ukrainian transit pipeline system. They diminish Ukraine's bargaining power in transit fee negotiations and assist Gazprom in its

endeavors to acquire the Ukrainian gas transport system. The Baltic pipeline exerts similar pressure on Belarus.

Theoretical work using game theory has shown that the existence of transport alternatives discourages transit countries from demanding high transit fees or “recontracting” them.⁷ The presence of alternative transport routes gives the supplier the upper hand in bargaining and increases his profit share. A model calculation shows that the existence of the Yamal pipeline increases Gazprom’s profit share to 55% of the overall profit from gas sales. The Nord Stream pipeline will raise Gazprom’s profit share further to 80%, while the transit countries will be forced to settle for a 20% share (Hubert and Ikonnikova, 2003). If additional suppliers (e.g., Turkmenistan and Iran) or additional transit countries (e.g., Azerbaijan and Georgia) are taken into consideration, the locus of bargaining power shifts depending upon the coalitions that are formed. If Turkmenistan or Iran cooperates with the southern transit countries (excluding Russia) and the Trans-Caspian Pipeline (TCP) across the Caspian Sea is realized, Russia’s bargaining power will be weakened.⁸ On the other hand, if Russia and Turkmenistan cooperate, the TCP will not be built, and Turkmenistan will not supply the Nabucco pipeline but only Russia and China, while Russia builds the Nord Stream pipeline, extends the Blue Stream pipeline, and adds the South Stream pipeline. At present, there is overinvestment in relatively expensive strategic pipelines (direct pipelines); at the same time, there is underinvestment in relatively cheap transit pipelines (Ikonnikova, 2006).

Gas-producing countries aim to maximize their profit. Thus, when the reliability of a transit country is called into question, gas producers respond by shifting their preference to direct pipelines. Maintaining overcapacities in those direct pipelines in turn enables them to exert pressure on transit countries. The second strategic aim therefore consists in

7. The problem of “recontracting” occurs especially in infrastructure projects that are pre-financed by one party in good faith that the other party will honor the contract, which does not always occur. See Hubert and Suleymanova (2006).

8. The planned TCP, an underwater pipeline, is to connect the gas fields east of the Caspian Sea with the transit pipelines that cross Azerbaijan, Georgia, and Turkey and end in Europe.

changing the negotiating position of gas producers vis-à-vis transit countries and shifting the distribution of profits made on gas exports to Gazprom's advantage.

The third strategic aim is to increase gas market security by identifying new markets outside Europe. These include –in addition to the worldwide LNG market– the Chinese/Southeast Asian market, which can be reached through pipelines. Until recently, the system of long-term contracts and pegging gas prices to oil prices have provided high market security for Russian natural gas on the European market. However, several developments are causing the European market to look increasingly insecure:

- Competition from African suppliers (pipeline gas and LNG) is growing. Contrary to widespread fears that Europe is becoming increasingly “dependent” on Russian natural gas (which in any case is plausible only in a purely numerical sense), Russia's share of European imports is actually expected to drop from two-thirds to less than half of all European gas imports due to the disproportionate increase in European imports from Africa and the Middle East.

- As Europeans become more aware of climate problems, the use of relatively “clean” natural gas is being rethought amid proposals to move to biogas, which is generated from biomass.

- Predictions about Europe's future natural gas needs are becoming increasingly modest. As a result of high natural gas prices (which are in turn caused by high oil prices), Europeans are revising their plans to build power plants; coal, which is cheaper than gas, as well as biomass, are becoming more attractive fuel sources.

Whereas the “mature” European market's need for additional natural gas has become uncertain, demand in China/Southeast Asia is all but assured. As a result, Gazprom and Russia's leaders have promised to construct two long-distance pipelines to China.

Thus it is fair to say that Gazprom's pipeline strategy (regardless of possible political motives, which cannot be ruled out but should also not be overestimated) derives from the

legitimate strategic objectives of the company. These include: controlling the market, driving out competitors, increasing Gazprom's bargaining position vis-à-vis transit countries, and securing markets.

Gazprom's strategies have unsettled the CIS states affected by its policies and particularly some eastern EU Member States, such as the Baltic countries and Poland, thus giving rise to calls for counter-measures in the interest of "energy security." Proposed measures range from a solidarity-based "EU energy policy" to an "Energy NATO." Because the Baltic pipeline weakens the negotiating position of both current and potential transit countries vis-à-vis Gazprom/Russia, the Baltic countries, Poland, and other Baltic Rim countries, such as Finland and Sweden, are attempting to delay this project or are actively lobbying for it to be aborted altogether (Larsson, 2007). But such attempts have little chance of success and merely contribute to the growing tensions between Russia and its immediate neighbors to the west.

European counter-strategies should instead focus on increasing Gazprom's trust in the reliability of European transit routes and the security of the European gas market. In this context, for an "energy security" policy to be accepted by Gazprom/Russia, it would have to address such issues as secure delivery, secure distribution, and stable demand, without neglecting other factors, such as the economic viability/efficiency and sustainability/ecofriendliness of the energy supply. This expanded concept of "energy security" should be a subject of the EU-Russian energy dialog.

The post-Soviet states of Central Asia and the southern Caucasus –the "Caspian Sea region"– have attracted considerable attention since the end of the Soviet Union, as exemplified by such phrases as the "Great Game on the Caspian Sea." International attention has been focused mainly on the region's oil deposits, whereas Europe has been more interested in the natural gas reserves. The latter count for some 6% of the world's remaining reserves of natural gas –only slightly less than those found in Africa, which make up a large part of Europe's supply. This situation has given rise to repeated calls for political support in order to make the natural gas potential

of the Caspian Sea region accessible to Europe, which would at the same time free the region as well as Europe itself from Russian dominance. By diversifying their gas exports, the countries concerned stand to gain a better negotiating position vis-à-vis Russia and are therefore interested in supplying Europe.

Potential gas exporters from the Caspian Sea region include the Central Asian countries Kazakhstan, Turkmenistan, Uzbekistan, and Azerbaijan, but not Kyrgyzstan, Tajikistan, Georgia, or Armenia. Whereas Kazakhstan has the largest oil reserves in Central Asia, Turkmenistan possesses the largest natural gas reserves in the Caspian Sea region. Admittedly, there are no reliable figures on the exact size of these deposits. Statements regarding Turkmenian deposits are extremely unreliable; they are either issued by Turkmenian officials, whose credibility is dubious at best, or are based on anonymous sources that cannot be verified. The country's medium-term annual gas production potential can be estimated at approximately 150 bcm. After allowing for domestic consumption, around 130 bcm would be available for export. If Turkmenistan honors its long-term supply agreement with Russia, which provides for a supply volume of up to 90 bcm per year by 2020, that would leave 40 bcm for Turkmenistan's planned exports to China as well as for its intended exports to Iran, Turkey, and on to Europe. The exact distribution of these exports will depend on the price conditions offered by potential customers and on the means of transport available.

The natural gas found in the Caspian Sea region can be exported in all directions, potentially supplying Russia and, via Russian pipelines, Belarus, Ukraine, Moldova, China, Pakistan, and India, as well as Turkey and Europe. The only pipelines currently in service, however, are those to the north and to the west; thus far there are no lines to the east or to the south.

Since the end of 1997, a pipeline has been in place that runs along the eastern shore of the Caspian Sea from Korpedze, Turkmenistan to Kordkoy, Iran, where it flows into the Iranian pipeline network. This pipeline carried 6 bcm to Turkey in 2006. There are plans to increase the gas flow to between 10 and 15 bcm.

The completion of the South Caucasus Pipeline (SCP) in 2007, which runs from Baku through Tbilisi and on to Erzerum largely along the Baku-Tbilisi-Ceyhan (BTC) oil pipeline, has for the first time given Azerbaijan access to the Turkish and European markets. The pipeline is designed to carry 16 bcm but could be expanded by laying further lines along the same route, which would enable the country to deliver to the west as much natural gas as it is capable of exporting.

Geopolitical considerations have led to vehement demands, especially by the United States, to build the TCP, an underwater pipeline between the Turkmenian port city of Turkmenbashi (previously Krasnovodsk) and Baku. This project has so far failed to materialize due to the unresolved issue of the status of the Caspian Sea, environmental concerns voiced by Russia, and questions concerning the pipeline's profitability. The estimated cost of constructing the pipeline (US\$2.5-5 billion) could be recovered only if the pipeline could be used at full capacity, which is doubtful.

Most of the natural gas exported to the west from the Caspian Sea region is expected to come from Azerbaijan, whereas Turkmenistan can be expected to supply significantly less. While Turkmenistan already has –or will soon have– the transportation infrastructure necessary to export gas to Russia and China, its capacity to export to the west remains comparatively undeveloped. By contrast, Azerbaijan has at its disposal the SCP by which exports can be expanded according to demand. Azerbaijan's future gas production and gas exports will largely be determined by how the overall market in Turkey and Southern Europe develops and what role competitors from Russia and Africa play there.

Repeated calls have been made not to “leave the construction of pipelines to the corporations” but rather to exercise political control over it at the EU level, enabling Member States to “speak with one voice” and promote the diversification of their gas imports. But is this really an effective strategy? The EU has neither formal powers nor the means to finance more than preliminary pipeline studies. In fact, it is neither the EC nor the EU Member States that govern the

construction of pipelines in Europe but rather the energy companies acting in their own interest, as shown by the example of Italy's ENI.

In any case, whether or not the Nabucco pipeline is built will not have a decisive effect on the extent of the diversification of Europe's gas imports, since the 30 bcm carried by a "southern transport corridor" would only cover 6-8% of Europe's import demand, which is expected to grow to 400-500 bcm by 2020. If, on the other hand, Iran were to initiate extensive gas imports to Europe, it could become Europe's third main supplier after Russia and Africa. However, Iran's gas export priorities are difficult to discern. Tehran is planning to construct a major pipeline to Pakistan and India and to make swap deals with Russia's Gazprom that would enable it to make indirect exports to Europe and to supply Europe by way of Turkey. Iran is also planning extensive LNG deliveries to China and Southeast Asia.

For the foreseeable future, Europe's main suppliers of natural gas will continue to be Russia and Africa (in that order). Nevertheless, all possible avenues of cooperation with the countries of the Caspian Sea region should be explored. The less the impression is given that a politically orchestrated "diversification race" is being run with Russia, the more successful this approach will be.

12. Institutionalizing Energy Relations

Given its concern for its energy security, Europe is very much interested in institutionalizing its energy relations. Two proposals in this regard, the "Energy NATO" and the "Energy OSCE" (Organization for Security and Co-operation in Europe), are oriented towards the principles of collective security. Whereas the Polish idea of an "Energy NATO" would involve only the European energy consumer states and aims at collective assistance in the case of a supply crisis, the "Energy OSCE," an idea proposed by German Foreign Minister Frank-Walter Steinmeier, would also include the producer and transit states and constitute an international energy dialog (Geden et al., 2007). But both concepts have their drawbacks. Whereas

the “Energy NATO” finds little backing among EU countries because it is obviously directed against Russia, the “Energy OSCE” likewise lacks support since it largely duplicates the Energy Charter Treaty (ECT).

In 2006, following the Russia-Ukraine gas crisis, the EU again tried to persuade Russia to adopt free-market legislation in the energy sector and therefore to ratify the ECT. Through the ECT and its Transit Protocol, a vastly developed system of norms for energy relations exists. Nearly all Western and Eastern European states have signed and ratified this treaty. Russia too signed the ECT in 1994, but the Russian Duma has so far refused to ratify it. Russia certainly promises to apply the ECT provisionally as far as it is compatible with the Russian constitution and Russian law. Its position is further supported by the fact that other big energy producers, such as Norway and Australia, have not ratified the ECT, nor has the United States even signed it.

Some of the arguments advanced by Russia against the ECT have become invalid in the meantime. So it is now undisputed that the ECT neither questions the existing long-term gas contracts nor will it demand higher internal gas prices in Russia. Nevertheless, Gazprom’s chief lobbyist, Valeri Yazev, asserts that the ECT and its Transit Protocol enables the Central Asian gas exporters to use the Russian gas transport system and thereby endangers Russia’s gas exports to the west. But the Energy Charter Secretariat (Mernier 2006) argues that the ECT will not compel Russia to open its pipelines to competing countries. Nor will the ECT give foreign companies unconditional access to its energy resources. Rather, the ECT only defends existing investments. Moreover, Russia will profit from the norms of the Transit Protocol because it prohibits the interruption of transit flows.

Russia rightly points out that, until now, the ECT has not covered the trade of nuclear fuels –despite the fact that the Partnership and Co-operation Agreement (PCA) had already addressed the issue in 1997, with the result that Russia has been banned from the trade of nuclear fuels on the European market. In addition, Russia rejects the ECT’s “Regional Integration Clause,” which excludes energy transport within the EU from the regulations of the Transit Protocol.

President Putin has explicitly argued against ratifying the current version of the ECT, and there are no signs that his successor will change Russia's stance. Putin did indicate that Russia would be prepared to adopt some of the ECT's principles in the PCA, which is due for renewal; but it is debatable whether doing so would yield relevant benefits for foreign investors and trade partners. Instead, it would be more fruitful to include the ECT's dispute settlement mechanism in the PCA (Energy Charter Secretariat, 2004: art. 7.7, 19, 26, 27 and 29). Furthermore, the EU should consider revising its position on the trade of nuclear materials and the Transit Protocol's "Regional Integration Clause" in order to gain Russian support for the ECT. In any case, the outlook for a revision of Russia's stance is bleak. As a sovereign power, Russia has no plans to become part of a European common political and economic space. Consequently, it has no immediate interest in bringing its regulations in line with European legislation (Finon and Locatelli, 2008: 436).

13. Speaking with a Single Voice: A Common Negotiator

The idea of a "common negotiator" is consistent with the EC's aim to "speak with a single voice" to gas producer countries (ibid., 437). It means that one European agency would coordinate the negotiations of contracts with gas exporting countries. Two issues are of cardinal importance here: First, what would contract coordination by a common negotiator really allow? Secondly, are the interests of EU members really converging? Concerning the first question, one has to realize that the role of a common negotiator would not at all be consistent with market principles, unless the role were only symbolic. What would be the common negotiator's task? Would it dictate the terms of commercial deals to private companies? Or will it auction on a market basis? If its actions were to be in line with market principles, could the negotiator do more than try to harmonize the contractual arrangements (time span of contracts, pricing clauses, etc.) with foreign producers?

The EU can pursue a consistent external energy policy only if the interests of Member States do not diverge much.

But in 2006 and 2007, some of the new Member States, especially Poland, failed to demonstrate the same spirit of compromise and the same balanced approach to their relations with Russia, which they see as a geopolitical opponent, as the other EU members did.

14. Enlarging the Energy Mix with Biomethan

Clearly the enlargement of the respective national energy mixes by an expanded use of renewable energies or an intensified use of nuclear energy will reduce dependency on imported fossil fuels. Natural gas can be substituted by biomethan, which can be extracted from biogas or bio-synthetic gas (Bio-SNG).⁹

Biomethan can be fed into the gas pipeline network if it is under the necessary pressure. In principle, European biomethan could be a substitute for imported natural gas in significant quantities if production costs could be reduced. If that were to happen, a contribution of up to 300 bcm of biomethan to the European gas supply is conceivable by 2030 (Thrän et al., 2007: 27-29). Furthermore, countries such as Ukraine, Belarus, and Russia potentially could sell biomethan to Europe, using idle pipeline capacities.

15. Improving Energy Efficiency

Energy efficiency can be improved through numerous measures concerning energy production, transport, transformation, and consumption. The investment required in each case would pay for itself by diminishing consumption and reducing harm to the environment. If the participants in such efforts were to include not only the European consumer states but also energy producers like Russia and transit states like Ukraine, Belarus, and Moldova, it would be possible to establish wide-ranging cooperation. The EU action plan for energy efficiency seeks to achieve this objective (EC, 2006: 22). In this

9. Biogas is produced by the fermentation of waste products of livestock farming as well as plants such as grasses, corn, or wood. Bio-SNG is produced by the gasification of residual wood and lumber. From both gases, biomethan is obtained. It is of the same quality as natural gas with a methane content of 93-98%.

connection, the EU could take advantage of the experience of national energy agencies, which for many years dealt with the improvement of energy efficiency in Eastern Europe and the CIS.¹⁰

16. Supply Security and Energy Dialogs

The uncertainty of the future European gas demand and the expansion of LNG trade both pose problems to Russian production and investment planning in the gas sector. On the other hand, Europeans are unsure whether Russia's gas export capacity will be ever sufficient to comply with supply contracts. Neither worry can be easily dispelled.

European import demand will hinge significantly on future EU policies on energy savings, energy efficiency, and the reduction of greenhouse gases. The more Europeans make use of renewable energies (including biomethan), nuclear energy, or zero-emission coal power stations, the less they will consume and the less natural gas they will have to import from Russia. Therefore, gas demand forecasts could become an interesting topic in the EU-Russia energy dialog.

The future of Russian gas supply capabilities depends primarily on the speed of development of the Yamal gas deposits. While Europeans cannot influence this process, they can nevertheless demand more transparency regarding Gazprom's investment plans. This, too, should be a topic in the EU-Russia energy dialog. That dialog, supplemented by EU dialogs with transit countries, could support the EU external energy policy. It should concentrate on shared information and launching concrete and far-reaching energy efficiency projects.

10. For instance, the German Energy Agency [<www.dena.de>], the Austrian Energy Agency [<www.energyagency.at/portrait/index.htm>], and the Russian Energy Technology Centre [<www.technologycentre.org/content.php?topic=3>].

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Turning a Weakness into a Strength A Smart External Energy Policy for Europe

COBY VAN DER LINDE*

1. Introduction

Over the past few years, the EU energy policy has slowly begun to take shape. The internal energy market was propelled forward by the implementation of policy rules governing the internal market and competition in the energy sector. After the Russia-Ukraine gas crisis of 2006, the drive to formulate an external energy policy gained in significance. With these developments in EU energy policy-making, however, the debate on its direction and design at the EU level and among its Member States has also grown more heated and politicized. This has affected the discussion not only of the structure of the internal energy market but also of the place and function of the European energy sector in the international economic and political system that has been evolving since the end of the Cold War.

Three priorities of energy policy –reasonable prices, security of supply, and the environment– have consistently been the bedrock of policy-making, though the emphasis on

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instrument types has varied substantially at times. Thus the continued promotion and pursuit of these three priorities does not attest their equal importance in the past. Since 1973, when most current policy tools and instruments were developed, the emphasis on one or another priority defined the direction of energy policy-making as a whole. In the 1970s and early 1980s, issues of oil supply security dominated energy policy in the OECD countries. The establishment of the International Energy Agency (IEA) and the agreement to participate in the International Energy Programme (IEP) in 1974, under which falls the IEA's oil crisis management mechanism, is testimony to this. Diversification of sources and origins were also widely used policy instruments. They aimed at reducing vulnerability to oil shocks and achieving reasonable pricing by increasing non-OPEC supplies and turning away from oil in power generation to coal, nuclear, and, later, gas. In the 1990s, under different market conditions, the emphasis shifted to the reduction of energy's environmental footprint and to energy prices, achieving in the sense that reasonable prices for consumers had to be realized through the liberalization of the gas and electricity markets.

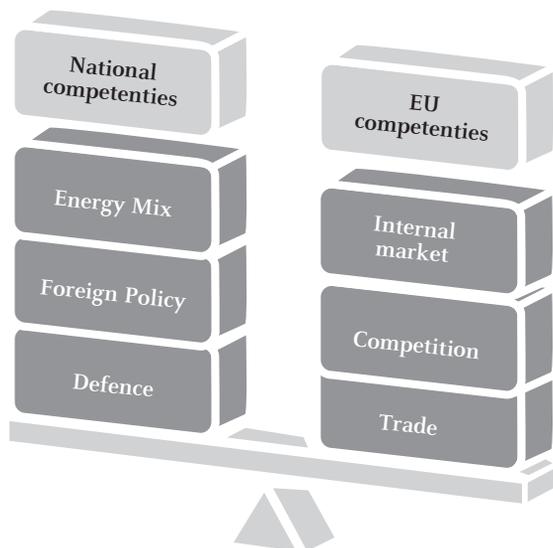
Typically, policy can be designed such that two of the three priorities can easily be pursued, while the third remains very difficult to attain. There is a natural tension in the simultaneous pursuit of all three priorities, for security of supply and the environment usually entail higher costs (CIEP, 2004: 63-69). Each priority also involves a different timeframe –with energy prices typically requiring the least time of the three. For instance, as part of a diversification policy, the contribution of coal to the energy mix could be increased, because coal is much more widely distributed throughout the world than oil and gas, and therefore more secure. But the environmental constraints limit the pursuit of this option as long as the problem of CO₂ emissions has not been resolved. Capture and storage of CO₂ is still in an experimental phase, and it may take some time before it becomes widely available as an effective driver for different fuel choices in the electricity sector requires the real cost of option to use fossil fuels within the context of climate policy. Both the price of CO₂ and the cost of storing it will play a role in developing clean fossil fuels.

Climate policy as an CO₂ emissions to be incorporated in the energy price. The strength of a driver for changing the energy mix can be illustrated by France's, security of supply considerations created the basis for the large contribution of nuclear energy to the mix. In other countries, different choices were made that perhaps suited security-of-supply considerations in the past but are now in conflict with current climate change policies. Energy policy is therefore not static but dynamic. And although the priorities themselves have not changed, governments' choices of policy instruments has indeed changed over time.

2. A New Agenda

Energy policy objectives and the suitability of traditional instruments to achieve them are currently under review. The main goals are to improve the balance among the three priorities of energy policy-making, to make a transition to a more sustainable energy mix, and to improve the security of that mix during the transition to it. Prices are left to the market, although concerns are growing about the increasing imbalance between demand and supply growth, state intervention in other countries (such as subsidies on energy products, e.g., in China), and state investment policies in producing countries which limit the access of (certain) international energy companies to resources.

In *An Energy Policy for Europe* (EC, 2007), the new EU policy goals are reflected in the European Commission's "20-20-20" policy for 2020, which aims to achieve a low carbon economy and a more sustainable and diverse energy mix. Security of supply is indirectly covered by shifting demand to other energy sources and by restricting import dependency to only a few suppliers. At the same time, the longer-term (climate change) goals must be achieved within the framework of the short-term-oriented market. Yet the EU energy policy does not cover the full set of energy policy instruments, particularly not regarding security of supply. Nor does the EU toolset include the full range of Member States' instruments, while the Member States have experienced a loss in national instrument effectiveness as a result of the closer integration of energy markets in Europe. At a minimum, both the EU and

Figure 1. National and EU Competencies

the Member State levels should at least acknowledge these policy gaps and the different abilities of individual Member States in order to overcome the gaps.

The EU's new policy goals need to be integrated in Member States' national energy policies. Member States remain in charge of the composition of the energy mix and will therefore seek different solutions to comply with the EU goals. For the EU, it is important that, for the coherence of energy policy, internal EU policy-making and external policy be connected. This is where matters become complicated, however, for neither internal energy policy-making nor external policy-making is entirely in the authority of either the EC or the Member States. Energy will become a shared responsibility when the Lisbon Treaty comes into effect. Member States have been in charge of determining the composition of their national energy mix (with potentially distorting consequences for the internal market), their energy resource management (including the conservation of energy endowments, distorting potential supply in the short term), and their foreign and security policies (though participation in NATO,

the UN, and other international institutions may have influenced the scope of these competencies in various ways). Member States are not responsible for trade and competition policy, and their monetary and fiscal policies are also bound up with the EU or the European Central Bank. While trade policy is an EU affair, stimulating trade relations is usually a Member State undertaking. In general, the EU forces Member States' economic policy-making into an EU mold; yet this mold, particularly regarding foreign relations, is still in a nascent stage. The EU's control over competition applies to competition beyond the national markets of Member States, not to competition within them, though some points of overlap are now beginning to appear. In the past, this has stimulated or at least given room to companies with a strong national base, or national champions, that used the internal market to expand their interests in other Member States. Also in energy we have seen a consolidation, first in individual Member State markets and then in the internal EU market (Van der Linde, 2007). Although very few companies or sectors are nationally oriented, it does limit the extent of EU competency. The energy dossier is full of examples of such complex, mutually competing authorities, as well as of normal market and government failures and international developments.

With regard to external energy policy-making, particularly of the mixed, non-economic, or political-strategic variety (foreign and security policy and trade promotion), competency lies fully with the Member States. In the 1990s, when security of supply was neither a political issue nor an issue left to the market to resolve, the competency issues were less relevant than today. The changing international economic and geopolitical relations after the demise of the Soviet Union, the opening up of China, and the politicization of energy relations more recently have caused the issue of supply security to gain in significance. It is exactly the politicization of energy relations that will make striking a proper balance between internal and external interests and policy-making difficult in the current stage of EU development. Too many internal issues have been left unresolved, such as the absence of crisis management policies at the Member State level. And matters are compounded by the fact that policy is increasingly coordi-

nated at the EU level as regards power generation, gas, coal, and new energies, which should have run parallel to the market liberalization process. In the amply supplied markets of the 1990s, policymakers could rely on the market to deal with security-of-supply issues. Currently, large Member States such as Germany, Italy, France, and the UK rely heavily on their foreign and security policy and trade promotion efforts to secure energy flows to their markets. Smaller Member States may experience more difficulty in developing effective national policies or may be unable to bear the cost on their own, and may have either to align themselves with a larger Member State's policy or to aim for EU action to further its interests. The larger Member States or Member States with strategic assets in the energy sector (such as the Netherlands) may regard the EU as diluting their interests by including those of smaller Member States or those with deficient energy diplomacy instruments.

The market responds incompletely to price signals when it comes to such longer-term issues as security of supply. Another complication is the asymmetric exposure to political and economic risks due to import dependence and dependence on only one or two suppliers. This is relevant for the gas and oil markets, but also for certain geographic subdivisions of the market, such as the new Member States in Eastern Europe, where coal and electricity imports from neighboring countries also play a regional role on top of oil and gas issues. Both Russia and Algeria are important gas suppliers to Eastern, Northwestern, and Southern European gas markets, causing a concentration of only one, perhaps two, suppliers. In a situation where domestic production is in decline, the import dependency on these suppliers will increase. Russia is also an important oil and coal supplier to the European market. In 2004, Russia supplied 26% of the oil, 29% of the gas, and 8% of the coal consumed in the EU (EC, 2007a).

From data accompanying the January 10, 2007 energy package, *An Energy Policy for Europe* (EC, 2007a), we learned that the composition of energy mixes in Europe is still very diverse, and will remain so in the foreseeable future. Imports are concentrated but diverse as well, due to the economies of supply and existing infrastructure. Although the energy mixes

and infrastructure will adapt to new market realities over time, the existing structure of the Member States' energy economy is rather inflexible in the short and the medium term. Unsurprisingly, no common external energy policy will change that, even if the Member States were suddenly able to find common political ground in their foreign policy orientations. It is only through investments and new economies, appearing in the energy market that the mechanisms of an already dynamic market structure will change. To be sure, the infrastructure in situ will continue to determine the economics of routes, but it will also determine the sites of new infrastructure (pipelines and regasification terminals) through their economic life.

3. Long-term and Short-term Goals

Given the acknowledged urgency of the energy and climate agenda, the EU policy efforts, as proposed in the 20-20-20 program, demonstrate that the transition to a more sustainable energy mix is an important long-term goal, which combines climate change and certain long-term security-of-supply policy dimensions. However, this is a policy that will only produce results in the longer-term. Meanwhile, the security-of-supply agenda will also have to deal with short- and medium-term issues, since switching to other sustainable fuels has not yet been achieved. The IEA's warning, in its *World Energy Outlook 2007*, that an energy crunch (a serious mismatch between demand and supply) is possible within the next ten years, requires more immediate results regarding security-of-supply policy-making. Naturally, the question is how Member States will deal with their shared responsibilities and particularly how many of their security-of-supply policy instruments they will be willing to coordinate with other Member States in an EU approach. It is especially in view of external energy policy-making that a call for "one voice" is sounded. And that is precisely the subject of this paper: what "one voice" means and which instruments it would entail. Particularly in the sphere of foreign and defense policy, the diversity among the Member States is large and could be a potentially serious stumbling block for external energy policy-making at the EU level.

In EU external energy policy-making, an alternative should be found to coercing reluctant Member States into accepting the usually top-down, generic approach of the EU and into giving up competencies that serve their particular national interests. One alternative, pragmatic route to policy-making might be to find a means to turn EU weaknesses in the sphere of foreign and energy policy into strengths by the smart use of diversity, asymmetry, and subsidiarity in a bottom-up, more tailor-made approach. After all, the EU has extensive experience in building coherence by stressing harmonization, coordination, and only then unification. This approach is known as the economist approach to integration. Only in recent years, after the economic and monetary union and enlargement processes required a more expedient procedure for political and strategic reasons, did the monetary or “big bang” approach to policy-making make its appearance in EU policy-making. The question is whether the big bang approach is suitable for overcoming the national resistance to the unification of foreign and security policies, and in effect evolving beyond *the economic project* Europe has always been. Perhaps the more evolutionary approach, and allowing Member States to find their own efficient and appropriate solutions for (mostly localized) supply-security issues, is the best means at least to keep the momentum going and allow for a search for cost-efficient solutions. Different energy mixes and asymmetric exposure to disruption risks might require different policies rather than just one. Impatience with the integration process in general would be a bad guide were it to result in Member States’ being pushed beyond what they perceive to be efficient and appropriate in their situation. The risk is that policy-making that should take place at the EU level may become stymied, and perhaps mired in endless discussions without many concrete results.

Impatience can be explained, however, partly by the complexities connected with the larger membership (directing 27 countries into a coherent approach), partly by asymmetric interests in a national or a supra-national approach that can also serve to socialize the cost of security of supply, and partly by the switch in approach to integration in general in the

1990s from an economist approach (evolutionary) to a monetarist approach (big bang). With the consummation of the Eastern enlargement, the appetite in Brussels for a continued monetarist approach to integration may not have been sated. But the new challenges, such as in the energy dossier, should at least cause the well-worn path of gradualism to be considered. It is the result that counts.

In summary, the issues involved in developing a coherent external energy policy for Europe can be divided into four areas: the changing international context; the changing international energy markets; the changing internal EU context; and the instrumentation of external energy policy. Before taking up the latter, in particular the instrumentation of a smart external energy policy, the current context of this policy must be explored to gain a better understanding of the challenges and opportunities it involves.

4. The Changing International Context

4.1. Changes in the EU

The process of liberalizing the EU energy markets, which started in the 1990s, was an integral part of the effort both to deepen integration (the realization of the monetary and economic union in 1999) and to enlarge the EU (attested by the accession of 12 new Member States in 2004 and 2007), and was partially a response to post-Cold War changes on the European continent. These sweeping institutional changes in the make-up of the EU were mostly absorbed by the market, where the larger size and the introduction of new technologies stimulated new structures in many sectors.

Changes were slower in the energy sector due to the diversity in organization and (mostly public) ownership structure in the Member States, the variation in fuel mixes, and the fact that fossil fuels largely had to be imported. In many Member States, utilities were owned or controlled by central or local governments, and constituted the energy-mix portion of government planning rather than market preference. Some Member States produced coal, oil, or gas domestically, while

others were structural importers. The fuel mix in the electricity sector often reflected the availability of domestic energy resources, and employment issues weighed heavily on fuel-mix choices. Most Member States had linked their various regions in a network infrastructure, sometimes with links to neighboring countries for reasons of security of delivery.

Liberalization was meant to introduce competition across Member State borders and to use the existing plants and infrastructure more efficiently. It proved much harder than expected, however, to create a level playing field in a sector where local preferences for fuels, ownership structures, resource endowments, environmental constraints, and wider socio-economic interests continued to exist. It also became clear that, in a situation of greater competition, energy-mix planning by governments would become more difficult, if not impossible, unless permits for certain types of generating plants were issued and/or liabilities for the storage of waste material (nuclear and CO₂) were assumed. However, this would also impact on the level playing field. Many of these issues may well have been anticipated, but if so, perhaps they were seen as surmountable further along in the liberalization process. The main thrust of the operation was to work out the initial inefficiencies and overcapacities at the Member State level and to deliver these efficiency gains to consumers. Neither the fuel and energy mix nor the security of supply was really an issue in the buyer's market of the 1990s. However, with the liberalization of the EU energy market, the focus on security of supply implicitly shifted to a focus on securing flows rather than on controlling and planning (internal) flows.

4.2. *Changing Energy Market Conditions*

Unfortunately, the completion of the internal energy market in 2007 had to be accomplished under much different circumstances than those that had prevailed in the 1990s, at the beginning of the process (IEA, 2005; 2006; 2007). Energy prices began to increase almost concurrently with the long-expected decline in EU energy production from 2003 onward.

The decline in gas production in the EU was particularly worrisome because much of the new capacity additions in the 1990s were gas-fired power stations. Gas is relatively clean with respect to CO₂ emissions, and was abundantly available. The switch to gas in the UK also rid the power sector of industrial actions in the coal sector; and in other countries the switch to gas was seen as an economical way of achieving the Kyoto emission targets. With ample supplies available and much more within the EU's economic reach, there was great confidence in the market's ability to adapt to any new circumstances, including growing import dependence.

The changes that took place in the international energy markets around the turn of the 21st century, however, did impact on the European market's ability to deal with the changes. The confidence that market principles would be the guide to balancing supply and demand was challenged when it became clear that producer governments were beginning to actively manage the energy value chain. Although governments have always been very involved in the energy sector, both as producers and as regulators in order to capture profits somewhere along the value chain, the nature of government involvement came to be driven by income and national interests. In the amply supplied markets of the 1990s, the market was considered able to balance each country's demand and supply. But when the geopolitical situation tensed after September 11, 2001, and markets became tighter (partly as a result of low investments in the 1990s), signaling in this sector characterized by long lead times in investment proved to be imperfect in this new short-term oriented market environment. The ownership structure of reserves and production was organized along national interests, while trade, processing, and distribution was organized along private, international interests. In this tighter market, private international oil companies renewed their efforts to engage in backward integration, while state- or semi-state-owned companies from producing countries were eager to engage in forward integration (Götz, 2008). At the government level, these movements were translated into security of supply and demand. Producer governments were concerned that their one-product economies and/or government energy income would be threatened by the climate

change policies of the OECD countries in the form of CO₂ taxes, while consumer governments were concerned that supply policies would perpetuate a situation of a seller's market and render their economies politically vulnerable. The latter became more important after September 11, 2001, when wider security issues came to the fore. The "war on terror" has sharpened divisions in the world, and also strained old coalitions due to different views on how the new threat of Islamic extremism should be handled. The differing positions on international relations, the balance between hard and soft power, and the role and function of international organizations revealed much greater uncertainty about the future of the entire international system than had previously been assumed to exist. Energy increasingly became one of the battlegrounds of shifting power relations in the world.

With this growing tension in international energy markets, newly emerging energy importers were keen to gain a stake for their national companies, independently of international companies. They also began more actively to promote their own national interests in international energy supply, either by ownership or control over energy reserves or by otherwise influencing energy flows. Particularly state-owned or semi-state-owned companies from newly emerging countries received a wide variety of investment-enhancing benefits, such as cheap loans, protected home markets, and investment packages in non-energy sectors, which gave them the advantage in the competition with international oil companies for scarce equity oil or gas (FT, 2008). International oil companies increasingly experienced difficulties in finding new reserves to replace those they had already exploited. OPEC countries already had limited the foreign direct investment opportunities in oil production, but after 2000, other countries, such as Russia, the Caspian Sea countries, and Latin American countries, also began to set stricter terms on new oil field exploitation rights. A similar development has now also impacted on the development of new gas flows. The flow of oil and gas, which in the 1990s had appeared to be mostly market-driven, was soon back in the realm of governments, both as producers and as consumers. This development ran counter to the developments in Europe, where efforts to liberalize, and perhaps privatize, were just getting under way.

The somewhat heated debate on market design among EU Member States in recent years has resulted in a European energy discussion that appears to proceed with little consideration of the rest of the world. The preoccupation with the internal market and the environment has led the discussants to overlook legitimate producer country concerns –both about security of demand as a result of the EU market design and about the impact of climate change policies on producer countries' main source of income. Meanwhile, international oil and gas markets were changing rapidly and new structures began to appear. The role of traditional international oil companies was becoming more marginal and new entrants from emerging economies were taking over as key players in new energy relations. These relations combined the national interests of producer and consumer governments with new types of agreements among their companies. With the shift in energy relations from a solely commercial activity to a wider interest-serving activity, and with the politicization of those relations, the EU as an economic project or construction proved to be less adequately suited to promote European energy business interests. The importance of government-to-government relations to business-to-business contracts fell completely in the realm of the Member States. Since the EU is not a state, it cannot be expected to perform this function. The EU has its role to play in dialogs with other international groupings, such as OPEC or the International Energy Forum, but where trade, investment promotion, and foreign policy are concerned, the Member States as states are the more effective agents. Because of its diversity, it is very difficult for *the* EU, if at all possible, to represent the diverse European energy business interests at a political and strategic level. The changes in the international energy markets and the renewed importance of the *modus operandi* of politics as opposed to economics in energy diplomacy have, in a sense, given national states a more prominent role within the EU. This complicates the development of an EU external energy policy.

Russia's rise as a major player in the international oil and gas scene, OPEC's renewed power, and the impact of new net-importing countries, such as China and India –together they

have caused the restructuring of the international energy markets. Energy and controlling its flow have become major determinants of new power relations in the world. Both the market and political tools are being used to influence flows to the various consumer markets.

Before discussing the options for an EU external energy policy and the instrumentation of such a policy, it is important to assess the scope and scale of the changes in the international energy situation, international relations, and the impact on energy policy options.

4.3. A New International Order?

With hindsight the period from the end of the Cold War in 1989-1990 until the September 11th attacks on New York and Washington, D.C., were an *interbellum*, a period that separated a world structured in terms of competing economic and political systems (market-oriented economies vs. planned economies, each with its own institutions, political systems, and alliances) and the world of today. Nowadays the world is less structured in terms of economic and political systems, though economies meet in overlapping economic interests in international markets while also competing to promote their own strategic economic interests (Van der Linde, 2005). The demise of the planned economy as a political system did not result in conformity to the democratic and market-based model of OECD countries (Abdelal and Segal, 2007). Instead, autocratic or authoritarian forms of government have successfully developed their own models to reform the formerly communist countries, such as in China and Russia, and they have also developed their own approaches to internationalization and integration in the world economy, approaches that do not necessarily follow the rules and norms of OECD countries. These new models attempt to combine economic growth strategies with central government control over reform processes, the main goal thereby being to manage the social balance during the reform. In Russia, this model appeared after the chaotic political and economic period following the demise of the Soviet Union, whereas in other countries other internal circumstances have led to similar, more controlled,

state-centered approaches. In countries such as Venezuela, other forms of populist autocracy are developing. Iran has also developed its own model. These new regimes share a strong inclination to promote government or state interests, often legitimated as a way to limit control over the domestic socio-economic processes, thus integrating their countries in the world economy on their own terms, accepting only a portion of the rules and norms advocated by the US or “the West.”

Rather than unipolarity or globalization, the world is moving towards multipolarity –both politically and economically. Economic nationalism, at least for the time being and particularly in the strategic area of energy, will continue to be a fact of life. This is partly due to the large economic income present in the energy value chains that can easily be taxed away without hindering the sector’s continued production. The fiscal benefits of energy attract the attention of all governments, but the properties of energy as a strategic and geopolitical “good” also help to explain government involvement. Furthermore, energy is a basic input in the economy, and reserves, production, and consumption are not distributed evenly throughout the world. Energy resources derive not only economic benefits but also store political value or power. In the new make-up of the world’s economic and political systems, *energy is an economic good, a strategic good, and a geopolitical weapon*. Producer countries are aware of their position and are, more than ever before, in a position to generate maximum political and economic benefits for their own states and economies from energy. This awareness of the properties of oil and gas as an economic and strategic good and a geopolitical weapon implies that investment and production levels will be maximized first to serve the interests of producer states and their state companies, and not automatically for the good of the world economy. Collectively, producer countries benefit from tight markets or a seller’s market. Spending needs could breach the collective goal when short-term income needs override longer-term strategic interests. The ability of states to play their “energy card” will also depend on the political stability and internal political support for the state’s strategy. A weakness of the longer-term strategy could be that citizens or groups demand too much “pay off”

for their support, forcing the state/government to sacrifice long-term goals for short-term stability. Another possible outcome is that producer states could develop competing interests in securing certain markets.

At the moment the United States' position as the main geopolitical power is challenged by the effective use of economic or soft power by China, India, Brazil, Russia, and the Gulf oil producing countries. The impact of the subprime loan crisis has created an opportunity for sovereign funds to acquire assets in the heart of the international financial center. In doing so, they are gaining much more access than they have ever had before. At the same time, the US economy and the dollar, which has functioned as reserve currency for so long, are also challenged. The benefits from financing foreign endeavors through the dollar's reserve currency role may come to a partial end as other currencies increase their activities in this area. The political impact of the US policy in the Middle East on its economic and strategic alliances has been substantial. Those alliances were important in the past for the US to perform its role as a dominant power, while support for the US offered benefits to the alliance countries. With the United States' recent, more unilateral approach, these alliances have been weakened, largely because the US failed to take the economic and political interests of its allies into account –such as when it entered Iraq. Its allies became more uncertain whether the US would perform its traditional role, as did others that had benefitted indirectly from the umbrella of the US policy to protect oil flows.

Since 2003 China and India have actively developed their own security-of-supply policies and rapidly increased their stake in foreign oil reserves and production around the world. The fact that they were prepared to create security of demand and were willing to invest in other parts of the producer countries' economies, without putting pressure on the local political system, has eroded the ability of the US and its allies to enforce their rules. For the EU and Japan, it is becoming difficult to determine whether and to what extent the US can still assure the security of oil and gas flows in the current geopolitical situation. Although security of supply is given priority

on the political agenda, hesitancy regarding the direction of such a policy is obvious. Currently, some countries are beginning to distance themselves somewhat from the US and are developing separate national approaches, suggesting that within the traditional Western alliance doubts about the benefits of ties with the US are gaining ground. If the US values the traditional Western alliance, sensitivity to these countries' interests should become a priority for the new president.

New energies, such as biofuels, also have the potential to develop into strategic goods, although competing interests among producers could render this tool less efficient than in oil and gas. Yet were these new energies to yield sufficient income for both investors and governments, a similar structure of private and government involvement could arise. Note that also in biofuels, which are a transition to other solutions for liquid energies or transportation fuels, (temporary) scarcity could occur, either in energy or food supply, as a result of government intervention.

Coal currently has the disadvantage of its high carbon emissions, but when CO₂ is properly priced and Carbon Capture and Storage (CCS) is out of its infancy, coal could develop similar properties to oil and gas, though the wider distribution of reserves could limit its strength as a geopolitical weapon.

Consumer countries are particularly interested in maintaining sufficient flows of energy to satisfy their demand, preferably at reasonable prices. Producer countries are interested in sufficient flows of income over a longer period of time. Governmental intervention (in the broadest sense, ranging from subsidies to domestically produced energy to market regulation to blocking ownership change to military intervention) becomes more likely when supply can no longer meet demand and certain flows are not available to the highest bidder. Energy flows thus become a subject of geopolitical power politics.

4.4. Do US interests Run Parallel to the EU's?

The main energy concern of the US is not energy dependency so much as its dependency on oil imports, now

euphemistically called “liquid energy” in order to include biofuels (NPC, 2007). It is the dependence on transportation fuels that drives US foreign (energy) policy, and oil security was always a part of the larger strategic security concept. For the EU, the issue includes the supply of energy to the power and industrial sectors (predominantly concerns about gas, but with a growing tightness of coal markets, they will soon be included) and, though not prominently voiced, to the transportation sector. The deepening integration and enlargement of the EU has increased the importance of mobility, and therefore the oil security issues, though less debated than gas, will soon feature higher on the EU’s agenda.

The US policy has long focused on guaranteeing the flow of oil –witness their security command structure, which includes a command for the Middle East and a recently established African command, underlining the growing importance of African oil. Guaranteeing the flow of oil is important for international markets to function, and it works well in a situation where oil producers have sufficient supply to meet demand. This situation persisted from the early 1980s until 2003-2004, and absorbed the shift in ownership of oil reserves and production from international oil companies to producer countries in the late 1970s and early 1980s. The special relationship with Saudi Arabia was an important part of the security of oil flow approach because Saudi Arabia, as the world’s largest swing supplier, could, in concert with the US, ensure that oil flows continued and markets functioned. The ability to guarantee flows changed for several reasons already stated, and has resulted in a reorientation of the US, but also of its allies, including the EU.

The debate in the EU has focused mainly on the flow of natural gas, the limits to diversification (due to the regional context of the market and the inflexibility of pipeline routes), and the supply and transportation monopolies of state gas companies (Russia, Algeria). For that reason, a gas-security approach on the part of the EU would initially focus mainly on North Africa and Russia. The regional properties of such an approach would enable gas security for the EU, through its neighboring countries’ policies and Member States’ bilateral

arrangements with these countries when it comes trade and investment promotion.

The Member States are comfortable with the arrangements in the IEA on oil security and the crisis mechanism, due to the EU's continued limited political and strategic role in securing oil flows. The IEA was founded in response to the oil crisis of 1973-1974. The coalition on oil crisis management has been a great asset to European countries and at a relatively low cost could benefit from the US foreign policy efforts to guarantee oil flows. However, the US policy in Iraq was perceived as running counter to European (and Asian/Chinese) interests. In the 1990s, the US, and even more so Europe, moved away from Middle East oil as much as possible and increased their supplies from Africa, and in the case of Europe, from Russia as well. China's dependence on oil from the Middle East has increased its strategic interest in the region, but China is increasingly uncertain about the flow of oil and whether the US is able (and willing) to guarantee this flow for it. The war in Iraq was a major source of motivation for China to step up its security-of-supply policies. For this reason, China has very quickly improved its strategic interest in the Middle East and in other producing regions. Its position in Africa has become particularly strong.

The rapid growth of energy demand in China and India also has profound consequences for the climate change debate. In 2007, China surpassed the US as the world largest CO₂ emitter in absolute terms. The IEA predicts that by 2015 the US, China, and India will be responsible for more than 50% of world's CO₂ emissions. The strategic post-Kyoto discussions therefore must include China and India, despite their lower per capita emission rate. The EU position, which favors a cap-and-trade system, differs from the US position, as well from the Chinese and Indian positions, which emphasize technological solutions. Transatlantic relations over climate change have been strained by the Bush Administration's decision not to ratify the Kyoto Protocol. Because climate change and energy (oil) security policies merge in foreign energy policy, the differences over climate change policies could be yet another hairline fracture in transatlantic energy cooperation.

Recent debates about security of supply in the US and the EU have been limited to either oil or gas. This has created a gap in the recognition of immediate shared interests, but also has caused divergent positions on Russia. Differing perceptions of what are the most urgent security-of-supply issues could lead to a loosening of the coalition on energy. Yet the EU could not easily replace the benefits from the IEA, nor would it want to replace them, with energy issues that now involve different energies, becoming more diverse and complex, and different approaches to energy dependence and climate change. It is likely that the urgency of gas security could move the EU in a direction that diverges from the US with respect to this resource, and to its own gas security. The EU and its Member States might have to decide whether an energy coalition with the US, or with other potential partners, has any value if it is unable to coordinate its different energy and climate change interests with the interests of the US.

4.5. Impact of the Collapse of the Soviet Union

The collapse of the Soviet Union and its satellite countries organized in the Comecon had considerable impact on the EU, on both its economic structure and its political identity. In the 1990s, Russia became an important energy supplier for the EU Member States. The Eastern European countries had been traditional importers of Russian energy, but increasingly Western European countries also imported their oil, gas, coal, and electricity (EC, 2007b). Most of these imports had to flow through infrastructural corridors that were constructed to serve the Comecon countries' energy needs and the gas export contracts. This quickly led to worries about security of transit. It was clear that both Belarus and Ukraine, as former Soviet Union and CIS countries, would not be part of the Eastern European enlargement process, and therefore lacked political and economic direction and discipline in their transition. Russia itself was weakened in the 1990s, and it was only after oil prices began to increase after 1999 that the economy recovered. With the Putin presidency also came political and institutional direction, which ended the period of unhindered cowboy capitalism. Attracted by potential energy income and

leverage, Russia began to restructure its energy industries away from full privatization, setting limits to (foreign) private capital. Russia then became increasingly concerned that it would experience difficulties in reaching the lucrative EU market, at least on terms that best suited Russia's interests. Currently, exports to Europe account for 27% of Russian gas sales and 60% of Gazprom revenues (IEA, 2007). It is precisely in this sphere of access to markets and to supplies from the Caspian Sea region that the EU (and the US) is challenging Russian domestic security of supply with alternative pipelines routes and access regimes (WGI, 2007). Ukraine's "orange" revolution exposed the vulnerability of the gas corridor, and both Russia and the EU began to further their own interests in influencing the country's direction. Without the necessary security of demand and stable routes to the European market, Russia will first seek diversification of transit routes and markets before committing to other investments in the gas value chain. Both Nord Stream and the proposed South Stream pipeline fit in this strategy. The importance of oil and gas in domestic structural growth plans and in Russia's reemergence on the international stage has become a vital driver in Russia's future foreign and economic policy.

The efforts to develop alternative routes to the Ukrainian and Belarus corridor have created a major fissure between some of the eastern and western Member States. Governments that support joint ventures of Gazprom with German, Dutch, French, and Italian companies are in effect favoring a policy that secures gas supplies through integration into the value chain. Bulgaria is the most recent country to adopt this strategy and hopes to expand its role as a secure transit alternative. At the same time, it gains security for its own supplies with its role as a gateway for oil and gas to Southern European markets. Developing alternatives to the large dependence on the Ukrainian corridor would reduce the risk to security of transit for the EU, while also reducing both the economic benefits from transit and the political power to influence certain Eastern European countries that are on the Ukrainian route. Uncertainty about Ukraine is causing both economic and political difficulties in the energy dossier, and a reduction of transit risks has consequences for the position of EU

Member States on that main trunk line. In the discussion of the Nord Stream pipeline, Poland and the Baltic states were not convinced of the security they can derive from their EU membership, and instead have mainly relied on relations with the US and on their NATO membership for their security (which is also attested by Poland's proposed participation in US missile plans). This has caused a serious rift in relations with Germany, but also has blocked negotiations for a new strategic partnership between the EU and Russia. The new Polish government is trying to repair this situation and bring Poland back into the discussion. The Eastern European countries that are not connected with the Ukrainian corridor seem to prefer developing their positions as an alternative gas transfer linchpins and fully embracing their soft-power strategy. From an EU perspective, diversification of routes, even if it involves one supplier, will reduce the risk of supply disruption. The commitment of a supplier to supply a market also increases when large investments have been made to reach that market. Because the European public has not always appreciated this interdependency, discussions have often focused on conflicting interests and not on the obvious shared interests that can balance the relationship between the EU and Russia. This is not to say that the concerns of individual Member States should not be addressed. Energy policy instruments other than, or in addition to, those used for external energy policy are available to address these issues.

4.6. Influences of Diversity on the Discussion

The changing international economic and political environment caused energy to rise quickly on the political agenda, both in the Member States and in the EU. With growing uncertainties over security of supply, the structural dependency of some Member States on one or two suppliers, climate change policies, and the realization that competition policy alone cannot guarantee security of supply (nor a transition to more sustainable energy mix for that matter) but that other policy instruments are required, the debate among the (larger) Member States on the merits of a full-blown EU energy policy has become politicized. Some Member States promote strong

EU companies that can engage in joint ventures with other international (state-owned and/or private) companies to secure the flow of energy. Others –mostly smaller, eastern Member States– want first and foremost to establish a crisis management policy within the EU. Small countries have much to gain from collective crisis management policies because their markets (and often their companies) are too small to influence or engage in security-of-supply strategies and meet the great costs involved. They can opt to use their internal political power to leverage their position in the external energy relations debate. For example, some Eastern European countries have used their powers to influence the start of negotiations between the EU and Russia, and are also disrupting pipeline investments between European companies and Russia's Gazprom to underscore their concern about security of supply. The message that can be derived from this is that the larger Member States that engage in external energy relations and support their businesses to generate the flow of energy towards the European market must do so in a manner that satisfies the local security concerns. A crisis management mechanism could become the (political) minimum requirement for all Member States in order to support strategic external energy relations and the accompanying investment strategies of companies. Such a mechanism would necessarily be best implemented within an EU minimum framework-setting for reasons of cost and benefit distribution (and the avoidance of free-riding on other Member States' national energy security policies), and to create a level of political comfort for the external energy policy initiatives.

For certain Member States the design of the internal market can become an integral part of the debate on external energy policy, depending on their national preferences, bilateral relations, and energy mix. Hence, debates over the merits of the EU market design and the external energy policy approach are made highly complex because of discussions about national interests, national and/or EU champions, Member States with strong companies and Member States with weak companies, and small and large Member States. Differences in foreign policy approaches (e.g., on Iraq) and in the vision of what the EU will or should be in the future (e.g.,

membership), where Europe starts and the role of the US, the level of intensity of the alliance with the US (and the role of NATO), to name but a few, have seriously blurred the debate.

The reasons for why the EU internal discussion is becoming increasingly political are thus diverse and many. First, the energy industries in the Member States were long a part of the Member States' socio-economic and political organization and construction. The EU policy measures increasingly supersede this traditional socio-economic construction, and are replacing it with a new European construction. Yet this new construction still fails to provide the necessary political anchors (function of a state), which makes it difficult for Member States to accept a transfer of powers to the EU level. For instance, Member States carry some of the energy industries' liabilities, such as for storage of nuclear waste and, perhaps in the future, for sequestered CO₂. Second, Member States' energy mixes are diverse both in the distribution of the various sources of energy and in their import dependency. Authority over the energy mix still lies with Member States. The contribution of nuclear to the energy mix is highly controversial in some Member States and less so in others. The political preferences for a certain mix of energy sources limits the level playing field among the various energy resources, and also determines the "trade off" between desired mix and import dependency. The asymmetry in structural and strategic import dependency lies at the core of the different approaches to external energy policy. Third, Member States have different foreign and strategic policy traditions and were part of diverse alliances in which their policies were formed. Moreover, Member States are sovereign in their foreign and strategic policies, and although cooperation in the EU is promoted, the differences are vast –not only between the "old" and the "new" Member States but also within these groups. Many EU Member States were at one time or another either part of a certain alliance, occupied, a colonizer, an invader, or neutral. A complex set of relations has survived from these historical roles in current Member States' foreign policy orientations. The knowledge- and experience-base in the Member States is diverse, and other policy-making tools, such as development aid, educational exchanges, trade and investment

promotion, and cultural links, are part of the foreign policy family of instruments. Yet there remain many fault lines for continued diversity in foreign and strategic policy-making among the Member States.

Perhaps the key fault line has been the relationship with the US in the post-9/11 period. After the initial support in the wake of the September 11th attacks in New York and Washington, D.C., the run-up to the invasion of Iraq in 2003 created deep divisions among Member States over their support for US foreign and security policy.

4.7. Can the EU Afford to Sit on the Geopolitical Fence?

The United States' strategic behavior in the Middle East and Central and East Asia will have a strong impact on the oil and gas (LNG) security of both Asian consumer countries and Europe. The fact that the "regime change" approach in Iraq and Afghanistan did not immediately create stable and safe havens in the region, but rather internally unstable states, both requiring long-term occupation forces to make them and their economies functional again, implied a wider engagement than European countries were willing to pursue. This had to do with a different assessment of the risks and the effectiveness and availability of foreign policy tools (CIEP, 2004: 56-57). In the absence of hard power, the instruments of soft power are emphasized. In contrast to the US employment of hard powers, the soft powers have actually gained strength. The US administration is now suffering from its unilateral rush into these problem areas and is also losing domestic public support for a drawn-out engagement. However, US withdrawal under the current circumstances would significantly increase risks to the security of energy flow for both Asian and European countries. The EU and its Member States (but also Asian countries) will at some point be confronted with this new strategic dilemma of how best to secure European energy flows under the new circumstances. It is quite possible that fence-sitting will not be an option and that employing soft power will fail to reduce the risk. This would mean that one of the major consuming blocs (EU, China, India) or a regional power or group (e.g., Iran or the Shanghai Cooperation Organisation: SCO) would (have to) become involved.

The involvement of European countries in Afghanistan, by elevating the mission to the level of NATO, has not removed the differences in transatlantic opinion about how best to tackle Islamic extremism (in Afghanistan and elsewhere) and failed states in strategic (economic) locations around the world. Currently, the entire zone from Pakistan to the Horn of Africa is unstable, with problems spilling over into energy-rich countries in the region. The stability of both the countries in the Caspian Sea region and those in the Gulf Cooperation Council could be jeopardized by conflicts in neighboring countries, and for this reason the US, the EU, Russia, and China have vital interests at stake there, including the flow of energy. This has translated into intense American, Russian, and Chinese involvement in the region. The Shanghai Cooperation Organisation (SCO) could become increasingly important in maintaining stability in Central Asia. Some EU Member States have also become quite involved, either in Iraq or in the NATO operation in Afghanistan, but their involvement is not supported by all Member States nor is it connected to EU policies. The US initiative to enhance its missile defense system (increase its defense against Iran) by placing radar and missile installations in Eastern Europe has divided Europe because of its impact on Russia and EU-Russia relations. Extending NATO membership to include former Soviet Union states, such as Georgia, has further strained relations with Russia, while Ukraine's overtures to the EU and/or NATO are also straining regional relations. The remodeling of institutional relations on the European-Asian continent at the close of the 20th and early in the 21st century have also bolstered new Russian foreign and strategic policy initiatives in the region, or the "Near Abroad," as it is called. Relations in the Caspian Sea region have particularly been strengthened.

Apart from their participation in NATO, European countries have always relied predominantly on their soft powers as drivers of foreign policy: the EU itself is the best example. Only France and the United Kingdom maintained their strategic capacity in order to use it in certain parts of the world that are of particular interest to them or to provide a countervailing power within NATO. Due to this mainly soft-power tradition and the success of this approach in defusing

conflict on the European continent and the removal of the Cold War threat, the Member States are suffering from a lack of public support for sending their militaries into conflict, particularly after 2003 when their militaries were to be involved operations led and/or initiated by the US. The NATO operation in Afghanistan is the first with a wider European involvement.

The emphasis on economic issues in Europe, exemplified by the deepening of integration and enlargement, has sidetracked discussions on geopolitical issues and strategies to defend security interests at the EU level. This discussion of roles and functions in the geopolitical context was a national affair. In many Member States, the peace dividend was “sold” to the public in such a way that security forces would only be needed to put out “small human rights fires” and that the economization of international relations itself (i.e., globalization) would largely guarantee the pursuit of peace and prosperity. The changing geopolitical circumstances have not yet resulted in a different debate within European society. Rather, the growing uncertainties, both political and economic, have created a breeding ground for the public to disengage and fear international developments, and increasingly focus on protecting the local society. European leaders have thus failed to properly communicate the implications of the changing international context and the role they envision for Europe. Public support is crucial for any stepped-up international engagement other than trade and investment. The instrumentation of foreign and security policy has become limited as a result, and any other level of engagement will require an investment in building public awareness and support for a new role.

The instability in some parts of the world could –if it were to jeopardize the vital energy interests of energy consuming countries– force the EU to engage in strategic geopolitical matters that go beyond the peace-building operations in which European countries prefer to be engaged. The question, then, is whether the geopolitical circumstances warrant a revision of the EU’s design from a predominantly economic organization to a new one that includes political and strategic issues. The

question surrounding the development of an EU external energy policy is whether energy diplomacy can be developed without such a new design or whether energy diplomacy should be used to develop the new design, without other elements of a full foreign and security mandate in place.

5. Strategic Foreign Energy Policy Instruments

The external energy discussion in Europe is for the most part a debate on how to formulate a strategic foreign policy in which energy (and climate) plays an important but not exclusive role. Regional foreign relations, where energy already plays an important role, is not an area of policy-making that is exclusively in the realm of the EU. The strategic positioning of the EU in regional foreign relations (neighboring countries policy) cannot be separated from the relationship with the US and the US position towards North Africa, Turkey, Belarus, Ukraine, Caucasus, and Russia. Also, the relationship with the Middle East will largely be determined by the role of the US in the region. Cooperation or competition with Asian countries in the field of energy, notably India and China, will also be influenced by the US. The room to maneuver outside US national interests is less than is perhaps thought. Not because the EU Member States cannot redefine their foreign relations orientation but because they do not have the hard power needed to claim a role independent of the US while maintaining the same relationship structure. Alternatively, loosening transatlantic ties to make room for an independent EU foreign policy would require rather large investments in hard power capacity. The political and economic costs of both strategies will be a dilemma for any EU foreign policy development.

Interestingly enough, the hard power of the US has proven to be less effective than perhaps expected, and the soft power of countries such as Russia and China are much stronger than anticipated. The economic tools of these countries have proven to be very effective in undermining, to some extent, the standing of the US (and its companies) in Africa, Latin America, and Asia. Soft power is geared mainly towards economic issues, and energy is an important part of these relations. The fact that certain crucial upstream technologies were

spun off from the interests of large international oil companies in the 1990s has helped to improve the skill level in national oil companies. The capacity to develop resources themselves created the opportunity for companies from emerging countries such as China to offer alternative partnerships when needed: they offer an exchange of access to resources for access to markets. In effect, China has used the United States' insistence that China accept its norms (democracy, human rights, governance) to create a less demanding alternative for local elites. In the wake of Chinese and Indian oil companies, other companies follow with their investment capital, spreading their activities to a much wider range of economic sectors. Since the EU also supports implementing the US-based norms –albeit not by military means– completely in accordance with its own Lisbon Agenda, it might not be ideally positioned to undertake a swift change in approach to these countries.

The question, then, is how the EU or its Member States can hope to manage their strategic interests in the newly emerging international order, and which coalition, if any, would best serve the EU (energy) interests.

The debate is not only between the diverse Member States, but also between the EC and the Member States. The EC makes proposals first and foremost with a heavy top-down orientation –partly because this is the function of the EC (though with the renewed emphasis on subsidiarity they could also better work with that concept), partly because the EC as a bureaucracy finds justification in expanding its powers, and partly because when leadership is lacking or divided among the Council members, the EC tries to fill the gap.

This complex debate has also come to be about power: power of the individual Member States, power of and in the Council, power of the EC, power to determine the outcome. From the EC's recent proposals in the third package, it is clear that its view of the design of the internal energy market is increasingly divorced from the interests of the large Member States. We see evidence of this in the disputed proposals for unbundling, and the view of energy relations with, for example, Russia, demonstrated by the so-called "Gazprom clause." The EC could apparently no longer make proposals

that represented the common denominator among the (main) EU Member States. The EC did try to create alternative to unbundling that everyone could live with, but it made (or felt compelled to make) a clear choice in favor of its preferred orientation. To some extent, this is a risky strategy because Member States could create coalitions with other Member States in opposition to the EC's approach. The ensuing debate is not only a time- and energy-consuming exercise, with few winners, but could also seriously delay important parts of the energy and climate change agenda that get caught up in the fray.

Despite the foreign policy initiatives in the new treaty, which has yet to be tried and tested, the EC has failed to secure the foreign policy powers needed to compete with the Member States for supremacy in this domain. That said, developing a common foreign policy is going to take a lot of time, particularly in highly controversial areas, and areas where national interests are deemed to be at stake. It is unlikely that a common foreign policy will develop quickly enough to deal with the current strategic energy policy issues, let alone to have energy policies in place to deal with the energy crunch the IEA has warned about. The open question is what other options can be pursued.

6. Is the Current External Energy Toolset Still Sufficient?

The external energy policy toolbox (CIEP, 2004: 115) consists of prevention and deterrence instruments, multilateral cooperation and agreements (IEA, IEF), broader foreign policy, (bilateral) economic relations, trade policies, diversification of energy sources and origins, and foreign direct investment. Deterrence tools include security policies, sanctions, UN Security Council measures, and strategic alliances (NATO). When these policies fail to prevent energy scarcity, internal measures need to be applied to limit impact on the economy. These policy instruments can be divided into containment policies and crisis management policies. These policies consist of diversification of the energy mix, stimulation of domestic production, energy system flexibility, standby arrangements, energy saving, strategic reserves, energy sharing (among coali-

Figure 2. Instruments of Energy Policy-making

| Prevention | Deterrence | Containment | Crisis management |
|---|--|--|---|
| <ul style="list-style-type: none"> • Foreing policy • Energy mix • International cooperation (UN, IEF) • Diversification to source, origin and routes • Strategic agreements • Trade policy • Investment | <ul style="list-style-type: none"> • UN Security Council • NATO • Strategic alliances • Unilateral deterrence • Sanctions | <ul style="list-style-type: none"> • Strategic reserves • Transition to more sustainable energy system • Diversification • Domestic production • Energy system flexibility • Energy saving | <ul style="list-style-type: none"> • Oil-IEA/IEP • Gas, coal, etc: nothing at inter or intra level; national? • Demand management • Sharing of scarcity • Strategic reserves |

Source: CIEP, 2004.

tion partners), and wider demand management policies. The use and effectiveness of these instruments depends on the priorities, the coalitions or organizations to which the country belongs, and the country's political and/or economic importance. In general, security-of-supply policies involve some intervention in the market, usually at a cost.

From the above, it is already clear that the EU has yet to develop a full policy toolbox to underpin any full-fledged external energy policy. And even if the Member States have a more complete toolbox, market integration has rendered their tools less efficient. That is why smarter use of tools at both levels makes sense. Yet before an external energy policy can come about, certain preconditions must be considered. In the absence of these conditions, there is a distinct danger that the calls for "one voice" will be for public consumption only, and not to be taken seriously.

7. Preconditions for an External Energy Policy

For Member States to cooperate and, perhaps in time, relinquish some of their sovereignty in the foreign (energy) domain, a crisis mechanism that fairly distributes costs and

benefits between the Member States (perhaps along the lines of the IEA method of cost distribution), and that helps to reduce the cost of risk management at the Member State level, must be in place. The current absence of such a mechanism is a major (political) obstacle to the success of any EU initiative in external energy policy. While transition to a low-carbon economy is a long-term containment policy, the short- and medium-term risks are not covered. The comfort level of certain Eastern European Member States in particular would improve substantially with a minimum level of shared crisis management capacity in Europe. This would help them to overcome the risk of asymmetric exposure to a disruption by a single supplier and/or single transportation route. Some of their concerns stem from their relatively brief histories as sovereign nations, the adaptation to rapidly changing economic circumstances (including those of oil and gas value chains), and their brief membership in the EU, which offers a different institutional framework for their political system and economy. The absorption into the internal energy market discipline with an energy system based on a different regulatory framework, and without some form of a safety net in place, was perhaps an oversight in shaping the proper conditions for accession. The EU essentially offered itself as a safety net, which would have sufficed in the buyer's market of the 1990s, but proved inadequate in the seller's market in the period after 2003. Most of the conditions were negotiated in a completely different energy environment, including the organization of energy trade with Russia, their main supplier.

That said, their options to diversify origin and routes are (commercially) limited at the national and perhaps even regional level. With limited economic options in arranging alternative supplies and limited possibilities in the short term to adapt their energy mix, smart positioning and a realistic approach will be crucial for them to overcome the current lack of a safety net. At the same time, engaging other Member States in establishing a crisis management framework is vital. As relatively small Member States, they had much to gain from sharing security risks. Nevertheless, potential market-based opportunities also should be secured and not excluded on political grounds, particularly not when the interests of the

larger Member States are potentially held hostage and disregarding those options would potentially increase the cost of energy security. In the current make-up of the EU, a small Member State representing relatively small economic interests cannot realistically expect the larger Member States or groups to forego pursuing their own interests and then to carry part of the cost of self-inflicted higher security of supply risks. Moreover, an Energy NATO, as was suggested above, does not sit easily with the market system, the institutional make-up of the EU (as a primarily economic organization), or the building of long-term, stable energy relations based on integration of the value chain and energy economies. It also politicizes energy relations where other Member States are engaged in building these new economies. Small Member States or small sub-markets often find themselves in a “follower position,” such as with energy relations between the EU and Russia. This brings both benefits and disadvantages. Nonetheless, smaller Member States in the past very often managed to maximize their position in relation to the larger Member States when negotiating their support. Concretely, with regard to the gas transportation routes, the Baltic States and Poland can opt to increase the political and economic cost of Nord Stream and not participate or cooperate. Or they can opt to maximize their benefit from participating in this joint Russian-European venture. In the latter case, they can reduce their risk exposure to a single route (Ukrainian corridor) and find shelter in the route diversification already taking place. More proactive integration of their energy infrastructure in the arrangements that are being developed for the larger sub-markets in the EU would help to bundle their economic and strategic interests with those of larger Member States and their companies. Alternatively, they could seriously sideline themselves when the benefits to the larger Member States to carry their plans forward are greater than the cost of frigid internal relations with those smaller Member States. In the case of Poland and the Baltic States, they were well positioned to negotiate additional energy security guarantees from both Germany and Russia for their cooperation. It seems that the new Polish government is trying regain some of lost strategic ground in the negotiations.

Apart from the specific case of the Nord Stream pipeline, it was already argued that the internal energy market and the international oil and gas seller's market create sufficient ground to explore the merits of a basic internal crisis management policy for the EU. This policy, including demand management, appears to be a necessary precondition for any initiative on external energy policy. It is needed in order to secure support from Member States and to close the policy gap in the internal energy market. The analogy with the oil crisis mechanism of the IEA's IEP, where Member States remain sovereign over their energy policy and yet manage to share risks and costs in oil security, is the best example that comes to mind. The EU should be encouraged to establish something comparable on a regional scale for Europe or even for those parts of Europe that wish to go forward with this. What must be avoided, however, is a long discussion about the competency issue, free-riding, burden-sharing, etc. Instead, the EU and Member States should focus on results, that is, a reduction of risk to make Member States more comfortable with EU policy initiatives. So far, the EU has not made a compelling case that their approach can address the individual Member States' concerns about security of supply.

What can the EU do now to prepare the ground for a more European-based energy policy? What the EC can do to make a difference is, perhaps fortunately, not of sweeping political significance, and does not require grand political statements. Possible EC actions are rather mundane and could and should have been done at the beginning of the liberalization process, because they are part and parcel of a properly functioning market: provide the market with transparency on flows and prices, lay the groundwork for creating some sort of benchmark for security of supply, and set up a peer-review system for Member States to look at each other's arrangements. With this initial foundation laid, the EU could begin to build (based on its shared responsibility) and develop an external energy policy –not the other way around. Thus, the EC should first gather information on exactly what crisis mechanisms are in place in the Member States. Second, it should gather information on how the market has organized or contracted for security of delivery. Third, it should develop an open information

channel, analogous to the information the Energy Information Agency in the US, which played a crucial role after Hurricane Katrina in providing information about capacities and prices on a daily basis. Transparency is crucial. Fourth, it should set up a peer-review system among the Member States. Fifth, it should develop a security-of-supply index that functions as a benchmark or guideline for Member States to evaluate their own and others' systems and solutions. Sixth, the EC should be sensitive to the regional solutions or arrangements that are already part of the Member States' security-of-supply package. Seventh, it should be perceptive to security-of-supply risks in relation to the measures for achieving a low-carbon economy that will become the backbone of containment policies. Old risks can easily be replaced by new ones. Eighth, it should develop a smart crisis mechanism, from the bottom up, a mechanism that maximizes the use of market-based solutions, is cost effective, and avoids heavy bureaucracy. Finally, the EC should stimulate Member States in a race to the top, and make clever use of new technologies.

Member State authority should therefore be the point of departure for cooperation, and the joint interests in cost and risk reduction are to be used as the main drivers in producing the crisis management policy. Also, a crisis mechanism in the EU must (apart from oil, which is covered under the IEA policy) avoid a fuel-by-fuel approach, since it would be more costly to achieve. Instead, efficiencies are possible by smartly combining the diversity of the energy mix, allowing gas security to be served by dual-firing capacities and by using the cheaper strategic oil reserves. It would be absurd to assume that all oil or all gas flows would be disrupted at the same time. A crisis mechanism, properly conceived, will be able to absorb a disruption of some size for a relatively short duration. As long as Member States can show that they can meet some security-of-supply standard (Scheepers et al., 2007), they can expect solidarity. A crisis management mechanism arrangement per fuel, such as for gas (and perhaps also some arrangements for electricity, although electrons currently travel shorter distances), could be more complicated and more costly to realize than the oil crisis mechanism because it is more expensive to store gas and electricity (e.g., in hydro) and the infrastructure to effectively share scarcity

might not presently be available. Given the expected higher cost of gas and electricity security, the EU ought to come up with a smart system for the use of diverse energy mixes and efficiencies. This can be achieved by employing the available technical and economic possibilities, first in the market (e.g., interruptible demand, standby contracts), and as a last resort among governments (drawing on available reserves, mothballed capacities, etc.), while actively managing demand.

Moreover, a crisis mechanism could also help to overcome the uncertainties about the market design, where discussions about vertical integration and the desire of some for strong European companies threaten to become a drawn-out battle of wills between the EC and certain large Member States. The success of the IEA is that it recognizes the importance of oil security for strategically important member countries. Although the mechanism does not provide them with the full service security of protecting or maintaining oil flows that they feel responsible for (e.g., securing sea routes), it does make oil and oil products available through sharing in case of a regional or compartmentalized problem; it creates a strategic coalition, strengthening its political and economic importance; and it provides security to the smaller “follower” states. This formula could be used in the EU and could be the solid foundation needed for the development of more cooperation in external energy policy-making.

The bad news is that energy security, both internal and external, is either going to be more costly to achieve than in previous decades or the energy security situation will become more uncertain. Governments must decide what the cost of increased risk is in terms of prevention, containment, and crisis management policies, or in terms of the impact on the economy (society) with no particular safeguards in place. The consensus is that policies should be implemented, but the discussion on costs, benefits, and method of adoption has not truly commenced.

7.1. Smart Crisis Management

Smart crisis management could progressively link the progress Member States make in the transition to a more

sustainable energy system, in the sense that it contributes to the cost reduction of traditional security-of-supply measures. A dynamic benchmark of a security-of-supply index (Scheepers et al., 2007) would help to determine obligations in terms of traditional measures. Here the EU could immediately play an important role in gathering the information and organizing the system for compliance. In a dynamic security-of-supply indexed system, new economies throughout the value chains can be considered, and the information can be used to determine what the economic and political risks are. Currently, all the risks seem politicized and the Member States are in danger of overreacting, burdening the market with a much higher cost base and in general impeding regular market solutions.

Another opportunity is to offer fiscal incentives to Member States to connect investing in transition policies –which is the long-term solution to reduce the risk– to a crisis mechanism. The more energy efficient and cleaner a Member State becomes, the more tradable “drawing rights” on a European energy security fund a Member State is allocated. These “drawing rights” can help to finance, for instance, the purchase of gas in crisis situations. A benchmark could be the European average index, which would move with improvements in sustainability. The problem of new Member States with inefficient energy systems could be solved by creating a special investment instrument to help them to get started. When new Member States score low on the index, they could draw on an investment fund to reduce their exposure to risk by investing in sustainable (preferably domestically/regionally/European-produced) energies that are available in their market.

Another smart instrument, as was already mentioned, would be to replace the traditional fuel-by-fuel approach and allow the Member States to develop an integrated policy (CIEP, 2004), tailored to their energy mix and particular demand and supply structure. Member States should not be forced to hold certain strategic stocks in gas or coal, or to oversize certain capacities and employ a fuel-by-fuel security policy. Rather, they should be stimulated to develop synergies, cost efficiencies, flexibilities, and any other solutions that reduce their

overall exposure to security-of-supply risk and that allow them to make efficient choices. For instance, the cost of underground storage of gas varies among Member States. If a Member State can reduce the cost of storage by storing oil, over-sizing non-gas electricity capacity, installing dual-firing capacity, and installing wind, solar, or hydro capacities to replace imported gas, this should all count towards the index that determines what measures are to be taken.

A final smart instrument, in addition to the integrated energy security approach, would be to allow Member States to bundle their efficiencies and synergies, as long as they can show that energy security is improving and that they are not free-riding on other Member States.

8. Prevention Instruments

The calls for “one voice” appear to relate only to the possible coordination of certain prevention policies, particularly regarding Russia (though a rift in approach and aim is obvious among the Member States) and perhaps the Caspian Sea region. But because details are lacking about what exactly the Council’s “one voice” consists in, it is quite possible that most of these calls are wishful thinking and for current political consumption only. Towards the Middle East or Africa, foreign policies are fundamentally dissimilar, and often traditional relations with countries preceded the EU/EEC. The UK cannot be separated from its relationships with the Commonwealth countries, and France has similar ties to its former colonies. The special relations that certain Member States have with other countries cannot easily be transferred to the EU level because they do not fit in the EU context, nor can they rely on longstanding experience, contacts, and interests. Contrary to the special relations going back to colonial times, where the pain of the “divorce” has been more-or-less been dealt with on both sides, the relations of the Eastern European and Baltic states with the countries in their previous alliance have not yet turned into special relationships, but are rather a source of tension since political and economic ties that still exist need to be adapted to the new situation. In that sense, enlargement has for the time being “burdened” the EU’s

relations with Russia with an unfinished divorce settlement. These past alliances have complicated, for example, the traditional relationship between Germany and France –but also Italy, the Netherlands, and Austria– with Russia. But the foreign and economic ministries of these countries seem to be able to overcome such difficulties with greater ease than the EU. It seems rational, therefore, to use the ministries of certain Member States, and not declare them to be running counter to EU interests (or interests of certain Member States). Rather, they should be encouraged to work for dual benefits, for both national and European interests. It is also conceivable that Member States could cooperate and coordinate their efforts in workable coalitions to further national and wider European interests. A good example is the Nord Stream pipeline, which has featured high on the agenda of the EU (pre-enlargement) and Germany, but is now causing internal friction (post-enlargement). The EC could help the Council to overcome this friction by pointing out the longstanding importance of the route and the fact that it helps to bring more gas to Europe and reduces the transit risk, but also by initiating a crisis management framework. The latter is more important for security of supply and is also more effective in dealing with the asymmetries in exposure to disruption risks and the diversity of the energy mixes than the current “nice words” about “one voice.” Poland perhaps phrased it too politically or confrontationally, and its communication was certainly devoid of subtleties towards other Member States. In essence, though, it pointed out the foremost weakness of energy policy in Europe: not the lack of an external energy policy but the lack of a crisis mechanism.

Adaptation to the major political and institutional changes on the European continent takes time. The enlargement process implied that the new Member States adapted with a “big bang,” and not in a more gradual manner. Despite the current formal situation, implanting the new situation into the “genes” of society and into foreign policies takes much longer. Also, Russia had to adapt to the new situation in Europe and deal with the economic realities of new state borders, while both economic and physical infrastructures reflected the old make-up. The fact that EU membership is not

clearly defined and that countries belonging to the former Soviet Union, other than the Baltic States, are also contemplating the possibility of membership, complicates relations with Russia, as the main country in the Commonwealth of Independent States (CIS). The desire of some CIS countries to become members of NATO is another foreign policy complication that burdens relations. Patience and understanding for each other's interests can in time help to overcome tensions. Given the substantial changes over the past 15 years, the relative harmony in which they can occur is a success for all European countries. It should be clear, however, that the changes involve both costs and benefits, and the distribution should be perceived as fair in order to maintain good foreign relations.

The fact that Russia is a major energy exporter to Europe and that it also has vital interests in the Caspian Sea region underlines the importance of making the EU-Russia relationship a success. The EU's concerns over security of supply and Russia's worries over security of demand are potentially mirror images of each other, and one could complement the other. Security of transit is a shared concern, although their approaches to reducing the risk have been dissimilar so far. Another reason the EU-Russia relationship must be a focal point is the overlap in the EU's neighborhood policy and Russia's Near Abroad policy. Again, these could potentially be developed into comparable interests, or become a source of discontent and competition. Europe is quite experienced in managing its structural import dependence, while maintaining a clear view on its own interests. But with regard to energy producers, including Russia, Europe sometimes neglects to acknowledge the producer state's national interests.

That both the EU and Russia do not automatically have similar interests makes efforts in foreign policy all the more important. If the EU and the Member States want to stabilize relations with Russia and structure them in a strategic cooperation agreement, it would be wise to avoid unnecessary irritations and instead employ a goal-oriented approach. An instrument that would suit such an approach is to use the strong ministries of Member States with longstanding and

solid bilateral relations, which could help both the EC and the Council move closer to an agreement. The fact that three EU countries already conduct discussions in a tripartite coalition with Iran shows that the method is not unheard-of or unacceptable to other Member States. Indeed, a small group of Member States preparing the political ground could prove to be helpful in the development of “one voice” approaches to energy with various producer and consumer countries. Because other Member States must be able to accept the outcome, the negotiating Member States should be sensitive to their needs without allowing them to become stumbling blocks or vetoes. Where the foreign policy approach is not immediately clear among the Member States, other countries or regions could also be approached in this manner, as long as it is clear that ultimately the relationship will be upgraded to the EU level. Using the national foreign and energy policy administrations also brings much expertise to the European table. Furthermore, energy companies that need government-to-government relations in order to conclude business-to-business contracts can communicate through their national administrations. When successes follow, the confidence in EU external energy policy-making will grow. Given the divergence in energy mixes, energy import dependence, and asymmetric exposure to risk, the evolutionary approach appears to be a route that can remove resistance to increasingly combining bilateral approaches in an EU external energy policy. Particularly in the use of prevention instruments, when crisis is still far away, this approach could build confidence both in the EU and with foreign countries.

After all, the gradual approach does not imply that all instruments can be effectively used as before. Typical security-of-supply policies, such as diversification of source and geographic origin, have become limited in their effectiveness as a result of climate change policy ambitions and restricted investment opportunities for private capital to boost reserves with foreign reserves. The policy toolset that had been successfully applied in the late 1970s and 1980s would not suffice. The EU Member States did not have a new “North Sea” at its disposal, and, in addition, oil and gas supplies were bound to become more concentrated in only a few major exporting

countries. Of these, the Middle East continued to be a high political risk. This was further emphasized after the September 11th attacks on the US, and the subsequent interventions in Afghanistan and Iraq. For the EU, the energy reserves of Russia and the Caspian Sea region gained strategic importance with supplies from the Middle East at risk and other regions, such as Africa and South America, being competed over by the US and China. The proximity of Russia and the Caspian Sea region to the European market and the fact that the production facilities were already connected to the European market through the former Soviet Union oil and gas infrastructural system, justified the interest. Yet Russia and the Caspian Sea countries began increasingly to develop their own designs on how best to exploit their energy resources, and these designs have not always matched with the European drive for liberalization. The European concern about the reorganization of the energy value chain in the most important exporting countries to the EU is understandable. The EU and the Member States must, if and when energy flows are jeopardized as a result, defend the interests of all Member States.

The differences in satisfying national interests should be resolved not by forcing the organization model of the energy industry on each other but by building upon joint interests. The joint ventures between the Russian company Gazprom and European energy companies (both in Europe and in Russia) can be seen in two different ways: as a successful route to closer integration of energy economies or as a power struggle to gain dominance over each other's market model. In the EU, the presumption is that Russian companies will always aim for dominance over the European energy sector, while the presumption in Russia is that the EU wants to fragment Russian industry. The EU should at least show some confidence in the Member States and the EU's competition laws, and in its regulatory capacities.

Europe was a successful formula because the integration created economic value for Member States and for those who wished to operate on European markets. Through the integration of economies, joint interests also became durable in more

difficult times. It would be a shame if the European Union experience, which culminated in the deepening and enlargement of recent years, was ultimately the harbinger of impatience and conceit about other sovereign countries' reform processes and national interests choices.

8.1. Smart Prevention

Smart prevention is designed to ensure that the European economy is attractive to supply because of macro-economic stability, a stable currency, and a stable regulatory and investment climate. For energy suppliers to prefer the European market, a fair price and a stable volume are important. Also, suppliers must be able to contract their supplies with reliable counterparts in the market, so the size and scope of European companies should reflect to some extent the size and scope of the suppliers. Suppliers must also be able to invest in bringing their product to the end-user, so vertical integration is no problem as long as companies do not dominate all or parts of the market and abuse their position. Smart prevention includes sensitivity to suppliers' security of demand concerns and using the EU's soft powers to strengthen and broaden economic relations. Energy trade should be embedded into a mutual, wider trade portfolio in order to increase the shared economic costs of a dispute. Smart prevention also includes engaging the traditional supplier countries in making their economies more energy efficient and sustainable in order to conserve finite resources over a longer period of time. It also involves innovating the non-energy economy, resulting in energy savings.

9. Deterrence

Above it was argued that the growing geopolitical dilemmas and the willingness and ability to employ hard power rather than soft power were addressed at the Member State and the EU level. In that context, the question was raised as to whether the EU design should be adapted to include geostrategic policy options. The answer to this question depends on the future of the NATO alliance. The purpose of

NATO has been debated since the demise of the Soviet Union. The current NATO operation in Afghanistan is the first outside its traditional “theater” of operations, namely Europe. The new Member States feel comfortable in the alliance with the US, and other countries from the former “Eastern bloc” would also like to join in order to increase the security threshold between themselves and Russia, and to distance themselves from the past and their dependence on Moscow.

If the NATO members can find and agree on a new mandate and purpose for the alliance, the development of EU instruments in this area will be difficult, if not impossible to achieve. Much effort will go into making the alliance work, both with an extended membership and with a new mandate.

The formulation of this new mandate might be a conundrum. Finding the proper organizing principle or vision for the alliance should be precise enough to give focus, but broad enough to give purpose. Moreover, vital interests of the member countries should be represented in the mission statement. Defending democracy or democratic rights could be too vague. NATO will also not be allowed to emulate the UN agenda, and the “war on terror” as a central goal could too easily be seen as a clash of civilizations and could sour sound relations with some Islamic countries. Broad NATO involvement in energy security also runs the risk of straining relations rather than stabilizing or relaxing them (Noël, 2008). Yet it is not unthinkable that a new rationale for the alliance can be found in the security of energy flows, since this represents the vital interests of all member countries. This security could be defined narrowly, as in securing transportation routes (a narrow definition would only include the naval routes; in a wider definition, vital pipeline routes would be included) and perhaps certain vital production facilities. Or it could be viewed in a wider sense: to secure energy flows to make certain that sufficient energy will reach international markets. The level of deterrence to divert flows away from the alliance for political and strategic reasons could be fairly high. In combination with the instruments of the UN Security Council, and with the economic instruments of the IEA, a powerful

deterrent or credible threat could be envisaged. But such a mandate would also create strategic competition for energy flows with other geopolitical powers and could potentially hamper the operation of the world energy markets when strategic behavior is provoked. Energy as an organizing principle is therefore also fraught with many difficulties.

The level of deterrence that the EU can muster is mostly of an economic nature, and the structural dependency on imports will limit the general deterrence potential. Yet singling out certain countries for sanctions is conceivable, particularly when it concerns a smaller supplier. In the end, the EU is best served with slightly oversupplied markets in order to maximize the instruments available to the EU. The EU's powers outside the economic domain are mainly to obstruct and neglect, not to create or enforce.

9.1. Smart Deterrence

Smart deterrence is based on coalitions that have a full-fledged energy security toolset and a foreign and security mandate to discipline those that hamper the free flow of energy and to prevent being confronted by other consuming countries. Smart deterrence also involves the redistribution of the cost of maintaining the free flow of energy to potential free-riders in the system. Some sort of energy coalition with China –for instance, by including China and India in the IEA crisis mechanism– could be a powerful deterrent to producing countries to interfere with oil or gas flows.

10. Containment

The transition to a more sustainable energy economy in Europe can be seen as a long-term containment policy, and therefore smart, because it possesses all the elements of containment: diversification of source and origin, demand management, and promoting domestic production. Also, new energies require more system flexibility to integrate them into the energy infrastructure. However, this is a very long-term solution. Before this new energy economy materializes, the dependency on fossil fuel will remain substantial. The transition itself could be costly

and limit the ability of countries to invest at the same time in security-of-supply policies. Smart is when the Member States realize that the cost of transition is a structural investment in improving their energy security, while traditional security of supply measures are not.

11. Smart External Energy Diplomacy

The challenges to the EU are large and immediate. At the same time, the process of developing a full-fledged external energy policy, in conjunction with the transition to a more sustainable energy system, is a very tall order, indeed. Only a severe crisis could create the sense of urgency needed to speed up the process of getting a full-fledged policy in place with expedience. Short of a crisis, European policy-making processes are slow. As long as the national energy diplomacy initiatives are in place to prevent such a crisis from occurring and there is no immediate danger, Member States will promote their own interests in this area and focus on the transition agenda, while relying on their own policy toolset, experience, and abilities to secure fossil energy flows. The EC has yet to make a convincing case to Member States to relinquish their nationally oriented policies, while their oil policies are secured in the IEA. The absence of a crisis management policy is particularly important for smaller or follower Member States, while large Member States are better positioned to secure their energy interests, despite the decline of the national instruments' effectiveness due to the internal market.

The diversity of the energy mixes in Europe also creates possibilities because, except where oil and gas are concerned, the impact of a disruption or extended scarcity could be fairly localized. The improved connectivity also allows for flows to be redistributed, although this function could be technically restricted. Clearly, the biggest problems are for countries at the "end of a pipeline" or on the edges of the infrastructural system, who have few alternative routes and infrastructure to switch to, countries with concentrated supplies or with a lack of economic ability to purchase energy at premium prices. The internal market will not solve the problems of countries

at the outer edges of the European market because the economies might not always be there to develop the proper infrastructure. These countries should be assisted by the regional fund, an energy security fund or soft European Investment Bank lending window to improve their energy security.

The most pressing issue for external energy policy is the dependency of the European economy on oil and gas imports. European energy diplomacy will most likely be focused on oil and gas producing countries. The limits of independent initiatives towards oil producing countries in the Middle East (though the tripartite discussions with Iran are an important exception) are clear. The “battle for Africa” is on, but Europe will meet stiff competition from the US, China, and India for African resources. Which leaves the most important relationship: Russia. The importance of Russian energy supplies is clear. Moreover, Russia could develop into an energy linchpin on the European-Asian continent. European external energy policy is first and foremost about the energy relationship with Russia and North Africa. So there is nothing new under the European sun after all. Smart actions would involve returning to the negotiation table and hammering out a new strategic partnership that is respectful of both European and Russian interests.

12. Conclusion

The EU should recognize that the current incomplete powers in the field of energy and the strategic foreign policy dimensions will take a long time to develop into what can be considered “one voice.” If immediate accomplishments in this area are desired, a different approach to the development of an external energy policy is required. Instead of trying to convince the Member States to transfer their competencies in energy, foreign and security policy as soon as possible to the EU level, the EC should promote a bottom-up approach. This should allow for the smarter use of diversity, asymmetry, and subsidiarity among Member States, and turning these perceived stumbling blocks into assets or instruments of external energy policy. Such an approach uses, for example,

the discipline of the internal energy market, climate change policies, and the expert ministries of individual Member States with producer and competing consumer countries.

The EC can start by enhancing transparency and beginning to prepare the ground for a crisis mechanism. They should focus on stimulating the Member States and the companies in a race to the top, and reward best practices, bottom-up rather than top-down. It is also important that the development towards a low-carbon economy, as the EU's long-term containment policy, is made an integral part of security of supply approaches. A smart crisis mechanism is the basis for external energy policy to be developed on, not the other way around.

Furthermore, Member States should substantiate why their external energy policy contributes not only to the national but also to the EU-regional or EU-wide security of supply. National interests should not run counter to the interests in continuous energy flows of other Member States, but instead should help increase the energy flows available to the European market. By using diversity and asymmetry as an asset of EU policy-making, those policies that truly are most effective at the European level will be "produced" or demanded by that market.

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Views on Europe's Domestic and Foreign Energy Policy

JACQUES LESOURNE*

1. Introduction

Over the past several months, the European Commission has presented several legislative acts relating to energy:

- The Third Energy Package on September 19, 2007.
- The European Strategic Energy Technology Plan on November 22, 2007.
- The Climate and Energy Package on January 23, 2007.

These texts were discussed and analyzed during the conference “The External Energy Policy of the European Union,” held in Brussels from January 31 to February 1, 2008, and hosted by the European Governance and the Geopolitics of Energy Program at the IFRI.

From the discussions at this conference and reviewing the work carried out by the IFRI over the past two years, what views can one extract about Europe's domestic and foreign energy policies?

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Before examining some views on these policies, it is necessary to highlight two preliminary remarks that are often underestimated.

2. Two Preliminary Remarks

Energy is not an ordinary good because it has numerous characteristics, and energy policies have meaning only in relation to actors in the field.

2.1. Energy Characteristics

There are four main characteristics of energy:

1. Energy is, in an economic sense, a private good that is bought by a consumer (industrial or household) from a supplier in order to satisfy its needs, in the framework of a market.

2. Energy is also a primary necessity, to the point that most governments want the entire population to have access to it at affordable prices. In developed countries, this access, which includes electricity, gas, fuel, etc., is generally assured. In the poorest countries, it is not assured in the most distant rural zones and sometimes in certain slums surrounding large cities.

3. Energy is a redistributable good. Many governments, particularly in producing countries, have chosen to distribute energy to consumers at below-market prices, and this assistance is often substituted for other public services. This is the case in Russia, Iran, certain Gulf States, and for electricity in India and Africa.

4. Energy is considered a strategic good. Those that import energy cannot do without it in the short term, and those that supply it (according to some) suffer less from an interruption in delivery. This aspect was apparent during the Second World War, but outside of times of war the strategic characteristic of energy becomes much less apparent and political tensions between countries have rarely led to long-term supply interruptions, since producers need the revenues from their exports. On the other hand, civil or local wars have prevented

the operation of industries involved in the production of primary energy, or have blocked investment.

When discussing energy policy, it is important to be mindful of these characteristics of energy.

2.2. Actors in the European Energy System

European policy is rarely presented in terms of actors, which is a mistake. Who are these actors?

- The European authorities: They enact numerous policies dealing particularly with competition law, norms, accounting procedures, emission limits, etc.

- Member State governments: They also enact policy, especially fiscal policy, and can provide assistance, intervene through energy policy measures, etc.

- Firms, which can be divided into three categories: Operators in the energy sector; energy intensive industries; and other firms.

- Households that use energy for transportation, heating, lighting, etc.

In the world today, governmental organs tend to overestimate their ability for action and make pledges that they will not be able to keep, and they most often recognize this.

One often forgets that it is in fact firms that invent new technologies, improve energy efficiency, eventually offshore their activities, make investments (transportation and distribution) with the help of banks, and sign important international supply contracts.

In addition, it is households that, because of either price or fear, adapt their behavior. The hope of some for society to move away from consumerism will have little success without the effects of increased energy prices and a perceived danger.

From this point of view, the European energy policy suffers from a certain lack of realism: the EC takes governmental agreements at face value, imposes “solidarity” measures on states while their situations and energy policies differ, and sometimes suffers doctrinal excesses that prevent it from taking realities on the ground into account.

As for national governments, especially those of large countries –they are both removed from the actual problems on the ground and are responsive to particular interest groups.

3. The European Union's Domestic Energy Policy

Today domestic policy falls into three principal areas: the creation of a domestic market, the consideration of governmental commitments for 2020, and an emission trading system.

3.1. The Market

The Single European Act planned for an extension of the domestic market, notably to include energy, and thus gave the EC the powers needed to ensure its implementation. Simultaneously, the British, who were not content with their nationalized electric power system, looked to transform it by devising a system in which producers would be separated from distributors, each using a national grid; producers would decide prices that would allow their power stations to function; distributors would buy depending on their needs; and a spot price would be determined under conditions where the quantity demanded would be equal to the quantity offered since electricity is not stockable.

This model of “double perfect competition” is implicitly the goal of certain European functionaries and of leaders in countries that have been freed from the former planned economies of Eastern Europe. While this model may be suitable for the oil industry, it does not take into account certain characteristics of electricity and gas: the lengthy time period needed to construct equipment; the necessity of indicative prices that can be anticipated and judged to be stable in order secure investment; operators' interest in having long-term contracts and not in basing them only on spot prices; peak equipment not being profitable (something that economic theory has underlined); and the necessity of investments in networks. Relations with the outside can be added to these reasons. Namely, if there were a dominant supplier outside the EU, contracts with this supplier would be signed by firms, not by

a European monopsony, for which there is no imaginable agency. It is necessary, therefore, to substitute a different model for the implicit one used by the EC, a model in which:

- There is an oligopoly, made up of powerful energy operators, but such that in each country there are several big operators, and they are active in several countries.

- Planning for investments and interconnections is undertaken.

- A European regulator is set up for each sector, either coordinating with national regulators or replacing them altogether.

- There is coordination among transportation operators.

This model is not far from the EC's proposals, but it takes better account of the realities on the ground. In this respect, the EC's determination regarding *unbundling* seems to be secondary for the creation of an efficient market, and dangerous when confronted with a single foreign bidder –at least for gas– a bidder that naturally seeks to interfere with infrastructures. The proposal of several Member States, including France and Germany, should thus be retained and transformed into a future act.

3.2. Governmental Commitments for 2020

At the European Council in March 2007, European governments pledged to cut their greenhouse gas emissions by 20%, to increase their energy efficiency by 20%, and to produce 20% of their primary energy from renewable sources (not including nuclear energy). Biofuels must also make up 10% of total fuels used. This multiplicity of commitments is disconcerting; moreover, governmental pledges to goals such as these have very little value in democratic societies. (“A week is a long time in politics,” a British Prime Minister once said.) What should one think of these objectives?

- The greenhouse gas emission objective is essential and a priority insofar as climate change is a real threat.

- Energy efficiency is a means to reduce greenhouse gases, but it is very difficult to achieve through governmental

initiatives, despite the possibility of implementing certain norms (for buildings and automobiles).

– The objective concerning renewable resources –which considers neither nuclear energy nor the cost of renewables– is not a serious objective, and is a demagogic concession to the anti-nuclear lobby. Naturally, each country is free to choose to use nuclear power or not, but overall, Europe uses nuclear power and will continue to do so.

– Finally, as for biofuels, all studies show that with the exception of sugar-cane-based ethanol from Brazil, first generation biofuels are not economically profitable nor do they decrease the consumption of primary energy.

Logic would thus call for the EC to concentrate on the CO₂-emission objective, for which it has already made constructive proposals.

3.3. Regulation of Greenhouse Gas Emissions

While the EC broke new ground by implementing –on a trial basis for the periods 2005-2007 and 2008-2012– a system for the allocation of emissions allowances, and by creating a market for trading these allowances, this initiative can be viewed as only a partial success due to the system's brief time-frame, and to the means by which the free emission allowances are allocated (including to some installations that do not yet exist in certain countries).

Recently, the EC sent a proposal to national governments for the 2013–2020 period that it hopes to adopt quickly. This proposal represents a clear advance. The progressive disappearance of free allowances and the inclusion of all sectors in auctioning allowances constitute real progress.

Nonetheless, subject to a more detailed study, three questions require clarification:

– If the auctioning is performed by individual Member States, prices may differ from one country to another, highlighting the inequitable conditions within the system. Is it thus necessary to allow all EU companies to buy allowances in any country? And if so, what will companies from a given

country say about this that have received only part of that country's allotted allowances?

– The problem of energy-intensive companies is not settled. If these firms reduce their production and employment within the EU even while imports of their products increase, there will be a powerful social reaction, even if the percentage of these firms in European countries' gross value added is relatively small. (It is reasonable to wonder if the EC has seriously studied the actual situation within these sectors in Europe.)

– Certain operators think that they would be able to construct coal power stations associated with carbon capture and sequestration (CCS) units, but investment is considerable and would be profitable only over the life of the station. Why not allow part of what is collected from auctions to be used for refundable advances or to subsidize these prototypes?

– Is it necessary to point out that a 30% reduction in greenhouse gas emissions objective in the case of an international agreement seems unrealistic? Is one justified in wondering whether this decision by heads of state adds more credibility to the EU's proposal?

Thus it seems that the EU should simplify its domestic energy policy, direct it towards the European regulation of an oligopolistic market, concentrate on lowering greenhouse gas emissions, and move towards a working emissions allowance system –all of which is accomplished by implementing measures to preserve competition within the EU's industrial sectors, its largest energy consumers.

4. The European Union's External Energy Policy

In the context of existing treaties, the EU has not adequately discussed its external policy in a substantial sense, nor does it seem likely that it will have such a policy in the near future. It is well-known that trade (WTO) is the only area in which the EC is the sole negotiator. The EU nonetheless makes itself an important actor by a certain coordination of its Member States' external policies and by adopting common behavior in the handling of international issues. The creation of a new treaty will undoubtedly reinforce this harmonization, even if in certain cases there will remain:

- Differences in attitudes towards the United States.
- Differences in attitudes towards Russia and the New Independent States (NIS).
- Differences in opinion about the relative importance of various geographic zones (e.g., the Mediterranean Basin) to European countries.

What, however, could the objectives be at the EU level? There appear to be three:

1. Energy security
2. The fight against global climate change
3. Aid to the world's poorest countries

What is needed to pursue these goals?

1. For *energy security*, essential elements include working towards the successful operation of international markets, finding solutions to conflicts in the Middle East and Western Asia, and the framing of partnerships, such as the Russian-European partnership. On the other hand, projects aimed at broader reciprocity, such as the Energy Charter, seem unrealistic since they ignore the fact that energy is part of national policies. European countries should be careful in formulating their foreign policies not to humiliate or outrage certain energy suppliers. Strong transnational European corporations should operate on international markets. This last point is far more important to EU energy security than is theoretical perfect competition in the domestic market. The domestic energy policy is also a component of security policy. On one particular point, it is appropriate to question whether Europe's involvement with Nabucco, a project deemed unrealistic by many actors, is adding to the credibility of the EU's foreign actions.

2. As for *the fight against global climate change*, the EU has taken courageous positions in Kyoto and in Bali, but two possible pitfalls should be avoided:

- Sermonizing, appearing to lecture others too often, which can stir up negative reactions.
- Imposing constraints that lead to a reduction in production within Europe by energy-intensive industries, which is then offset by an increase in imports.

We should be exploring possible paths for international agreements in individual sectors. In the meantime, these sectors should be asked to reduce emissions to levels that will feasibly allow for continued, steady production. In this respect, the position taken in Copenhagen will be crucial, particularly given the evolution of the United States' position and the strategies adopted by China and India. Maybe world agreements on the use of existing advanced technologies would be easier to reach than cap emissions commitments.

3. In order to provide *aid to the world's poorest countries*, three issues should be highlighted:

- Assistance in increasing energy efficiency, especially in power distribution, which at times is quite meager.

- The realization of investments in production by operators in developed countries using modern technologies –though experience has shown that the governments of developing countries refuse to commit themselves to purchase prices, which eliminates candidates; clauses can also be envisioned in regard to the EU's ACP (African, Caribbean, and Pacific countries) policy.

- Technology transfers by the firms that possess the tools, under fair conditions, and especially for decentralized power production in rural areas of the poorest countries.

While it cannot be said that the EU has a real foreign policy, it is nevertheless possible to integrate energy issues intelligently into the Member States' and the EU's international activities.

5. Conclusion

Facing Member States, the EC succeeded in elaborating a set of relatively coherent propositions. However, for reasons that explain its disinterest in concrete problems, and its (and certain Member States') occasional susceptibility to oversimplified, quasi-ideological visions, these propositions should be modified in the context of the ideas expressed above, which were largely inspired by the discussion at the IFRI's recent conference on "The External Energy Policy of the European Union."

*The Ifri Energy Program: European Governance
and the Geopolitics of Energy*

2008 Annual Conference

in partnership with:

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DAY 1, THURSDAY, JANUARY 31

8:00 – 8:45 Registration and welcome coffee

8:45 – 9:15 Welcome address, **Thierry de Montbrial**, President of Ifri

Session I. In Search of a European Energy Policy: Beyond National Interests

Chairman: Thierry de Montbrial, President of Ifri

9:15 – 10:30 *European energy policy seen from the inside...
and the outside*

Andris PIEBALGS, EU Commissioner for Energy
William RAMSAY, Deputy Director, International Energy Agency

10:30 – 11:00 *Coffee break*

11:00 – 12:30 *To what extent is the convergence of national energy
policies necessary?*

Jean PISANI-FERRY, Director, Bruegel Think Tank
Adam ROTFELD, Former Minister of Foreign Affairs,
Poland
Dieter HELM, Professor, University of Oxford
Jorma OLLILA, Chairman of Royal Dutch Shell

12:30 – 14:00 *Lunch*

Session II. The European Energy Supply and Geopolitics

*Chairman: Jacques Lesourne, President of the Scientific Committee
of the Ifri Energy Program*

14:00 – 16:00 *Looking east: Russia and Asia*

Thomas GOMART, Director of the Russia/NIS Center, Ifri
Pierre MOREL, EU Special Representative for Central Asia
Tatsuo MASUDA, Professor, Tokyo Institute of
Technology (SIMOT)
Valérie NIQUET, Director of the Asia Center, Ifri

- 16:00 – 16:30 *Coffee break*
- 16:30 – 18:00 *Looking south: Middle East and Africa*
Robert MABRO, Honorary President, Oxford Institute for Energy Studies
Hubert VEDRINE, Chairman, Hubert Vedrine Conseil
Sadek BOUSSENA, Professor, LEPII-EPE, Université de Grenoble

DAY 2, FRIDAY, FEBRUARY 1

- 8:30 – 9:00 Welcome coffee

Session III. The External Energy Policy of the European Union: Formulation and Development

Chairman: Thierry de Montbrial, President of Ifri

- 9:00 – 9:20 *Keynote address*
Javier SOLANA, High Representative for EU Foreign and Security Policy

Chairman: Jan Horst Keppler, Professor of Economics, Université Paris-Dauphine, Research Associate with the Ifri Energy Program

- 9:20 – 10:00 *Engaging Europe's neighbors*
Gernot ERLER, Minister of State at the Federal Foreign Office, Germany
Anatoly TORKUNOV, Chancellor, MGIMO University

- 10:00 – 10:30 *Coffee break*

- 10:30 – 11:30 *Climate change and the new geopolitics of energy*
Claude MANDIL, Former Executive Director, International Energy Agency

- 11:30 – 12:30 *Concluding remarks (roundtable)*
Moderator: **Paul TAYLOR**, European Affairs Editor, Reuters
Participants: **Jacques LESOURNE**, President of the Scientific Committee of the Ifri Energy Program
Jean-Marie CHEVALIER, Director of "Centre de Géopolitique de l'Énergie et des Matières Premières," Université Paris-Dauphine
Jacek SARYUSZ-WOLSKI, Chairman of the Foreign Affairs Committee of the European Parliament
Franklin DEHOUSSE, Professor at the University of Liège, Judge at the Court of first instance of the European Communities
Ricardo SOARES de OLIVEIRA, Oxford University

THE EXTERNAL ENERGY POLICY OF THE EUROPEAN UNION

GOUVERNANCE EUROPÉENNE ET GÉOPOLITIQUE DE L'ÉNERGIE

This third monograph of the Ifri program on *European Governance and Geopolitics of Energy* is devoted to the program's first annual conference on the "External Energy Policy of the European Union." The conference took place from January 31 to February 1, 2008, at the Palais Egmont, in Brussels, Belgium.

Representatives of the European Commission, national governments, academia, and industry examined the European perspectives on the highly topical issue of external energy policy and assessed their relative prospects. The purpose of the conference was to take stock of current policies and to develop perspectives for the future.

This monograph comprises five chapters:

- A background paper prepared by **Jacques Lesourne**. A version of this document was given to the speakers prior the conference. It provided a set of questions that were designed to orient their reflection.
- Three background papers that introduced some of the questions to be addressed during the three sessions. These papers were written by **Jan Horst Keppler**, professor at Université Paris-Dauphine and Senior Research Associate at the Ifri Energy Program; **Roland Götz**, Senior Research Fellow at the Institute for International and Security Affairs (SWP), Berlin; and **Coby van der Linde**, Senior Research Fellow and Director of the Clingendael International Energy Programme (CIEP).
- An assessment of the main points raised during the exchanges among the conference participants and an evaluation of the European Union's external energy policy written by **J. Lesourne**.

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