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European Union Energy Supply Policy: Diversified in Unity?

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Introduction

1. Preface

Energy is crucial for the economic development, social stability and geopolitical security of every country. It has become even more important with the growing competition for the access to the limited energy resources, as dynamic economic growth and population increase are bringing about a rise in energy demand. Energy policy is regarded a strategic policy area, as first, it has influence on national economies; whether energy will be available at reasonable prices influences a state's economic competitiveness and power. Changes in energy prices can have enormous effect on a state's budget revenues or on wealth allocation and distribution nationwide and internationally. Second, it affects the security in and of a state, as a disruption in energy supply restricts a state's defence capabilities.

Energy security, in terms of secure supply and stable prices is increasingly related to geopolitics and international relations. First, the decisions about ensuring energy security are always taken in the long term, because it implies the implementation of large projects, needing enormous investments, which implies more important role for governments. Second, energy is both strategic good and commercial good.

Therefore, there are two aspects of energy policy: commercial and political. Governments take decisions and conduct negotiations about energy, but there are other important actors involved, namely the big energy companies, private or state-owned. In the EU in the past several decades energy policy was regarded only as an affair of economic state administration and private companies, and was left to be determined by market forces. The problem is that industry interests take into account the short-term economic benefits, while mid- and long-term national interests of energy supply security are often neglected. That is why the EU's security of supply can not be entrusted only to the industry, when national energy strategies of countries like China, India, Russia, OPEC countries, are determined by

geopolitical considerations.

In the EU, regarding the commercial aspect of energy policy, the European Commission has impact through the competition policy, the single market legislation, through its competences in the environmental policy. In the political field, decisions are still taken by unanimity and by intergovernmental approach, where every state retains the right to impose its veto. But considering the growing global demand for energy resources, EU's own maturing gas and oil fields, threats stemming from the doubtful reliability of energy suppliers, the EU member states are becoming aware that to enhance their energy security, they must act collectively facing the new energy challenges.

However, there is still no common energy policy in the Union, although the domain of two of the Treaties, on the basis of which the EU was created was energy. The European Coal and Steel Community (ECSC) and the European Atomic Community (Euratom) were both meant to serve political and military goals, rather than economic or energy security ones. The Coal and Steel Community was created as a means to prevent a future war between the member states, and France and Germany in particular, as these two industries are the basis for the armament industry. The Euratom Treaty was rather an expression of EU's will to use nuclear power for peaceful purposes, than an economic project. Its objectives were the development and research in the nuclear energy domain, the creation of a common market for nuclear fuel and in that way to hamper the illegal use of nuclear materials and to protect the health of the population. At the same time, the nuclear programmes of the member states remained under national control.

Energy has been a preoccupation for the EU on several occasions when there were threats to energy supplies. The first great challenge which faced the EU was the oil crisis in 1973-1974, when international demand for oil started to exceed supply and OPEC decided for a fourfold increase of crude oil prices to almost $12 a barrel. This at least contributed to the severe economic crisis in Europe with high inflation and high unemployment. The Arab oil embargo of the early 1970s made clear to the

nations of Europe that there was a need for more collaboration on energy policies among the nations of Europe and between Europe and the energy producing world as well as the need to prepare strategies intended to prevent the EU from becoming the victim of future attempts to use energy as a political or economic weapon by exporting nations.

Even at that time the different positions of European countries resurfaced. France and Italy, for example, wanted to manage the crisis by building strong political relations with Arab countries, while the UK, the Netherlands, and to some extent Germany, expressed their preference for an alliance with the US, which implied more confrontational approach and required the existence of a global energy market.[1] The crisis induced industrialised countries to take measures so that they would not be vulnerable to supply disruptions again. However, every country adopted separate strategy to cope with the crisis, varying from boosting domestic production of oil and gas to building nuclear plants. The only common step at that time was the initiative to create the International Energy Agency (IEA), whose initial role was to coordinate measures in times of oil supply emergencies. But even now, not all member states of the EU share a membership in the IEA as well.

The second important moment for the EU in terms of energy relations was immediately after the fall of the Berlin wall. At that moment there were hopes for renewed relations with the states, that were beyond the iron curtain before, especially with Russia. One of the most appropriate field for partnership with them was energy. The EU needed to satisfy its growing demand for energy, while Russia, and other countries in the region, which have energy resources, needed investments to exploit them. That is when the EU launched another initiative, the Energy Charter, which was envisaged to be a forum for dialogue and later a rule-settler for a level playing field in the domain of energy.

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[1] Hoogeveen, Femke and Perlot, Wilbur, “Tomorrow's Mores: The International System, Geopolitical Changes and Energy”, Netherlands Institute of International Relations Clingendael, The Hague, December 2005, pp. 41-42.

Later, in 1996 and 1998, the EU made a move forward towards the creation of a single energy market by issuing two directives, aiming at ensuring the free movement of electricity and gas within the Union, which were updated in 2003. This initiative had some success, although the degree of liberalisation varies largely from one country to another.[2]

In spite of these common initiatives and the awareness of the member states of their dependence in terms of energy, during the whole development of the European Communities, and subsequently, the EU, energy has always been within the scope of competence of member states. They have been developing their own energy policy, depending on geopolitical interests, their domestic resources and production, their specific needs and their diplomatic relations with suppliers and transit countries.

Only lately the EU launched a more thorough debate on energy policy, aiming to achieve three goals: competitiveness, sustainability and security of supply. But while energy efficiency and environmental concerns have been on the agenda for some time, the external aspect and security of supply gained more significance only lately.

2. Objectives of the analysis

The EU faces more and more challenges for the security of its energy supply - rising prices of energy, reliance on fossil fuels, rising import dependence, problems with the reliability of energy suppliers, difficulties in the implementation of the internal market. It is becoming clear that we can not take energy for granted any more. For the EU this means that it can no more manage the energy sector based on 27 or more different energy policies. In order to enhance its energy security, it is necessary that EU member states act as a unity in their energy supply policy, which involves a common external energy policy. The individual countries have too weak position to impose themselves as actors on the international energy field. Only if they identify their common interests and negotiate as a whole, will they be able to protect their

[2] European Union, Summaries of legislation, Energy: Introduction. Available at: <http://europa.eu/scadplus/leg/en/lvb/l27001.htm> (accessed on 15 May 2007).

position and to ensure their energy security.

This thesis aims to show that the way of resolving EU's problems concerning energy supply is a common approach to energy policy, and that although there is great diversity in individual member states' energy situations there is already a political will among individual countries to adopt a common stance on energy supply policy. In order to confirm this statement, the paper first identifies the challenges for the EU in the context of the global energy situation, which represent the reasons for adopting a common external energy policy. Second, it follows the steps taken towards a common external energy policy and third, depicts the instruments of EU's external energy relations.

3. Outline of chapters

In **Chapter I** there is a description of the overall world energy situation and the challenges for the EU's energy supply security in this context, which represent the reasons for the development of an external energy policy. In the first part of the chapter I conclude that at world level, there are many threats to the uninterrupted energy supply for energy importing countries. Fossil fuels will dominate the global energy mix again in the 21st century, but with the depletion of reserves in the western world, the remaining oil and natural gas reserves will be highly concentrated in several regions in the world, characterised by political instability and doubtful reliability. Developing countries, with China and India holding the lead, mark unprecedented increase in their energy demand. They pursue strategies aiming at securing their energy supplies at state level taking into account their geopolitical interests and undermining the development of energy relations based on market forces and international institutions.

In the second part I determine which are the challenges for the EU in securing its energy supply. Energy security has several aspects: external, referring to the availability of imported products; internal, regarding the performance of national production, transmission and distribution systems; and demand side, referring to

energy efficiency in domestic consumption. For the purposes of my study, I focus mainly on the external dimension of energy security. One of the major challenges for the EU is to reduce its energy dependence. Internally, it makes efforts to increase its energy efficiency. Externally, the answer to energy dependence is diversification of sources, suppliers and routes. The EU must make sure that it does not rely on a single energy supplier for one of the main fuels in its energy mix. Moreover, it can no longer rely on market forces to secure its energy supplies, as major energy consuming countries pursue so-called “neo-mercantilist” strategies to assert geopolitical interests, thus rendering it necessary for the EU to take geopolitics into account, contrary to its hitherto prevailing strategy. In order to meet their competition, the EU should use actively its foreign policy to achieve security of supply.

The first part of **Chapter II** examines the different reasons, for which there is still no common approach to energy policy within the EU and the second part describes the different initiatives aiming at developing such a policy. The main difficulty for transferring competences to the Community in the energy domain is that energy policy is traditionally considered as directly linked to national security and sovereignty. Also, the member states have different approaches towards energy policy due to their different energy mixes, various level of dependence on imported sources, different diplomatic relations with major producing and consuming countries, even different level of liberalisation within the single energy market. Yet, they share the same challenges for their energy security, which they should face as a unity.

In the second part I describe the competences on EU level, through which the European Commission can influence member states' energy policy. Although there is no explicit chapter on energy in the Treaties, the Commission uses its powers related to the single market, competition policy, environmental policy, to shape the energy policies of member states. The obstacles for a common approach in the field of energy are more of a political nature than of a juridical one. Nevertheless, the EU has expressed its will for a common action in the energy field several times in the past, by

including an energy chapter in the Treaty establishing a Constitution for Europe, or by issuing the Green Paper on energy security in 2000, stating that energy policy has already assumed a community dimension. These steps were relatively futile, as member states were not yet ready to accept the necessity of facing the energy challenges of the 21st century. The most important step of the Union was made after the gas crisis of early 2006, when the need for a common external energy policy for Europe became obvious and the member states increasingly support a common policy in energy supply.

Chapter III points out diversification as the most important condition for enhancing EU's energy security and describes the EU's dialogues and partnerships with the most important energy suppliers, consumers and transit countries. The first part asserts that diversification of energy sources, suppliers and transport routes is the necessary condition for enhancing energy security, and that is why the action on community level is directed towards providing political and financial support and establishing effective relations with partner countries. The effective producer-consumer and consumer-consumer dialogue, as well as the dialogue with transit countries requires a mix of bilateral and multilateral instruments. Therefore, the EU is trying to develop bilateral dialogues with the most important producers, consumers and transit countries, and to use in the most effective way regional and international organisations.

Chapter 1

The energy situation in the world and the challenges for the EU

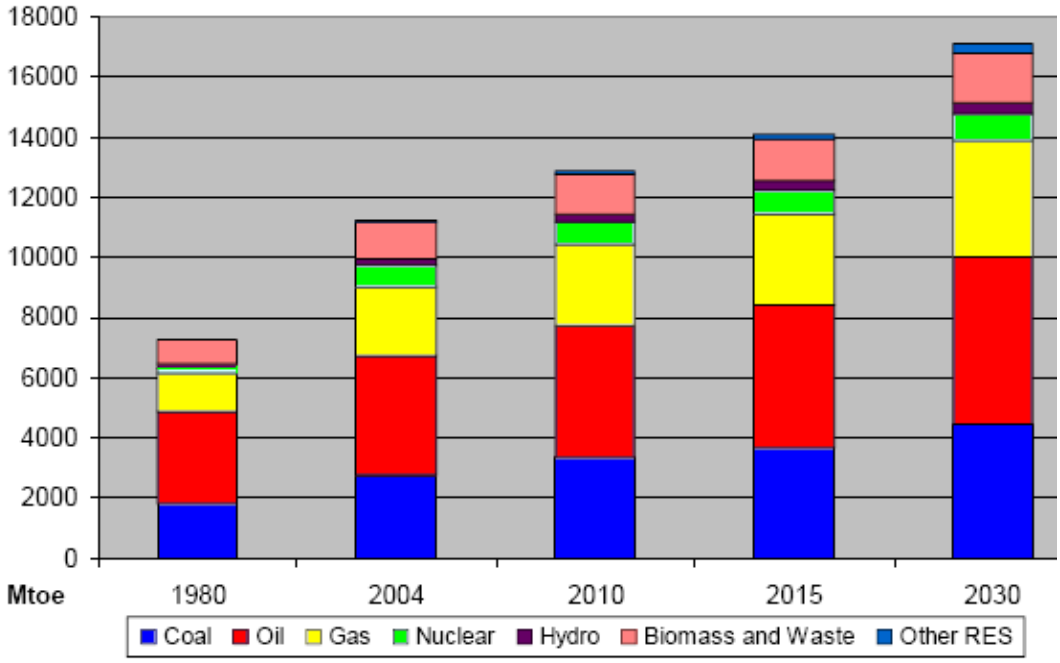
1. World overview and implications for the future

In recent years there have been many alarming trends concerning energy security, which have placed it again on the political agenda for all energy importing countries. With the rising number of the world population and constant economic growth, global demand for energy is surging. World primary energy consumption rose by 2.7 pct in 2005[3],and according to the IEA reference scenario 2005 is expected to increase by 52 percent between 2005 and 2030, reaching 16.3 billion tonnes of oil equivalent (btoe). Fossil fuels will account for the largest share of this increase – 81 percent.[4] The increasing demand logically entails the problem of rising oil and gas prices, already felt by governments, businesses and consumers around the world. It evokes environmental concerns as well.

World hydrocarbon reserves, especially oil reserves, are concentrated in several regions and countries (Annex 2), which brings forward for energy importing states the problem of import dependency. Moreover, the political situation in a large part of the producing countries is unstable, which poses threats to security of supply. Another challenge is that enormous investments will be needed to maintain energy supply at a level to be able to meet energy demand.

[3] "Quantifying energy", BP Statistical Review of World Energy June 2006, BP p.l.c., London, p. 2.
[4] IEA, World Energy Outlook 2005, cited in: Gnesotto, Nicole and Grevi, Giovanni, "The New Global Puzzle: What World for the EU in 2025?", Institute for Security Studies, Paris, 2006, p. 54.

Figure 1.1. World primary energy demand 1980-2030 (IEA Reference Scenario)



Source: World Energy Outlook 2006, OECD/IEA 2006.

a. Primary energy sources

Oil

Oil is the most important global energy source, accounting for 34.3 percent of the world total primary energy supply in 2004.[5] Global oil demand marked a 8.8 percent yearly increase between 2001 and 2005, with China's consumption surging by 46 percent. Between 2004 and 2030, world oil consumption is expected to increase by 40 percent to 115.4 million barrels a day (mb/d) from 82.1 mb/d.[6] The world oil reserves are highly concentrated in several regions in the world, mainly in the Middle

[5] International Energy Agency, "Key World Energy Statistics 2006", Paris, 2006, p. 6.
[6] IEA, World Energy Outlook 2005, cited in: Gnesotto, Nicole and Grevi, Giovanni, "The New Global Puzzle: What World for the EU in 2025?", Institute for Security Studies, Paris, 2006, p. 54.

East, which holds 61.9 percent of the world proved reserves,[7] while the bulk of the remaining oil reserves are held by Russia and the countries in the Caspian region. This concentration of reserves will reinforce their dominant position on the market and their ability to impose high prices. With the impending depletion of OECD oil reserves, oil importing countries will become more and more dependent on these regions that have a high risk of internal instability. The continued trend of rising demand, combined with political tensions in producing countries and supply disruptions caused by natural disasters raise the question if in the future consumer states will be able to ensure their security of supply.

The global reserves-to-production (R/P) ratio for oil is estimated at 40.6 years[8], but there are also problems related to the extraction of these reserves. The problem is not only the availability of the resource, but the resource mobilisation. It is possible that a discrepancy between demand and supply appears due to underinvestment in production and refinery capacity. Production capacity today hardly exceeds demand. Most of the oil producing countries, mainly in the Persian Gulf rely on revenues from the oil industry for a great part of their GDP. They tend to use this capital on generous social programmes, instead of investing in spare and new production capacity and ameliorating infrastructure, so there is no certainty that they could maintain the supply in case of sharp rise in demand.

The present situation of rising demand and supply constraints has led to higher oil prices (Annex 3). The average Brent dated oil price in 2005 stood at $54.52, a 40 percent increase from the 2004 average.[9] Rising prices can have a strong negative impact on economic growth and international competitive position of the economies of oil importing countries.

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7 "Quantifying energy", BP Statistical Review of World Energy June 2006, p. 6.

8 Ibid., p. 6. R/P ratio: if the reserves remaining at the end of any year are divided by the production in that year, the result is the length of time that those remaining reserves would last if production were to continue at that level.

9 Ibid, p. 3.

Natural gas

The share of natural gas in the world energy mix stood at 20.9 percent of the world total primary energy supply in 2004[10] and is increasing. According to the projections of the IEA the global consumption of natural gas will increase by 87 percent to 4,900 billion cubic metres (cm) in 2030, with liquefied natural gas (LNG) market growing even at a faster rate, by around 10 percent per year. The R/P ratio for natural gas stands at 65.1 years.[11]

In difference to the oil supply situation, the world natural gas reserves are not as highly concentrated, although a large part of them are situated in the same regions which are the main oil producers. Russia disposes of the largest single national natural gas reserves, accounting for 26.6 percent of world total[12], and is by far the largest exporter, but the Middle East, Africa and the Caspian region also hold significant reserves. Another specificity of natural gas market is related with the demand side. Natural gas is consumed only in countries equipped with a pipeline network reaching every consumer. That is why, although emerging countries like China and India will become gas importers, it will take more time for them to become significant players on the natural gas market than on the oil market. However, an ever larger portion of the gas trade is replaced by LNG trade.

Coal

Coal's large availability in terms of quantity and geographical distribution renders it an important energy source for the future. Coal reserves are distributed more evenly around the world and its R/P ratio is estimated at 155 years[13]. Demand is projected to increase to almost 7,300 million tonnes (Mt) in 2030 from 5,200 Mt in 2003[14], with

10 International Energy Agency, "Key World Energy Statistics 2006", p. 6.
11 "Quantifying energy", BP Statistical Review of World Energy June 2006, p. 22.
12 Ibid., p. 22.
13 Ibid., p. 32.
14 IEA, World Energy Outlook 2005, cited in: Gnesotto, Nicole and Grevi, Giovanni, "The New Global Puzzle: What World for the EU in 2025?", Institute for Security Studies, Paris, 2006, p. 55.

the consumption increase concentrated mainly in developing countries, like China and India, while in industrialised countries the coal consumption is expected to fall. The problem with coal is that although it is largely available it causes much more pollution than the other fossil fuels. That is why the research for new ways to use coal in a cleaner way are high on the agenda.

Nuclear power

Nuclear power accounted for 6.5 percent of the world total primary energy supply in 2004[15] and its share is expected to decline to 4.7 percent in 2030.[16] For a long time the nuclear option seemed unattractive due to low fossil fuel prices, compared to the large investments needed for building new nuclear power plants, as well as the negative public opinion in the aftermath of the Chernobyl accident. Recently, the increased environmental concerns and security of supply preoccupations made nuclear energy topical again.

An important issue regarding nuclear energy is the proliferation of nuclear technology, in particular technology related to enrichment and reprocessing plants. This can be considered as a threat to international security, as it could be a step towards the creation of a nuclear weapon.

Renewable energy sources

The share of renewables in world energy supply has increased in recent years, but it is still not significant. Fossil fuels will continue to dominate energy consumption in the first half of the 21 century. Renewables are expected to increase slightly their share of total world energy consumption from 8 percent in 2003 to 9 percent in 2030.[17] However, taking into account the impending depletion of hydrocarbon

[15] International Energy Agency, "Key World Energy Statistics 2006", p. 6.
[16] IEA, World Energy Outlook 2005, cited in: Gnesotto, Nicole and Grevi, Giovanni, "The New Global Puzzle: What World for the EU in 2025?", Institute for Security Studies, Paris, 2006, p. 55.
[17] Energy Information Administration, International Energy Outlook 2006, p. 10. Available at:

reserves, the pollution caused by them and the security of supply problems related to oil and natural gas imports, the promotion of renewable energy becomes more and more important. The European Union has taken the lead in the climate-change policy, by endorsing an ambitious plan to legally bind member states to have 20 percent of the EU overall energy consumption coming from renewables by 2020.[18]

b. Energy importing countries

In recent years, security of energy supply was jeopardized by geopolitical interests and natural disasters, leading to disruptions. That is why, on the demand side, the awareness of environmental problems and the aspiration for increased energy security may lead to changes in the consuming countries' energy policy. As regards energy security, consumer countries have to reduce the risk of disruptions and higher prices by strengthening their ability to handle a supply emergency and by developing long-term policies to promote diversification of supply as a means to reduce dependence. Referring to the environmental concerns, as 80 percent of global greenhouse gas (GHG) emissions are attributed to energy consumption, consumer governments are under continued pressure to reduce the effects of their domestic energy consumption.[19]

According to projections, more than two-thirds of the growth in world energy use will come from developing countries, with highest population and economic growth.[20] There are several emerging countries, like China and India, with ambitions for fast economic development and strong international presence, combined with population and economic growth, industrialisation and urbanisation. Their ambitions are particularly visible on the energy markets.

<http://www.eia.doe.gov/oiaf/archive/ieo06/pdf/world.pdf>

18 EU Observer, “EU sticks out neck in global climate change battle”, 09.03.2007. Available at: <http://euobserver.com/9/23665>.

19 Birol, Fatih, “World energy prospects to 2030”, The World Energy Book, Issue 1, Autumn 2005, Petroleum Economist Ltd., London.

20 Ibid., p. 2.

China and India are the countries which mark an unprecedented growth in energy demand, as they are both at a very energy-demanding level of economic development. China accounted for more than half of the global energy consumption growth in 2005. India was the main factor for the increase in Asian LNG consumption in the same period.[21] These countries face the challenge of meeting growing energy demand with limited indigenous resources. Therefore, import dependency, especially on oil is expected to increase significantly in the future. As a consequence, the appearance of new actors on the energy market, such as Chinese companies, aggravates the competition for energy resources. Growing demand will also surely have an impact on energy prices.[22]

China is the second energy consumer in the world after the USA, with 14.7 percent of the world total primary energy consumption in 2005[23], and its energy demand is expected to grow sharply over the next few decades. In the period between 2002 and 2030 its oil demand is projected to grow by 150 percent, gas demand by 336 percent and demand for coal by 83 percent.[24] But whereas coal demand can be satisfied by domestic production, oil and gas supply will rely mainly on imports. As until recently it has been dependent on imports mainly from the Middle East, a region where the USA are military present and control the transport routes[25], China is trying to diversify its suppliers. It is pursuing an aggressive all-directions policy in order to guarantee its energy supply, by investing in Iran, Sudan, the Caspian region, Australia. China is planning an oil pipeline connection with Russia as well and has made attempts to participate in the exploitation of oil sands in Canada. It has been present in Kazakhstan since 1997.[26] This active policy will increase competition for energy resources, posing threats for the positions of the USA, EU and Russia in the

21 "Quantifying energy", BP Statistical Review of World Energy June 2006, p. 4.
22 Gnesotto, Nicole and Grevi, Giovanni, "The New Global Puzzle: What World for the EU in 2025?", Institute for Security Studies, Paris, 2006, p. 66.
23 "Quantifying energy", BP Statistical Review of World Energy June 2006, p. 40.
24 Gnesotto, Nicole and Grevi, Giovanni, "The New Global Puzzle: What World for the EU in 2025?", 2006, p. 65.
25 Mueller, Friedemann, "Energy Security. Demands Imposed on German and European Foreign Policy by a Changed Configuration in the World Energy Market", SWP-Berlin, January 2007, pp. 19-20.
26 Ibid., p. 20.

Middle East, Central Asia and Africa.

The energy policy of China has impacts on its foreign policy as well. In order to secure its oil interests, China lends its diplomatic support to Sudan and provides weapons to it.[27] It has almost a monopoly position in oil exploration in Sudan, where it is installed with 4000 civilian security personnel to secure its production sites.[28] At the same time China supports Iran in the problem of its nuclear programme.[29] The geographical position of Iran is favourable for transport via pipeline, which will allow China to bypass the US-controlled sea routes.

India houses more than 17 percent of the world population, but at the same time has less than 0.8 percent of the world's proven oil and natural gas reserves. Coal is the only fossil fuel of which India has large reserves, but they are of low quality and its steel industry is nevertheless dependent on imports.[30] India's energy demand is projected to increase by 109 percent between 2006 and 2025.[31] For oil and gas, the country will be dependent mainly on the Middle East and Nigeria. In order to mitigate the effects of energy dependency, India is deploying programmes for diversification of energy resources and suppliers and is developing the share of nuclear energy in power generation after having signed a civil nuclear cooperation deal with the USA, allowing civil nuclear commerce between the two countries.

Despite this high energy demand growth in emerging countries, in 2030 developed countries are still expected to consume more oil, natural gas and nuclear energy, giving way to developing countries only in the case of coal.

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27 Fondation pour la Recherche Stratégique, “Sécurité énergétique: vers de nouveaux rapports des forces?”, Actes de la journée d'études du 12 septembre 2005, pp. 41-42.

28 Mueller, Friedemann, “Energy Security. Demands Imposed on German and European Foreign Policy by a Changed Configuration in the World Energy Market”, 2007, p. 11.

29 Fondation pour la Recherche Stratégique, “Sécurité énergétique: vers de nouveaux rapports des forces?”, 2005, p. 42.

30 Mehta, J. K., “India: facing up to the future”, The World Energy Book, Issue 1, Autumn 2005, Petroleum Economist Ltd., London.

31 Gnesotto, Nicole and Grevi, Giovanni, “The New Global Puzzle: What World for the EU in 2025?”, 2006, p. 66.

Energy demand in the USA will increase more than in any other OECD-country, expected to grow by 36 percent from 2002 to 2025. USA will also need to increase its oil and gas imports, but it has the advantage of having significant oil and gas reserves on its own territory, and besides, it has diversified its energy sources with regard to supplier, and receives its oil supplies from Latin America, the Middle East, Africa and Canada.[32] Although the USA obtains most of its energy imports by non-OPEC countries, mainly situated in the western hemisphere, it regards the Middle East as a vital region for its oil needs, so they will try to secure their position in the region, where they are facing the competition for energy resources from emerging countries, China in particular.

Japan's share in world primary energy consumption for 2005 amounts to 5 percent[33], for which it relies mainly on imports, as it has very few resources. The rate of dependence on imports for the total energy supply stands at 96 percent. It is second only to the USA in terms of imported oil, for which it relies heavily on the Middle East.[34] Japan also seeks to achieve supply diversification, but usually meets Chinese competition in that undertaking, as for example the rivalry between the two countries regarding a possible pipeline connection with Russia.

Energy demand in the EU will grow by about 15 percent by 2030. Around half of the EU's oil needs will be satisfied by OPEC, and in particular Saudi Arabia, Iran, Iraq, and Algeria, while the remainder will come from Russia and Norway. Gas will be imported mainly from Russia, followed by Norway and Algeria. However, the growing use of LNG could help to diversify gas imports, with countries such as Qatar and Egypt as suppliers.[35]

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[32] Ibid., p. 65.
[33] "Quantifying energy", BP Statistical Review of World Energy June 2006, p. 40.
[34] Institute of Defence and Strategic Studies, Nanyang Technological University, "Energy and Security: The Geopolitics of Energy in the Asia-Pacific", Singapore, October 2006, p. 41.
[35] Gnesotto, Nicole and Grevi, Giovanni, "The New Global Puzzle: What World for the EU in 2025?", 2006, p. 64.

c. Energy exporting countries

One of the most important energy exporting regions is the Middle East and North Africa (MENA). Its significance is expected even to grow in the coming decades. But with the increasing importance of this region as an oil and a natural gas exporter, it will become an arena of fierce competition between energy consuming countries.

The oil and gas resources of MENA will be critical to meeting the growing world energy consumption. The largest share of the world's reserves are in this region, and they are relatively under-exploited. By 2030, oil production from the MENA region is projected to increase by 74 percent to 50.5 mb/d, while in the same period gas production will triple to 900 billion cubic meters (bcm).[36] The Middle East countries export these resources mainly to Japan and other Asia Pacific countries, followed by Europe and USA.[37] However, there is uncertainty regarding the level of investment in upstream industry in the region, and taking into account expanding domestic energy consumption, how much of the energy supply will be available for export.[38]

Overall global investments needed for the energy sector between 2004 and, 2030 are estimated at $17 trillion (in 2004 dollars), and around half of them in non-OECD countries. One of the biggest challenges in front of the energy industry is financing these investments in developing countries.[39]

Moreover, some of the most important energy resources producers and exporters are not friendly disposed to foreign investments. According to the IEA, around 57 percent of world oil reserves are protected from foreign investments in benefit of the national companies. They have exclusive status in Saudi Arabia, Kuwait and Mexico,

[36] Ibid., p. 117.
[37] "Quantifying energy", BP Statistical Review of World Energy June 2006, pp. 20, 30.
[38] Birol, Fatih, "World energy prospects to 2030", 2005.
[39] Ibid., p. 2.

which together hold 35 percent of the proven world oil reserves.[40] Russia, which was on the way to a liberalised energy market gives more and more signs for increasing government interference and hostility to foreign investors. Saudi Arabia, the biggest oil producer and exporter does not allow any foreign investment in oil exploration and production, Iran poses enormous administrative obstacles to foreign investors, while Iraq repels them with its uncertain security situation.[41]

Lately, there were disturbing trends in Latin America as well, directed towards increase of the government's role in the energy sector. Manifest examples of this "petro-nationalism" were Venezuela and Bolivia, as well as to a certain extent Argentina and Mexico.[42] In 2001 Venezuela adopted a new legislation for the oil industry, limiting private-sector participation in any project to 49 percent of the total capital, which induced several western companies, operating there to desist from their activities. The president of Bolivia, Evo Morales, went even further by issuing in May 2006 a decree on the nationalisation of the oil industry and sending armed troops to occupy 56 hydrocarbon fields, refineries and pipelines.[43] These petro-nationalistic trends are related to foreign policy as well. Venezuela, by relying on its enormous oil revenues tries to replace the USA as the dominant power in Latin America.

Russia holds the largest world gas reserves of 47.82 trillion cubic metres (tcm)[44] and is the largest gas exporter, while at the same time is the second world oil producer and exporter after Saudi Arabia.[45] By 2025, Russian oil is expected to be exported mainly towards Northeast Asia, while gas exports will be diversified only to a limited

40 Gnesotto, Nicole and Grevi, Giovanni, "The New Global Puzzle: What World for the EU in 2025?", 2006, p. 59.
41 Mueller, Friedemann, "Global Energy Resource Supply: Strategic Trends", SWP-Berlin, April 2006, p. 6.
42 Guzman, Rodolfo, "A resurgence of petro-nationalism", The World Energy Book, Issue 2, August 2006, Petroleum Economist Ltd., London.
43 Ibid.
44 "Quantifying energy", BP Statistical Review of World Energy June 2006, p. 22.
45 International Energy Agency, "Key World Energy Statistics 2006", p. 11.

extent from Europe to Asia.[46] However, Russia will be for long the main gas supplier for Europe, and at the same time Europe will be the main consumer of Russian hydrocarbons. Even if Europe diversifies part of its natural gas consumption by supplies from the Middle East and the Caspian region, and Russia diversifies its export in favour of East Asia and the USA, by means of LNG, Russia and Europe will remain respectively the largest exporter and the largest importer of natural gas for the next few decades.[47] With a view to the European dependency Russia already disposes of a leverage which it can use as a political weapon.

Russia also considers its large hydrocarbon resources as an instrument of foreign policy. Countries members of the Commonwealth of Independent States (CIS), like Ukraine, Belarus and Georgia received, at least until recently, natural gas from Russia at subsidised prices, much lower than that determined for the countries from western Europe. However, they paid for this preferential treatment with political dependence.

The Caspian region is related to much expectations, as it holds large quantity of under-exploited reserves. Therefore, this region has become object of serious rivalry on the part of energy importing countries. The USA aim at securing a dominant role in the region, while at the same time diminishing the major role of Russia and impeding Iran of obtaining influence. That is why the USA have been a great supporter of the Baku-Tbilisi-Ceyhan (BTC) and the Trans-Caspian Gas Pipeline (TCGP), as they both bypass Russia and Iran.[48] However, Russia remains the most influential power in the Caspian region, and it opposes to every export pipeline that would not pass through its territory. China is also present in the Caspian region, in Kazakhstan in particular, as in 1997 the two countries signed several agreements for

[46] Gnesotto, Nicole and Grevi, Giovanni, "The New Global Puzzle: What World for the EU in 2025?", p. 62.

[47] Mueller, Friedemann, "Energy Security. Demands Imposed on German and European Foreign Policy by a Changed Configuration in the World Energy Market", 2007, pp. 14-17.

[48] Clingendael International Energy Programme, Netherlands Institute of International Relations Clingendael, "Study on Energy Supply Security and Geopolitics", Report prepared for DG TREN, The Hague, January 2004, pp. 161-162.

the exploitation of the Kazakh's oil reserves.[49] The resources available in the Caspian region could be a means for diversifying the energy supply for the EU as well, although they are not enough to substitute imports from the Middle East. However, there are some uncertainties regarding hydrocarbon exploitation in the region, caused, for example, by the unsolved legal status of the Caspian Sea. More general, the weak political situation and social and economic problems could bring about social tensions, terrorism and organised crime, which could also have impact on security of supply.

Great expectations are connected with countries of sub-Saharan Africa as well, especially Angola. China already imports 28 percent of its oil from Africa, while for the USA this number is 18 percent.[50] Production is expected to rise also in Nigeria, Equatorial Guinea and Chad.[51] However, although these countries are friendly to foreign investments, supply security is threatened by the instable situation in the region, for example civil unrest in Angola or the ongoing conflict in the Niger delta.

Regarding all these geopolitical issues, there are many threats to importing countries' security of supply, and for the EU in particular. In the second part I will describe the energy situation in the EU and what challenges it is facing with respect to its energy supply.

2. Challenges to the energy security of the EU

a. EU's energy mix

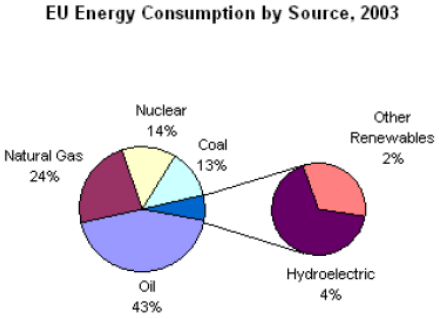
In 2004 oil and natural gas accounted respectively for 37.2 percent and 23.9 percent of EU's gross inland consumption, followed by solid fuels and nuclear power, which accounted for 17.9 percent and 14.6 percent respectively. The share of renewables

[49] Ibid., pp. 164-166.
[50] Gnesotto, Nicole and Grevi, Giovanni, "The New Global Puzzle: What World for the EU in 2025?", p. 63.
[51] Clingendael International Energy Programme, Netherlands Institute of International Relations Clingendael, "Study on Energy Supply Security and Geopolitics", 2004, pp. 202-203.

stood at 6.3 percent. Import dependency for the same period amounted to 50.5 percent, of which 80.2 percent for oil, 54.5 for gas and 38.2 percent for solid fuels.[52]

The dominant fuel in the EU's energy mix is oil. Over the past decade the gas was the energy source that marked the largest increase of its share in the overall EU's energy consumption, mainly at the expense of coal. Particularly in the natural gas sphere, Europe is in favourable position, as it is in proximity (4000 km at the most) to 80 percent of the world's reserves, which makes possible transportation through pipelines. In the future, it is possible also to expand the gas supply through LNG trade, possibly from Qatar.[53] Although the EU has large reserves of coal, the share of coal diminished significantly. The main reason were environmental concerns, which were materialised in the EU's directive 2001/80/EC, aiming at limiting the pollution produced from large coal-fired power plants, as well as the commitment of the EU in the framework of the 1997 Kyoto Protocol, obliging the Union to reduce its gas emissions by 8 percent from their 1990 levels by 2012. A reason for the revival of coal could be the development and the adoption on a broad commercial basis of the "clean coal" technology, allowing to capture large part of the CO_2 by-products of coal. Renewables account for only 6 percent of EU's energy consumption, but the Union has committed itself to achieving a level of 20 percent renewable energy from the total energy consumption until 2020.

Figure 1.2 EU Energy Consumption by Source, 2003



Source: Energy Information Administration

[52] European Union, "Energy & Transport in Figures 2006. Part 2: Energy", European Commission, Directorate-General for Energy and Transport, Brussels, 2006, p. 13.
[53] Kreft, Heinrich, "Geopolitics of Energy: A German and European View", Berlin, 2006, p. 4.

Nuclear power accounts for around 14 percent of EU's total energy consumption, but its use provokes heated debates in Europe. Some of the member states are opposed to using nuclear power, because although considered as a clean energy, it is still dangerous and creates problems regarding the disposal of the nuclear waste. France is on the other extreme, producing more than 70 percent of its electricity in nuclear plants. Still others, like Germany and Spain have decided to phase out their nuclear facilities, but now are reconsidering their position.[54] In the long term, an alternative of the nuclear power can be found by the means of the International Thermonuclear Experimental Reactor (ITER), a project in which the EU is involved along with several other countries. The ITER project is an attempt to produce electrical power by nuclear fusion, which does not generate dangerous waste. However, the first results of this programme will not become a reality until several decades.

At the same time, the EU has only limited and diminishing oil and gas reserves, concentrated mainly in the UK, Denmark and the Netherlands. That is why now the Union imports around 60 percent of its oil consumption and 40 percent of its natural gas consumption.

All these figures show that the EU uses primary fossil fuels to meet its energy needs and is heavily dependent on imports, with the tendency of increasing its import dependence in the long term. According to the projections of the European Commission gross inland energy consumption in the EU-27 will increase with an annual growth rate of 0.5 percent in the period between 2000 and 2030, which is a rather slow increase. However, there will be a steep decline in crude oil and natural gas production due to the exhaustion of currently exploited reserves (-73 percent and -59 percent respectively from 2000 levels until 2030 for EU-25). The production of solid fuels will decline as well by 41 percent for the same period. Only the renewable energy is expected to mark an increase during the period at an annual growth rate of 3 percent. As the share of oil and natural gas in the EU's energy mix will remain

[54] Energy Information Administration, “Country Analysis Briefs: European Union”, January 2006.

dominant, this will lead to import dependence rise to 64.2 percent in 2030 for EU-27.[55] The following table allows to follow the evolution of the import dependence increase in the Union until 2030:

Table 1.1 Import dependency in EU-25, EU-27 and Europe-30[56] 1990-2030

Table 2-4: Import dependency in EU-27 and Europe-30

	%				
	1990	2000	2010	2020	2030
EU-25	44.7	47.2	55.0	63.5	64.9
EU-27	44.6	46.7	54.4	62.9	64.2
Europe-30	38.9	36.4	44.4	52.4	56.3

Source: PRIMES.

Source: European Commission

Moreover, the EU relies for its energy imports only on several countries and regions. Oil imports were dominated by the Former USSR region, Norway and Saudi Arabia, while the bulk of gas imports originated from Russia, Norway and Algeria:

Table 1.2 EU-25 Crude Oil Imports for 2006

Crude Oil Imports
EU-25 (in Mio tonnes)

Origin	2000	2001	2002	2003	2004	2005	Share 2005(%)
Former USSR	118.0	134.6	156.2	174.3	196.1	199.6	36.4
Norway	114.9	107.2	101.8	104.6	106.9	90.1	16.4
Saudi Arabia	65.1	57.5	53.1	61.5	64.5	61.0	11.1
Libya	45.5	43.8	39.1	45.9	50.0	50.5	9.2
Iran	35.5	31.4	25.9	34.7	35.9	34.5	6.3
Middle East not spec.	13.1	18.7	20.2	12.3	9.1	9.0	1.6
Other origin	127.4	122.4	111.2	94.8	86.4	103.9	18.9
Total Imports	**519.5**	**515.5**	**507.6**	**528.1**	**548.8**	**548.5**	**100.0**
in Million barrels	3792	3763	3706	3855	4007	4004	

Source: European Commission

[55] European Commission, Directorate-General for Energy and Transport, "European Energy and Transport, Trends to 2030 – update 2005", European Communities 2006, p. 23-24, 47.

[56] Europe-30 includes EU plus Turkey, Norway and Switzerland.

Table 1.3 EU-25 Natural Gas Imports for 2006

Gas Imports
EU-25 (in Mio cubic metres)

Origin	2000	2001	2002	2003	2004	2005	Share 2005(%)
Russia	107213	103853	101762	108515	108655	106839	36.7
Norway	48715	52565	64342	67280	68523	71285	24.5
Algeria	54644	48363	52551	53126	50395	55620	19.1
non spec. origin	6808	8575	13604	17914	22609	29580	10.1
Nigeria	4283	5369	5507	7884	10117	10741	3.7
Qatar	293	646	2070	1893	3770	4606	1.6
Other origins	2906	3206	3171	2681	6640	12773	4.4
Total Imports	**224862**	**222577**	**243007**	**259293**	**270709**	**291444**	**100.0**

Source: European Commission

b. Definition of energy security

After presenting the overall situation in the energy field in the world and in the EU, I will try to determine what are the challenges for the EU's energy security in this context. Before specifying them it is necessary to give a definition of the term energy security. According to the definition of the International Energy Agency (IEA), energy security is defined as the availability of a regular supply of energy at an affordable price.[57] The EU adds to this definition the respect for environmental concerns and the perspective for sustainable development.[58] However, the term energy security has different meanings for energy importing and energy exporting countries, as the latter emphasize on the "security of demand", sufficient access to markets and consumers, for the resources they are exporting, which in most cases constitute the bulk of their government revenues.[59] Daniel Yergin describes the different states' aims regarding energy security in the following way:

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57 International Energy Agency, "Towards a sustainable energy future", Paris, 2001, p. 76.

58 Commission of the European Communities, Green Paper "Towards a European strategy for the security of energy supply", Brussels, 29.11.2000, p. 2.

59 Yergin, Daniel, "Ensuring Energy Security". In: Foreign Affairs, Vol. 85, No. 2, March/April 2006, p. 71.

> "For Russia, the aim is to reassert state control over "strategic resources" and gain primacy over the main pipelines and market channels through which it ships its hydrocarbons to international markets. The concern for developing countries is how changes in energy prices affect their balance of payments. For China and India, energy security now lies in their ability to rapidly adjust to their new dependence on global markets, which represents a major shift away from their former commitments to self-sufficiency. For Japan, it means offsetting its stark scarcity of domestic resources through diversification, trade and investment. In Europe, the major debate centers on how to manage dependence on imported natural gas – and in most countries, aside from France and Finland, whether to build new nuclear power plants and perhaps to return to (clean) coal. And the United States must face the uncomfortable fact that its goal of "energy independence" ... is increasingly at odds with reality."[60]

Security of energy supply has several important elements. It encompasses:

1. a reliable supply of energy – it implies diversification of primary energy sources and suppliers;
2. a reliable transportation of supply. Energy networks should be physically available, well maintained, expanded as required, and should offer as many route options as possible;
3. a reliable distribution and delivery of supply to the final customer;
4. a reasonable price over a continuous period.[61]

In the short term security of supply can be threatened by events with disruptive impact, like accident, sabotage, strike or other social demonstration, unusual climatic event, military or police intervention or rise in price. In the medium and long term threats for security of supply are related to the availability of sufficient

[60] Ibid., p. 71.
[61] Chevalier, Jean-Marie, "Security of Energy Supply for the European Union", September 2005, p. 2.

energy, which can be impacted by factors like lack of available resources or underinvestment in productive capacity, transmission and storage. Thus, the concept of security of supply involves technology, politics, economics, investments planning and weather conditions.[62] Energy security has also an important military dimension, as military forces are heavily dependent on oil products for their activities.

Energy security can be considered in three different ways:

- external security (or energy supply security), which means ensuring that the imported energy products meet the needs of the consumers in time and quantity;
- internal security, which means ensuring that the national production, transmission and distribution system are able to provide final customers with the energy they need;
- energy consumption has a significant impact on energy security by means of its volume and quality.[63]

Taking into account the scope of my study, later on in my study I will concentrate exclusively on the external aspect of energy security.

For long there dominated the opinion that energy security can be guaranteed only by functioning markets and diversification of supply. However, states also have a role in ensuring energy security. In many countries oil and gas supplies and transport infrastructure are in the hands of state-owned companies. That is why EU member states must undertake negotiations on diplomatic level with suppliers and transit countries. Another important role of governments is that they have more possibilities to help with long-term investments.

In conclusion, there is no state or region that can achieve energy security alone. It necessarily involves the interdependence between energy importing and exporting countries, and therefore there is a link between energy security and a common

62 Ibid., September 2005, p. 2.
63 Laponche, Bernard; Marignac, Yves and Stephane, Hélène, "La sécurité énergétique", Etude pour le Commissariat Général du Plan, March 2001, p. 4.

external energy policy.

c. Challenges to EU's energy security

Taking into account the fore-mentioned definition of energy security, the threats towards EU's energy security can be events that would drive up the price of energy or would cause disruptions in supply.

A major challenge for the EU is reducing its energy dependence. One way of measuring the energy dependence of an economy is the energy intensity, which is the amount of energy necessary to produce a unit of GDP. In this respect, the situation of the EU is satisfactory (Annex 1), as in EU-25 energy intensities vary between 0.1 and 0.32 toe per 1000 euro of GDP. Energy intensity was reduced by more than 35 percent over the last 30 years, which was induced by improvement of energy efficiency and structural change of production.[64]

Internal challenge for the EU are going to be the encouragement of energy efficiency as well as creating market conditions favourable for increasing the share of renewable energy and clean coal. Energy efficiency is a priority for the EU, as reducing demand growth is an answer to growing environmental concerns, high fuel prices and security of supply. Mitigating the demand growth and encouraging the use of energy which can be produced by indigenous resources can be a means of taking hold of import dependence.

Another internal factor for energy security is the completion of the internal energy market. The EU considers a fully open and competitive energy market as a priority of its energy policy. The Commission acted on this field by issuing two Directives in 1996 and 1998 for the liberalisation of the electricity and gas markets, updated in 2003. One of the objectives of the liberalised market is to ensure energy security. The idea is to guarantee energy delivery for European citizens through mechanisms as

[64] Ibid., p. 39.

pipelines and electricity grid interconnections and energy storage to be used in case of emergency. The process of liberalisation is expected as well to bring competition, liquidity, to encourage fuel substitution and thus to enhance security of supply.[65] The EU has to develop its abilities to respond to energy crises as well.

Among the challenges which the EU is facing the environmental concerns take a significant place, as energy security and environment protection are inextricably linked. With the rising global consumption of fossil fuels, efforts to reduce CO_2 emissions are necessary.

Another aspect of energy dependence is the import dependence, reflecting the share of imported energy over total primary energy consumption. An external factor influencing the EU's energy security is the import dependence by regions and countries marked by geopolitical uncertainties, as well as the reliance on long pipelines passing through politically unstable transit countries. As indicated earlier, the EU obtains its energy supply mainly from Russia and the Middle East. But the Middle East is politically unstable, torn by war and terrorism, and terrorist attack against energy infrastructure is a real threat to uninterrupted energy supply. The issue of the nuclear programme of Iran might also have an impact on energy security, as the country has declared that it could stop its oil exports for western countries if it is forced to relinquish its activities regarding uranium enrichment.[66] And Russia has shown repeatedly that it would not hesitate to use the threat of cut in energy supplies as a political leverage.

The gas conflict between Russia and Ukraine in late 2005 had a sobering impact on the EU awareness of its energy dependence. At the end of 2005 Russia declared it would start applying “market rules” in its gas deals with Ukraine, which meant that it would lose its highly subsidised price it previously enjoyed and will have be charged prices similar to those western countries pay. Ukraine refused to pay the new

[65] Laponche, Bernard; Marignac, Yves and Stephane, Hélène, “La sécurité énergétique”, 2001, p. 37.
[66] Gallis, Paul, “NATO and Energy Security”, CRS Report for the Congress, Washington, March 2006.

significantly higher price and accused Russia of trying to exert a political pressure after the so-called “orange revolution” which brought to power a government unfavourable for Moscow. After this Russia did not hesitate to interrupt gas supplies for Ukraine, which had implications also for EU's natural gas supply. Although this dispute did not involve Europe directly, when Gazprom, Russia's state-owned gas utility, interrupted gas supplies to Ukraine, the gas supply to Europe, which is transported through the same pipeline was also disrupted. Several EU member states, including Austria, Italy, Poland, Slovakia and Germany reported drops in their own pipeline pressure by 30 percent.[67] A similar dispute broke out between Russia and Belarus in the first days of 2007, when Russian pipeline operator Transneft cut off oil supplies transiting via the Druzhba pipeline, after claims that Belarus was illegally siphoning off oil, and thus affected supplies to Germany and Poland. Although the oil crisis was not as grave as the gas crisis, because EU countries hold strategic oil reserves, it raised again the question of the reliability of Russia as an energy supplier.

Therefore, one of the most important priorities for the EU in the following years will be to avoid becoming totally dependent on a single or several suppliers by diversifying its suppliers and the transit routes for this supply. Although Europe is geographically relatively close to the main world energy suppliers, it faces the problem of their political instability or lack of reliability. There is a problem also regarding future ability of supply to meet demand, which lies in the question of insufficient investments in new exploration or production in regions like Russia and the Middle East. In response to this the EU could undertake actions as building pipelines with more secure energy producers, like countries from the Caspian region or Central Asia, or develop more facilities for importing LNG from distant suppliers.

Another external challenge in front of the EU is that, taking into account the surge in energy demand in developing countries, China and India in particular, it will increasingly meet competition for obtaining access to energy resources, while

[67] Morelli, Vince L., “The European Union's Energy Security Challenges”, CRS Report for Congress, Washington, September 2006, p. 4.

countries with abundant oil and gas reserves try to tighten the control over their domestic reserves. For example, after the profound differences of view between the USA and the EU revealed regarding the invasion of Iraq in 2003, there appeared even opinions fearing a deterioration of transatlantic relations, which could develop into competition for energy resources, making the cooperation in the framework of organisations like the OECD and IEA difficult.[68]

As mentioned earlier, the surge in global energy demand had brought about also a constant rise in energy prices, which can have a strong negative impact on economic growth. According to the IMF, higher oil prices in 2004-2005 (from an average $40 in 2004 to $50 in March 2005) could reduce the world economic growth by 0.7 to 0.8 percent in 2005-2006.[69] The rise in oil prices influences also natural gas markets, as the price of gas is connected to crude oil and oil products through contractual formula.

With regard to the fact that hydrocarbon reserves are concentrated in several regions, which are considered as not completely secure from political point of view, the question which is asked with a rising anxiety among energy importing countries is whether there will be a global liberalised market of energy, or the strategic interests of sovereign countries will prevail and determine the market rules. In recent years, there have been signs that the trend towards globalisation of energy markets is reversing and there is a growing re-politicisation of energy flows between exporting and importing countries.[70] Such signs are the renationalisation of the energy industry in Russia, China's all-directions energy strategy, the difficult progress of the energy market liberalisation in Europe, the incomplete process of ratification of the Kyoto Protocol.

This preference for a national interest approach, rather than the development of a

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[68] Clingendael International Energy Programme, Netherlands Institute of International Relations Clingendael, “Study on Energy Supply Security and Geopolitics”, 2004, p. 207.

[69] CERA World Oil Watch: Do High Prices Matter? $1.6 Trillion Say Yes, 2005, Cited in: Chevalier, Jean-Marie, “Security of Energy Supply for the European Union”, September 2005.

[70] Kreft, Heinrich, “Geopolitics of Energy: A German and European View”, 2006, pp. 2-3.

global internationalised energy market will have impact on EU's energy policy.[71] Instead of focusing on creating good market conditions and developing public services, the EU will have to use actively foreign and security policy to achieve security of supply.

3. Conclusion

In this chapter I aimed to describe the overall world energy situation and what are the challenges for the EU and its energy supply security in this context. Taking into account that the EU will remain a "hostage of fossil fuels" for the years to come and the depletion of its own reserves, it will be more and more dependent on energy imports from regions characterised by political instability and doubtful reliability. On the demand side, it faces the competition by developing countries with unprecedented increase in energy demand. These countries pursue aggressive strategies for ensuring their energy supply, creating trends of national geopolitical interests prevailing over international institutions and markets, thus rendering it necessary for the EU to take geopolitics into account, contrary to its hitherto prevailing trend to leave energy supply security to market forces. That is why energy is likely to become part of EU external trade and foreign relations, as well as security policy. However, until now there are no competences in the energy field on Community level. In the next chapter I will depict the steps that EU has taken towards creating a common external energy policy.

[71] Energy Policy, "Energy Supply Security and Geopolitics: A European Perspective", vol. 34, Issue 5, March 2006.

Chapter 2

Towards a common external energy policy

1. European energy policy – diversified in unity

Although the domain of the ECSC and Euratom Treaties, on the basis of which the EU was created was energy, member states have not ceded some of their competences in the energy field to the Community yet.

There are a number of reasons for the reluctance of EU member states to maintain their national competence over energy matters and that there are still no competences on a community level in the field of energy policy. Member states repeatedly were reluctant to include an energy chapter in the Treaty on the European Community, as energy policy has been always considered an issue related to national security and therefore states were unwilling to lose parts of their sovereignty in this field. Although the member states of the EU pursue a number of shared goals on international level, as for example the Kyoto Protocol negotiations or negotiations within the WTO, foreign and security policy are fields in which the objectives and policies of individual countries highly differ. That is why sometimes EU member states pursue their strategic interests and give preference to bilateral relations over multilateral ones.

A common approach is really difficult to achieve for several reasons. First, the 27 member states of the EU have to somehow coordinate 27 sets of policy objectives, comprising energy policy, foreign policy, economic policy, etc. After the last enlargement the harmonisation of policies became even more difficult, as it added more countries with different political and social conditions, different level of economic development and growth, functioning of institutions.

Another factor hampering the common approach in the energy field is that there is contrast in the diplomatic relations of certain member states with major energy suppliers. A telling example are the contradictory relations to Russia or to the USA. Some of the new member states, like Poland, for example, are more Atlantic-oriented and want to distance themselves from Russia, while others, like Germany, especially under Chancellor Schroeder have luke-warm relations with the USA and try to keep good relationship with Russia. Poland and the Baltic states see as essential to their energy security to reduce their dependence on Russia through diversification and through a tougher collective stance towards it. Germany and France, for their part, are not willing to isolate Russia and want develop a long-term energy relationship with it.[72] These different positions sometimes result in internal clashes for the EU. Hungary's oil and gas company MOL entered into agreement with Gazprom to build an extension to Gazprom's Blue Stream gas pipeline across the black sea through the Balkans into Hungary, a project which is in direct competition with EU-endorsed NABUCCO, one of the main projects aiming at diversification of supplies.[73] When Germany and Russia signed the agreement for the construction of a direct gas pipeline connection running under the Baltic Sea (Nord Stream) in 2005, Germany argued that the pipeline was in its best interest (Annex 4). Poland and Lithuania, which were bypassed by the new pipeline saw in this a threat to their energy security. They viewed it as a special agreement between Russia and Germany for energy supplies to the latter that other states might not enjoy and therefore expressed their resentment with the fact that Germany did not make attempt to coordinate a pipeline strategy on EU level prior to signing the agreement. The Eastern European countries practically lost their leverage as a transit country, a status on which they relied while negotiating about prices and for insurance against vulnerabilities in the relations with Russia. It was in fact a weakening of their position.[74] Moreover, from a Polish point of view, the realisation of this project will detach Polish and Western European security of supply, thus undermining European solidarity and the prospects for the

[72] International Herald Tribune, “EU unity on power is elusive”, March 23, 2006. Available at: <http://www.iht.com/articles/2006/03/22/business/energy.php>.

[73] Morelli, Vince L., “The European Union's Energy Security Challenges”, 2006, p. 12.

[74] Westphal, Kirsten, “Energy Policy between Multilateral Governance and Geopolitics: Whither Europe?”, Internationale Politik und Gesellschaft, Bonn, Germany, 4/2006, p. 57.

emergence of common external energy policy.[75]

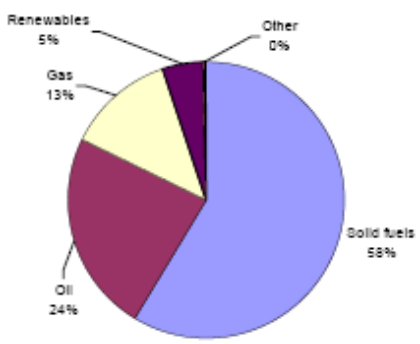
There are some opinions according to which Germany's longstanding policy to develop a working relationship with Russia may weaken European efforts to ensure secure and reliable energy supplies from Russia and elsewhere, as it is possible that if Germany grows increasingly reliant on Russian energy supplies it could move away politically from its EU partners. This German decision also contributed to launching the debate within the Union over Europe's need for a more coordinated external energy policy.

This practice of individual member states taking energy-related decisions without consulting or assessing their impact on other member states hampers the coordination of the energy policy and setting common objectives for the Union as a whole. Apart from the disagreements regarding Russia, there are different positions with regard to which other of the world's energy producing regions the EU should entrust its energy supplies.

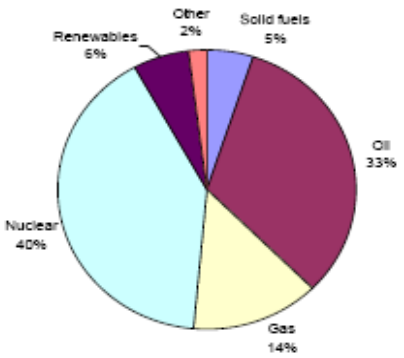
Furthermore, there are big differences in the energy mix of the member states, which sets the pattern for their respective energy policies. For example, Germany imports oil and gas, uses domestic coal and has decided to decrease the share of its nuclear power; France produces the large part of its electricity from nuclear power; while Poland, like others of the new member states still use predominantly coal. Another important issue is the endowment of member states with natural resources. Some of the EU countries are producer countries, like the UK and the Netherlands, while the majority of them are energy importing countries. Naturally, producer countries want to maintain their sovereignty over their energy resources.

[75] Wyciszkiewicz, Ernest, "One for All – All for One – The Polish Perspective on External European Energy Policy". In: Foreign Policy in Dialogue, Vol. 8, Issue 20, "Dealing With Dependency. The European Union's Quest for a Common Energy Foreign Policy", Trier, Germany, 11 January, 2007.

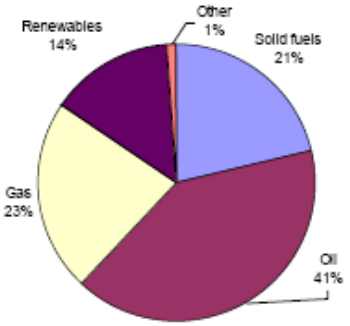
Figure 2.1 Total Primary Energy Supply (Energy Mix) of France, Poland, Denmark and Hungary



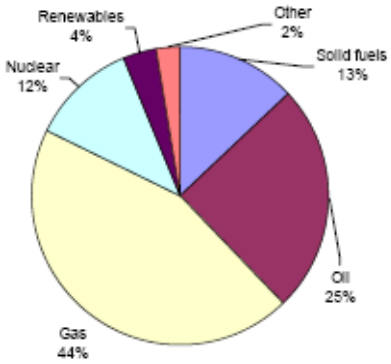
Poland



France



Denmark

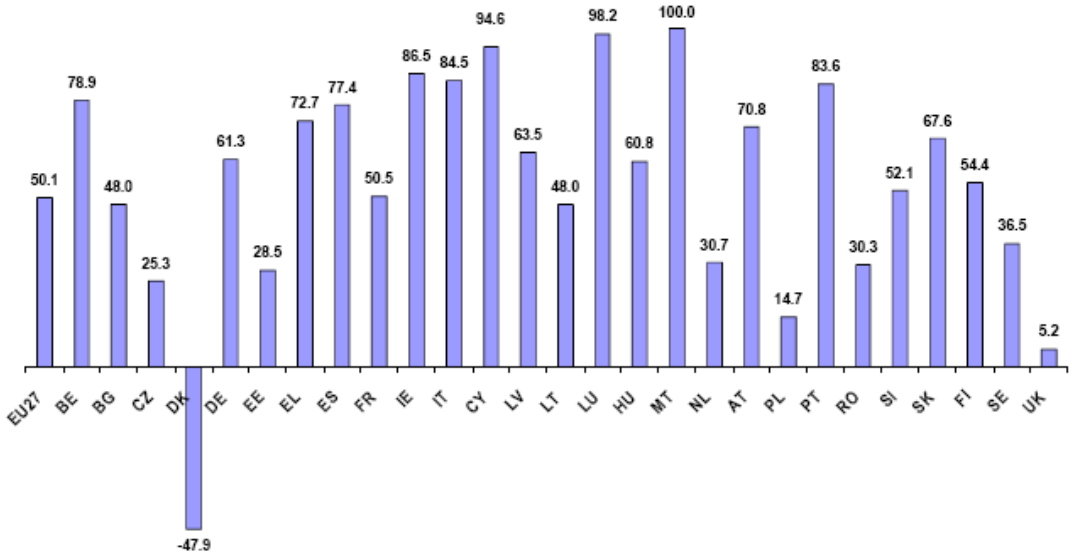


Hungary

Source: European Commission

Therefore, there is a great variation in the level of import dependence among countries, as well as in the energy producing countries on which they are dependent. The majority of new member states, which acceded the Union in 2004 and 2007 are largely dependent for their imports on Russia, for historical and geographical reasons. Countries like Bulgaria, Finland, Latvia, Lithuania, Romania, Slovakia receive the total of their natural gas imports and the bulk of their oil imports from Russia. Other countries, like France and Italy, for example, managed to achieve a sufficient level of diversification of suppliers.

Figure 2.2. EU-27 Import dependence 2004



Source: European Commission

Other main reason impeding the common approach in energy policy is the different structure of national energy sectors.[76] That is why, for all these reasons energy policy was not part of the single market project until the middle of the 1990s. This predetermines also the different national energy priorities of member states. Certain countries, like France and Finland, as indicated above, are interested in nuclear energy development, while others, like Germany and Poland are striving to protect their coal industry. Germany, together with Denmark and other member states decided to proceed with the development of renewable energy sources than laid out in the European directives.[77]

However, the national differences that impede the formulation of an energy policy on EU level are expected to disappear in the long term, due to market and regulatory

[76] Egenhofer, Christian, "European Energy Policy", CEPS, Brussels, 2001, pp. 40-41.
[77] Meritet, Sophie, "French Energy Policy in the European Context". In: Foreign Policy in Dialogue, Vol. 8, Issue 20, "Dealing With Dependency. The European Union's Quest for a Common Energy Foreign Policy", Trier, Germany, 11 January, 2007.

convergence.[78] Nevertheless, even the liberalisation of the energy market is not advancing at the same pace in each member state. Netherlands, for example, is undertaking a full ownership unbundling of network and distribution companies, while other countries only implement a legal or organisational separation.[79] In France the government made great efforts to keep its utility Suez from being acquired by Italian ENEL, which gave rise to the notion of "economic patriotism". Spain also preserved its Endesa from being taken over by German E.ON. So several countries make attempts to create national champions, able to compete on the European market, before fully implementing the gas and electricity directives, while other countries do not have such an industrial policy. The protectionist trends are the most tangible in France and Poland. The first fears that in an open market it could lose its "national champions", and the second, that its energy sector will end up under Russian control.[80]

Yet, all of the member states have something in common, and this is their reliance on fossil fuels and their import dependence for natural gas and oil. And as this dependence is threatening energy security, the EU member states have decided to advance towards a coordinated external energy policy, as it will facilitate the achieving of their goals. The European Commission stated that an approach based on 25 or more individual energy policy will simply not work, and that a more common approach to energy policy will be required. Once united, they will be stronger and will be able to exert more influence and to implement projects that are in their interest. Until now, the EU relied on well-functioning markets to ensure security of supply. But given that from now on it will be more and more dependent for its energy on Russia and the Middle East, where energy suppliers are state-owned companies, state-level discussions become more relevant. That is why, after recognizing the need for a common energy policy, the EU is aiming to speak with one voice on energy matters.

78 Egenhofer, Christian, "European Energy Policy", 2001.
79 Hoogeveen, Femke, 2005, pp. 73-76.
80 International Herald Tribune, "EU unity on power is elusive", March 23, 2006.

2. Towards a common external energy policy?

a. The competences of the EU in the energy sector

Having in mind all the fore-mentioned differences between member states' positions concerning the energy field, the reluctance of countries to cede competences to the Community and the fact that the EU uses intergovernmental approach to almost all issues in this domain, it is a matter of course that policies agreed on EU level in general concern broad objectives, for example the consensus that EU energy policy is a balance between competitiveness, sustainability and external relations. Decisions such as entering into long-term oil or gas purchases, developing or improving energy-related infrastructure, initiating or terminating the use of a particular energy fuel or developing alternative fuels and technologies continue to be taken by individual member states.[81]

Another problem impeding the common external energy policy is the fact that for long energy policy was considered an economic issue, at best with some environmental implications. Actors from the foreign policy area were not included in energy decision-making on grounds of the claim that security of supply can be best ensured by conforming to market rules, and by big energy corporations. Energy started to be considered as a foreign policy issue when it became obvious that energy markets do not function completely in a competitive way and that energy resources can be used by producer countries as a political weapon.[82] However, although most of the EU member states have always thought that energy policy is a national matter and should be within the competence of the individual states, considering the growing dependence of the EU on imports, and especially after recent Russian actions regarding the flow of energy to nations such as Ukraine and Belarus have

[81] Morelli, Vince L., "The European Union's Energy Security Challenges", 2006, p. 1.
[82] Mueller, Friedemann, "Energy Security. Demands Imposed on German and European Foreign Policy by a Changed Configuration in the World Energy Market", 2007, p. 7.

made European states to rethink energy as an element not only of the national security, but also of the EU's common foreign and security policy (CFSP). This was recognised by the President of the European Commission Jose Manuel Barroso, who said in February 2006: “Europe must put its external instruments at the service of more secure and competitive energy.”[83]

When it comes to common energy policy, an often mentioned problem is the lack of legal basis in the Treaties, despite the successive propositions for this made at Intergovernmental Conferences for amendment of the Treaties. The opposition was especially strong among the producer states, the UK and the Netherlands. In the EU the negative integration, consisting in elimination of economic, regulatory and administrative obstacles for the free movement is more developed than the positive integration, implying transfer of competences towards the community level. And the definition of a European energy policy necessitates a high level of positive integration.[84]

The Treaty Establishing the European Community fixes several objectives, which can serve as a basis for community action in the energy sector: “establishing a common market,... sustainable development,... sustainable and non-inflationary growth,... a high degree of competitiveness,... a high level of protection and improvement of the quality of the environment” (art. 2), actions on community level “if severe difficulties arise in the supply of certain products” (art. 100), prudent and rational utilisation of natural resources (art. 174).[85]

That is why the European Commission approaches the energy issues on the basis of its competences in the common market, competition policy, environmental policy, and, to a lesser extent, regional and research policy and Trans-European Networks

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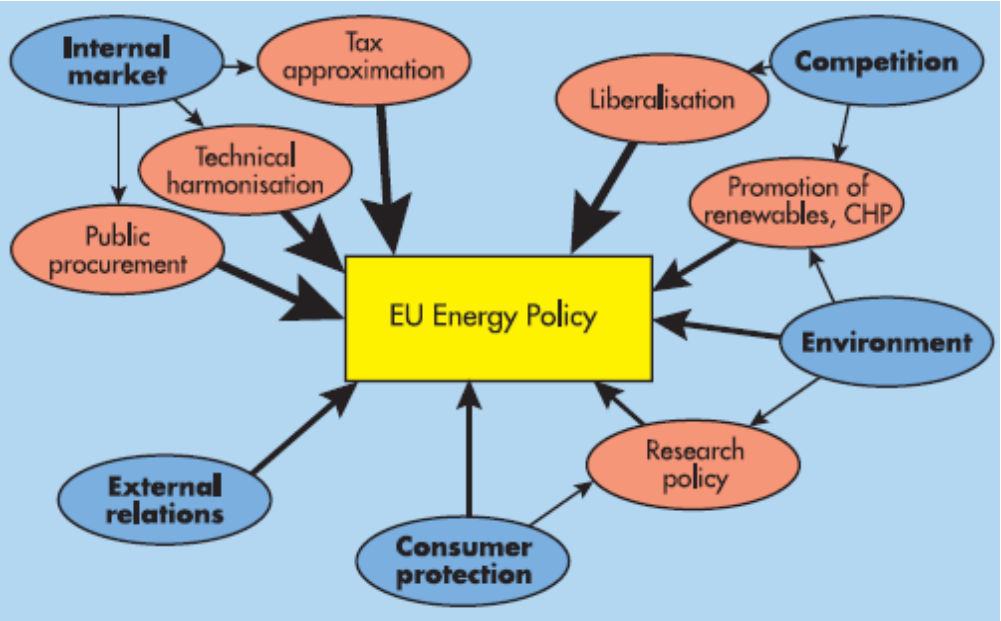
[83] Barroso, Jose Manuel, Speech “Speaking with a common voice: Energy policy in the 21st century”, Georgetown University, 9 February 2006. Available at: <http://ec.europa.eu/commission_barroso/president/pdf/speech_20060209_en.pdf>.

[84] Ecole Nationale d'Administration, Séminaire “Energie et Société”, “Une politique européenne de l'énergie?”, 2002, p. 6.

[85] Ibid., p. 12.

(TENs) and consumer protection. That is how the EU is influential in forming the energy sector, its most important competences being related to the internal electricity and gas markets. Until a sound legal basis is not provided, energy policy must be carried out on the basis of the actual Treaties or by intergovernmental decision-making.

Figure 2.3 EU energy policy competencies.



Source: Center for European Policy Studies (CEPS).

The EU's acquis communautaire covers parts of all the three priority objectives of an energy policy – competitiveness, sustainability and security. The strategic reserves measures serve the objective of security of supply, in which the EU legislation is complementary to IEA measures. The price efficiency objective is served by the liberalisation process of the electricity and gas markets. The European Trading Scheme (ETS) and the commitments taken by the EU regarding renewables objectives serve the environmental objective. And although the EU has developed a number of partnerships in which energy plays a predominant role, like Euromed or BASREC, at present, EU external energy policy is subject to intergovernmental

cooperation, where decisions are taken by unanimity and every country has the right to use its veto power. The European Commission has never had competences in external energy matters, and only tries to promote a more cooperative approach to external relations with current and future energy suppliers in cooperation with the office of the High Representative for External Affairs.

So, even without legal basis, the EU has the means to establish if not a common policy, at least coherent actions in the energy field. The obstacles before a community approach are more of political nature than of juridical one. There is stronger need for a political will of the member states than for a legal basis in the form of a separate "energy chapter" in the Treaties.[86] However, recently, there is a rising awareness among the member states that they need actions on a community level to be able to meet the new challenges for their energy security.

b. The way towards a common external energy policy

There is a consensus among the member states of the EU as regards the principal objectives of the energy policy: competitiveness, sustainability and security of supply. The Union has developed instruments to serve each one of these objectives. But the energy challenges standing before the EU require response on a higher level. No one of the member states is strong enough to establish itself as a strategic actor able to cope with the growing competition for energy resources regarding the USA, China, India, Japan, Russia and the OPEC. However, until now European energy policy has been fragmented and not targeted, and therefore the EU has had a weaker role on the international scene.

The EU expressed its will for a common action in the energy policy field several times in the past. For the first time this happened with the project for the Treaty establishing a Constitution for Europe, which had a section dedicated to energy policy under Article III-256. It recognized again the triad of goals of energy policy,

[86] Ibid., p. 12.

namely competitive market, sustainability and security of supply. In the project for the Treaty establishing a Constitution for Europe, energy policy would be turned into a shared competence, which gives the EU if not the possibility to act alone on specific energy policies, at least a means to exert more influence on energy policy decision-making. It retained the right of member states to determine themselves the conditions for the exploitation of their energy resources, as well as the right to choose their energy mix and the general structure of their energy supply and provided for decision-making by unanimity in the Council. However, this attempt to communitarise the European energy policy was withheld by the negative results of the referendums in France and in the Netherlands in 2005.

The first sign of the "waking up" of the EU to the realities of its energy problems was the Green Paper of 29 November 2000, entitled "Towards a European strategy for the security of energy supply". The paper raised the issue of EU's import dependence, currently standing at 50 percent of the overall energy consumption and predicted that in the next 20 or 30 years if no measures are taken this figure will increase to 70 percent. It put the emphasize also on the environmental challenges that determine the energy choices of the Union, mainly in relation to the commitments under the Kyoto Protocol. It also stated that the energy policy has assumed already a community dimension, as member states are interdependent both with regard to actions to combat climate change, and the completion of the internal market. Nevertheless, this was not reflected in new Community competences, although the Green Paper was an important foundation for security of supply-policy making. As regards the EU's external energy policy, the Green Paper was clear: "Unfortunately, the EU lacks the means of negotiate and exert pressure. The Union suffers from having no competence and no community cohesion in energy matters."[87] However, this green paper was received rather cold because of the differing and contradictory interests of individual member states.

Regarding the internal dimension, this Green Paper had only a limited effect, mainly

[87] Commission of the European Communities, Green Paper "Towards a European strategy for the security of energy supply", Brussels, 29.11.2000, p. 28.

on environmental issues, energy efficiency and climate policy. As regards the external dimension, the EU started the Russia-EU Energy Dialogue.[88]

Concerns about energy security were also present in the EU's security strategy of 2003 “A Secure Europe in a Better World”, where once again were reiterated the threats to European energy security coming from the rising import dependence and the dependence on several major energy suppliers.

The idea for European energy policy was launched again by the British Presidency in 2005. The fact that a country as the UK, which traditionally takes a negative stance on most of the matters entailing loss of sovereignty, set forth the idea, is indicative of the significance of the problem. The idea was accepted at the informal Hampton Court summit of Heads of States and Governments in October 2005. At the press conference following the summit, Tony Blair stated that: “In respect of energy, there was an agreement to take forward work in the energy sector... It is important that energy policy is something that we work on together as a European Union.”[89]

Observing the increasing import dependence and rising demand, member sates felt their energy security endangered. This situation favoured the stronger and more coherent action in the external energy issues on EU level. In January 2006, after the shortages of Russian gas transported to Europe during the gas crisis with Ukraine, European governments and public opinion became aware of the threats to security of supply and alarmed about the reliability of fossil fuel imports. The need for a coordinated energy policy, even without a legal basis in the Treaties, became obvious. As the EU Commissioner for energy, Andris Piebalgs put it: “The reason why a European Energy Policy is needed is because secure and affordable supplies can no longer be taken for granted. Increased import dependence, higher energy prices and environmental constraints are issues of the utmost importance to all Member states

[88] Westphal, Kirsten, “Energy Policy between Multilateral Governance and Geopolitics: Whither Europe?”, 2006, p. 56.

[89] Press Conference at EU informal summit Hampton Court, 27 October, 2005. Available at: <http://www.number-10.gov.uk/output/Page8393.asp>.

and therefore a European response is logical."[90]

The gas dispute between Russia and Ukraine showed that when the security of supply of several EU countries is threatened, the Community practically does not have any power to influence the course of action.[91] That is why after the crisis, the EU swiftly embarked on activities to secure its external energy supply. It was deeply concerned by the crisis, as it suffered shortages in external gas supply, 80 percent of which comes through pipeline passing through Ukraine. Until then, the predominant opinion in Europe was that Russia is a reliable and secure partner, even in times of internal turmoil.[92] On March 8 2006, the European Commission released a Green Paper, entitled "A European Strategy for Sustainable, Competitive and Secure Energy". In this paper the Commission proposed a common energy policy, which will give the EU the possibility to face the future energy supply challenges. The Commission stated in the document that the EU is the world's second largest energy market, comprising more than 450 million customers. If the member states act together, they have the way to protect and assert their interests. Andris Piebalgs qualified the Paper as "a new beginning for energy policy in Europe".[93]

The Green Paper determined six key priority areas in which the EU should act in order to have a sustainable, competitive and secure energy supply. First, it called on the EU member states to desist from protectionist policies and to implement the single European electricity and gas market until the middle of 2007 and to take measures to improve the ability of the EU to react in case of supply disruptions.

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90 Piebalgs, Andris, Speech at Secure Energy Supplies for the Future Conference on "Synthetic Fuels", Brussels, 7 March 2006. Available at: <http://europa.eu/rapid/pressReleasesAction.do?reference=SPEECH/06/150&format=HTML&aged=1&language=EN&guiLanguage=en>.

91 Wyciszkiewicz, Ernest, "One for All – All for One – The Polish Perspective on External European Energy Policy", 2007.

92 Westphal, Kirsten, "Energy Policy between Multilateral Governance and Geopolitics: Whither Europe?", 2006, p. 45.

93 Piebalgs, Andris, Speech at EU Energy Policy and Law Conference "A Common Energy Policy for Europe", Brussels, 9 March 2006. Available at: <http://europa.eu/rapid/pressReleasesAction.do?reference=SPEECH/06/161&format=HTML&aged=0&language=EN&guiLanguage=en>.

Other key points were the attainment of a more sustainable, efficient and diverse energy mix, to establish an integrated way to deal with climate change and measures to encourage innovation.

The paper contains a separate chapter dedicated on external energy policy, which, together with the internal market, energy efficiency and research are destined to make the EU a strong player on the international stage. Here the European Commission recognized the need for a common approach: "The energy challenges facing Europe need a coherent external policy to enable Europe to play a more effective international role in tackling common problems with energy partners worldwide. A coherent external policy is essential to deliver sustainable, competitive and secure energy."[94] This Green Paper was presented by the President of the Commission Jose Manuel Barroso himself and was supposed to serve as the basis for a further debate among the member states for the possibilities for a common approach in the energy field. The Secretary General and High Representative for the CFSP of the EU Javier Solana backed this position in an article for Financial Times a day after the Green Paper was issued: "We are already working together on liberalising and integrating energy markets within the European Union. It makes sense to complement this with concerted action on the external side. If you negotiate together, you will have more influence."[95]

However, there were criticisms to the Commission that it did not make any concrete proposals leading to a common external energy policy. In its resolution on security of energy supply in the European Union from March 2006. the European Parliament noted that: "The Green Paper does not propose new targets or advance concrete proposals that would respond to recent calls for a common energy policy", urged the Commission and the Council to "ensure a rapid political process in order to achieve a more ambitious European energy policy which includes a concrete plan of action as

94 Commission of the European Communities, Green Paper "A European Strategy for Sustainable, Competitive and Secure Energy", Brussels, 08.03.2006, p. 14.

95 Solana, Javier, "Europeans must act collectively on energy strategy", Financial Times, 9 March 2006. Available at: <http://www.consilium.europa.eu/ueDocs/cms_Data/docs/pressdata/EN/articles/88701.pdf>.

soon as possible" and demanded that "Parliament be fully consulted in that process".[96]

At the European Council meeting on March 23-24 2006, the Heads of State and Government of the EU member states after intense debates broadly endorsed the Green Paper and called for the creation of an "Energy policy for Europe". Member states appeared more willing to admit competences in the energy sector on Community level, without, of course, transferring the entire control over energy policy to the EU. They adopted a strategy to enhance EU's energy supply by an approach comprising three steps: cooperation on external policy with major producer, consumer and transit countries; diversification of energy sources, routes and suppliers; and a common approach to address crisis situations. That is when member states at least in principle agreed to pursue the creation of a common energy policy. However, some of the member states repeated their position that the EU should not encroach on national sovereignty, especially as regards the choice of the energy mix.[97] While presenting the Green Paper at an EU Energy Policy and Law conference in Brussels, Andris Piebalgs stated that, while the choice of energy mix is and will remain a question of subsidiarity, in reality the choices that a Member State makes regarding the energy sources that it uses, inevitably has an impact on the energy security of its neighbours and of the Community as a whole.[98] In the Presidency Conclusions of the March 2006 Council, the EU acknowledged that: "foreign and development policy aspects are gaining increasing importance to promote the energy policy objectives with other countries."[99] The European Council invited the Commission to prepare an Action Plan with a set of actions and a

96 European Parliament, EP Resolution on security of energy supply in the European Union, March 2006.

97 Euractiv.com: "Energy Green Paper: What energy policy for Europe?", 27 April 2006. Available at: <http://www.euractiv.com/en/energy/energy-green-paper-energy-policy-europe/article-154790>.

98 Piebalgs, Andris, Speech at EU Energy Policy and Law Conference "A Common Energy Policy for Europe", Brussels, 9 March 2006. Available at: <http://europa.eu/rapid/pressReleasesAction.do?reference=SPEECH/06/161&format=HTML&aged=0&language=EN&guiLanguage=en>.

99 Council of the European Union, Presidency Conclusions, Brussels European Council 23/24 March 2006, Brussels, 18 May 2006, p,. 13.

timetable to be adopted at the spring summit in 2007.

The Council also entrusted the European Commission and the Secretary General/High Representative with the task of working together on external energy relations and providing the input for an EU strategy. The fact that the High Representative was also engaged in the task is indicative that energy policy was already considered as a part of the foreign policy of the Union. The aim of the paper was to consider how EU external relations and CFSP can serve to effectively pursue the objective of security of supply. The joint Commission/High Representative paper made further submissions for "an external policy to serve Europe's energy interests", emphasizing the importance of diversification and well-functioning markets, as safe and affordable energy supplies can be ensured only through well-functioning world markets, and diversification of energy sources, energy suppliers and transit routes is the way to enhance EU energy security. The paper stresses the importance of having an EU external relations policy on energy, which should be coherent, strategic and focused. It made as well various proposals for dialogues and partnerships with energy producing, consuming and transit countries at bilateral, regional and multilateral level. The EU should develop its relations with all producer and transit countries around it, using adapted initiatives for each of them, depending on their strategic importance.

However, it did not propose any transfer of competences from the member states to the Union regarding energy matters: "The legitimate right of individual Member States to pursue their own external relations for ensuring security of energy supplies and to choose their internal energy mix is not in question. Nonetheless, the development of a coherent and focused external energy policy, drawing on the full range of EU internal and external policies, would enhance the collective external energy security of the Union."[100]

The European Council in June 2006 welcomed the joint paper, considering it as a

[100] Paper from Commission/SG/HR for the European Council, "An External Policy to Serve Europe's Energy Interests", June 2006, p. 1.

sound basis for development of an external policy, intended to ensure security of energy supplies into the Union. Furthermore, the Council invited "the Presidency, the Commission and the High Representative to take forward work on the development and implementation of an external energy policy in a coherent and coordinated manner, making use of all available instruments, including CFSP and ESDP."[101] The most important priorities according to the European Council were the ratification of the Energy Charter Treaty by all signatories, alluding to Russia, as well as concluding the negotiations of the Energy Charter Transit Protocol; concluding an agreement with Russia on energy in the framework of the successor to the PCA; the expansion of the Energy Community Treaty; make use of the ENP to further the EU's energy policy objectives, emphasizing on the dialogue with Algeria; giving support to infrastructure projects compatible with the environmental and sustainability objectives of the Union.

On October 12, 2006, the Commission adopted a concept paper and Action Plan for the informal European Council in Lahti, Finland, on October 20, which contained most of the ideas of the joint paper of the Commission and the High Representative and promoted the idea of a network of "energy correspondents" to assist the EU's response to possible energy security threats by collecting, processing and distributing information relevant to the security of energy supplies.

The next step was the publishing of the Strategic Energy Review focusing on both external and internal aspects of EU energy policy. The European Commission released on January 10, 2007, a "Communication from the Commission to the European Council and the European Parliament: An Energy Policy for Europe". This document contains a ten-point Action Plan with a timetable of measures to achieve the proposed objective of at least 20 percent reduction of greenhouse gases by 2020 compared to 1990. As for the external dimension of energy policy, the Communication reiterated that energy must become a central part of all external EU relations. The first step towards "speaking with one voice" is to set clear objectives

[101] Council of the European Union, Presidency Conclusions, Brussels European Council 15/16 June 2006, Brussels, 17 July 2006, p. 10.

and means to coordinate effectively. The Commission proposed to prepare Strategic Energy Reviews on a regular basis, which will serve as an overall framework for discussions of external energy issues in the EU institutions. The priorities for an effective EU energy policy, set forth by the Commission include: design of international energy agreements, including the post-2012 climate regime; building up a wide network of countries around the EU, acting on the basis of shared rules and principles derived from the EU energy policy; enhancing relations with external energy suppliers; developing closer relations with major energy consumers; developing the use of financial instruments; improving the conditions for investments in international projects; promoting non-proliferation.

At the March 2007 European Council the external dimension of the European energy policy was overshadowed by the bold commitments taken by the EU as regards the use of renewable energy, namely, to achieve the target of 20 percent of the overall energy consumption to be provided by renewable energy by 2020 and the endorsed objective for 20 percent reduction of GHG. The European Council endorsed an Action Plan for the period 2007-2009 based on the Commission's Communication and acknowledged as well that “Member States' choice of energy mix may have effects on the energy situation in other Member States and on the Union's ability to achieve the three objectives of the Energy Policy for Europe”[102], namely increasing security of supply; ensuring the competitiveness of European economies and the availability of affordable energy and promoting environmental sustainability and combating climate change. The Action Plan comprises priority actions concerning the implementation of the internal gas and electricity market, enhancing security of supply through diversification and effective crisis response management, energy efficiency and renewable energies, energy technologies. As for international energy policy, the Action Plan confirmed the importance of accelerating the way towards a common approach to external energy policy, involving consumer-to-producer, consumer-to-consumer and consumer-to-transit dialogues.

[102] Council of the European Union, Presidency Conclusions, Brussels European Council 8/9 March 2007, Brussels, 9 March 2007, p. 13.

It should be mentioned that public opinion is also in favour of more extensive competences of the EU in the field of energy, especially with regard to combating climate change. The EU released a Eurobarometer survey on 5 March 2007, according to which an overwhelming majority feel that the best way to manage energy-related issues would be at EU-level.[103] Almost two-thirds of the EU citizens, 65 percent, believe that EU is in a better position to negotiate energy supplies and prices for all member states, while only 26 percent prefer that their government be able to act independently. This survey reinforced the conclusions of the European Commission that a more coordinated energy policy on European level is necessary.

As for the future development of EU energy policy, the European Council invited the Commission to put forward an updated Strategic Energy Review in early 2009, on the basis of which will be adopted a new Energy Action Plan for the period after 2010. In the future, EU energy policy will probably involve shared responsibility between member states and the Union. The decisions regarding the liberalised electricity and gas markets, the gas and electric transmission and distribution systems, coordinating and financing renewable energy sources, the development of emergency supplies, can be taken at EU level. Also, it is possible that the member states create an independent European regulator, responsible for controlling the gas and electricity flows, the pricing of energy, and the development and operation of LNG facilities. According to the principle of subsidiarity, member states will retain the right to determine which energy mix best suits their national conditions.

It is likely that decisions regarding sources of supply and contract terms will also remain within the scope of action of member states. However, energy policy will probably be an important element of the EU's CFSP. Energy dialogues and partnerships with major producing and transit countries and regions should be pursued in a more coordinated manner between the Office of the High Representative and the individual member states, as can be inferred by the European

[103] European Union, Press Release, “Eurobarometer: Europeans support greater EU action on energy and climate change”, 5 March 2007. Available at: <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/07/280>.

Commission's conclusions of the Green Paper of 2006:

> "In taking the debate forward, it is essential to act in an integrated way. Each Member State will make choices based on its own national preferences. However, in a world of global interdependence, energy policy necessarily has a European dimension".[104]

3. Conclusion

There are many reasons, for which there is still no common energy policy in the EU. The fact is, that the impediments are more of a political character, than of a juridical one. Although there is no legal basis in the Treaties for an energy policy, the Commission approaches the energy issues through its competences in other policy fields, thus shaping the energy policies of member states as well. However, with the urgency of the energy challenges, standing before the Union, there is a growing awareness that the energy supply policy should be tackled on a Community level.

Member states already express their will to accept the common energy policy by endorsing the Commission's propositions in that direction. A period of more than five years passed between the publication of the Green Paper on security of supply in 2000 and of the subsequent "A European Strategy for Sustainable, Competitive and Secure Energy" from 2006. While both of them pointed out the threats in the energy situation and pointed out the need of common European strategy, the first one was received quite cold by the member states, because of their diverging national interests. However, the second Green Paper was received positively, which indicates the growing awareness for the need of an urgent response to the energy problems.

Taking into account all the impending problems in the energy sphere and their scope and significance, it is clear for EU member states that they should tackle these

[104] Commission of the European Communities, Green Paper "A European Strategy for Sustainable, Competitive and Secure Energy", Brussels, 08.03.2006, p. 17.

challenges together as a unity, as they will gain more coherence and will have greater weight in negotiations with third countries. That is why the EU made several steps towards a common energy policy, with an external dimension, aimed at enhancing its security of supply by diversification and partnerships with producer, consumer and transit countries.

Chapter 3

EU's external energy dialogues

1. Diversification – key for EU's security of supply

Diversification is the key for Europe's energy security. Multiplying one's supply sources reduces the impact of a disruption in supply from one source by providing alternatives, serving the interests of both consumers and producers, for whom stable markets are a prime concern.[105] The main task of EU's energy supply policy is to determine which is the best equilibrium point for supply from each geographic region and how to manage in the best way the relations with the governments in those regions that possess energy resources. According to Daniel Yergin: "energy security does not stand by itself but is lodged in the larger relations among nations and how they interact with one another."[106]

Diversification has three aspects – diversification of energy sources, diversification of suppliers and diversification of transport routes. Member states of the EU have the competence to determine themselves their energy mix without interference by the Commission. That is why the action on EU level is directed towards providing political and financial support and establishing effective relations with energy producers, as well as consumers and transit countries.

At present the EU has a balanced energy mix from relatively secure energy sources, but in the future, with the depletion of the reserves in the North Sea, the share of imports of oil and natural gas from unstable regions is set to increase significantly. Russia is going to remain the principal energy supplier to the EU, but a European security strategy necessarily has to include other suppliers, as North Africa, the Caspian region or the Middle East. That is why the EU should aim at fostering good governance, rule of law and better investment opportunities for European companies

[105] Yergin, Daniel, "Ensuring Energy Security", 2006, p. 76.
[106] Ibid., p. 69.

in these regions.[107]

The European Union has been active for many years in conducting relations with the most important energy partners, producers, consumers and transit countries alike. Energy is present in all cooperation and association agreements of the EU, as well as in all the documents concluded in the framework of the European Neighbourhood Policy (ENP).[108] However, since it is faced with a growing dependence on energy imports, it has to make more targeted and coherent efforts to ensure its energy security.

2. Consumer-producer dialogue

The EU needs a more active policy with regard to producing countries. Whether this will become a reality depends on how will develop the Union's external identity, which will be influenced by the development of its security and military capacity and the way it addresses internal institutional weaknesses in international negotiations in trade and environmental domains. The role of the EU as a global actor is influenced by enlargements as well. The last enlargement from 2004 resulted in a more prominent place for Russia in EU's external relations, while a possible accession of Turkey, involving a border between the EU and Syria, will result in a more active EU policy in the Middle East. But without a doubt, foreign relations with producing countries will have a major energy component.

There are two dimensions of EU's relations with producing countries. From the one hand, EU tries to secure its energy supplies by imposing economic and political interdependence, using instruments as cooperation agreements, free trade agreements, technical assistance, foreign investments. On the other hand, energy relations are used to promote reforms in the respective countries. Revenues from

[107] Kreft, Heinrich, "Geopolitics of Energy: A German and European View", 2006, p. 5.
[108] Landaburu, Eneko, DG RELEX, Speech "Europe's External Energy Relations: present and future challenges", Public hearing "Towards a common European Foreign Policy on Energy", 28 February 2007. Available at: <http://ec.europa.eu/external_relations/energy/docs/speech_el_280207.pdf>.

export to the EU raise the level of investments and bring in foreign expertise, thus increasing the economic interdependence.[109] And it is equally true, that we can not talk only about the import dependence of energy importing countries, because just as they need energy sources, energy exporting countries need secure markets and stable income.

An effective consumer-producer dialogue would require a mix of bilateral and multilateral instruments. At international level it is necessary to strengthen the role of the International Energy Forum, the forum for dialogue between producers and consumers, which is still a relatively informal body.[110] The EU can act towards engaging energy producing countries in interdependence by enhancing trade, economic, political and socio-cultural cooperation and by engaging these countries in political dialogue and mutual responsibilities.[111]

a. Bilateral level

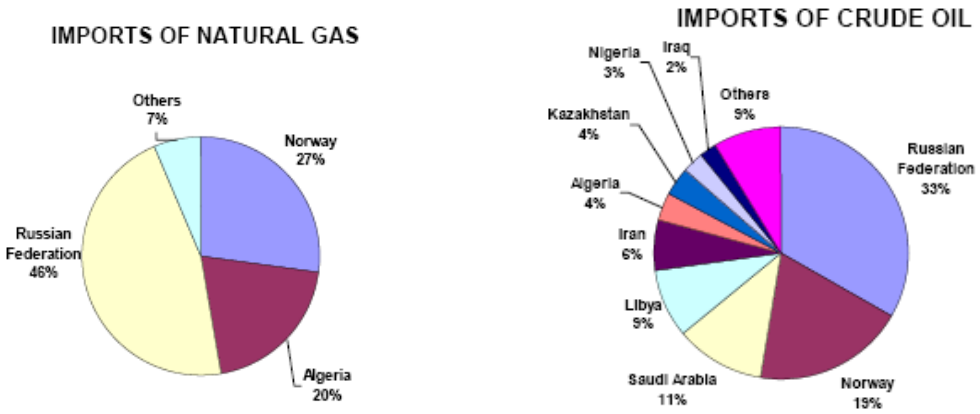
Russia

Russia is one of the mosts important energy partners of the EU. The Union receives from Russia 46 percent of its natural gas imports, 33 percent of its oil imports and 17 percent of its hard coal imports.[112] In addition, more than half of Russia's oil and natural gas exports go to the EU. It is also holds control over key transit routes from Central Asia. This, in combination with the fact that Russia is still an important player on the international scene on geopolitical and security issues, makes one of the goals of the EU to build a strategic partnership with this country. The legal basis for the development of the relations between EU and Russia is the Partnership and Cooperation Agreement (PCA), which came into force in 1997 for a period of ten

[109] Egenhofer, Christian, "European Energy Policy", 2001, p. 46.
[110] Kreft, Heinrich, "Geopolitics of Energy: A German and European View", 2006, p. 5.
[111] Westphal, Kirsten, "Energy Policy between Multilateral Governance and Geopolitics: Whither Europe?", 2006, pp. 60-61.
[112] Commission of the European Communities, Commission Staff Working Document, "EU Energy Policy Data", Brussels, 2007, p. 45.

years. The PCA covers a number of sectors for cooperation, among which, without doubt, energy is the most important.

Figure 3.1 EU's imports of crude oil and natural gas



Source: European Commission

In 2000, the EU launched an Energy Dialogue with Russia, which soon became one of the key issues in the bilateral relations between them, given their interdependence in the energy sector, Russia being the main energy supplier to the EU, and EU being the largest integrated energy market in the world. The objective of this partnership is to enhance the energy security of the EU by establishing a closer relationship between Russia and the Union, while ensuring that the policies of opening and integrating energy markets are pursued. The ultimate goal of the partnership is the possibility for mutual access to energy markets – EU investments in the upstream sector in Russia and Russian access to the downstream sector in the EU.[113]

The progress on this partnership has been mixed since. One of the successful steps, and one of the most tangible results of the Energy Dialogue is the establishment of a technology centre in Moscow in 2002 and several projects for energy savings. However, on issues like pipelines, gas supply contracts, restructuring of the electricity sector and nuclear fuel supplies the two sides have considerable

[113] Kreft, Heinrich, "Geopolitics of Energy: A German and European View", p. 5.

disagreements. This can be explained by the fact that energy is extremely important for the Russian economy, and that is why Russian government treats the issue of energy market reform very carefully. Also, the EU-Russia dialogue involves not only partners on political level. The key players are private or state-controlled companies that often have their own agenda.[114] Also, Russia and the EU have differing strategies regarding major issues as market harmonisation and market transparency.[115]

Another principal reason is that some of the member states sidelined the Energy Dialogue and the Energy Charter Process and developed their relations with Russia on a bilateral basis, thus responding to Russia's own preference for bilateral deals. Member states did not make serious joint attempts to encourage Russia's ratification of the ECT and to strategically coordinate energy policies, in particular in regard to infrastructures. On the contrary, some of them pursued bilateral strategies. A case in point is the Nord Stream pipeline through the Baltic Sea, as an illustration of national approach on the part of EU member states to secure their energy supply. Although the project will enhance the security of supply for Germany and old EU member states, it undermines the main principle of energy security: diversification of energy supply.[116] Another proof of the fact that Russia will be able to increase its influence and political leverage in Europe through the project, is that it embarked on the construction of the expensive undersea Baltic pipeline system, while gradually giving up the construction of the Yamal II pipeline, a much cheaper alternative, which would have given more energy security to Central and Western Europe.[117]

There are several alarming trends in Russia, which preoccupy the EU. One of them is the revival of nationalisation trends in Russia. The first sign of this, which provoked anxiety in the EU was the Yukos affair, which was seen as an attempt on the part of

[114] Grant, Charles and Barysch, Katinka, “The EU-Russia Energy Dialogue”, Centre for European Reform, London, May 2003, p. 1-2.
[115] Westphal, Kirsten, “Energy Policy between Multilateral Governance and Geopolitics: Whither Europe?”, 2006, p. 56.
[116] Ibid., p. 54.
[117] Smith, Keith, “Security Implications of Russian Energy Policies”, Centre for European Policy Studies, Brussels, January 2006.

the Russian government to regain control over natural resources and to use them as a political tool in its external relations. This became obvious during the gas dispute with Ukraine in early 2006. Russia has also continuously tried to enhance its strategic position in many of the ex-Soviet and new EU member states by buying up utility companies and infrastructure through its giant state-owned energy corporations. Gazprom now seeks direct access to customers and end users in the EU in order to increase its market share from 26 percent to 38 percent by 2020.[118] At the same time, foreign companies investing in Russia are under pressure, as show the examples of the tax claim on British-Russian oil joint venture TNK-BP and the "environmental problems" threatening the withdrawal of the license of Royal Dutch Shell for the Sakhalin 2 oil and gas field in the Russian Far East.[119] An investigation was launched also against the Exxon-Mobil led Sakhalin 1 project. And in October 2006, Gazprom announced its intention to develop the Shtokman Gas field in the Barents Sea on its own without the help of western partners, thus taking by surprise French Total, US Chevron and other western companies aspiring to participate in the project. The rejection of foreign companies' participation is even more alarming given the current investment shortfall in Russian energy infrastructure.[120] And there were repeated fears among the western countries that Russia is going to build up a gas cartel together with Iran and Algeria, two of the countries on which Europe relies for diversification of its supplies.

The strategy of Russia towards EU member states is aimed at dividing EU member states, for example by using trade to put pressure on critics and to reward its supporters. This creates internal tensions in the EU and poses difficulties in front of a coherent approach and a common external energy policy, at a time when the EU

[118] Umbach, Frank, "Towards a European Energy Foreign Policy?". In: Foreign Policy in Dialogue, Vol. 8, Issue 20, "Dealing With Dependency. The European Union's Quest for a Common Energy Foreign Policy", Trier, Germany, 11 January, 2007.

[119] Sander, Michael, "A "Strategic Relationship"? The German Policy of Energy Security within the EU and the Importance of Russia". In: Foreign Policy in Dialogue, Vol. 8, Issue 20, "Dealing With Dependency. The European Union's Quest for a Common Energy Foreign Policy", Trier, Germany, 11 January, 2007.

[120] Curtin, Joseph, "EU-Russia Energy Relations". In: Energy Policy Newsletter, Institute of European Affairs, Dublin, November 2006.

must be united in order to face the future energy challenges.[121] However, there is already a common awareness, even among old and big member states, that there should be a common and coherent approach towards Russia in managing the energy relations with it.

However, Russia also can be concerned about the EU. The Union is a key energy market for Russia and contributes significantly to its budget revenues. Taking into account the EU's attempts to diversify its energy suppliers, Russia feels threatened that it will lose its most important market, which could undermine their economy. This has prompted both Russia and the EU to look for other markets, pushing them into what can be called "energy security dilemma".[122]

For achieving the aim of diversification, the EU backs projects which will diminish its dependence on Russia, as the Italy-Greece gas pipeline connection, whose construction is envisaged to start in June 2008 and which will supply natural gas from the Caspian region, North Africa and the Middle East. At the same time Russia tries to strengthen its position by projects in Europe. Recently it has signed an agreement for the construction of the Burgas-Alexandroupolis pipeline, which will transport Russian oil from the Bulgarian port at Burgas to the Greek port of Alexandroupolis, thus diminishing the probability of constructing the competitive AMBO project, which was without Russian participation (Annex 5). Also, just a few days before the Russia-EU summit on May 18, 2007, Russian president Vladimir Putin met with the leaders of Kazakhstan and Turkmenistan and convinced them to start the construction of a Caspian onshore pipeline, connected directly with Russian gas pipeline network, a move with considerable implications for EU's energy security and diversity of supply.[123]

As for the future of EU-Russia relations, they will have to develop on the basis of a

[121] Ibid.

[122] Monaghan, Andrew and Montanaro-Jankovski, Lucia, "EU-Russia energy relations: the need for active engagement", European Policy Centre, Brussels, March 2006, p. 8.

[123] Euractiv.com, "Pipeline politics in shadows of EU-Russia summit", May 24, 2007. Available at: <http://www.euractiv.com/en/energy/pipeline-politics-shadows-eu-russia-summit/article-163762>.

renewed PCA, as the previous one expires in November 2007. The negotiations on the new document are at present stuck following the Polish veto, which came as a response to the Russian ban for Polish meat imports. The EU wants to pursue its relations with Russia on the basis of principles like opening of energy markets, respecting market rules and competition rules, granting mutual access to production and transit infrastructure, and possibly, the Russian ratification of the ECT. Following the Lahti informal summit of EU leaders, Putin reiterated the reluctance of Russia to ratify the ECT, albeit agreeing to its underlying principles. The problem remained the Transit Protocol to the ECT and the liberalization of Russian energy market. He proposed the drawing up of another document, taking up these principles, while amending some articles. Then this new document could be integrated in the new PCA between Russia and the EU.[124]

Another implication for the future development of the relations between Russia and the EU ensues from the fact that Russia is not only one of the biggest energy producers in the world, but also one of the most important consumers. According to some forecasts Russian domestic consumption is going to outpace that of the EU, and that Russian energy demand will increase by 150 percent by 2030. As this means that domestic consumption will absorb some of Russia's finite reserves, energy efficiency will become even more important issue on the agenda of EU-Russia relations.[125]

The EU should not be too worried about the future of its relations with Russia. It will continue to be the Union's main energy supplier. First, because it needs the imports from its hydrocarbon exports to sustain its economic development. Second, Russia will not decide easily to divert its exports towards East Asia or elsewhere, because there is already considerable infrastructure connecting it to the EU, and the construction of such an infrastructure aimed at diversifying its exports would be extremely costly for Russia. There is, however, problem connected with the

[124] Curtin, Joseph, "EU-Russia Energy Relations", 2006.
[125] Monaghan, Andrew and Montanaro-Jankovski, Lucia, "EU-Russia energy relations: the need for active engagement", 2006, p. 14.

underinvestment in infrastructure, which could lead to supply disruptions. According to IEA estimates, the investments needed up to 2030 to maintain and develop Russia's energy infrastructure are close to $1 trillion.[126] Consequently, despite Russia's abundant hydrocarbon resources, there may be problems with exporting them towards the European market.

Norway

Norway is the third world oil exporter after Saudi Arabia and Russia and the third gas exporter after Russia and Canada. The EU receives around 19 percent of its oil imports and 27 percent of its gas imports from it.[127] Norway is an integral part of the EU's internal energy market due to the European Economic Area (EEA) Agreement.[128] It applies most of the EU acquis, including legislation regulating the energy market and related policies. The EU-Norway Energy Dialogue aims mainly at coordinating energy policies, including research and technological development in the energy sector and relations with other producing countries. Other issues, discussed in the framework of the Energy Dialogue are the exploration of energy resources in the High North, for example the Barents Sea.

In 2005 the two parties confirmed their interest to cooperate in energy issues, in particular in the spheres of energy efficiency, renewable energy and security of energy supply, including exploration and production activities in the Arctic Sea.

Norway is one of the most reliable and secure partners for the EU. However, in the future Norwegian oil production will likely remain steady or decline, unless new fields are not developed in the Barents Sea. In the long term it relies on non-North Sea projects to provide significant gas production.[129]

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126 Ibid., p. 20.
127 Commission of the European Communities, Commission Staff Working Document, "EU Energy Policy Data", Brussels, 2007, p. 45.
128 Kreft, Heinrich, "Geopolitics of Energy: A German and European View", 2006, p. 5.
129 Energy Information Administration, "Country Analysis Briefs: Norway", August 2006.

Algeria

Securing access to Algeria's gas reserves is essential for EU's diversification of supplies and diminishing its dependence on Russia. Algeria possesses 161 tcf reserves of natural gas and is one of EU's principal gas suppliers. It is the world's third largest exporter of LNG and it exports almost all of its gas to Europe. Recently, the Algerian national oil company, Sonatrach, signed a 20-year LNG supply contract with the Spanish power company Endesa.[130]

The attempts of the EU to secure its supplies from North African countries did not remain unnoticed by Russia. In March 2006, President Putin traveled to Algeria together with Gazprom officials to discuss Russian participation in Algeria's future oil and gas projects, including its LNG export markets. As Russia envisages Europe to be a major market for LNG produced from Shtokman gas field in the Barents Sea, it wants to be in the position to influence Algeria's future role as a major supplier of energy to Europe.[131] Moreover, there were repeated fears that Russia is making attempts to create a "gas OPEC" together with Algeria.

Azerbaijan

According to industry journals and government sources, estimates of Azerbaijan's proven oil reserves vary between 7 and 13 billion barrels and proven natural gas reserves of roughly 30 trillion cubic feet. Despite this, it is currently a natural gas importer and currently lacks any infrastructure for exporting gas.[132]

Azerbaijan is one of the countries, which will be extremely important for EU's energy security and diversification of supplies. It is part of the INOGATE and Baku initiatives, discussed below. Apart from that, the EU has signed in November 2006 a Memorandum of Understanding (MoU) on a strategic partnership in the field of

[130] Morelli, Vince L., "The European Union's Energy Security Challenges", 2006, p. 18.
[131] Ibid., pp. 18-19.
[132] Energy Information Administration, "Country Analysis Briefs: Azerbaijan", August 2006.

energy with Azerbaijan. It outlines four main spheres of cooperation: gradual harmonisation of energy legislation, leading to the convergence of the electricity and gas markets; enhancing the security of supply and transit systems from Azerbaijan and the Caspian basin to the EU; partnership for enhancing energy efficiency in Azerbaijan and technical cooperation and exchange of expertise.

The most important projects of common interest for the EU and Azerbaijan are the BTC oil pipeline and the BTE natural gas pipeline, treated in more detail below.

Kazakhstan

Kazakhstan has the Caspian Sea region's largest recoverable crude oil reserves. As it has enough export options, Kazakhstan could become a major world energy producer and exporter over the next decade. Natural gas production has been on a constant increase since 1999.[133] The EU has signed in December 2006 a MoU on cooperation in the field of energy with Kazakhstan as well, in which they agreed on mutual interests in the area of: supporting the gradual development of regional energy markets in the Caspian littoral states and their neighbouring countries; enhancing the attraction of funding for new infrastructure; energy efficiency programmes; gradual integration between the respective energy markets and the EU.

b. Regional level

Caspian Region and Central Asia

The countries from the Caspian region and Central Asia hold important position as energy transiting and producing countries taking into account their energy resources and strategic position with regard to the EU. They are also one of the most important alternatives for diversification of supplies and diminishing the dependence on Russian resources. The Caspian region states also have stimulus to look for

[133] Energy Information Administration, "Country Analysis Briefs: Kazakhstan", October 2006.

alternative markets and routes, as immediately after the states from the region gained their independence, Russia dominated both oil and gas production in the region, as all Caspian oil and natural gas traveled north and west via pipeline to or through Russia to European markets. This granted Russia the leverage to influence prices, impose transit fees and determine the quantities transported.[134]

The main instruments of the EU relations with these countries are the Partnership and Cooperation Agreements. The Union has participated in the development of the energy sectors of these countries particularly through the TACIS financing programme, which will be replaced as from 2007 with a single European Neighbourhood and Partnership Instrument.[135] The relations with the Caspian States were identified as one of the priorities of the EU in 1998, when the European Council issued a declaration on energy policy for the enlarged EU. The objectives for the EU were to promote the development of the region's energy reserves, and envisaging the construction of multiple pipeline connections.[136] In 2004 the EU launched the "Baku Initiative", with the participation of the Black Sea and Caspian Littoral states, as well as five of the central Asian states, with Russia and Iran as observers. This initiative is aimed at the progressive integration of the energy markets of this region into the European market, and at the transportation of the Caspian oil and gas resources towards Europe.

Another initiative for cooperation with the states of this region is INOGATE, an international cooperation programme aiming at promoting the regional integration of the pipeline systems and facilitating the export of oil and gas towards Europe and acting as a complementary programme to other EU-funded programmes supporting the development of new energy infrastructure projects through technical assistance.

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134 Morelli, Vince L., "The European Union's Energy Security Challenges", 2006, pp. 14-17.

135 European Commission, DG External Relations, Overview: The EU's relations with the countries of Eastern Europe and Central Asia, Available at: <http://ec.europa.eu/external_relations/ceeca/index.htm>, accessed on 17 May 2007.

136 Kalyuzhnova, Yelena, "The EU and the Caspian Sea region: An energy partnership?", Centre for Euro-Asian Studies, University of Reading, January 2005, p. 71.

One of the most important projects was the Baku-Tbilisi-Ceyhan (BTC) oil pipeline, which allows exports of Caspian resources to Europe while bypassing Russia (Annex 6). It allows also bypassing the Bosphorus strait, an already major chokepoint for oil tankers. An additional option could be the extension of the Baku-Supsa connection under the Black Sea, or the oil could be transported by tankers to Odessa, where it can be pumped to through the Odessa-Brody pipeline into Poland.[137]

As regards natural gas, the new infrastructure projects directed towards Europe are envisaged to transport gas from the Caspian Sea to Turkey. It already has a pipeline connection with Russia, the Blue Stream pipeline under the Black Sea (Annex 4). The EU-backed project is Baku-Tbilisi-Erzurum, or the South Caucasus pipeline, which could be the first stage of a route Caspian Sea-Turkey-Greece-Eastern Europe. Another route for transporting Caspian gas bypassing Russia is the NABUCCO pipeline, scheduled to be built in 2008, passing through Turkey, Bulgaria, Romania, Hungary and Austria to western Europe (Annex 6).[138] There is also the Trans-Caspian pipeline project, intended to bring gas from the Caspian to Georgia and across the Black Sea to Romania and the Balkans. Both NABUCCO and the Trans-Caspian pipeline are opposed by Russia, which had some success at diminishing the support of at least Hungary by offering alternatives.[139] Russia tries to undermine the NABUCCO project by its own project for a continuation of its Blue Stream pipeline, which will have approximately the same route and price and will be finished around the same time as NABUCCO. Hungary has already confirmed its support for the Blue Stream 2 pipeline.

One of the obstacles in developing the energy resources available in the Caspian Sea is its still unresolved legal status, as the littoral states can not come to an agreement for its division. In 2003 Russia, Azerbaijan and Kazakhstan divided the northern 64 percent of the sea into three unequal parts, and following that the development of the

[137] Morelli, Vince L., “The European Union's Energy Security Challenges”, 2006, p. 16.
[138] Locatelli, Catherine, “Les enjeux politiques des hydrocarbures de la Caspienne et de la Russie”, LEPII – EPE, Grenoble, France, March 2006, pp. 2-3.
[139] Morelli, Vince L., “The European Union's Energy Security Challenges”, 2006, p. 16.

Caspian Sea's hydrocarbon potential will likely move forward. Turkmenistan and Iran both refused to sign the agreement.[140]

Gulf Cooperation Council (GCC) and OPEC

As the EU has the ambition to become a significant actor in the Middle East, it has concluded bilateral cooperation agreements with the six Gulf States, represented in the GCC and has recommenced negotiations on a free trade agreement with the GCC, abandoned in the early 1990s.[141] The EU has boosted its trade and economic relations with the littoral states of the Persian Gulf to secure its oil and gas supplies. The GCC is the EU's fifth largest export market, while the GCC is the fourteenth biggest source of imports for the EU.[142]

There are three factors that determine the importance of the dialogue between Europe and the GCC in the energy field. First, the GCC and Iran hold the world's largest proven oil and gas reserves. Second, the world's spare oil-producing capacity is concentrated almost only in Saudi Arabia. Third, while the EU is the preferred destination for energy exports for Russia, the Caspian states and North Africa, the Gulf countries send most of their oil to the east or to the USA.[143]

The EU imports around 40 percent of its oil from the OPEC. Both parties established in the second half of 2004 a high-level bilateral dialogue to enhance producer-consumer relations.[144] At the three EU-OPEC Ministerial Meetings, that have taken place until now were discussed issues like oil prices, enhanced data transparency on stocks, investment needs, tightness on the refining sector, financial markets, new

[140] Energy Information Administration, "Country Analysis Briefs: Caspian Sea", September 2005.
[141] Euractiv.com, "Geopolitics of EU Energy Supply", 18 July 2005. Available at: <http://www.euractiv.com/en/energy/geopolitics-eu-energy-supply/article-142665>.
[142] Sadeghi-Nia, Mahboubeh, "The European Union and Persian Gulf Energy Security", Journal of Middle Eastern Geopolitics, vol. 1, No. 2, 2005, p. 67.
[143] Bahgat, Gawdat, "Europe's Energy Security: challenges and opportunities", International Affairs, September 2006.
[144] European Commission, DG TREN, Energy and transport international relations. Available at: <http://ec.europa.eu/dgs/energy_transport/international/index_en.htm>., (accessed on 29 May 2007).

technologies.

South Mediterranean

EU relations with North Africa were institutionalised in 1995 with the launch of the "Barcelona Process" and the creation of The Euro-Mediterranean Energy Partnership. The Barcelona process has served so far as a basis for both bilateral and regional cooperation. This partnership between the EU and the north Africa and eastern Mediterranean states is an action plan to establish a free trade area with a particular emphasis on the energy market by 2010. The aim of the EU in this partnership is to create a stable investment climate and to ensure security of supply, while the Mediterranean countries see it as an opportunity to enhance investment and technical assistance.[145] Since 2004 the Mediterranean Partners are also included in the European Neighbourhood Policy.

Africa – Gulf of Guinea

EU relations with the Gulf of Guinea region are focused mainly on development cooperation with the Economic Community of West African States (ECOWAS). Discussions are mainly on peace, security and good governance aspects with a strong emphasis on economic and trade integration.[146]

BASREC

In the context of the EU's Northern Dimension, which plays an important role to energy issues, in 1999 was launched the Baltic Sea Region Energy Cooperation (BASREC). It encompasses Denmark, Finland, Germany, Iceland, Estonia, Latvia, Lithuania, Sweden, Norway, Poland, Russia and the European Commission. The main issues discussed are security of energy supply, gas transit routes, progress on electricity and gas interconnection, energy efficiency, climate change, renewable

[145] Bahgat, Gawdat, "Europe's Energy Security: challenges and opportunities", 2006.
[146] Euractiv.com, "Geopolitics of EU Energy Supply", 18 July 2005.

energies.

c. Multilateral level

Energy Charter Treaty

At the Dublin European Council in June 1990 the Dutch Prime Minister proposed cooperation in the energy sector with eastern Europe and the than Soviet Union, thus ensuring both the economic recovery of the former communist countries and the security of supply for the European Community. Negotiations began in July 1991 and the Concluding Document was signed in the Hague in December 1991. The 51 signatory states agreed to cooperate in the framework of a legally binding Basic Agreement, later called Energy Charter Treaty, designed to promote east-west cooperation by providing legal safeguards in areas such as investment, transit and trade. The Energy Charter Treaty was signed in 1994 by all signatories of the 1991 Charter except for the USA and Canada. The ECT's aim is to enhance international cooperation in the energy sector by conforming to GATT and WTO principles. It provides rules regarding investment, trade, transit, as well as dispute settlement.

However, the Energy Charter process was undermined by the reluctance of Russia, one of the most important actors on the international scene in terms of energy, to ratify the treaty and to continue negotiations on the Transit Protocol attached to the Charter. By doing it, Russia fears it would lose its strategic position as a supplier and transit country to Europe. An obstacle to the full application of the ECT for Russia is the Transit Protocol, which would oblige Russia to apply the principles of freedom of transit without distinction of origin, destination or ownership of the energy and of non-discriminatory pricing. And at the same time the pressure on Russia has been very low, due to diverging interests in the EU itself.[147]

[147] Westphal, Kirsten, "Energy Policy between Multilateral Governance and Geopolitics: Whither Europe?", 2006, p. 56.

3. Dialogue with transit countries

It is important for the EU to diversify not only its energy sources and suppliers, but also the routes through which it receives its energy imports, so that one actor or state does not completely control and dominate them. The most important transit countries for the EU are Ukraine, Belarus and Turkey, through which pass most of the connections with Russian or Caspian sources.

Ukraine

Ukraine is a key transit country for Russian exports to the European market, which became all the more obvious during the gas crisis in early 2006, when several European countries were affected by the Russian cut of gas supplies to Russia. Between 80 and 90 percent of Russian gas exports to Western Europe move through Ukrainian territory and it has the second largest natural gas storage capacity in Europe after Russia, with 30 bcm.[148] EU and Ukraine have been developing an enhanced energy cooperation since 2001, aiming at enhancing the overall performance, safety and security of the Ukrainian natural gas transit network. Moreover, Ukraine has the potential to become an electricity exporter and has expressed its will to become part of the EU and Southeast Europe electricity market. Therefore, energy is expected to be a key sector of cooperation between the EU and Ukraine in the future. A MoU was signed at the EU-Ukraine summit in 2005, establishing a joint strategy aimed at the integration of the Ukrainian energy market to that of the EU. [149]

Another important project is the reversal of the flow of the Odessa-Brody pipeline and its possible extension to Poland, which will allow increased flow of hydrocarbons from the Caspian.

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[148] Commission of the European Communities, Communication from the Commission to the Council and the European Parliament, "On the Development of Energy Policy for the Enlarged European Union, Its Neighbours and Partner Countries", Brussels, 13.05.2003, p. 12.

[149] European Commission, DG External Relations website: <http://ec.europa.eu/external_relations/index.htm>.

Belarus

Belarus is also an important transit country for Russian gas deliveries to Europe. Through it passes the largest Russian export pipeline to Europe, the Druzhba oil pipeline (Annex 4). Moreover, the country's natural gas transportation monopoly, Beltransgaz, manages a total of more than 2000 km of natural gas pipelines.[150] Its importance became all the more evident during the oil crisis in the beginning of 2007 when Russian authorities cut off the oil supplies through the Druzhba pipeline, passing through Belarus, on the grounds of commercial disagreements. However, the relations between the EU and Belarus are not very developed because of the non-democratic regime there. Both sides negotiated a PCA agreement in 1995, but it never came into force.

Turkey

Turkey's strategic position makes it a natural bridge between main oil and gas producing and consuming regions. It is of importance not only for Europe, but also for the energy exports of Russia and the Caspian states. It is one of the main routes for EU's diversification of supplies, as through it pass the main projects: BTC, BTE, NABUCCO (Annex 6); as well as the competitor projects of Russia, like Blue Stream 2.

The relations between the EU and Turkey develop in the framework of its possible accession. However, its wish to become an EU member state still seems a remote perspective. Membership negotiations were started with Turkey in 2005, but since than there were many setbacks, caused by the numerous problems lying on its way to accession. Some of these issues are the requirement that Turkey open its airports and ports for Cypriot vessels, freedom of expression, minority rights.

[150] Commission of the European Communities, Communication from the Commission to the Council and the European Parliament, "On the Development of Energy Policy for the Enlarged European Union, Its Neighbours and Partner Countries", Brussels, 13.05.2003, p. 25.

Caucasus

The Caucasus states, and especially Georgia, are essential for exports of the Caspian Sea resources, notably because they are an alternative route to avoid Russian transit network, which was epitomized by the BTC oil pipeline. The problems in this region are of security nature, as they all have unresolved domestic problems, including the development of separatist movements.[151] But since 2004, all the three Caucasus countries, Georgia, Armenia and Azerbaijan are included in the EU's Neighbourhood Policy[152], aiming at enhancing stability and security in EU's neighbouring countries.

4. Consumer-consumer dialogue

The aim of the consumer-consumer dialogue is, taking into account the identical interests of the different actors, to lessen economic competition in conformity with market-based principles.[153] Energy security can be only achieved collectively, so there is a persistent demand for political cooperation. The EU tries to pursue a role which is not in competition, but in cooperation with other consumers. It tries to avoid highly competitive and conflictive politics and instead to link the energy trade with policy issues such as the environment and climate, which are perceived as public goods.[154]

a. Bilateral level

India

Energy security is one of the key features of India's foreign policy. It has been

[151] Monaghan, Andrew and Montanaro-Jankovski, Lucia, "EU-Russia energy relations: the need for active engagement", 2006, p. 16.
[152] Energy Information Administration, "Country Analysis Briefs: Caucasus Region", May 2006.
[153] Kreft, Heinrich, "Geopolitics of Energy: A German and European View", 2006, pp. 5-6.
[154] Westphal, Kirsten, "Energy Policy between Multilateral Governance and Geopolitics: Whither Europe?", 2006, p. 61.

investing in oil and gas projects abroad since 2001, even in problematic countries, such as Sudan and Iran.[155]

The EU launched a cooperation with India in the energy field at the fifth EU-India Summit in November 2004, when the decision was taken to start an energy dialogue. As a formal instrument of the dialogue an India-EU Energy Panel and four working groups were established. As India's current energy policy is based on overstretched domestic coal production, the objectives of the dialogue are considering alternative fuel chain, as clean coal technology, hydropower, new and renewable energies, nuclear; as well as horizontal issues, as regulatory, financial, political and social questions.[156] The conclusion of the US-Indian nuclear agreement, which raised the question about the conflict between NPT principles and energy security has become an issue which forced the EU to rethink its cooperation with India on the civilian use of nuclear energy.[157]

China

The energy relations between the EU and China are more longstanding, as they are cooperating in the energy field for more than two decades. Since 1994, dialogue takes place mainly in the framework of the Conference on EU-China Energy Cooperation and of the EU-China High Level Working Group on Energy on issues as energy efficiency and environmental technology. At the meeting of the working group in March 2005 were agreed two new initiatives – an Action Plan on Clean Coal and Action Plan on Industrial Cooperation, Energy Efficiency and Renewable Energies. At the China-EU Summit in September 2005 was signed a Memorandum of Understanding to develop a new strategic dialogue on energy and transport, and was issued a Joint Declaration on Climate Change. [158]

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[155] Kreft, Heinrich, "Geopolitics of Energy: A German and European View", 2006, p. 6.
[156] Commission of the European Communities, Communication from the Commission to the Council, the European Parliament and the European Economic and Social Committee, "An EU-India Strategic Partnership", Brussels, 16.06.2004.
[157] Kreft, Heinrich, "Geopolitics of Energy: A German and European View", 2006, p. 6.
[158] European Commission, DG TREN, Energy and transport international relations. Available at:

Andris Piebalgs noted as a common interest between the two parties also promoting the improvement of the investment climate in energy exporting countries.[159] However, it is possible that namely the strategy towards exporting countries become a contentious issue between China and the EU. China is embarked on a neo-mercantilist approach in its pursuit for energy resources, by buying up oil and gas fields, which has consequences on its foreign and security policy. China's relations with countries like Sudan, Zimbabwe and Iran runs counter to everything that the international community does in the field of human rights, good governance, fight against corruption, etc.[160]

USA

Until not long ago, the energy cooperation between the USA and the EU was underdeveloped, given that the principal aim US energy security policy coincides to a great extent with the European one: ensuring a functioning world energy market.

Jose Manuel Barroso called for the setting up of a Strategic Energy Dialogue with the USA during his visit at Georgetown University in February 2006. Its aim was declared as increasing the cooperation in worldwide challenges as the development of under-exploited hydrocarbon resources in the Caspian Sea and Central Asia in particular; increasing the role of market rules in the energy sector; improving energy efficiency; maintaining competitiveness; creating a permanent network of EU-US energy experts who would identify common policies and responses to energy crises.[161] The EU and the USA have agreed to develop a strategic cooperation on

<http://ec.europa.eu/dgs/energy_transport/international/index_en.htm>, (accessed on 29 May 2007).

159 Piebalgs, Andris, Speech at China-EU Energy Conference "Towards a closer EU-China cooperation in the field of energy", Shanghai, 20 February 2006. Available at: <http://europa.eu/rapid/pressReleasesAction.do?reference=SPEECH/06/105&format=HTML&aged=0&language=EN&guiLanguage=en>.

160 Kreft, Heinrich, "Geopolitics of Energy: A German and European View", 2006, pp. 6-7.

161 Barroso, Jose Manuel, Speech "Speaking with a common voice: Energy policy in the 21st century", Georgetown University, 9 February 2006.

energy and energy security, presented in a joint declaration at the EU-US Vienna Presidential Summit.

However, the USA are both a potential partner and potential rival of the EU. The interests of both parties coincide, for example as regards China's actions in Africa and Latin America, and the second as regards the Norwegian resources in the Barents Sea. A problematic issue is also the US rejection of the Kyoto Protocol, although they are the world's largest energy consumer and CO_2 emitter. On the other hand, USA is a global power of particular importance, for ensuring the security of sea lanes, as well as the stability of many oil producing countries.[162]

b. Regional level

Energy Community Treaty

The geographic position of Southeastern Europe between major producers and consumers makes it an important transit route for Russian, Caspian and Middle East energy supplies. That is why the European Union launched an initiative to integrate its gas and electricity markets with the market of the countries in the region, by binding them to harmonize their legislation with the EU acquis by signing the Energy Community Treaty. It came into force on July 1, 2006, creating the largest internal energy market in the world.[163] Following that date, countries that are party to the Treaty have to allow free movement of gas and electricity across their borders, while conforming to a minimum of environmental and commercial standards. The Treaty serves several strategic objectives of the EU. First, it establishes direct connection to countries that border to the Caspian Sea and the Middle East, and thus providing a single regulatory basis for the import of fuels from these countries and second, it extends EU environmental standards to neighbours of the EU.

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[162] Kreft, Heinrich, "Geopolitics of Energy: A German and European View", 2006, p. 7.

[163] European Union, Press release, "Ministers hail largest energy internal market in the world – Energy Community Treaty", 8 June 2006. Available at: <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/06/757&format=HTML&aged=0&language=EN&guiLanguage=en>.

c. Multilateral level

IEA

Consumer-consumer dialogue on energy security between the Western consumer countries now takes place within the IEA, which is developing a cooperation with the European Commission. The IEA's principal role is the security of oil supply by holding oil stocks and taking measures in case of supply disruptions. It is a consultative body, whose activities include the exchange of information on energy policies.

5. Conclusion

Diversification is the most important condition for enhancing EU's energy security. That is why the EU embarks on energy dialogues and partnerships with the most important energy suppliers, consumers and transit countries. The action on community level is directed towards providing political and financial support and establishing effective relations with partner countries.

As indicated earlier, there are individual actions of single member states to ensure their own energy security without taking into account the overall interest of the Union. However, member states are increasingly aware of the importance of a common and coherent approach for facing the future energy challenges. The effective producer-consumer and consumer-consumer dialogue, as well as the dialogue with transit countries requires a mix of bilateral and multilateral instruments. Therefore, the EU is trying to develop bilateral dialogues with its energy partners and to use in the most effective way regional and multilateral organisations.

General conclusion

Energy has always been considered as a sector directly linked to national security and therefore a field which must be kept under national sovereignty. However, the member states of the EU are aware that the only way to meet the energy challenges of the 21st century is unity. There are signs that there is a political will to overcome the traditional reluctance to cede competences in the energy field, which is the most important precondition for a shift to an external energy policy. Despite all diversities among member states, they have always shared a common vision over energy development. And they are aware that in order to face their growing dependence on energy imports, they have to make more targeted and coherent efforts to ensure their energy security.

The reasons for this are several. First, the EU member states are aware that they do not have the necessary resources to maintain their well-developed economies and standard of living. Europe will remain a “hostage of fossil fuels” for the years to come and with the depletion of its own reserves, it will be more and more dependent on energy imports from regions characterised by political instability and doubtful reliability. At the same time it has to cope with increasing competition for energy resources with other major consumers and with rising energy prices. If individual countries act independently from one another, they will not be strong enough to exert influence and to carry out projects in their interest, as well as to meet the competition of rival consumer countries. The EU should face this challenges by engaging in partnerships with major energy producers, consumers and transit countries and by diversification, using actively its foreign policy instruments to achieve security of supply. Ensuring energy security is possible only after recognising the importance of interdependence. No country or region can alone protect itself from price swings or from consequences of supply disruptions. Diplomatic and economic dialogues, not confrontations are going to enhance EU's energy security and a common effective and coherent energy policy will give the EU the opportunity to obtain a prominent position in the international relations.

The effective producer-consumer and consumer-consumer dialogue, as well as the dialogue with transit countries requires a mix of bilateral and multilateral instruments. The EU has many instruments at its disposal for the implementation of the common external energy policy, including diplomatic, legal, financial and political options and should make use of all of them to enhance its security of energy supply. Therefore, the EU is trying to develop dialogues with its energy partners and to use in the most effective way regional and multilateral organisations. It develops bilateral dialogues with its main energy suppliers – Russia, the Middle East, the Caspian region, Norway, with key transit countries such as Ukraine and Turkey, as well as with other major consumers, like India, China and the USA. It profits also from international instruments such as the Energy Charter Treaty, the European Energy Community, the European Neighbourhood Policy, the IEA. All these dialogues are aimed at diversification, which is the main principle of ensuring energy security.

Acting together at international level is an important step, as it is a guarantee for a more coherent and efficient action towards EU's partners. In the future energy policy will probably be an important element of the EU's CFSP. Energy dialogues and partnerships with major producing and transit countries and regions should be pursued in a more coordinated manner between the Office of the High Representative and the individual member states.

The fact that until now there is still no common energy policy in the EU was due to the lack of political will, rather than the lack of legal basis. Regarding the urgency of the energy challenges, standing before the Union, there is a growing awareness that the energy supply policy should be tackled on a Community level. The EU has already started common initiatives related to the completion of the internal market, environmental protection, security of supply. But despite the efforts of the EU member states to liberalise their energy sector, on the world stage governments still play the leading role. That is why an active EU policy is needed. In order to be able to influence the global developments in the energy field, the EU should find a way to

speak with one voice on energy matters.

Realising that when they are united, they will be stronger, member states started to seek a common position and have already expressed their will to accept the common energy policy by endorsing propositions for a common energy strategy. The EU member states will meet the same challenges for their energy security and have the same vision for their energy policy priorities. Therefore, even being so different and with various energy situations, it is in their best interest to develop a common approach in their energy supply policy.

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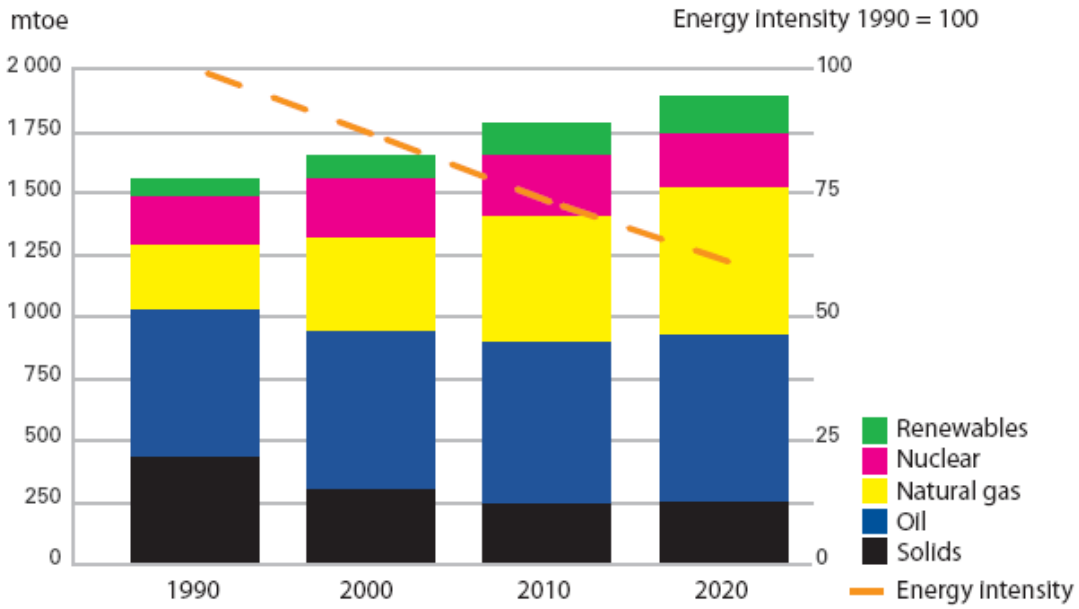
Interview with Mr. Tim Gould, Senior Adviser, Energy Charter Secretariat, 24 April 2007.

Annexes

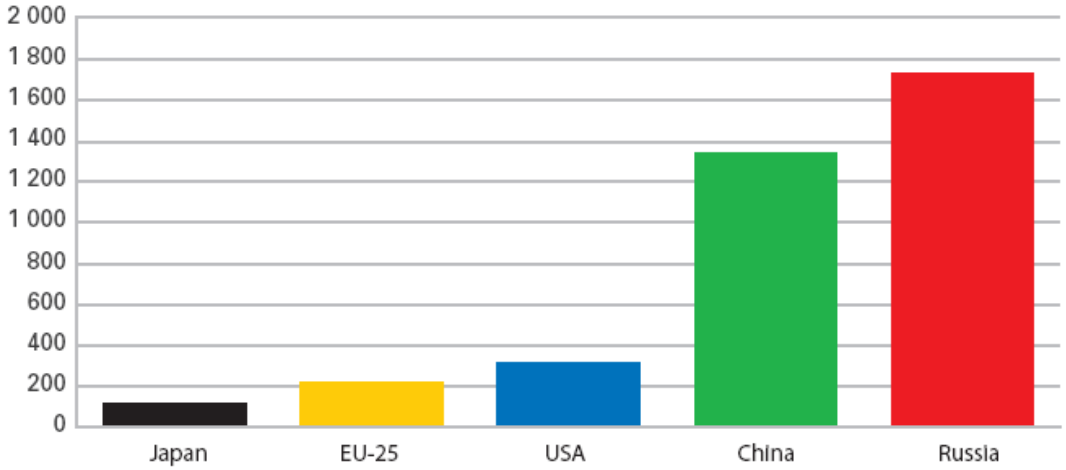
Annex 1

Energy intensity in the EU

Total energy consumption by fuel and energy intensity 1990-2020 (EU-25)



Energy intensity in 2003 (in toe/million EUR of GDP at 1995 market prices)

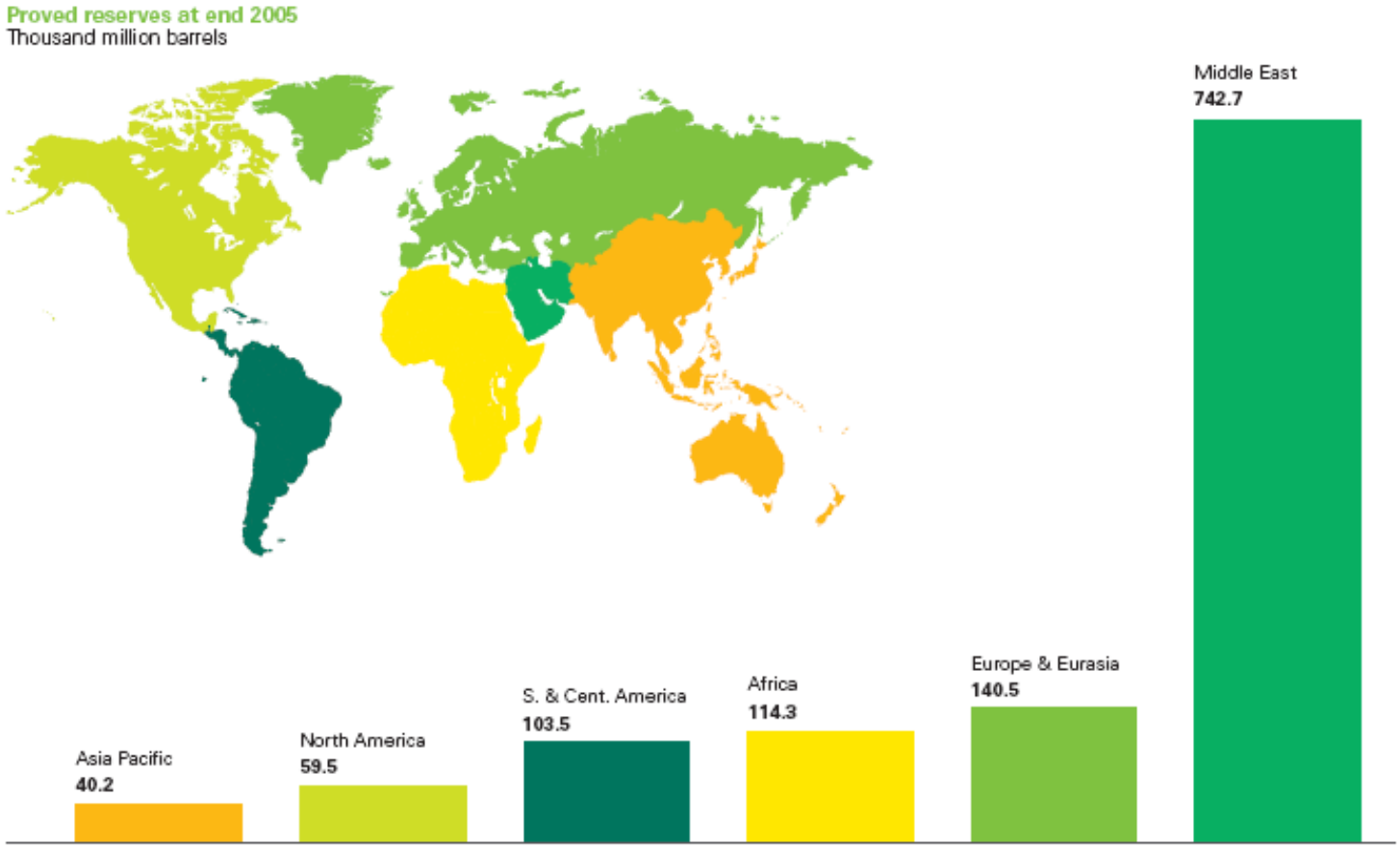


Source: European Commission, DG TREN, Green Paper on Energy Efficiency, "Doing More With Less", European Communities, 2005.

Annex 2

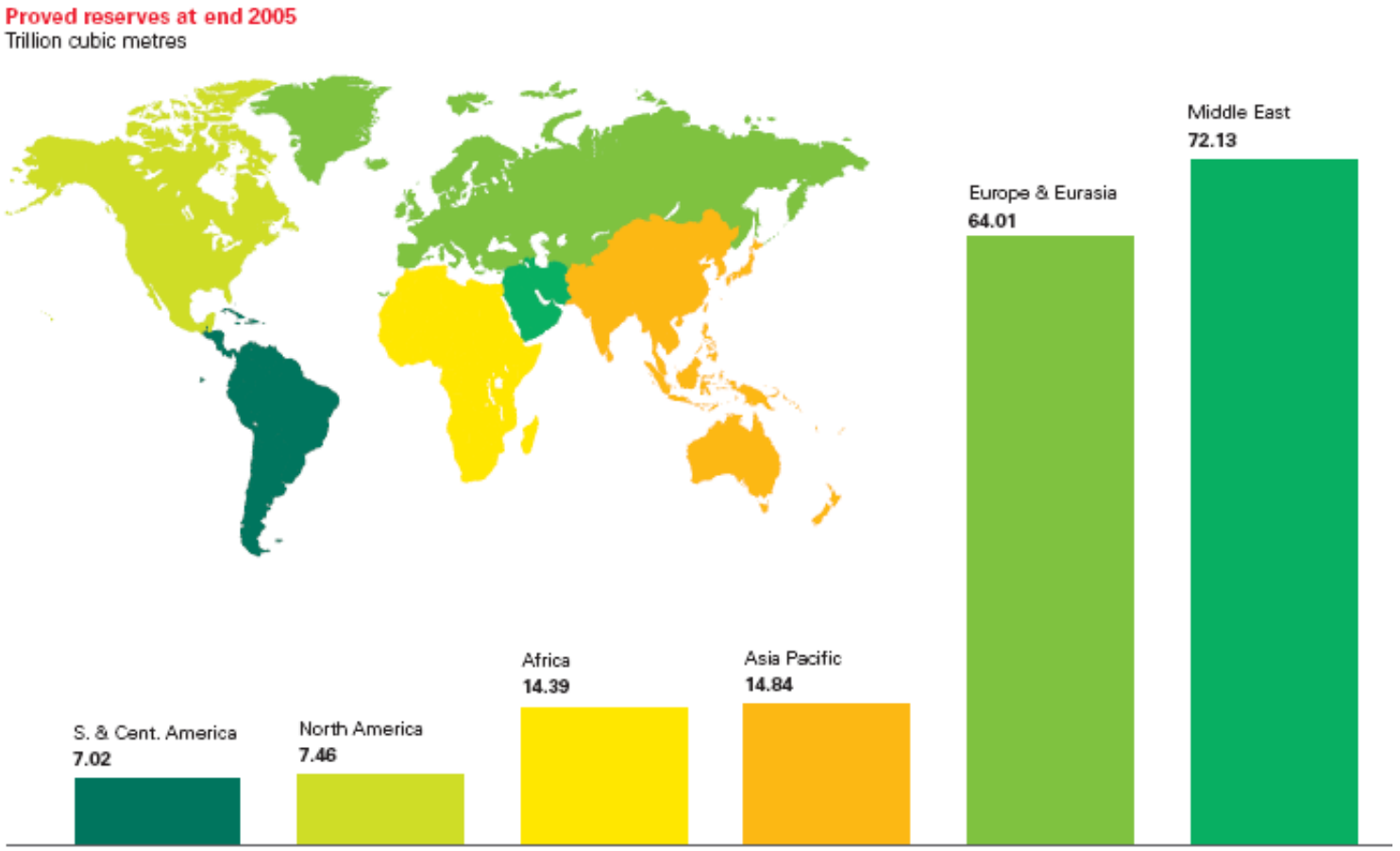
World fossil fuels proved reserves distribution by region

a. Oil



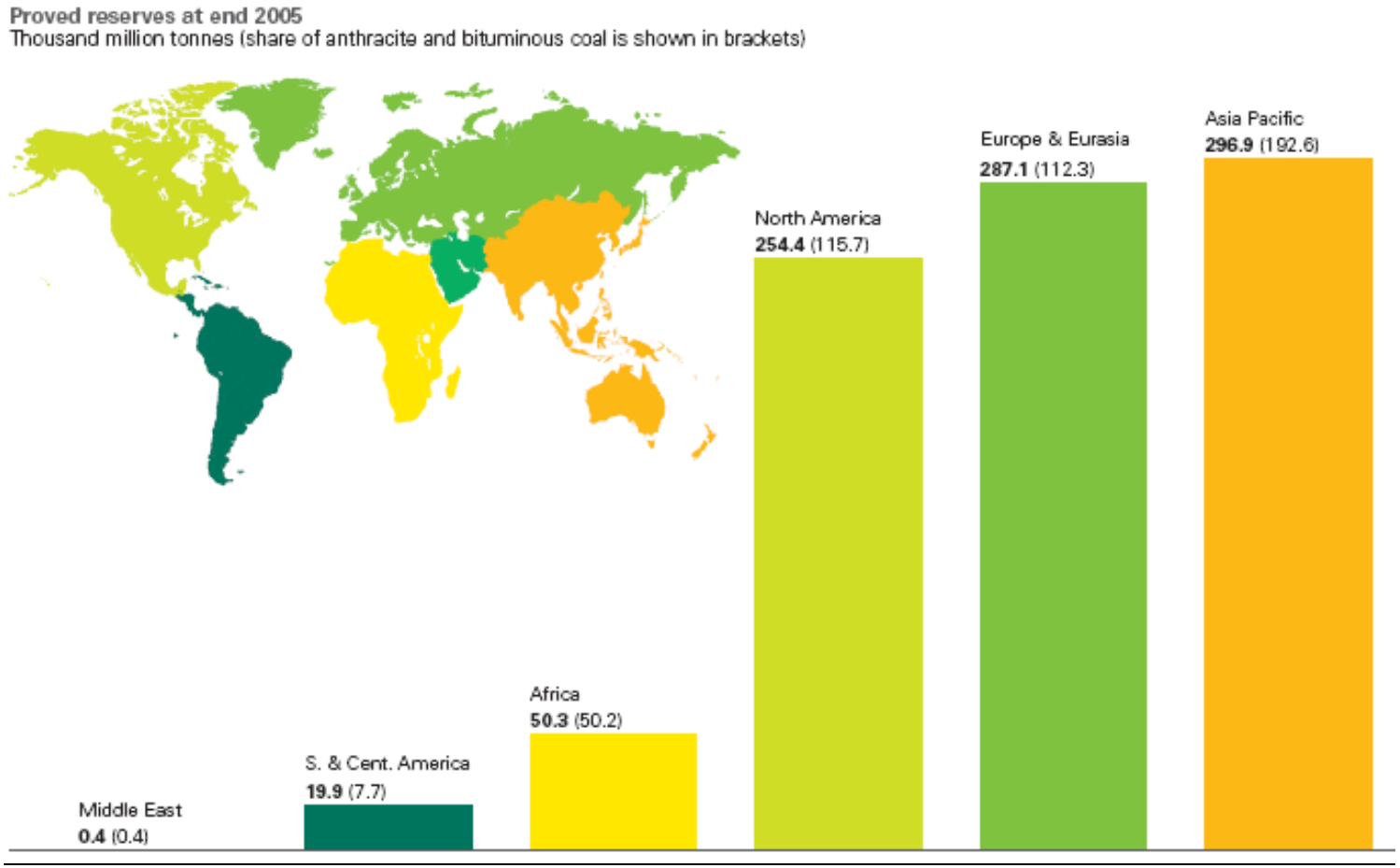
Source: BP

b. Natural gas



Source: BP

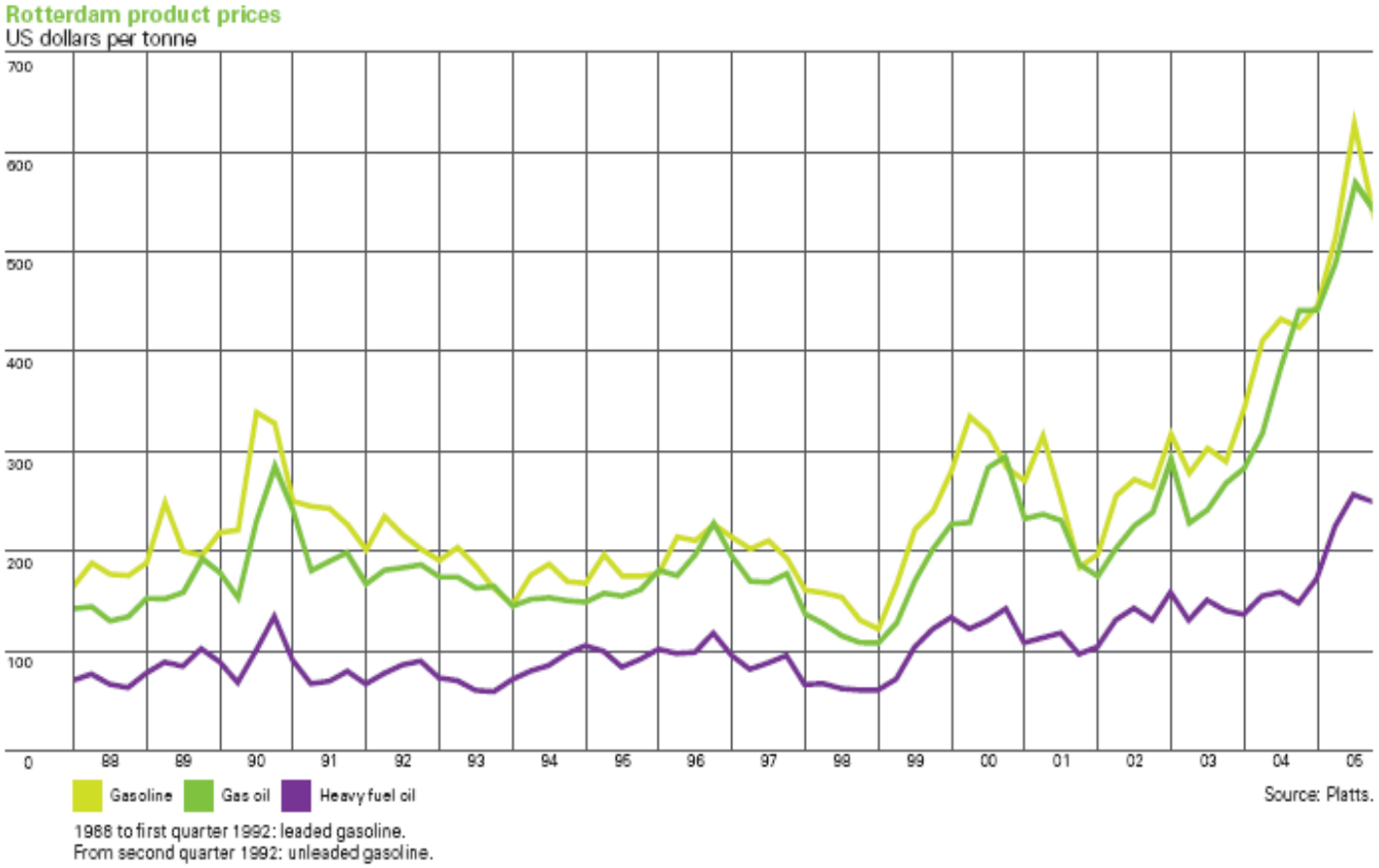
c. Coal



Source: BP

Annex 3

Oil products prices 1999-2005



Source: BP

Annex 4

Main oil and gas pipeline connections Russia-Europe

a. Druzhba oil pipeline - the world's longest pipeline with a capacity of 1.2-1.4 mb/d. It begins in Samara, where it collects oil from West Siberia, the Urals and the Caspian Sea and is split into two sections: one running through Belarus, Poland and Germany, the other through Belarus, Ukraine, Slovakia, the Czech Republic and Hungary.

Source: Energy Information Administration

b. Blue Stream – it is aimed at Russian natural gas supply to Turkey via the Black Sea offshore area avoiding third countries. It is 1213 km long and its design capacity amounts to 16 bcm per year.

Source: Gazprom

c. Nord Stream – natural gas pipeline, still under construction. It will bypass Poland and the Baltic states, running under the Baltic Sea from Vyborg, Russia to Greifswald, Germany, from where the gas can be transported onward to other European countries. It is approximately 1,200 km long, with a capacity of 55 bcm per year. The total investment for the offshore pipeline is estimated to be at least 5 bln euros. It is scheduled to become operational in 2010.

Source: Nord Stream website: http://www.nord-stream.com

Annex 5

Pipeline connections in Southeast Europe

a. Burgas-Alexandropoulis pipeline - linking the Bulgarian Black Sea port of Burgas with the Greek Mediterranean port of Alexandropoulis. It will pipe Russian oil transported with tankers from the port at Novorossiysk. Construction of this pipeline would reduce the increasing pressure of maritime oil transport through the Bosphorus. It is 285 km long with a capacity of between 35 and 50 mln tonnes a year. Counstruction work is scheduled to begin in 2008.

Source: Transneft

b. AMBO (Albanian Macedonian Bulgarian Oil Pipeline Corporation) – founded upon the necessity of a bypass to the Turkish straits, because until now only BTC provides a direct route from the Caspian to a load port in the Mediterranean. However, the probability of implementation of this project is undermined due to the agreement reached for the construction of the Burgas-Alexandrupolis pipeline.

Source: Energy Charter Secretariat

Annex 6

EU-supported projects for bypassing Russia

a. BTC oil pipeline – Azerbaijan – Georgia – Turkey. It runs 1,040 miles from the Azeri capital city of Baku, via Georgia, to the Mediterranean port of Ceyhan. At a cost of almost $4 billion, the BTC pipeline allows oil to bypass the crowded Bosporus and Dardanelles Straits. Test filling began in early May 2005, and the BP-led consortium loaded its first tanker on July 13, 2006. With a capacity of 1 million barrels a day, it will supply Azeri and Kazakh oil.

Source: Energy Information Administration

b. BTE pipeline (South Caucasus Pipeline) - Azerbaijan – Georgia – Turkey. For the most of its length it will follow the route of the BTC through the Caucasus region westwards from Azerbaijan to Tbilisi, and then southwards to the Turkish town of Erzurum, where it will be connected to the Turkish gas pipeline system. The BTE pipeline will exploit the natural gas from the giant offshore Azeri field of Shah Deniz, which has proven reserves of 460 billion cubic metres. With a full capacity of around 8 billion cubic meteres per year, to be achieved in 2009, the BTE could start piping gas to Turkey as early as 2006, depending both on the development of the Azeri field and on the completion of the pipeline. The $1.3 billion pipeline's capacity is expected to carry 30 bcm per year. Pipeline construction activities began in late 2004 and will be completed during the first quarter of 2007.

c. NABUCCO - Turkey - Bulgaria - Romania - Hungary - Austria gas pipeline. Total capacity is envisaged at 20 billion cubic metres with a total of 3,630 kilometres of pipelines.

Source: INOGATE