MASARYK UNIVERSITY
Faculty of Social Studies
Department of Political Science
Department of International Relations and European Studies

Bc. Pim Plekker

The European Union’s Politics of Energy

Master Thesis in European Politics

Supervisor: PhDr. Břetislav Dančák, Ph.D.

Brno 2007
I declare, that I made this thesis myself by the use of cited resources.

…………………………signature

Brno, December 10th, 2007
Abstract

Energy sources like oil and gas are depleting. In the nearby future the demand for energy will only rise further. Cheap “Energy” is the fundament of a healthy economical society. Without cheap energy everything will become more expenses. The fact that “energy” is important for a country’s economy makes it not difficult to predict that having a stable energy source is of the highest importance. It can be said that due to the fact that the European Union is depending on imported energy it is vulnerable. States who supply energy could misuse there dominant position as supplier of energy by using this as a political tool to manipulate the political decision-making process of the European Union. The Russian - Ukraine conflict, where Russia shut down her gas-export to the Ukraine, and because of that, parts of Europe had to deal with a minor disruption as well, can be seen as an example how Russia uses her dominant status as gas supplier in order to manipulate foreign decision-making. It shows how the energy topic becomes more and more a political subject. In light of this background I would like to ask the following question:

“How does the European Union conduct her internal and foreign energy policy in terms of energy security?”

This thesis question will analyze the current and future policies of the European Union concerning energy security.
Contents

Introduction ............................................................................................................. 6

1. Definition of energy and energy security ......................................................... 7

2. The EU’s historical development on energy security/policy ......................... 10
   2.1. European Community on Steel and Coal ............................................ 11
   2.2. Euroatom Treaty ................................................................................. 12
   2.3. The Rome Treaty and further ............................................................... 14
   2.4. European Energy Charter ................................................................. 16
   2.5. Maastricht Treaty .............................................................................. 19

   3.1. Overview of Current Energy Consumption in the European Union .. 21
   3.2. Contemporary Internal Energy Policies of the European Union ....... 25
       3.2.1. An Energy Policy for Europe .................................................... 26
       3.2.2. Competitiveness and the internal energy market .................... 27
   3.3. An Internal Energy Market that guarantees security of supply ......... 29
       3.3.1. Enhancing security of supply in the internal market ............ 29
       3.3.2. EU’s approach to emergency oil and gas stocks ................. 30
       3.3.3. Opinions concerning the EU’s internal market .................... 31
   3.4. Diversification of the energy mix ....................................................... 32
       3.4.2. Possibilities of coal, nuclear power and renewable energy ... 33
       3.4.3. Coal .................................................................................. 34
       3.4.4. Nuclear Power .................................................................. 35
       3.4.5. Renewable Energy ............................................................... 36
   3.5. An integrated approach towards climate change ......................... 39
       3.5.1. Innovation and technology ................................................... 42
4. Contemporary situation of the EU’s external energy policies
   4.1. EU-Russia Energy Relations
   4.2. EU-OPEC Energy Dialogue
   4.3. Caspian and Black Sea region
      4.3.1. EU initiatives towards the region
      4.3.2. Important pipelines in the region
      4.3.3. Issues in the region
   4.4. Middle-East, North Africa and the Persian Gulf Countries
   4.5. South-East European Energy Community
   4.6. Baltic Sea Region Energy Cooperation (BASREC)
   4.7. Arctic Energy Agenda
   4.8. EU-Norway Energy Dialogue
   4.9. Africa

5. Energy Security in the Transatlantic Context

6. An External Energy Policy for Europe

7. Conclusion

8. References
Introduction

In the coming decades, the European Union will significantly become dependent on foreign energy imports mainly coming from regions which are political unstable. In addition, fossil fuel sources are depleting and the demand for energy will rise considerably. When no action is taken, these developments carry the potential to change our way of life. In fact, without securing our demand of energy in the nearby future, we will not be able to maintain our way of life. Therefore, finding solutions in order to avoid us from finding ourselves without enough energy, is of the outmost importance.

In light of this background I will research the following question:

“How does the European Union conduct her internal and foreign energy policy in terms of energy security?”

By analyzing the question above, my goal is to describe and analyze the development of an European energy policy on an internal level and as well external one.

The structure of my thesis will be as follows. Chapter one will analyze the definition of “Energy Security”. Chapter two will give an overview of the European Union’s developments concerning the creation of an energy policy. Chapter three will discuss and analyze the EU’s contemporary internal energy policy. In Chapter four I will give an overview and analysis on the European Union’s external energy policy. As regards to chapter five, I will discuss the relation between the European Union’s energy relation with the United States of America. Chapter six will discuss and analyze the EU’s proposal for a specific European Energy Policy. Chapter seven will contain my conclusion.
1. Definition of energy and energy security

Before I start to write about ‘energy security’ it is first important to explain what energy security means. In order to do this, I will first separated these two words and define each one apart. When trying to find a precise definition of ‘energy security’, one learns quickly that there are many, and that they all carry a certain truth within them. So, the spectrum concerning the definition of ‘energy security’ is wide. In order to get a clear picture I will first start with defining the word ‘energy’ and ‘security’ separately. According to the Oxford dictionary the word ‘energy’ is said to be:

**The strength and vitality required for sustained activity. 2 power derived from physical or chemical resources to provide light and heat or to work machines. 3 Physics the property of matter and radiation which is manifest as a capacity to perform work.**

The word ‘security’ is explained as: *The state of being or feeling secure.*

Putting these to meanings together create the following: *A sustained being of strength and vitality required for continual activity.* From the perspective of a state it would mean *‘the flow of energy resources on a continual and secure base’*. Commonly the definition of energy security is explained as “the availability of energy at all times in various forms, in sufficient quantities, and at affordable prices”. However, this only counts for countries depending on imported energy. This is an explanation which does not take in account the broader scope surrounding the definition of energy security. What about the countries who are exporting energy? Does the definition of energy security apply for them as well?

Daniel Yergin ask himself this question as well and therefore states that the definition of energy security is defined by several perspectives based on the situation a particular country finds itself in. For example, for a country depending on import, like most countries within the European Union and the Western World, the definition of energy security would indeed be: “a stable ad secure supply of energy at a reasonable price”.

---


A breach in the supply flow of energy to a state depending on important energy would create financial tensions on the economy. A serious breach of important energy for a longer time of period could create great economic damage. At the other side of the paradigm there are countries located in an area where there are lots of energy resources, who would define the definition of energy security as a “security of demand”. For these countries it is of economical importance to have a continual guarantied demand for energy. Paradoxically, high oil prices do not benefit exporting countries in the long run. For example, high oil prices encourages importing countries to diverse their need for energy. In order to be less depended on their imported oil they will invest more in alternative resources of energy and make their use of energy more efficient. This means that exporting countries will gain losses if the do not keep their prices on a reasonable level. These countries will need to find a continually balance concerning their oil price according to the day to day situation on the energy market. But having this said, I wonder if this is really a form of energy security? To secure a continual demand of energy is of course a vital act of an exporting country in order to sell its products. But is the need to secure the demand for energy on the same level as the need to secure the supply of energy? I think not. The risk that an importing country will have to deal with the situation of little energy supply is many times bigger than an exporting country without demand for energy. In order to use the term security there should first be a certain risk. As their exists no nearby risk for an exporting country without a demand of energy I would state that I therefore do not completely agree with Yergin by placing exporting countries within the definition of energy security.

Between the importing and the exporting countries lie the developing countries. According to Yergin, for these countries the definition of energy security means to address in how far changes in energy prices affect their balance of payments. Higher energy prices will mean higher payments. Developing countries dealing with high oil prices will create, for example higher costs on the countries transportation sector thus affecting the economy. In addition it will create rising unemployment, higher budget deficits and higher inflation deficits. Here Yergin makes a good point by showing that there exists a real risk for these countries not able to pay their payments because of high energy prices. This is indeed a big risk for developing countries and creating policies in order to deal with this risk can, from my point of view, be a part of energy security.

---

3 UNCTAD. http://www.unctad.org/TEMPLATES/Page.asp?intItemID=4005&lang=1
In sum, according to Yergin, these three examples show that the definition of energy security depends on the fact if a country is an importing country, exporting country or developing country. However, I stated that placing an exporting country within the definition of energy security is not needed, because there exists now real risk of losing a continual demand of energy in the nearby future. Only for importing countries and developing countries there exists a real threat of disturbed economies due to unsecured energy policies.

Now that we have a created a clear picture about what the definition of energy security means for different countries and how this affects each country’s policy on energy security, we can continue with the European Union’s historical position on energy security.
2. The EU’s historical development on energy security/policy

Before I will start to discuss the historical development on energy policies of the European Union, it is important to notice that the European Union in fact came into existence until November 1993. It did not replace the European Community (EC) which was in place from 1957⁴. In this thesis I will use the name EU as well for events which took place before 1993 and to policies that, legally, belong to the EC.

I will discuss the origin of the first attempts to come to a common energy policy. I will discuss the kind of policies which were perceived, the reasoning behind them and the results which they had.

The whole development of coming to a common energy policy within the European Union has been, and is, a difficult process. At the core of these problems lies a structural friction between the member state and the EU concerning sharing or handing over autonomy on certain policies which were first a national matter. In case of possibly losing decision rights relating to controlling energy policy, it can be predicted that member states are not eager to pass on there decision mandate on to a supranational level. Especially producer countries were not favourable of being dictated in their policy by Brussels. However, in most cases during the history of the EU the so-called: ‘hard nuts’ would be cracked only in times of real crises. This does not only count for the development of the policies on energy, but as well for all other policies which have been created. In most cases a ‘European’ crisis was needed to make a decisive step forwards.

2.1. European Community on Steel and Coal

The first treaty in direction of a common energy policy was the treaty on the European Community on Steel and Coal (ECSC) of 1952, signed for in 1951\(^5\). The Treaty can be seen as a great achievement in relation to a Supranational-Europe, because for the first time the six founding nations of this community gave parts of their national sovereignty, although small, to the community. Its participants were France, Belgium, the Netherlands, Germany, Italy and Luxemburg. Jean Moneta French economist, being the father of this plan, aimed to transfer control of national coal and steel industries from national authorities, particularly from France and Germany, to a supra-national institution. Since the control of steel and coal were fundamental elements for the creation of large armed forces, the effect of this would be that it would become impossible for individual member-states to posses their heavy industry and armaments industries, in particular, and thereby would make a new war unfeasible\(^6\). By doing this the treaty also intended to reconcile France and Germany with each other by being forced to cooperate. Therefore it should provide for a framework for economic and industrial recovery that would not revive old rivalries but instead establish the basis for permanent peace. This initiative created a free-open marked system for coal and steel between the six member-states. Its results were successful. From an economical point of view the iron and steel production, between 1952 and 1960, rose by 75% in the ECSC nations, and industrial production rose by 58%. From a political point of view the treaty fostered political cooperation between the member-states. This was mainly important for countries like France and Germany who during history clashed many times over the control of key sectors at the border regions of France and Germany in the Ruhr, Saar and Lorraine areas. These regions contained a large amount of iron and coal. On July 23, 2002 the treaty expired, and assets and liabilities were taken over to the European Union\(^7\).

From an energy security point of view the creation of the ECSC contributed to a stable and secure exchange of steel and coal resources between participating countries based on an open market incentive. Countries without coal reserves had guarantied


\(^6\) Egenhofer, C., *Understanding the politics of European Energy Policy: The Driving and Stopping Forces, the politics of European Energy, the energy of European Politics and Maastricht II*,

access to coal reserves located in other countries. In addition, the treaty made it impossible for countries like France and Germany to get monopoly control in key steel and coal rich regions by force. In fact they were now forced to enter into a political dialogue with each other which fostered the emergence of a peaceful cooperation between two former rivals. Therefore, not only did this treaty promote peace in an area which had a long history of conflicts, it also stimulated a highly profitable cooperation between ECSC nations from which its effect drive forward until today.

2.2. Euroatom Treaty

In 1957 the European Atomic Energy Community, or with other words, Euroatom, came into being together with the European Economic Community (EEC)\(^8\). Both came forth out of Treaties of Rome in 1957.

Euroatom formed an answer to several problems, from which some of them could not be dealt with by a single country. According to the Treaty, the specific tasks of Eurotom are:

- To promote research and ensure the dissemination of technical information
- To establish uniform safety standards to protect the health of workers and of the general public and ensure that they are applied
- To facilitate investment and ensure the establishment of the basic installations necessary for the development of nuclear energy in the EU.
- To ensure that all users in the EU receive a regular and equitable supply of ores and nuclear fuel.
- To make certain civil nuclear materials are not diverted to other (particularly military) purposes.
- To exercise the right of ownership concerned upon it with respect special fissile materials
- To foster progress in the peaceful uses of nuclear energy by working with other countries and international organisations.
- To establish joint undertakings.

\(^8\) Treaty Establishing the European Atomic Energy Community (Euratom), http://europa.eu/scadplus/treaties/euratome_en.htm#OBJECTIVES.
During the 1950’s the six founding countries had to combat a general shortage of conventional energy. Investing in nuclear energy could not be met by a single country alone. Only in the form of cooperation this could be realized. Hereby the six countries aimed for energy independence. The Suez Crisis formed a key motivation why countries should be less depended on foreign energy imports. Euroatom was meant to limit the growing energy import dependence from the Middle East. But this was not everything. By forming Euroatom, the EU would create and develop Europe’s nuclear industries in order to achieve a security of supply. In short, further objectives which were envisaged by the EU were, by the use and development of nuclear energy, would bring prosperity to the people and also the promotion of peace. Although this all sounds very utopian and a bit idealistic, the creation of Euroatom was also to form an European counter balance to the military and political hegemony of the two superpowers USA and USSR.

Unlike the EC Treaty, The Euratom Treaty has never been undergone major structural changes. The European Atomic Energy Community has not merged with the Union and therefore retains a separate legal personality, though sharing the same institutions. The whole political process surrounding Euratom has always undergone fierce debate and therefore the political process surrounding the Treaty has been tiresome. However, Euratom has made significant achievements during the last fifty years of its existence. For the last fifty years, Euratom is still meeting the objectives set in 1957. In addition, it made its most significant successes in the field of setting safeguards and the introduction of strict benchmarking standards. Euratom loans have also helped to implement safety upgrades and decommissioning programmes in the EU. The safeguards on the handling and distribution of fissile materials provided by the Treaty have been proven to play a very effective role in ensuring that civil nuclear materials are not misappropriated for military uses. Especially in today’s world, where terrorist groups could use nuclear materials, this is a very important achievement.

---

9 The Suez Crisis formed a possible threat because the Suez formed a strategic road for the transport of oil to the West. Losing this strategic point would mean a loss on oil imports.
11 Egenhofer, C., Understanding the politics of European Energy Policy: The Driving and Stopping Forces, the politics of European Energy, the energy of European Politics and Maastricht II.
The Treaty ensures that a regular and fair supply of uranium and nuclear fuels is maintained and this is done through the careful monitoring and approval of supply contracts by the Euratom Supply Agency. This helps security of supply. The Treaty further achieved important successes in the area of research. For example, it continues to foster nuclear R & D via the EU’s 7th Framework Programme and the work of the European Commission’s Joint research Centre. Within the international dimension, the Treaty has enabled major nuclear cooperation agreements to be signed, e.g. with the US, Japan, Australia and Canada. These agreements have helped to provide a basis for increased shared security and safety on global scale. Finally, the Treaty has helped to establish a European market for nuclear energy in which access to materials and security of supply play a key role\textsuperscript{12}.

In sum, we can state that Euratom has had major achievements, namely when looking to the safety procedures which are used by all the member-states. When looking to its relevancy from the viewpoint of energy security we can say that Euratom formed an important role within differentiating of energy resources. It secured a continues need for energy, this time not only based on coal and oil, but also based on nuclear energy. However, we must not forget that nuclear technology was not available before Euratom. France and the UK were already testing nuclear facilities from 1945 on.

2.3. The Rome Treaty and Further

The European Economic Community in 1957 did not foresee a separate energy chapter. However there was the Spaak report, which identified energy as an area for urgent attention. Unfortunately this report must be seen as a draft EEC treaty. Member states did not accept an energy chapter since they were loath to lose their autonomy over energy policy. Since there did not exist a legal base for energy, it did not mean that the EU was left with nothing in order to deal with energy issues. Due to the craftiness of the commission several EU competencies were used in order to provide a certain energy policy.

These competencies were the single market provision (e.g. technical and tax harmonisation and public procurement) and competition policy. In some of core EU policies such as the environment, regional policy, research and development policy and Trans-European Networks, energy has played an important role.

In addition, from time to time, attempts were made to enlarge the energy competencies of the EC. This happened mostly in times of real or perceived supply crises such as in the beginning of the 1970’s or, in the context of the First Gulf War. In the 1970’s, the promotion of research on coal and exploration activities in the North Sea through Community funds was on the agenda, and the mid 1980s saw the definition of common energy objectives. These objectives, were designed to improve energy efficiency and with it, to reduce import dependence. With falling energy prices, the objectives were soon forgotten. Member states neglected targets on energy efficiency and other energy objectives to which they committed themselves. Intergovernmental coordination in the field of energy policies has not worked.

The text above shows a clear circle of behaviour which is typical for the way the European Union and her Member states conduct politics. It shows that before coming to a common policy there must be a serious crises which endures long enough in order to set all the political decision authorities in one direction. If the crises fades away on time nothing structural will be done. When a certain crises will take long enough, structural policies will be made and by then based on a supranational level. Unfortunately, countries or organisation responsible for setting energy prices, like for example oil prices know this. Therefore, these countries will monitor the political movements of their buyers on close so they can lower their prices, when possible, if serious steps are taken to lower import due to creation of alternative energy resources. It also shows also that it is unwise for exporting countries or organisations to raise there prices just because they are able to. Because, in effect, importing countries would invest in alternative resources. The incentive to do this anyway without having high energy prices is mainly because investing in research and development of alternative energy sources is very costly. Therefore, no structural changes will happen when the price of energy is affordable. Since, for many oil exporting nations oil is their primary income, they cannot afford to lose their customers. Therefore, it is important for them to set ‘reasonably’ prices for their oil. Because the supplier and demander need each other, they will be both motivated to maintain and foster their ‘trade’ relation.
Using energy as a political weapon by influencing politics of their client, is therefore one of the biggest sin and foolishness which a supplying country can carry out towards their client. It will motivate importing countries almost instantly to become independent of their provider because it cannot rely on their provider as a stable deliverer without an extra agenda. In addition this would also send a very bad signal to other potential clients, who contemplate to do business with them. This all seems very logical, but however it still has happened that countries used their strong position as energy provider to influence the political agenda of their receivers. In the chapter, describing the contemporary situation in Europe, I will discuss this issue.

2.4. European Energy Charter

Although nothing much happened during the 1980’s in the field of a European energy policy, at the end of it a new impulse was given at the Dublin European Council in 1990. It was the Prime Minister of the Netherlands, Ruud Lubbers, who suggested to set up cooperation within the energy sector with the Eastern European countries and the former Soviet Union countries. One of the key happenings in which these events took place was the end of the Cold War at the end of the 1980’s. The Soviet Union fell apart and many of its former satellite states were opening up to the West after a long time of isolation. This offered the opportunity to overcome previous economic divisions. By doing this, Lubbers aimed to stimulate economic growth and improve the EU’s security of supply. Cooperation within the energy sector would be mutual beneficial, and because of that there was a genuine need to ensure that a commonly accepted foundation was established for developing energy cooperation among the states of Eurasia.\(^\text{13}\)

There are several reasons why the energy sector is promising for mutual cooperation:

- Energy is the driving force of all economies.
- For many partners with a developing economy, the export and sale of energy products is, and will be, one of the most important sources of “hard” foreign currency earnings and a major source of tax revenue.
- To make full and efficient use of their energy resources, developing countries and transition economies need to modernise their existing facilities. Without an immense inflow of capital, technology and know how this will not be possible\(^\text{14}\).
- Industrial countries have interests in enhanced energy cooperation because energy supply from the resource-rich countries helps them to meet increasing energy demands and results. Eventually this should result in an improved diversification of energy flows, thus reducing dependency upon one particular region.

Therefore, based on these motives the Council asked the Commission to look how such cooperation could be established. In 1991 the Commission came out with a European Energy Charter. After the negotiations processes ended a concluding document was signed in 17 December 1991. This led to the creation of the Energy Charter Treaty, ECT, in 1994; a legally-binding multilateral instrument signed or acceded to by 51 States plus the European Union. Since 1991 the Energy Charter has developed into a more global forum for energy cooperation. Russia and the five states of Central Asia (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan), Australia and Japan are all founding signatories to the ECT and are active participants in the Energy Charter process. They have been joined by Mongolia in 1999.

In addition to the Energy Charter a protocol was added named, Energy Charter Protocol on efficiency and related environmental aspects. The objectives of this protocol are:

- To promote energy efficiency policies compatible with sustainable development;
- To create the conditions for encouraging producers and consumers to use energy in more economic, efficient and environmentally sound manner;
- To encourage cooperation in the field of energy efficiency\textsuperscript{15}.

Although the European Union was the initiator of the European Energy Charter, it has not become the primary decision maker. Its main institutional body is the Energy Charter Conference, which has the political responsibility for the implementation of the Energy Charter, the ECT\textsuperscript{16} and related instruments. However in light of this thesis, the role of the European Union, by setting up this process, proved to be a right one. By taking the initiative, the EU laid down the foundations of the European Energy Treaty. Its value can be found in the fact that by doing this the EU, although very young in its existence, acted as an international actor within international politics thereby, strengthening its political position.

\textsuperscript{15} European Energy Charter, \url{http://europa.eu/cgi-bin/etal.pl}.
\textsuperscript{16} ECT stands for ‘Energy Charter Treaty
2.6. Maastricht Treaty

During the same time when the European Energy Charter was in development, there was also another important process in development. This was the creation of the European Union in 1993, based on the Treaty on the European Union.

The Treaty on the European Union which was signed for in 1992 did not enclose any chapter on energy policy. There were several reasons which excluded an energy chapter within the treaty.

- Member states were not ready to accept any curbs on their perceived or real autonomy in the energy field. For example, countries with own reserves, like the UK, the Netherlands or Germany have always been against any competencies coming from the EU;
- Another problem formed the different structures of national energy systems in each country. For instance, while the UK relies more on market forces, France is relying more on government intervention.
- Primary energy fuels supply forms another area where interests differ. In this case the differences lies in the fact that Southern member states are traditionally oriented towards the Mediterranean, while Central and Northern European countries were more concerned with Eastern cooperation.
- There existed important differences within the needed stringency of environmental legislation. Countries like Denmark, Germany or the Netherlands have in most cases high standards. By having a CEP, countries with high standards these countries would fear that there standards would be too high and therefore be lowered through an EU energy policy. At the other side, countries with low standards feared that this policy would make their industries uncompetitive because of the toughen environmental standards of the CEP.

At the whole, the most shared opinion about the CEP within member states was that there were more important issues to focus on. The Commission shared this view as well.
Commission’s president Jacques Delors realized that a possible CEP would produce fear by the French government because this would undermine the French structure of gas and electricity industries. Therefore, due to this political background, Delors had a limited interest in energy.

As time passed by after the Maastricht Treaty 1993, no attempts of an energy policy were made during the creation of the Amsterdam Treaty in mainly due to the same reasons which can be found for the Maastricht Treaty. Because the Maastricht Treaty was perceived as a huge step towards Community competencies, another big treaty including the transfer of national competencies within the energy field was not welcomed so close after Maastricht.

In sum, we can conclude that although the EU’s Commission is trying to promote a common policy via all kinds of White Papers and Green Papers, the fact is that until now, energy policy remains primarily the responsibility of the member states. For example, decisions regarding long-term oil or gas purchases, the development and improvement of energy-related infrastructure and the use of particular fuel continue to be made at the national level by individual member states.

Before I will start to discuss the current energy policies of the European Union, it is important to have a thorough understanding of where the European Union stands as a consumer of energy in world politics. The EU is a net consumer of energy and therefore it depends mainly on external energy imports from other countries or organisations. The fact that energy influences every corner of our daily lives and that living without energy would mean the end of the world we know, means that a stable and secure flow of energy to the EU needs to be guaranteed in order to maintain our way of life.

3.1 Overview of Current Energy Consumption in the European Union

Being one of the largest importers of oil, gas and coal, the European Union plays a big role on the international energy market. But still, as I have already concluded in the previous chapter, the EU remains to be a small player on the political stage because member states keep in control over there foreign energy policies. I would like to give an overview of the current energy consumption of the European Union, how much energy will the EU import in the nearby future and from who the EU imports energy. In addition I will make an analysis of possible risks related to above issues.

At the moment the EU\textsuperscript{17} accounts for 17\% of the world’s total energy consumption. In 2005, 80\% of the energy consumed within the EU was from fossil fuels\textsuperscript{18}. The figure below shows an overview of the EU’s energy consumption by fuel source. According to the Commission Green Paper on security of energy supply from November 2000\textsuperscript{19}, the EU will face a difficult period concerning her energy situation. It predicts that, if no action will be initiated, the EU’s import dependency will rise from 50\% of total EU energy consumption today to 65\% in 2030. It is expected that imports of gas will increase from 57\% to 84\% by 2030 and oil from 82\% to 93\%\textsuperscript{20}.

\textsuperscript{17} EU based on 27 member states.
For the main important fossil fuels the situation is as follows\textsuperscript{21}:

**Oil:**
- 45\% of EU oil imports derive from the Middle East;
- By 2030, 90\% of EU oil consumption will have to be covered by imports.

**Gas:**
- 40\% of EU gas imports originate from Russia (30\% Algeria, 25\% Norway);
- by 2030, over 60\% of EU gas imports are expected to come from Russia with overall external dependency expected to reach 80\%.

**Coal:**
- By 2030, 66\% of EU needs is expected to be covered by imports.

---

**Figure 1. EU-27 Energy Consumption**

*Source: European Commission DG TREN, Eurostat*

Figure 2:

Import Dependency
2005 (in %)

<table>
<thead>
<tr>
<th></th>
<th>All fuels</th>
<th>Solid fuels</th>
<th>Oil</th>
<th>Gas</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU27</td>
<td>82.3</td>
<td>36.8</td>
<td>82.2</td>
<td>57.7</td>
</tr>
<tr>
<td>EU15</td>
<td>82.9</td>
<td>36.9</td>
<td>83.7</td>
<td>56.4</td>
</tr>
</tbody>
</table>

Source: Eurostat / OECD
Definition: Import Dependency = Net Imports / (Imports+Gross Inland Consumption)
Note:
A simplified formula, not taking burners into account, is used occasionally. This variant gives higher values for import dependency by overlooking maritime transport.
Negative numbers indicate that the country is a net exporter. Values over 100% are

Figure 3: EU-27 Origin of oil (2004)
Figure: 4. EU-27 Origin of Natural Gas (2004)

Source: European Commission DG TREN, Eurostat


Source: European Commission DG TREN, Eurostat
3.2. Contemporary Internal Energy Policies of the European Union

No that we understand where the EU is situated concerning here energy dependence, we can continue by looking at its internal energy policies. Based on the facts that fossil fuels are a finite resource and that it is a major cause of global warming it became clear that the use of energy can no longer be taken for granted. Therefore, EU leaders agreed in March 2007 to bring in existence an integrated energy and environment policy based on clear targets and timetables for cutting fossil fuel use, saving energy and developing alternatives. In short, the EU leaders agreed upon the adoption of measures which largely came forth out of a larger group of measures which the Commission proposed in March 2006 with the introduction of the “Green Paper”. In this chapter I will give an overview of the most important points and measures coming out of this paper.

The Commission proposals focus on three broad interconnected goals:

- Increasing European-wide energy security;
- Enhancing sustainability;
- Fostering competition in Europe’s internal energy market.

In light of these above three goals seven targets where created in order to define the amount of percentage which should be aimed for in the coming years. The EU leaders agreed on the following numbers\(^2\):

- Saving 20% of energy consumption compared to projections for 2020;
- Increasing the share of renewable energies to 20% by 2020 in overall energy consumption;
- Increasing to at least 10% the share of biofuels in overall petrol and diesel consumption by 2020, provided that sustainable, ‘second-generation’ biofuels from non-food crops become commercially available;
- Cutting greenhouse gas emissions by at least 20% by 2020;
- An internal energy market which provides real and effective benefits to each and every person and company;

• Better integration of EU energy policy with other policies, such as agriculture and trade;
• More international cooperation.

3.2.1. An Energy Policy for Europe

In January 2007 the Commission came out with a green paper named “An European strategy for sustainable, competitive and secure energy”, in which it proposes a common European energy policy which will enable Europe to face its energy supply challenges of the future and the effects these will have on growth and the environment.

According to the Commission, the European Union should act quickly and effectively in six priority areas in order to ensure its energy supply which is sustainable, competitive and secure. By boosting developments like, the internal market for energy, energy efficiency, research and the creation of an external policy, it will contribute to Europe’s strong position on the international stage. Its six priority areas are:

• Competitiveness and the internal energy market;
• Diversification of the energy mix;
• Solidarity;
• Sustainable development;
• Innovation and technology;
• External Policy.

Since this chapter only deals with internal policies of the EU, I will discuss the sixth policy area concerning the EU’s external energy policy in chapter 6.

---

3.2.2. Competitiveness and the internal energy market

According to the Commission, sustainable, competitive and secure energy will not be achieved without open competitive energy markets, based on competition between companies looking to become European-wide competitors rather than dominant national players. Therefore, they believe that open markets, and not protectionism, will strengthen Europe and allow it to tackle its problems.

In addition, they state that, a truly competitive single European electricity and gas market would bring down prices, improve security of supply and boost competitiveness. From July 2007 almost every EU consumer has the legal right to purchase electricity and gas from any supplier in the EU. Although this already forms a big step towards a competitive market there are still issues to deal with. A lot of markets remain largely national, and are dominated by a few companies. Also there are many differences in how member states approach market opening, which prevents the development of a truly competitive European market. This also includes powers of regulators, level of independence of network operators from competitive activities, grid rules, balancing and gas storage regimes.

In short, as regards to the second electricity and gas directives The Commission has identified five core areas which need particular attention:

- **A European Grid**
  
  In order to develop a real European electricity and gas market, consumers will need a single European grid. This will be possible by ensuring that there are common rules and standards on issues that are related to cross-border trade. To deal with this, the Commission proposes a European energy regulator which will look whether existing forms of collaboration between national regulators and national grid operators are adequate, or whether a closer level of collaboration is needed. In this case such a regulator would have decision-making powers for common rules and approaches such as a European grid code and, in addition, would work together with the network operators.
• **A priority interconnection plan**
  At the Barcelona European council in 2002, the Heads of State and Governments agreed to increase minimum interconnections levels between member states to 10%. However progress in this field has been poor. For example, countries like Ireland and Malta or for the Baltic States remain largely cut off from the rest of the Community. Additional electricity interconnection capacity is necessary between many areas in order to permit real competition. In addition, there is a need for new investment in infrastructure in gas markets. Therefore, the Commission proposes to stimulate the private and public investments in infrastructure and accelerate authorisation procedures.

• **Investment in generation capacity**
  Substantial investment over the next 20 years is needed in order to replace ageing electricity generation capacity and to meet demand. Capacity has to be big enough in order to deal with peaks and necessary reserve must exist in order to prevent disruptions at times of high demand and to serve as back-up for intermittent renewable energy sources.

• **A level-playing field: the importance of unbundling**
  There are still differences in the level and effectiveness of unbundling of transmission and distribution from competitive activities. This means that, national markets are open to fair and free competition to differing degrees. The Commission advocates the fact that, the provisions of the second electricity and gas Directives on unbundling need to be fully implemented. When now further progress will made the Commission will consider further measures on a community level.
• **Boosting the competitiveness of European industry**

Promoting the competitiveness of EU industry which in turn will lead to growth and jobs is one of the most important objectives of the internal market. The Commission therefore states that an energy policy needs to favour cost-effective options and be based on a thorough economic analysis of different policy options and their impact on energy prices. A new High-Level Group on Energy, Environment and Competitiveness should play an important role in identifying ways to promote the competitiveness of all sectors of affected industry.

3.3. An Internal Energy Market that guarantees security of supply

Looking at solidarity in between member states, the Commission discusses two subjects namely:

- Enhancing security of supply in the internal market;
- Rethinking the EU’s approach to emergence oil and gas stocks and preventing disruptions.

3.3.1. Enhancing security of supply in the internal market

The Commission states that liberalised and competitive markets help security of supply be sending the right investment signals to industry participants. However, in order to let this work in an effective way the market needs to be transparent and predictable.

Physical security of Europe’s energy infrastructure against risks from natural catastrophe and terrorist threat, as well as security against political risks including interruption of supply is critical to predictability. Development of smart electricity networks, demand management and distributed energy generation could all help at times of sudden shortages.

In this case the Commission proposes several areas for possible future action:
• The establishment of a European Energy Supply Observatory that will monitor the demand and supply patterns on EU energy markets, identifying likely shortfalls in infrastructure and supply at an early stage and complementing on an EU level of the International Energy Agency.

• Improved network security through increase collaboration and exchange of information between transmission system operators in defining and agreeing common European security and reliability standards. The Commission promotes the idea of an European Centre for Energy Networks, with powers to collect, analyze and publish relevant information, as well as to implement schemes approved by the relevant regulatory institutions.

• Looking at the physical security of infrastructure, two main actions need further consideration. First, a mechanism to prepare and ensure rapid assistance to a country facing difficulties due to damage to its infrastructure. Second, the use of possible common standards and measures in order to protect infrastructure.

3.3.2. EU’s approach to emergency oil and gas stocks

In order to have enough backup supplies when major supply disruptions take place, the Commission proposes to initiate stronger coordinated community response linked to the IEA\textsuperscript{24} on a global level. By having a new Commission legislative proposal which will ensure the publication of the state of the community oil stocks on a more regular and transparent basis, this should contribute to more transparency on oil markets. In addition, existing directives on gas and electricity security of supply should be re-examined to ensure they can deal with potential supply disruptions.

\textsuperscript{24} IEA stands for International Energy Agency
3.3.3 Opinions concerning the EU’s internal market

The European Commission has long argued that member states could substantially increase energy supply security and network and const efficiency by integrating national gas and electricity markets into EU’s single European Market. However, although some member states have implemented reforms in order to liberalize their markets, national energy markets remain mostly under national control.

Since energy security considerations have taken a more profound place on the EU’s agenda the debate about liberalizing the market for energy has increased.

There are different views regarding the implementation of market integration and liberalization. At one hand, as we have already read, the Commission argues that market integration and liberalization will increase energy security by forging network connectivity and EU-wide interdependence and diversifying supply sources. At the other hand, others argue that continued national protection is important to guarantee stable and secure supply and distribution and to protect consumers from fluctuations in an unpredictable free market. For now, Commission proposals to develop a Europe-wide internal market for gas and electricity transmission and distribution continue to increase the debate, and analysts do not expect member states to take concerted action in this area before 2008.

The willingness of member states to implement EU energy policy remains a difficult task mainly because, member states regard energy policy as too important to their own economic development to let go of national control. One argument for this is that, nationalized industries in Europe have, for the most part, provided stability in the energy market. This idea goes so far that some national governments have decided to implement measures in order to protect their most dominant energy industries.

Although the Commission contends that, by increasing competition, a more open energy market will diversify supply, thereby justifying the effects of individual dependencies and bolstering EU-wide security, there could be still one vital point which could undermine the above principle. For example, analysts at one hand argue that this principle of the Commission will indeed guarantee a certain level of security if competitive forces are successful in providing energy from a variety of sources.

However, at the other hand, like analysts Giacomo Luciani stated in its research regarding Europe’s gas market, as long as only two sources of energy, in this case Russia and Algeria, continue to dominate gas imports to Europe, it is unlikely that real competition can exist, and that increasing on established suppliers is incompatible with competition\textsuperscript{26}.

3.4. Diversification of the energy mix

Regarding the topic of the kind of energy each member state prefers to use, the Commission states that, choices made by one Member State will have consequences on the energy security of its neighbours and of the community as a whole, as well as on competitiveness and the environment. For example, decisions by member states to relay mainly on natural gas for power generation will have significant effects on the security of supply of its neighbours in the event of a gas shortage. Another example forms the decision by member states concerning nuclear energy can also have very significant consequences on other member states in terms of the EU’s dependence on imported fossil fuels and CO\textsubscript{2} emissions. Therefore, having a strategic EU energy review would offer a clear European Framework for national decisions on the energy mix. This review should analyse all the advantages and drawbacks of different sources of energy, from indigenous renewable energy sources such as wind, biomass and biofuels, small hydro and energy efficiency to coal and nuclear, and effects of these changes for the EU as a whole.

Within this review there should be place for a transparent and objective debate on the future role of nuclear energy in the EU. At the moment nuclear power contributes roughly one-third of the EU’s electricity production. Even as careful attention needs to be given to the issues of nuclear waste and safety, nuclear power represents the largest source of largely carbon free energy in Europe. The Commission proposes therefore, to play a useful role in ensuring that all costs, advantages and drawbacks of nuclear power are identified for a will-informed, objective and transparent debate.

Other proposals are to agree on an overall strategic objective, which will balance the goals of sustainable energy use, competitiveness and security of supply.

3.4.1. Possibilities of Coal, Nuclear Power and Renewable Energy

The EU’s ability to reduce its import dependence while mitigating negative environmental effects will depend largely on individual member state decisions regarding energy mix. For now, European efforts are expected to focus on promoting renewable energy and cleaner burning fuels, developing ‘clean coal’ technology, and increasing energy efficiency and reducing overall consumption. The question if nuclear power should be used in a higher quantity is not being favoured by all. Because, nuclear power forms the only way of creating electricity without carbon emission, some experts and government officials advocate an increase in nuclear power generation. However, others oppose increased use of nuclear power because the fear a second Chernobyl.

**EU-27 Electricity Mix (2004)**

![Graph showing electricity mix with Breakdown: Nuclear 31%, Gas 20%, Oil 4%, Coal 30%, Renewables (*) 14%, Other 1%]

*Source: European Commission DG TREN, Eurostat, *Renewables: [Link](#)*
3.4.2. Coal

Looking at the use of coal in the European Union we see that one third of the total electricity generated in Europe is coal fired. Just like with other energy sources, coal use and production varies among member states. For example, coal burning accounts for the bulk of electricity production in member states such as Poland (92%), the Czech Republic (65%), Greece (62%) and Germany around 50%. At the other hand, countries like France, are mainly relying on nuclear power.

Although that, coal burning accounts for close to 25% of the EU’s total carbon dioxide emissions, its abundance, which represents a proven reserve of almost 40 billion ton, makes most analyst believe that coal will continue to play a significant role in Europe’s energy setting\(^\text{27}\). Because of Europe’s continues reliance on coal and the prospect of utilizing possibilities for sustainable use, the EU has invest in technologies, such as carbon capture and sequestration (CCS), that will enable so-called clean coal burning.

Current technology is capable to enable efficiencies of above 60%. However, the majority of Europe’s older and most recently built plants have efficiencies ranging between 30% to 43\(^\text{28}\).

By now, EU member states have approved Commission efforts to foster technological advance in the area of clean coal-burning and to bring 12 sustainable fossil-fuel power plants on line by 2015. However, in the long-term the ability of member states to meet their commitments to lowering carbon emissions, the potential for using renewable energy, the price of natural gas and the cost of installing clean coal burning technologies will likely dictate whether coal can remain a viable alternative energy source for Europe.


3.4.3. Nuclear Power

Nuclear power accounts for roughly one-third of Europe’s overall electrical generation. However, differences in national nuclear energy policies have prevented the EU from developing a common nuclear energy policy. At current, there are around 175 nuclear reactors in operation in Europe. Nevertheless, while nations such as France, Finland, Sweden, and the United Kingdom rely heavily on nuclear power, others oppose it on the grounds that it is dangerous and create difficult waste disposal problems. For example, Germany and Spain have committed themselves the closing of their nuclear installations over the next coming years and instead of this they will replace them for gas powered installations. However, in both counties, there is more and more political pressure to rethink these decisions, or to extend the timetable of closing down the nuclear facilities. Already, countries like the United Kingdom, Finland and Lithuania have all decided to add new reactors. Nonetheless, looking at the costs of bringing a nuclear installation online and the controversial nature of nuclear waste, it will be unlikely that Europe will see a reappearance of new nuclear reactors in nations where nuclear power does not already play a role. Under the best circumstances, only nations that already utilize nuclear power can be expected to either replace or upgrade existing reactors. On the other hand, the use is gaining in popularity due to the fact that it is a way to generate electricity with virtually zero greenhouse gas emissions.

There is however a promising development going the use of nuclear power. This is the Thermonuclear Experimental Reactor (ITER) program, which experiments with successful utilisation of electrical power form nuclear fusion which unlike current nuclear power does not generate dangerous waste. The EU has joined the United States and several other nations in this effort. Nevertheless, the first facility will be constructed in France but initial results are not expected or at least 15-20 years.

---

29 ITER, www.iter.org
3.4.4. Renewable Energy

Currently, Hydro, wind, solar and bio-mass energy account for just under 7% of Europe’s total energy consumption and 15% of its electricity generation. Member states have agreed in March 2007 via legally binding target that by 2020 this will be 20% of total European energy consumption. However, by the end of 2007, individual member states are expected to negotiate individual national targets to realize EU-wide goal.

It is predicted that countries like Austria, Sweden, and Denmark, with advanced renewable energy sectors, will set significantly more ambitious targets than newer member states in Central and Eastern Europe. France has advocated reportedly to use special considerations concerning nuclear energy, which is not viewed as a renewable energy resource, but nevertheless almost greenhouse gas emission-free.

Although there is enough EU-wide support for the development and utilisation of renewables, individual member states differ in which renewables they choose.

---

Commission of the European Communities, EU Energy Policy Data, Brussels, 2007
For example, Austria and Latvia promote hydro power, while the Czech Republic and Portugal have committed financial support to large solar energy facilities. Germany, Sweden and the United Kingdom on the other hand, are more involved with major wind farms of their coasts. Other forms of renewables which are increasing in favour are, biomass and biofuel programs. Due to the fact that, Europe’s oil-dependent transport sector accounts for roughly a quarter of the EU’s total carbon emissions, the EU has mandated that biofuels make up a 10% share of all European transport fuel by 2020.

Renewables Growth: Electricity Projections up to 2020

![Renewables Growth: Electricity Projections up to 2020](source)

Source: European Commission, Renewables Roadmap

The question whether the EU meets its renewable energy targets will likely depend on cost of production and the extend to which member states are willing to subsidize their development on a large scale.

A report by McKinsey and Company estimates that EU member states will need to invest approximately 1.1 trillion euros in new technologies over the next 14 years in order to achieve their carbon emissions and accompanying renewable and energy efficiency targets\(^{31}\). Most probably, the Commission, the European Investment Bank, and individual member states are poised to substantially increase their investment in these sectors, although specific amounts are difficult to estimate.

A number of member states have announced programs to subsidize and provide low-interest loans to fund research and development on renewable energies, with countries like Germany hoping to create the industrial capacity to supply what German officials believe will become an increasingly lucrative global market for renewable energy\textsuperscript{32}.

**EU-27 Cumulative Investment in Energy by Electricity Supply Infrastructure (2005-2030)**

\begin{center}
\includegraphics[width=\textwidth]{eu_27_cumulative_investment_in_energy_by_electricity_supply_infrastructure_2005_2030}
\end{center}

*Source: European Commission DG TREN*

3.5. An integrated approach towards climate change

The Commission sees tackling issues concerning climate change as one of its key priorities. Therefore, it wants Europe to continue to lead by example and work towards the widest possible international action. At the moment the EU is already far by using approaches which will decouple economic growth from increasing energy consumption.

Already the EU is conducting legislative initiatives and energy efficiency programmes with encouragement to competitive and effective renewable energy.

Utilizing the use of renewables and energy efficiency, besides tackling climate change will contribute to security of energy supply and help limit the EU’s growing dependence on imported energy. In addition the Commission promotes the idea of creating a Europe with high-quality jobs and maintain Europe’s technological leadership.

One of the examples as regards to the above is the EU Emissions Trading Scheme which creates a flexible and cost-efficient framework for more climate friendly energy production. In addition, it provides the nucleus for a gradually expanding global carbon market, which will offer European business a head-start.

As regards to effective energy efficiency the Commission states that, having such a policy, does not mean that comfort or convenience need to be sacrificed. Neither should it reduce competitiveness. It should do the opposite by making cost-effective investments in order to reduce the waste of energy, thereby increasing standards of living and saving money, and using price signals, that would lead to more responsible, economical and rational use of energy. According to the Commission, market-based instruments, which include the Community energy tax framework, could be an efficient tool for this.

In order to achieve a higher efficiency rate the Commission has proposed an action plan. Successful implementation of this plan will need the long-term support and determination at all high political levels throughout Europe. Reason for this is the fact that, many of the tools are in national hands. For example, grants and tax incentives. Also, only governments can convince the public that energy efficiency can bring real savings along the way.
Examples of possible action are\textsuperscript{33}:

- Long-term targeted energy efficiency campaigns, including efficiency in buildings, particularly public buildings;

- A major effort to improve energy efficiency in the transport sector and in particular to improve rapidly urban public transport in Europe’s major cities.

- Harnessing financial instruments to catalyze investments by commercial banks in energy-efficiency projects and companies providing energy services;

- Mechanisms to stimulate investment in energy efficiency projects and energy services companies;

- A Europe-wide “white certificates” system, tradable certificates, which would enable companies that exceed energy efficiency minimum standards to “sell” this success to other that have failed to meet these standards.

- To guide consumers and manufacturers, more focus will need to be put on rating and showing the energy performance of the most important energy-using products including appliances, vehicles, industrial equipment.

In addition the Commission promotes the ambition goal to make energy efficiency a global priority. From there point of view, they see this action plan as a potential “launch pad” to trigger similar action worldwide, in close collaboration with the IEA and the World Bank.

Another area in which the Commission sees potential is a bigger use of renewable energy sources. Since 1990, the EU has already been successful engaged in the process of becoming world leader in renewable energy. Currently, the EU has installed wind energy capacity equivalent to 50 coal fired power stations, with costs halved in the past 15 years.

The EU’s renewable energy market has an annual turnover of €15 billion, this stands for half the world market. Renewable energy is now starting to compete on price with fossil fuels.

The agreements made in 2001 by the EU, which stated that the share of electricity from renewable energy sources consumption should reach 21% by 2010. In 2003, it agreed that at least 5.75% of all petrol and diesel should be bio-fuels by 2010. Although a number of countries are showing rapid progress in reaching there targets, it will not be enough. According to current developments, the EU will miss both targets by 1 or 2 percent. Therefore, the Commission proposes to bring forward a Renewable Energy Road Map which will cover key issues for an effective EU policy on renewables. The main points in this Road Map are:

- An active programme with specific measures to ensure that existing targets are met;

- Consideration of which targets or objectives beyond 2010 are necessary, and the nature of such targets, in order to provide long term certainty for industry and investors, as well as the active programmes and measures needed to make this a reality. Any such targets could be complemented by extended operational targets on electricity, fuels and possible heating;

- A new Community Directive on heating and cooling, complementing the Community energy saving framework.;

- A detailed short, medium and long term plan to stabilise and gradually reduce the EU’s dependence on imported oil. This should build on the existing Biomass Action Plan and the Strategy for Biofuels;

- Research, demonstration and market replication initiatives to bring clean and renewable energy sources closer to markets.
A third way which will provide near zero emission technology is carbon capture and geological storage in combination with clean fossil fuel technologies. This way is particularly interesting for countries which will choose to continue the use of coal as a secure and abundant energy source. In order to utilize this completely an economic incentive will be needed.

3.5.1. Innovation and technology

The Commission sees the development and deployment of new energy technologies as essential in order to deliver security of supply, sustainability and industrial competitiveness. For now, energy related research has contributed strongly to energy efficiency for example, in car engines, and to energy diversity through renewable energy sources. However, according to the Commission more needs to be done in order to meet future demand. The Commission proposes several ways about how this can be met.

First, one way could form the so called Strategic Energy Technology Plan. According to the Commission, this should accelerate the development of promising energy technologies, but should also help to create the conditions to bring such technologies efficiently and effectively to the EU and the world markets. In addition, the plan should strengthen the European research effort to prevent overlaps in national technology and research programmes and to put the focus on agreed EU-level goals.

Second, European technology platforms led by industry, could help to further develop biofuels, hydrogen and fuel cells, photovoltaics, clean coal and electricity networks.

Third, the EU should consider ways to finance a more strategic approach to energy research, taking further steps towards integrating and coordinating Community and national research an innovation programmes and budgets.

Fourth, Europe should consider to develop “leading markets” for innovation, Europe should act through large-scale integrated actions with the necessary critical mass, mobilising private business, member states and the European Commission in public/private Partnerships or through the integration of National and Community Energy Research Programmes.
Finally, actions to accelerate technology development and drive down the costs of new energy technologies must be complemented by policy measures to open the market and to ensure the market penetration of existing technologies that are effective in addressing climate change.
4. Contemporary situation of the EU’s External Energy Policies

Since the EU’s external dependence on imports is growing rapidly, the EU has initiated relations with third countries in order to promote a more integrated cooperation within the field of energy. These include:

- Russia;
- OPEC members;
- Caspian and Black Sea region;
- Middle East and Persian Gulf countries;
- South-East European Energy Community;
- Baltic Sea Region Energy Cooperation (BASREC);
- Arctic energy Agenda;
- Norway;
- Africa.

4.1. EU-Russia Energy Relations

Russia is a major player in world energy markets. With 1.700 trillion cubic feet of natural gas reserves in 2004, it can be counted as the largest producer and exporter of natural gas in the world. In addition Russia takes second place as an oil exporter\(^{34}\). Its proven oil reserves are estimated to be around 60 billion barrels\(^{35}\).

\(^{34}\) CRS Report for Congress, Russian Oil and Gas Challenges, Gelb A. Bernard, January 2006.

\(^{35}\) EIA, Energy Information Administration, April 2007.
In October 2000 the European Union started a bilateral energy dialogue with Russia in order to enable progress to be made in the definition and arrangements for an EU-Russia Energy Partnership\textsuperscript{36}. With other words, to secure its access to Russia’s enormous oil and gas reserves. The Joint Declaration, which was adopted at this Summit states that the energy partnership will

“provide an opportunity to raise all the questions of common interest relating to the sector, including the introduction of cooperation on energy saving, rationalisation of production and transport infrastructures, European investment possibilities, and relations between producer and consumer countries. The planned ratification of the Energy Charter Treaty by Russia and the improvement of the investment climate will be important aspects in this context\textsuperscript{37}”.

The motivation for this dialogue is based on the assumption that interdependence between the two regions will grow because the EU needs to secure its supply and Russia needs to secure its foreign investment and thereby facilitate its own access to the EU and world markets. The EU is responsible for over half of Russia’s trade turnover. This interdependency between Europe and Russia can be illustrated by the following figures.

\textbf{Table 2: Russian Oil Exports by Export Outlet (2006, thousand bbl/d)}

<table>
<thead>
<tr>
<th></th>
<th>2006, thousand bbl/d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Novorossiysk</td>
<td>790</td>
</tr>
<tr>
<td>Other Black Sea</td>
<td>217</td>
</tr>
<tr>
<td>Primorsk</td>
<td>1,296</td>
</tr>
<tr>
<td>Druzhba Pipeline</td>
<td>1,261</td>
</tr>
<tr>
<td>Germany</td>
<td>437</td>
</tr>
<tr>
<td>Poland</td>
<td>456</td>
</tr>
<tr>
<td>Hungary</td>
<td>136</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>104</td>
</tr>
<tr>
<td>Slovakia</td>
<td>119</td>
</tr>
<tr>
<td>Lithuania</td>
<td>159</td>
</tr>
<tr>
<td>Total Crude Oil Exports</td>
<td>4,155</td>
</tr>
</tbody>
</table>

\textsuperscript{36} European Union – Russia Energy Dialogue, 2007
\textsuperscript{37} EU-Russia Summit, Joint Declaration, Paris, 2000.
Russian energy exports account, for 45% of exports to the EU. 50% of Russian oil exports\(^{38}\) was exported to the EU in 2001. This represented 20% of the EU’s oil imports and 17% of total EU oil consumption. When we look at the gas supply than a number of 63% (130 billion cubic metres (Bcm)) of Russia’s natural gas exports was delivered to European countries in the year 2000, with contractual requirements to increase deliveries to around 200 Bcm in the year 2008.

An additional motivation to initiate a partnership with Russia is because the energy sector in Russia represents a major opportunity both for foreign investment and for export revenues. It is estimated that the need for new capital in the sector is between €560 and €650 billion over the period to 2020. Also, from an energy security perspective point of view, both have interest in enhancing the overall security of the continent. Finally an important aspect in the negotiation is whether the EU will support Russia’s bid for accession to the World Trade Organisation (WTO).

Within the context of an energy dialogue there are also issues being examined. The main issues are as follows\(^{39}\):

- opening of Russia’s domestic energy market to competition (according to the Centre for European Studies (CEPS) Gazprom controls around 70% of Russian gas production and enjoys a monopoly situation in terms of exports\(^{40}\));

- improving the business environment, including investments;

- cooperation on climate change under the Kyoto Protocol;

- nuclear safety and decommissioning (this in relation to the events of Chernobyl);

- legal security for long-term energy supplies\(^{41}\);

---

\(^{38}\) Crude and products
\(^{40}\) CEPS (Center For European Policy Studies), *What to do about Gazprom’s monopoly power?*, February 2006.
\(^{41}\) European Union – Russia Energy Dialogue, *Issues being examined under the energy dialogue*, October 201.
• improvement of the legal basis for energy production and transport in Russia;

• Long term contracts for natural gas.
  These contracts will provide risk sharing arrangement between producers and buyers for the development of the European gas market. In turn this will enable important new production and infrastructure projects.\textsuperscript{42}

Until now a real breakthrough on the Energy Dialogue has not occurred, and the last summit being held between the EU and Russia in May this year did not produce any progress. The relation between both, depends mainly on the broader context concerning the negotiations of the “four common spaces” where there is made little progress.

These concern negotiations within the field of the\textsuperscript{43}:

• Common Economic Space;
• Common Space of Freedom, Security and Justice
• Common Space of Cooperation in the field of External Security
• Common Space on Research, Education and Culture.

Another issue which constrains the dialogue and partnership is the fact that meanwhile, bilateral deals between Russia and separate EU states continue to prevail over a specific EU approach, and disputes between Russia and some of the EU’s new Eastern European member states, in particular Poland, have cooled relations between the two sides.

Another issue in the relationship between Russia and the EU forms the Ukraine gas conflict with Russia where Gazprom had cut gas supplies to the Ukraine because of an energy price dispute. This created the fear in Europe that this could also hit the export to Western Europe. Second, this act of Gazprom, a state owned company by Rusia, is seen as politically motivated because of the Kiev’s Orange Revolution and the election of its pro-western President, Viktor Yuschenko.\textsuperscript{44}

\textsuperscript{43} EU – Russia Summit, The four “common spaces”.
\textsuperscript{44} BBC News, Russia cuts Ukraine gas supplies, January 2006.
Fear exists, that Russia is utilizing its strong position as energy supplier in terms of a political weapon to influence national politics of other countries. In addition it sparked discussion concerning the growing import dependence of the EU towards Russia. Daniel Yergin, an known analyst in he field of energy security stated,

"Putin believes that energy security is about (Russia’s) retaking control of the commanding heights’ of the energy industry and extending that control downstream..."45

The political importance of energy can be related to the fact that the two major Russian energy giants, Gazprom and Rosneft, have close ties to the Kremlin and, in particular, to President Putin himself. Rosneft is led by a close associate and former KGB colleague of Putin. Gazprom is run by Alexy Miller, a close Putin ally, and Dimitry Medvedev, Russia’s First Deputy Prime Minister. Gazprom dominates the Russian gas sector and controls 100% of Russian gas flowing to the EU.

According to analysts, Russia is using the political card also on the investment side. The International Energy Agency estimates that the Russian gas sector needs upwards of $10 billion in annual investment to meet future global demands. The EU has urged Russia to provide European energy companies the opportunity to invest in the total range of the energy sector from oil and gas fields to the pipeline system. Until now Russia has refused to meet EU demands warned the EU not to constrain Gazprom’s plans to buy or invest in Europe’s energy sector46.

It is also believed by observers that Russia is planning to assure its long-term gas contracts with European Nations through its near monopoly on gas from Central Asia47. Russia currently controls the overwhelming majority of oil and gas transportation routes from Central Asia and, according to analysts, intends to exploit this control and its political leverage over central Asian governments and European countries to block European and U.S. efforts to develop alternative pipelines that bypass Russia. For example, critics believe that Gazprom’s strategy is to establish permanent control of the Hungary and Balkan markets before Caspian as can reach them through the proposed

47 Central Asia meaning: Kazakhstan, Turkmenistan, and Uzbekistan.
Nabucco pipeline\textsuperscript{48}. By doing this, critics believe that, Gazprom will try to convince other nations that agreed to fund the Nabucco pipeline withdraw their commitments and rely on the Russia-Hungary pipeline instead. They also warn for the fact that, Russia’s state-owned energy companies aim to increase their influence in the face of further European diversification by seeking to acquire controlling stakes in natural gas concerns in North Africa\textsuperscript{49}.

As mentioned before, there is also a lot of bilateral negotiating taking place between the EU’s member states and Russia. For example, both Germany and Italy, who are the largest importers of Russian Gas, have negotiated long-term deals with Russia in order to be sure of its future gas supplies. Slovenia and Belgium have entered into negotiations with Gazprom to build a pipeline across the former and to enter the gas distribution market in the latter. Hungary’s oil and gas company, Mol, has joined with Gazprom to extend Gazprom’s Blue Stream pipeline across the Black Sea through the Balkans into Hungary.

These individual actions taken by the member states have led to protest and warnings by other member states. For example, countries like Poland and the Baltic states warn not to make deals that will give Russia an excessive and possible dangerous amount of political influence over European decision-making. They understand that Europe’s dependence on Russian energy is likely to last no matter what alternatives are included in an EU energy policy. In addition they fear for the fact that Europe will not really gain security by becoming more dependent on Russia because, the growing presence of Gazprom throughout the European energy market has led many to worry about the EU’s ability to develop an energy policy which is shielded of by Gazprom’s influence\textsuperscript{50}.

The ongoing dialogue between the EU and Russia, which started in 2000, has been mixed in its relational experience. This is meanly due to fact that some individual member states and the EU are not always working in the same direction by giving more priority to their ‘national’ energy relation with Russia.


\textsuperscript{49} CSIS (Center for Strategic and International Studies), Russian Energy Pressure Fails to Unite Europe, Volume 13, Number 1, Smith C. Keith, January 2007.

In turn, difficulties are also caused by Russia who is until now unwilling to allow European investment in its energy sector and adopt energy market and transportation principles, which are laid down in the Energy Charter. Despite the disagreements and the difficult relationship between the EU and Russia facts are that, Russia will continue to be Europe’s primary energy supplier for the long-term. In turn, Russia needs Europe as one of its main exporting countries. Therefore, both are tight to each other in a love-hate marriage of convenience.

According to analyst Paul Belkin, there are two options which may be considered when a common external EU energy security policy is to come out. First, Europe could move to limit its dependence Russian energy by increasing its diversification to other regions without threatening Russia’s own market security in Europe. By doing this Europe needs to ask itself at which point Russia could possible decide that the EU’s commitment to diversification no longer makes it financially attractive for Russia to continue to invest in new supplies destined for the European market. Second, the EU may attempt to regulate the behaviour and practices of Gazprom as it becomes more of a dominant energy player in Europe. Consequently, few European countries have sought bilateral deals with the Russian Monopoly that would do just that. According to Belkin analysis, if this would continue, Europe could risk having Gazprom interfere more and more in its internal political decision-making. In order to avoid this, the European Union will likely continue to apply pressure on Gazprom to play by Europe’s rules on competition and work to change Gazprom’s corporate mentality by allowing European firms to invest in Russia’s gas industry.

However, other analysts state that this internal discord on how to approach Russia is constraining the EU from applying this kind of pressure. They state that, by acting as a whole, thus cooperatively, the EU could pressure Russia in a much stronger way to accept EU competition laws and even using Russia’s potential World Trade Organization (WTO) membership as leverage to open Russia’s domestic energy sector to outside investment.

Looking at these different viewpoints, it is a right analysis to state that it will be difficult for Europe to speak with one voice towards Russia because this could influence the bi-lateral relationship between some member states with Russia.

Because of this reason these member states will likely not be favourable to give their approval. However, this would be an ideal situation which is not to be expected, mainly concerning the energy topic. We have to stay with the facts which do not allow different interpretations. Russia needs Europe for exporting gas. Europe needs Russia to provide this. This interdependence cannot be simply ignored. What is written above means that when Russia does not accept our rules of the game then Europe will start to diversify its supplies. If Russia does accept then it will be guaranteed for doing business. This difficult situation will ask a lot of the diplomatic qualities of the EU as regards to her approach to Russia on this matter. The energy relation between the EU and Russia can be defined as a “love / hate marriage”.

4.2. EU-OPEC Energy Dialogue

The growing global competition for access to limited oil resources, and concerns about high oil prices and long-term security of supply have caused the EU to decide to setup a dialogue with OPEC (Organisation of Petroleum Exporting Countries) in order to discuss these developments. At the moment the EU imports 40% of its oil imports from OPEC.\textsuperscript{53} The high oil prices on the world market are caused by several factors namely:\textsuperscript{54}:

- Rising demand, mainly from the United States and the ongoing growing economies of China and India;

- Shortage of spare capacity with oil producers. Only Saudi Arabia has enough capacity to increase supply when needed;

- The unstable situation in the Middle-East;

- Tension in Nigeria and Venezuela;


• Speculation;

• Lack of sufficient refinery capacity to process heavier crude;

• Fears that the world might be running out of oil sooner than predicted.

Based on its Green Paper\textsuperscript{55} of 2000, the EU estimated that, by 2030, up to 70\% of the Union’s energy requirements and 90\% of oil will have to be covered by imports. Therefore, in June 2005 the EU held its first bilateral meeting with OPEC (Organisation of Petroleum Countries).

According to the EU, this initiative is part of a broader approach to strengthen energy dialogues with the main oil and gas suppliers. For OPEC this meant a significant further step in its continued efforts to encourage dialogue and cooperation among oil producers and consumers\textsuperscript{56}. Both stress the importance of having an effective framework which enables and exchange of views related to energy issues of common interest. For example, oil market developments, and its potential for contributing to stability, transparency and predictability in the international oil market. In addition, increased transparency in financial markets and their impact on the oil market is seen as a common concern.

This dialogue between the EU and OPEC identified four main themes which are in the interest of both namely:

• Oil market developments, both short, medium to long terms;
• Energy policies;
• Energy Technologies;
• Energy-related multilateral issues.

\textsuperscript{55} Commission of the European Communities, Green Paper, Towards a European Strategy for the security of energy supply, Brussels 2000.

Until now there have been four meetings between the EU and OPEC. Subjects for discussion were tightness on the refining sector and financial markets. In addition these dialogues also brought to the front the use of new technologies, mainly related to the capture and storage of carbon dioxide.

4.3. Caspian and Black Sea region

The Caspian Sea is located in central Asia and bordered by Azerbaijan, Iran, Kazakhstan, Russia, and Turkmenistan. Only Iran is a member of OPEC. Azerbaijan, Kazakhstan, and Turkmenistan became independent after the collapse of the Soviet Union in 1991. During history, the Caspian Sea region has produced oil and natural gas. However, it is considered to be an area with large resources of oil and gas capable of much greater production.

The resources of the Caspian Sea region form a reason for the EU to have active interest in this region in order to diversify and secure its energy resources. The Caspian and Black Sea region forms a realistic alternative for the EU in order to decrease dependence on imports from the Middle East and Russia.

Although the Black Seas does not level the amount of resources as the Caspian Sea it is of a vital geographical strategic importance for the EU in order to bypass Russia for the transport of oil and gas to the West.

The Caspian Sea region is viewed as a significant but not major supplier of crude oil to world markets. According to estimates by BP and the Energy Information Administration (EIA), and the U.S. Department of Energy the region provided 1.9 million barrels per day including natural gas liquids in 2005. This can be compared with 2% of total world output. The contribution to world natural gas supplies coming from the region is larger then that for oil. It produces of 3.0 trillion cubic feet per year which formed 3% of world output in 2005.

The fact that a number of large oil companies have large stakes in the Caspian Sea region means that there is a possibility of greater additional reserves of crude oil and natural gas still waiting to be found. Currently much of its known reserves have not been developed yet.

It is estimated that extra production of 184 billion barrels of crude oil reserves are possible if development would take place. This would then raise the total amount to five times of its present level. In addition, this level would almost equal the amount held by Saudi Arabia and could come to 15% of total world reserves\textsuperscript{58}.

Looking at the total amount of potential gas to be produced, it is estimated that these numbers will come out lower than those for oil. Nevertheless, the potential remains very large. If this potential would be developed then by 2010 the Caspian Sea region would produce twice as much compared to today’s production capabilities. This stands for 300 tcf (trillion cubic feet) in additional natural gas reserves in the region. These numbers would exceed those of present Saudi Arabia gas reserves. However, any comparison of the volumes of Caspian Sea region oil and natural gas reserves versus those of Saudi Arabia must be tempered because Saudi Arabia has a more advanced production system which enables it to produce in lower costs\textsuperscript{59}. In addition, Saudi Arabia has much easier market access. In comparison with Saudi Arabia, the Caspian countries will depend on international energy companies in order to develop its potential.

4.3.1. EU Initiatives towards the Region

Because of the region’s high potential and strategic location, the EU has developed several programmes and projects. The EU’s energy policy paper from January 2007 recommends to strengthen the EU’s so-called Neighbourhood Policy with these areas. Also European leaders have started to setup better relations with the individual countries in this region.

The first formal interest from the EU in this region took place in 1995 when it started its Interstate Oil and Gas Transport to Europe program called INOGATE. By setting up this project, the EU created a framework in which it could promote the construction and integration of regional pipeline systems in order to facilitate the transport of oil and gas to Europe.

\textsuperscript{58} Caspian Sea Region: Survey of Key Oil and Gas Statistics and Forecasts, July 2006.
\textsuperscript{59} CRS Report for Congress, Caspian Oil and Gas: Production and Prospects, Gelb A., September 2006.
At the same time the program works as a catalyst for attracting private investors and international financial institutions to these pipeline projects.

There are currently 21 countries participating in the program these are:

- Republic of Albania;
- Republic of Armenia;
- Azerbaijani Republic;
- Republic of Belarus;
- Bulgaria;
- Republic of Croatia;
- Georgia;
- Hellenic Republic;
- Republic of Kazakhstan;
- Kyrgyz Republic;
- Republic of Latvia;
- FYR Macedonia;
- Republic of Moldova;
- Romania;
- Serbia & Montenegro;
- Slovak Republic;
- Republic of Tadjikistan;
- Republic of Turkey;
- Turkmenistan;
- Ukraine;
- Republic of Uzbekistan.
By doing this, INOGATE supports the security of supply of both the EU and the INOGATE participating countries by\textsuperscript{60}:

- Enhancing the safety and security of the existing hydrocarbon network;
- Facilitating the extension of the network to reduce bottlenecks and enhance supplies
- Attracting and facilitating the necessary investments
- Acting to improve the investment climate
- Supporting the convergence of the regulatory framework and normative standards of participating countries towards those existing in the EU.

With the participating of the European Commission and the Black Sea and Caspian littoral states, another initiative was launched in November 2004 called the “Baku Initiative”. The “Baku Initiative is a policy dialogue aimed at enhancing energy cooperation between the European Union and countries of the Black Sea, the Caspian Basin and their neighbours.

\textsuperscript{60} INOGATE, Interstate Oil and Gas Transport to Europe, http://www.inogate.org/inogate/en/about/what_is, November 2007.
Participating countries in Participating countries are:

- Republic of Armenia;
- Azerbaijani Republic;
- Republic of Belarus;
- Georgia;
- Iran (Political conditions permitting);
- Republic of Kazakhstan;
- Kyrgyz Republic;
- Republic of Moldova;
- Russian Federation (observer);
- Ukraine;
- Republic of Uzbekistan;
- Republic of Tajikistan (new partner);
- Republic of Turkey;
- Turkmenistan.

The “Baku Initiative” should facilitate the progressive integration of the energy markets of the region into the EU market as well as the transportation of the extensive Caspian oil and gas resources towards Europe. It forms a further step for the EU towards securing its energy supplies and to find an answer to the growing global competition. In addition also partner countries have interest in securing energy supplies, avoiding price fluctuations, and attracting investments in the energy sector. This form of cooperation between the EU and its partner countries should then create predictable and transparent energy markets, capable of stimulating investment and economic growth as well as security of energy supply for the EU and its regional partners.

4.3.2. Important pipelines in the region

There are three important pipelines running thru the Caspian and Black Sea region. The first pipeline is run by the Caspian Pipeline Consortium (CPC) project. This pipeline connects Kazakhstan’s Caspian Sea area oil fields with Russia’s Black Sea port of Novorossiysk. From there the oil is exported to world markets by tanker.

---

The first phase of the pipeline was completed in 2003 and is now responsible for the transportation of 32 million tonnes of oil a year. The CPC partners are currently working to expand the pipeline to 67 million tonnes a year.\(^{62}\)

The second pipeline is the Baku-Tbilisi-Ceyhan oil pipeline (BTC). The pipeline was established in May 2005 and transports crude oil from the Caspian Sea, Azerbaijan, to the Mediterranean. The pipeline is constructed for an oil throughput of one million barrels per day with a working life for almost 40 years.\(^{63}\) The role of the pipeline was mainly to reduce the West’s dependency on imports from the Middle East and OPEC producing countries. Its key objective was to function as a secure energy supply for both America and Europe. Because, the pipeline bypasses Russia it can be stated that it in a political and an economical way.

The third pipeline, South Caucasus Pipeline (SCP), is a gas pipeline and became active in December 2006. It runs from Azerbaijan to Turkey and for a big part it follows the same route as the BTC Pipeline. Hereby environmental and social impact has been minimized. The pipeline is 692 kilometres long and its capacity is up to 16 billion cubic metres a year.\(^{64}\)

Currently there are two projects running for the creation of two gas-pipelines, The Trans-Caspian pipeline and the Nabucco project. Both pipelines are valuable options for the EU.

The Trans-Caspian pipeline is intended to bring gas from the Caspian to Georgia and across the Black Sea to Romania and the Balkans. The project finds warm support by EU officials. According to Javier Solana, the high representative for common foreign and security policy of the European Union stated that, the trans-Caspian route could become an important opportunity to resolve issues relating to piping gas Central Asia to Europe.\(^{65}\)

The second project forms the Nabucco pipeline which is scheduled to be built in 2008. It is planned to carry gas through Turkey into Bulgaria and on to Austria. Several European nations and the EU are financially involved in this project. The length of the


pipeline is a remarkable 3.300 km. The pipeline should be able to transport 31 billion cubic metres a year. Just like the BTC, also this pipeline will bypass Russia. Therefore, Russia and Gazprom are against the project and try to take away support mainly from Hungary by offering other alternatives.

On 11 April 2007 the Commission published a Communicating on cooperation with the Black Sea region. According to the Commission, this cooperation could serve as the foundation for a future gas pipeline running from the Ukraine, Georgia and Azerbaijan to the EU.

4.3.3. Issues in the region

Although the fact that the region offers a great potential for the EU and the region itself in terms of energy security and economical development, there are also issues to be dealt with. One of them forms the legal status of the Caspian Sea. Until now only countries like Azerbaijan, Kazakhstan, and Russia have reached agreement in terms of defining ownership of the Sea’s resources or their rights of development. The last treaty defining the Caspian’s legal status was the Soviet-Iran Treaty signed in 1940. Here it was determined that both parties had exclusive rights of fishing in coastal waters up to 10 nautical miles. The treaty further stated that “parties hold the Caspian to belong to Iran and the Soviet Union.” Since the Soviet Union fell apart in 1991 the legal status of the Caspian has become unclear. In the absence of an agreement concerning a division of Caspian waters and the seabed, it will be difficult to run favoured projects as undersea natural gas pipelines for exporting Turkmen natural gas westward.

A second issue forms the ability of the EU to ensure the long-term political stability of the region. Unfortunately the region knows several conflicts. For example, there is a conflict between Azerbaijan and Armenia concerning the Nagorno-Karabough area which threatens the BTC project and the SCP pipelines in terms of sabotage. This area is a point of dispute because it is both claimed by Azeris and ethnic Armenians.

In addition, political struggle in Georgia and its two break away regions also threatens future pipelines through that country. Georgia still has to deal with separatism from different regions. Also the uncertain political situation in the Ukraine and growing Iranian influence in the southern Caucasus could prevent future long-term investment by the private sector. However, since Romania and Bulgaria have become part of the European Union and the fact that there is a special relationship with Turkey there are chances to keep the region stable.

A third issue forms the willingness of the EU to compete with Russia for political and economic influence in the region an to prevent Gazprom form closing of the Caspian market, or at least the Central Asian part of the Region, to Europe and its private sector.

---

It is thought by observers that Gazprom tries to continue to press countries around the Black Sea and Caspian Sea regions to agree to gas supply and transit arrangements that satisfy the company’s goals of channelling lower-cost Central Asian gas to Russian customers and protecting its lucrative European market.\footnote{CEPS, Centre for European Policy Studies, Security Implications of Russian Energy Policies, \url{http://shop.ceps.eu/downfree.php?item_id=1293}, Smith, K., January 2006.}

The final issue contests if Europe forms the optimal market for Caspian oil and natural gas. It is estimated that over the next 10 to 15 years oil demand in Europe is to grow by 1 million barrels per day. On the other side it is estimated that the Asian markets will demand roughly 10 million barrels per day of the next 15 years.\footnote{CRS Report for Congress, Caspian Oil and Gas: Production and Prospects, \url{http://www.ncseonline.org/NLE/CRSreports/06Oct/RS21190.pdf}, Gelb, Bernard, A., September 2006.} Mainly China sees Kazakhstan as a major source of oil for the long term. In 2005 China opened a pipeline to Kazakhstan.

In sum, the Caspian and Black Sea Region can be seen as high potential regarding to its energy production capabilities. The region offers Europe a great chance in order to the diversification of oil and gas supplies to Europe, which in turn will add to Europe’s energy security. However, in order to retrieve these resources, the EU will need to show strong commitment on its part for making sure that the region is stable and ready for investments. The European Union forms an attractive market for export countries in the Caspian and Black Sea region. Therefore, all parties involved, should enter into dialogue with each other in order to explore and resolve current issues in the region. This will ask for a long-term vision from the EU, which could be generated by the creation of a strong external EU strategy towards this region. In addition, the EU should find a way how to deal with Gazprom’s presence in the region. An option for the EU would be to have a common foreign energy policy towards the Caspian and Black Sea region. By having this it would enable the EU to act far more rapidly towards Gazprom’s initiatives in the region. Because, being too late, cold possible mean that, in the future, the EU will buy its Caspian oil and gas from Russia’s Gazprom.
4.4. Middle-East, North Africa and the Persian Gulf Countries

EU efforts to diversify European energy supplies and decrease dependence on Russia have pulled the EU, in terms of political and economic engagement, in the direction of the Middle-East and the Persian Gulf Countries. However, the region’s political instability and strong competition for its energy resources from countries in Asia and North America present challenges to European Efforts.

The region owns enormous resources and production capabilities. For example, the Persian Gulf Countries (Bahrain, Iran, Iraq, Kuwait, Qatar, Saudi Arabia and the United Arab Emirates) alone hold 57%, thus half of the world’s oil reserves. The Middle-East region accounts for about 31% of the world’s oil. When we take a look at Libya and Algeria, then it is estimated that Libya holds 40 billion barrels and Algeria 12 billion barrels. Looking at natural gas reserves, the Persian Gulf Countries holds an estimated 2.400 trillion cubic feet (tcf). This represents 45% of the world’s total gas. Algeria is estimated to hold 161 tcf, and Libya 52 tcf.

Currently, the EU depends for 30% of its oil imports and 15% of its piped gas on this region. Based on figures from 2005, Europe imported around 3.1 million barrels a day. The biggest part was imported from Saudi-Arabia, and then followed by Libya and Iran. The primary supplier of natural gas is Algeria. Two pipelines ensure the flow of gas to Europe via Spain and Italy. In addition, two additional gas pipelines from Algeria to Spain and Italy are under construction.

Over the years, European relations with the states of the Persian Gulf and North Africa have steadily improved. In 1995, EU relations with North Africa were formalized thru the creation of the Euro-Mediterranean Energy Partnership. In addition, the EU has created the EU-Gulf Cooperation Council (GCC) Dialogue with the states of the Persian Gulf and has initiated a formal dialogue with the nations of OPEC.

The Middle-East and Persian Gulf countries including North Africa play a significant role in the Europe’s energy diversification strategy.

---

Nevertheless, facing competition with Asia and North America including long-term political instability in the region are reasons for Europe not to become over dependent. Therefore, the EU should find a balance between all its suppliers. The EU’s closer cooperation in the field of gas exports from North Africa have also caught the attention by Russia and Gazprom. In March 2006, President Putin, along with Gazprom officials, travelled to Algeria to discuss Russian participation in Algeria’s future oil and gas projects. Here we can see the same developments which are happening in the Caspian and Black Sea region. Also in this case it should be clear for the EU to be able to act and decide quickly in order to prevent Gazprom from getting to much influence in the region.

4.5. South-East European Energy Community

The treaty establishing the Energy Community of South East Europe (ECSEE) was signed in Athens, Greece on October, 2005 and entered into force on July 1, 2006. The treaty covers the sectors electricity, natural gas and petroleum products. The treaty aims to extend the EU internal energy market to the South East Europe region. Participants of the treaty are: EU; Albania; Bosnia and Herzegovina; Croatia; Republic of Macedonia; Montenegro; Serbia and UNMIK on behalf of Kosovo. Negotiations with Turkey for joining the treaty at a later stage are on going. The task of the Energy Community is to organise the relations between the Parties and create a legal and economic framework in relation to Network Energy.

Important fact is that, the treaty ensures that signatory states will adopt EU single market regulations regarding energy. With other words, without being an official member state, these countries adopted a part of the ‘Acquis communautaire’ in the fields of energy, environment and competition.

According to the European Commission, improving the balance between energy supply and demand is crucial to boost and sustain economic development in South Eastern Europe.

---

76 United Nations Mission in Kosovo
In Addition, the Commission states that, it means that countries should be prepared to
draw fully on the substantial gains which can result from energy trading among
themselves and with their neighbours.

The main objectives of the treaty are:\(^{78}\):

- To create a stable and regulatory market framework capable of attracting
  investment in gas networks, power generation, and transmission and distribution
  networks, so that all parties have access to the stable and continuous energy
  supply that is essential for economic development and social stability;

- To create a single regulatory space for trade in network energy that is necessary
  to match the geographic extent of the concerned product markets;

- To enhance security of supply of the single regulatory space by providing a
  stable investment climate in which connections to Caspian, North African and
  Middle East gas reserves can be developed, and indigenous sources of energy
  such as natural gas, coal and hydropower can be exploited;

- To improve the environmental situation in relation to network energy and related
  energy efficiency, foster the use of renewable energy, and set out the conditions
  for energy trade in the single space.

- To develop electricity and gas market competition on a broader geographical
  scale and exploit economies of scale.

During a speech in February 2005, European Commissioner for Energy Andris
Piebalgs stated that he sees the Energy Community as a key to the stabilisation and
development of South East Europe\(^ {79}\).

\(^{78}\) Treaty establishing the Energy Community, 2005
\(^{79}\) Speech by Commissioner Piebalgs, *Energy Community is a key to the stabilisation and development of South East Europe*,
4.6. Baltic Sea Region Energy Cooperation (BASREC)

Issues like security of energy supply, mainly when looking at the growing dependency from Russia and, gas transit routes in the region, progress on electricity and gas interconnections, made the energy ministers of the Baltic Sea Region Countries and the European Commission decide to set-up a form of energy cooperation named BASREC. This was decided at the conference in Helsinki in October 1999. Participating countries are:

- Denmark; Estonia; Finland; Germany; Iceland; Latvia;
- Lithuania; Norway; Poland; Russia; Sweden.

The European Commission is represented by the Directorate-General on Energy and Transport. Further participation in this work programme involve the Council of Baltic SEA States(CBSS), the Nordic Council of Ministers (NCM) and the Council of Baltic States (CBS).

The BASRECC cooperation is meant to provide the CBSS member countries with a forum to build up regional view of the energy policy strategies. The networks and the BASREC’s organizational structure give administrations and business actors in the energy sector a natural base for analyzing the possibilities to develop the market framework and rules in order to effectuate the energy supply and to reduce environmentally problematic impacts of energy production, use and transmission\(^{80}\).

According to European Commissioner for energy Andris Piebalgs, the BASREC initiative supports the EU energy policy of security of supply, sustainable development and competition by strengthening the internal energy market. In addition, the initiative is playing an important role in promoting energy efficiency and renewables in the region\(^ {81}\).

---


During its existence, BASREC has been responsible for the process of market restructuring in the gas and electricity sectors and has contributed to the identification of new infrastructure and investment needs. In addition, BASREC has served as a vehicle for cooperation on key issues such as climate change, biomass and energy efficiency.

The European Commission’s involvement in the BASREC initiative is another example of its determinacy to promote regional cooperation in the field of energy around the regions of the European Union. The Commission is aware of the fact that only by having strong cooperative bonds around its own borders it is able to secure its supply and promote energy efficiency and the use of renewables. However, a weak point will be the fact that the Commission depends on the good will of other countries in order to start or maintain cooperation. It will always need to convince other parties that cooperating is profitable. In addition, cooperating parties will always be able to step out when they feel that their agenda’s start to clash with that of the European Commission. Therefore, only parties who are using the same agenda are able to cooperate for the long-term. However, parties with an agenda which is not completely the same as that of other parties will only slow down or frustrate progress during the cooperation. In addition, having a slightly different agenda could also cause that parties are only willing to undertake small steps instead of major leaps because it is bound by its own agenda.

4.7. Arctic Energy Agenda

Another area in which already cooperation is ongoing for the last time of period is the Arctic Region. It is believed that this region is one of the last big remaining petroleum provinces. The fact that in coming years energy use will only grow rapidly means that all resources need to be utilized for production. However, in the case of the Arctic region a careful approach is to be taken because of the vulnerable marine environment of the region.

Current estimations concerning the production capabilities of the Arctic region are not precisely known, but it is believed that it hold a large amount of gas and oil resources. Several tens of billion of barrels of oil equivalent are mentioned as possible reserves by many scientists.
Another indication for the potential in the Arctic region are the Snoghvit and Goliat gas and condensate fields which are in development in the Norwegian Barents Sea. Also Russia is actively seeking gas in its Arctic offshore area where it has found the giant Stockman gas field. Therefore, political and industrial decision makers from Norway, the Russian Federation, the United States, and the European Union, met on 7 July to a round table discussion in Kirkenes, Norway. This discussion addressed the challenges and opportunities of the Energy resources within the framework of the Arctic Agenda.

Issues concerning possible developments in the region form the vulnerable marine environment. Therefore, in its closing statement, any development taken place in this region should be on the base of a rational co-existence between fisheries, environmental concerns, and safe transportation at sea and petroleum activities should be key factors. In addition, the parties involved stated that, it is a joint task for governments and companies involved to ensure strict environmental and safety standards and compliance.

Another issue which has not been yet discussed formally between the participating counties is the question: who owners what? Which country or organisation has the right to utilize oil or gas from the artic region? Unlike Antarctica, whose territory is shared by all the worlds’ nations, the Artic region does not know any treaty which defines who owns which part of the territory. This means that issues like who can use which shipping lanes, what royalties will all remain unanswered. There are several nations that border the Arctic who are signatories to a treaty that gives them exclusive control over coastal waters extending 322 kilometres from shore. However, the treaty allows to file a petition to extend that distance beyond 322 kilometres. For now this is what several countries have already done. Countries like Denmark, Canada and Norway have filed claims to extend their territory as well. For now the question remains open.

---

4.8. EU-Norway Energy Dialogue

Norway is the world’s second-largest exporter of natural gas to the EU after Russia. It is the eight-largest natural gas producer in the world. In 2004 Norwegian exports represented 17% of European gas consumption. The largest consumers of European gas are Germany (25%), France (30%), and the United Kingdom (30%). In January 2005 Norway could be accounted for 73.6 Trillion cubic feet (tcf) of proven natural gas reserves. There are three regions which contribute to Norway’s resources from which the North Sea is the main supplier. The Norwegian and Barents Seas also contain significant quantities. Norway has recently opened Snohvit gas field along with Russia’s filed at Shtockman.

Norway's Natural Gas Exports, by Country, 2005

![Graph showing natural gas exports by country in 2005.]

Source: Statistics Norway.

---

On the 6 of July in 2005 a meeting was conducted between Energy Commissioner Andris Piebalgs and the Norwegian Minister of Petroleum and Energy. Hereby, both sides confirmed to cooperate on energy issues. It was agreed by both sides to strengthen cooperation on energy efficiency, renewable energy, and security of energy supply, including exploration and production activities in the Arctic area. Both shared the same view on development of new sources of oil and gas supplies, namely in the Arctic region. In addition, also topics like climate change where discussed.

By using technologies as carbon capture and storage and through energy efficiency both parties hope to deal in a positive way in addressing the problems regarding climate change.

Another agreement which came forth out of this dialogue was the Commission’s participation of an informal forum established by Norway, the UK and Denmark. In this forum, issues like the use of CO2 for enhanced oil recovery and storage in the North Sea could be discussed. After the meeting which was conducted on the 6 of July in 2005, annual meetings have taken place between the EU and Norway.

A new opportunity for the EU as regards to her security issues forms Norway’s entry into the LNG export market. Statoil, the largest petroleum company in Norway, has plans to construct the first large-scale LNG export terminal in Europe, with connections to the Snohvit project. Although initial LNG production will be meant for the United States future follow-on production and future fields in the Barents Sea could be shipped to facilities in Europe.
Because the EU recognizes Norway as an important supplier of energy it has showed interest by facilitating Norway’s efforts to develop resources in the High north of Europe\textsuperscript{87}.

Relations with Norway on the field of energy will need to be fostered. As shown, Norway forms an important supplier of gas and oil to the EU. The promising gas and oil fields in the Arctic region form another reason for the EU to remain in close contact with Norway about future developments.

4.9. Africa

With countries like Angola and Nigeria now taking a place as one of the major oil suppliers, also other countries in the Gulf of Guinea are seeking to follow up their success. For example, Nigeria is rich in mineral wealth, with petroleum and natural gas being the country’s major mineral products. Nigeria’s economic growth primarily comes from the country’s oil sector\textsuperscript{88}. Nigeria had 36.2 billion barrels of proven oil reserves on January 2007. The Nigerian government plan to expand its proven reserves to 40 billion barrels by 2010.

Based on figures from the Oil and Gas Journal, Nigeria had an estimated 182 trillion cubic feet (Tcf) of proven natural gas reserves as of January 2007. This makes Nigeria the seventh largest natural gas reserve holder in the world and the largest in Africa.

Angola, another promising country in Africa, joint OPEC in January 2007. According to estimates, Angola had proven oil reserves of 8.0 billion barrels as of January 2007\textsuperscript{89}. Looking at it is gas supply, Angola had 2 trillion cubic feet (Tcf) of proven natural gas reserves in January 2007.

Nevertheless, Nigeria and Angola are not the only African countries with rich petroleum resources. The two tables below give an overview of other African countries as regards to their estimated oil and gas supplies.

\textsuperscript{87} European Commission, Green Paper, 2000
Looking at EU relations with the region, the main focus is being placed on development cooperation with the Economic Community of West Africa States (ECOWAS), in particular on issues such as peace, security and good governance with a strong emphasis on economic and trade integration.
However, since January 2007, more intensive discussion on the possibility of creating an Africa-Energy Partnership has emerged. The European Commission recognizes the fact that a comprehensive Africa-Europe Energy partnership is important, mainly since Africa as an energy supplier has increased greatly in recent years. In addition, Africa’s potential is of a vast amount. Therefore, according to the Commission, the dialogue should include security of supply, technology transfer on renewable energy, sustainable exploitation of resources, transparency of energy market and respect for good governance.

Based on its energy forum in 2007 in Berlin the forum had the following outcomes regarding energy:

- An Africa-Europe Energy Partnership would respond to challenges such as energy security and climate protection.

- Africa has vast energy resources, including oil, gas and renewable resources which are waiting to be developed. Oil and gas resources are, however, distributed unevenly across regions. There is great potential for expanding energy supply, especially from renewable sources. At the same time, many countries are facing a supply crisis. Differences must be taken into account, and regional cooperation all the way down to the operator level is indispensable.

- Concerning Energy Efficiency. Better management of energy systems and increased investment in efficient technology are extremely cost-effective, both in the medium-term and in the long-term perspective (reduced consumption of resources, lower recurrent costs). Increasing end-use efficiency and reducing energy wastage is a priority.

---

• As regards to climate change. Development partners must address climate change jointly. While mitigation of greenhouse gas emissions is a global priority, the focus for Africa is on adaptation to climate change. Climate change affects Africa particularly, even though the continent’s contribution to worldwide greenhouse gas emissions is minimal. Adaptation to climate change requires better knowledge concerning impacts at the local and regional levels. Climate change impacts need to be considered in energy investment planning.

In its paper: “An Energy Policy for Europe”, the Commission stated that Africa and other developing regions have a vital interest like Europe to boost diversification and energy efficiency. Therefore, the EU is committed to support developing countries in promoting sustainable and secure energy supply and use. The paper continues by stating that Africa offers a unique opportunity to install renewable energy technology in a competitive manner. Hereby, it will be able to by-pass the need to build expensive transmission grids and “leap-frog” to a new generation of clean, local low carbon energy sources and technologies.

In sum Africa counts as a continent with a big potential. Countries such as Nigeria and Angola already show, in a promising way, their energy production capabilities. However, before the potential of Africa can be fully released, it will need a large investment strategy for the long-term. For now Africa has to deal with little capital to invest in her energy potential in order to become a high ranking world market energy exporter. A major share of the investment will need to be drawn from outside of Africa, which in turn will ask for stability, transparency and non-corruption before large investments will be made. It is for these reasons that the process of getting Africa up and running in the world’s energy market, is slow and that it will need strong commitment from both sides in order to realize its full potential. The European Commission has already shown its commitment to deal with Africa in a constructive way in order to unleash its potential. However, it will have to realize that it needs to be patient before it can fully profit from its investment. Investing in Africa is an investment for the long-term.

5. Energy Security in the Transatlantic Context

Relations between the United States and the EU have been steadily broadened and deepened over the past 55 years. The transatlantic integration has become in particular visible in its economical relation. This economic partnership is by many describes as being one of the most important factor on world wide economic growth, prosperity and trade. Within the deepening of this transatlantic economic relationship, energy security policy is becoming a higher priority for both the US and the EU. Together, the US and the EU represent the world’s largest energy market. The US and the EU produce approximately 23% of the World’s energy but combine for almost 40% of global energy consumption. According to BP’s Statistical Review the United States’ share of global oil consumption is approximately 43% and gas consumption, 23%. The EU accounts for 18% of global oil consumption an 19% of natural gas.

In 2006, at the U.S.-EU summit the parties agreed to increase cooperation on energy security, climate change, and sustainable development issues. In order to achieve this, three institutional mechanisms where created in order to facilitate this cooperation. These are:

- U.S.-EU energy cooperation;
- U.S.-EU High Level Dialogue on Climate Change;
- Clean Energy and Sustainable Development;
- U.S.-EU Energy CEO Forum.

Until now, non of these forums have only come together one time. Problem areas can be found in the fact that the US rejects European calls for a commitment to pursue binding international global emissions and energy efficiency targets. In particular, European officials have insisted on the US to support an international treaty regulating greenhouse gas emissions after 2012, when the U.N. Kyoto Protocol will expire, and for an international market-based carbon emissions credit trading system.

On other parts, European officials perceive the willingness of the US to acknowledge climate change as a problem with serious global consequences and the link between energy and climate change policy as positive developments in their relationship.
At the other hand they are frustrated about the fact that the US is not yet willingly to commit itself to binding international emissions and energy efficiency targets. For example, the US is not part of the Kyoto Protocol and the administration reportedly views global regulation to address climate change skeptically. Instead the US officials are favoring transatlantic and international cooperation. Within this co operational framework parties could develop successfully alternative and renewable energy sources and liberalize international energy markets. In this case, both the US and the EU have launched a series of initiatives that promote technological advances in clean coal and carbon capture and storage, biofuels, energy efficiency, and methane recovery. From the United States point of view, U.S. officials argue that such technological innovation is more effective in reducing emissions than global regulation and that such regulation may actually slow down the economic growth necessary to sustain further technological advances. The support there argument by stating that, although the EU takes part in the Kyoto Protocol, carbon dioxide emissions increase at a faster rate in the EU than in the United States from 2000-2004. In addition, in the same period US economic growth was higher then in the EU\textsuperscript{92}.

Although Europe complains about the U.S.’s position towards its energy and climate policy, the U.S. and analysts in turn, point out that, Europe’s dependence on Russian energy and Gazprom’s growing influence in large segments of Europe’s energy infrastructure could form a potential long-term threat to transatlantic relations arising. Therefore, the U.S. has already initiate efforts in order to build pipelines and develop other transportation routes from Central Asia and the Caspian Region to Europe that bypass Russia. In addition, U.S. critics also argue that the EU should strengthen its resolve in requiring Russia to ratify the Energy Charter Treaty and to accept standard open market business practices, competition, and foreign investment in its energy sector.

Countries like Germany will not be eager to take common action upon Russia because they fear it could provoke bad relations between the two countries. Mainly Germany views Russia as an essential strategic partner as regards to its security of supply.

Finally, transatlantic discussion of energy supply security also includes energy crisis management and infrastructure protection. Some countries have proposed NATO involvement in energy security issues, including in securing supply sources, distribution routes and storage facilities. For example, in 2006 Poland proposed a so called “Energy NATO,” which would mean an extra task for the NATO in guaranteeing the protection of member state energy supplies. The same idea was proposed on a summit in 2006 in Riga where senator Lugar proposed the extension of NATO’s collective defense clause, article 5, to cases where a member state’s energy security is threatened. However, other EU member states, in particular Germany and France have not welcomed such ideas positively. They rather see an enhanced role for the EU covering this matter.

Nevertheless, the idea that proposes an active role for NATO’s in energy security did not lose all of its supporters. Some, still believe that, NATO could offer assistance for protection of pipelines or sea lanes during times of political unrest of conflict. For example, NATO Partnership for Peace countries, like Kazakhstan and Turkmenistan, which are important energy producers are seeking ways to associate themselves more closely with NATO, in part to reduce the Russian influence and in part to develop reliable partners in an unstable region. For some, NATO has the ability to help secure the energy infrastructure of such countries.

6. An External Energy Policy for Europe

As we have seen in the above chapters, the EU is already active as regards to her external policy. However, the Commission aims for bigger plans. In order to play a more effective international role in tackling common problems with energy partners worldwide, the Commission proposes a coherent external energy policy. The Commission argues that, this is essential to deliver sustainable, competitive and secure energy. In this paragraph I will give an overview of the most important proposals of the Commission regarding this subject.

The Commission proposes several steps towards the development of an External Energy Policy. The first step is to agree at community level what should the External Energy Policy aim for and to what extend actions need to be taken at both community and national level to achieve it. In this case the already mentioned Strategic EU Energy Review would serve as the basis for establishing a common vision.

Second, a number of key goals and instruments should be in place in order to realize further development of External Energy Policy namely:

- **A clear policy on securing and diversifying energy supplies**
  According to the Commission, having such a policy is important for both the EU as a whole and for specific member states or regions and would in particular be appropriate for gas. In this case the already mentioned review could propose clearly identified priorities for the upgrading and construction of new infrastructure necessary for the security of EU energy supplies, especially new gas and oil pipelines and liquefied natural gas (LNG) terminals as well as the application of transit and third party access to existing pipelines.
• **Energy partnerships with producers, transit countries and other international actors.**

The EU and its energy partners are interdependent. This is reflected at bilateral and regional level in a number of specific EU energy dialogues with a number of producers and transit countries.

Equally, energy issues are a growing feature of the EU’s political dialogues with other major energy consumers (such as the US China and India), including through multilateral fora like the G8.\(^{94}\)

• **Dialogue with major energy producers/suppliers**

In this case the EU already has an established pattern of relations with major international energy suppliers including OPEC and the Gulf Cooperation Council. However, a new initiative is particularly opportune with regard to Russia as it is the most important energy supplier. The development of a common external energy policy should offer a true partnership which will guarantee security and predictability for both sides. In addition, this would clear the way for the necessary long-term investments in new capacity. Therefore, the EU should start an energy initiative based on these principles form which the results could be integrated into the framework of EU-Russian relations which in turn will replace the current EU-Russia Partnership and Cooperation agreement.

• **Developing a pan-European Energy Community**

Although the EU already uses European Neighborhood Policy and Action Plans, the creation of a “common regulatory space” around Europe, would imply progressively developing common trade, transit and environmental rules, market harmonization and integration. By doing this, it would create a predictable and transparent market to stimulate investment and growth, as well as security of supply, for the EU and its neighbors.

---

\(^{94}\) G8 stands represents an international forum for the governments of Canada, France, Germany, Italy, Japan, Russia, the United Kingdom and the United States.
• **Reacting effectively to external crisis situations**

Experiences as regard to external energy crises, with respect to both oil and gas have shown the need for the Community to be able to react quickly and in a fully coordinated manner to such events. For now, the EU has no formal instrument dealing with external energy supplies. By the introduction of a new more formal, targeted instrument which will deal with emergency external supply crises, this can be tackled.

• **Integrating energy into other policies with an external dimension**

The Commission argues that at the political level, a common European external energy policy will permit a better integration of energy objectives into broader relations with third countries and the policies which support them. This means increasing the focus in relations with global partners facing similar energy and environmental challenges such as the US, Canada, China, Japan and India on issues such as:

- climate change
- energy efficiency and
- renewable sources
- research and development of new technologies
- global market access
- investment trends.

In addition, there is a possibility to make better use of trade policy tools to promote goals such as non-discriminatory energy transit and the development of a more secure investment climate.

• **Energy to promote development**

For developing countries, access to energy is a key priority. For example, Sub-Saharan Africa has the lowest access in the world to modern energy services, while at the same time only 7% of Africa’s hydropower potential is tapped.

---

Therefore, according to the Commission, the EU should promote a twin-track approach through the European Union Energy Initiative and through raising the profile of energy efficiency in development programmes. It should be focused on developing renewable energy and micro-generation projects, which could help many countries reduce reliance on imported oil.

In sum, because all EU member states have in common that they are increasingly depending on foreign fuel imports, there was increasing acceptance in the fact that national leaders have come to understand the strategic importance of energy and the potential profits of putting their strengths together. Therefore, national leaders are becoming more willingly to accept an External Energy Policy.

Having an External Energy Policy can bring added value to energy security by:

- Setting up a dialogue with suppliers and transit countries and industry to enhance a stable and transparent framework where market principles and free pricing mechanism are applied as much as possible.

- Establishing common projects: developing new pipelines and terminals; protecting facilities against terrorist attacks or other disruptions.

- Defining a common foreign stance on major crisis disrupting the energy supply.

It will be a test for the EU’s goal of identifying pragmatic answers to European issues as regards to the different views from member states concerning this policy. For example, while Germany, as one of the most integrationist member state, supports the idea of this policy, Poland is trying to get the EU to help her succeed in her own agenda towards Russia. In addition the United Kingdom has also argued in favour for a EEP\(^{96}\) and is trying to influence the outcome of an EEP that will result in further opening of markets.

\(^{96}\) EEP stands for External European Energy Policy
There are several options that the EU could consider for the future in order to achieve results in the area. For example, the EU has many instruments at its disposal and should make use of each of them in particular legal, financial and political instruments. In addition the EU should also consider other ways such as short-term and long-term options, effective or/and symbols, they all aim at following the EU to speak with one voice to achieve a better energy security.
7. Conclusion

In this thesis I have researched how the European Union conducts her internal and external energy policy in terms of energy security. It explains that the development towards an internal and external energy policy from the European Union has been difficult and has made slow progress during the years. The main reason for this difficult and slow progress lies in the fear of member states to lose decision power over their national energy policy, which in their opinion could possible be a threat to their national energy security. However, since member states of the European Union are experiencing an increased dependence on imported fossil fuels from political unstable regions and energy prices are rising, opinions about having an European energy policy have slowly turned into favour. Nevertheless, still a substantial part of decision power in this field remains with the member state.

The steadily rise of Europe’s dependence on energy imports, has been the main reason for the European Commission to initiate several programmes that will increase the Union’s energy security of demand. For example, the Commission has instigated policies that will vary its energy mix in order to lower its dependence on oil and gas. Programmes have been setup that will increase the use of renewable energy sources. In addition the EU has setup programmes that will increase its energy efficiency.

In order to provide for a long-term stable use of energy without shortage in Europe, the Commission has started the implementation for an internal energy market that will increase its competitiveness and security of demand.

On the other hand, looking at the Commission’s external policies, it has conducted programmes that will diversify the Union’s import on oil and gas in order to avoid that it will depend to much on one supplier. Europe’s dependence on Russian gas has formed an important motivation. In order to achieve this, the Commission has initiated dialogues and partnerships with countries and organisations that will further diversify and secure its energy import and thereby its energy security.
Although the fact that, the Commission has proved itself to be a highly productive and a convinced actor in creating an internal and external energy policy, it remains weak in its decision power which in turn undermines its effectiveness and consistency. In order to be a successful world actor it will need more decision power on a common level. Since the European Union has no capacities to become fully energy independent, it will have to become a manager of energy resources in order to guaranty its energy security. This will ask for a Europe who can speak with one voice.
8. References

Books


Articles located on the internet:


• *Geopolitics of Energy: A German and European View*, Kreft, H.


• Institute of International Relations and Political Science, *EU-Russia Energy Dialogue and Lithuania’s Energy Security*, Budrys, K.


• The European Community, *Treaty Establishing the Energy Community*. 

- 86 -
• The Royal Institute of International Affairs, Security of European Natural Gas Supplies: The impact of import dependence and liberalization, Stern, J., July 2002.


• Tribune and Opinions, Fifty Years of Safeguards under the Euratom Treaty – A Regulatory Review, Patel, B., Peter Chare, 2007.


• University of Oxford, Transcaucasia and the Caspian Region with Particular focus on Energy Issues, MacFarlane, N. .


• World Economic Forum, Ten Key Principles of Energy Security, Yergin, D., 2006;